A pluralistic approach to EBM implementation in the Caribbean.

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AORAC-SA FAO workshop: Making the ecosystem approach operational

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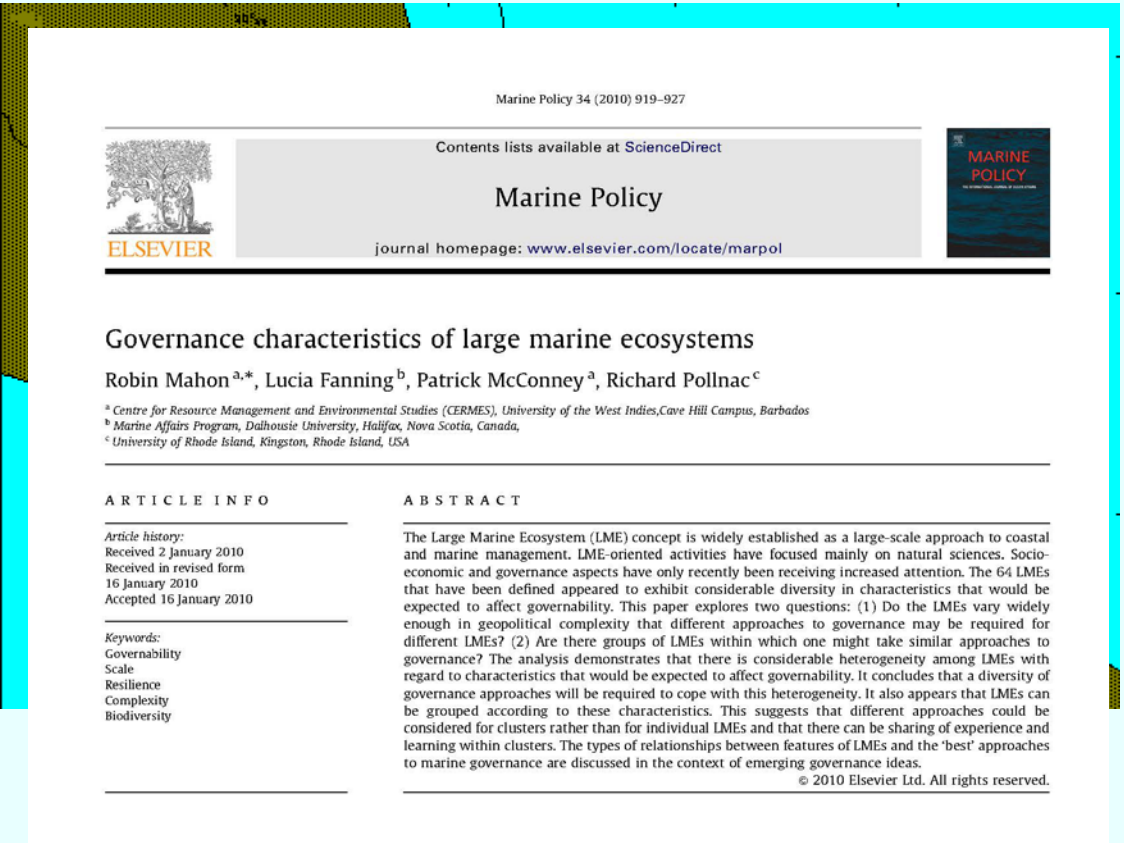
THE ATLANTIC: OUR SHARED RESOURCE
Making the Vision Reality

Case Study Context

The Caribbean is the most geographically and politically diverse and complex region in the world



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Governance characteristics of large marine ecosystems

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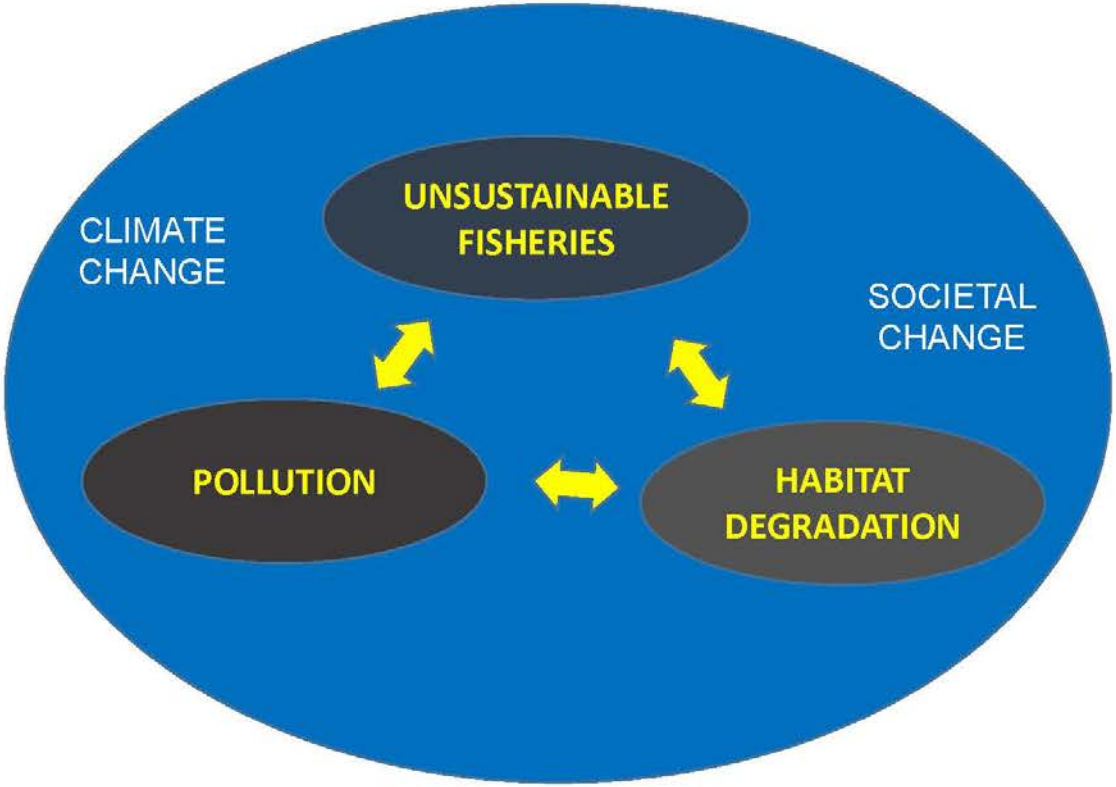
ABSTRACT

