Opportunities and synergies available for building national and regional capacities to conduct marine assessments for the Regular Process

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Outline

- Definition
- Requirements & stages in capacity building
- Ways to increase effectiveness of capacity building
- Some regional Marine Assessments
- Opportunities and synergies for national and regional capacity

What is capacity building?

- UNEP 2002 describes capacity building
  - "as building abilities, relationships and values that will enable organizations, groups and individuals to improve their performance and achieve their development objectives".

Capacity building

- Forms an integral component of a successful assessment.
- Participation in international assessment processes (regional, global) is in itself a form of capacity-building.
- Involvement in cooperative international programmes at all levels also builds capacity.

UNEP/UNESCO-IOC/UNEP-WCMC ,2007

What is required for capacity building?

- Effective collaboration between scientists, resource managers, and other stakeholders
- Scope of assessment:
  - define and prioritize key regional issues,
  - characterize relevant uncertainties,
  - assess potential responses.
- Willingness to share and communicate
- Adequate funding.

Stages in Capacity Building

- Identify and evaluate the existing human, scientific, technological, organizational, and institutional resource capabilities
- Determine the limitations and needs
- Formulate a response to meet the limitations of the resources
- Implement the desired intervention(s)/strategy(ies)
- Evaluate the results and impact.

Ways to increase effectiveness of capacity building

- Identify needs and gaps
- Build on existing capacities.
- Set clear objectives.
- Use a wide range of capacity building approaches
  - Distributed capacity (train the trainers and mobilize)
  - Centralized capacity (Short hands on courses)
  - ICT driven capacity building
- Institutionalizing capacity building programmes at regional and national level.

