

An aerial photograph of a coastal fortification, likely a Spanish colonial-era fort, situated on a rocky hillside. The fort features stone walls and a central tower. The surrounding landscape is a mix of green vegetation and rocky terrain. In the background, the ocean transitions from a shallow turquoise near the shore to a deep blue further out. The sky is clear and blue.

The Caribbean Large Marine Ecosystem (CLME)

State of the Environment and
Ecosystems of the Wider Caribbean

Elva Escobar, *Cesar Toro*
November 2012

Call for the Regular Process

- WSSD 2002 - to “establish by 2004 a Regular Process under the United Nations for global reporting and assessment of the state of the marine environment, including socio-economic aspects, both current and foreseeable, building on existing regional assessments”.
- This was endorsed at the United Nations General Assembly (UNGA) later in 2002 (resolution 57/141).
- The Ad-hoc Steering Group and then Group of Experts were established by UNGA Resolution 60/30 – fall 2006.
- Work of the Group of Experts commenced in 2007

Why is a Regular Process Needed?

Oceans are under increasing stress:

- 80% of commercial fish stocks are fully or over-exploited
- Pollution by contaminants, nutrients and sediments is widespread
- Critical habitats are being damaged, esp coastal
- Climate change causing temperature increases to 3000 m, with many consequences
- Invasive species increasing – major changes to some systems

Types of indicators considered

- **Process** indicators, to assess the progress of certain administrative and organizational processes;
- **Pressure** or **stress** indicators, to evaluate impacts and possible changes thereof;
- **Status** indicators, to determine the actual state of environment and ecosystems.
- **Socio-economic** indicators

The Caribbean Large Marine Ecosystem

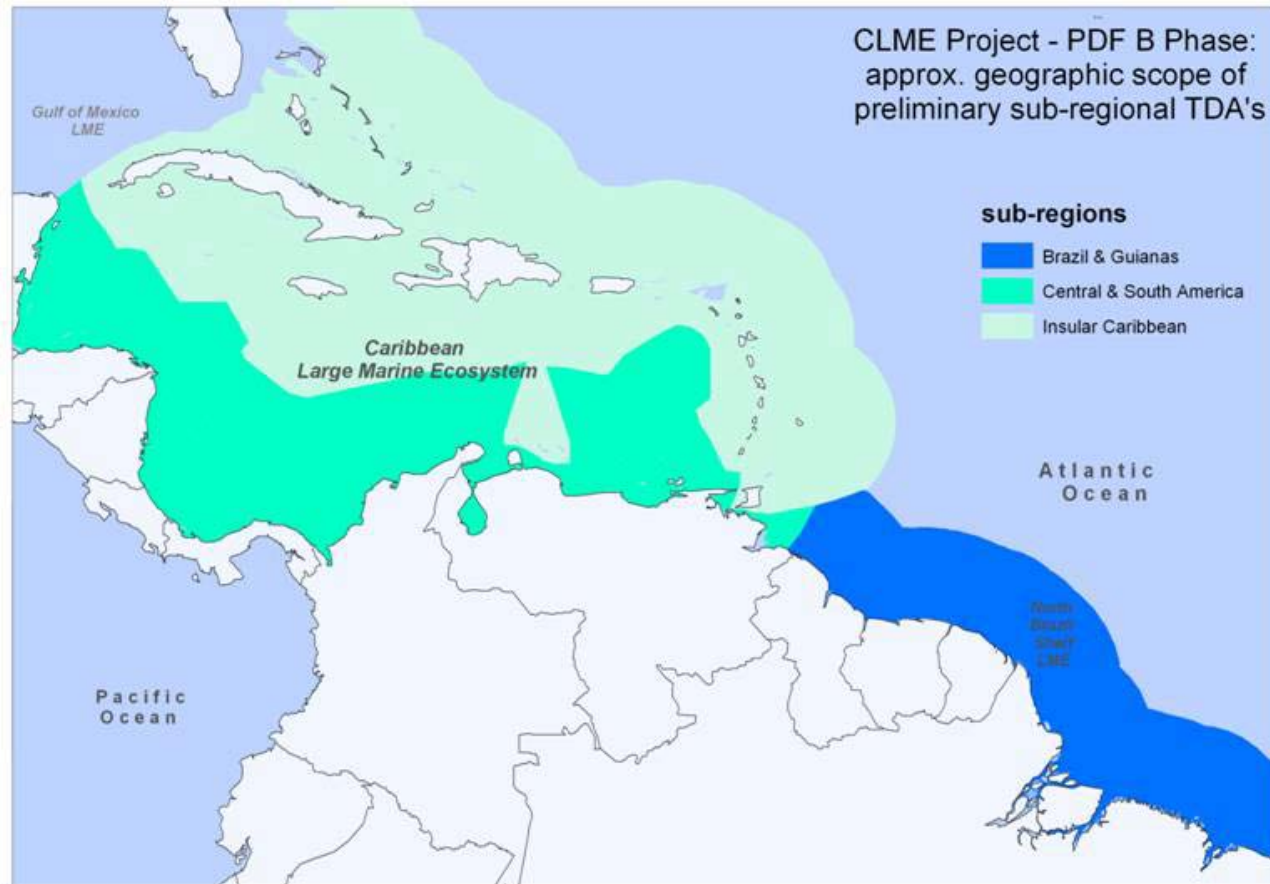


Table 1. Countries and territories of the CLME

Independent countries

Antigua & Barbuda
Bahamas
Barbados
Belize
Brazil
Colombia
Costa Rica
Cuba
Dominica
Dominican Republic
Grenada
Guatemala
Guyana
Haiti
Honduras
Jamaica
Mexico
Nicaragua
Panama
St. Kitts Nevis
St. Lucia
St. Vincent & the Grenadines
Suriname
Trinidad & Tobago
Venezuela

Countries and territories

UK:

Anguilla
British Virgin Islands
Cayman Islands
Montserrat
Turks & Caicos

USA:

Puerto Rico
USVI

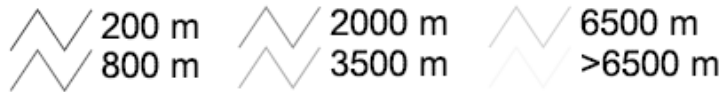
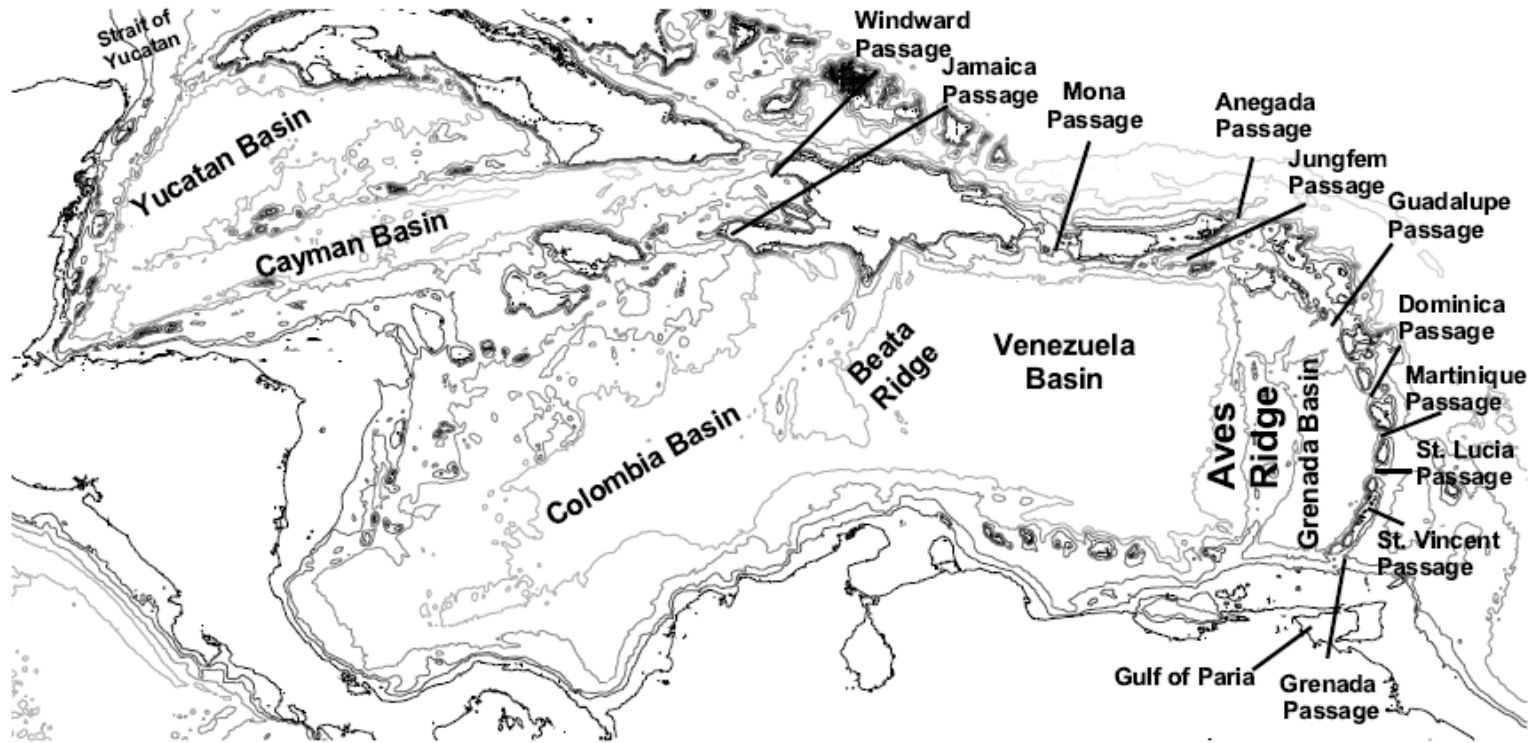
France:

Guadeloupe and St. Bart
Martinique
St. Martin
French Guiana

Netherlands:

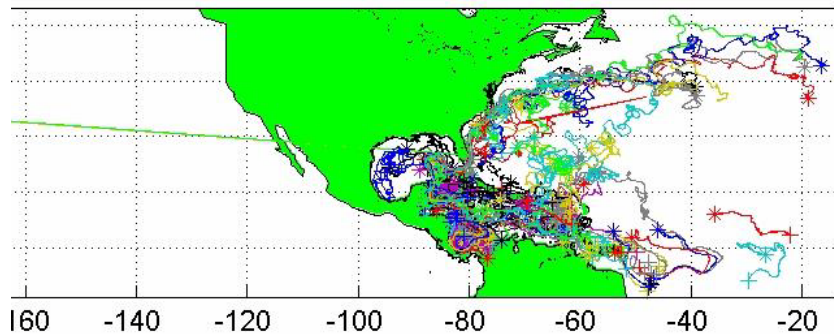
Aruba
Curacao
Bonaire
St. Eustatius
Saba
St. Maarten