The Large Marine Ecosystem (LME) concept is widely established as a large-scale approach to coastal and marine management. LME-oriented activities have focused mainly on natural sciences. Socio-economic and governance aspects have only recently been receiving increased attention. The 64 LMEs that have been defined appeared to exhibit considerable diversity in characteristics that would be expected to affect governability. This paper explores two questions: (1) Do the LMEs vary widely enough in geopolitical complexity that different approaches to governance may be required for different LMEs? (2) Are there groups of LMEs within which one might take similar approaches to governance? The analysis demonstrates that there is considerable heterogeneity among LMEs with regard to characteristics that would be expected to affect governability. It concludes that a diversity of governance approaches will be required to cope with this heterogeneity. It also appears that LMEs can be grouped according to these characteristics. This suggests that different approaches could be considered for clusters rather than for individual LMEs and that there can be sharing of experience and learning within clusters. The types of relationships between features of LMEs and the 'best' approaches to marine governance are discussed in the context of emerging governance ideas.

- **Geopolitical**
  - 44 states and territories
  - 100 maritime boundaries
- **Cultural diversity**
- **Size**
  - smallest to largest
  - 16 SIDS
- **Development**
  - poorest to most wealthy

CLME TRANSBOUNDARY DIAGNOSTIC ANALYSES:
3 KEY PROBLEMS throughout the CLME+



ROOT CAUSES OF THE 3 CLME+ ISSUES

1. **Weak governance** (including legal & institutional frameworks, inadequate environmental quality standards and legislation)
2. Limited **human and financial resources**
3. Inadequate (access to) **data and information** (inadequate knowledge)
4. Inadequate **public awareness & participation**
5. Inadequate consideration of **value of ecosystem goods & services**
6. **Population and cultural pressures**
7. **Trade and external dependency** (high dependence on fish for income and export earnings)

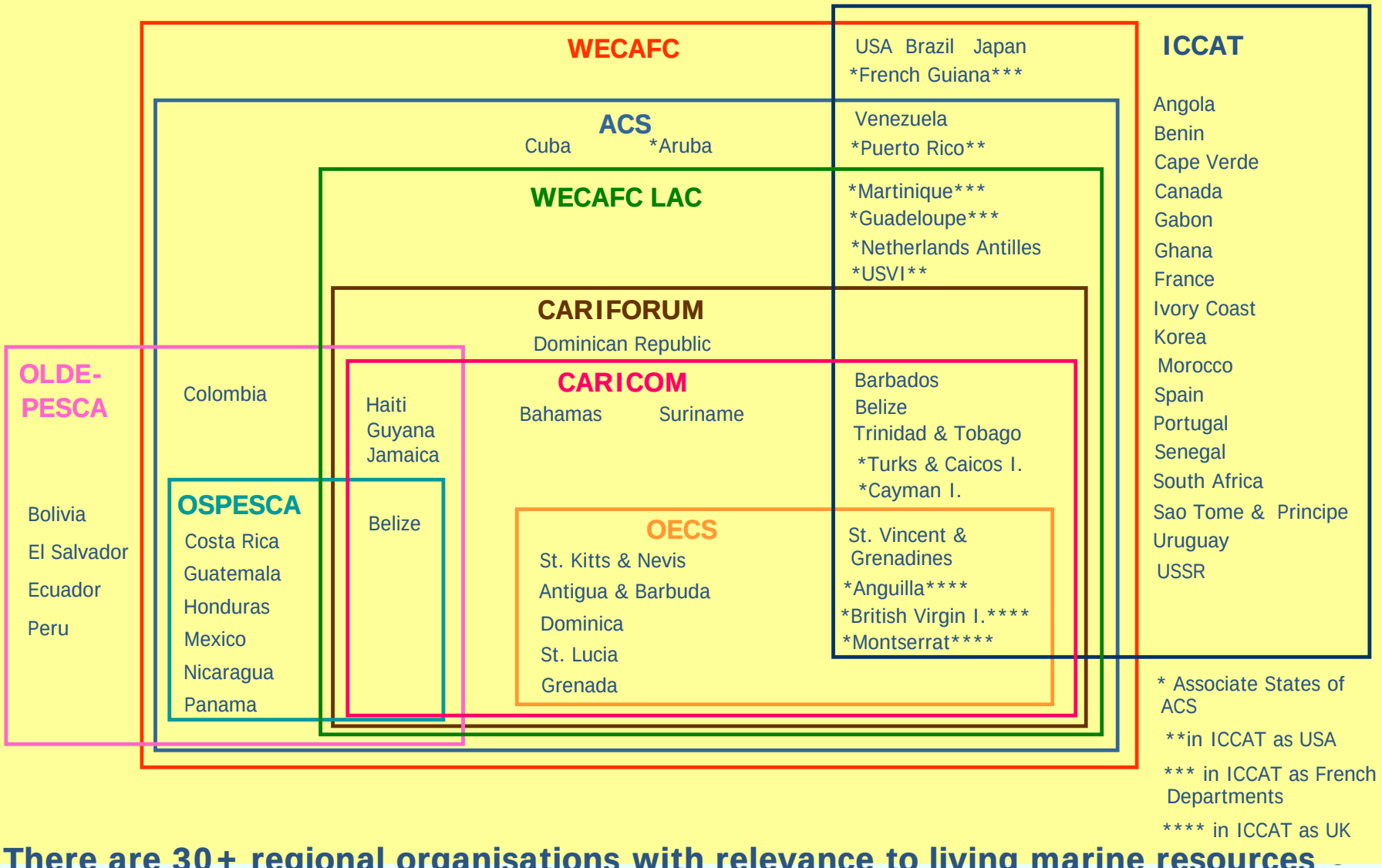
Background and description of EBM arrangements in place

What is the problem?