Some Regional Marine Assessments in Wider Caribbean Region

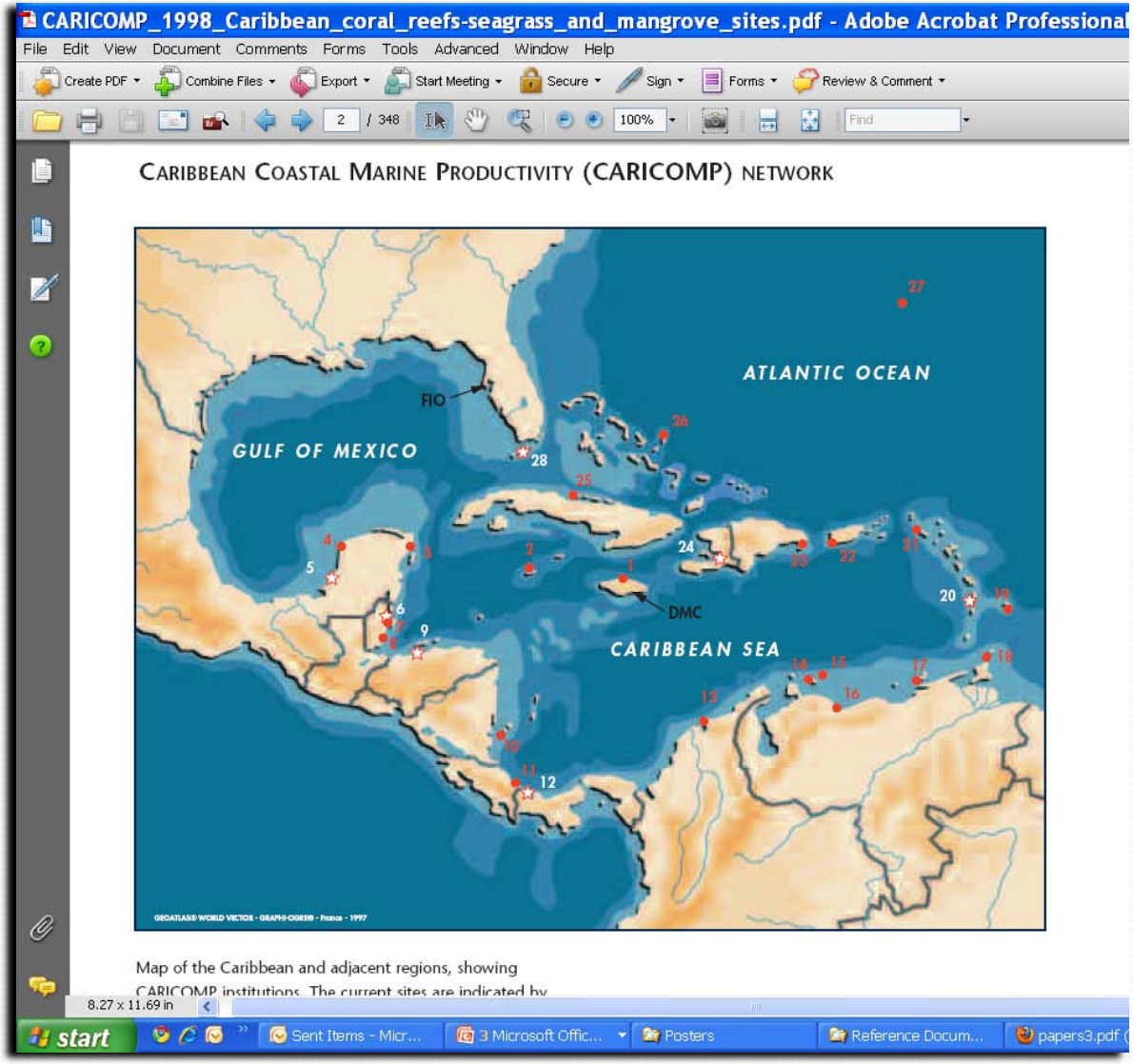
- CARICOMP
- AGRRA
- CPACC
- CLME
- SHIPS OF OPPORTUNITY

The Caribbean Coastal Marine Productivity (CARICOMP) Program

- Laboratories, parks, reserves (1990)
  - Started with 14 institutions in 14 countries
  - 30 institutions, (18 active, 8 inactive, 4 not started)
  - 13 islands, 10 mainland
- Regularly organizes capacity building workshops and training sessions.
- Central data archiving and management centre (CCDC)
- Supported by
  - UNESCO
  - MacArthur Foundation
  - Individual Institutions

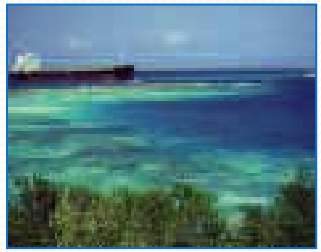
The CARICOMP Network

1. Bahamas (San Salvador)
2. Barbados
3. Belize (Ambergris Cay, Hol Chan)
4. Belize (Calabash Caye, Turneffe Island)
5. Belize (Carrie Bow Cay)
6. Bermuda
7. Bonaire
8. Cayman Islands, British West Indies
9. Colombia (Bahia de Chengue)
10. Colombia (San Andres & Isla de Providencia)
11. Costa Rica (Cahuita and Laguna Gandoca)
12. Cuba (Cayo Coco)
13. Curacao
14. Dominican Republic (Parque Nacional del Este)
15. Florida (Long Key)
16. Haiti (Port au Prince)
17. Honduras (Cayo Cochinas)
18. Jamaica (Discovery Bay)
19. Jamaica (Portland Bight)
20. Mexico (EPOMEX, Campeche)
21. Mexico (Laguna de Celestun)
22. Mexico (Puerto Morelos)
23. Nicaragua (Great Corn Island)
24. Panama (Isla de Colon)
25. Puerto Rico (La Parguera)
26. Saba, Netherland Antilles
27. St. Lucia
28. Trinidad & Tobago (Buccoo Reef and Bon Accord Lagoon, Tobago)
29. Venezuela (Parque Nacional Morrocoy)
30. Venezuela (Punta de Mangle, Isla de Margarita)



Standardized Monitoring Protocol

- CARICOMP Level 1 methods
  - Mangroves
  - Seagrass
  - Coral reefs
- CARICOMP Level 2 Methods
  - Fish count
  - Turbidity
  - Water quality
  - Algal bloom
  - Urchin population status



CARICOMP Challenges

- Voluntary programme
- Changing priorities of participating countries/ institutions
- Data usage
- Continuity of the data sets (gaps)
- Financial sustainability

Caribbean Community Climate Change Centre (CCCCC) 2005

1. Antigua and Barbuda
2. The Bahamas
3. Barbados
4. Belize
5. Dominica
6. Grenada
7. Guyana
8. Haiti
9. Jamaica
10. Montserrat
11. Saint Lucia
12. St. Kitts and Nevis
13. St. Vincent and the Grenadines
14. Suriname
15. Trinidad and Tobago
16. Anguilla
17. Bermuda
18. British Virgin Islands
19. Cayman Islands
20. Turks and Caicos Islands

Caribbean Planning for Adaptation to Climate Change (CPACC) Project

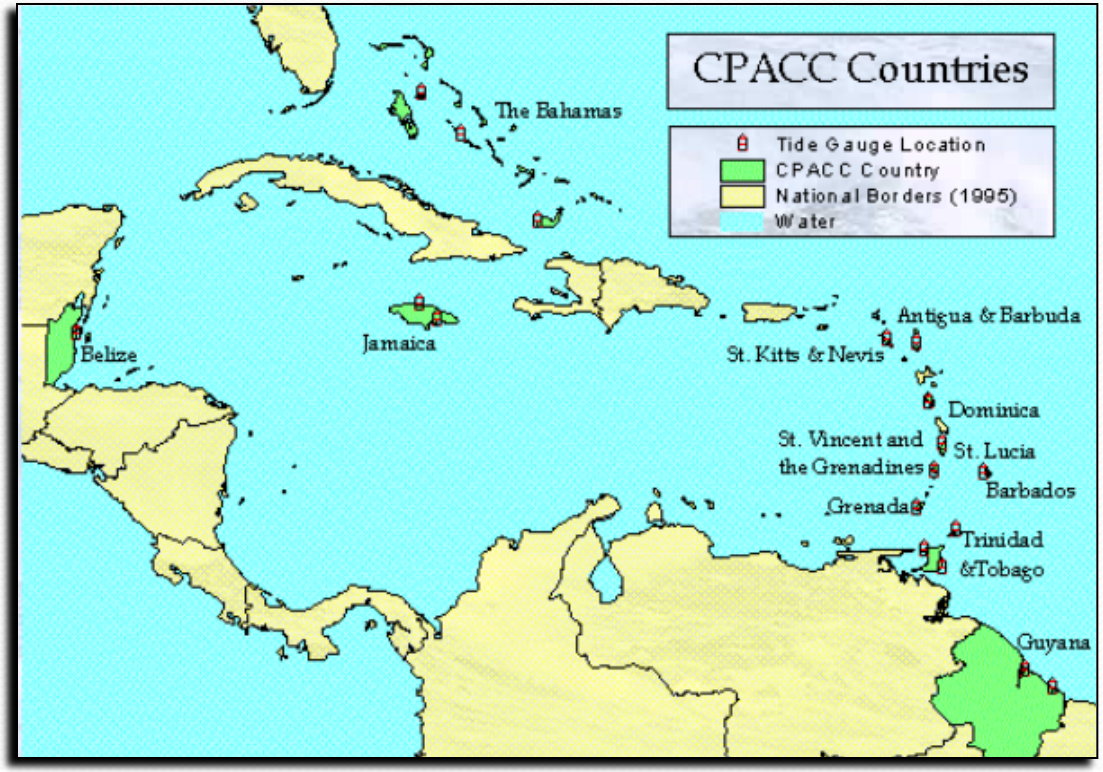
- **Four regional projects**
  1. Design and establishment of a sea level/climate monitoring network;
  2. Establishment of databases and information systems;
  3. Inventory of coastal resources; and
  4. Use and formulation of initial adaptation policies.