Bathymetry & geological setting

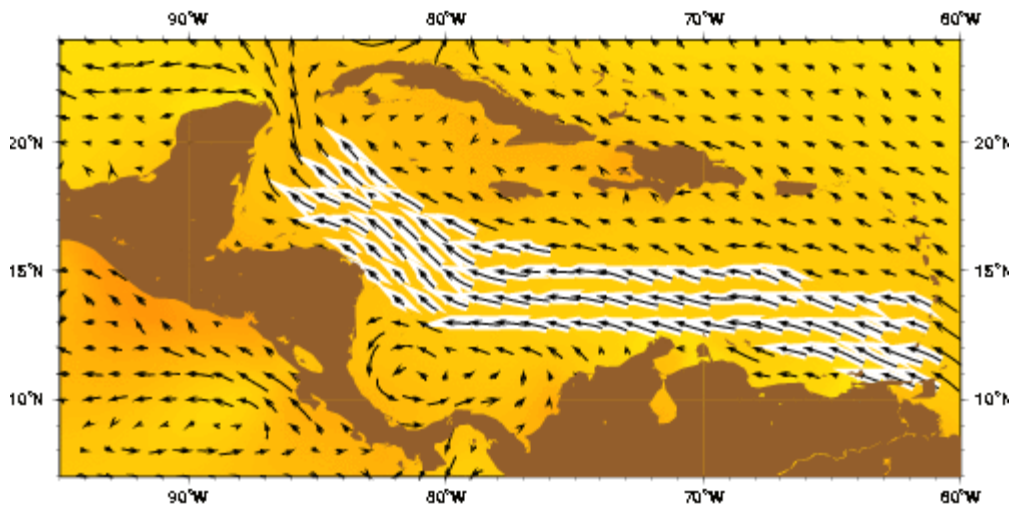
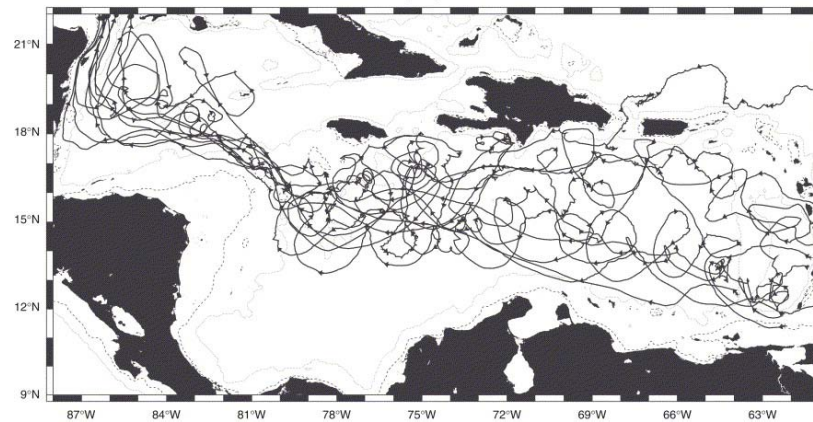