- Considerable research on overexploitation and degradation in Caribbean marine ecosystems
- Limited policy/management impact
- Overfishing and ecosystem degradation continue
- Can an institutional perspective add value?

ORGANIZATIONAL COMPLEXITY

Overlapping and nested fisheries related organisations



There are 30+ regional organisations with relevance to living marine resources

Ecosystem Approach

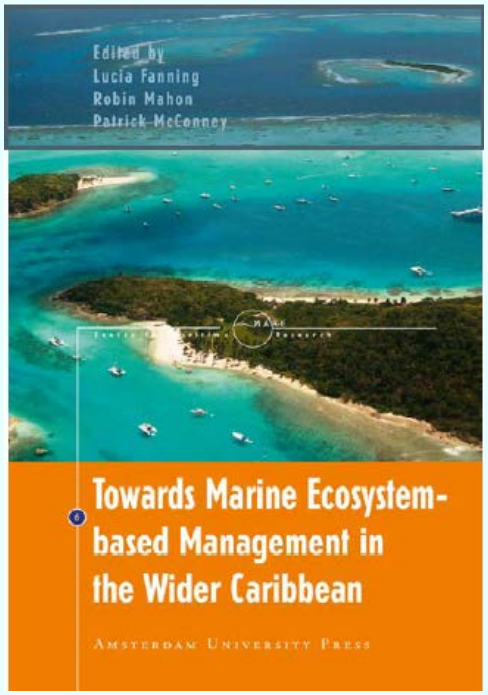
2008 Symposium vision for marine EBM in the Wider Caribbean

Healthy marine ecosystems in the Wider Caribbean that are

fully valued and protected and enhances livelihoods and human well-being

through strong institutions at local, national and regional levels providing effective governance

that involves everyone, is fully understood and supported by the public



Ecosystem Approach
Some implementation examples in Caribbean marine & coastal areas

- Sustainable Grenadines Project – civil society capacity building
- Lesser Antilles Pelagic Ecosystem Project – scientific basis for EAF
- MesoAmerican Healthy Reefs for Healthy People Initiative
- Caribbean Large Marine Ecosystem Project (CLME+)

CLME+ Project (2006-2019)
EBM Processes in place/development

CLME SAP, 2013

25 GEF-eligible countries

19 associated territories of France, USA, UK, The Netherlands,

PDF-B Funding: 2006/07
GEF support- US $700,000

Full Project (I): 2009/14
GEF support – US $7M

Full Project (II): 2015-2019
GEFsupport – US $12.5M

CLME+ Project Objectives

1. Identify, analyze and agree upon major issues, root causes and actions required to achieve sustainable management of the shared living marine resources
2. Improve the shared knowledge base
3. Implement legal, policy and institutional reforms
4. Develop an institutional and procedural approach to LME level monitoring, evaluation and reporting
5. Facilitate EBM/EAF in the CLME+ area for the sustainable and climate resilient provision of goods and services for the shared living marine resources in the region