- **Five pilot projects**
  1. Coral reef monitoring for climate change (Bahamas, Belize, and Jamaica);
  2. Coastal vulnerability and risk assessment (Barbados, Guyana, and Grenada);
  3. Economic valuation of coastal and marine resources (Dominica, Saint Lucia, and Trinidad and Tobago);
  4. Formation of economic/regulatory proposals (Antigua and Barbuda, and St Kitts and Nevis); and
  5. National communications (St Vincent and the Grenadines).

CPACC-Caribbean Planning For Adaptation To Climate Change

- The goal of the CPACC project was to build capacity in the Caribbean region for the adaptation to climate change impacts, particularly sea level rise.
- Accomplished through the completion of vulnerability assessments, adaptation planning, and **capacity building activities.**
  1. Detailed "hands on" training was provided to all national technicians.
  2. Provided computers and software to accomplish continued reporting responsibility.

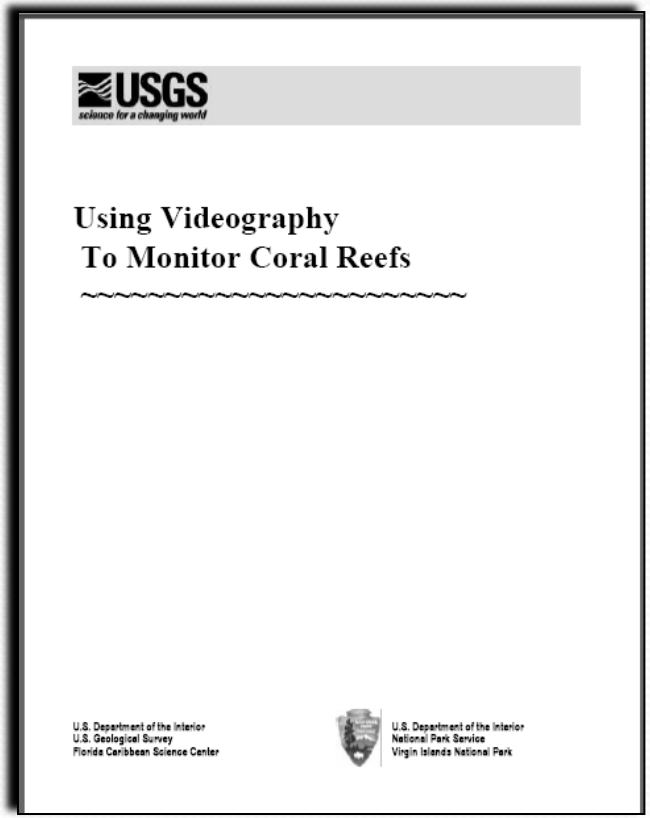
Sea Level Stations



- Institute of Marine Affairs The CPACC Regional Archiving Center for Sea Level and Sea Temperature Data
- 18 stations/12 counties
- Web based data access
- Where is the data now?
- Want of the stations?

Coral Reef Monitoring for Climate Change Impact (Component 5 of CPACC)

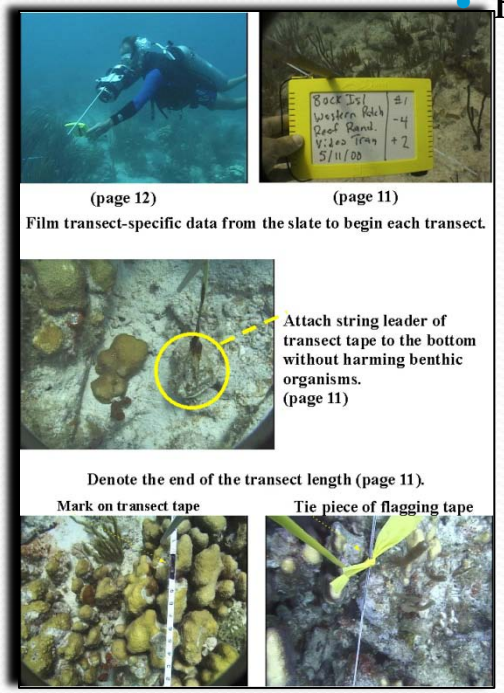
Site Selection and Video Monitoring Protocols


