



# Marine Monitoring for Evidence- based Action in Caribbean Small Island Developing States

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Blue Planet Symposium 2017



# Overview

- Introduction to 4M
- Why 4M?
- Framework
- Objectives
- Next Steps
- Opportunities

# Introduction to 4M

- 4M: Multipurpose Marine Monitoring Mechanism:
  - ✓ An innovative concept to address a long-standing development challenge faced by the Caribbean
  - ✓ Partners: UNDP Barbados & the OECS, the GEO Blue Planet Initiative and IOCARIBE – GOOS



*Empowered lives.  
Resilient nations.*







# Examples of existing marine monitoring efforts in the Caribbean\*

- **Caribbean Community Climate Change Centre (CCCCC)**: 5 buoys installed in 2013 to monitor coral reefs, for climate modelling in coral reef ecosystems off the coasts of Barbados, Belize, Trinidad and Tobago, Dominican Republic and St. Lucia
- **Caribbean Planning for Adaptation to Climate Change (CPACC) Project** (1997-2001): 18 buoys installed with a data hub at UWI St. Augustine, Trinidad and Tobago. Follow-up project in 2007 with training of 16 participants for maintenance and data collection.

\*Based on readily available information

# Dependence on oceans in the Caribbean

- ✓ 70% of population living along the coast<sup>1</sup>
- ✓ Tourism generating US\$25B of revenue annually, supporting 6 million jobs – marine life attracting 60% of the world's scuba divers<sup>1</sup>
- ✓ Livelihoods dependent on marine and coastal resources – fisheries, coral reefs etc.<sup>1</sup>

<sup>1</sup>Caribbean Challenge Initiative/TNC





# What sets 4M apart from other marine monitoring efforts?

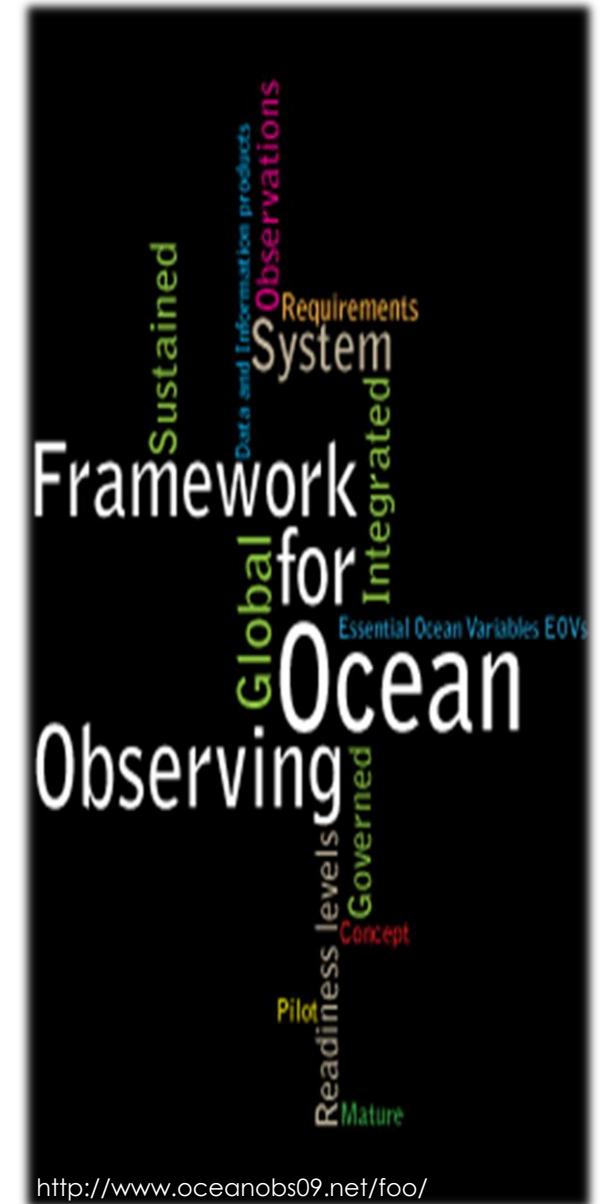
- One of a kind system in the Caribbean:
- ✓ Directly involves stakeholders and end-users and addresses their needs
- ✓ Focus on capacity building
- ✓ Scaling-up vision
- ✓ Focus on partnerships
- ✓ Sustainability



<http://www.waterworld.com/articles/2013/06/marine-monitoring-buoys-to-study-climate-change-in-caribbean-wat.html>