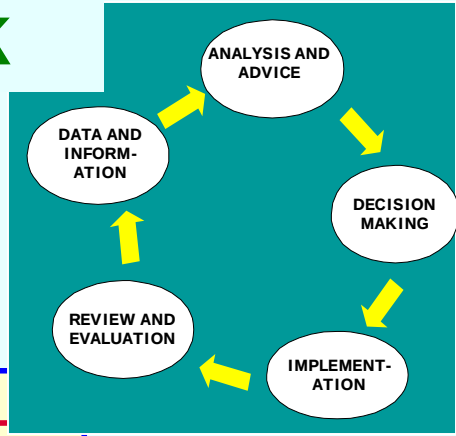
Process for EBM in the Caribbean

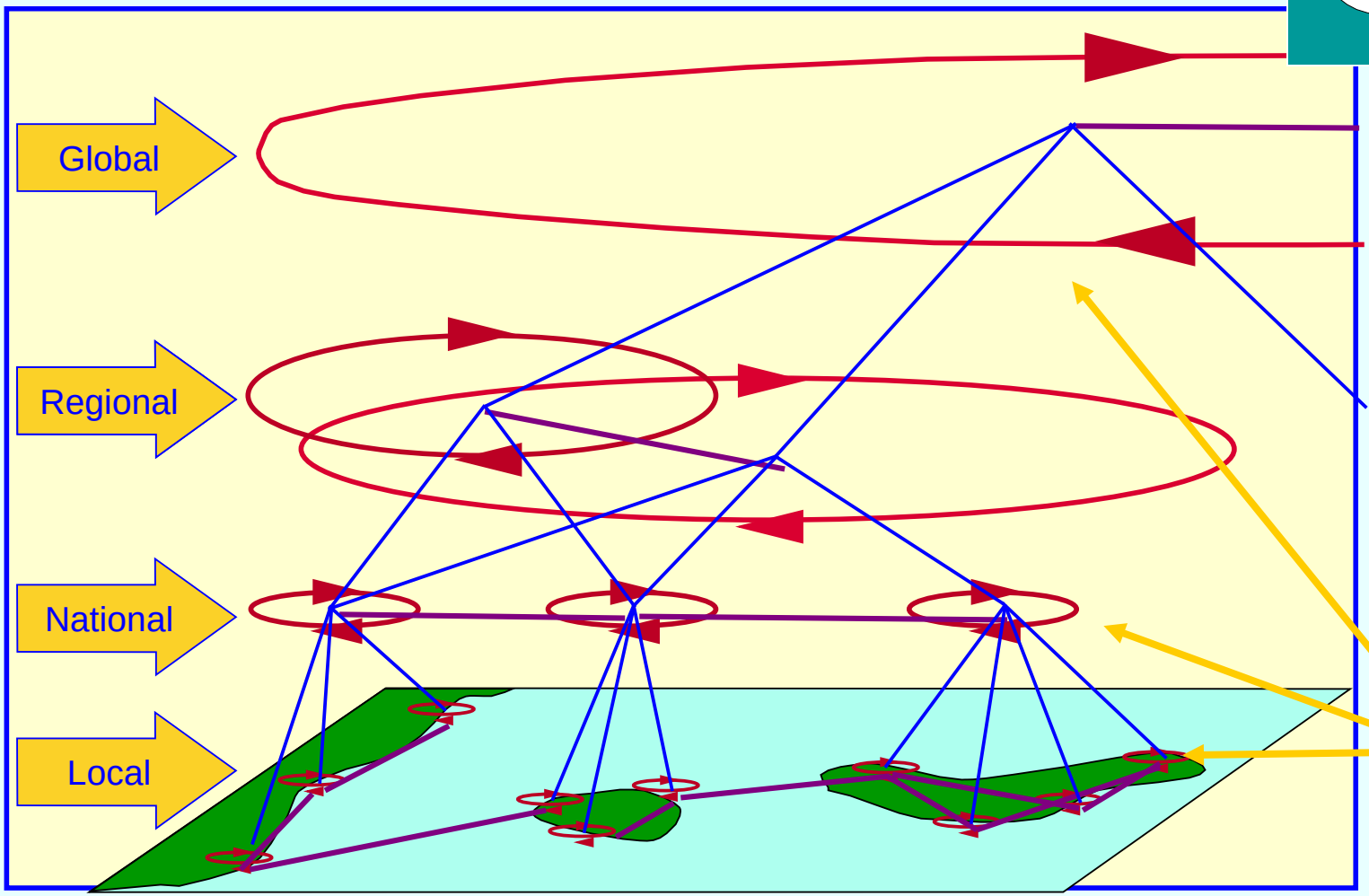
Because of the inherent normative foundation to EBM, the **interests, values and knowledge** of individuals or groups developing an EBM approach will determine:

- how the "problem" is defined, and
- subsequent strategies and actions on how it "ought" to be resolved.

The LME governance framework

A multi-level policy-cycle based governance framework





Policy cycles must be:

Complete

Linked vertically

Linked laterally

Diversity of policy processes as appropriate

Building the CLME+ Governance Framework - "Learning by doing"

Long-term goal

Fully-functional policy cycles at all appropriate levels with the appropriate vertical and lateral linkages.

Framework building interventions

- Interventions can be specifically targeted at:
  1. Establishing or completing policy cycles
  2. Building or enhancing linkages
- Approached incrementally by targeting deficient areas

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A large marine ecosystem governance framework

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Abstract

A large marine ecosystem (LME) governance framework, developed from a need to effectively address the sustainable management of the shared living marine resources of the Caribbean, is proposed. The framework is based on four propositions and focuses on a linked examination of two well-known components of LME-level governance: the policy cycle process by which decisions are made and the multi-level nature of LMEs. It accommodates the diversity of policy cycles at multiple levels and the linkages among them required for effective governance of LMEs. The framework takes into account of factors such as context, purpose, jurisdictional scale, capacity and complexity and provides a means to identify critical areas for intervention.

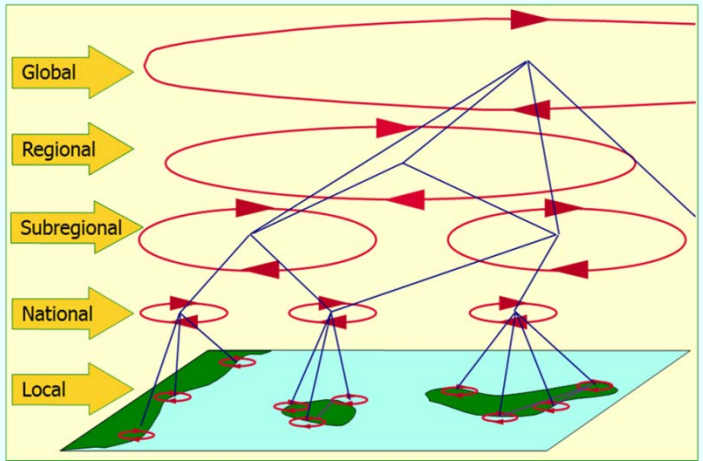
Keywords: Governance; Policy cycle; Multiple levels; Scale; Network; Linkages