USGS
science for a changing world

Using Videography
To Monitor Coral Reefs

U.S. Department of the Interior
U.S. Geological Survey
Florida Caribbean Science Center

U.S. Department of the Interior
National Park Service
Virgin Islands National Park



Advantages over traditional methods

- Non Scientist
- Less time in water
- Permanent photographic record
- Re-assessment possible

Coral Reef Monitoring for the OECS and Tobago (Component 1 of MACC)

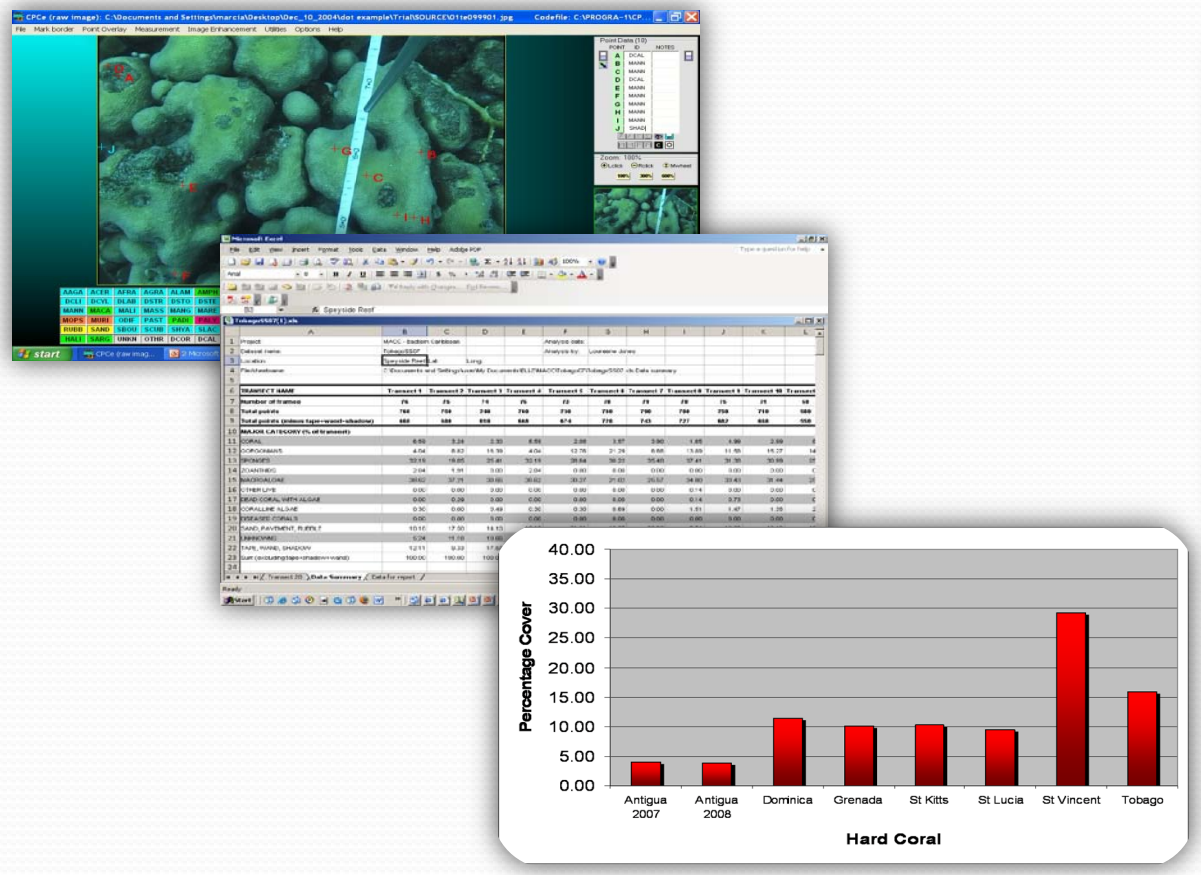
MOU with the MACC Project to implement the expansion of the CPACC coral reef monitoring programme to the OECS and Tobago.

