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Cartagena, Colombia, 11-13 December 2014

Project Document

CLME+: Catalysing Implementation of Strategic Action Programme for Sustainable Management of shared Living Marine Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystems

For reasons of economy and the environment, Delegates are kindly requested to bring their copies of the Working and Information documents to the Meeting, and not to request additional copies.

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CLME+ProDoc
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Abbreviations/Acronyms [INCOMPLETE – will be further completed]

CARICOM	Caribbean Community and Common Market
CBO	Community-Based Organisation
CCAD*	Central American Commission for Environment and Development
CEP	Caribbean Environment Programme (UNEP)
CERMES	Centre for Resource Management and Environmental Studies
CFMC	Caribbean Fisheries Management Council
CITES	Convention on the International Trade of Endangered Species
CLME	Caribbean Large Marine Ecosystem
CLME ⁺	Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME Project)
CRFM	Caribbean Regional Fisheries Mechanism
DoI	Declaration of Intention
DSS	Decision Support system
EAF	Ecosystem Approach to Fisheries
EBM	Ecosystem-based Management
EcoQO	Ecosystem Quality Objective (CLME SAP)
FAO- WECAFC	Food and Agricultural Organisation of the United Nations - Western Central Atlantic Fisheries Commission
GDP	Gross Domestic Product
GEF	Global Environment Facility
GPA	Global Programme of Action for the Protection of the Marine Environment from Land Based Activities
ICCAT	International Commission for the Conservation of the Atlantic Tuna
ICM	Integrated Coastal Management
IGO	Inter-Governmental Organisation
ILO	International Labour Organisation
IMO	International Maritime Organisation
IOC	Intergovernmental Oceanographic Commission of UNESCO
IOCARIBE	IOC UNESCO Sub-commission for the Caribbean Sea and Adjacent Regions
IUU	Illegal, Unreported and Unregulated fishing
IWEco	Integrating Water, Land and Ecosystem Management in Caribbean Small Island Developing States (GEF)
LBS	Protocol concerning Pollution from Land-Based Sources and Activities (Cartagena Convention)
LME	Large Marine Ecosystem
LMR	Living Marine Resources (CLME Project)
M&E	Monitoring and Evaluation

MARPOL	International Convention for the Prevention of Pollution from Ships
MCS	Monitoring, Control and Surveillance
MPA	Marine Protected Area
MSY	Maximum Sustainable Yield
NAP	National Action Plan
NBSLME	North Brazil Shelf Large Marine Ecosystem
NGO	Non-Governmental Organisation
NPOA	National Plans of Action
OECS	Organisation of Eastern Caribbean States
OSP	Oil Spills Protocol (Cartagena Convention)
OSPESCA*	Central America Fisheries and Aquaculture Organisation
REMP	Regional Environmental/Ecosystem Monitoring Programme (CLME Project)
RFMO	Regional Fisheries Management Organisation
RGF	Regional Governance Framework (CLME Project)
SAP	Strategic Action Programme (CLME Project)
SBO	Societal Benefits Objective (CLME SAP)
SD	Strategic Direction (CLME SAP)
SGP	Small Grants Programme (GEF)
SIDS	Small Island Developing States
sLMR	shared Living Marine Resources (CLME Project)
SPAW	Specially Protected Areas and Wildlife Protocol (Cartagena Convention)
TDA	Transboundary Diagnostic Analysis (CLME Project)
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNOPS	United Nations Office for Project Services
UWI	University of the West Indies
WCR	Wider Caribbean Region
WRI	World Resource Institute

* Spanish acronym

1 Situation Analysis

1.1 Introduction: GEF support for the CLME+ Strategic Action Programme (CLME+ SAP)

Large Marine Ecosystems (LMEs) are regions of the world's oceans, encompassing coastal areas from river basins and estuaries to the seaward boundaries of continental shelves and the outer margins of the major ocean current systems, and/or occupying semi-enclosed seas. LMEs typically cover relatively large areas, characterized by distinct bathymetry, hydrography, productivity, and trophically dependent populations of marine species¹. Globally, 66 different LMEs have been delineated. 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. Due to the transboundary nature of many LMEs, their adoption as a management unit generally requires inter-national coordination and collaboration.

Since 1995, the Global Environment Facility (GEF), through its International Waters (IW) Focal Area, has been fostering the use of the LME approach. GEF LME supported projects bring together coastal States with concerned international agencies and regional organisations and other key stakeholders to address issues pertaining to the marine environment. Under these projects, science-based information on major transboundary environmental concerns are analysed, and root causes of environmental degradation are identified. Based on the results of these analyses (known as *Transboundary Diagnostic Analyses* or “TDAs”), countries jointly determine and agree upon priority actions to deal with these transboundary concerns, through the development and political endorsement of a *Strategic Action Programme (SAP)*.²

Between 2001 and 2014, co-financing has been provided by the GEF to the countries that share the *Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME and NBSLME, resp.)*, to support the preparations for, and implementation of a “foundational capacity building phase” for enhanced, joint LME-based living marine resources management. During this phase, the Full Sized UNDP/GEF Project “*Sustainable Management of the Shared Living Marine Resources of the Caribbean Large Marine Ecosystem and Adjacent Regions*” (“CLME Project”, GEF ID 1032) was implemented between 2009 and 2014.

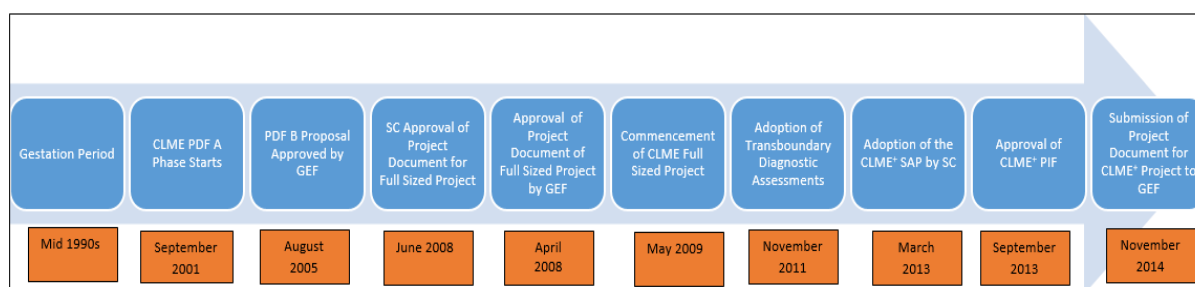


Figure 1: Timeline and important milestones of the GEF-supported “CLME” and “CLME+” initiatives

¹ NOAA. 2014. The Large Marine Ecosystem Approach to the Assessment and Management of Coastal Ocean Waters: Introduction to the LME Portal. Available at http://www.lme.noaa.gov/index.php?option=com_content&view=article&id=47&Itemid=41

² Bille, R., L. Chabason, P. Drankier. E.J. Molenaar, J. Rochette. 2013. Regional Oceans Governance (Draft) UNEP. 165p.

Under the CLME Project, a series of TDAs were produced for the 3 ecosystem subtypes known to support the most important fisheries and biodiversity in the CLME region: (a) the reef ecosystem (incl. associated habitats); (b) the pelagic ecosystem; and (c) the continental shelf ecosystem. The three priority environmental problems, highlighted through these TDAs and common to the three ecosystem subtypes, were: (i) unsustainable exploitation of fish and other living resources; (ii) habitat degradation and ecosystem community modification; and (iii) pollution. Causal Chain Analyses (CCA's) conducted under these TDAs further identified direct and root causes of these problems.

TDA and CCA results were combined with the outcomes of a series of case studies (incl. the analysis of existing governance arrangements) and pilot projects and used to steer the development of the *“Strategic Action Programme for the Sustainable Management of the Shared Living Marine Resources of the Caribbean and North Brazil Shelf Large Marine Ecosystems”* (the CLME⁺ SAP, one of the main outputs from the CLME Project). The SAP is a 10-year programme consisting of 77 priority actions structured under 6 Strategies and 4 Sub-strategies. The SAP describes a long-term vision on the relationship between human society and the marine environment in the CLME, and provides a comprehensive roadmap towards sustainable living marine resources management, through strengthened and consolidated regional cooperation. The SAP puts particular emphasis on addressing the root causes of environmental degradation. It combines actions for improving governance arrangements with actions to enhance marine resources management capacity at the regional, national and local levels, and contemplates the implementation of high-priority management interventions and investments on the ground. To date, 31 Ministers in 22 different countries have formally endorsed the CLME⁺ SAP.

At the Fourth Steering Committee Meeting of the CLME Project (Cartagena - Colombia, March 2013), participating countries expressed their interest in moving forward towards implementing the CLME⁺ SAP and, in that regard, requested that high priority be given to the development of a proposal for a new project, to be implemented with renewed co-financing support from the GEF. Consequently, a Project Identification Form (PIF) was submitted to the GEF Secretariat in September 2013, and included in the Work Programme that was approved by the GEF Council in November 2013. This way, a commitment was obtained from the GEF to support the development of the Project Document for a Full Sized UNDP/GEF Project that will allow the region to initiate and catalyse the implementation of the 10-year CLME⁺ SAP.

The present *Project Document* (*“the CLME⁺ ProDoc”*) constitutes the main reference document for the implementation of the 5-year Full Sized UNDP/GEF Project: *“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”* (*“CLME⁺”*³).

CLME⁺ Project implementation will be supported by the GEF through a financial contribution of US\$ 12.5 million. The CLME⁺ Project will seek to foster collaboration with and among other projects and initiatives (both GEF and non-GEF) that are of relevance to the SAP. Co-financing commitments for the implementation of the CLME⁺ Project currently amount to XX million USD.

³ Please note the double meaning of the “+” sign added in superscript to the project acronym: on one hand, it refers to the fact that both the Caribbean Large Marine Ecosystem (CLME) and North Brazil Shelf Large Marine Ecosystem (NBSLME) are covered by the project; on the other hand the “+” also refers to the catalytic effect the new project will have on the regional efforts for sustainable living marine resources management. The new “CLME⁺” Project builds upon the achievements of the GEF foundational capacity building project, which acronym was “CLME”.

1.2 The Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME⁺):

The semi-enclosed Caribbean Large Marine Ecosystem⁴ (CLME; 3.3 million km²) is a distinct ecological region, bounded to the North by the Bahamas and the Florida Keys, to the East by the Windward Islands, to the South by the South American continent, and to the West by the Central American isthmus. The CLME largely corresponds to the boundaries of the Caribbean Sea, the second largest sea in the world. It is an ecosystem with overall moderate productivity rates that show considerable variability over space and time. The Caribbean Sea supports a broad array of commercial and subsistence fisheries, and constitutes a sub-area of a distinct and globally important bio-geographical region of coral reef development with high levels of endemism.

The North-Brazil Shelf Large Marine Ecosystem⁵ (NBSLME; 1.1 million km²) extends along North-Eastern South America from the boundary with the Caribbean Sea in the NW to its southern limit near the Parnaíba River estuary in Brazil. High volumes of water and nutrients from terrestrial river basins in South America – including the Amazon and Orinoco basins- are transported by the North Brazil Current through this LME, into the Caribbean Sea. The highly productive North Brazil Shelf supports important fisheries, and has moderate levels of biodiversity characterized by an important degree of endemism.

Jointly, the *Caribbean and North Brazil Shelf Large Marine Ecosystems* (4.4 million km²) are further referred to in this document as CLME⁺ (Figure 2).



Figure 2 : The CLME⁺ region as defined under the UNDP/GEF “CLME⁺” Project⁶ (please note that the CLME⁺ region does not include the Gulf of Mexico LME)

⁴<http://www.eoearth.org/view/article/51cbed2d7896bb431f690478/>

⁵<http://www.eoearth.org/view/article/154877/>

⁶ Please note that the CLME⁺ Region does not include the “Gulf of Mexico LME” (“GoMLME”). The GoMLME is the subject of a different GEF project. Notwithstanding this, provisions for the coordination of actions are being made.

1.2.1 Global significance of the CLME⁺

Being home to [more than 100] XX million people, the CLME⁺ constitutes a region of globally unique cultural and historical value, a consequence of its precolonial and colonial history, and of the indigenous, African, Asian and European roots of its current population. At the same time, the region supports a multitude of globally important economic activities and ecological processes.

The vast expanse of marine environment in the CLME⁺ is of great importance for the global tourism, shipping, fishing and oil and gas industries. The Caribbean is the world's premier cruise tourism destination, commanding over 60% of the world cruise market. The Panama Canal, a critical hub for maritime traffic, handles about 5% of total world trade. It is expected to double its present transit volume, once the expansion of the Canal has been completed. The CLME⁺ holds significant potential as a major producer of hydrocarbons, with Venezuela -ranking as the world's sixth largest net oil exporter in 2006- being one of the largest oil producers in the western hemisphere. With the advancement of technology, sea-bed exploration has grown exponentially in this region over the last few years, and the number of countries now producing oil and gas for export has increased. Further, the region provides global markets with important products derived from its fisheries (incl. red snapper, shrimp, and emblematic species such as Caribbean spiny lobster and queen conch).

These economic activities take place in a region that occupies a globally relevant position in terms of its share in the total coverage of key tropical marine habitat/ecosystem types known to deliver substantial contributions to globally important ecological processes. Approximately 10% of the world's coral reefs, and at least 15% of the world's remaining mangrove forests are located within the CLME⁺ region. X% of global seagrass cover. Within the North Brazil Shelf, the deltaic plains of the Orinoco and the Gulf of Paria in the north Atlantic coast of South America cover 27,630 km² and constitute one of the major wetlands in South America as well as one of the best preserved ecosystems in the world.⁷ Globally, mangrove forests, seagrass beds and salt marshes contribute almost 50% of the total organic carbon burial in ocean sediments, known as 'blue carbon'. As such, they help in constraining the rise in atmospheric CO₂, and preserve nursery grounds for regionally and globally important fish stocks.⁸

As a consequence of the prevalence of such important ecosystems in a unique, tropical biogeographic region, the CLME⁺ is characterized by globally significant levels of marine biodiversity, with exceptionally high levels of endemism. In the area of the Caribbean Sea, a total of 12,046 marine species (approx. 1,400 species of fish) were identified by the Census of Marine Life⁹, with well over 90% of the fish, coral and crustacean species being endemic to the area.¹⁰ In addition to this species diversity, several emblematic animal species are known to permanently inhabit, or occasionally/seasonally visit or pass through the region: the CLME⁺ includes nesting and foraging grounds, as well as important migration corridors, for six of seven extant marine turtle species, including the single-most important nesting site in the Western Hemisphere of the endangered

⁷ Miloslavich, P., E. Klein, J. M. Díaz, C. E. Hernández, G. Bigatti, L. Campos, F. Artigas, J. Castillo, P.E. Penschaszadeh, P. E. Neill, A. Carranza, M. V. Retana, J. M. Díaz de Astarloa, and A. Martín. 2011. Marine Biodiversity in the Atlantic and Pacific Coasts of South America: Knowledge and Gaps. PLOS One. Available at <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0014631>

⁸ Holmyard, N., 2014. IPCC AR5 Implications for Fisheries Summary.

⁹ <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0011916>

¹⁰ WRI. 2011. Reefs at Risk Revisited.

green turtle (*Chelonia mydas mydas*), and 3 of the world's 4 largest nesting aggregations¹¹ for the emblematic and globally vulnerable leatherback turtle (*Dermochelys coriacea*). At least 34 marine mammal species¹² –i.e. more than 1/4 of the total global species count- are known to permanently inhabit and/or periodically pass through the waters of the Caribbean Sea (UNEP-CEP/RCU 2001). With annual aggregations of the world's biggest fish, the whale shark (*Rhincodon typus*), reported from ±10 tropical locations around the world, the Caribbean sea currently holds the world record of the largest reported single aggregation event -420 whale sharks- to date¹³.

¹¹<http://api.ning.com/files/UFV1jUe-HMdv3sEqeHbxlv2HFVJbXKSzSzeUEgcstMLCsAvWkSEu0A7mW7rWJCTZpwl6lwi0NaY-1ok9FN8RM-HJWX7xhr8H/PatinoMartinez2008.pdf>

¹² 31 cetacean, 2 pinnipeds, and 1 sirenian; of the two pinnipeds, the West Indian monk seal (*Monachus tropicalis*) is now generally considered extinct

¹³<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0018994>

1.2.2 Regional geopolitical context

The CLME⁺ region constitutes one of the geopolitically most diverse and complex sets of LMEs in the world. Currently, there are twenty-six independent States and eighteen dependent/associated¹⁴ territories, located within or bordering the CLME⁺.

Countries sharing the CLME⁺ range from among the largest (e.g. Brazil) to the smallest (e.g. St. Kitts and Nevis), and from among the most developed (e.g. United States of America) to the least developed (e.g. Haiti)¹⁵ in the world. A distinct feature of this region is the high number of Small Island Developing States (SIDS) - the highest concentration within any existing (set of) LME(s).

Independent Continental States	Independent Island States	Overseas dependent territories, associated states, departments and island with a special status ¹⁶
Belize ¹⁷ Brazil Colombia Costa Rica Guatemala Guyana ¹⁷ Honduras Panama Mexico Nicaragua Suriname ¹⁷ Venezuela United States of America	Antigua & Barbuda ¹⁷ Bahamas, the ¹⁷ Barbados ¹⁷ Cuba ¹⁷ Dominica ¹⁷ Dominican Republic ¹⁷ Grenada ¹⁷ Haiti ¹⁷ Jamaica ¹⁷ St. Kitts & Nevis ¹⁷ Saint Lucia ¹⁷ St. Vincent & the Grenadines ¹⁷ Trinidad & Tobago ¹⁷	Anguilla ¹⁷ (<i>United Kingdom</i>) Aruba ¹⁷ , Curaçao, St. Maarten ¹⁸ British Virgin Islands ¹⁷ (<i>United Kingdom</i>) Cayman Islands (<i>United Kingdom</i>) French Guiana (<i>France</i>) Guadeloupe (<i>France</i>) Montserrat ¹⁷ (<i>United Kingdom</i>) Martinique (<i>France</i>) Puerto Rico ¹⁷ (<i>United States of America</i>) Bonaire, St. Eustatius, Saba ¹⁹ St. Barthélemy (<i>France</i>) St. Martin (<i>France</i>) Turks and Caicos (<i>United Kingdom</i>) U.S. Virgin Islands ¹⁷ (<i>United States of America</i>)

The region's geopolitical reality is strongly influenced by its high diversity in terms of historical backgrounds, cultures, languages, country and population size, political systems and governance arrangements, as is reflected in the existing regional political and economic integration mechanisms: e.g. the Central American Integration System (SICA), the Caribbean Community (CARICOM), the Organisation of Eastern Caribbean States (OECS), and the Association of Caribbean States (ACS).

The Caribbean Community (CARICOM)

The Caribbean Community (CARICOM) was established in 1973, expanding a previously established free-trade agreement with provisions for, e.g., the coordination of agricultural, industrial and foreign policies. The signing of a revised treaty in 2001 established the CARICOM Single Market and Economy (CSME). The objectives of CARICOM include, among others, to improve standards of living

¹⁴This includes overseas dependent territories, associated states, departments and islands with a special status; see also section 1.4

¹⁵ CLME Project. 2013. CLME⁺ SAP

¹⁶As of 10 October 2010, Holland, Aruba, Curaçao and St. Maarten are partners in the Kingdom of the Netherlands. The islands of Bonaire, Saba, and St. Eustatius have become "special municipalities" of Holland

¹⁷ Low-lying coastal and/or Small Island Developing States (SIDS), see also: <http://sustainabledevelopment.un.org/index.php?menu=1522>

¹⁸Kingdom of the Netherlands

¹⁹special municipalities of Holland

and work, to accelerate coordinated and sustained economic development, the expansion of trade and economic relations with third States; and to improve the effectiveness of Member States in dealing with third States, groups of States as well as the enhanced co-ordination of Member States' foreign policies and enhanced functional co-operation. CARICOM Member States and Associated Member States and Territories are shown in Figure X.

The Organisation of Eastern Caribbean States (OECS)

The Organisation of Eastern Caribbean States (OECS) came into being on June 1981, when seven Eastern Caribbean countries signed a treaty agreeing to cooperate with each other and promote unity and solidarity among the Members. A revised treaty was signed in 2010, establishing the OECS economic union, i.e. a single financial and economic space within which goods, people and capital move freely, monetary and fiscal policies are harmonised and where Members continue to adopt a common approach to matters relating to trade, health, education and environment. OECS Member States and Associate Member States are: Antigua and Barbuda; Dominica; Grenada; Montserrat; St. Kitts and Nevis; Saint Lucia; St. Vincent and the Grenadines (the full Members); and, Anguilla and the British Virgin Islands (Associate Members)

The Central American Integration System (SICA)

Since 1993, the Central American Integration System (Spanish: *Sistema de la Integración Centroamericana*, or SICA) constitutes the economic and political organization of Central American states. It extends earlier cooperation arrangements for regional peace, political freedom, democracy and economic development. SICA Member States are: Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, Belize, and, since 2013, Dominican Republic (Figure X). Mexico, Chile and Brazil became part of the organization as regional observers, and the Republic of China, Spain, Germany and Japan became extra-regional observers.

The Association of Caribbean States (ACS)

The Association of Caribbean States (ACS) was established in 1994 to promote and encourage consultation, cooperation and concerted action among its 28 contracting States, countries and territories. The objectives of the ACS include the strengthening of the regional co-operation and integration process, with a view to creating an enhanced economic space in the region; preserving the environmental integrity of the Caribbean Sea, as a common patrimony of the peoples of the region; and promoting the sustainable development of the Greater Caribbean. As a forum for political dialogue, the organisation has identified 5 areas of concern that may be addressed at the regional level.

1.2.3 Marine environment and human society in the CLME⁺

Coastal and marine ecosystems in the CLME⁺ provide critical support for biodiversity and for food security, livelihoods and socio-economic development (and thus contribute to peace and stability) of the peoples of the CLME⁺ region and far beyond.

The CLME⁺ region is the most urbanized region in the developing world, with close to 80% of its population living in cities.²⁰ With about 116 million people living within 100 km of the coast, and nearly three-quarters of the population in coastal zones, the CLME⁺ region is highly dependent on the goods and services provided by the marine ecosystems.

The wide range of goods and services provided to human society include **provisioning services** such as food (e.g. protein from fisheries), energy, wood, and bio-prospecting; **regulating services** such as shoreline stabilization, flood prevention, storm protection, climate regulation, hydrological services, nutrient and carbon sequestration, pollution control and waste disposal; **cultural and amenity services** such as sense of place, and tourism and recreation opportunities; and **supporting services** such as habitat provision, nutrient cycling, primary productivity and soil formation.²¹

Key economic activities in CLME⁺ countries include **tourism, construction** (much of which is tourism-related), **mining** and **oil & gas extraction**, and **fishing**. The petroleum industry is a major economic sector in Venezuela, Mexico, and Trinidad and Tobago, the region's three largest oil exporters. According to the Caribbean Tourism Organisation (CTO)²², the Caribbean welcomed more than 25 million stay-over visitors in 2013, which is up from 24.6 million in 2012.²³ Fuelled by the accommodations sector, visitors to the region spent more than 28 billion dollars in 2013, an increase of 2.3 per cent when compared to 2012.²⁴

Fisheries are a highly significant provider of food (protein), livelihoods and income in the CLME⁺. It is estimated that more than 900,000 people are employed directly in the primary sector (capture fishery), with another three million jobs in ancillary activities such as processors, net makers, and boat builders. Within the wider setting of the Western Central Atlantic, in 2010 the CLME⁺ countries and territories caught an estimated 1.25 million tonnes of fish (FAO Area "31"). The fisheries sector brings approximately USD 1.2 billion annually in export earnings into the Caribbean, with the United States of America being the principal destination of the exports.

Three marine ecosystem types are recognized as supporting the region's most important fisheries and biodiversity, and have been the subject of the analyses under the CLME Project's TDAs. The

²⁰ UN Habitat. 2012. The State of Latin American and Caribbean Cities 2012 Towards a new urban transition. <http://mirror.unhabitat.org/pmss/listItemDetails.aspx?publicationID=3386>

²¹ UNEP. 2006. Marine and coastal ecosystems and human wellbeing:

A synthesis report based on the findings of the Millennium Ecosystem Assessment. UNEP. 76pp

²² CTO Government Members include: Anguilla, Antigua and Barbuda, Bahamas, Barbados, Belize, Bermuda, Bonaire, British Virgin Islands, Cayman Islands, Cuba, Curacao, Dominica, Grenada, Guadeloupe, Guyana, Haiti, Jamaica, Martinique, Montserrat, Puerto Rico, St. Eustatius, St. Kitts and Nevis, St. Maarten, Saint Lucia, St. Vincent and the Grenadines, Trinidad and Tobago, Turks and Caicos, United States Virgin Islands, and Venezuela.

²³ (CTO. 2014. Statistics for 2013, State of the Industry Report Presented by Hon. Beverly Nicholson-Doty Chairman, Caribbean Tourism Organization available at <http://www.onecaribbean.org/statistics/annual-reviews-prospects/>)

²⁴ Ibid.

characteristics of each of these three “fishery ecosystem types”, as well as their importance for regional²⁵ livelihoods and socio-economic development, are presented below.

1.2.3.1 Coral Reefs and associated habitats

The CLME⁺ region contains about 26,000 km² or approximately 10% of the world’s **coral reefs**²⁶. Coral reefs are concentrated primarily within the Caribbean Sea and the Bahamas Bank. They are prolific providers not only of ecosystem goods and services such as food, but also of protection from storms, recreational opportunities and medicinal products. In the CLME⁺ coral reef systems constitute an important source of revenue and food for many coastal communities, as they provide habitat for important commercial species such as the Caribbean spiny lobster, and as they attract divers and snorkelers from all over the world. Coral reefs further play a critical role in the provision of the characteristically white sand that forms the region’s many highly valued beaches, and as shoreline protection to important coastal infrastructure.²⁷ It is estimated that the region’s reefs provide annual net benefits of USD \$391 million from fisheries, USD \$720 million from coastal protection, USD \$663 million from tourism/recreation and USD \$79 million from biodiversity value, delivering total annual benefits of at least USD \$1.85 billion.²⁸ The World Resources Institute (WRI) estimated in 2011 that more than 42 million people in the CLME⁺ region are dependent on coral reefs as a source of food and/or for their livelihoods.

Mangroves²⁹ can be found along sheltered coastlines of almost all the countries and territories of the CLME⁺; with an (roughly) estimated total mangrove cover of around 22.000 km² in the CLME⁺ region, globally important stands (in terms of their extension, and hence, their share in the total amount of the world’s mangroves) are found in Brazil, Mexico, Venezuela, Cuba, Colombia and Belize. Three species of mangrove, red, black and white, and one associated species, buttonwood, are common within the CLME⁺. As a provider of habitat, mangrove forests fulfil an essential role in critical stages of the life cycle of numerous economic and ecologically important marine species. In many areas of the CLME⁺ region, they are critical to the protection of coastal areas and coastal communities. Increasing recognition is further given to the role of mangrove stands as an important sink for carbon dioxide. The total current contribution to the Gross Domestic Product of mangrove stands in **Belize located within 1km of the coast (i.e. approx. 400 km²)** is estimated at around US\$174–\$249 million per year.³⁰ Studies in Suriname (approx. 1.150 km² of mangroves) have shown that 60-80% of all fish sold at coastal fish markets originated from mangrove areas.³¹

Sea grass beds (approx. 66,000 km² in the Caribbean alone [22]) provide important ecosystem services, such as the stabilization of sediment, and act as nursery grounds for (often, the juvenile stages of) economically important species. Six species of **seagrass** are known to exist within the

²⁵ Global Environmental Benefits (GEBS) were already briefly highlighted under Section 1.2.

²⁶ WRI. 2011. Reefs at Risk Revisited. Available from http://www.wri.org/sites/default/files/pdf/reefs_at_risk_revisited.pdf

²⁷ WRI. 2001. Reefs at Risk Revisited.

²⁸ Schuhmann, P.W. 2011. The Valuation of Marine Ecosystem Goods and Services in the Caribbean. CLME Project.

²⁹ The remaining mangrove forest areas of the world in 2000 was 137,760 km² spanning 118 countries and territories – this is wikipedia; seek original source

³⁰ Cooper E., L. Burke & N. Bood. 2009. Coastal Capital: Belize: The Economic Contribution of Belize’s Coral Reefs and Mangroves. WRI Working Paper. World Resource Institute. Washington DC. 53pp.

³¹ Finlayson and Moser, 1991

CLME⁺ with the most common being turtle grass (*Thalassia testudinim*)³². The direct monetary outputs are substantial since highly valued commercial catches (e.g. shrimp and queen conch) are dependent on these systems. Seagrasses provide protective shelter for many animal species and seagrass meadows are a source of food for manatees, turtles, some herbivorous fish, sea urchins and the economically and culturally very important Queen conch (*Strombus gigas*). The roots and rhizomes of seagrasses stabilise sediments and prevent erosion while the leaves filter suspended sediments and nutrients from the water column. Seagrass meadows are linked to other important marine habitats such as coral reefs, mangroves and salt marshes. Seagrass meadows provide ecosystem services that rank among the highest of all ecosystems on earth.