Interventions and entry points

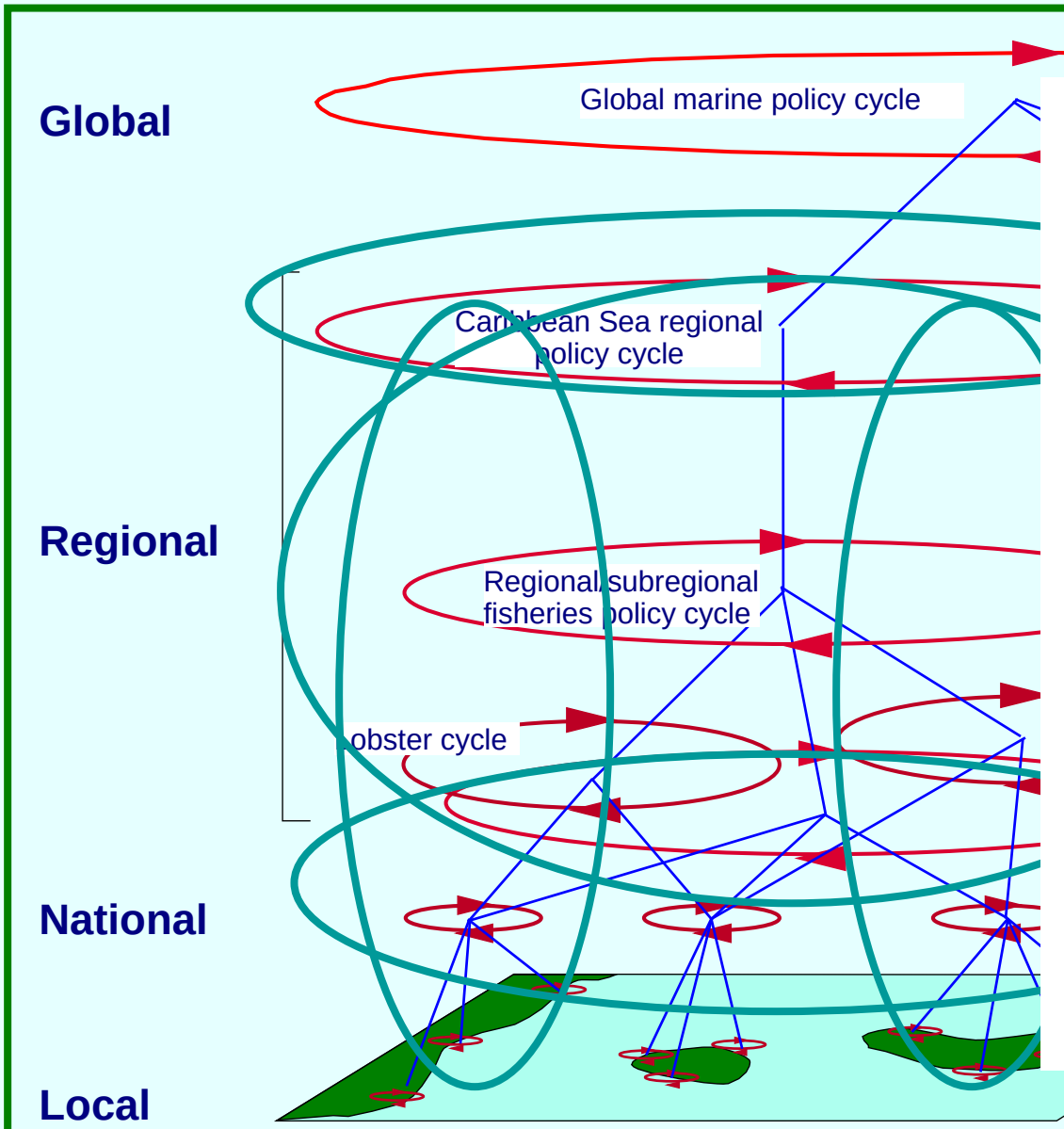
ACS/CSC
ICCAT
OECS
IMO MARPOL
FAO WECAFC
CRFM
Oil Spills Protocol
CARICOM
UNEP Cartagena Convention
CARPHA
LBS Protocol
SPAW Protocol
OLDE-PESCA
OSPESCA
SICA
CCAD

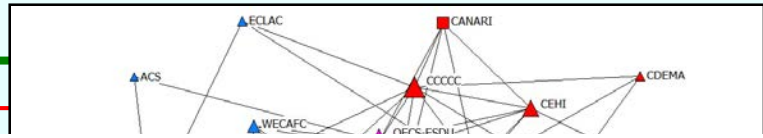
KEY
- Fisheries
- Pollution
- Biodiversity
- Multipurpose

Intervention level
- Policy
- Planning
- Operational



Framework Assessment





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Applying the large marine ecosystem (LME) governance framework in the Wider Caribbean Region

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ABSTRACT

The large marine ecosystem (LME) governance framework was developed to address the complexity inherent within the Wider Caribbean Region with respect to the region's shared living marine resources. The framework is adaptable to all multi-scale living marine resource situations and provides a basis for incremental implementation of interventions. Parts of the overall governance framework can be targeted for sub-framework development and strengthening through institutional reforms and capacity building. Three examples, the Eastern Caribbean flyingfish fishery, marine protected area (MPA) management and the Eastern Caribbean tuna fishery, are used to illustrate the application of the framework in facilitating and assessing governance effectiveness in the Caribbean. In each case, the purpose is to show the different governance questions that must be addressed at policy, strategy and action levels to make up a complete governance arrangement and how these are distributed among several levels on the institutional scale that typically occur in regional marine resource governance.

1. Introduction

The identification of large marine ecosystems (LMEs), defined as encompassing large areas of coastal ocean on the basis of bathymetry, hydrography, productivity and trophic linkages, has played a significant role in focusing global attention on the need to manage ecosystems at scales appropriate to their marine biogeophysical processes [1–4]. Due to the large areal coverage of LMEs, typically comprising some 200,000 km^2, many of the world's 64 LME are transboundary [5]. This has led to a growing recognition among countries sharing an LME of the need to develop regional approaches for managing their shared marine resources and the response from the Global Environment Facility (GEF) to financially support some of these initiatives [6].