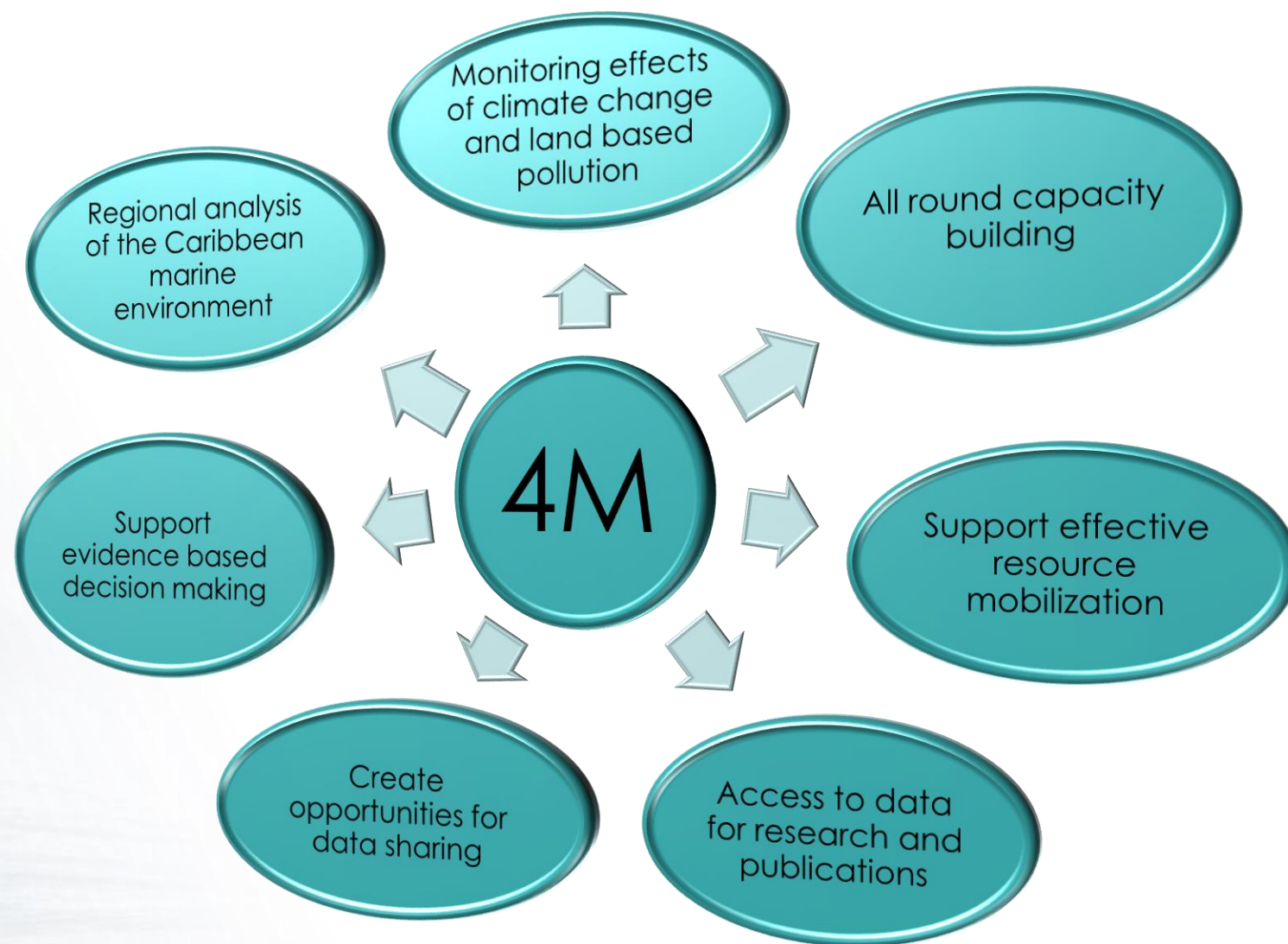
# The 4M Framework

- ✓ A fresh, holistic approach to system development
- ✓ Collaborative nature
- ✓ Utilizes Framework for Ocean Observing as a basis for development