Together, coral reefs, mangroves and seagrass beds -which often occur in close proximity to each other-serve to enhance the productivity of the entire ecosystem, with reefs acting as breakwaters providing a low energy environment to allow mangroves and sea grass beds to flourish. In return, seagrass beds and mangroves act as a barrier to excessive nutrients and sediments entering the reef environment.³³

Coastal lagoons/wetlands

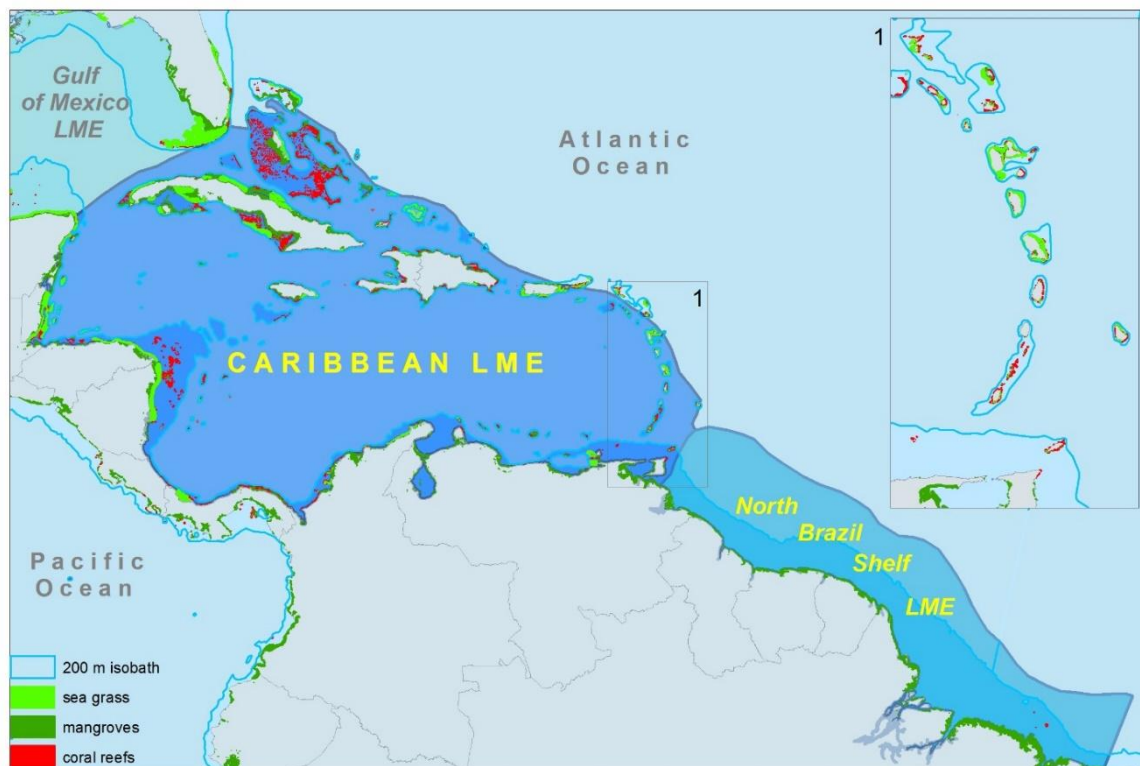


Figure 3 Approximate distributions of the 3 key ecosystem types in the CLME⁺³⁴

³² CARSEA 2007. Caribbean Sea Ecosystem Assessment (CARSEA). A sub-global component of the Millennium Ecosystem Assessment (MA), J. Agard, A. Cropper, K. Garcia, eds., Caribbean Marine Studies, Special Edition, 2007. 104 pp

³³ A.R. Harborne, P. J. Mumby, F. Micheli, C. T. Perry, C.P. Dahlgren, K.E. Holmes and D.R. Brumbaugh. 2006. The Functional Value of Caribbean Coral Reef, Seagrass and Mangrove Habitats to Ecosystem Processes. Advances in Marine Biology. Volume 50. 133p.

³⁴ All features represented in the map are indicative only. The 200 m isobath is used as a rough indication of the possible extension of the "continental shelf" ecosystem. This map is intended to be informative only and is not suitable for legal or surveying purposes.

1.2.3.2 The Pelagic Ecosystem

A wide array of species – from small coastal pelagic fishes such as the four-wing flyingfish to large coastal and oceanic species including tunas, sharks, billfish, turtles and marine mammals – spend their full life cycle or part thereof in the pelagic ecosystem. Areas of high productivity in the pelagic zone are usually associated with coastal upwelling and ocean fronts.³⁵

Provisioning services of the pelagic ecosystem hence include provision of fish for commercial, recreational and subsistence fishing. One of the main regulatory services includes that of climate regulation. Supporting services provided by the pelagic ecosystem include commercial shipping and recreational navigation routes, habitat for fish, eggs and larval stages of a number of marine organisms, transport of eggs and larvae to feeding and recruitment grounds, provision of adult fish migratory pathways, as well as habitat support to emblematic components of global and regional biodiversity such as sea turtles, sea birds and marine mammals.³⁶

In the CLME⁺ region this ecosystem has acquired an increasingly important economic value for the fisheries sector, particularly as within the last decade(s), the decline of many reef and inshore fisheries, through overfishing, has resulted in the expansion of the large pelagic fishery in the region. Apart from Venezuela (and the USA, which has some catches in the western Tropical Atlantic), the major fishing countries for large pelagic resources of the CLME⁺ are in the Lesser Antilles, most of which are members of the Caribbean Regional Fisheries Mechanism (CRFM): Barbados, Grenada, Saint Lucia, and Trinidad and Tobago. Substantial catches of large pelagic species are also taken by Martinique and Guadeloupe. Over the period 2000 – 2009, CARICOM countries reported to ICCAT a total harvest of 135,226 tonnes of tuna, tuna-like and shark species.³⁷

Other important sources of revenue provided by the pelagic ecosystem include sport fishing. In Puerto Rico alone, the economic contribution of recreational bill fishing was estimated at approximately USD 4.75 million annually, with 200 jobs attributed to this activity.³⁸

Other pelagic species provide opportunities for tourism activities that are of fast-growing popularity among visitors in the CLME⁺: whale watching activities are known to take place in at least 14 of the CLME⁺ territories (Vail, 2005). Estimates for the Caribbean region derived from Hoyt (2001) and Hoyt and Hvenegaard (2002) suggest that nearly 89,000 people went whale, dolphin or porpoise watching in the Wider Caribbean in 1999, generating revenues in excess of US\$11 million.³⁹ More recent values from Alie (2008) suggest that up to 568,000 individuals engaged in Caribbean whale watching in 2006, generating nearly US\$23 million in revenues. Recreational diving with sharks in the Bahamas (reef/pelagic ecosystem) has been estimated to have generated US\$78 million in revenue in 2007

³⁵ CLME Regional TDA

³⁶ Tietze, U., and Singh-Renton, S. 2012. Strategic Action Programme for the Effective Governance and Management of Large Pelagic Fisheries in the Caribbean Large Marine Ecosystem (CLME). *CRFM Technical & Advisory Document*, No. 2012 / 15. 40p.

^{37,38} Tietze, U., and Singh-Renton, S. 2012. Strategic Action Programme for the Effective Governance and Management of Large Pelagic Fisheries in the Caribbean Large Marine Ecosystem (CLME). *CRFM Technical & Advisory Document*, No. 2012 / 15. 40p.

³⁸ Schuhmann, P.W. 2011. The Valuation of Marine Ecosystem Goods and Services in the Caribbean. CLME Project.

³⁹ Hoyt, E. and Hvenegaard G.T., 2002. "A Review of Whale-Watching and Whaling with Applications for the Caribbean", *Coastal Management*, 30, 381-399.

alone⁴⁰, while Norman and Catlin (2007) report a value of whale shark tourism in Belize of US\$1.32 million.

1.2.3.3 *The Continental Shelf Ecosystem*

Within the CLME⁺, the continental shelf is particularly pronounced in the Guianas-Brazil sub-region (NBSLME), where it supports major shrimp and groundfish fisheries, including species of major commercial value such as red snapper and seabob shrimp. Other countries within the CLME⁺ region with important shrimp and groundfish fisheries include: Panama, Nicaragua, Belize and Jamaica. There are also lesser fisheries taking place in the continental shelf ecosystem, such as fisheries for sharks, and for shelf-based schooling pelagic resources such as mackerels and jacks. However, unlike the reef and the pelagic ecosystem, as a distinct ecosystem the continental shelf has not been the focus for many economist working on ecosystem valuations.

Although ecosystem types/habitat types such as coral reefs, mangroves and seagrass beds will generally be located within the continental shelf area, most of the continental shelf ecosystem will generally be comprised of shallow and soft-sloping (0 to generally ± 200 m depth) sandy or muddy bottoms. Other habitats that are usually found to be associated with the continental shelf include beaches, tidal plains, saline and sweet marches, estuaries, deltas and flood plain forest.⁴¹

The transboundary nature of the continental shelf ecosystem is much more pronounced in the area of the NBSLME than it is in the CLME.

The continental shelf ecosystem is the CLME⁺ ecosystem where interactions among stakeholders of the different marine resources-based sectors, such as marine transportation, offshore energy, fisheries and marine-related tourism could potentially increase most, and threaten the sustainability of the goods and services provided by this ecosystem.⁴²

Despite the critical importance to human societies in the CLME⁺ of the different marine ecosystems and ecosystem/habitat types described in this section, many of these systems are under serious threat from numerous human pressures, including overfishing, habitat destruction and community modification, pollution, and climate change. These threats are further described under Section 1.3.1..⁴³

1.2.3.4 *Key stakeholder groups*

The marine environment of the CLME⁺ is important to a vast number of people, both within and outside of the region, and pertaining to a variety of different stakeholder groups. Some of these major groups, and their approximate representativeness in origin and numbers (rough estimates), are given in the table below.

⁴⁰ Cline, W. 2008. "Shark diving overview for the islands of the Bahamas". Nassau, Report of the Bahamas Ministry of Tourism. Nassau, Bahamas: Cline Marketing Group.

⁴¹ FAO. 2013. CASE STUDY ON SHARED STOCKS OF THE SHRIMP AND GROUND FISH FISHERY OF THE GUIANAS-BRAZIL SHELF Assessment studies CLME Case Study on Shrimp and Groundfish - Report. No. 9. Rome, 99 p.

⁴² CLME Regional TDA

⁴³ Waite, R., et al. 2014. Coastal Capital: Ecosystem Valuation for Decision Making in the Caribbean. Washington, DC: World Resources Institute. Accessible at: <<http://www.wri.org/coastal-capital>>.

Stakeholder type	Primary Stakeholders	Secondary Stakeholders
Governments and (inter)governmental organizations	<ul style="list-style-type: none"> -The 26 national governments of the sovereign CLME⁺ States; their regional and local governments -The 19 local governments and 4 “home governments” of the dependent territories -the different regional (political) integration mechanisms 	<ul style="list-style-type: none"> -the different IGOs with a mandate related to the marine environment -The governments of the many other countries (ex-region) with a stake in the marine environment of the CLME⁺
Civil Society	<ul style="list-style-type: none"> -120 million people living within 100km from the CLME⁺ -42 million people dependent on coral reefs for food/livelihoods -Subsistence fishing and subsistence/livelihood support, “invaluable” -native Non-governmental organizations (NGOs) 	<ul style="list-style-type: none"> -global seafood consumers(XXX ton exported from the CLME) -global visitors (stay-over tourists, 25 million/yr) -global NGOs <i>-the 7 billion people on earth that somehow benefit from the CLME⁺'s contribution to global ecological processes</i>
Private Sector	<ul style="list-style-type: none"> - The fishing sector (almost 4 million regional jobs;export earnings of USD 1,2 billion annually) -The tourism industry (XXX regional jobs, worth XXXXX annually) -The shipping & logistics sector (<i>no information obtained</i>) -The energy (oil & gas) sector (<i>no information obtained</i>) 	<ul style="list-style-type: none"> -Global seafood sector (importers) -other international markets for products originating from the CLME⁺
Academia		

More comprehensive assessments are not available to date.

1.2.4 Existing political commitments and declarations of intention (DoI)

Several global political commitments and declarations of intentions (DoI) relative to the sustainable use, management and protection of the marine environment and its resources have been subscribed by CLME⁺ countries. This is reflected, amongst others, in the ratification by CLME⁺ countries of the following global and regional Treaties and Conventions (Table ??).

1.2.4.1 Commitments and DoIs of CLME⁺ countries under global Treaties and Conventions

- **United Nations Convention on the Law of the Sea (UNCLOS)**

To date, most CLME⁺ countries have ratified the 1982 **United Nations Convention on the Law of the Sea (UNCLOS)**. UNCLOS came into force in 1994 and provides a framework agreement for the governance of maritime issues, including those related to the delineation of maritime boundaries. It defines the rights and responsibilities of nations in their use of the world's oceans, and establishes guidelines for businesses, the environment, and the management of marine natural resources, with the aim of lessening the risk of international conflict and enhancing stability and peace. It is a critically important framework in a region such as the CLME⁺ where States are in close proximity to each other and where many economically important marine resources (incl. ecosystems/habitats and fish species) are highly transboundary in nature. Under UNCLOS Article 63⁹, States that share fish stocks are also legally obligated to collaborate in its management.

- **FAO Compliance Agreement, UN Fish Stocks Agreement and FAO Code of Conduct**

The **Agreement for the Implementation of the Provisions under UNCLOS relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (1995 UN Fish Stocks Agreement)** entered into force in 2001. By signing on to this agreement, CLME⁺ signatories agree to the principle of international cooperation in the management of these fish stocks.

The **Agreement complements the 1993 FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (1993 FAO Compliance Agreement)**, through which signatory CLME⁺ States agree to follow specific measures for fishing on the high seas.⁴⁴

Although voluntary the **FAO Code of Conduct for Responsible Fisheries** provides a reference framework for the development of comprehensive and integrated policies for improved fisheries management and food security. The Code sets out the principles and international standards of behaviour for responsible practices with a view to ensuring the effective conservation, management and development of living aquatic resources, with due respect for the ecosystem and biodiversity. The recently adopted **Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication**, a complement to the Code of Fisheries, seeks to enhance the contribution of small-scale fisheries to food security and nutrition and to support the progressive realization of the right to adequate food through empowering small-scale fishing communities to participate in decision-making, enjoy their human rights, and assume responsibilities for sustainable use of fishery resources.

⁴⁴ FAO. 2014. <http://www.fao.org/fishery/topic/13701/en>

- **Convention on Biological Diversity (CBD)**

Most CLME⁺ countries have also ratified the **Convention on Biological Diversity** (CBD; UN Conference on Environment and Development (UNCED), Rio de Janeiro). As a comprehensive, binding agreement, the CBD requires signatories to develop and implement national strategies for the sustainable use and protection of biodiversity. At the 10th meeting of the Conference of Parties (COP), held in Nagoya, Aichi Prefecture, Japan, a Strategic Plan for Biodiversity (including the “Aichi Biodiversity Targets”) was adopted for the period 2011-2020. Aichi Biodiversity Target 17 states that **National Biodiversity Strategies and Action Plans (NBSAPs)** are the principal instruments for implementing the Convention at the national level, and requires countries to (i) prepare a national biodiversity strategy (or equivalent instrument), and to (ii) ensure that this strategy is mainstreamed into the planning and activities of all those sectors whose activities can have an impact (positive and negative) on biodiversity.

Table 2: Aichi Targets of particular relevance for the marine and coastal environment of the CLME⁺

Aichi Target #	Target description	Target date
17	Countries have developed and adopted NBSAPs	2015
5	Rate of loss of natural habitats are halved	2020
6	Adoption of ecosystem based approaches and that all fisheries are harvested sustainably	
8	Pollution has been brought to levels not detrimental to ecosystem function and biodiversity	
9	Invasive species are managed and brought under control	
11	10 per cent of coastal and marine areas are conserved through effectively and equitably managed, ecologically representative and well-connected systems of marine protected areas (MPAs) and other effective area-based conservation measures	
12	Extinction of threatened species prevented	
14	Ecosystems that provide essential services, contribute to livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable	

- **RAMSAR Convention**

The majority of CLME⁺ countries are also a signatory to the Convention on wetlands of international importance (Ramsar Convention). The “*Ramsar Convention*”(1971) is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. Wetlands under the RAMSAR convention include coastal ecosystems such as mangroves, shallow coral reefs and coastal lagoons. The Conference of the Parties (COP) generally meets each 3 years, to approve the triennial work plan.

Other relevant global agreements that encourage the cooperation of States in the sustainable management of their marine resources include Agenda 21, the Johannesburg Plan of Action (JPOA), Rio+20, the Millennium Development Goals (MDGs), Barbados Programme of Action (BPOA), Mauritius Strategy (MSI) for the further Implementation of the BPOA, and Global Programme of

Action for the Protection of the Marine Environment from Land Based Activities (GPA).+ forthcoming
SDGs

1.2.4.2 Commitments and Dols of CLME+ countries at theregional level

- **Cartagena Convention**

The ***Convention for the Protection and Development of the Marine Environment in the wider Caribbean Region (the “Cartagena Convention”)*** entered into force in 1983. It is a comprehensive, umbrella agreement. At the level of the wider Caribbean, it currently provides the only legal framework for cooperative action for the protection and development of the marine environment. By signing on to the Convention, States agree to adopt measures to prevent, reduce and control pollution. States are also required to take measures to protect and preserve fragile ecosystems and habitats, as well as threatened species.⁴⁵The Convention is supplemented by three Protocols: the Specially Protected Areas and Wildlife (SPAW) Protocol, the Land Based Sources of pollution (LBS) Protocol, and the Oil Spills Protocol. Updated ratification levels of the Convention and its protocols are available from <http://www.cep.unep.org/>. Contracting parties are given in the table below.

The Cartagena Convention is not the only Multilateral Environmental Agreement applicable in the region. Other applicable agreements include the Convention on Biological Diversity, MARPOL 73/78, the Basel Convention and others. However, its regional area of application makes it an important complement to other, global agreements.

The “wider Caribbean Region” (wCR), as defined under the Cartagena Convention, corresponds approximately to the areas covered by the Gulf of Mexico and Caribbean LMEs (GoMLME and CLME, resp.)⁴⁶. As such, it overlaps substantially, but is not identical to the area covered by the CLME+ Project and SAP, which cover both the Caribbean (CLME) and North Brazil Shelf LME (NBSLME), but exclude the GoMLME.

⁴⁵ Available from: <http://www.cep.unep.org/cartagena-convention>

⁴⁶ The Convention covers the marine environment of the Gulf of Mexico, the Caribbean Sea and the areas of the Atlantic Ocean adjacent thereto, south of 30° north latitude and within 200 nautical miles of the Atlantic coasts of the States referred to in article 25 of the Convention

Table 3 Country ratification/acceptance/accession of global and regional MEAs with relevance to transboundary living marine resources in the CLME⁺ Region(x = ratification, s=signed, as = accession)(data in the table reflect status on XX/XX)

Countries	CBD	UNFCCC	UNCLOS	UN Fish Stocks Agreement	FAO Compliance Agreement	MARPOL 73/78 (Annex I/II)	MARPOL 73/78 (Annex III)	MARPOL 73/78 (Annex IV)	MARPOL 73/78 (Annex V)	MARPOL Protocol 97 (Annex VI)	Cartagena Convention	SPAW Protocol	LBS Protocol	CITES	RAMSAR
Antigua and Barbuda	x	x	x			x	x	x	x	x	x		x	x	x
Aruba															
Bahamas	x	x	x	x		x	x		x	x	x		x	x	x
Barbados	x	x	x	x	x	x	x	x	x	x	x	x		x	x
Belize	x	x	x	x		x	x	x	x	x	x		x	x	x
Brazil	x	x	x	x	x	x	x	x	x	x				x	x
Colombia	x	x	s			x	x	x	x		x	x		x	x
Costa Rica	x	x	x	x							x			x	x
Cuba	x	x	x			x			x		x	x		x	x
Curacao															
Dominica	x	as	x			x	x		x		x			x	
Dominican Republic	x	x	x			x	x	x	x		x	x		x	x
France	x	x	x	x		x	x	x	x	x	x	x	x	x	x
Grenada	x	x	x								x			x	x
Guatemala	x	x	x			x	x	x	x		x			x	x
Guyana	x	x	x			x	x	x	x		x	x	x	x	
Haiti	x	x	x												
Honduras	x	x	x			x			x					x	x
Jamaica	x	x	x			x	x	x	x	x	x			x	x
Mexico	x	x	x		x	x			x		x			x	x
Netherlands	x	x	x	x		x	x	x	x	x	x	x		x	x
Nicaragua	x	x	x			x	x	x	x		x			x	x
Panama	x	x	x	x		x	x	x	x	x	x	x	x	x	x
Saint Kitts and Nevis	x	x	x		x	x	x	x	x	x	x			x	
Saint Lucia	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
St. Vincent and the Grenadines	x	x	x	x		x	x	x	x	x	x	x		x	
Suriname	x	x	x			x	x	x	x					x	x
Trinidad and Tobago	x	x	x	x		x	x	x	x		x	x	x	x	x
United Kingdom	x	x	x			x	x	x	x	x				x	x
United States of America	s	x		x	x	x	x	x	x	x	x	x	x	x	x
Venezuela	x	x				x	x	x	x		x	x	x	x	x

1.2.4.3 Global DoI on the Caribbean Sea

Through the United Nations Resolutions A/RES/61/197 and A/RES/67/205 “**Towards the sustainable development of the Caribbean Sea for present and future generations**”, the Caribbean Sea is recognized as an area of unique biodiversity and a highly fragile ecosystem that requires relevant regional and international development partners to work together to develop and implement regional initiatives to promote the sustainable conservation and management of coastal and marine resources.

Through its adoption by the UN General Assembly in 2012, the resolution offers a high-level and up-to-date common basis upon which Caribbean States can take concerted action among themselves, and upon which they can enlist global co-operation, in an effort to meet the objectives of better long-term management of the ecosystem.

1.3 Baseline Analysis

1.3.1 Threats to the CLME⁺

Despite their importance, in the CLME⁺ many coastal and marine ecosystems and their sustained human uses are under threat from numerous pressures, including overfishing, pollution, habitat destruction and community modification, and climate change.⁴⁷

Direct and indirect human pressures on the marine environment in the CLME⁺ have grown exponentially over the past decades. As a consequence, the capacity of the marine ecosystems to provide the goods and services that are so critical to the region's livelihoods, sustained socio-economic development and well-being has become increasingly impacted by this multitude of human activities, exploitation and consumption patterns, and management decisions.

Transboundary Diagnostic Analyses (TDAs) conducted under the foundational capacity building *CLME Project* identified three inter-linked, key environmental problems with severe socio-economic impacts across the CLME⁺ region and beyond: (i) **unsustainable fisheries**, resulting in over-exploited and collapsing fish stocks; (ii) **habitat degradation** and **community modification**; and (iii) marine **pollution**. It is recognised that in the absence of mitigation and adaptation measures, the impact of these problems will become further exacerbated as a consequence of **climate change** and associated sea-level rise, leading to a potentially profound environmental-economic crisis in the CLME⁺ region by mid-century, if not earlier.

1.3.1.1 Unsustainable fisheries

Available data –even when often very limited- on catch and associated effort, together with data on biological indicators, reveal overall high exploitation levels of marine fishery resources. This has led to the stocks of many economically important species becoming fully fished or over-exploited in the region. The problem of the unsustainability of fisheries and fishery practices in the region originates from a multitude of direct causes including the over-harvesting of target stocks and the impacts of fishery activities on fish species, size groups and/or life stages not directly targeted by the fishery itself (e.g. “bycatch”; the use of destructive or “harmful” practices or gear that leads to habitat degradation/ destruction, etc.). This is evidenced by the reduction of total fishery catch by CLME countries within FAO Area 31 (“Western Central Atlantic”) from approximately 1.79 million tonnes in the late 1990s to about 1.25 million tonnes in 2010⁴⁸. Anecdotal information provided by stakeholders suggest declining catch per unit effort (CPUE) trends throughout many fisheries in the region, with fishers commonly reporting the need to fish further offshore and for longer periods of time in order to catch the same amount that they caught in times gone by.⁴⁹ The specific nature and direct causes of the problem and the required on-the-ground management solutions may vary

⁴⁷Waite, R., et al. 2014. Coastal Capital: Ecosystem Valuation for Decision Making in the Caribbean. Washington, DC: World Resources Institute. Accessible at: <<http://www.wri.org/coastal-capital>>.

⁴⁸ Statistics from FAO

⁴⁹CRFM, 2013. Regional Strategy on Monitoring, Control and Surveillance to Combat Illegal, Unreported and Unregulated Fishing in the CARICOM/CARIFORUM Region. CRFM Technical and Advisory Document No. 2013/11. 73p.

depending on the ecosystem type, the species being fished, the type of fishery,⁵⁰ and/or the gear being deployed.

It is perceived by regional stakeholders that Illegal, Unreported and Unregulated (IUU) fishing is a particularly important threat to the sector, and is a key contributor to social injustice and to the unsustainability of fisheries in the CLME⁺. The scope and magnitude of the IUU fishing problem in the region is not well known, but encompasses fishing and related activities by both nationals and foreign fishers in waters under national jurisdiction and on the adjacent High Seas. It is accentuated by an inadequate institutional framework and limited financial and human capacity to monitor and enforce the existing regulations, combined with a lack of awareness and/or access to viable legal alternatives of decent work⁵¹.

IUU fishing has been identified as a major threat to, among others, the economically important spiny lobster, queen conch and shrimp fisheries. This can be illustrated by the practical example of Jamaica, where, reported values indicate that approximately 400 tonnes of lobster are produced in the country annually, whilst conservative figures suggest that twice this amount is fished illegally. In this particular case alone, the resulting estimated loss in annual revenue for the country already amounts to USD\$ 26 million/yr.⁵²

There are increasing reports of IUU fishing being linked and/or associated to other illegal activities such as human trafficking and the trade in contraband narcotics. This further complicates this issue, making it necessary that it is addressed from a multi-sectoral perspective.

1.3.1.2 *Habitat degradation and modification of ecological community*

Degradation and/or destruction of key marine habitats is a severe problem across the region, with the integrity of a number of tropical marine habitats threatened by physical destruction and/or changes to their ecology, resulting in a reduced provision, or even a total loss of ecosystem goods and services.

Coastal habitats within the reef and continental shelf ecosystems of the CLME⁺ are particularly subject to the impacts from a suite of anthropogenic factors: coastal development, overfishing and destructive fishing methods, irresponsible tourism, mining, oil and gas exploration, and marine and land-based sources of pollution (e.g. industrial and wastewater discharges, agrochemicals, and storm runoff), and the introduction of invasive species. Deep sea habitats are most likely also affected, but evidence on the level of impacts within the CLME⁺ is not available at present.

Increases in the sea surface temperature and acidification, a consequence of climate variability and change, hold the potential to cause further damage to many of these habitats.

According to the World Resource Institute (WRI), 75 percent of the region's **coral reefs** are at risk from overfishing and pollution (Figure 4). Overfishing caused steep reductions in the populations of

⁵⁰ e.g. small-scale, industrial, recreational

⁵¹ According to the International Labour Organisation ILO, Decent Work involves opportunities for work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organize and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men.

⁵² CRFM, 2013. Regional Strategy on Monitoring, Control and Surveillance to Combat Illegal, Unreported and Unregulated Fishing in the CARICOM/CARIFORUM Region. CRFM Technical and Advisory Document No. 2013/11. 73p.

herbivores, especially large parrotfishes, which are the most effective grazers on Caribbean reefs. It is now well understood that –often in combination with an excessive influx of nutrient from especially land-based sources- overfishing of important grazers such as the parrotfish, along with the unexplained disappearance in the early 1980s of the black sea urchin⁵³ (*Diadema Antillarum*, a well-known grazer of microalgae on reefs), has had dire consequences for many Caribbean reefs.⁵⁴



Figure 4 Source: WRI. 2011. Reefs at Risk Revisited

In addition to the threats posed to coral reefs from fishing, pollution and direct physical impacts from recreation, invasive species like the lionfish pose an additional threat to coral reef biodiversity and community structure. Lionfish was accidentally introduced into the Caribbean Sea in the mid-1980s, and can now be found throughout the entire Caribbean Sea and even adjacent areas of the Atlantic Ocean. The species has no known predators in the CLME itself, however it preys on a large variety of fish species, including ecologically and economically important species such as snappers, grouper and grunts. Through their potential to reduce the fish biodiversity (and thus recreational

⁵³ Although the cause of the *Diadema* disease and the White-band coral disease in the Caribbean have never been certified, there is evidence that suggest that their occurrence may be associated to unidentified pathogens from other regions, introduced through bulge water of ships entering the Caribbean Sea through the Panama Canal.⁵³

⁵⁴ Jackson JBC, Donovan MK, Cramer KL, Lam VV (editors). (2014) Status and Trends of Caribbean Coral Reefs: 1970-2012. Global Coral Reef Monitoring Network, IUCN, Gland, Switzerland

attractiveness) of coral reefs⁵⁵, the lionfish is another threat to the region's USD 2.1 billion dive tourism industry.