Most of the GEF-funded projects use an LME approach based on a 5-module, indicator-based, approach to assess and monitor the state of the LME [5]. This approach viewed governance as one of the five modules, along with productivity, fish and fisheries, pollution, and socio-economics. However, in attempting to implement the modular approach for the GEF-funded Caribbean LME and the adjacent North Brazil Shelf LME project (referred to as the CLME Project), it was found to be inadequate in addressing the complexity inherent in the region [7,8]. As well, while the modular approach was considered useful as an indicator-based framework, it provided little guidance on identifying targeted interventions on how to improve multi-level governance in a regional setting [7,9].

The importance of having an effective governance regime in place to address the sustainability of the living marine resources of the Wider Caribbean region (WCR) (which coincides with the CLME Project area) is the principal driver underpinning the actions taken by CLME Project. The region is the most geopolitically complex region in the world, with 26 nation states and 19 territories [7,9]. The countries range from among the largest (e.g., Brazil, the United States) to among the smallest (e.g., Barbados, St. Kitts, and Nevis), and from the most developed (e.g., the United States, France) to the least developed (e.g., Haiti, Guyana). Consequently, there is an extremely wide range in their capacities for governance. This challenge is exacerbated by the high socio-economic dependence across the region on the ecological goods and services provided by the region's marine ecosystems and the close proximity of the countries, leading to a high degree of transboundary issues and conflicts.

Countries in the region, especially its small island developing states (SIDS), are highly dependent on the marine environment for their livelihoods, recreational, cultural, and spiritual needs. While coastal tourism is a significant contributor to the economic well-being of many WCR states, fisheries also play a major role in the economic, nutritional, and cultural well-being of these countries. The small-scale fisheries that predominate in this region are particularly important, but are often undervalued. As near-shore

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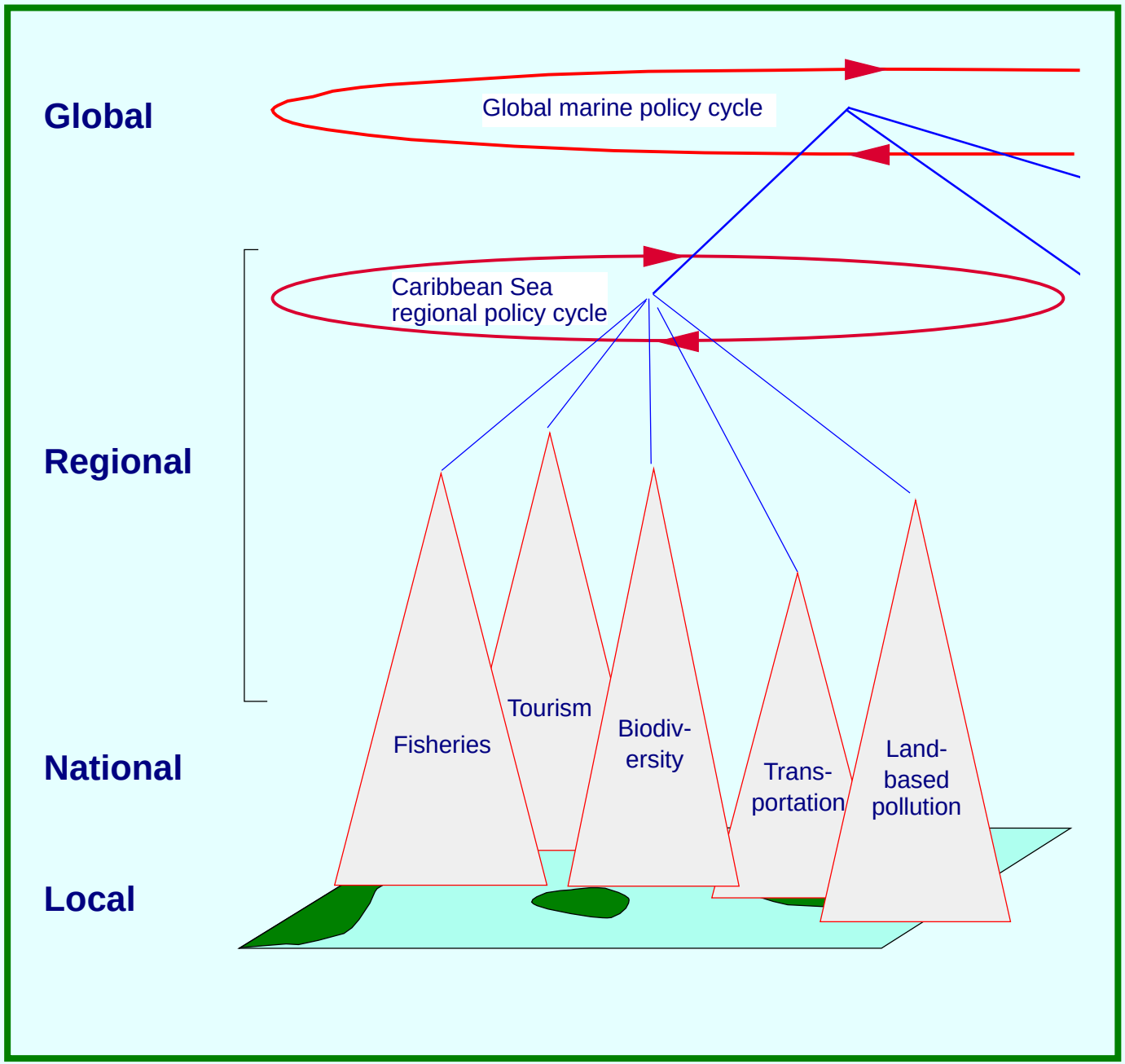
Several subframeworks will be needed

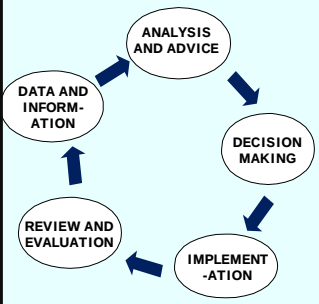


UNGA – CSD
COFI?