Circulation

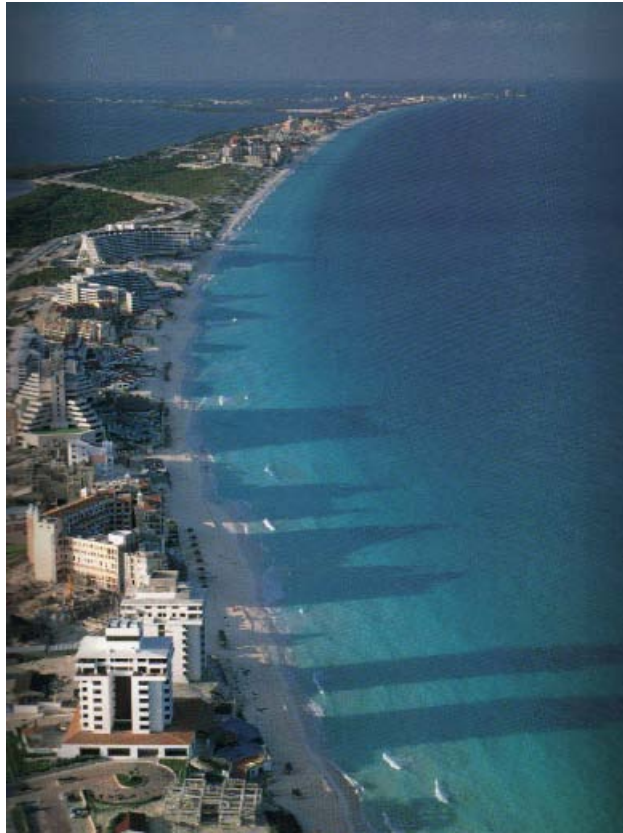
IAS YOTO ALL Drifter Tracks



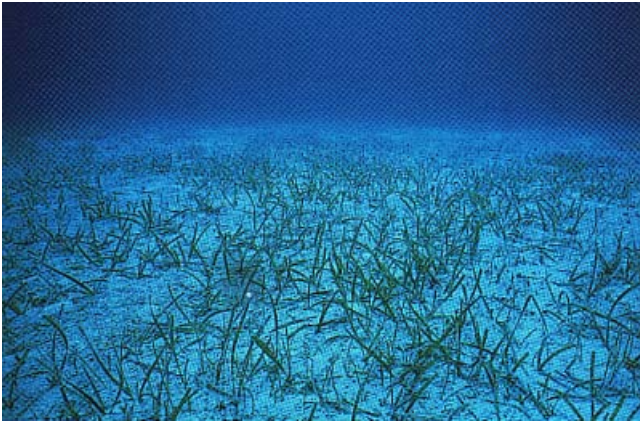
Long Trajectories



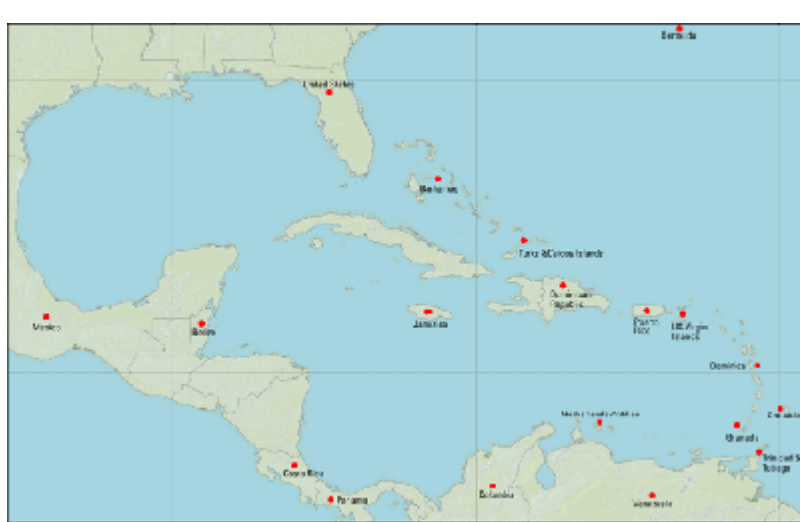
The coastal ocean



Institutions that contribute to assessment work in the region

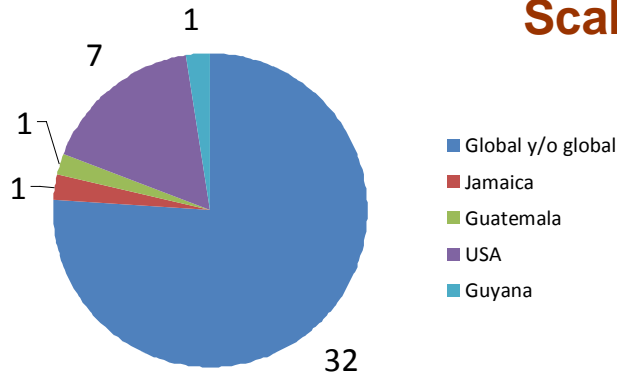


- Research Institutions & Universities
- Regional IGOs
 - ACS, CAST, CEHI, CIMH, Caribbean Tourism Association, CARICOM CRFM, OECS, OLDEPESCA & OSPESCA
- International IGOs
 - ICCAT
- UN organizations with regional bodies
 - WECAFC of FAO, UNEP Caribbean Environmental Programme, IOC-CARIBE of IOC-UNESCO, UN Economic Commission for Latin America & UNECLAC, UNDP, UNEP for Latin America, Caribbean GEO, GEF
- International NGOs
 - WWF, TNC, WRI, IUCN, Census of Marine Life,
- Regional organizations
 - WIDECAS, GCFI

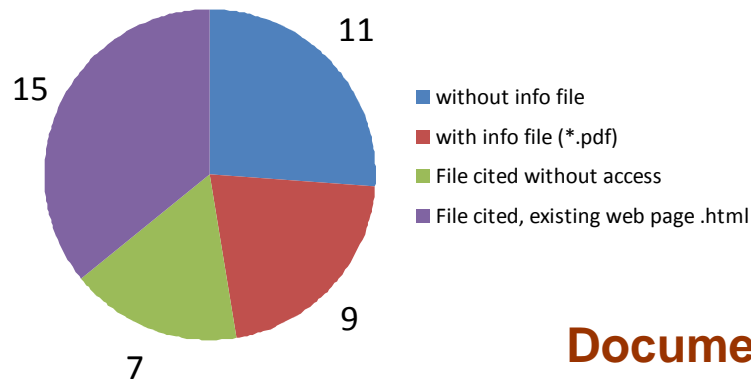
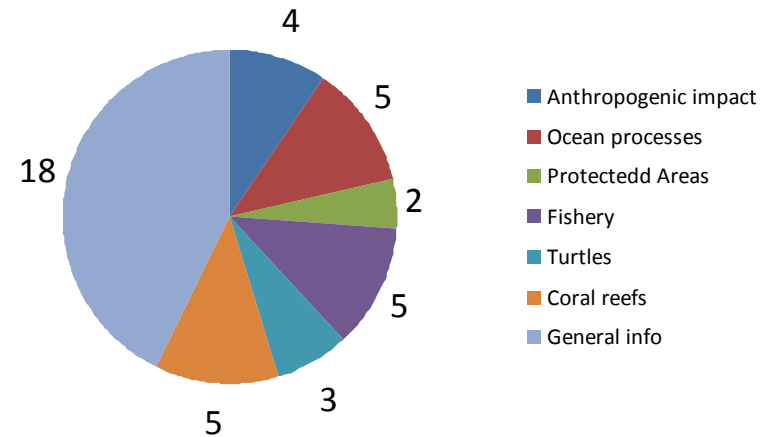


Assessments presented in 2009

Scale



Themes covered



Documentation supporting Assessments

Antes no estaban ahora ya

página web en pdf

Siguen sin estar

Valor	Número	Escala:	Región:	Escala	País:	País	Nombre de la	Acronimo (tip	Referencia co	Referend	Reporte de te	Reporte	Valoración rev	Clasificación/t	Organización:	Justificación/d	Objetivos de IE
	ID:	Scale:	Region:	Global/	Country:	Jamaic	Name of Asse	Acronym:	Full Reference	No:0, Si:	Full Text Repo	No:0, Si:1	Assessment re	Classification/	Organisation:	Justification/C	Objectives of S
1	986	Global/Region	Arctic Ocean, N	1	-	0	A Framework	-	Sutinen, J.G. (1	http://www.lr	1	No	Narrow Asses	National Ocea	In September	This report pr
2	199	Regional	Wider Caribbe	2	-	0	An Atlas of Se	-	Wendy, D., Ec	1	http://www.t	1	Yes	Narrow Asses	Wider Caribbe	To significantl	? Generate th
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13	206	Regional	Wider Caribbe	2	-	0	Exploitation, T	-	Exploitation, T	1	www.widecas	3	Yes	Narrow Asses	Trade Records	The assessme	As agreed bet
14	984	Global/Region	Arctic Ocean, N	1	-	0	Global Applica	-	Sherman, K., A	1	http://www.lr	1	No	Narrow Asses	National Ocea	In keeping wit	Part I is an ove
15	652	Global/Region	Wider Caribbe	1	-	0	Global Interna	GIWA 4	UNEP (2004) V	1	http://www.u	1	No	Broad Assessr	United Nation	Some governm	The GIWA ass
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17	650	Global/Region	Wider Caribbe	1	-	0	Global Interna	GIWA 3a	UNEP (2004) E	1	http://www.u	1	No	Broad Assessr	United Nation	The environm	The GIWA ass
18	29	Regional	Wider Caribbe	2	-	0	Integrated Ca	CARIFORUM	-	0		0	No	Indeterminate	Caribbean Reg	Financed by the European U	In