Not only coral reefs but also mangrove forest, seagrass beds and coastal wetlands are the subject of ongoing degradation in the CLME⁺. It is estimated that a quarter of the **mangrove forests** in the CLME region have been lost between 1980 and 2005 as a result of coastal development⁵⁶. Data on the degradation of other key marine habitats has not been obtained to date, although the perception of a general downward trend in the abundance and quality of these systems are widespread among stakeholders in the region.

In terms of the region-wide economic impacts of habitat degradation in the CLME⁺, estimates are currently available for the coral reef ecosystem, for which the annual loss in net revenues from tourism alone for the period between 2000 and 2015, due to the ongoing degradation of the region's reefs, has been estimated to range between USD \$100 - \$300 million/yr.⁵⁷

Even with the limited available data, it is clear that the combined problem of habitat degradation and ecosystem community modification severely impacts the tourism potential of the region, affects the sustainability of fisheries, and increases the vulnerability of coasts to extreme events and sea level rise.

Further, as has been illustrated through the practical examples given above, habitat degradation can typically not be seen as an isolated problem. Very often it will be closely associated to the other key problems identified for the CLME⁺, i.e. unsustainable fisheries and pollution (with climate change as a further aggravating factor).

1.3.1.3 Pollution

Sources of marine pollution in the CLME⁺ are linked to a high intensity and diversity of both land-based and marine activities: e.g. tourism, households, industry, agriculture, forestry, mining, shipping and exploration for oil and gas. Impacts range from biological, physical and chemical impacts (as pollution affects water quality, the abundance and quality of fishery products, and the overall health of marine habitats), to visual impacts that can severely affect the amenity value of the region. All these impacts have a negative effect on tourism, fisheries, public health and biodiversity. Climate change can further exacerbate the impacts of pollution, through changes in runoff patterns and decreased ecosystem health -which may in turn result in reduced resilience of ecosystems towards contaminants. Although pollution affects all three key ecosystems, its impacts are typically more evident along the coastal zone.

As a semi-enclosed Sea, and with its multitude of fragile ecosystems, it can be anticipated that the Caribbean Sea environment (3,3 million km²) is highly susceptible to the inputs of land-based pollution originating from the activities of the more than 100 million people that permanently live in the approximate 2,2 million km² of land that drains into the Caribbean Sea. The intensive shipping and cruising activities, and the tens of millions of annual visitors to the region are considered another important (potential) direct source of pollution.

⁵⁵ Waite, R. 2011. Lionfish Invasion Threatens Coral Reefs in the Atlantic and Caribbean
<http://www.wri.org/blog/2011/08/lionfish-invasion-threatens-coral-reefs-atlantic-and-caribbean>

⁵⁶ Waite, R., et al. 2014. Coastal Capital: Ecosystem Valuation for Decision Making in the Caribbean. Washington, DC: World Resources Institute. Accessible at: <<http://www.wri.org/coastal-capital>>.

⁵⁷ Reefs at Risk WRI

In addition to this, important freshwater and associated sediment and nutrient flows (and potentially pollutant flows) originate from major river basins such as the Amazon and Orinoco (NE South America) and enter into the marine and coastal environment of the NBSLME and –through the North Brazil Current- the CLME. Impacts from these river basins can be felt as far north as Saint Lucia.

Hence, pollution problems can be both local in nature, or affect vast expanses of marine environment and thus be highly transboundary – both from the perspective of its source area as well as from the perspective of the area of impact. Given the nature of certain pollution problems and the challenge they pose for many of the States and territories in the CLME⁺ (in particular the SIDS), solutions to these problems will require, or at least benefit from, a well-coordinated region-wide or transboundary approach.

Since the mid 1990's, there has been a noted improvement in sanitation within the region. However, there are still many communities within this region that have limited access to basic sanitation. This lack of infrastructure and ineffectual treatment practices increases the sewage discharge into coastal areas of the CLME⁺ causing risks to public health from direct contact with polluted water and the consumption of seafood with different degrees of contamination.⁵⁸ Increased nutrient discharge from wastewater directly or indirectly (e.g. through water courses) into the marine environment can also lead to eutrophication that can result in local dead zones and/or algal overgrowth of local coral reefs. Increased nutrient and sediment discharges can also originate from bad land use practices and, together with point source impacts, can ultimately lead to more widespread (although much more gradual, long-term) changes in trophic status.

In this sense, at the regional level, the impacts of sediment and nutrient discharges associated with poor land-use practices constitute one of the biggest, and –due to their distributed nature- very complex permanent threats to the marine environment in the CLME⁺.⁵⁹

⁵⁸ UNEP-UCR/CEP. 2010. Updated CEP Technical Report No. 33 Land-based Sources and Activities in the Wider Caribbean Region

⁵⁹ UNEP-UCR/CEP. 2010. Updated CEP Technical Report No. 33 Land-based Sources and Activities in the Wider Caribbean Region

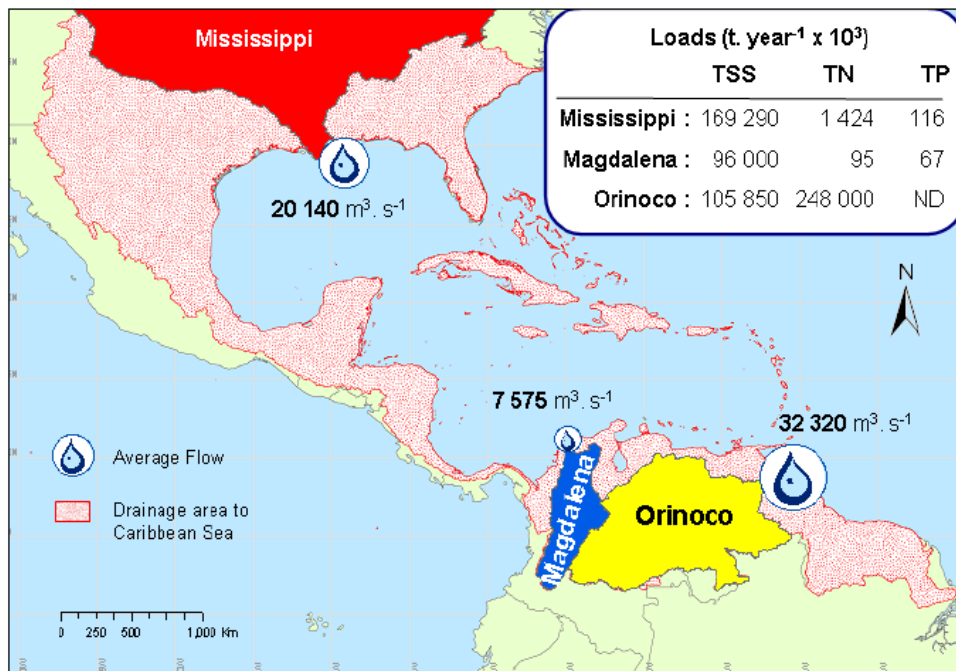


Figure 5 Freshwater discharge (m³/sec) and pollutant loads (ton/year) into the wider Caribbean region from the main terrestrial river basins (amended from UNEP TR33 Revised)

Marine litter is another significant pollutant issue for the CLME⁺, with a high negative impact on sensitive marine species (e.g. sea turtles) and on the region's multi-million dollar tourism industry. Beaches lined with garbage are a deterrent to many tourists who aim to visit the region for its glorious beaches and natural beauty. Marine litter also provides a medium for invasive species that could 'hitch' a ride for long distances into other regions. Plastics, and more specifically micro-plastics are becoming a growing concern, as there is mounting evidence of toxic plastic pellets entering the food-web, with potentially important negative implications for major, economically important fisheries in the CLME⁺.

1.3.1.4 Climate variability and change

Significant impacts from climate variability and change are expected to be experienced in the coastal and marine environments of the CLME⁺ over the next decades. Sea level rise, increasing coastal water temperatures, ocean acidification, and increasing frequency and strength of extreme events such as tropical storms, hurricanes and droughts pose a significant threat to the region's coastal zones and maritime areas, and regional economies.

Although its effects on marine organisms have not been fully explored, ocean acidification is expected to be a limiting factor in the development of corals, as well as other organisms with calcium carbonate shells and exoskeletons.⁶⁰ With global CO₂ emissions continuing to rise, reef habitats and associated fauna are increasingly under threat.

Increasing sea surface temperatures can lead to widespread bleaching of coral reefs, which are already under threat from habitat degradation and pollution.

⁶⁰Leonard A. Nurse. The implications of global climate change for fisheries management in the Caribbean. *Climate and Development*, 2011; 3 (3): 228 DOI:10.1080/17565529.2011.603195

Without adequate mitigation and adaptation measures, cumulative losses to the coral reef ecosystem would be over USD \$900 million per decade in 2010, 2020 and 2030.⁶¹

Under a Business-as-Usual (BaU) scenario, it is estimated that the value of ecosystems goods & services in the CLME⁺ including those of recreational and tourism amenities, biodiversity protection, breeding zones for fish, and protection from storm surges, could fall to an estimated value of USD \$2.7 billion in 2050, down from USD \$64.7 billion in 2030.⁶² Cumulative losses to fisheries in the sub-region could be as much as USD \$13.3 million/yr from increased storm frequency alone, by 2050.⁶³

The high dependence of the CLME⁺ countries on the marine ecosystems and their associated living marine resources, combined with their high environmental vulnerability, underscores the importance of ecosystem conservation (and where applicable, restoration) and of the sustainable exploitation of associated living marine resources. This is even more the case in the context of a changing global climate (situation over which the countries of the region have little or no control), which will require that solutions to be implemented for sustainable ecosystem and resources management are screened for their robustness to the uncertainties associated with climate change, and for their contributions to enhanced overall resilience of the socio-ecological systems of the CLME⁺.

Ultimately, the level of impacts from all key environmental problems described above, will depend on the kind and level of mitigation and adaptation efforts that will be undertaken by the region in the next decade(s).

1.3.2 Root causes

As part of the TDAs⁶⁴ conducted under the CLME Project, Causal Chain Analyses (CCAs)⁶⁵ were developed to link the three key environmental problems (and their associated socio-economic impacts) described under Section 1.3.1 to their *direct*, *intermediate* and *root* causes.

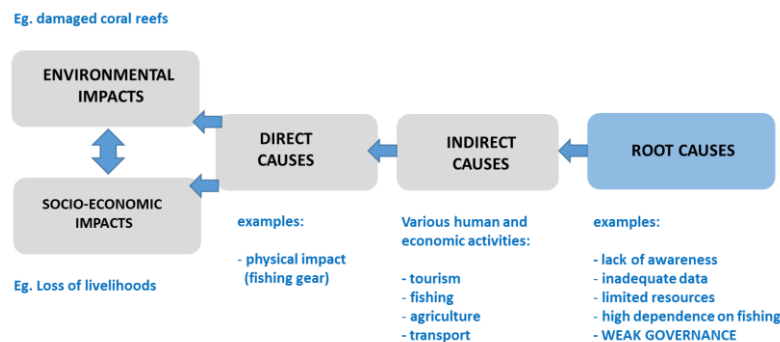


Figure X. Simplified Causal Chain

⁶¹ T. Lorde et al., 2013.

⁶² T. Lorde et al., 2013. An assessment of the economic and social impacts of climate change on the coastal and marine sector in the Caribbean. United Nations Economic Commission for Latin America and the Caribbean. 41p http://www.eclac.cl/portofspain/noticias/documentosdetrabajo/7/49707/Coastal_and_Marine.pdf

⁶³ Ibid

⁶⁴ <http://www.clmeproject.org/clmetdas2.html>

⁶⁵ <http://www.clmeproject.org/clmetdas3.html>

Under the CLME Project, and following the GEF's TDA/SAP approach, the importance of tackling the root causes of environmental degradation has been fully acknowledged. Whilst addressing direct causes can lead to results at the local-scale in the short-term, it is recognized that such an approach is not sustainable or cost-effective if at a wider regional level the root causes of the identified issues are not eradicated or controlled⁶⁶. Addressing root causes at the ecosystem level⁶⁷ will therefore be necessary in order to achieve region-wide and globally relevant, sustainable impacts and results.

The following seven cross-cutting root causes were identified:

- (i) ***weak governance (incl. legal and institutional frameworks);***
- (ii) ***limited human and financial resources;***
- (iii) ***inadequate (access to) data and information/knowledge;***
- (iv) ***inadequate public awareness and involvement;***
- (v) ***inadequate consideration of the value of ecosystem goods and services;***
- (vi) ***population and cultural pressures;***
- (vii) ***trade and external dependency***

Dealing with these root causes constitutes a core element of the long-term solution for the key environmental and associated socio-economic problems in the CLME⁺ (Section 1.3.3), and has been given due consideration in the development of the regionally endorsed *CLME⁺ Strategic Action Programme (SAP)*. As a project that will catalyse the implementation of this SAP, eliminating root causes of environmental degradation has been given high priority in the development of the project's strategy (Section **Error! Reference source not found.**), and constitutes the backbone of the LME⁺ Project's Logical Frame (LogFrame; see Section 3).

1.3.3 Long-term solution

1.3.3.1 Long-term vision for the CLME⁺

Previous sections in this Project Document highlighted the strong dependence of sustained economic growth, social well-being and political stability in the CLME⁺ region (and beyond) on the provision of marine ecosystem goods and services.

Within the region, broad consensus has now been achieved on: the need to implement an ecosystem approach (EBM/EAF) for sLMR management; the critical importance of addressing root causes of environmental degradation; and the necessity of mainstreaming climate change mitigation and adaptation considerations across all sectors with a stake in the marine environment. This consensus has been largely achieved through the foundational capacity building support provided by the GEF during the period 2009-2014.

In this same context, the following *long-term Vision* for the marine environment in the CLME⁺ was developed and adopted:

⁶⁶ e.g. field campaigns to reduce illegal fishing implemented by a single country may not be cost-effective and may not yield the desired results if regional and/or local root causes such as *insufficiently harmonized legal frameworks* and the *lack of alternative livelihoods* remain unresolved.

⁶⁷ e.g. at the scale of the *fishery ecosystem, or at the LME-level*

“Healthy marine ecosystems that are adequately valued and protected through robust, integrative and inclusive governance arrangements at regional, sub-regional, national and local levels, which in turn effectively enable adaptive management that maximizes, in a sustainable manner, the provision of goods and services in support of enhanced livelihoods and human well-being” (CLME+ SAP, p. 17)

This long-term vision for the CLME+ acknowledges that, in a context of increasing environmental pressures and demands for natural resources - exacerbated by climate change and population growth - a sustained provision of goods and services will require substantial improvements in the coordination of resources use among the different societal groups with a stake in the marine environment.

Awareness has consequently grown within the region that urgent steps must be taken towards the implementation of an integrative and well-coordinated and ecosystem-based, multi-level governance model for the adaptive management and sustainable use of marine resources across the CLME+. This recognition is in line with the progressive global acceptance of the fact that *“improved governance is urgently required if increasing economic activity in the ocean is to be effectively managed and environmental degradation halted and reversed”* (World Ocean Summit, 2014 – The Economist).

Interactive governance emphasises the solving of societal problems and the creation of societal opportunities through interactions among civil, public and private actors. Such an interactive and collaborative approach will be essential if the above goal and a transition to a blue[/green] economy in the region are to be achieved. Increased involvement of these different societal actors in formal governance processes will therefore be of critical importance. An integrated regional governance framework should thus involve all sectors with a stake in the marine environment (e.g. fisheries, tourism, shipping, oil and gas, etc.)

1.3.3.2 Catalyzing the implementation of the long-term solution

By adopting the long-term vision, the States and territories in the CLME+ region recognize that establishing ocean governance and management arrangements within the next 20 years will be essential for the restoration and maintenance of the health of the marine environment and of the associated societal benefits. To assist the region in the implementation of the actions and measures (i.e. the *long-term solution*) that will be required to achieve this vision, support was provided by the GEF for the development of a regional Strategic Action Programme (SAP).

In this context, and in recognition of the complexity of the CLME+ region and the existing constraints in terms of financial, technical, human and organisational capacity, a progressive, step-wise approach is being pursued. A 10-year “CLME+ Strategic Action Programme” has been developed that will contribute to long-term vision, by putting an initial focus on the integration of the approaches for the **management of fisheries** with those for the **protection of the marine environment**.

The SAP development process followed the conceptual approach depicted in Figure X: following the definition of the long-term vision for the CLME+ region, the over-arching *Ecosystem Quality* and associated *Societal Benefits Objectives* were identified as a first step during the SAP development process. The root causes of environmental degradation identified under the TDAs (Section 1.3.2) were then used to define the overall *Directions* for the *Strategies* and *Actions* under the SAP. With the adoption of the ecosystem approach (EBM/EAF), and giving due consideration to both the existing governance arrangements in the CLME+ (Section 1.3.5) as well as the 3 key transboundary environmental problems (Section 1.3.1), priority *Actions* for the enhancement of governance

arrangements, of institutional and stakeholder capacity, and for management actions in the field, were then structured under a total of 6 *Strategies* and 4 *Sub-Strategies* (Figure ??).

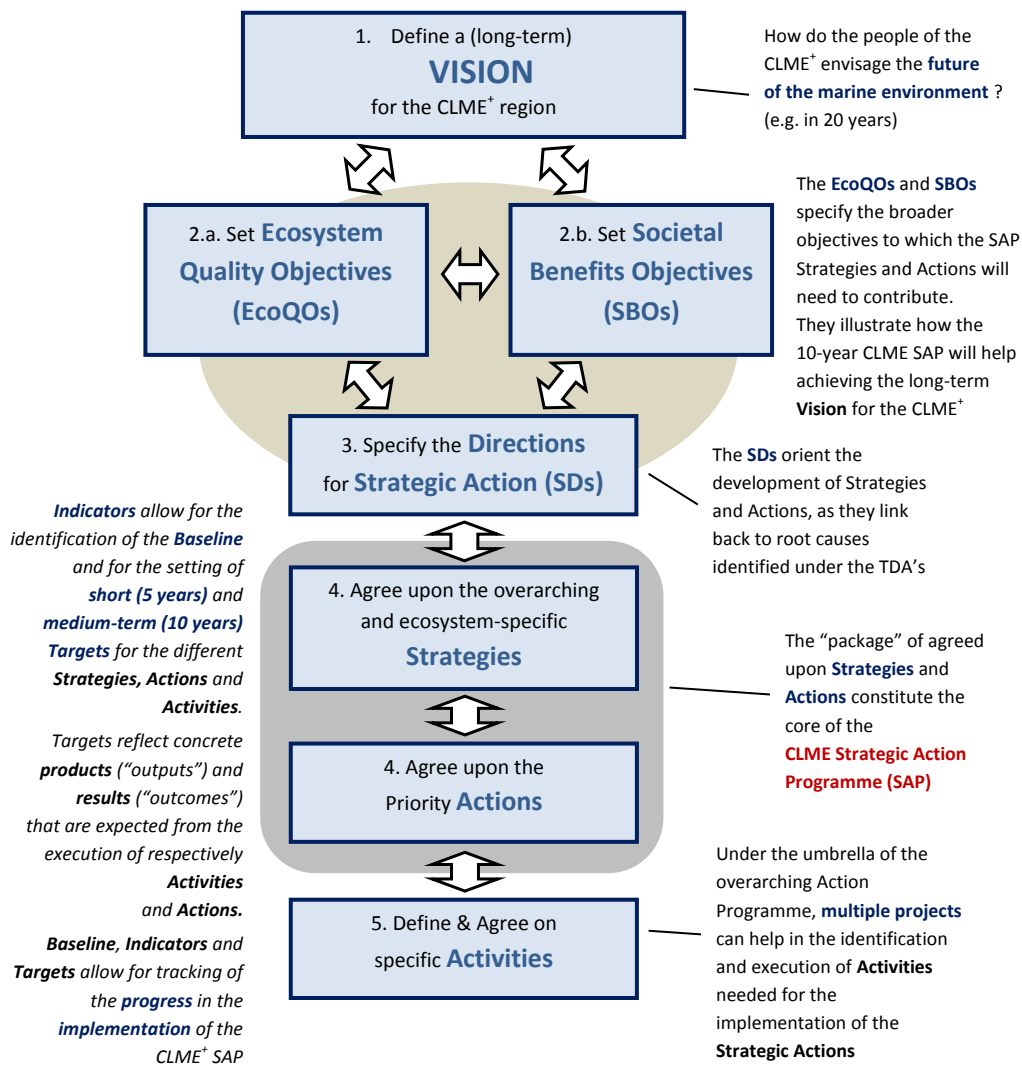


Figure: the SAP development & implementation process in 5 steps

Through the SAP, the countries of the region commit to the implementation of a comprehensive package of 6 coordinated Strategies and 4 Sub-Strategies, and a total of 77 priority Actions, with an initial focus **ongovernance and management of shared Living Marine Resources**.

At the overarching, LME level, the 3 main strategies under the SAP are:

(S1) Enhance the regional governance arrangements for the protection of the marine environment;

(S2) Enhance the regional governance arrangements for sustainable fisheries;

(S3) Establish and operationalise a regional policy coordination mechanism for ocean governance, with an initial focus on shared living marine resources;

In order to foster the adoption and implementation of EBM/EAF at the level of the 3 CLME⁺ “fishery ecosystem types”⁶⁸, 3 additional Strategies were incorporated under the SAP.

(S4) *Enhance the governance arrangements for ecosystem-based management of reefs and associated ecosystems (incl. sea grass beds, mangroves, reef slopes and coastal lagoons);*

(S5) *Enhance the governance arrangements for implementing an ecosystem approach for pelagic fisheries;*

(S6) *Implementing EBM/EAF of the Guianas-Brazil continental shelf, with special reference to the shrimp and groundfish fisheries;*

In addition to this, the CLME⁺ SAP contemplates 4 Sub-Strategies, focussing on fisheries of key economic and/or social importance in the region:

(S4A) *Enhance the governance arrangements for implementing an ecosystem approach for spiny lobster fisheries;*

(S4B) *Enhance the governance arrangements for implementation an ecosystem approach for queen conch fisheries;*

(S5A) *Enhance the governance arrangements for implementation an ecosystem approach for flyingfish fisheries;*

(S5B) *Enhance the governance arrangements for implementation an ecosystem approach for large pelagics fisheries;*

Both short-term (0-5 years) and medium-term (6-10 years) actions have been included under the SAP.

1.3.3.3 *The CLME⁺ SAP: an umbrella programme*

The political endorsement by the CLME⁺ countries in 2013⁶⁹ of this SAP now provides the region with a formal, broad integrative “umbrella” framework for action under which coordination, cooperation and information exchange among the many sLMR-related projects and initiatives that take place in the region can be achieved. The strategies and associated timeliness specified under the CLME⁺ SAP provide a roadmap that will help countries, regional organisations, multi-lateral and bilateral donors in their efforts to gradually expand capacities and knowledge, and strengthen the frameworks and arrangements for region-wide cooperation, coordination and decision-making.

As considerable resources have already been invested in a myriad of regional and sub-regional organisations, SAP strategies towards the proposed long-term solution for the CLME⁺ will contribute to the further strengthening of organisations that already successfully exercise leadership - largely within their existing geographical or thematic areas of responsibility. In line with their long-term mandate, [it is anticipated that these organizations will] [these organisations are expected to] assume key responsibilities over the execution (and/or coordination) of key actions under the different strategies. Enhanced coordination and collaboration among organizations, arrangements, programmes, projects and initiatives will be critically needed, and was an important cross-cutting criterion used throughout the SAP development process.

⁶⁸ See Section 0

⁶⁹ By early 2014, 31 Ministers in 22 different countries had formally endorsed the CLME⁺ SAP

The SAP was therefore designed as an “umbrella programme”, not to be implemented through a single project, but rather as a reference framework and means to bring together the different stakeholders and projects and initiatives working in the CLME⁺.

The GEF co-funded CLME⁺ Project (2015-2019) will contribute to creating the enabling conditions for improved and sustainable sLMR governance and management in the CLME⁺ region during the first 5 years of SAP implementation. At the same time, gradual expansion of both the scale of the actions and of the scope of the framework (e.g. by more fully integrating other productive sectors such as shipping and oil/gas) can then be planned, as additional awareness is being built and stakeholders – including the private sector and international or regional development banks - become increasingly involved.

1.3.4 Barriers to success

Geopolitical complexity/fragmentation of the CLME⁺ region lies at the basis of the highly transboundary nature of not only marine ecosystems and habitats and of the range of living marine resources and fish stocks, but also of the identified priority environmental problems.

With the people and economies of the CLME⁺ being so critically dependent on the goods and services provided by these threatened ecosystems and habitats, dealing successfully with both direct and root causes of these problems will require substantial expansion and enhancement of the gradually emerging, but still insufficient levels of coordination and collaboration among CLME⁺ countries and organisations with a stake in the marine environment⁷⁰.

With the limitations of human and financial resources in the region being recognized as an important root cause, the absence of transitory incremental funding and coordination support to kick-start SAP implementation would constitute a substantial barrier to catalyzing change in the region, and thus to achieving the CLME⁺SAP’s expected objectives, outcomes and outputs (including a progressive reduction, over the medium and long-term, of the levels of donor dependency for sLMR governance).

Climate change may offset the potential positive results of actions dealing with the priority issues described above. Absence of the mainstreaming of climate change adaptation in sLMR governance decisions and management actions would therefore constitute an important potential barrier to achieving sustainable outcomes from SAP implementation.

Insufficient communication, co-ordination and information exchange among the myriad of sLMR-related projects, activities and initiatives that are underway or planned within the CLME⁺ region constitutes an important additional barrier to achieving the societal and environmental benefits expected from such substantial investments.

⁷⁰Technical studies on sLMR governance conducted under the CLME Project have shown that management of marine ecosystems and their associated resources in the CLME⁺ has traditionally been conducted in a highly fragmented manner, with individual habitats or fish stocks assessed and managed separately, and with little consideration to preserving the overall ecosystem health

1.3.5 SAP implementation baseline: progress and gaps

In many parts of the region, considerable efforts have already been made, and are currently ongoing, to deal with the priority environmental problems and -up to a certain extent- their associated root causes (see also Sections 1.3.1 and 1.3.2). Notwithstanding this, substantial gaps remain to be filled if within the next 10 years substantial progress towards effective implementation of EBM/EAF is to be achieved.

(Sub-)Regional Fisheries Bodies have been created over the past decades, mostly with an advisory role. These include the *Western Central Atlantic Fisheries Commission* of FAO (FAO-WECAFC; 1973), which covers all CLME⁺ countries; the *Organisation of the Fisheries and Aquaculture Sector of the Central American Isthmus* (SICA-OSPESCA; 1995); and the *Caribbean Regional Fisheries Mechanism* (CARICOM-CRFM; 2002).

At the level of the wider Caribbean, the Caribbean Environment Programme (CEP) was established under UNEP in 19XX. However, the geographic scope of work of the CEP includes the Gulf of Mexico and Caribbean LMEs, but does not extend sufficiently down southwards⁷¹ to fully encompass the NBSLME. At the sub-regional level, the Central American Commission on Environment and Development (CCAD, 1989) has been established under SICA.

These and other existing and newly emerging governance arrangements in the CLME⁺ region are complemented by a myriad of programmes, projects and initiatives dealing with sLMR, both at the local, national and sub-regional levels.

These initiatives include projects to strengthen marine protected areas (MPAs) networks, and to support the sustainable financing of MPA management, as well as to control and curb the impact of invasive species, such as the lion-fish. Several Fisheries Improvement Projects (FIPs) are ongoing (e.g. Saint Lucia) and/or planned (e.g. Bahamas and Nicaragua). Initial stock taking assessments of current policies and practices to reduce and manage bycatch, discards, and other impacts of bottom/shrimp trawling on environment are being planned in a number of countries that undertake bottom/shrimp trawling. There have also been and continue to be initiatives that are seeking to enhance the capacity of regional and national fisherfolk organisation networks to participate in governance. A number of the initiatives being supported and/or implemented by countries and partner organisations within the CLME⁺ are now considering the inclusion of a small grants or a livelihoods component that promotes sustainable livelihoods at the community level through micro and small sized enterprises. Multiple attempts have been made to create data portals in support of decision-making for enhanced living marine resources management. Mangrove and coral reef restoration techniques have been trialled. Capacity building workshops on negotiation for government officials and the development of project proposals for both government personnel and civil society groups have been conducted. Monitoring, Control and Surveillance measures are being implemented, with varying degrees of success.

However, in many cases, the scale of these actions, together with inadequate coordination among initiatives, and the persistence of root causes to environmental degradation, have limited the overall scope, outcomes and sustainability of individual and cumulative success(es).