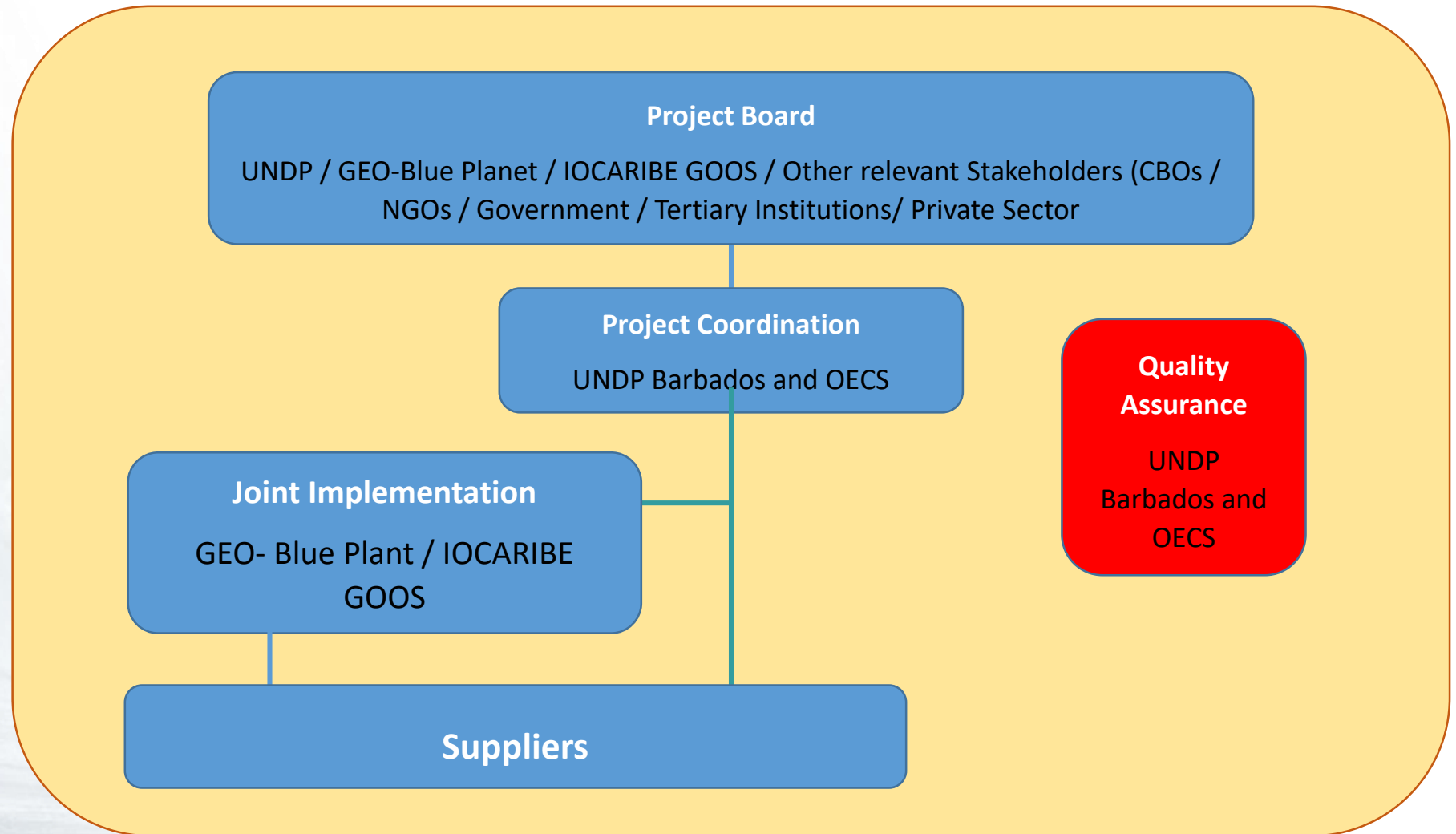


# Objectives of 4M





# Project Structure



# Next Steps



June 2017 -  
UN Oceans  
Conference

Jul 2017 -  
UNDP Project  
Document

Sep 2017 -  
GOOS Pilot  
Project

Oct 2017  
Blue Planet  
Pilot Project



# For more information:

UNDP Barbados and the OECS:

- Danielle Evanson, Programme Manager – [danielle.evanson@undp.org](mailto:danielle.evanson@undp.org)
- Lorenzo Harewood, Technical Administrative Associate – [lorenzo.harewood@undp.org](mailto:lorenzo.harewood@undp.org)

GEO Blue Planet Initiative:

- Emily Smail, Scientific Coordinator – [emily.smail@noaa.gov](mailto:emily.smail@noaa.gov)

IOCARIBE – GOOS:

- Doug Wilson, Project Coordinator - [doug@coastaloceanobs.com](mailto:doug@coastaloceanobs.com)



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