2009 Assessment Gaps

Strategy followed

Template

REGION:

NAME OF THE ASSESSMENT:

Check-List of Questions

INSTITUTIONAL ARRANGEMENTS

- 1 What organisation carried out the assessment?
- 2 Was the assessment a result of an initiative by the body carrying it out? If not, what body took the initiative that resulted in the assessment?

ORIENTATION

- 3 What is the context and purpose of the assessment?
- 4 Were there explicit objectives for the assessment? If so, what are they?
- 5 What is the relation of the assessment to the cycle of determining the problems, adopting measures and evaluating progress?

COVERAGE AND SOURCES

- 6 What area does the assessment cover?
- 7 What were the reasons for selecting the area covered?
- 8 What period of time does the assessment cover?
- 9 How often will assessments of this kind be produced?
- 10 What aspects of the marine ecosystem are covered by the assessment?
- 11 What aspects of human activities and pressures that impact on the marine environment are covered by the assessment?
- 12 On what information is the assessment based?
- 13 Where environmental, economic or social data were used, what arrangements were made for subsequent access to this data by the public or by experts?
- 14 Where environmental, economic or social data were used, are metadata available on these data series?

PROCESS

- 15 How did the assessment control the quality of the data used in it?
- 16 Were models of aspects of the marine environment developed and used in the assessment?
- 17 Did the assessment use any form of indicators?

Check-List of Questions

- 18 If the assessment was based (wholly or partly) on traditional knowledge, what practices were used to control its quality?
- 19 If the assessment was based (wholly or partly) on expert opinion, what practices were used to control its quality?
- 20 Was any particular conceptual framework used to organise the assessment?
- 21 How were decisions made on which scientific specialisms should be involved, and how these scientific specialisms should be brought in?
- 22 How was interaction organised during the assessment process between scientific, economic and social disciplines and policy makers?
- 23 How were non-official stakeholders enabled to participate in the assessment?
- 24 Did differences of opinion arise over the conclusions of the assessment? If so, how were these resolved?
- 25 Was there a peer review of the assessment during the assessment process, and/or before the final text was published?
- 26 Were any specific arrangements made to link the assessment with other contemporary international or national processes?
- 27 Were specific efforts made to strengthen institutional, scientific or technical capacity for the assessment?

COMMUNICATIONS

- 28 In what form was the output of the assessment presented?
- 29 In which languages is the assessment available?
- 30 How were the results of the assessment made public?

CONTENT ON FUTURE ACTIONS

- 31 Did the assessment rank the severity of problems or otherwise identify priorities for future action?
- 32 Did the assessment evaluate options for future policy, and their likely outcomes?
- 33 Did the assessment indicate gaps in the information needed for it?
- 34 Did the assessment indicate gaps in the scientific understanding of the relevant processes that need to be addressed in order to improve the assessment?

REVIEW

- 35 Was there a review of the assessment process in order to draw lessons for future assessments?