⁷¹ It does not include northern Brazil, which is part of the NBSLME

1.3.5.1 Regional multi-level governance framework

Especially from the 1970s onwards (Fig Xa), a diverse array of regional and sub-regional organisations started to emerge to address both the challenges and opportunities of ocean governance within the wider Caribbean. This evolution has also resulted in increased complexities and in some instances duplication of effort over time. Generally, specialized bodies to deal with environmental or fisheries matters were created at the sub-regional level as subsidiary bodies of the existing geopolitical integration mechanisms described under Section 1.2.2. Although many of these effects have assisted in the advancement towards transboundary coordination and resources management, the geopolitical focus in some instances resulted in a certain geographic “patchiness” of governance arrangements. Such patchiness could, in the absence of political willingness to achieve further coordination and integration, constitute an important barrier to successful implementation of the EBM/EAF approach.

As part of the TDAs undertaken under the first CLME Project, weaknesses in the governance arrangements was identified as one of the root causes hampering the full adoption of an ecosystem approach for shared living marine resources management in the region. Also under the CLME Project, a comprehensive analysis of the existing framework of global and (sub)regional institutions and organisations involved in Shared Living Marine Resources (sLMR) governance in the CLME⁺ was prepared by the *Centre for Resource Management and Environmental Studies (CERMES)*.⁷² At least twenty-five institutions/organizations have been identified as having a mandate on various aspects of living marine resource governance and management in the CLME⁺ (Figure ??). These include: intergovernmental organisations, regional bodies, NGOs and a small number of private sector organisations. Many of the organizations listed in Table Xb and XX are expected to assume a key role in the implementation of the CLME⁺ SAP.

⁷²Mahon, R., A. Cooke, L. Fanning and P. McConney. 2013. Governance arrangements for marine ecosystems of the Wider Caribbean Region. Centre for Resource Management and Environmental Studies, University of the West Indies, Cave Hill Campus, Barbados. CERMES Technical Report No 60.99p.

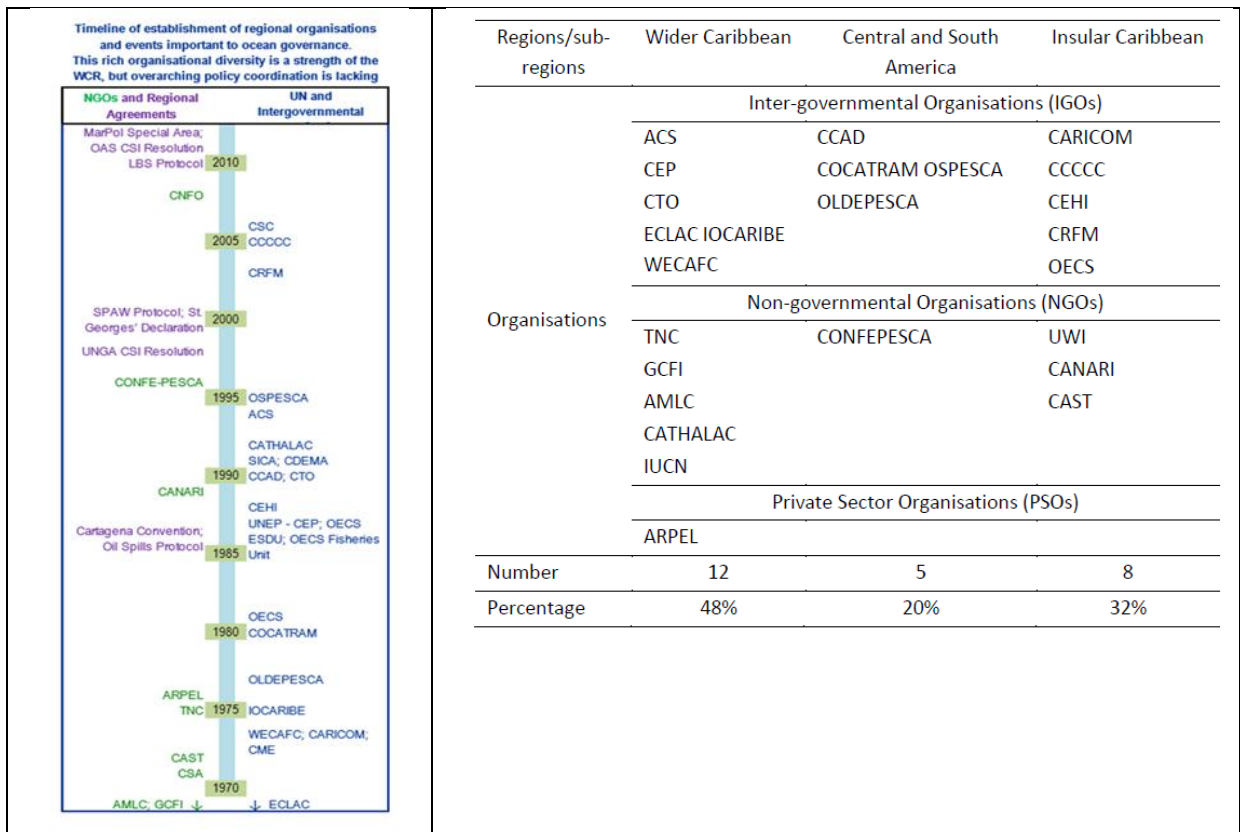


Figure X. (a) XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX; (b) XXXXX

The analysis however also highlighted important/critical gaps and missing linkages in the regional arrangements and processes. These gaps and missing linkages would now need to be addressed if successful ocean governance – with the adoption and full implementation of the EBM/EAF approach – is to be achieved.

CEP

The Caribbean Environment Programme of the United Nations Environment Programme (UNEP CEP) is managed by and for the countries of the wider Caribbean Region through the Caribbean Action Plan adopted in 1981. The Action Plan led to the 1983 adoption of the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention) and later the three protocols addressing specific environmental issues namely, oil spills, specially protected areas and wildlife and land-based sources and activities of marine pollution. The CEP consist of three main sub-programmes which include:

- Assessment and Management of Environment Pollution (AMEP)
- Specially Protected Areas and Wildlife (SPAW)
- Communications, Education, Training and Awareness (CETA)

Biannual workplans elaborated for these sub-programmes are developed during the meetings of the LBS and SPAW Conference of Parties and adopted during the Intergovernmental Meetings of the Cartagena Convention. Although, the SPAW and AMEP sub-programmes fall within the purview of the CEP, and therefore under the mandate of the Cartagena Convention, there has been very little effort at collaboration and coordination through the biannual workplans of the two sub-programmes in the past. Further, there has been recognition that issues pertaining to land-based sources of

pollution cannot be adequately addressed without the involvement and support of all countries that have major river basins that impact the habitats and living marine resources of the Caribbean Sea. In light of the foregoing, at the Fifteenth Intergovernmental Meeting (IGM) in 2012, Member States encouraged the Secretariat to:

- Explore, as feasible, further alignment of CEP Workplan activities with the relevant interventions for the CLME⁺ SAP, particularly those relevant to the AMEP and SPAW Programme Areas.
- Explore opportunities and needs for collaboration with Brazil in areas of relevance to the Cartagena Convention and its Protocols.⁷³

WECAFC

At the 15th Session of WECAFC (2014), Costa Rica confirmed its membership to the organisation which now covers 30 CLME⁺ countries and territories (incl. all GEF eligible States). The Bi-Annual Work Plan of the WECAFC (2014-2015) was clearly reflective of a mainstreaming of the relevant CLME⁺ SAP actions into the WECAFC Work Programme. Particularly with regard to the future of the WECAFC, the Commission concluded that for the time being the WECAFC shall continue to function as an advisory body. The Commission further recognized that -as recommended under the CLME⁺ SAP (Strategy 2)- the future role and mandate of the organisation, and its relationship with the sub-regional fisheries bodies (OSPESCA, CRFM,...) should be further assessed.⁷⁴

ECROP

The adoption in 2013 of the Eastern Caribbean Regional Ocean Policy (ECROP) by the Heads of Government of the Organisations of Eastern Caribbean States (OECS), makes it the first transboundary ocean policy agreement in the region. The ECROP *-with the ECROP and CLME⁺ SAP being complementary and mutually supportive-* provides the framework for enhanced coordination and management of ocean resources within the Eastern Caribbean. This sub-regional Policy and the associated 3-year Action Plan (2013-2016) are well aligned with the regionally approved 10-year CLME⁺ SAP (and vice versa). As part of the Action Plan, the OECS Member States with the support of the OECS Commission will, amongst others, (a) develop a marine research strategy that identifies key data requirements for decision making; (b) promote the adoption of ecosystem based management by its Member States; and (c) establish a network of marine protected areas.

CCCFP

The Draft Agreement on the Establishment of the Caribbean Community Common Fisheries Policy (CCCFP) was endorsed by the CRFM Ministerial Council in 2011. It will (once ratified): (a) govern the fisheries through establishment of measures for conservation, management, sustainable utilization and development of fisheries resources and related ecosystems; (b) build capacity amongst fishers; (c) optimize the social and economic returns from fisheries; and (d) promote competitive trade and stable market conditions.

CRFM-OSPESCA MOU and Joint Action Plan

At the *Third CARICOM-SICA Summit of Heads of State* (2011), Member States of both organizations reaffirmed the importance of the CARICOM-SICA relationship whilst at the same time recognising

⁷³ UNEP-CEP. 2012. Report of 15th Intergovernmental Meeting UNEP. (DEPI)/CAR IG.33/5

⁷⁴ FAO. 2014. Final Report 15th Session of WECAFC

the need to strengthen ties in areas of common interest. In light of this, the Heads instructed the CRFM and OSPESCA to elaborate and promote a joint plan of action for the responsible management of migratory fish stocks and the spiny lobster within the Caribbean Sea. They also directed a joint CRFM-OSPESCA Ministerial Meeting to strengthen collaboration between the two regional fisheries organisations for the improved conservation, management and sustainable development of their shared living marine resources.

Supported by the CLME Project, the first-ever *High Level CRFM-OSPESCA Meeting* was convened in September 2012 in Belize. During this monumental meeting the Ministers with responsibilities for Fisheries entered into a joint *Memorandum of Understanding (MOU) between both organizations*, to strengthen understanding and cooperation and promote and ensure the conservation and sustainable use of fishery and aquaculture resources in their member countries.

A *Joint Action Plan* developed and agreed upon by the meeting lists priority areas for improved cooperation and coordination between the 19 States that are members of either CRFM and/or OSPESCA⁷⁵. These priority areas include the research and management of fisheries of regional interest such as the spiny lobster and large pelagics. It also calls for the development of a joint regional plan on combating Illegal Unregulated and Unreported Fishing (IUU) through strengthened Monitoring Control and Surveillance (MCS) Systems.

Notwithstanding the tremendous step forward -towards a more ecosystem-based approach- that was taken by both organizations, it is important to point out that the need remains for additional expansion of the geographic scope of the cooperation and coordination agreement. Such expansion will be necessary given the fact that several of the target fish stocks of the Action Plan, and several of the problems that are to be dealt with under the plan, are also shared with CLME⁺ States which are not a member of any of the aforementioned sub-regional integration mechanisms.



⁷⁵ Only Belize is member of both organisms



Figure X. OSPECSA and CRFM Member States

IUU Fishing and MCS

The issue of IUU Fishing has been highlighted under Section 1.3.1 as a growing threat to both fish stocks, the ecosystem, human livelihoods and social justice in the region. Due to the nature of many of the fisheries in the CLME⁺, characterized by a large amount of artisanal/small scale boats with numerous landing sites, the traditional approach to combat IUU fishing has to be reconsidered. Numerous landing sites, open and *de facto* open access, the size of the fleet and the institutional limitations and challenges, and inadequate resources make the combat of IUU fishing in the artisanal fisheries sector more difficult compared to the traditional approach used with industrial fisheries. The critical importance of this issue is reflected in the 10-year OSPECSA Regional Fishery Policy (*Política de Integración de Pesca y Acuicultura en el Istmo Centroamericano*) adopted in 2005, and which contains an Application Strategy for Surveillance and Control of fishing activities. Under the Regional Policy, several actions were implemented and regional regulations adopted. However, gaps still persist with the Strategy which tended to focus primarily on enforcement and compliance, not taking into account other actions that could curb these issues.

Further, OSPECSA Member States have adopted a number of binding agreements that contain elements for addressing issues pertaining to IUU. The most recent binding agreement to be adopted is the Regulation to Prevent Deter and Eliminate IUU Fishing (Regulation OSP-08-2014). Under the regulation the sub-region is required to, amongst other things, prepare a Regional Plan of Action to Combat IUU Fishing, as well as create a Network for Monitoring, Control and Surveillance (MCS).

In 2010, CRFM States adopted the *Castries Declaration on Illegal, Unreported and Unregulated (IUU) Fishing*. Through the Declaration, CRFM Member States call for the adoption of a comprehensive and integrated approach to prevent and deter IUU Fishing. The Declaration also underscores the need to implement MCS schemes with a view to increasing cost-effectiveness of surveillance activities.

In an attempt to implement the Castries Declaration, in 2014 the CRFM, through its Ministerial Council meeting adopted a *Regional Strategy on Monitoring Control and Surveillance to Combat*

Illegal, Unreported and Unregulated Fishing in the CARICOM/CARIFORUM Region (MCS Strategy). Regional actions proposed in the Strategy reiterate the need for enhanced coordination, collaboration, integration and harmonisation of approaches as defined under the 2012 CRFM-OSPESCA Joint Action Plan, whilst proposed national actions focus more on strengthening national MCS capacity.

Notwithstanding the foregoing efforts by both CRFM and OSPESCA there is recognition, within the region, that in order to adequately address the issue of IUU Fishing; commitments, coordination and collaboration beyond the scope of the sub-regional geopolitical integration bodies will be required.

As such, at the 15th Session of WECAFC, which was held in Trinidad and Tobago in 2014, the Commission agreed to the establishment of a regional Working Group on Illegal, Unreported and Unregulated (IUU) fishing under which a regional approach towards addressing IUU could be articulated. Operationalization of this Working Group is however still pending at this stage.

1.3.5.2 *Protection and restoration of key habitats and associated fisheries*

The significance of the coral reef and associated habitats such as mangroves and seagrass beds as well as the threats to these ecosystems/habitat types have been detailed under Sections 0 and 1.3.1 respectively. Within the CLME⁺, coral reef ecosystems and associated habitats are critical to both the tourism and fisheries sectors and by extension, the livelihoods and well-being of coastal communities and Caribbean societies.

In an attempt to adopt a more ecosystem-based approach in the management of the marine environment in the wider Caribbean/CLME⁺, the Secretariats of the SPAW Protocol and WECAFC initiated communication regarding the possibility of collaboration on the sustainable management of a number of important (reef) fish species. Such support for improved coordination and collaboration on matters of mutual interest (e.g. regional management plans and support to WGs) was confirmed by the Commission at the 15th Session of WECAFC, and constitutes an important step from the traditional sectorial approach towards EBM/EAF.

Sub-regionally, in 2012, two organisations under the umbrella of SICA: OSPESCA and CCAD also entered into an MOU to work more closely together on matters pertaining to biodiversity, fisheries and the marine environment. Although not yet associated with a specific plan for joint action, this MoU reflects the clear intention of both organisations towards strengthened collaboration in the near future on matters –relating to the marine environment – that are of common interest. Strengthened coordination and collaboration between CCAD and OSPESCA will indeed allow the sub-region to move forward towards e.g. the implementation of EBM on the region's critically important reef ecosystem and its associated habitats (mangroves, seagrass beds...). These attempts at enhanced collaboration are consistent with, and can be seen as "early implementation" activities under Action 4.1 of CLME⁺ SAP Strategy 4.

In 2008, a number of the region's SIDS and key organisations came together to launch the *Caribbean Challenge Initiative* (CCI) as an effort to provide greater leadership and to chart a new course for protecting and sustainably managing the marine and coastal environment across the Caribbean. Participating countries are Bahamas, British Virgin Islands, Dominican Republic, Grenada, Jamaica, Puerto Rico, St. Kitts & Nevis, Saint Lucia and St. Vincent & the Grenadines. As part of the Initiative,

participating countries have committed to conserving at least 20% of the nearshore environments by 2020 as well as establish sustainable financing architecture that will generate funding for the marine and coastal environment.

In 2014, a *Regional Coral Reef Plan of Action for CARICOM Member States* was endorsed by ministers and other officials at the Eighth CRFM Ministerial Council Meeting in 2014. The Action Plan, which is aligned with the CLME⁺ SAP, seeks to improve the health and resilience of the coral reefs in the CARICOM region as well as strengthen the adaptive capacity of coastal communities whilst also advocating for stronger action on climate change⁷⁶. Investment in achieving the goals and objectives of the plan will be supported through the development of an associated implementation plan, and a program of monitoring, evaluation and reporting.

1.3.5.3 EAF for spiny lobster fisheries

Spiny Lobster Management

The management of the Caribbean spiny lobster (*Panulirus argus*) is also one of the top priority areas for cooperation agreed to under the *CRFM-OSPESCA Joint Action Plan*. As has been stated under Section 1.2.3, the Caribbean spiny lobster, which is known to be highly migratory, particularly during its larval stage, is an economically important fishery for a large number of CLME⁺ countries generating an estimated USD 456 million to fishers per year.⁷⁷ The lobster chain, from harvest to distribution and consumption, is wide ranging throughout the Caribbean and beyond. Apart from retailers and restaurants, the principal chain actors are the importers, processors/exporters located in the Caribbean, various types of intermediaries and fishers⁷⁸.

It is estimated that approximately 50,000 lobster fishers are active in the Caribbean region, with an additional 200,000 people working in positions related to the lobster fishery.⁷⁹ Among the countries that harvested Caribbean spiny lobster from 1996 through 2005 and reported those landings to the FAO, the Bahamas had the largest average annual landings, followed by Cuba, Brazil, Nicaragua, and the United States of America.⁸⁰ The transboundary nature of the resource, mobile fishing fleets, and the international aspects of the lobster trade closely link the fisheries throughout the region.⁸¹ This thereby requires, as was recommended by Chakalall & Cochrane (2007), that the management of

⁷⁶ Australia Caribbean Coral Reef Collaboration 2014, Improving the outlook for Caribbean coral reefs: A Regional Plan of Action 2014-2019, Great Barrier Reef Marine Park Authority, Townsville.

⁷⁷ Ehrhardt, N. M. (2005). Population Dynamic Characteristics and Sustainability Mechanisms in Key Western Central Atlantic Spiny Lobster, *Panulirus argus*, Fisheries. *Bulletin of Marine Science*, 76 (2), 501-525.

⁷⁸ Monnereau, I. and A.H.J. Helmsing. (2010). "Local Embedding and Economic Crisis: Comparing Lobster Chains in Belize, Jamaica and Nicaragua" in A.H.J. Helmsing and S. Vellema (eds) Value Chains, Inclusion and Endogenous Development: Contrasting Theories and Realities. Routledge Publishing Company. Abingdon.

⁷⁹ CRFM, 2011. Baseline Review of the Status and Management of the Caribbean Spiny Lobster Fisheries in the CARICOM Region. CRFM Technical & Advisory Document, No. 2011/ 5. 64p

⁸⁰ CFMC; NMFS; GMFMC; SAFMC. (2008). *Final Amendment 4 to the Fishery Management Plan for the Spiny Lobster Fishery of Puerto Rico and the U.S. Virgin Islands and Amendment 8 to the Joint Spiny Lobster Fishery Management Plan of the Gulf of Mexico and South Atlantic*. Caribbean Fishery Management Council, National Marine Fisheries Service, Gulf of Mexico Fishery Management Council & South Atlantic Fishery Management Council.

⁸¹ CRFM, 2011. Baseline Review of the Status and Management of the Caribbean Spiny Lobster Fisheries in the CARICOM Region. *CRFM Technical & Advisory Document*, No. 2011/ 5. 64p.

the lobster fisheries be undertaken at the regional level through a cooperative and coordinated approach.⁸² Currently, control of fishing capacities and landings are rare, and a region-wide lack of enforcement and illegal fishing prevent effective management of the resource.⁸³ As such, there is a need for greater coordination and integration among States when defining and agreeing to management measures for this shared species.

A Joint OSPESCA/WECAFC/CFRM/CFMC Working Group on Spiny Lobster was re-established by the Commission in 2012 at the 14th Session of WECAFC. The Joint Spiny Lobster Working Group works to develop methodologies for the assessment and monitoring of spiny lobster stocks, as well as to provide management advice to countries and regional organisations.

Sub-regionally, OSPESCA Member States have adopted binding agreements that outline management measures for the spiny lobster, including the definition of a (largely) simultaneous closed season across the Central American fisheries (and including the Dominican Republic). This shared closed season has been in effect from 2009, with the participation of Colombia as a non OSPESCA Member State. OSPESCA States also have harmonized minimum size and weight for harvest and trade of spiny lobster.

As part of the first CLME Project, a Sub-Regional Management Plan for the Central American Lobster Fishery was drafted. The Draft Lobster Plan seeks to promote the sustainable exploitation of the resource whilst at the same time ensuring social and economic benefits for stakeholders. However there is a need for further consultation with stakeholders regarding the proposed management actions at the regional, sub-regional, national and local levels, so that buy-in across the many stakeholders is achieved so that formal adoption and implementation of the proposed plan can take place.

There is thus a need for greater efforts at coordination, collaboration and harmonisation – where it proves to be meaningful – particularly from a stock (ecological reason) and/or market (compliance/enforcement) perspective, within the entire range of the Caribbean spiny lobster if the region is to have a chance of ensuring the continued sustainable exploitation of this economically important species.

1.3.5.4 EAF for pelagic fisheries

Four-wing Flyingfish

The four-wing flyingfish fisheries are concentrated in the southern end of the Lesser Antilles chain. Barbados, Tobago, Martinique and Saint Lucia all have large flyingfish fisheries and to a lesser extent Dominica and Grenada. Barbados accounts for about two-thirds of the regional catch of this resource. The fishing effort for flyingfish is highly seasonal (December – June), driven by the seasonal availability of both flyingfish and the large pelagic species, particularly dolphinfish with which flyingfish are usually associated.

⁸² Chakalall, B., & Cochrane, K. (2007). Regional Cooperation for the Responsible Use of the Caribbean Spiny Lobster Resource. *Proceedings of the 60th Gulf and Caribbean Fisheries Institute*. Punta Cana: GCFI.

⁸³ CRFM, 2011. Baseline Review of the Status and Management of the Caribbean Spiny Lobster Fisheries in the CARICOM Region. *CRFM Technical & Advisory Document*, No. 2011/ 5. 64p.

A joint *WECAFC/CRFM Working Group on Flyingfish in the Eastern Caribbean* was established in 2012 to, amongst other things: (a) revise and finalise the then draft Sub-Regional Fisheries Management Plan for Flyingfish in the Eastern Caribbean, taking into account both the need to adopt an ecosystem approach to fisheries (EAF) management as well as climate change issues; and (b) monitor and provide advice on the implementation of the adopted Management Plan. With the support of the CLME Project (2009- 2014) a Ministerial Sub-Committee on Flyingfish was established. The Ministerial Sub Committee is responsible for providing recommendations for policy decisions to ensure the long-term conservation, management and sustainable use of the shared flyingfish resources, and protect and safeguard their ecosystem within the Eastern Caribbean.

The adoption of the *Sub-Regional Fisheries Management Plan for Flyingfish in the Eastern Caribbean* (Flyingfish Management Plan), developed with the support of resources from the first CLME Project, took place at the 8th CRFM Ministerial Council Meeting in Dominica in 2014. The adoption of the Flyingfish Management Plan constitutes a milestone as it is the first time that a joint management plan for a shared resource has been agreed upon within the CLME⁺ region. By adopting the Flyingfish Management Plan, the six CRFM Member States that target the fishery (i.e. Barbados, Dominica, Grenada, Saint Lucia, St. Vincent and the Grenadines and Trinidad and Tobago) agree to a number of management measures including:

- Development and implementation of national management plans for flyingfish fisheries consistent with the sub regional plan by 2016;
- Establishment of an authorised national entry (licence/permit) system for flyingfish fisheries which would enter into force 2015/2016
- Adoption of a precautionary sub-regional total annual catch trigger point of 5,000 tonnes;⁸⁴

There is however still a further need to ensure a formal agreement on the flyingfish fishery between CRFM and France, because of Martinique's participation in the fishery. Effective implementation of the sub-regional plan can only occur if the management measures committed to under the sub-regional plan are adopted at the national level by the countries targeting this species.

As the Flyingfish Management Plan represents the first sub-regional plan approved within the CLME⁺ with an ecosystem approach focus, progress with its implementation will undoubtedly provide important insights on how other fisheries could move from "business-as-usual" to a more ecosystem-based management approach.

1.3.5.5 EBM/EAF for the continental shelf ecosystem

The shrimp resources in the NBSLME support one of the most important export oriented shrimp fisheries in the world. These resources include four of the larger penaeids (southern brown shrimp, pink spotted shrimp, southern pink shrimp and southern white shrimp). The groundfish resources include red snapper, weakfish, whitemouth croaker or corvina and sea catfish, with the red snapper probably being the most important groundfish in the region because of its wide distribution range

⁸⁴ CRFM. 2014. Sub-Regional Fisheries Management Plan for Flyingfish in the Eastern Caribbean.

and export value. The fisheries are multigear, multispecies and multinational, using fishing methods that can be classified as industrial or artisanal depending on the level of mechanization.⁸⁵

Despite the relatively stable catches experienced within the NBSLME, overexploitation was found to be severe, with there being evidence that some of the fisheries may be fully or overexploited, particularly some of the groundfish stocks. For the most part, the shrimp species in the region are subjected to increasing trends in fishing mortality with stocks of brown and pink spotted shrimp close to being fully exploited⁸⁶.

Whilst a number of the countries within the NBSLME have national laws that define some form of management measure for the shrimp and groundfish fishery, many of them are outdated and were not developed taking into account the transboundary nature of many of these stocks and therefore the shared responsibility of management. Further many of the national management plans that were developed (Table ??) are still in draft form and were never approved.

Table ??: Status of Management Plans Developed for Fisheries within the North-Brazil Shelf

Country	Name of Plan	Status
Suriname	National Management Plan for Seabob (2010-2015)	Approved
Brazil	National Management Plan for Shrimp	Finalised but not approved
Guyana	Fisheries Management Plan (2007-2011)	Not approved
Trinidad and Tobago	Management Plan for the Trawl Fishery (dev. In 1992)	Not approved

A Joint *Ad hoc*WECAFC/CRFM/IFREMER Working Group on Shrimp and Groundfish originally established in 1986 is to be “re-activated”, following a decision of the Members of the WECAFC Commission in 2014. Draft revised Terms of Reference (ToRs) have been developed and need to be discussed and agreed upon by the participating countries and partners. The scope of the working group will be to provide scientific and management advice for the sustainable management of the shrimp and groundfish resources of the Northern Brazil-Guianas shelf, paying close attention to the principles of the Ecosystem Approach to Fisheries.

⁸⁵Booth, A., A. Charuau, K. Cochrane, D. Die, A. Hackett, A. Lárez, D. Maison, L. A. Marcano, T. Phillips, S. Soomai, R. Souza, S. Wiggins, and M. Yspol. 2001. Regional assessment of the Brazil-Guianas groundfish fisheries. FAO Fisheries Report 651:22-36.

⁸⁶Heileman, S. 2008. 52. North Brazil Shelf LME. In: K. Sherman and G. Hempel (Eds). *The UNEP Large Marine Ecosystems Report: A Perspective on Changing Conditions in LMEs of the World’s Regional Seas*. UNEP Regional Seas Report and Studies No. 182. Pp. 701–710. Nairobi: United Nations Environment Programme.

1.3.6 Business as Usual versus the Alternative Scenario

Notwithstanding the progress and successes referred to above, the cost-effectiveness and efficiency of actions, the potential for further up-scaling, and the overall impacts and sustainability of these outcomes -in terms of their expected environmental and socio-economic benefits- are at risk. For these benefits to be fully realised, the need for a functional governance framework at the overarching LME level - providing regional coordination and harmonization of efforts, building human and institutional capacity, improving knowledge and information levels and promoting sustainable financing mechanisms - must be urgently addressed.

Many existing and planned activities are aligned in their objectives with, and are essential for the achievement of the overall objectives of the CLME⁺ SAP. However, many of these initiatives have been, or are being developed and implemented in an “*ad hoc*” manner, increasing the risk of gaps or overlaps in coverage of key issues, isolation/non-replication of efforts, and of competition amongst organizations and countries/stakeholders for limited donor funds. This is a consequence of the fact that adequate overarching governance arrangements and strategic frameworks for coordinated action had not been established. In light of this and despite the many efforts, many of the region’s marine resources continue to be threatened and/or in decline. The rising threats posed by climate variability and change further make the systematic mainstreaming of climate change adaptation considerations increasingly urgent.