ACS– CSI / CSC?

There will be a sub-framework for each of several sectors topical areas

Applying the framework to Caribbean MPA management



Concerns mainly for regional level arrangements

Evaluation of MPAs within broader regional policy and principles context

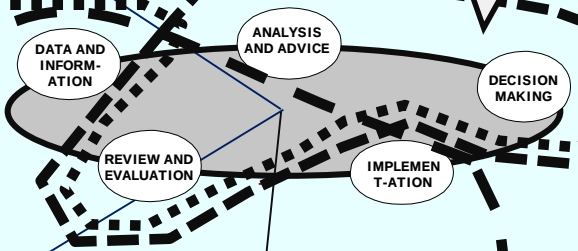
- Is approach consistent with policy and agreed principles?
- Are MPAs meeting regional sustainability objectives – livelihoods, fisheries, etc.?
- If not what is needed?

Concerns mainly for reef biodiversity regional /subregional level

Evaluation of MPA approaches and effectiveness

- Are they distributed among countries as planned?
- Is learning being transferred from one MPA to another?
- Is network consistent with current understanding of connectivity (ecological as well as stakeholder)?
- Are regional conservation targets being achieved/?
- If not what is needed?

Regional marine policy cycle



Concerns mainly for local to national levels

Evaluation of implementation action quality

- Are local stakeholders involved?
- Are measures for each MPA effective
- If not what is needed?

MPA strategic approach is to

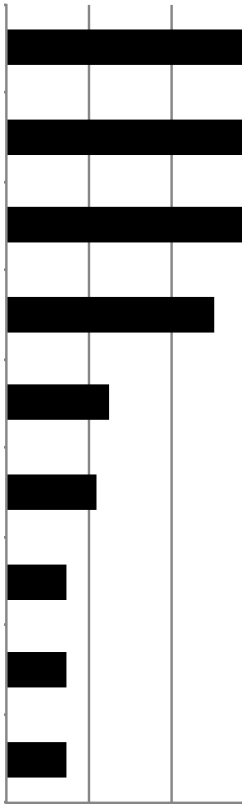
Establish national systems of MPAs that:

- Protect representative habitat
- Provide recreational opportunities for locals and visitors
- Support livelihoods of local people
- Support fisheries

Science-Policy Interface in the Caribbean

Constraints for using science

tion in policy



Top knowledge demands

- climate change
- status of fish stocks
- status of biodiversity
- ecosystem valuation
- ecosystem health
- socio-economic indicators
- fisheries management
- disaster risk reduction
- tourism contribution
- coastal management

frontiers in Marine Science

ORIGINAL RESEARCH

A First Look at the Science-Policy Interface for Ocean Governance in the Wider Caribbean Region

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Weak governance is a root cause of the problems constraining the sustainable management of shared living marine resources within the Wider Caribbean Region (WCR). Integral to any fully functioning policy cycle in governance is the communication of marine science data and information, through the stages of the policy cycle, ultimately for use in decision-making. The networks of ties between science and policy constitute science-policy interfaces. Connecting science to policy is a major issue confronting the world today in efforts to achieve sustainable development. In order to develop a regional science-policy interface for ocean governance in the WCR we must first understand what currently exists. In this paper we describe the process and product of an interview investigation of the marine science-policy interface in the WCR. Policy discussions that used marine science extensively were infrequent. Constraints on use of science included low capacity, science not being provided in policy-relevant format, not having easy access to databases, and low policy demand for science. There is little transboundary marine science information sharing except through informal social networks. The absence of a culture of evidence-based policy-making in the region must be addressed before there will be any significant change in use of properly packaged marine science. External influences, political context, science and evidence, links, and networks are used to systematize the key learning.

Keywords: Caribbean, marine, science, policy, interface

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INTRODUCTION

According to the panel of 20 distinguished scientists from around the world who consulted with 400 more during the United Nations Environment Programme (UNEP) Foresight Process on Emerging Environmental Issues for the twenty-first century, the cross-cutting issue labeled "Broken Bridges: Reconnecting Science and Policy" is the fourth most pressing one confronting the world today in efforts to achieve sustainable development (UNEP, 2012). In essence, critical scientific knowledge is not being communicated effectively to audiences ranging from decision-makers to the general public. The panel found that public confidence in the environmental science that is communicated is diminishing due to deepening distrust of scientific outputs. There is increasing resistance among policy decision-makers against easily accepting scientific advice. Climate change provides many examples (Beck, 2012). Failed communication, however, is said to be more often at the root of