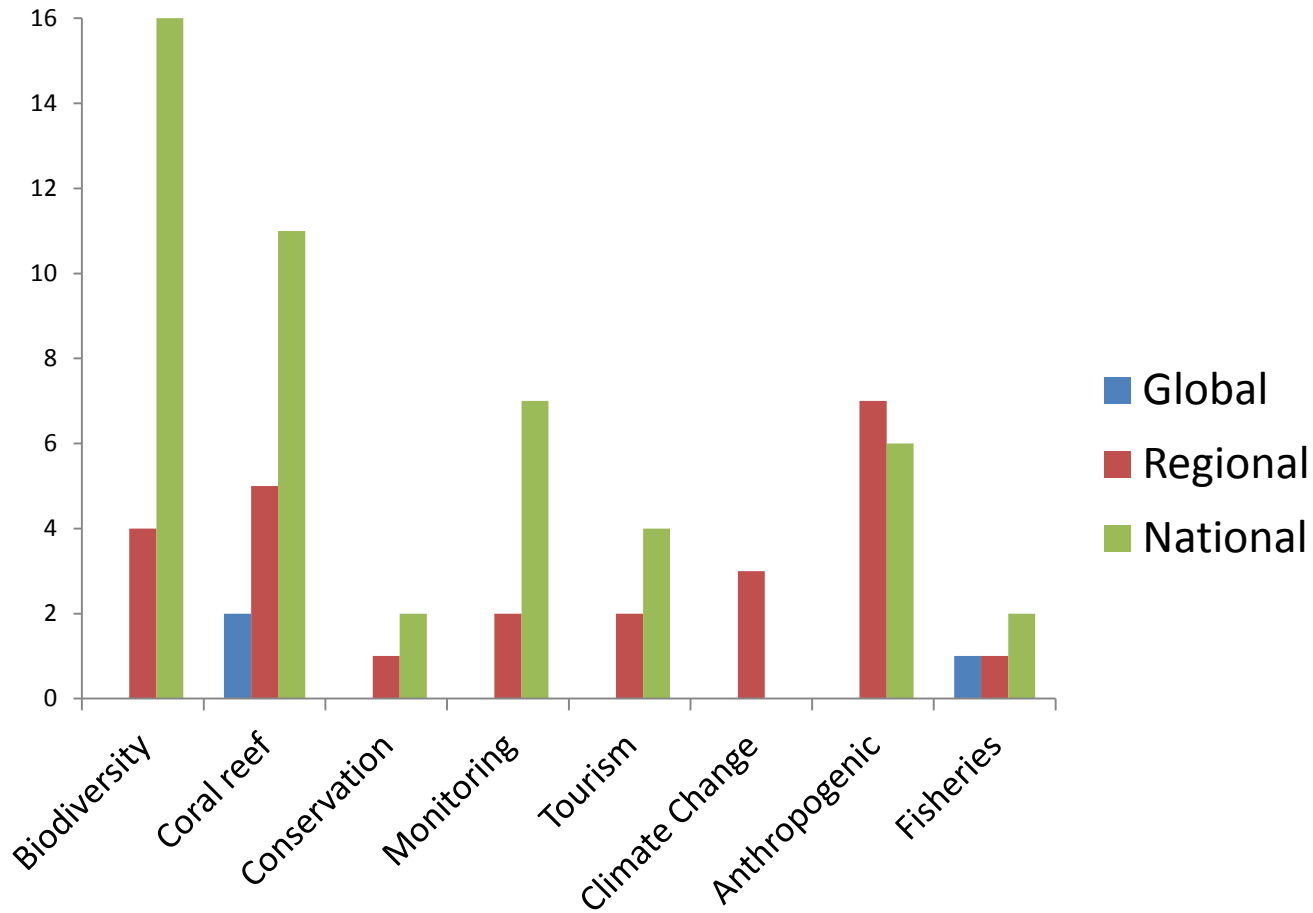
Check-List of Questions

EXPERT EVALUATION

- 36 Is the published assessment easy to understand and accessible to non-specialist readers?
- 37 To what extent does the assessment give confidence that it provides sound conclusions that apply to the whole of the area covered?
- 38 Does the assessment appear to have been timely in relation to policy development and the adoption of measures?
- 39 Are there any particular strengths or weaknesses in the assessment that are relevant to the Assessment of Assessments?
- 40 Does the assessment appear to have been influential in policy making and the adoption of measures?