The broad political endorsement in 2013 of the 10-year CLME⁺ SAP now provides the region with an important reference framework for coordinated action. A critical barrier to achieving the objectives of this SAP are the costs of actions –including those of the operationalization of interim coordination arrangements- required to kick-start SAP implementation. In case the Alternative Scenario (i.e. catalyzing implementation of the CLME⁺ SAP through the GEF-funded co-financing of associated incremental costs) cannot be implemented, the baseline scenario will be maintained, and the region will fail to address -in a comprehensive and integrated way- the key root causes described under **Section 1.3.2.**

Under such a scenario, it is expected that overall environmental degradation will continue, and that:

- critical fish stocks -economically and socially very important to the region- will not become sufficiently restored, and that Maximum Sustainable Yield (MSY) across relevant geographic ranges will not be achieved;
- the specific areas and/or total extension of key habitats and ecosystems that become protected and/or restored, will be insufficient to optimize the delivery of goods and services from sLMR in a sustainable and climate-resilient way.

Under this scenario delivery of such goods and services will become further impaired. Offsetting increased contaminant loads from a growing population will be insufficient, as investments in prevention, mitigation and remediation would be inadequate or too limited. Some of the associated socio-economic impacts foreseen include: increased unemployment and poverty, impacts on human health and well-being, forced migration, and a rise in illegal activities.

2 Strategy

2.1 Project rationale

2.1.1 CLME⁺ Project: catalyzing SAP implementation

As part of its strategic approach towards the achievement of the long-term vision for the marine environment in the CLME⁺, both short-term (to be implemented within the next 0-5 years) and medium-term actions (to be implemented within 6-10 years) have been proposed under the 10-year CLME⁺ SAP. It is the aim of the CLME⁺ Project to catalyse SAP implementation within the next 5 years.

Efforts under the project will therefore primarily contribute to creating the enabling conditions for improved and sustainable sLMR governance and management in the CLME⁺ region, with an initial focus on integrating the management of fisheries approaches with those for the protection of the marine environment. As such, the project objective will be to facilitate the implementation of the EBM/EAF approach for the 3 key CLME⁺ ecosystems and associated key fisheries, in line with the Strategies and Sub-Strategies of the endorsed SAP.

As part of the project rationale and sustainability strategy, particularly as the project will enhance the existing governance arrangements for fisheries and environmental protection in the CLME⁺, additional awareness will also be built and stakeholders – including the private sector and international or regional development banks – will become increasingly involved. Expansion of both the scale of the actions and of the scope of the framework (e.g. by more fully integrating other productive sectors such as shipping and oil/gas) can then gradually be planned.

2.1.2 CLME⁺ Project Components

The CLME⁺ Project consists of **five complementary and inter-linked components**, as illustrated in the Figure X below. The 5 components reflect the Project Rationale and Strategy, and are designed to collectively deliver the Project's objective: *Facilitating EBM/EAF in the CLME⁺ for the sustainable and climate resilient provision of goods and services from shared living marine resources.*

Each project *component* deals with a particular thematic aspect (i.e. a specific kind of action or need) that will typically be common⁸⁷ to the different Strategies and Sub-Strategies of the SAP. As such, specific *outcomes* under each *component* will often be relevant to more than just one *Strategy* of the SAP. Different *outputs* ("products") will be produced to contribute to each project *outcome* ("result"). As will become clear under Section 2.4., each *output* may consist of different *elements*. The *activities* that are proposed under the Project for each of these *elements* are also listed under Section 2.4.

Many of the SAP's actions focus on addressing the root causes of transboundary problems (see Section 1.3.2.). The SAP acknowledges in this context that structural changes and enhanced management capacity are essential pre-conditions for the up-scaling of impacts at larger spatial scales, but results from such changes, in terms of effective, region-wide improvements in

⁸⁷ e.g. actions to enhance governance arrangements were included under both SAP Strategy 1,2 and 3

environmental and socio-economic conditions in the CLME⁺, may only be obtained in the medium- and longer term.

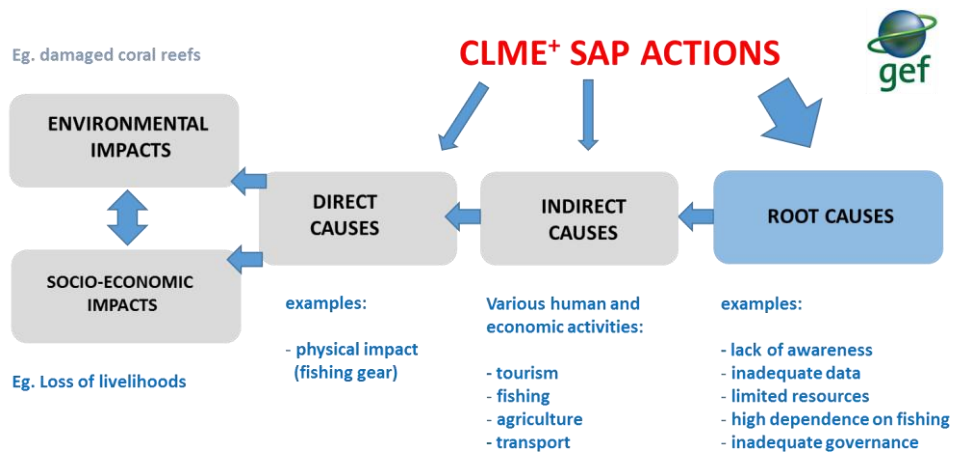


Figure: major focus should be put on dealing with root causes of environmental degradation; however, such actions will be combined with pilot actions that will be expected to deliver more local scale, but more “immediate” results

COMPONENTS OF THE CLME⁺ PROJECT

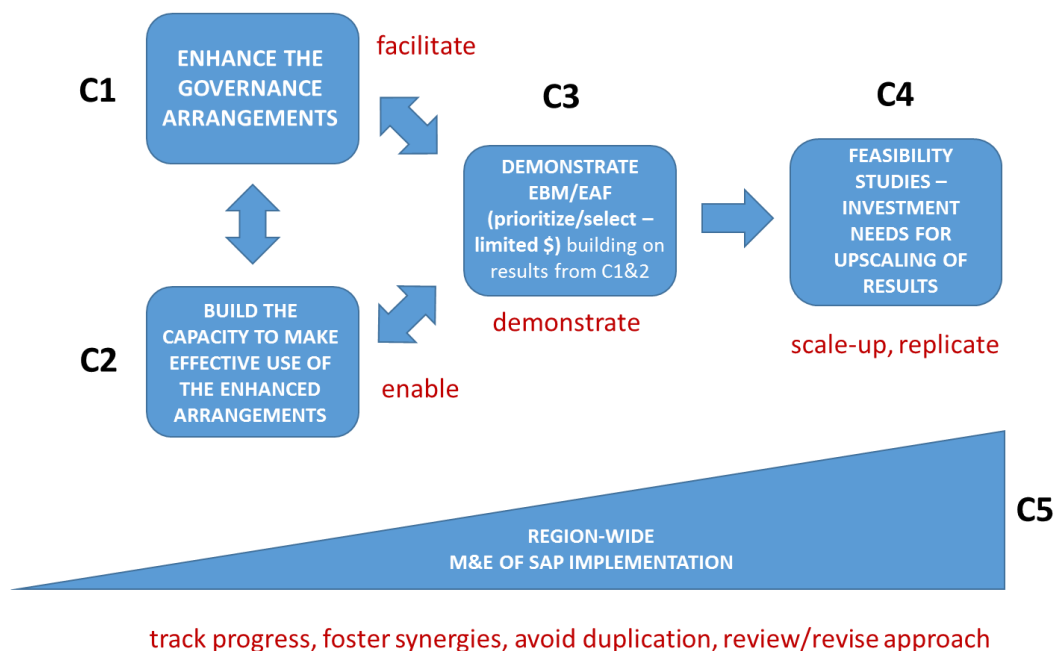


Figure: Complementarity, linkages and catalytic effects on overall SAP implementation, of the 5 Components of the CLME⁺ Project

In recognition of the above, the CLME⁺ Project's actions for structural changes in institutional, policy and legal frameworks (**Project Component 1**), and for increased human and institutional capacity, and technical/scientific knowledge (**ProjectComponent 2**), will be combined with a progressive implementation of "stress reduction" measures⁸⁸, innovative demonstrations⁸⁹, and initiatives geared towards the replication/up-scaling of early results (**ProjectComponent 3**). In this way, as the region prepares for a major upscaling of investments under the SAP: methods, technologies and techniques will be tested; best practices will be captured; and lessons learnt will be documented and shared.

In addition to the above, high-priority investment needs will be analysed under the CLME⁺ Project, and associated investment opportunities and options will be identified and agreed upon (**ProjectComponent 4**). Results from this process will facilitate full-scale implementation of the CLME⁺ SAP (this is expected to result in a major up-scaling, towards the second half of SAP implementation, of on-the-ground actions under the action programme).

This way, the CLME⁺ Project is expected to kick-start a large-scale process that will lead to a more economically productive ocean that benefits coastal communities and ocean-linked businesses, and improves overall human well-being and social equity, while significantly reducing environmental risks and ecological scarcities ("Blue Economy", UNEP 2013).

Synergies among projects and initiatives in the CLME⁺ region will be fostered through the monitoring and assessment frameworks and the knowledge management and exchange mechanisms developed and implemented under **Project Component 5**. This component will further provide the means to track progress towards both specific and overall objectives of the CLME⁺ SAP, and offer meaningful guidance for project managers and practitioners, regional governments and stakeholders, and donors alike, as it will facilitate adaptive management and the identification of opportunities for synergies and collaboration.

The above approach is consistent with the aim of achieving enhanced human well-being (as a consequence of improved marine ecosystem status and protection) by addressing several of the more important root causes of environmental degradation in the Caribbean, among which: weak governance arrangements (e.g. Component 1), and lack of human and financial capacity (e.g. Components 2, 3 and 4), inadequate knowledge, awareness and participation (e.g. Components 2, 3, 4 and 5), and inadequate ecosystem valuation in decision-making (e.g. Components 2, 3, 4 and 5).

The five Project Components and their associated outcomes and outputs are further described in greater detail under Section 2.4.

2.1.3 Results-based management

Jointly, the five components of the CLME⁺ Project are expected to achieve the project objective outlined above in Section 2.1.2 and detailed in the Results Framework (Section XXX). The process of monitoring and assessment, as an integral element of project management, is described fully in

⁸⁸full EAF/EBM policy cycle runs throughout the project implementation period, following an adaptive management approach

⁸⁹with special attention for enhanced/alternative livelihoods

Section XXX; this section describes the tools and approaches that will be adopted to achieve the goals of the project consistent with the planned M&E.

The goal of this project, *improving/assuring human well-being in the CLME⁺*, is intrinsically linked to *improved ecosystem and fish stock conditions*. These improved conditions are expected to be obtained in such a way that *social justice* for all stakeholders is enhanced. This in turn will require that actions to *reduce environmental/ecosystem stressors* are identified and implemented, through a process in which *key stakeholders are adequately engaged*. The “*Governance Effectiveness Assessment framework*” (Figure X), adapted from the GEF Transboundary Waters Assessment Programme (TWAP), provides a useful tool for results-based coordination and management of activities under the CLME⁺ Project and its Demonstration/Pilot initiatives. In addition, a modified “DPSIR⁹⁰ framework”, a well-established decision-support tool, is also being proposed to manage the successful implementation of this project.

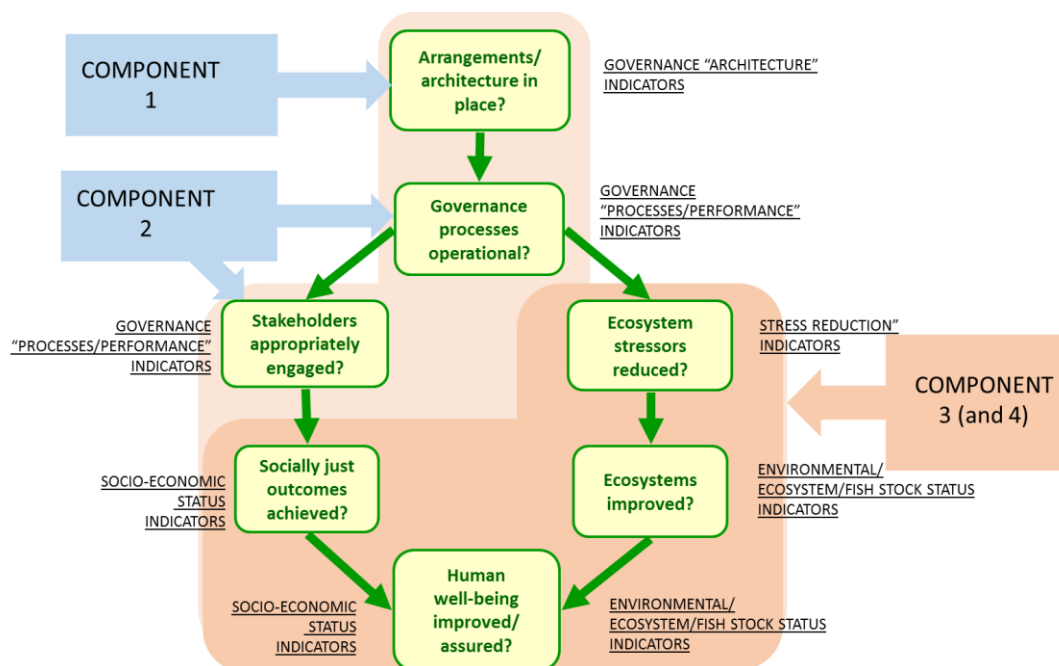


Figure: XX the adapted “Governance Effectiveness Assessment” framework used for this Project linking improved socio-economic and ecosystem conditions to more effective governance arrangements and processes

Identifying, agreeing upon, and implementing cost-effective responses to efficiently address undesired environmental and socio-economic impacts from human actions requires a sound, participatory decision-making process that is ideally steered by organizations and institutions with a formal and broadly recognized mandate, and that makes use of the best available knowledge. Achieving effective shared living marine resources governance in the CLME⁺ therefore demands a solid institutional/organizational framework, under which mandates for the functions of (i) analysis and advice; (ii) decision-making; (iii) implementation; (iv) review and evaluation; and (v) data & information management, are clearly assigned, and associated with well-defined thematic and geographic scopes. The baseline study⁹¹ on governance architecture and process

⁹⁰ Drivers, Pressures, Status, Impact, Response

⁹¹ CLME/CERMES, 2012, conducted under the UNDP/GEF “CLME” Project

operationalization for sLMR management in the CLME⁺, provided key inputs for the development of the CLME⁺ SAP, and remains an important reference framework for CLME⁺ Project implementation.

These tools, together with the project M&E system will assist in assuring the achievement of the Project's planned objective and the outcomes.

2.2 Conformity of the Project with GEF Policies and Focal Area Strategies

Even though the CLME⁺ Project receives its co-financing support from the *International Waters (IW) Focal Area* under the GEF's 5th Replenishment (GEF 5; 2010-14), the project's conceptual design is also in line with the GEF's rationale of promoting synergies among focal areas, and gives due consideration to the relevant, updated focal areas strategies under GEF6 (2014-18). Through the project, multiple Global Environmental Benefits (GEBs)⁹² will be secured across the International Waters (IW) and Biodiversity (BD) Focal Areas.

The CLME⁺ project is consistent with the GEF5 International Waters strategy, goals and priorities:

International Waters Strategy:

The project is designed to catalyze full-scale implementation of the endorsed CLME⁺ SAP and will primarily address the Strategic Objective IW-2: *Catalyse multi-state cooperation to rebuild marine fisheries and reduce pollution of coasts and Large Marine Ecosystems while considering climatic variability and change*. In addition, it will contribute to Objective IW3: *Support foundational capacity building, portfolio learning and targeted research needs for joint ecosystem-based management of transboundary water systems*.

In addressing these Strategic Objectives the project is expected to realise Outcome 2.1 (*Implementation of agreed SAPs incorporates ecosystem-based approaches to management of LMEs,....*), Outcome 2.2 (*Institutions for joint ecosystem based and adaptive management for LMEs,....*), Outcome 2.3 (*Innovative solutions implemented for reduced pollution rebuilding or protecting fish stocks,....*) (Outcome 2.4 has been addressed during the development of the CLME⁺ SAP).

Under IW3, Outcome 3.1 (*Political commitment, shared vision, institutional capacity for joint ecosystem based management,....*), Outcome 3.2 (*On-the-ground modest action implemented in water quality,....fisheries and coastal habitats,....*) and Outcome 3.3 (*IW portfolio capacity and performance enhanced,....*) will be realised.

Although, as has been stated previously, GEF co-financing support for the project originates from the 5th Replenishment, the project is also aligned with Objective 3 of the International Waters Focal Areas Strategy under GEF 6. Through the CLME⁺ Project, the region will seek to catalyse investments to support the rebuilding of fish stocks, restore and protect coastal habitats and reduce pollution of the CLME⁺.

Through synergetic actions, including through coordination with other programmes, projects and initiatives (PPIs), it will also contribute to the GEF6 Strategy on Biodiversity:

Biodiversity Strategy:

The project will contribute to the maintenance and/or restoration of the capacity of the pelagic, continental shelf, reefs and associated ecosystems to provide goods and services in support of sustainable human development and wellbeing, including through the conservation and sustainable use of biodiversity. More specifically, the project will contribute to Objective 1: *Improve sustainability of protected area systems*, Objective 2: *Reduce threats to globally significant biodiversity*, Objective 3: *Sustainable use of biodiversity*, and Objective 4: *Mainstream biodiversity*

⁹²<http://www.thegef.org/gef/GEB>

conservation and sustainable use into production landscapes and seascapes and production sectors. The project will contribute to: Outcome 1.2 (Improved management effectiveness of protected areas); Outcome 2.1 (Increase in area of terrestrial and marine ecosystems of global significance in new protected areas); Outcome 2.2 (Improved management effectiveness of new protected areas); Outcome 4.1 (Improve management frameworks to prevent, control and manage invasive alien species (IAS)); Outcome 6.1 (Integrity and functioning of coral reef ecosystems maintained and area increased); and Outcome 10.1 (Biodiversity values and ecosystem service values integrated into accounting systems and internalised in development and finance policy and land-use planning and decision-making).

The project seeks to demonstrate global benefits through advocating ecosystem based approaches to management for the sustainable use of the coastal and marine ecosystem services as well as sustainable fisheries and alternative livelihoods. Policy, institutional and legal reforms and initiatives, including strategic partnerships, will contribute to targets for recovering and sustaining fisheries, among other things. Habitat restoration, preservation and management actions, such as effective fisheries governance, marine management areas, and support to alternative and sustainable livelihoods will reduce stresses on ecosystems and fish stocks.

In working towards these GEF Strategic Objectives and Outcomes the project will advance regional ecosystem based management consistent with regional and global conventions and agreements, as applicable (e.g. the Cartagena Convention and its protocols, WSSD, Aichi targets of the CBD, etc.).

2.3 Incremental reasoning, and global, regional, national and local benefits

2.3.1 Incremental reasoning

Between 2009 and 2014, under the UNDP/GEF *foundational capacity and trust building* project “CLME”, unprecedented momentum was created in the CLME⁺ region in the move from a sectoral, geographically fragmented approach to living marine resources management (“*business-as-usual*”) to a more regionally integrative, *ecosystem-based approach*. During 2013, these efforts culminated in the region-wide political endorsement of a 10-year action programme (the CLME⁺ SAP). As a “*roadmap*” document, the SAP now constitutes a fundamental part of the new baseline situation in the region.

However, as recognised in the SAP, the multitude of actions needed, and the coordination among actions that is required to fully address the key environmental problems in the CLME⁺, pose a major challenge for its implementation. In order not to lose the created momentum, it is critical that SAP implementation can now be immediately initialized. Further catalytic and transitory support is therefore urgently needed to help co-finance incremental costs of [transboundary] action [on root causes of environmental degradation] during the next five year period during which time long-term sustainable financing mechanisms must then also be analysed and identified (see also Section 1.3.4 and 1.3.6.). It is precisely this critical immediate need for catalytic transboundary action that the CLME⁺ Project will address, and which underpins, and justifies, the request for GEF co-financing support.

Many of the actions implemented and/or planned by the multitude of other initiatives and donors in the CLME⁺ Region (a) focus on dealing with the direct causes of environmental degradation, and/or (b) have a more limited, sub-regional, national, or even local-level scope. In the current, socio-economically complex regional context, and with the reality of capacity constraints faced by the

regions' many SIDS, it is common for countries to give preference to such local/direct actions as they hold the potential to deliver more immediate, on-the-ground results - even if the range of these actions may be too local to enable delivery of region-wide or global benefits, and positive outcomes may easily become undone if coordination across sectors and sites/countries is not ensured, and root causes are not adequately dealt with.

The GEF (co-)funded CLME⁺Project activities will therefore put special emphasis on addressing root causes and barriers, catalyse adoption and implementation of EBM/EAF in a more ecologically meaningful region-wide context, and foster the replication and up-scaling of results (Sections 1.3. and 2.1.). The absence of GEF funding will be a continuation of 'business as usual' and the persistence of the root causes that were identified by the TDA.

Of overarching importance in this context is the need for more effective linkages between the regional, sub-regional and national arrangements and approaches for sLMR governance. In the transitional phase, moving from "*business-as-usual*" and towards a better integrated, multi-level and multi-sectoral governance approach will involve substantial incremental costs, which cannot be borne by the region in the current global economical context, and the lack of integration of ecosystem goods and services valuation into the decision-making processes.

Incremental cost funding required from the GEF to: further consolidate the multi-level, nested governance framework for the CLME⁺; to kick-start major transboundary and cross-regional coordination efforts; and to demonstrate innovative (EBM/EAF) approaches to sLMR management, is detailed in Section 4 and will assist the region in making the transition towards more sustainable arrangements that will then also allow for the gradual reduction on the dependency on donor support.

Co-financing requested from the GEF under the CLME⁺ Project is therefore fully compliant with the GEF Incremental Cost Policy⁹³.

2.3.1 Global, regional and national benefits

Ensuring that the move towards this integrated approach is made within the next decade will be critical for the sustained/enhanced provision of goods and services from marine ecosystems and associated resources in the CLME⁺ at global, regional, national, and local levels described under Sections 1.2.1. and 1.2.3. Projections for substantial incremental benefits and return-on-investment can be made under the *Alternative Scenario* (i.e. the CLME⁺ SAP and CLME⁺ Project).

At this stage the LME-based CLME⁺ Project is the only initiative in the region with a sufficiently broad geographic and thematic scope, able to catalyse and promote integration of the different key initiatives in the region. By promoting the CLME⁺ SAP as an overarching reference framework and by catalyzing its implementation, the GEF project – through the co-financing of the associated incremental costs - will provide interim coordination and integration support for and amongst agencies, sectors and initiatives, while more permanent coordination mechanisms are being agreed upon, established and/or consolidated. As such, the GEF incremental cost co-financing will result in a *much higher return on the investments* from the different sLMR-related activities in the region.

⁹³<http://www.thegef.org/gef/sites/thegef.org/files/documents/C.31.12%20Operational%20Guidelines%20for%20Incremental%20Costs.pdf>

This project will result in improved EBM/EAF by agreeing and implementing appropriate governance and management arrangements that will enhance the protection of biodiversity, enable the recovery of, and optimized, sustainable exploitation of fish stocks, and strengthen the livelihoods of the population dependent on the CLME⁺ resources. Overall, the GEF increment will kick-start SAP implementation including the up-scaling of key developments already initiated under the CLME Project (2009-2014) and other, SAP-related projects and initiatives.

The overarching vision behind the CLME⁺ SAP is to achieve, within a time frame of approximately twenty years, a healthy marine environment in the CLME⁺ region, which maximizes in a sustainable way the benefits for livelihoods and human well-being obtained from marine ecosystem goods and services. Within this broader time frame, the 10-year SAP focuses on better governance and management of shared living marine resources by fostering progressive application of the EBM and EAF approaches and enhanced compliance with rules and regulations within the CLME⁺.

Such strategic actions will reduce ecosystem stresses resulting in improved ecosystem status. These environmental benefits will lead to improved food production, economic development and regional stability, as critical fish stocks (incl. spiny lobster, queen conch, reef fish etc.) will be sustainably managed, marine and coastal ecosystems (such as the CLME's reefs and the NBSLME's mangroves) will be better valued, protected and restored. It is expected that the protection of such natural, coastal and marine capital will strengthen the regions' ability to resist impacts from storms and sea level rise, which would otherwise result in increasing damage to coastal infrastructure as a consequence of climate variability and change. The region's globally important biodiversity will be better preserved, thereby allowing for the protection of critical assets (natural and man-made) necessary for the economically important tourism sector. Improved or alternative means of incomes and decent work will be created and promoted.

The proposed CLME⁺ project and overarching SAP fully support MDG Goals on sustainable development, WSSD targets on biodiversity, poverty, fish stocks and governance, and contribute to the achievement of the Aichi Strategic Goals (A-E) and Targets XXXXXXXX, established by the CBD COP 11.

The activities planned for the CLME⁺ project are anticipated to result in substantial impacts in terms of global, regional, national and local benefits, as well as more sustainable results.

2.4 Project objective, components, outcomes and outputs

The objective of the CLME⁺ Project is to facilitate Ecosystem-Based Management (EBM) and the implementation of the Ecosystem Approach for the management of key fisheries in the CLME⁺, to ensure the sustainable and climate resilient provision of goods and services from shared living marine resources.

Within this context, the Project will kick-start and catalyse the implementation of the CLME⁺ SAP, through a series of activities structured under 5 distinct Project Components. Project activities will address the different root causes of environmental degradation described under Section 1.3.2.

2.4.1 Project Component 1: Strengthening the institutional, policy and legal frameworks for sustainable and climate-resilient shared living marine resources governance in the CLME⁺ region

During the first CLME Project (GEF ID 1032), *Casual Chain Analyses (CCAs)* undertaken as part of the *Transboundary Diagnostic Analyses (TDAs)* identified *weak governance* as the main, over-arching root cause to the three transboundary problems in the CLME⁺. More detailed insights acquired through the *Regional Governance Framework (RGF) Case Study* demonstrated that even though a multitude of regional and sub-regional arrangements for *shared Living Marine Resources (sLMR) governance* are already in place, many of these demand further strengthening and better integration (see: Mahon *et al.*, 2013). It is now widely recognized and accepted that under several of the existing arrangements, there is a need to review, clarify, expand and/or harmonize institutional and organizational mandates, and associated policies and legal frameworks.

Consequently, actions to enhance governance arrangements -consistent with the EBM/EAF approach- were incorporated under the different strategies of the SAP. They have been inspired by the technical proposal for a RGF developed under the CLME case study, and have been further shaped through the political consensus-building process that was followed during SAP development.

The existence of adequate governance arrangements is one of the seven elements evaluated under the “Governance Effectiveness Assessment Framework”⁹⁴, and is a key concern of this Project:

Under COMPONENT 1 and through the outcome and outputs described below, the CLME⁺ Project will enhance the institutional arrangements for sLMR governance at the regional (**Output 1.1.**) and national levels (**Output 1.2.**). The project also recognizes that sustainable sLMR management requires key (aspects of) fisheries and environmental policies and laws to be updated and harmonized, within relevant geographic scopes. Mainstreaming the concepts of “EBM/EAF”, the “precautionary approach” and “knowledge-based management” into (sub-)regional policies and

⁹⁴for a description of the Regional Governance Assessment Framework, see Section 2.1.3 of this document

associated national-level legislations (**Output 1.3**) is considered key to the definition and adoption of cost-effective implementation of sustainable, climate-resilient LMR management plans.

While acknowledging the importance of data quality, it is the *inadequate access to data and information* that has been explicitly recognized as another root cause under the TDAs. The lack of (access to) data and information can also be linked to the *lack of awareness* on environmental issues, another of the identified root causes. Making (existing) data and information (including traditional knowledge) available to the different stakeholders involved in policy cycle implementation⁹⁵ will indeed further facilitate the adoption of the EAF/EBM approach and the effective implementation of the CLME⁺ SAP. Agreements on access and exchange mechanisms for key data and information sets that are relevant for region-wide governance processes will be developed under **Output 1.4**.

Limited *financial resources* were also listed as a root cause under the CLME TDAs. The identification, and adoption by CLME⁺ stakeholders, of innovative and sustainable financing mechanisms for the continued operations of the governance and institutional arrangements established under this Component (**Output 1.5**) will be key to their long-term sustainability.

Activities under the aforementioned outputs will build upon the progress achieved in the region to date.⁹⁶

OUTCOME:

Improved, integrative governance arrangements for sustainable fisheries and for the protection of the marine environment, in line with CLME⁺ SAP Strategies 1, 2 and 3

It is anticipated that the successful implementation of this project component will lead to the further consolidation of comprehensive, coordinated and integrative sLMR governance arrangements in the CLME⁺. In this context, this project component will give major attention to those processes and arrangements that are of region-wide relevance⁹⁷.