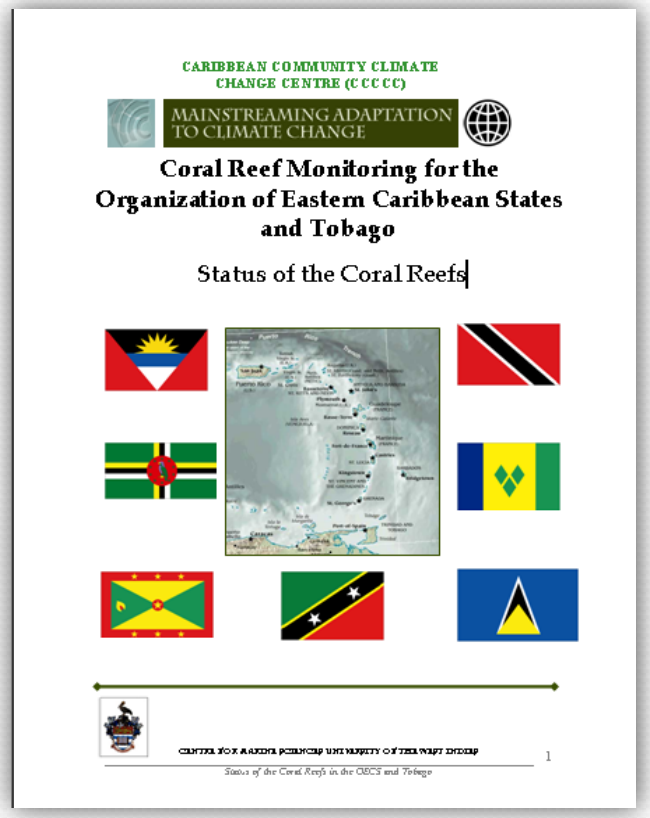
- Antigua & Barbuda
- Dominica
- Grenada
- St. Kitts & Nevis St. Lucia,
- St. Vincent & the Grenadines
- Trinidad & Tobago.

Coral Reef Monitoring for the OECS and Tobago (Component 1 of MACC)

- Technical support was provided in the form of
  - training
  - supervised monitoring
  - data processing & analysis
  - report preparation
- 16 participants/7 countries trained during the period September 10-13, 2007 in St Lucia

Monitoring in the OECS and Tobago took place during 2007 and 2009.





AGRRA Atlantic and Gulf Rapid Reef Assessment program

- An international collaboration of scientists and mangers aimed at determining the regional condition of reefs in the Western Atlantic and Gulf of Mexico.

In-country capacity and collaboration by:

- Conducting hands-on, interactive workshops to train local resource managers and scientists to assess reef condition using a standardized method,
- Promoting effective and responsible management efforts using this scientific information; and
- Improving collaboration and information sharing within and between the countries.

Challenges - Coral Reef monitoring

- Implementation time
- Training period
- In-country preparation/site selection
- Weather and other logistical challenges (boat, equipment etc)
- Protocol/Metadata
- Communication

The Integrated Coral Observing Network (ICON) program

Coral Reef Early Warning System (CREWS) stations

- High-quality meteorological and oceanographic data in near real-time.
- Bahamas, Puerto Rico, the US Virgin Islands and Jamaica.
- Continuous, long-term, high-quality (NOAA quality controlled) dataset from these harsh marine environments

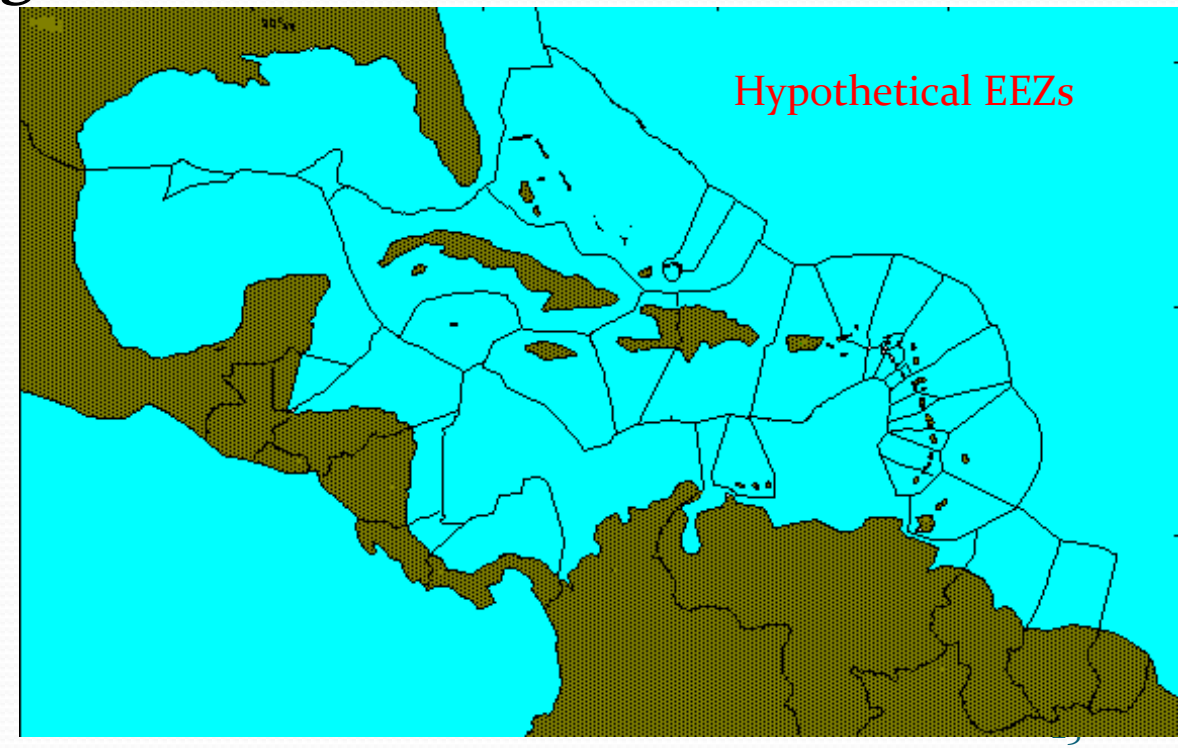
The Caribbean Large Marine Ecosystem (CLME) Project:

2008

CLME Project Unit
Centre for Resource Management and Environmental Studies (CERMES)
University of the West Indies
Cave Hill Campus, Barbados

Complex and Challenging Wider Caribbean Region

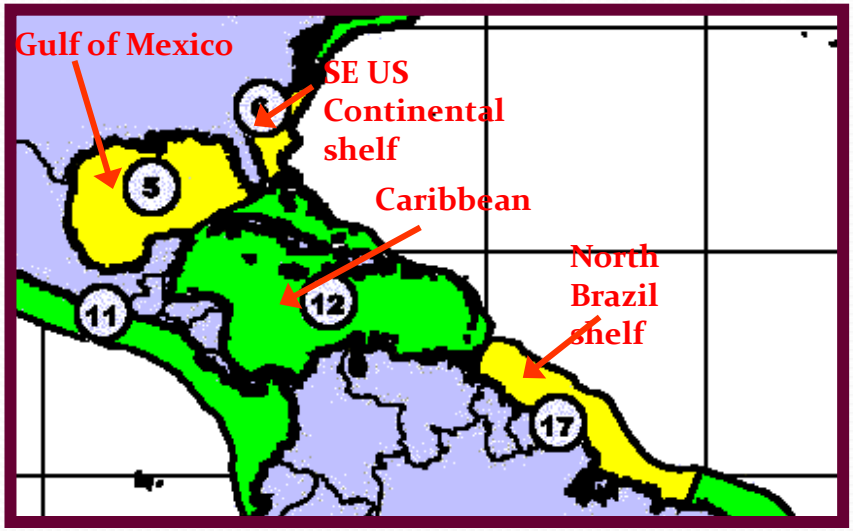
- **Geopolitical**
  - 33 state entities
- **Cultural**
  - ethnicity, language
- **Size**
  - small & large
- **Development**
  - poor & wealthy



The Caribbean LME (CLME) Project

Overall objective

Sustainable management of the shared living marine resources of the Caribbean LME and adjacent regions through an integrated management approach that will meet WSSD targets for sustainable fisheries



Other opportunities & synergies

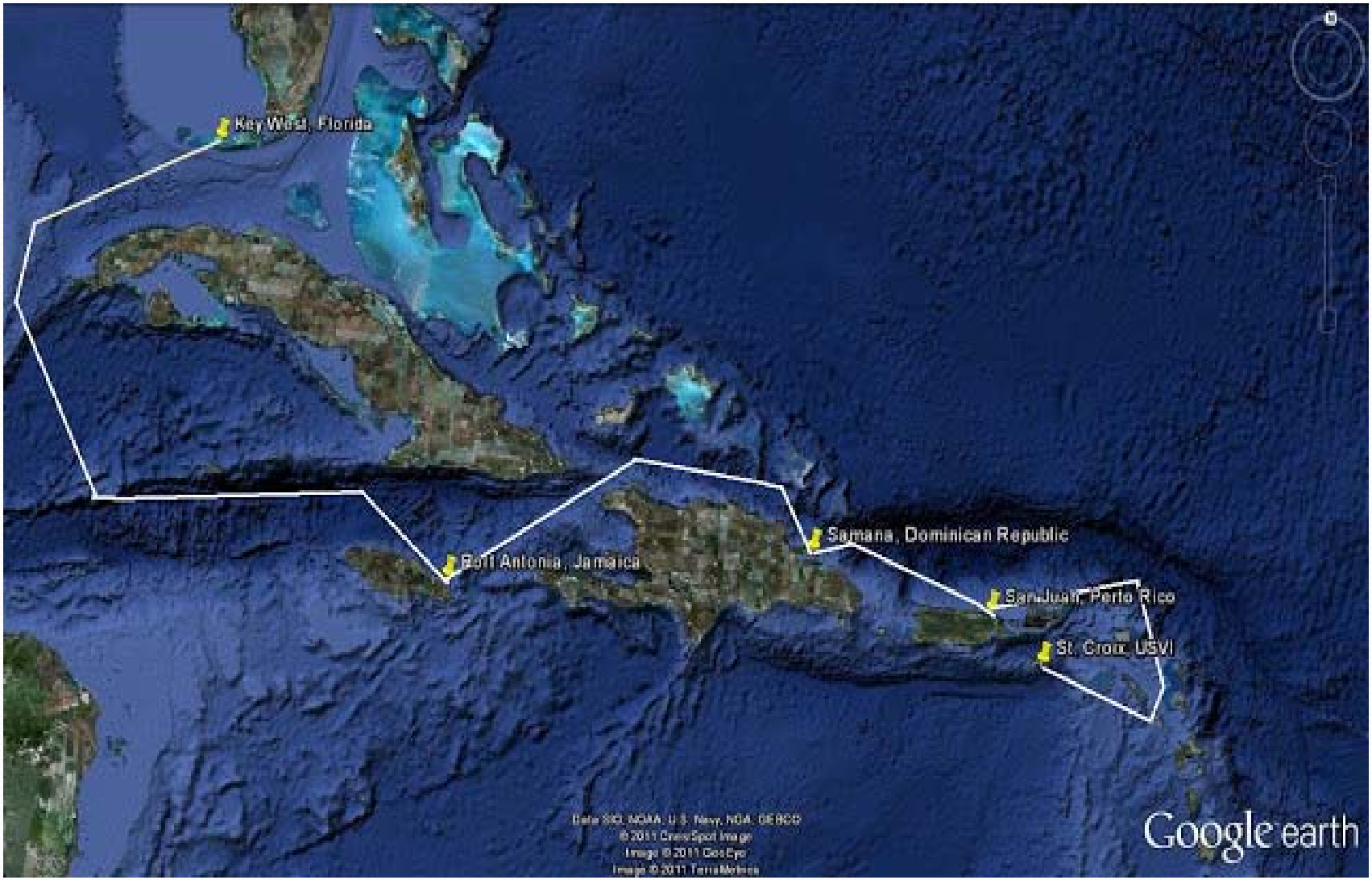
- Institutionalized training:
  - University of the West Indies – 16 Caribbean countries
    - CERMES, CMS (PRML & DBML)
  - Regional eg. CEHI, CFMC, NOAA, UNEP/UNDP/UNESCO
  - National eg. IMA (T&T), U of Guyana, U of Belize, CIMAB, U of Santo Domingo,
  - USA opportunities eg FIU – CCSP; USF- FIO, Mote ; FAU - Harbor Branch; UM Rosensteil
- International Conventions and their associated facilities (Small grants, WFF etc.)