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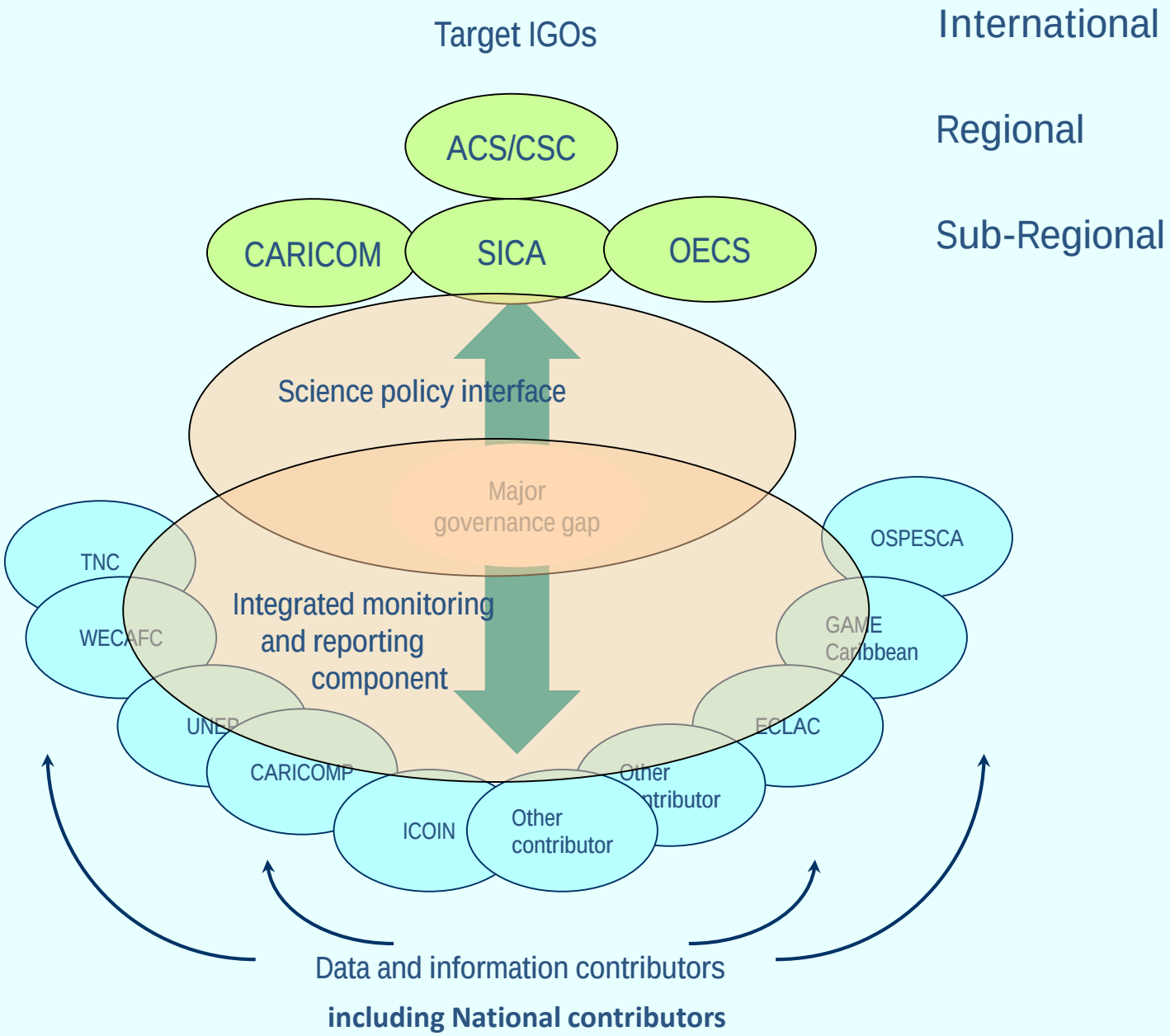
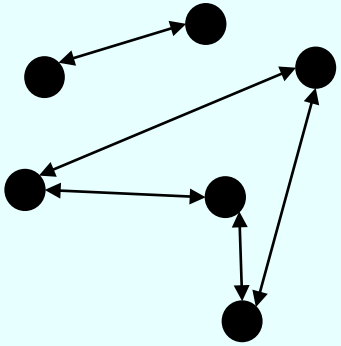
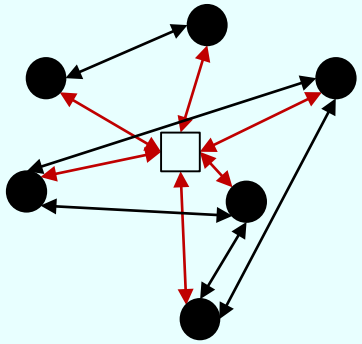
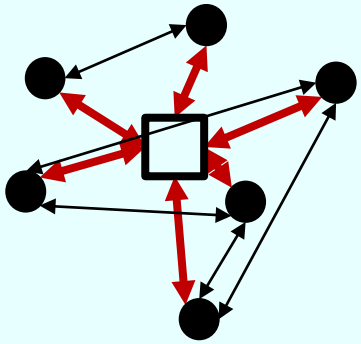
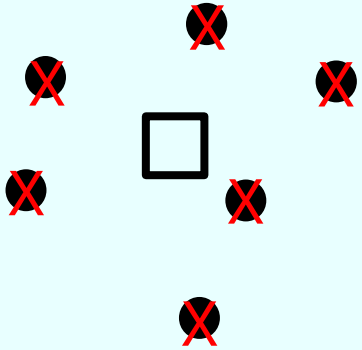
Addressing Need for a High Level Science-Policy Interface



What are appropriate governance arrangements for EBM implementation in the Caribbean?

Hierarchy and centralization

Fragmentation	Coordination	Policy direction and review	Full responsibility
			
Initial undesirable state, but actors are invested.	What is the best mechanism for coordination – new body, council of members? Best practices?	What is the best mechanism for policy formulation and oversight – commission, council of members? Best practices?	Is this always the ultimate goal? Linkages with other LMEs?

The way ahead for EBM in the Caribbean

- No nice neat off-the-shelf solution exists for CLME
- We can learn from other regions but...

Given the emerging institutional complex within the region, a networked approach that makes best use of and improves upon existing arrangements appears to be the most feasible one

We believe it can work if we are prepared to –

- see the collective benefits of a regional approach
- make a long-term commitment
- to develop the network incrementally
- and to learn and adapt as we go