This outcome is aligned with several of the Actions⁹⁸ under the regionally endorsed CLME⁺ SAP, and is reflective of the consensus in terms of regional priorities. Specifically, the Project's contributions will consist of the following outputs:

OUTPUTS UNDER COMPONENT 1

Output 1.1. (O1.1.) Regional agreements on coordination and cooperation arrangements and [organizational] [and/or] [institutional] mandates, as set forward under CLME⁺ SAP Strategies 1 (environment), 2 (fisheries) and 3 (cross-sectorial policy coordination)

This output will contain different elements, which can be linked to the 3 regional-level CLME⁺ SAP Strategies:

SAP Strategy 1: enhanced governance arrangements for the protection of the marine environment

⁹⁵ for a description of the different components of the policy cycle see Section ...

⁹⁶ for an overview of current progress with the building of the RGF, see Section 1.3 and/or Annex X of this document

⁹⁷ additional strengthening of governance arrangements will also occur under the Demonstration Projects (Component 3), where matters relating more specifically to the implementation of EBM/EAF at the sub-regional and national levels, or for selected key fisheries, will be dealt with

⁹⁸ e.g. CLME⁺ SAP actions 1.1, 1.2, 2.1, 2.2, 2.3, 3.1, 3.2, 3.3. and 3.4, and others

A formal agreement between Brazil and UNEP CEP (*Target T.PI1 in the project logframe under Output O1.1., or O1.1.T.PI1*) will facilitate collaboration and coordinated action between Brazil and the Wider Caribbean Region⁹⁹ on environmental protection in the NBSLME and CLME, in particular on matters relevant to the Cartagena Convention and its Protocols (notably the LBS, Oil Spills and SPAW Protocols). Collaboration with Brazil is deemed important, given the substantial impacts from Brazilian river basins (incl. the Amazon) and its northern coastal zone on both LMEs, and considering the local and Global Environmental and Societal Benefits that the sustainable management of key transboundary ecosystem types (e.g. mangroves and coastal lagoons) along the NBSLME will deliver.

The agreement with Brazil is expected to further facilitate the inclusion of matters relevant to Brazil within the coordination arrangements between the region-wide governance bodies with a mandate for fisheries and those with a mandate for the protection of the marine environment (EBM/EAF approach). The current aim is to have the agreement between UNEP CEP and Brazil in place by Project Mid-Term.

Proposed activities and milestones to achieve this element of Output 1.1. include:

- Development and negotiation of a Memorandum of Understanding (MoU) and Terms of Reference (ToRs) establishing the modalities for, and scope of the cooperation between Brazil and UNEP CEP
- Approval of the MoU and its ToRs by the Cartagena Convention Inter-Governmental Meeting (IGM) and the Conferences of the Parties (COPs) of the LBS and SPAW Protocols (IGM17 and COPs)

An agreement for enhanced coordination between the arrangements for the implementation of the SPAW and LBS Protocols under the Cartagena Convention (*Target T.PI2 under O1.1. in the project logframe, or O1.1.T.PI2*) will facilitate the implementation of more holistic solutions to the loss of key habitats and associated socio-economic opportunities.

Proposed activities under this element of the output will include (but not necessarily be limited to):

- Formal approval by the Cartagena Convention Inter-Governmental Meeting (IGM) and the Conferences of the Parties (COPs) of the LBS and SPAW Protocols (IGM16 and COPs) of the scope and initial modalities for enhanced cooperation during the 2015-2016 biennium
- Subsequent expansion (as applicable) of the modalities for coordination and collaboration, during the following biennia, with approval from the corresponding IGMs

SAP Strategy 2: enhanced governance arrangements for sustainable fisheries management:

An agreement on an interim arrangement for the coordination of actions towards sustainable fisheries (led by FAO-WECAFC, including in the first instance CRFM and OSPESCA [and OECS] and covering the full CLME⁺ region; **Target O1.1.T.PI3**) will facilitate coordination among the different existing regional and sub-regional Fisheries Bodies, and all CLME⁺ countries (incl. those not represented in any of the existing sub-regional arrangements), for the implementation of the different fisheries-related Strategies of the CLME⁺ SAP.

⁹⁹ as opposed to the geographic scope of the CLME⁺ SAP (which includes the northern part of Brazil), the Wider Caribbean Region as defined under the Cartagena Convention does not include Brazil.

This interim arrangement is expected to be put in place by August 2015, and to remain operational while a proposal for a formal long-term and region-wide arrangement for sustainable fisheries is being prepared for approval and implementation.

Under the interim arrangement, a range of Working Groups/Technical Task Teams will be established and/or strengthened, in support of CLME⁺ Project activities under Project COMPONENTS 1-5. These will include:

- the regional *Technical Task Team on the formulation of the long-term governance arrangement(s) for sustainable fisheries in the CLME⁺* (to be established);
- the regional *Working Group on Illegal, Unreported and Unregulated (IUU) fishing* (already established but not yet operational)

In addition, the interim arrangement will also support the implementation of the fisheries (EAF) Demonstration Projects under Project Component 3, amongst others, through the (already established):

- joint OSPESCA/WECAFC/CRFM/CFMC regional *Working Group on Spiny Lobster*;
- *WECAFC/CRFM/IFREMER (and OSPESCA) Working Group on Shrimp and Groundfish*;
- *WECAFC/CRFM Working Group on Four-wing Flyingfish*

As part of their tasks, and in accordance with the specifications included in their ToRs, it is anticipated that these Working Groups/Technical Task Teams will provide the inputs required to identify potential enhancements for the governance arrangements under Project COMPONENTS 1 (region-wide) and 3 (specific fisheries/ecosystems), to the development of policies and plans under COMPONENTS 1, 2 and 3, to the identification of major investment needs and opportunities under COMPONENT 4, and to the monitoring of progress of SAP implementation under COMPONENT 5.

Proposed activities to achieve this element of Output 1.1. include:

- Development and negotiation of a Memorandum of Understanding (MoU) and Terms of Reference (ToRs) establishing the composition, operational modalities and scope of the interim coordination arrangement, by August 2015
- Establishment of a Technical Task Team on the formulation of the long-term CLME⁺ fisheries governance arrangement(s) by second half of 2015
- Review the role and mandate of the existing working groups, viz-a-viz requirements for implementing the CLME⁺ Project and SAP
- Development and/or revision (as applicable) and formal approval, of the Terms of Reference (ToRs, incl. mandate) for the different working groups and technical task team(s)

A formal agreement on a long-term arrangement (or arrangements) for sustainable fisheries management in the CLME⁺ region (*Target "O1.1.T.PI4" in the project logframe*) is expected to be obtained by the end of the Project. The institutional/organizational arrangements identified under this formal agreement will ultimately replace the interim arrangement that will operate during the CLME⁺ Project itself, and support the implementation of the 10-year SAP beyond the project's lifespan. The agreement aims at reconciling the geopolitical concerns underlying the currently existing sub-regional arrangements, with the need for an inclusive/participatory, regionally integrative and coordinated approach [and stronger mandate(s)] for sustainable ecosystem-based fisheries management in the CLME⁺.

The activities that will be required to deliver this element of Output 1.1 include:

- Technical (*incl. analysis of needs*) and economic evaluation (*incl. analysis of costs & benefits*), and screening of the political feasibility and social acceptability of different possible arrangements to come to a robust, region-wide governance mechanism for sustainable fisheries management (building upon, or strengthening the existing institutions; the former may include a possible reform of WECAFC's mandate and the option of transforming it into a Regional Fisheries Management Organization(RFMO))
- Development of a proposal which identifies and outlines options for consideration by the CLME⁺ countries, based on the results from the work conducted under the previous point
- Building political consensus towards the selection and implementation of the preferred mechanism by the Project end (this includes the identification and approval of a sustainable financing mechanism – *see also Output 1.5.*)

SAP Strategy 3: regional policy coordination mechanism for shared living marine resources governance:

A formal **agreement**, among the CLME⁺ SAP endorsing parties and stakeholders, **on an interim coordination mechanism to support SAP implementation (Target O1.1.T,PI5)**, is to be achieved by [the end of the Project Inception Phase] [Project Year 1], and will ensure enhanced coordination, oversight and integration of activities for sustainable fisheries and for the protection of the marine environment under the CLME⁺ Project and SAP. This “core group” will also play a lead role in the establishment under Project COMPONENT 5 of the expanded “*Global CLME⁺ Partnership*”.

Related to this element of Output 1.1., the following activities are expected to take place:

- Development of a Memorandum of Understanding (MoU) and Terms of Reference (ToRs) for the interim SAP coordination mechanism
- Approval of the interim arrangements and its ToRs at the CLME⁺ Project Inception Meeting
- Development and approval of a plan for the continued coordination of SAP implementation beyond the CLME⁺ project lifespan **at the final project SC meeting**
- Formal establishment of a Technical Task Team, and development and approval of its ToRs of an advanced proposal for a permanent policy coordination mechanism for sLMR management, with clear specification of the mechanism's mandate and its relationship to other existing and newly created sLMR/ocean governance arrangements in the CLME

A formal **agreement**, by all relevant parties, **on a permanent, inclusive and sustainably financed policy coordination mechanism for sLRM governance in the CLME⁺ region (Target O1.1.T.PI6)** is expected to be obtained as a key element of Output 1.1, before the end of Project Year 4. The coordination mechanism is expected to foster an integrative approach towards LME-level ocean governance, with special attention to EBM and to the development of the regional science-policy interface(s) and [data & information] [monitoring & evaluation] mechanisms, and the promotion of the use of information on the value of ecosystem goods & services in decision-making. Under the CLME⁺ Project, the initial focus of the mechanism will be on shared living marine resources governance (“building bridges” between fisheries bodies and those bodies with a mandate for the protection of the marine environment).

Expected activities are:

- Technical (including analysis of needs, performance) and economic evaluation (including analysis of cost-benefits), and screening of political feasibility, of the different possible arrangements and mandate(s) for the permanent policy coordination mechanism
- Development of a proposal (including a ranking of options, as applicable) and submission of the proposal for review and consideration by the interim coordination mechanism, the [CLME⁺ Steering Committee] and/or the different relevant sLMR governance mechanisms in the CLME⁺
- Building political consensus towards the selection and approval, by the Project End, of the final proposal for the permanent coordination mechanism (this includes the identification and approval of a sustainable financing mechanism – see also Output 1.5)

For the “needs and feasibility” analysis, care will be taken not to repeat, but rather to build upon the Regional Governance Framework Case Study (CLME Project) and other relevant existing work. Alignment of activities will be sought with the spirit of the relevant actions contained in the politically endorsed CLME⁺ SAP. Key evaluation criteria that will be considered for the screening of the different alternatives include: geographic/geopolitical inclusiveness of the identified arrangement(s); probabilities of political acceptance/consensus for the arrangement(s); performance successes; sustainability, cost-effectiveness and added value; clear and relevant mandate, and complementarity of the mechanism’s mandate with the mandates (existing and/or reformed under the CLME⁺ Project or SAP) of the other regional and sub-regional organizations with a key role under the CLME⁺ sLMR Governance Framework; feasibility of further expansion of the arrangement in the medium- [to long] term, to more fully embrace the concept of broader ocean governance (i.e. expansion from the initial focus on fisheries and environmental protection, including sectors such as tourism, shipping, oil and gas, etc.).

Output 1.2. (O1.2.) *Inter-sectorial coordination mechanisms (including science-policy interfaces, as feasible) in place [and made operational]* (Target O1.2.T.PI1)

Successful implementation of EAF/EBM at the CLME⁺ level will require good integration and coordination of efforts across key thematic areas (e.g. fisheries and environmental protection), and across the relevant geographic levels (e.g. local, national, sub-regional and regional).

Whilst the activities under **Output 1.1** focus on strengthening and improving collaboration between the regional and sub-regional levels, **Output 1.2** focuses on fostering improved consultation and coordination processes between different sectors and stakeholders at the national level, and on their linkage with the (sub-)regional processes and arrangements.

This requires that inter-sectorial coordination mechanisms be established or enhanced (as applicable) in the different CLME⁺ countries. Such in-country coordination mechanisms will be particularly important to achieve full country ownership over CLME⁺ SAP and CLME⁺ Project implementation, and positively impact the cost-effectiveness of SAP/project¹⁰⁰ governance and implementation.

In addition to this, in-country coordination will facilitate the demonstration of the EBM/EAF approaches under Project COMPONENT 3.

¹⁰⁰ Project governance arrangements are described under **Section 5**

Whereas for the most part the establishment and operationalization of these coordination mechanisms will be a country responsibility, the Project Coordination Unit (PCU) and Project partners will seek to provide technical support to the CLME⁺ countries during this process.

Proposed GEF-supported activities associated with this Output therefore include:

- [Conduct a] [Update] [Complete] [the] review on the formal or *de facto* existence, composition, mandates (incl. whether their establishment was mandated through legislation) and modus of operation of relevant/likely inter-sectorial coordination mechanisms in the different CLME⁺ countries
- Evaluate, where and as feasible the policy and legal environment/interventions that contribute to successful inter-sectorial committees
- Evaluate, where and as feasible, the impacts of functioning inter-sectorial coordination mechanisms on CLME⁺ Project outputs
- Identify (including through the use of gap analysis) the possible mechanisms and solutions to maximize policy and decision-making relevance and to ensure sustainability beyond the CLME⁺ Project lifespan, and disseminate good practices and lessons learnt among interested CLME⁺ partner countries
- Development of draft ToRs, and/or collection of existing good examples of such ToRs, and dissemination of these materials among interested CLME⁺ partner countries
- Conduct and support the above activities, through the use of regional workshops or other exchange mechanisms, as feasible (esp. in connection with the CLME⁺ EBM/EAF Demo projects) where lessons learnt, experiences and best practices will be shared and disseminated.

In case of financial or logistical constraints, priority attention may be given to those countries in which Demonstration Activities are being implemented through the CLME⁺ Project.

Output 1.3 (O1.3.) Updated regional [policies], [agreements] [declarations] [and/or regulations], and associated (compatible or harmonized) national-level [legislation] [plans], as needed to enable effective EBM/EAF in the CLME⁺ (Target O1.3.T.P11)

Success with the implementation of EAF/EBM will further also be dependent on the institutionalization of both conceptual approaches through the relevant legal and policy frameworks.

This will require a revision of those regional policies and associated national legislations that at present do not support or are incompatible with the EBM/EAF approach. Such revision will generally include the adoption and integration within these policies and legal frameworks of important paradigms such as the “*precautionary approach*”, and the “*adaptive management*” and “*polluter pays*” principles.

Recognising the transboundary nature of many resources, and thus the shared responsibility for their sustainable management, there is a need for increased efforts amongst countries to support and adopt, as feasible (e.g. through regulations), compatible or harmonised management measures.

In order to achieve this output, the following activities are considered:

- Conduct a regional-level review of the status of relevant fisheries and environmental policy and legislation in terms of their compatibility with/support for EAF/EBM (i.e. [enhanced] [

updated] baseline/gap analysis; with priority attention to what is needed to facilitate the implementation of the demonstration projects under COMPONENT 3)

- Prepare a plan to support, under the CLME⁺ Project, the development and adoption of enhanced regional policies and declarations, and the harmonization of associated national-level legislation and plans
- Support the implementation of the plan, to give effect to national obligations under relevant regional and international agreements

Output 1.4 (O1.4.) Agreement on data [policies] [management, access & exchange arrangements] to support adaptive management and implementation of the CLME⁺ Project and SAP (Target O1.4.T.PI1)

In more generic terms, the thematic area associated with this Output will be of relevance not only for (a) the M&E of CLME⁺ Project and SAP implementation (and thus for supporting region-wide adoption of the EBM/EAF approach), but also for (b) supporting the decision-making processes under the EBM/EAF demonstration projects of COMPONENT 3.

Under COMPONENT 1 however, outputs and associated activities will relate in the first instance to element (a)¹⁰¹ of the above description.

Agreements/Protocols on the management, access and exchange of key data, information and indicator sets that will be critical for the overall **Monitoring & Evaluation (M&E) of CLME⁺ Project and CLME⁺ SAP implementation**, and for the successful development of the “*State of the Marine Ecosystems and Shared Living Marine Resources in the CLME⁺ Region*” portals and report under COMPONENT 5.

The following activities will contribute to this element of the output:

- Identification of key data and information/indicator sets and types (incl. their minimum quality and format) required by end users in the context of the M&E activities (to be coordinated with activities under Output 5.2.)
- Identification of the owners, managers and relevant end users of these data sets (institutional/stakeholder responsibilities and rights)
- Development (incl. negotiation, as required) and adoption of (draft) agreements & protocols

For the production of this Output, collaborative arrangements have already been formalized between the CLME⁺ Project and, amongst others, the Caribbean Marine Atlas initiative (CMA2 Project, FUST/IODE - IOC of UNESCO & INVEMAR). Progressive expansion of collaborative agreements will take place during Project Inception and implementation (e.g. with prospective partners such as: CRFM, OSPESCA, OECS, CCAD, WECAFC/FAO/ FIRMS, UNEP CEP, TNC, CI, WWF, IUCN, UNEP ROLAC, UNEP WCMC, UNEP Live, WRI, UN ECLAC...; see also COMPONENT 5).

¹⁰¹ Agreements regarding data and information management & exchange to support decision-making processes during the implementation of the CLME⁺ Demonstration Projects are associated to a separate output under COMPONENT 3.

Output 1.5 (O1.5.) Sustainable financing mechanism(s)/plan(s) to ensure short, medium and long-term operations of the enhanced arrangements for sLMR governance in the CLME⁺ region(*Target O1.5.T.PI1 and 2*)

Long-term sustainability of the different governance arrangements established and strengthened through Project COMPONENTS 1, 2 and 3 will need to be ensured. The aim of Output 1.5 will thus be to respond to the needs under the different key components of the CLME⁺ Regional Governance Framework (RGF).

Activities under this output will thus link back to the different Strategies under the CLME⁺ SAP.

- With the support and guidance of a Technical Task Team, undertake a consultancy(ies) to research alternatives, investigate feasibility and political acceptability, and propose long-term (innovative) sustainable financial mechanism(s) for the permanent sLMR governance arrangements in the CLME⁺
- Review and undertake an analysis of the proposals, by the relevant CLME⁺ stakeholders (governments, private sector, civil society, donor community,...., as feasible/applicable)
- Development and approval by the project end of revised Sustainable Financing Action Plan(s) (incl. outline of the proposed timelines required to allow the governance arrangements to become financially sustainable)

2.4.2 Project Component 2: Enhancing the capacity of key institutions and stakeholders to effectively implement EBM/EAF in the CLME⁺

Adequate governance arrangements and clear institutional mandates are pre-requisites for effective and efficient policy cycle implementation. However, “*putting the arrangements in place*” by itself will not be sufficient to ensure enhanced sLMR management and socially just outcomes. The *Causal Chain Analyses* (CCAs) conducted under the CLME TDAs pointed to the weaknesses in the institutions’ and stakeholders’ capacity¹⁰² to make effective use of existing and newly created governance arrangements, as another root cause of environmental degradation.

Hence, it will be essential that institutions, organizations and individual stakeholders become progressively equipped with the capacity and means¹⁰³ needed to successfully exercise their mandates/rights under any given component of the policy cycle. Under this project component, the use of the term capacity building refers to “*the empowerment of the project’s stakeholders - which encompasses the ability, will and skills to initiate, plan, manage, undertake, organise, monitor/supervise and evaluate activities*”.

It is recognized that capacity building efforts should not be limited to governmental organisations only but should also seek to engage and empower civil society and private sector stakeholders, to ensure buy-in and support for the decisions that are being made; to increase and upscale the opportunities and potential for implementation; and to foster corporate responsibility and socially just outcomes.

Verifying that governance processes are operational, and that stakeholders are appropriately engaged, are two distinct key elements of the evaluation process conducted under the “Governance Effectiveness Assessment Framework” described under Section 2.1.3.

COMPONENT 2 will thus complement Project COMPONENT 1 as it will seek to build upon the developed governance arrangements. Through the outcome and outputs described below, special attention will be given, on one side, to weaker stakeholder groups, and on the other side, to those institutions, organizations and stakeholders (incl. businesses) that can play a key, pivotal/catalytic role in the implementation of the strategies of the CLME⁺ SAP.

Taking into account existing financial and logistical constraints, and in line with the recommendations of the GEF STAP, during CLME⁺ Project implementation itself the focus of activities under COMPONENT 2 will be further narrowed down, by identifying stakeholder priorities and by looking for short-term opportunities that can produce major catalytic effects. For example, through the strengthening of key CLME⁺ Project partners (incl. regional and sub-regional governance bodies, and organized stakeholder groups), these direct beneficiaries of the project will become enabled to, in turn, further enhance the capacity of their national constituencies, and of the local organisations and individual stakeholders they collaborate with¹⁰⁴.

Outputs that –via a *learning-by-doing approach*– will directly enhance the institutions’ and stakeholder’s ability to implement or support EBM/EAF in the CLME⁺ region include: the

¹⁰² in its broader sense, and thus not restricted to “trained skills”

¹⁰³ incl. tools and resources, knowledge and information (e.g. *reference/guiding documents* such as action plans), and, in the case of stakeholders, rights to participate or influence in decision-making

¹⁰⁴ application of the subsidiarity principle

collaborative development and delivery of action plans to deal with issues of cross-cutting, region-wide importance such as: Illegal, Unreported and Unregulated (IUU) fishing, habitat degradation and pollution (**Output 2.1**); the collaborative development of a Civil Society and Private Sector Action Programme (CSAP and PSAP; **Output 2.2**)¹⁰⁵. Also under Output 2.2, a CLME⁺ Project-supported *Small Grants coordination [facility] [mechanism]* will support the implementation of priority actions identified in the CSAP, and allow for better coordination amongst the different small grants initiatives (SGIs)¹⁰⁶ and projects in the region. This way, it will become possible to better address the specific needs and opportunities under the CLME⁺ SAP and the associated sectorial Action Programmes.

Identification of best/good practices in the field of data and information management, and of best available (innovative) tools and technologies –tailored to the capacity and needs of the region and its stakeholders- will be addressed through **Output 2.3**. This will be done in collaboration with the FUST-supported “Caribbean Marine Atlas” CMA2 initiative (IODE, IOC of UNESCO).

To enhance awareness, empower stakeholders and provide a pathway for better coordination and collaboration, an over-arching CLME⁺ Communication and Dissemination Strategy will be developed (**Output 2.4**). The Strategy will contain central and decentralized components, targeting different relevant stakeholder groups. Coordinated implementation of the different elements of the Strategy will then take place under all CLME⁺ Project components.

Even when under this component capacity building has been interpreted in its broader sense, training of stakeholders remains an essential component of it. Key training needs on matters of cross-cutting importance for the CLME⁺ SAP will be identified under **Output 2.5** and incorporated in a (given the limited resources) initially modest, but expandable¹⁰⁷ Training Plan. Such cross-cutting training needs may then be addressed under Component 2, while training needs that more specifically relate to the Demonstration Projects will be addressed under COMPONENT 3.

Finally, the development of targeted research strategies to support knowledge-based implementation of the EAF/EBM approach will take place under **Output 2.6**.

Combined, the outputs under Component 2 will increase awareness and enhance overall capacity and participation of key stakeholders in the different stages of policy cycle implementation: (i) *analysis & advice*, and (ii) *decision-making*; (iii) *implementation*; (iv) *review & evaluation*, and (v) *data & information* collection, provision and management.

Complementary to the activities and outputs under COMPONENT 2, important additional “hands-on” capacity enhancement of stakeholders will also be achieved through the implementation of the CLME⁺ Demonstration Projects (COMPONENT 3) and through the activities under COMPONENTS 4 and 5.

OUTCOME:

Strengthened institutional and stakeholder capacity for sustainable and climate-resilient sLMR management at regional, sub-regional, national and local levels (*with special attention under the*

¹⁰⁵The CSAP and PSAP are expected to further complement the politically endorsed CLME⁺ SAP, which, in its current version, is strongly focussed on governmental action.

¹⁰⁶ Including an additional contribution from the CLME⁺ Project itself (<- this is still to be decided!)

¹⁰⁷The leveraging of additional financial resources or partner support during Project implementation may allow to further expand the initial plan

CLME⁺ Project to increased capacity of regional and sub-regional organisations with key roles in SAP implementation)

Successful achievement of this outcome will contribute to the overall objective of the CLME⁺ Project, as it will support the operationalization of governance processes and enhance the involvement of all stakeholders groups.

The expected outcome under COMPONENT 2 will address several of the root causes identified under the TDAs, such as *weak governance; limited human/financial resources and capacity; inadequate (access to) data and information; inadequate public awareness and participation; and inadequate information on and consideration of the value of ecosystem goods and services.*

OUTPUTS UNDER COMPONENT 2

Output 2.1. (O2.1.) Regional-level Action Plans for the management, conservation and sustainable use of fishery resources and for the protection of the marine environment

Decision-making on management principles, actions and approaches, and over-arching targets is one of the required steps in a full policy cycle run. Capacity for the implementation of such region-wide decision-making processes will be enhanced through the “hands-on” development and adoption of regional action plans under COMPONENT 2. These regional action plans will be mutually supportive with the more specific¹⁰⁸ EAF/EBM management plans and measures that will be developed and implemented under COMPONENT 3. The development of these plans will be supported by the working groups/technical task teams established under Project COMPONENT 1.

Output 2.1. consists of multiple elements, which in first instance relate to Strategies 1, 2 and 3 of the CLME⁺ SAP. However, they will also be relevant for Strategies (and Sub-Strategies): 4, (and 4A &B), 5 (and 5A&B) and 6.

A “Regional Strategy and Action Plan against Illegal, Unreported and Unregulated Fishing” (Target O2.1.T.PI1) will provide a regional framework for the coordination of actions against IUU among the CLME⁺ countries and territories, and across the region’s different key fisheries. The action plan is expected to consider the combination of measures for (a) improved enforcement with (b) increased awareness building, and with (c) support for enhanced/alternative livelihoods. It will take reference of the existing baseline in the region (e.g. Castries Declaration on IUU Fishing and regional binding regulations already in place among OSPESCA States, as well as existing regional strategies and action plans developed for key fisheries). Approval of the Action Plan at the 16th Session of the WECAFC will facilitate the implementation of related Demonstration activities under COMPONENT3.

In order to achieve this element of Output 2.1., the following activities are considered:

- Preparation of an updated, enhanced baseline (status report) on the situation of IUU fishing in the region, and of its impacts on stocks, the environment, socio-economics and social justice
- Development of the Regional Strategy and Action Plan (incl. a proposed timeline for implementation, and for its adoption at the national level)
- Adoption of the Regional Strategy and Action Plan by the Interim Fisheries Coordination Mechanism established under Component 1, and by the WECAFC Constituency at the 16th Session of the WECAFC

¹⁰⁸In terms of resources considered, and geographic scope

- Development of a draft-model national action plan to combat IUU (IUU-NPOA)
- Submission of the draft-model NPOA to the CLME⁺ countries at the 16th Session of the WECAFC, for their consideration and further use

These activities are to be lead and/or supported by the IUU Working Group established during the 15th Session of WECAFC (2014) and operationalised in 2015 as part of Output 1.1 under Component 1.

A “Regional Strategy and Action Plan for the [valuation,] protection [and restoration] of key marine habitats [and associated biodiversity] in the CLME⁺” (Target O2.1.T.PI2) will strive to better coordinate and integrate the many different efforts that are being undertaken in the region.

In order to achieve this element of Output 2.1., the following activities are considered:

- Establish a technical task team and/or utilise the existing SPAW Scientific Technical Advisory Committee (STAC) for the development of the “strategy and action plan” (or another arrangement to coordinate & implement the below activities)
- Further expand the baseline and complete the mapping of regionally relevant initiatives: e.g. work under SPAW Protocol and CaMPAM, the Caribbean Challenge Initiative (CCI), the ECMMAN Project, the MAR2R GEF Project Proposal, the CRFM Regional Coral Reef Plan, the Caribbean Aqua-Terrestrial Solutions Programme (CATS), etc.)
- Analyse the marine component of the National Biodiversity Strategies and Action Plans (NBSAPs)¹⁰⁹ from the CLME⁺ countries and territories, including funded projects and identify needs and opportunities for synergetic, transboundary action (incl. training needs)
- Regional (capacity building) workshop on synergetic action for the marine component of CLME⁺ countries’ NBSAPS [in collaboration with the CBD Secretariat]
- Identify gains versus incremental costs from enhanced coordination of efforts among CLME⁺ countries, and identify action points to fill critical gaps and foster synergies
- Align, as feasible, the timeline for the development, adoption and implementation of this regional Action Plan with the timeline of the CBD Strategic Plan for Biodiversity (2011-2020) and with the timeline of the established (sub)regional governance mechanisms (e.g. SPAW Protocol STACs and COPs and associated bi-annual work plans, etc.)
- Adoption of the action plan

A “Regional Action Plan for the reduction of impacts from excessive nutrient loads on marine ecosystems and related ecosystems goods and services in the CLME⁺” (Target O2.1.T.PI3) will be developed and delivered by the Xth LBS COP.