Research Vessels/Ships of opportunity (another opportunity)

- Corwith Cramer – Woods Hole; 2008
- Meteor Cruise – University of Kiel; 2009
- Ronald H. Brown – NOAA; 2010
- Gordon Gunter – NOAA; 2011
- M.Y. Golden Shadow – Living Oceans; 2012
- Atalante – IFREMER; 2013

a) Hydrography, oceanography & geology
b) Plankton & fisheries
c) Benthic biota of the Caribbean esp. corals

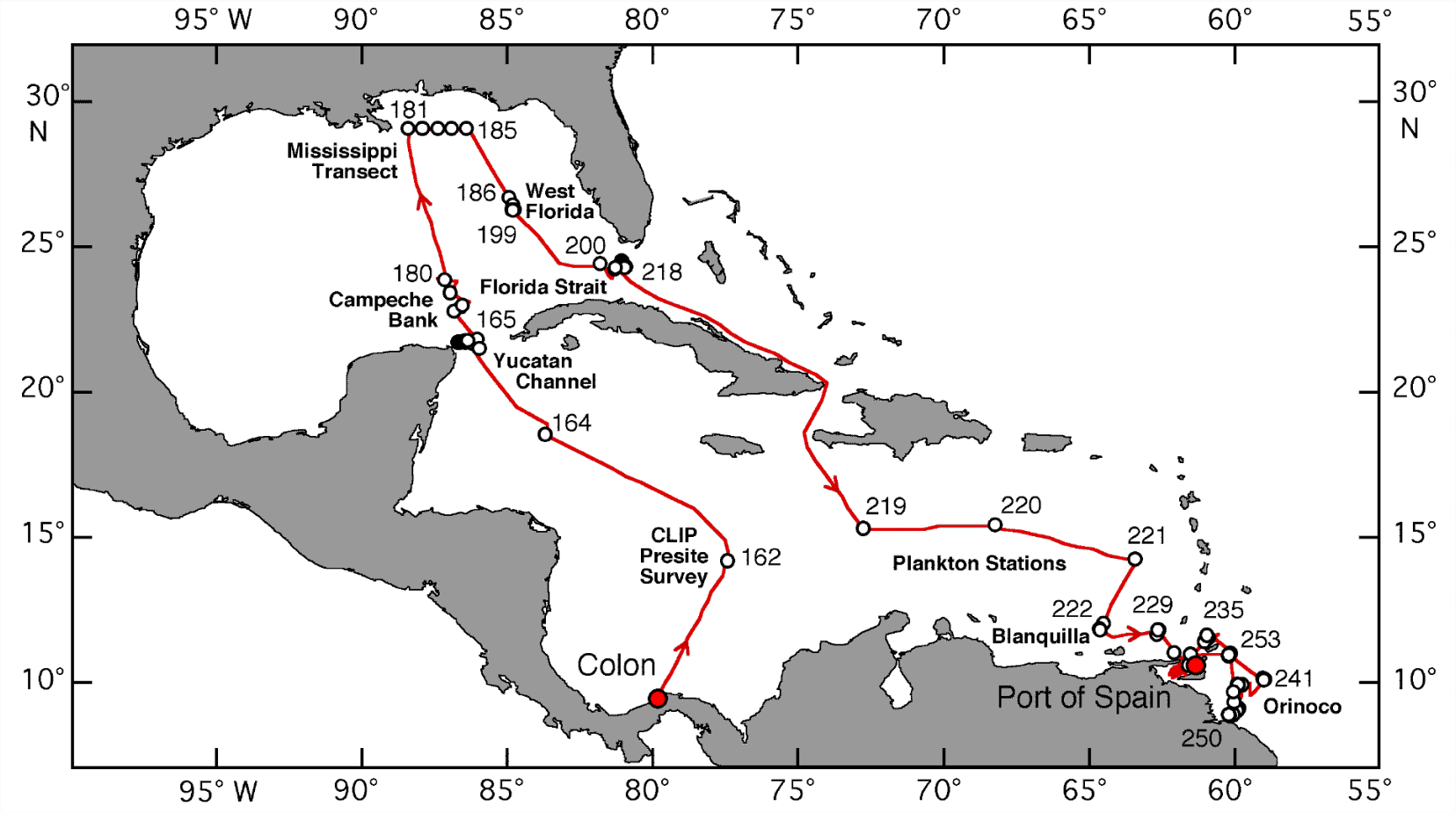
Caribbean Voyage of Research Vessel Corwith Cramer 2008