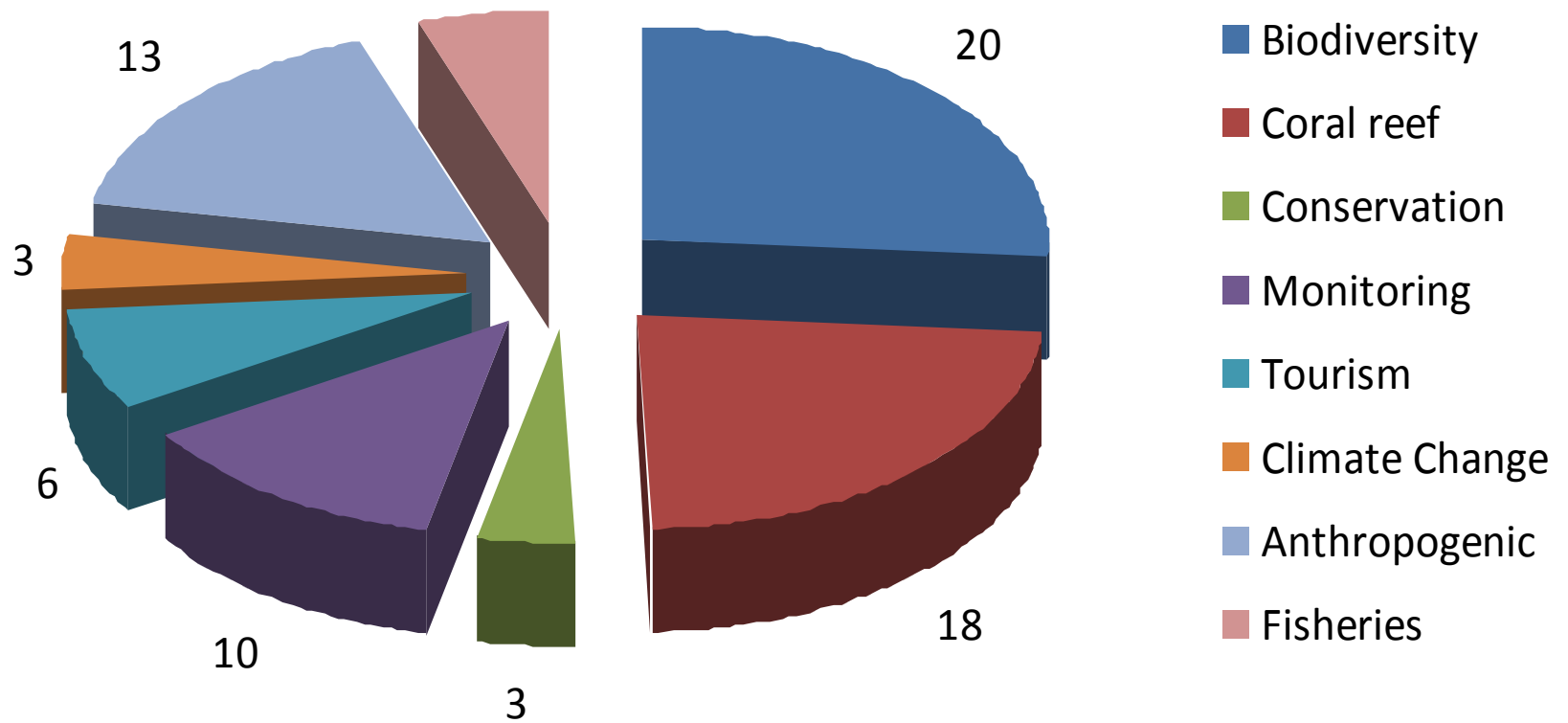
The Caribbean LME 2012 Assessments

Scales coverage



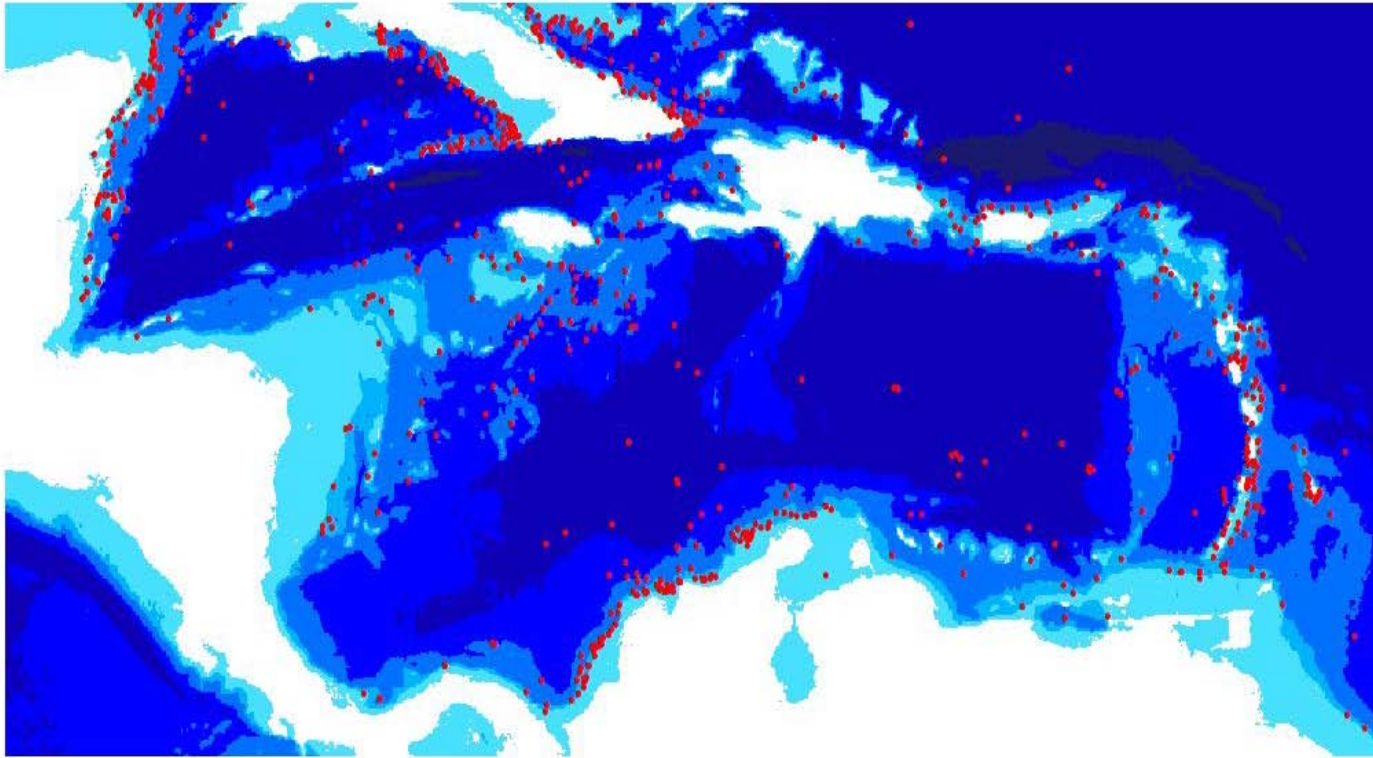
Topic coverage

Assessments Topics

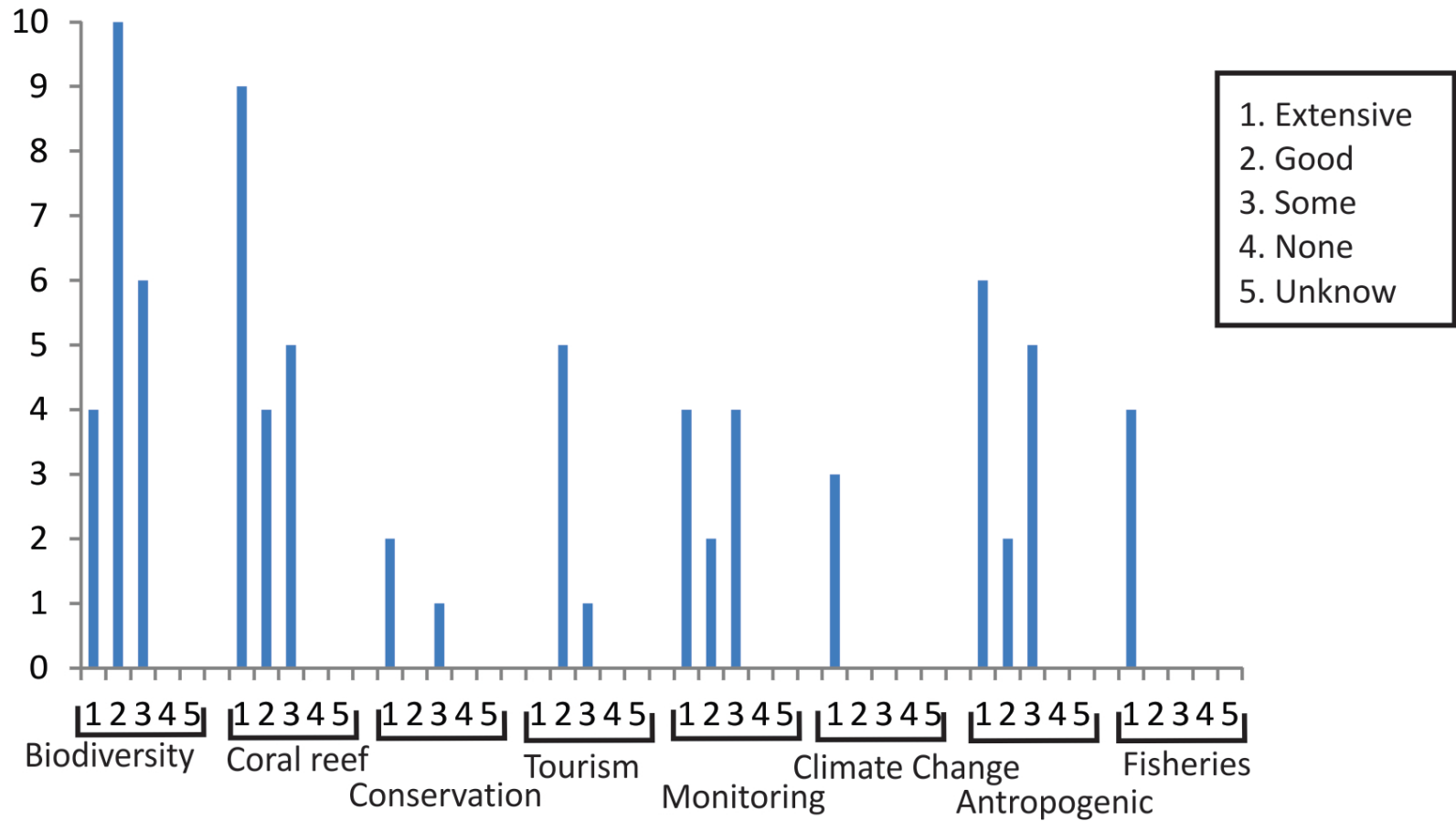


Example:

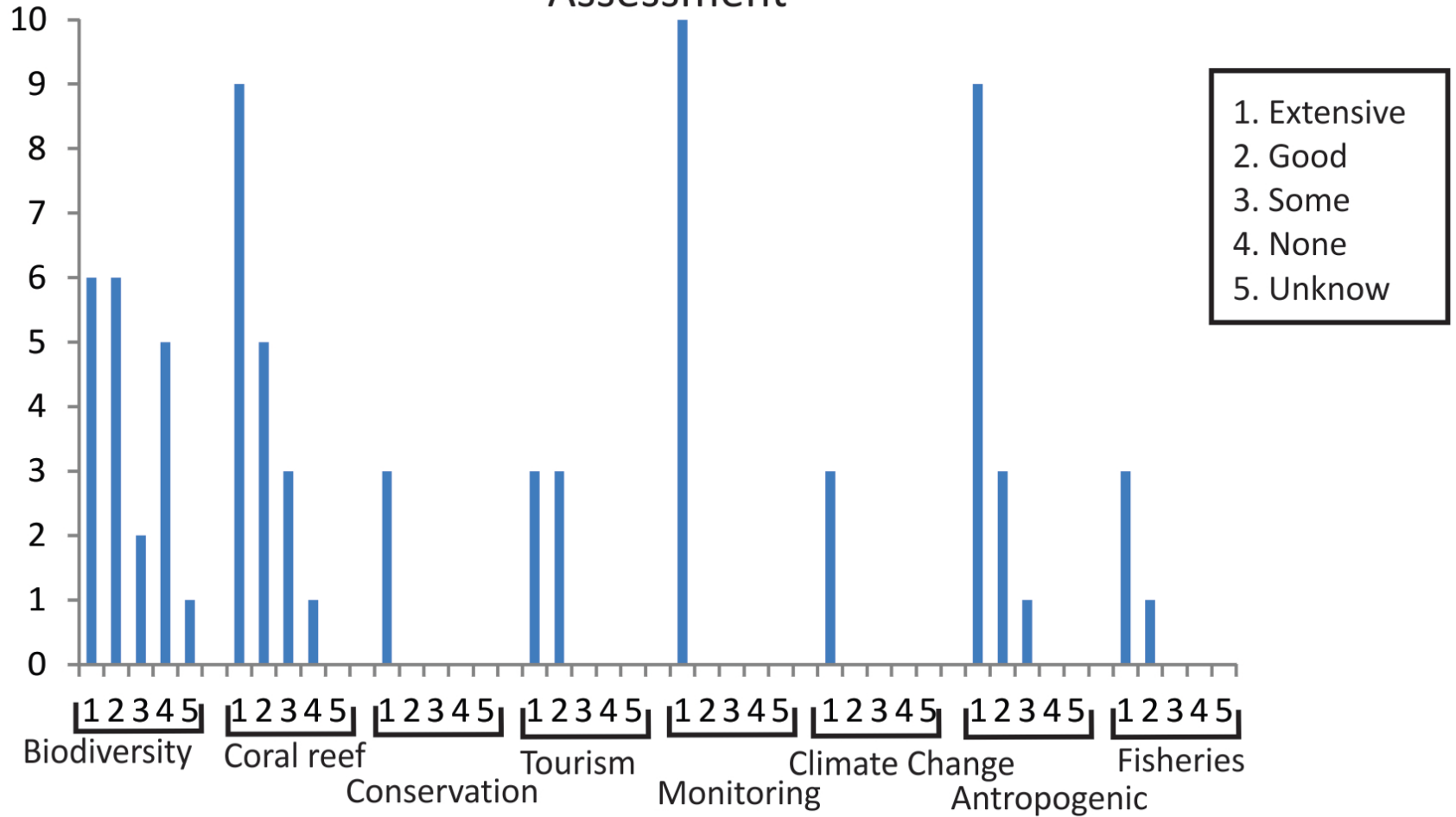
Sampling effort and current knowledge of deep sea biodiversity in the CLME



Regional Marine Assessment



Factors Affecting Influence of Regional Assessment



Major gaps

- The Assessments of the less developed countries
- The economical, social, linguistic, and cultural diversity in the region
- The Socio-economic assessments and offshore and deep sea themes
- The effect of watershed in coastal ocean
- Stronger link to managers and policy-makers