In order to achieve this element of Output 2.1., the following activities are considered:

- Establish a technical task team and/or utilise the existing LBS Scientific Technical Advisory Committee (STAC) for the development of the “strategy and action plan” (or another arrangement to coordinate & implement the below activities)
- Further expand the baseline and complete the mapping of regionally relevant initiatives: e.g. work under LBS Protocol, the World Bank Global Programme of Action, the MAR2R Project (GEF/WWF/CCAD, under development), the IWECO Project (GEF/UNEP/UNDP), etc.

¹⁰⁹<http://www.cbd.int/nbsap/>

- Identify “focal areas” for high-priority action (most affected ecosystem types and most important socio-economic impacts, incl. –as feasible- a characterization of their geographic spread; most important “regionally relevant” pollution sources, in terms of the transboundary nature of both sources and impacts)
- Align, as feasible, the timeline for the development, adoption and implementation of this “regional Action Plan” with the timeline of established governance mechanisms (LBS Protocol) and existing *National Plans of Action for the Protection of the Marine Environment from Land-based Activities*(NPOAs)
- Identify gains versus incremental costs from enhanced coordination of efforts among CLME⁺ countries, and identify action points to fill critical gaps and foster synergies
- Adoption of the action plan
- Assistance from UNEP-CEP to help a selected number of countries with their National Programmes of Action for the Protection of the Marine Environment from Land-based Activities (to be linked with the Demonstration Projects under Component 3). Lessons learnt and best practices collected from the region and elsewhere will inform the proposed NPAs.

Output 2.2. *Civil Society and Private Sector Action Programme (CSAP and PSAP), to complement and support the implementation of the politically endorsed CLME⁺ SAP*

This output will consist of 3 elements, inter-linked among themselves and with the over-arching CLME⁺ SAP.

In line with the concept of *interactive governance*¹¹⁰, the **Civil Society Action Programme (CSAP; Target O2.2.T.PI1)** and **Private Sector Action Programme (PSAP; Target X)** will strengthen the role, participation and ownership of [interested] civil society and private sector actors in achieving the long-term vision¹¹¹ for the marine environment in the CLME⁺ [(reformulated here as *sustainable and socially just blue growth*)]. Both sectorial action programs will be expected to be mutually supportive and will build upon and further complement the politically endorsed CLME⁺ SAP (which itself has a strong focus on governmental action).

Activities to achieve both elements of this output will include:

- Identification of prospective non-governmental partners (CBOs, FFOs, SMEs)
- Consultations to identify stakeholder priorities under the CLME⁺ SAP (both in terms of capacity development/empowerment needs and needs for high-priority on-the-ground actions)
- Inventory of existing civil society/private sector awareness raising & capacity building initiatives and mechanisms, currently operational within the CLME⁺ Region (baseline)
- Inventory of existing civil society/private sector initiatives relevant to the objectives of the CLME⁺ SAP (baseline)
- Collaborative development of the sectorial action plans (giving due attention to the 3 priority problems identified under the CLME TDAs, and the potential for catalytic effects)
- Endorsement of the plan by interested stakeholder groups

¹¹⁰ Defined under Section 1.3.3.

¹¹¹ See Section 1.3.3.1

A third element under Output 2.2. will consist of the (CLME⁺ Project-supported) establishment of a **Small Grants coordination [facility] [mechanism]**(*Target O2.1.T.PI3*). The [facility] [mechanism] will allow to better coordinate and tailor the different small grants initiatives¹¹² and projects in the region towards the specific needs and opportunities under the CLME⁺ SAP and associated Action Programmes (CSAP, PSAP). The small grants initiatives themselves will contribute to increased stakeholder capacity and participation under the CLME⁺ SAP.

The coordination mechanism will further make it possible to better evaluate overall impacts of the different programmes, and as such help improving the policies, implementation modalities and complementarity of the different initiatives.

Actions by civil based organizations (CBOs), national or local government departments [and/or SMEs] that are supported through the Small Grants coordination facility will benefit from the existence of the over-arching SAP framework and from the enhanced institutional, policy and legal frameworks established under Component 1. Small Grants facilitated through the coordination mechanism are also expected to contribute to, and support the implementation of CLME⁺ Demonstration activities under Component 3.

The following activities will contribute to this element of O2.2:

- Further completion –as necessary- of the inventory (initiated under the PPG phase) of existing Small Grant Programmes (SGPs) that are operational within the CLME⁺ Region, and that are of (potential) relevance for the objectives of the CLME⁺ SAP
- “awareness building & planning” workshop(s) to
 - (a) inform regional and national-level coordinators of existing small-grants programmes (SGPs, e.g. those of the GEF, UNEP CEP/CampPAM, etc. – see the baseline section of the document) on the scope, goal and objectives of the CLME⁺ SAP
 - (b) discuss and agree on collaborative (logistical and financial) arrangements to implement a mechanism or modalities for enhanced coordination and cooperation, and for improved mapping and evaluation of programme outputs & outcomes (incl. exchange of best practices)
- Operationalization of the SG coordination mechanism (incl. periodic mapping/evaluation of SGIs)

Output 2.3. (O2.3.) *Identification of best/good practices in the field of data & information management, and of best available (innovative) technologies and tools to support communication and decision-making processes*

An **inventory of good/best practices and innovative technologies & tools that can support communication and decision-making processes**, relevant for the implementation of the CLME⁺ Project and SAP, will constitute a first element of Output 2.3 (*Target O2.3.T.PI1*).

The following activities are considered under this element:

- Inventory of technologies, tools and approaches, deployable for communicating and raising awareness among the different stakeholder groups on the relevance of the CLME⁺ SAP and

¹¹² Including an additional contribution from the CLME⁺ Project itself (<- this is still to be decided!)

Project, and for dynamically updating stakeholders and participants on the progress obtained in SAP and Project implementation (*to be achieved through the integration of activities under the CLME⁺, CMA2, OHI, TWAP initiatives; opportunities for collaboration with additional initiatives will be further sought during project implementation*)

- Experts evaluation of the content of the inventory, and of the regional relevance, applicability and potential for sustainability of the identified solutions
- Reporting on the findings from the inventory and from the analysis of its content + dissemination among the broader CLME⁺ and global LME stakeholder community (see also Output 2.4. and 5.3)

Innovative tools & technologies to enhance the capacity of civil society [and private sector] actors to support sustainable sLMR management, and to [facilitate] [enhance] [support] their involvement in policy cycle implementation (Target O2.3.T.PI2)

Several CLME⁺ sister initiatives will be testing the use of innovative technologies to empower civil society actors and enhance their contributions to sustainable sLMR management, e.g.:

The “mFisheries” initiative (UWI) will explore the potential for the use of smartphone technology to support small-scale fisherfolk, through bi-directional information exchange with fisheries (and other relevant) authorities, and among fisherfolk themselves. The +Fisheries (Conservation International, Brazil) will explore the potential of the same technology to support small-scale fisherfolk adopting more sustainable fisheries techniques, by linking fisherfolk and consumers/markets.

Both initiatives are expected to directly contribute to enhanced livelihoods of small-scale fisherfolk.

The following activities are considered under this element:

- Regional workshop to analyse results and extract good practices and lessons learnt from the pilot implementation of innovative technologies such as the mFisheries (UWI) and +Fisheries (CI Brazil) tools
- Dissemination of results and analysis of opportunities for upscaling (the latter in connection with activities under Component 3 and 4)

Output 2.4. (O2.4.) Overarching CLME⁺ Communication Strategy, with central and decentralized components and responsibilities (Target O2.4.T.PI1)

Successful SAP implementation will demand that awareness is raised among the broader CLME⁺ stakeholder community, on the importance of the regionally endorsed SAP, and on the urgent need to adopt the EAF/EBM approach at the level of the Caribbean and North Brazil Shelf LMEs. In this same context, enhanced communication and information exchange among key actors involved in the different programmes, projects and initiatives that can contribute to the SAP objectives will be of crucial importance.

It is therefore anticipated that a CLME⁺ Communication Strategy will help securing a sufficiently broad support base and buy-in from the different societal sectors, for collective and well-coordinated action. Further, such strategy will generate awareness among relevant stakeholder groups on the opportunities created to contribute to the objectives of the SAP, through the many existing and forthcoming projects and initiatives in the region (incl. small grants, training, etc.).

It is further recognized that, in full alignment with their formal mandate and/or recognized role within the CLME⁺, the responsibilities for the implementation of SAP Strategies and Actions, and of activities under the different Components of the CLME⁺ Project, will be shared by a number of international and regional CLME⁺ partners. In light of this, it is important that an **overarching, comprehensive CLME⁺ Communications Strategy** is **collaboratively developed** and in place by the end of the Project Inception Phase.

The strategy will outline the methods and suggested approaches for communicating information about the CLME⁺ SAP process and the CLME⁺ Project, tailored to the different practitioners and target stakeholder groups¹¹³.

Following its development and adoption, the Strategy will be centrally coordinated/monitored (as applicable) throughout its –largely decentralized- implementation. Each one of the 5 CLME⁺ Project Components is expected to contribute to the implementation of distinct elements of this overarching Communication Strategy. For this purpose, consideration will be given to the formal institutional mandates, and roles in CLME⁺ Project & SAP implementation, of the different members of the interim SAP coordination mechanism (Output 1.1) and CLME⁺ partnership (Output 5.1).

The following activities are considered under Output 2.4:

- Inventory of major existing communication & awareness building initiatives and mechanisms within the CLME⁺ Region
- Collaborative development, involving the main project partners, of an overarching strategy that outlines the communications approach of the CLME⁺ Project (incl. the identification of stakeholders, and of stakeholder-tailored communication methods, vehicles and materials, the definition of targets in terms of kind & and quantity of stakeholders to be reached, and identification and implementation of tracking/M&E mechanisms)
- Review, and if necessary periodic revision/expansion, of the stakeholder mapping exercise conducted during the PPG Phase
- Identify the central and de-centralized components of the strategy, and distribute responsibilities among the different CLME⁺ partners, in alignment with their role/mandate for sLMR governance and management in the region
- Development of the “awareness building/stakeholder empowerment” sub-strategy/component, targeting the broader stakeholder community and broader public
- Further development of the sub-strategy targeting the CLME⁺ Partnership (to be implemented under COMPONENT 5)
- Further development of the sub-strategy targeting the global LME Community of Practice (to be implemented under COMPONENT 5)
- Oversight of, and support for the collaborative implementation of the strategy by the CLME⁺ PCU and/or interim SAP coordination mechanism, to ensure continued consistency
- M&E of strategy implementation, incl. the review and evaluation, and if necessary, revision of the Strategy by Project Mid-Term
- Sustainability plan

Output 2.5. (O2.5.) Strategy for the training of selected stakeholders on key issues of cross-cutting importance for the different Strategies of the CLME⁺ SAP (Target O2.5.T.PI1)

¹¹³ See e.g. Section 1.2.3.4 for a preliminary listing of these stakeholder groups

It is recognized that all activities and outputs under the CLME⁺ Project will, up to a certain extent, empower people and organizations, as these activities provide a “hands-on” practicing opportunity for those involved, and foster increased awareness among participants and beneficiaries. Even when under the Project (incl. COMPONENT 2) capacity building has been interpreted in this broader sense, the implementation of specific training activities, targeting specific stakeholder groups, remains an essential component of the overall capacity building efforts.

Key training needs on matters of cross-cutting importance for the CLME⁺ SAP will be identified under **Output 2.5**, and incorporated in a (given the limited resources) modest, but expandable¹¹⁴ Training Plan. Such key cross-cutting training needs may then be directly addressed through activities under Component 2, while the training needs that more specifically relate to the Demonstration Projects will be addressed under COMPONENT 3.

Due consideration will be given in the identification of priorities to the major weaknesses/missing linkages in the operationalization of governance arrangements supported under COMPONENT 1, and to the role of the different stakeholders in this process (policy cycle components).

It is further anticipated that a multiplier effect in terms of capacity building impacts can be achieved by applying the subsidiarity principle: empowerment and training of stakeholders within regional and sub-regional organizations and coordinating bodies, or national coordination units, will then allow these stakeholders to spread out the results among a much broader target public.

Activities under Output 2.5. include:

- Inventory of relevant, existing stakeholder empowerment and capacity building initiatives and mechanisms (targeting governmental bodies, civil society, CBOs, FFOs,...) within the CLME⁺ region
- [Conduct a] [Complement –as needed- existing] training needs assessment, in coordination with other relevant activities (e.g. the development and implementation of the CLME⁺ Project thematic regional Action Plans under COMPONENT 2, and the EAF/EBM Management Plans under COMPONENT 3).
- Fine-tuning and validation of the draft training plan
- Progressive implementation of key training activities under the Plan (selected set of high-priority training activities/workshops, to be based on available CLME+ Project budget and additionally leveraged resources)

Where feasible the implementation of the Plan will be supported through the establishment of partnerships (e.g. UNU, regional universities, etc.), and through the identification and implementation of innovative training methods (e.g. multi-lingual on-line training modules and programmes) capable of achieving major catalytical effects and of reaching larger stakeholder groups.

Output 2.6. (O2.6.) *Strategies for targeted, demand-driven research to support the management of fisheries and the protection and sustainable use of the marine environment* (Target O2.6.T.PI1)

To support the implementation of EBM/EAF and the achievement of the long-term vision for the CLME⁺, it becomes imperative to progressively expand the existing knowledge and enhance its use

¹¹⁴The leveraging of additional financial resources or partner support during Project implementation may allow to further expand the initial plan

for awareness building and decision-making, on key issues such as: ecosystem health, fish stock size, and innovative environmental and stock assessment techniques, the social and economic value of ecosystem goods and services, and the impact of management options and decisions on ecosystems and fish stocks and other shared living marine resources.

With the aim of promoting a more effective use of results from science in real-world decision-making, scientific activities that specifically address requests (in terms of current knowledge needs) of the existing advisory and decision-making bodies need to be promoted.

By delivering the distinct elements under Output 2.6. (described below), the project will facilitate a better identification, and better communication to the scientific community, of the priority data, information and knowledge needs as they are perceived by policy advisors, decision-makers and managers.

In addition to this, through the actual process of producing these elements of this output, and following a “learning-by-doing” approach, the capacity of key policy makers and resource managers (i.e. those mandated to work on the “decision-making” and “implementation” components of the CLME⁺ Demonstration Projects policy cycles) to influence and guide the scientific agenda will be strengthened.

Achievement of this output will constitute one of the steps in a gradual move towards a more systematic uptake of results from monitoring and research in policy development and resources management, and is thus a distinct contribution to an enhanced science-policy interface.

Overall, Output 2.6. corresponds to an action under CLME⁺ SAP Strategy 3 (Action 3.5). At the same time, its distinct elements can be linked to additional actions under several of the strategies and sub-strategies of the SAP (e.g. 1.6, 1.7, 2.10, 2.11, etc.). The following elements will be delivered under O 2.6:

A strategy to expand the knowledge base required for the implementation of EAF in the CLME⁺ region will facilitate enhanced implementation of this approach in the medium-term. Under the CLME⁺ Project priority focus will be given to research, data and information needed to support the sustainable management of spiny lobster, flyingfish and shrimp & groundfish fisheries.

Early results from the **strategy to expand the knowledge base to support habitat protection and restoration in the CLME⁺ region** (with special attention to the protection and restoration of coral reefs, mangroves and seagrass beds) may be helpful for the implementation of related Demonstration/pilotactivities under COMPONENT 3; once further developed and implemented, the strategy will be of great important to support the development of related investment plans under COMPONENT 4.

A strategy to expand the knowledge base required for the efficient and cost-effective reduction of LBS pollution in the CLME⁺(with special attention to those types of LBS pollution mostly affecting human well-being and sustainable socio-economic development) will largely fulfil the same role as the strategy above, but within its own thematic scope.

A cross-cutting element of Output 2.5, to be integrated into the previous strategies, or to be delivered as a separate document (to be decided), consists of a **strategy to expand the regional knowledge base on the value of goods and services provided by the different key marine ecosystems in the CLME⁺** (incl. its spatial variability). This strategy needs to build on previous

regional and global work (e.g. TEEB, WRI and MESP¹¹⁵), acknowledge existing knowledge gaps, and focus on pre-identified and projected practical knowledge needs, especially in connection to the other 3 thematic strategies described above (e.g. valuation of the impacts of LBS pollution on ecosystem goods & services in the region, valuation of the socio-economic benefits (to be) obtained from the implementation of EAF and from habitat protection and restoration measures, etc..)

Similar activities are proposed to achieve these distinct elements of Output 2.5.:

- Identification¹¹⁶ of priority knowledge gaps and specific demands [for scientific knowledge] from stakeholders with key advisory and decision-making roles in the CLME⁺ Demonstration Project policy cycles
- Prioritization of scientific work to be conducted
- Development of the research strategy documents, based on the results of the previous activities
- Approval of the developed strategies by the corresponding Advisory and/or Decision-making bodies (i.e. pre-existing or developed under Component 1, and linked to the relevant policy cycles)
- Dissemination of the approved strategies among the scientific community (including through the use of e-groups, presentations at relevant fora such as, e.g., the annual GCFI meetings, etc.) and to the regional and global financing mechanisms for scientific research
- [Integration of the existing work conducted by the OECS on the development of a sub-regional research strategy, into the activities listed above]

Early results from the implementation of these strategies, where available, will be used to support enhanced policy cycle implementation under the CLME⁺ Demonstration Projects (Component 3) and the development of (pre-)feasibility studies and investment plans (Component 4).

¹¹⁵ Marine Ecosystem Services Partnership, <http://www.marineecosystemservices.org/>

¹¹⁶ Where possible and appropriate, use will be made for this purpose of the existing meetings of the scientific & technical committees already established under the corresponding governance arrangements

2.4.3 Project Component 3: Piloting the implementation of EBM/EAF

Under COMPONENT 3 and through the outcome and outputs described below, the CLME⁺ Project will demonstrate the steps required to move from Business-as-Usual to an Ecosystem-based Management approach for key ecosystems and associated fisheries in the CLME⁺ region.

This will be done through the implementation of a series of Demonstration Projects that will support: the progressive transition to an ecosystem approach for the Caribbean spiny lobster fisheries (**Output 3.1.**), for the four-wing flyingfish fisheries (**Output 3.2.**) and for the North Brazil Shelf shrimp and groundfish fisheries (first element of **Output 3.3.**). The latter efforts will be [embedded within] [linked with] a fourth demonstration project that will foster the [gradual] adoption of the ecosystem-based management approach (EBM) on the NBSLME (another element of **Output 3.3.**). Under this demonstration, pilot initiatives will coordinate efforts to protect key habitats and/or address priority pollution issues with the efforts towards more sustainable fisheries management.

*[depending upon the available resources and confirmed co-financing for the other project outputs, the incorporation of a 4th Output (**Output 3.4.**), focussing on EBM/habitat/pollution issues for selected pilot within the Caribbean LME may also be considered (this could be collaborative efforts with other (sub)regional or national-level initiatives, supported by the GEF and/or other donors]*

Initially, COMPONENT 3 activities will build upon the baseline described under Annexes XXXX, and in particular the progress achieved under the pilot projects (2011-2013) of the CLME Project (GEF ID 1032). As results from the project's activities under COMPONENT 1 and 2 start becoming available, the activities under COMPONENT 3 will progressively build upon these results.

Progress towards the above outputs will benefit from the enhanced coordination with other relevant, related regional and sub-regional initiatives (see also [Section X/Annexes X]). Activities under COMPONENT 3 will also contribute to the enhanced resilience of the CLME⁺'s socio-ecological system to climate variability & change.

OUTCOME:

Progressive reduction of environmental stresses [with particular attention to the enhancement of livelihoods] and enhancement of livelihoods demonstrated, across the thematic and geographic scope of the CLME⁺ SAP

To contribute to this outcome, activities under COMPONENT 3 will build upon the results from the CLME Project (2009-2014) as well as on the progressive achievements obtained during the execution of activities under COMPONENTS 1 and 2 of the current CLME⁺ project (2015-2019).

The Demonstration Projects under COMPONENT 3 have been shaped around the different elements of the Governance Effectiveness Assessment Framework (GEAF) described under Section 2.1.3, and aim at testing full policy cycle runs (see Section X).

They have been designed in such a way that, combined, they will largely cover the geographic and thematic scope of the CLME⁺ SAP.

They will address several of the root causes identified under the TDAs mostly at the sub-regional level, for selected fisheries and/or ecosystem/habitat types ("demonstration scale"): e.g. *weak governance arrangements, limited capacity, inadequate (access to) data and information, inadequate public awareness and involvement.*

The management plans that will be developed, and/or whose implementation will be kick-started under these CLME⁺Demonstration Projects, will provide an opportunity whereby a group of countries and diversity of stakeholders, either politically or geographically affiliated, take action under a jointly agreed upon approach for a shared resource. It is envisaged that many of these plans will be developed, and their implementation will be monitored and reviewed, with the support of the working groups established and/or supported under COMPONENT 1.

Wherever possible, insights acquired from the work conducted under COMPONENT 3 will be used in the development of the investment plans aiming at major upscaling and replication of EBM/EAF efforts under COMPONENT 4.

OUTPUTS UNDER COMPONENT 3

Output 3.1. (O3.1.) Transition to an ecosystem approach for the Caribbean spiny lobster fisheries demonstrated at the [sub-]regional level

This output can be linked to Sub-Strategy 4A (and Strategy 4) of the CLME⁺ SAP:

SAP Sub-Strategy 4A: enhance the governance arrangements for implementing an ecosystem approach for spiny lobster fisheries

(SAP Strategy 4: enhance the governance arrangements for ecosystem-based management of reefs and associated habitats (e.g. seagrass beds, mangroves, reef slopes and coastal lagoons)

The geographic scope of the Demonstration Project is variable and depends on the specific activity. It ranges from: (a) the SICA countries plus Colombia, Jamaica and the Bahamas (direct participants), USA [and Europe] (key market[s]) for on-the-ground demonstration activities, and, (b) all CLME⁺ States with a stake in the Spiny lobster fisheries, in the context of the development of the regional management plan, and the dissemination of best practices & lessons learnt.

The Objectives of the Demonstration Project are:

- a. Optimize the transboundary coordination for the sustainable management of Caribbean spiny lobster stocks, to foster long-term human well-being of direct and indirect stakeholders
- b. [Facilitate] [Enable] full policy cycle implementation at a sub-regional level, through the implementation of [the] [a] [sub-regional management plan] [agreed upon EAF-based management measures] for spiny lobster fisheries
- c. Promote and support the full policy cycle implementation at the national level, through the implementation of national management plans for spiny lobster fisheries
- d. Capture and disseminate best practices and lessons learnt, to facilitate replication and up-scaling of the EAF approach in other CLME⁺ fisheries

The activities that will be undertaken to achieve these objectives are described with more detail under Annex X, and include:

- Development and approval of a [sub-]regional EAF Management Plan for the Caribbean spiny lobster fisheries
- Development and implementation of an M&E framework (including the determination of baseline values and –participatory- setting of targets) to facilitate adaptive management and track progress with the implementation of the approved sub-regional management plan
- Mainstreaming of management measures outlined in the [sub-]regional plan into National Fisheries Management Plans of the participating CLME⁺ States
- Pilot implementation of agreed upon management measures (e.g. simultaneous/coordinated closed seasons, coordinated measures against IUU incl. enhanced MCS and awareness building and measures that will promote alternative/enhanced livelihoods)
- Enhanced stock assessments and identification of priority research needs to further support the progressive adoption of the EAF approach for spiny lobster fisheries in the CLME⁺ region (contribution to Output 2.5)

- Twinning exchanges with other CLME⁺ stakeholders not directly involved in the Demonstration Project
- Implementation of the relevant, de-centralized components of the CLME⁺ Communication and Training Strategies
- (Preliminary) review & evaluation of progress and formulation of advice, under an adaptive management approach (full policy cycle run)

Work on this output will occur in coordination with the MAR2R Project (GEF/WWF/CCAD; currently under development) which will promote the Ridge-to-Reef approach for the Mesoamerican Barrier Reef, and with the efforts of other organizations working on enhanced fisheries and fisherfolk livelihoods (e.g. the WWF-supported Fisheries Improvement Projects (FIPS) in Honduras and Nicaragua, the TNC-supported certification of spiny lobster fisheries in the Bahamas, etc.).

Output 3.2. (O3.2.) Transition to an ecosystem approach for the Eastern Caribbean flyingfish fisheries demonstrated

This output can be linked to Sub-Strategy 5A (and Strategy 5) of the CLME⁺ SAP:

SAP Sub-Strategy 5A: enhance the governance arrangements for implementing an ecosystem approach for flyingfish fisheries

(SAP Strategy 5: enhance the governance arrangements for implementing an ecosystem approach for pelagic fisheries)

The geographic scope of the Demonstration Project corresponds to: the CRFM countries and French Overseas Territories participating in the Southeastern Caribbean flyingfish fisheries (i.e. Barbados, Trinidad & Tobago, Saint Lucia, Dominica, Martinique). In extension, the project will be of importance for, a.o., those CLME⁺ countries targeting pelagic species (such as Dolphinfish or Mahi Mahi) that depend on the Southeastern Caribbean flyingfish stocks. Through the dissemination of best practices & lessons learnt, the Demonstration Project will also be beneficial to (a) other CLME⁺ States with a stake in flyingfish fisheries, and (b) other CLME⁺ fisheries (all CLME⁺ States) aiming at adopting the EAF approach.

The Objectives of this Demonstration Project are:

- Optimize the transboundary coordination for the sustainable management of eastern Caribbean four-wing flyingfish stocks, to foster long-term human well-being of direct and indirect stakeholders
- Demonstrate full policy cycle implementation at the sub-regional level, through the implementation of the sub-regional management plan for flyingfish fisheries
- Demonstrate full policy cycle implementation at the national level, through the implementation of the national management plans for flyingfish fisheries
- Capture and disseminate best practices and lessons learnt, for the replication and up-scaling of the EAF approach in other CLME⁺ fisheries (incl. flyingfish fisheries targeting other Caribbean stocks)

As has already been articulated under Section 1.3.5, the Sub-regional Fisheries Management Plan for Flyingfish in the Eastern Caribbean (finalised as part of activities under CLME Project -GEF ID 1032) represents the first sub-regional fisheries management plan to be approved by a number of States

within the CLME⁺ Region. In light of this, the activities to be implemented as part of this output are linked to the management measures agreed upon in the management plan by the main fishing States of Barbados, Dominica, Grenada, Trinidad and Tobago, Saint Lucia and St. Vincent & the Grenadines.

It should further be noted that early results and best practices emanating from this demonstration initiative will also be used to inform the other Demonstration Projects to be implemented under COMPONENT 3.

Activities under this output are described with more detail under **Annex X** and will include:

- Strengthen the existing CRFM Sub-Regional Committee on Flyingfish to a decision-making body
- Formalize relationship between the CRFM and France to ensure France's (Martinique) involvement in the management measures in place for the flyingfish fishery.
- Develop and implement national management plans for flyingfish fisheries consistent with the sub-regional fisheries management plan
- Establish sub-regional flyingfish vessel registry database
- Establish improved monitoring, control, surveillance and enforcement mechanism for flyingfish fisheries and ending IUU Fishing
- Promote and support the establishment of national training and public awareness programmes to strengthen fishers' participation in the management process

Output 3.3. (O3.3.) Transition to an ecosystem-based management approach for the North Brazil Shelf LME, with special attention to the implementation of EAF for shrimp and groundfish fisheries

This output can be linked to the following Strategies of the CLME⁺ SAP:

SAP Strategy 6: Implement EBM/EAF of the Guianas-Brazil continental shelf with special reference to the shrimp and groundfish fishery

SAP Strategy 1: Enhance the regional governance arrangements for the protection of the marine environment

Output 3.3. will consist of the following 2, inter-linked Demonstration Projects:

The transition to an “ecosystem approach for the shrimp and groundfish fisheries on the Guianas-Brazil shelf” (Target X in the logframe) will be fostered through the Demonstration Project further described under Annex X of this Project Document.

The geographic scope of the Demonstration Project corresponds to the countries that participate in the North Brazil Shelf LME fisheries: Trinidad & Tobago, Venezuela, Guyana, Suriname, French Guiana and Brazil. Through the dissemination of best practices & lessons learnt, the Demonstration Project will also be beneficial to (a) other countries with transboundary shelf fisheries in the CLME⁺region, and (b) other CLME⁺ fisheries (all CLME⁺ States) aiming at adopting the EAF approach.