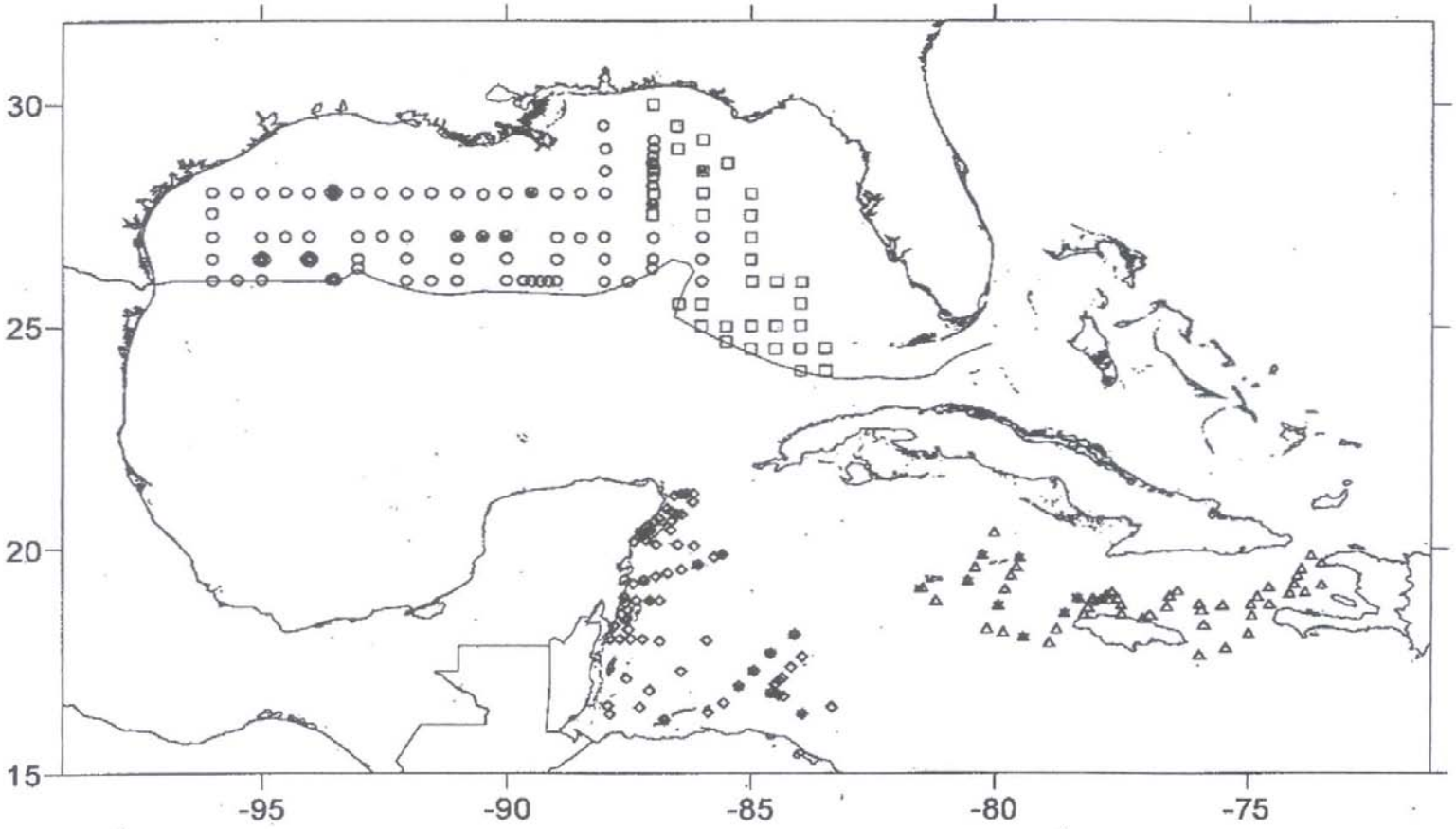
R/V METEOR Cruise 78

- Feb 22th – March 28th, 2009
- From Colon, Panama -Port of Spain, Trinidad
- Objective: Describe the linkage of the western Atlantic Warm Pool with changes of North Atlantic thermohaline circulation during the late Pleistocene and Holocene.
  - Benthic biota and sedimentary processes were documented with OFOS observations and surface sediment samples.

R/V METEOR Cruise track & stations



NOAA SHIP *GORDON GUNTER* (Mar-May 2011)



Collected plankton samples

Questions

- How to overcome the problems of the past
- How do we handle data and metadata?
- How do we determine and maintain the trainees?
- How do we institutionalize the training ?
- How to access and influence the ships of opportunity?

Thank You

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