Its objectives are:

- a. Optimize the transboundary coordination for the sustainable management of shrimp & groundfish stocks on the NBSLME, to foster long-term human well-being of direct and indirect stakeholders

- b. Demonstrate full policy cycle implementation at the [sub-regional][national] level, through the development, approval and initiation of implementation of the sub-regional fisheries management plan
- c. Capture and disseminate best practices and lessons learnt, for the replication and up-scaling of the EAF approach in other CLME⁺ fisheries

Activities under this element of O3.3. are described with more detail under **Annex X** and will include:

- Participatory development and adoption of a Regional Management Plan for the shrimp and groundfish resources of the North Brazil Shelf LME
- Promote and support the development/strengthening of national management plans or fisheries management plans for the shrimp and groundfish fisheries
- Pilot implementation of agreed upon action plan measures for improved monitoring, control and surveillance to control IUU fishing :
 - the signing of MoUs specific to actions to address IUU between States
 - The development and approval of MCS protocols
 - Preparation of training and inspection manuals that address aspects of MCS and establishment of training programmes for inspectors
- Establish a DSS to support the management of the shrimp and groundfish within the NB Shelf.
- Integrate socio-economic data and information on shrimp and GF fisheries with catch and effort data in FIRMS

The transition to an “Ecosystem-based management approach for the North Brazil Shelf LME” (*Target X in the logframe*) will be fostered through the Demonstration Project further described under Annex Y of this Project Document. The Demonstration Project will, amongst others, give a specific implementation context for the first 2 elements of Output 1.1. under COMPONENT 1 (i.e. collaborative arrangement between UNEP CEP and Brazil, and between the SPAW and LBS Protocols). It will also seek to -through pilot interventions- illustrate the inter-dependences and inter-linkages of the three transboundary issues of unsustainable fisheries, habitat degradation and pollution, identified during the first CLME Project.

In general terms, the geographic scope of this element of O3.3. is: Trinidad & Tobago, Venezuela, Guyana, Suriname, French Guiana and Brazil (North Brazil Shelf LME); however, (a) specific activities under the Demonstration Projects [may] [will] focus on a sub-set of countries, as detailed under Annex X, whereas (b) best practices and lesson learnt from the Demonstration Project’s implementation will be of interest to the wider CLME⁺ region, and the Cartagena Convention (LBS/SPAW) and WECAFC constituencies.

The Objectives of this Demonstration Project are:

- a. Operationalize the activities of the coordination and cooperation mechanisms established between the regional sub-arrangements for marine pollution (LBS and Oil Spills Protocol) and habitat degradation (SPAW Protocol) under Output 1.1., within the context of the objectives of this Demonstration Project
- b. Demonstrate, through pilot on-the-ground initiatives, innovative participatory approaches that promote and enable the restoration and protection of coastal habitats along the North-Brazil Shelf LME

c. Capture and disseminate best practices and lessons learnt, for the replication and up-scaling of the EBM approach to other sub-regions within the CLME⁺

Prospective activities under this element of O3.3. are described with more detail under **Annex X** and will include:

- Identify (and where feasible map) important spawning and nursery areas (local, national, sub-regional) for economically [and ecologically] important species along the North-Brazil Shelf LME
- Determine whether important spawning and nursery areas are associated with habitats such as mangroves, coastal wetlands and seagrass beds
- Develop and test the implementation of a methodology to identify (and where feasible map) marine pollution hotspots¹¹⁷ along the North-Brazil Shelf, and characterize pollution sources and types, and magnitude of (potential) impacts
- Pilot habitat protection and restoration initiatives that will support enhanced community participation (particularly the participation of women) and management of coastal habitats

¹¹⁷ Special attention will be given in this context to matters relating to pollution that are known to affect fisheries and fish nursery habitats

2.4.4 Project Component 4: (Pre-)Feasibility studies to identify major high-priority investment needs and opportunities in the CLME⁺ region

The lack of financial resources is recognized as an important root cause of the region's limitations, in terms of the scale at which actions to address environmental degradation and to develop a blue economy are currently being implemented.

Transitory incremental funding is now provided by the GEF through the CLME⁺ Project. However, these resources will only allow to initiate CLME⁺ SAP implementation. Full-scale SAP implementation and the achievement of its long-term objectives and overarching goal will demand a total volume of investments, up 1-2 orders of magnitude from the transitory funding provided by the GEF. Such will require a substantial increase in the involvement of the private sector, civil society, and the broader international donor community and development banks.

In order to avoid a stall in SAP implementation efforts after the CLME⁺ Project comes to an end, and in order to ensure that a substantial up-scaling of actions can take place, the 4th Component of the CLME⁺ Project has been specifically designed to assist the region and its stakeholders in the preparation, approval and delivery of investments plans, and in their efforts to start leveraging the funds required to implement these plans.

Under COMPONENT 4 and through the outcome and outputs described below, the CLME⁺ Project will deliver enhanced insights and understanding on high-priority investment needs and opportunities to: (a) halt and reverse, at the regional scale, the loss of ecosystem goods and services; and (b) stimulate sustainable, ocean-linked businesses and economic growth (**Output 4.1.**). The updated and completed baselines on lessons learnt from pilot-scale investments and demonstrated best practices, their current levels of application in the region, and their costs and effectiveness, will be used in the development of medium- and long-term (10-20 years) investment plans (**Output 4.2.**). Activities under these outputs will thus build upon progress achieved in the region to date (see Annex X), complemented with global experiences and with early results that will be obtained from Project COMPONENT 3.

Activities under COMPONENT 1, 2, 3 and 5 of this Project will all contribute to creating the enabling platform upon which the investments identified under COMPONENT 4 can then be built.

OUTCOME

Successful implementation of this component will facilitate the targeted leveraging of the financial resources that are required to achieve a substantial up-scaling of priority investments under the CLME⁺ SAP. These investments will in turn be expected to:

- facilitate the implementation of large scale, well-coordinated and knowledge-based efforts for the restoration and enhanced protection of key habitats known to be of critical importance for the region's sustained socio-economic development and the well-being of its peoples
- facilitate the implementation of a variety of technologies, tools and infrastructure works to support sustainable fisheries development and contribute to enhanced livelihoods and human well-being
- facilitate the implementation of [substantial] [large scale] on-the-ground investments to reduce the impacts of pollution on human well-being and on the region's socio-economic

development, with a focus on measures that safeguard and/or restore the provision of ecosystem goods and services in areas with major development potential and/or needs

As such, activities under Component 4 will ensure that actions under the SAP move beyond the pilot or demonstration scale, and that measurable impacts can be created at regional, and -as relevant and feasible- global scales.

The expected outcome (*Financing catalysed for the scaling-up of priority actions for the protection of the marine environment and for ensuring sustainable livelihoods and socio-economic development from sLMR use in the CLME⁺*) will contribute to addressing, amongst others, the following root causes: limited financial resources, inadequate public and private involvement, and inadequate information and knowledge.

OUTPUTS UNDER COMPONENT 4:

Output 4.1. (O4.1) (Pre-)Feasibility reports on major investment needs and opportunities (incl. budget estimates, scope of work, private sector & civil society involvement, expected benefits and required timescales) (Target O4.1.T.PI1 and 2)

This output will contain different elements, relating to specific investments needed to deal with each one of the three priority problems identified under the TDAs. Consideration of the cross-cutting and over-arching goals of enhanced livelihoods, socially just outcomes and increased resilience of the socio-ecological system to climate variability and change, will be mainstreamed into the development process for each individual element:

✓ *habitat degradation and modification of ecosystem communities (components: enhanced protection + stress reduction + restoration)*

A baseline and (pre-)feasibility assessment report on the needs and opportunities for ["in the field action"] [&] [investments] for enhanced protection and restoration of key habitats, with special attention to coral reefs, seagrass beds and mangroves will be delivered by CLME⁺ Project Mid-Term.

The report will take reference of the "*Toolbox for Action: Review of what's working in marine habitat conservation and what's not*" developed by the *Habitat Community of Practice* under the *Global Partnership for Oceans*. It will further harvest the relevant knowledge acquired from regional and global research, and build upon identified best practices and lessons learnt from the multitude of existing (currently mostly small-scale) habitat restoration initiatives in the CLME⁺. Where feasible, the report will also integrate additional knowledge acquired from the relevant activities under CLME⁺ Project COMPONENT 3 (i.e. early results).

In order to achieve this element of Output 4.1., proposed activities include:

- Utilize existing technical task team to provide guidance for the development/review/approval of a work plan and timeline (*timeline needs to be compatible with CLME⁺ Project timeline and timeline of the established regional governance processes in the CLME⁺*)
- Complete the inventory of existing efforts in the region (location, scale, type, stakeholders involved, status, cost/investments made, results obtained, potential for up-scaling/replication, etc.)
- Analyse benefits that can be obtained from enhanced habitat protection/restoration (valuation of ecosystem goods & services)

- Review and identify best practices and lessons learnt and analyse potential for replication and up-scaling, based on results from previous 2 points
- Pre-screening of identified options/potential measures and solutions: robustness in face of the uncertainties related to climate variability and change, and contributions to enhanced resilience of the socio-ecological system that is being addressed
- Identification of priority areas in the CLME⁺ region; criteria proposed for consideration are:
 - Potential for short-term return-on-investment (on site)
 - Potential for medium to long-term return-on-investment (replicability & up-scaling potential)
 - Current gaps (geographic, thematic,...)
- Build and expand the regional partnership for action on enhanced protection and restoration of habitats (incl. through, e.g., the organization of a donor conference and the establishment of a business forum)
- Develop report, and have report approved by the interim SAP implementation coordination mechanism

✓ *unsustainable fisheries*

A baseline and (pre-)feasibility assessment report on the needs and opportunities for sustainable fisheries management and development [through on-the-ground]/[in-the-field] priority investments in-line with the management plans developed under COMPONENT 3, will be delivered by Project Mid-Term.

The proposed activities to achieve this element of O4.1. include:

- Utilize existing technical task team to provide guidance to the development/review/approval of a work plan and timeline (*timeline needs to be compatible with CLME⁺ Project timeline and timeline of established regional governance processes in the CLME⁺*)
- Complete the inventory of existing efforts in the region (location, scale, type, stakeholders involved, status, cost/investments made, results obtained, potential for up-scaling/replication, etc.)
- Analyse benefits that can be obtained from enhanced habitat protection/restoration (valuation of ecosystem goods & services)
- Review and identify best practices and lessons learnt and analyse potential for replication and up-scaling, based on results from previous 2 points
- Pre-screening of identified options/potential measures and solutions: robustness in face of the uncertainties related to climate variability and change, and contributions to enhanced resilience of the socio-ecological system that is being addressed
- Identification of priority areas in the CLME⁺ region; criteria proposed for consideration are:
 - Potential for short-term return-on-investment (on site)
 - Potential for medium to long-term return-on-investment (replicability & up-scaling potential)
 - Current gaps (geographic, thematic,...)
- Build and expand the regional partnership for action on sustainable fisheries management (incl. through, e.g., the organization of a donor conference and the establishment of a business forum)
- Develop report and have report approved through the established governance mechanism at the Xth Session of the WECAFC

✓ *pollution*

A baseline and (pre-)feasibility assessment report on the needs and opportunities to reduce the impacts of pollution on human well-being and to safeguard the goods & services delivered by marine ecosystems and associated living resources to human society will be delivered by CLME⁺ Project End.

In order to achieve this output, proposed activities to be undertaken under Component 4 include:

- Utilize existing technical task team to provide guidance to the development/review/approval of a work plan and timeline (*timeline needs to be compatible with CLME⁺ Project timeline and timeline of established regional governance processes in the CLME⁺*), based on the preliminary results obtained from the work conducted by the World Bank and UNEP CEP, and in line with the recommendations of the 2nd LBS STAC
- Mapping key areas, type and magnitude of impacts from pollution on socio-economic development and human well-being, to determine where (i) critical needs exist to avoid increasing socio-economic loss from pollution, and (ii) best options for recovery from existing negative impacts exist, with the aim of pre-identifying where and how highest benefits from investments can be obtained
- Cost-benefit evaluation of different existing solutions (with consideration to both grey and green/blue infrastructure – the latter includes linkage with report # 1 on habitats)
- Complete the inventory of existing efforts in the region (location, scale, status, type, stakeholders involved, investments made, results obtained, potential for up-scaling/replication, etc.)
- Review and identify best practices and lessons learnt, analyse potential for replication and up-scaling
- Pre-screening of identified options/potential measures & solutions: robustness in face of the uncertainties related to climate variability and change, and contributions to enhanced resilience of the socio-ecological system that is being addressed
- Identification of priority areas in the CLME⁺ region; criteria proposed for consideration are:
 - Potential for short-term return-on-investment (on site)
 - Potential for medium to long-term return-on-investment (replicability & up-scaling potential)
 - Current gaps (geographic, thematic,...)
- Build and expand the regional partnership for action to reduce the impacts of pollution (**incl. through, e.g., the organization of a donor conference and the establishment of a business forum**)
- Develop report and have report approved by the Xth Meeting of the LBS COP???

Output 4.2. (O4.2.) Investment plans (incl. specifications for private sector and civil society involvement) to deal with key issues identified under the CLME TDAs, developed and agreed upon by SAP stakeholders (**Targets O4.2.T.PI1-4**)

The projected elements of this output are:

An investment plan for large-scale action on habitat protection and restoration, with special attention to habitats of critical importance in terms of current and potential future provisions of ecosystem goods & services, and contributions to Global Environmental Benefits (GEBs)

An investment plan for on-the-ground measures to support sustainable fisheries management & development, with the aim of ensuring enhanced/sustainable livelihoods, while fostering social justice and safeguarding and improving human well-being and health

An investment plan that outlines and costs national-level projects to reduce LBS pollution, with special attention to pollution sources known to cause substantial impacts on the provision of those ecosystem goods and services that are of critical importance for human well-being and sustained socio-economic development

These 3 element of Output 4.2. will require the implementation of the following type of activities:

- Revision of Working Group composition, ToRs, work plan and timeline, to ensure adequate representation of governmental, civil society, private sector stakeholders and representatives from donor community and development banks, and to ensure work plan and timeline are compatible with overall timeline of CLME⁺ Project and of decision-making processes under the relevant, established regional governance mechanisms in the CLME⁺
- Develop draft and revised investment plan; final screening of investments considered for inclusion in the plan in terms of their robustness in face of the uncertainties related to climate variability and change, and their contributions to enhanced resilience of the socio-ecological system that is being addressed
- Approval of final (revised) plan

2.4.5 Project Component 5: Monitoring and assessing the overall implementation of the CLME⁺ SAP, and experience sharing with the global LME practitioners community

Insufficient communication, co-ordination and information exchange among primary CLME⁺SAP stakeholders¹¹⁸ and among the myriad of existing and planned projects, activities and initiatives in the region constitutes an important barrier to fully achieving the societal and environmental benefits¹¹⁹ expected from these multiple investments. With the endorsement of the CLME⁺ SAP, a broad and comprehensive framework is now available to support better coordination of actions, so that major benefits can be more effectively obtained.

The establishment of a “**Global Partnership for the implementation of the CLME⁺ Strategic Action Programme**” (the “**CLME⁺ Partnership**”¹²⁰) –which is expected to bring together the different stakeholders, donors and development partners- will be key to achieving such coordinated action under the framework of the SAP.

By means of the outcome and associated outputs under COMPONENT 5, the CLME⁺ Project has been specifically designed to enable the establishment and progressive expansion of such Global Partnership (**Output 5.1.**). Under this partnership, the development of a joint CLME⁺ SAP Monitoring and Evaluation (M&E) framework and associated, dashboard-type “*CLME⁺ status*” web portal(s) and reporting tool (**Output 5.2.**) will facilitate better communication, and thus also better co-ordination and collaboration towards the objectives of the SAP.

Selected elements of the overarching Communication Strategy developed under COMPONENT 2 (esp. those targeting the CLME⁺ Partnership and those relevant to matters relating to the overall objectives of the SAP), will be implemented through COMPONENT 5 (**Output 5.3**). Building upon the results from the previous output, Output 5.3. will then also further promote ownership and accountability, enable adaptive planning & management of SAP implementation, and make it possible to better respond to evolving priorities, opportunities and needs.

The scope of activities under Output 5.3 will reach beyond the CLME⁺ region itself, as mutual benefits for the CLME⁺ Partnership and for the global GEF/IW/LME Practitioners Community will be secured through project twinning activities and through the global dissemination, collection and exchange of best practices and lessons learnt.

OUTCOME

The potential for maximizing regional socio-economic benefits and Global Environmental Benefits from SAP implementation will be increased through:

- a) **enhanced coordination and collaboration** among sLMR programmes, projects, initiatives (PPIs) and stakeholders, within the CLME⁺ region and beyond, to be achieved through the establishment and progressive expansion of the “CLME⁺ Partnership”

¹¹⁸ In the context of COMPONENT 5, with primary CLME⁺ SAP stakeholders we specifically refer to those institutions, organizations and donors whose formal mandate and/or recognized role in the context of sLMR management in the CLME⁺ creates the expectation that they are [important] [major], active or potential contributors to the over-arching objectives of the SAP

¹¹⁹ Including expected Global Environmental Benefits (GEBs) under the GEF IW and BD Focal Areas

¹²⁰ For the sake of outreach on, and promotion of the CLME⁺ approach, consideration will be given among the members under the Partnership to the potential proclamation of an annual, regional “Day of the Marine Environment” in the CLME⁺

- b) **optimized and adaptive management of sLMR-related PPIs** in the region, to be supported by effective and collaborative SAP M&E tools
- c) **exchange of best/good practices and lessons learnt among the global LME Community of Practice (CoP)**, leading to enhanced efficiency and effectiveness of measures under the CLME⁺ SAP

OUTPUTS UNDER COMPONENT 5:

Output 5.1. (O5.1.) *Formal and/or informal cooperation frameworks and partnerships*(**Targets O5.1.T.PI1-6**) will be developed and progressively expanded throughout the project’s duration. They will bring together and link the different development partners, programmes, projects, initiatives (“PPIs”), and the different countries and territories with a stake in the CLME⁺ SAP (**the CLME⁺ Partnership**). This effort will build upon the partnerships that were already successfully established during the first CLME Project and the CLME⁺ Project Preparation Phase (PPG Phase).¹²¹

Proposed activities that will contribute to Output 5.1. include:

- further expansion of the “baseline” inventory (initiated during the CLME⁺ PPG phase) of: (a) primary stakeholders and (prospective) partners, and (b) relevant, existing and planned programmes, projects and initiatives (“PPIs”)
- further enhancement of the basic PPI database structure developed during the PPG phase
- maintenance and periodic updating of the PPI database content
- negotiation and conclusion of collaborative/partnership agreements (MoUs, others,...) with prospective CLME⁺ Project/CLME⁺ SAP partners
- development of generic (and, where applicable, partner-specific) Terms of Reference (ToRs) for the collaborative arrangements under the CLME⁺ Partnership

Output 5.2. (O5.2.) A [prototype] *CLME⁺ ecosystem status and SAP implementation M&E mechanism* will be developed during the Project Inception Phase, and progressively expanded and improved throughout the project’s duration (in line with the expansion of the CLME⁺ Partnership).

Operationalization (by the end of Project Year 1) of the M&E mechanism will be supported through the activities under Output 5.3. Both outputs will be produced in collaboration with, amongst others, the “Caribbean Marine Atlas” CMA2 initiative (FUST/IODE – IOC of UNECO), and are also expected to contribute to the further regional appropriation, adaptation and institutionalization of the GEF initiated TDA/SAP approach.

Output 5.2. will consist of the following 2 distinctive, complementary elements:

- ✓ **Common, or compatible approaches and/or protocol(s) for the joint monitoring & assessment of overall SAP implementation (and CLME⁺ status and conditions)**
- ✓ **“CLME⁺ SAP Monitoring & Evaluation” and “CLME⁺ Status” web portal(s)**

In recognition of the fact that the CLME⁺ Project is a 5-year initiative, and with the 10-year SAP being nested within the broader regional-level aim of achieving effective ocean governance within a 20-years timeframe, due efforts will be made to ensure that activities under both elements of Output 5.2. build as much as possible on existing/planned activities of organizations and institutions with a formal, broadly accepted mandate or role relating to sLMR governance and management.

¹²¹ For more details on CLME+ partners, see... Annex? Section X?

Common, or compatible approaches and/or protocol(s) for the joint monitoring & assessment of overall SAP implementation and of CLME⁺ status and conditions, and for the further institutionalization of the TDA/SAP approach, will be developed and agreed upon (**Target O5.2.T.PI1-2**).

For this purpose, use will be made of concepts originating from the modular approach under the LME Programme (NOAA)¹²², the GEF IW M&E Strategy, the DPSIR framework¹²³, the Governance Effectiveness Assessment Framework (GEAF) and the Transboundary Waters Assessment Programme (TWAP Project, GEF ID 4489). Linkages will further be sought with the Ocean Health Index (OHI) initiative spearheaded/led by Conservation International, and with the currently existing national and regional-level monitoring and reporting obligations¹²⁴ and needs, as far as these are relevant to the SAP. Activities under this Output will be coordinated with those under Output 1.4.

The first element of Output 5.2. is compatible with the “umbrella programme” concept of the SAP, as it aims to further strengthen partnerships by fostering collaborative M&E processes, incl. on actions under the SAP that fall outside of the scope of the CLME⁺ Project itself.

Activities under this element of Output 5.2. are expected to include:

- pre-screening of potentially relevant key indicators for SAP M&E, under the different relevant indicator categories (e.g. governance architecture, process indicators, stress reduction, stock status, ecosystem status and associated socio-economic indicators, etc.)
- agreement on an initial indicator set for the joint M&E of SAP implementation, incl. indicators on status of CLME⁺ ecosystems and associated living resources
- development and implementation of an agreed upon collaborative framework (incl. protocols/agreement on approaches) for the production and exchange/dissemination of baseline values and periodical updates (progress/change in status) for key CLME⁺/SAP indicators

Activities will be coordinated with those described under Output 1.4.

A “CLME⁺ SAP Monitoring & Evaluation” and “CLME⁺ Ecosystem Status” web portal (or set of portals) will be developed, possibly combined with other (innovative) dissemination means (**Target O5.2.T.PI1-2**). For this purpose, activities under this element of Output 5.2 will build upon the results obtained under Output 2.6.

The web portal (or combination of inter-linked portals, hosted by CLME⁺ partners in alignment with their mandates and adhering to the principle of subsidiarity) will be designed in such a way that key aspects of CLME⁺ ecosystem status, and results from CLME⁺ SAP M&E can be depicted and communicated, by making use of the materials that will be developed under Output 5.3. For the purpose of SAP implementation M&E, a “dashboard functionality” will be considered.

Hence, the web portal(s) will provide the members of resp. the CLME⁺ Partnership, and of the broader stakeholder community and general public, with access to periodically updated key

¹²² http://lme.edc.uri.edu/index.php?option=com_content&view=category&layout=blog&id=48&Itemid=79

¹²³ See Section

¹²⁴ E.g. those under regional and global conventions, such as resp. the Cartagena Convention and the CBD and UNFCCC

indicators relating to CLME⁺ SAP processes and objectives, and to information on the status of key ecosystems and associated living resources in the CLME⁺.

Activities that will contribute to this element of O5.2. include:

- collaborative development of an agreed upon outline for the first “State of the Marine Ecosystems and associated Living Resources in the CLME⁺ region” report (report outline will be reflective of the CLME⁺ SAP Strategies, and take into account existing organizational mandates and/or recognized roles among the members of the CLME⁺ Partnership)
- in connection with and in support of the previous activity, integrate the CLME⁺ Status and SAP M&E web portal development with the development of the “State of ...” reporting Strategy
- foster the further regional appropriation and institutionalization, and long-term adoption of the cyclical TDA/SAP process, by conceptually mainstreaming the approach into the design of the CLME⁺ SAP M&E web portal and “State of...” reporting dynamics and prospective content
- agreement on partner responsibilities (hosting and maintenance arrangements for web portals, and provision of content for portals and for the report)

Given the formal mandates of UNEP CEP under the Cartagena Convention with regard to the LBS and SPAW Protocols, it is anticipated that UNEP CEP will take a lead role in the partnership to be established for the development of the the “Status of the Marine Environment” sections. In a similar way, it is anticipated that the interim arrangement for sustainable fisheries established under Component 1 of the Project, will coordinate the development of the “Status of Marine Fisheries” section of the Portal/Report. In an initial phase, overall coordination of the Portal/Report development is anticipated to be conducted through the interim “SAP implementation coordination” mechanism (to be established under O1.1) and (operationally) led by the CLME⁺ PCU, until a more permanent coordination mechanism has been defined and approved.

Output 5.3. (O5.3.) Communication, twinning and knowledge exchange activities targeting the CLME⁺ Partnership and global LME Community of Practice, to be implemented throughout the Project’s duration, will put in practice the corresponding elements of the over-arching Communication Strategy¹²⁵ developed under COMPONENT 2.

Communication towards and among the members of the CLME⁺ Partnership will enhance awareness, coordination and collaboration among current and prospective CLME⁺ partners and will help reducing overlap in efforts, enable complementarity of actions and facilitate synergetic effects towards the overall objectives of the CLME⁺ SAP. Communication activities under this element of O5.3. will be particularly geared towards the collaborative production of a first “State of the Marine Ecosystems and associated Living Resources” report, and relevant content for the web portal(s) developed under O5.2.

Although the members of the CLME⁺ Partnership will thus be the primary stakeholders of Output 5.3., in order to further maximize regional and global benefits from the support provided by the GEF (and in fulfilment of the associated donor requirement), O5.3 will also contain a distinct element that focusses on twinning, dissemination and knowledge exchange across the global LME Practitioners Community.

¹²⁵ And, where applicable, the Training Plan (e.g. inter-LME twinning activities)

Overall coherence of activities under Output 5.3. will be supported through the provisions under the over-arching CLME⁺ Communication Strategy (Output 2.4), and further promoted through the oversight/coordinating role that will be assigned to the [CLME⁺ PCU] [and/or] [interim SAP implementation coordination mechanism (established under Output 1.1)]. Activities under Output 5.3 will consequently also be coordinated with the communication and awareness building activities to be implemented as part of the Demonstration Projects under COMPONENT 3, and will be mutually supportive.

Output 5.3 will consist of the following 2 distinctive elements (described in further detail below):

- ✓ **Implementation of selected elements of the CLME⁺ SAP/CLME⁺ Project Communication Strategy, targeting the existing and prospective members of the CLME⁺ Partnership**
- ✓ **Global dissemination, collaboration, and sharing of experiences among the global LME practitioners community**

For the **implementation of those elements under the CLME⁺ Communication Strategy (O2.4) that specifically target the CLME⁺ Partnership (Target O5.3.T.PI1-2)**, the following activities are foreseen to take place under COMPONENT 5:

- Coordinated development of CLME⁺ SAP/Project-related content on CLME⁺ partner websites (incl. a central “CLME⁺ Project” website, initially managed through the CLME⁺ PCU)¹²⁶
- Coordinated development of content for the CLME⁺ Status and SAP M&E web portal(s) and “State of...” report
- Production of CLME⁺ Project booklet, leaflets and quarterly newsletters, or similar dissemination materials, that will build awareness on the CLME⁺ Project and SAP, and showcase over-arching and/or distinguished project results (target public: (a) current and prospective members of the CLME⁺ Partnership; (b) the wider CLME⁺ stakeholder community)
- Exchange of CLME⁺ SAP-related or relevant communication materials and reports, among CLME⁺ partners (incl. through the use of repositories and/or mailing lists)

Global dissemination, collaboration, and sharing of experiences among LMEs (Target O5.3.T.PI3-5) holds the important potential to lead to more efficient and cost-effective -and thus more successful- implementation of actions, both within the CLME⁺ as well as in other [GEF-supported] Large Marine Ecosystems or LMEs. The exchange of experiences, best practices and lessons learnt, and (where feasible and relevant to the Project’s objective) “hands-on” collaboration/twinning activities involving practitioners and stakeholders from other LMEs will therefore be fostered by the CLME⁺ Project through this element of O5.3.

This will be achieved through networking activities with the global LME practitioners community (e.g. through IW:LEARN, TWAP, the LME COP Project, and the Global LME Conferences). For example, a pre-identified interest exists in this context to further explore potential twinning opportunities on the monitoring & evaluation of SAP implementation, and the associated development of marine atlases/information portals, with the [forthcoming]/[proposed] “SAPPHIRE” Project on the Agulhas and Somali Current LME (currently under development).

Activities under this element of O5.3. will include:

¹²⁶The de-centralized approach, involving organizations with a long-term mandate for sLMR governance and management in the CLME⁺, will contribute to the sustainability of this result beyond the project lifespan

- Participation of the CLME⁺ Project in the biennial GEF International Waters Conferences (IWC)
- Participation of the CLME⁺ Project in the annual LME Consultative Group meetings
- Participation of the CLME⁺ Project in the Global LME Conferences
- The production and dissemination of CLME⁺ Experience Notes¹²⁷
- Participation of the CLME⁺ Project in IW:LEARN/LME COP twinning exchanges, and regional workshops (to be coordinated with the IW:LEARN and LME COP Projects)

For this purpose, at least 1% of the CLME⁺ GEF grant will be dedicated to support IW:LEARN/LME COP-related dissemination, twinning & exchange activities.

¹²⁷ Materials produced under the previous element this Output can also be used for this purpose (and vice versa)