

# CariCOOS Development Plan: Current Status of Observing System Assets

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Jorge E. Capella Roy A. Watlington



## CaRa Stakeholders Council

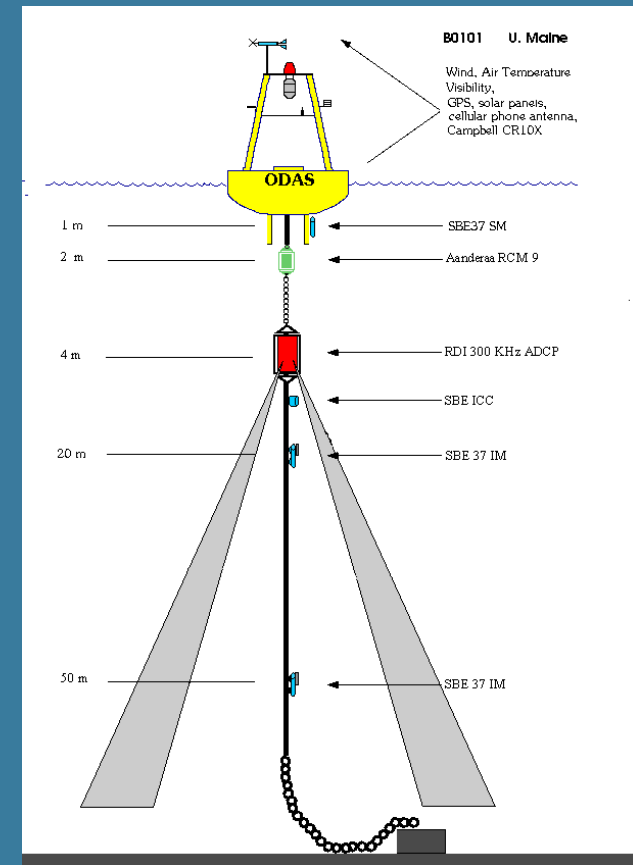
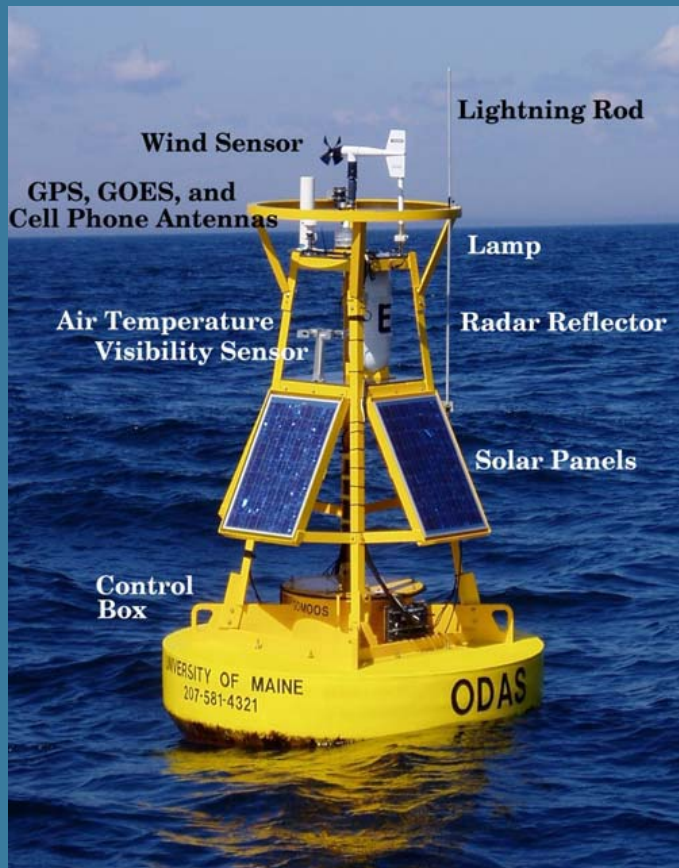
San Juan, PR  
Dec. 9 2008

# CarlCOOS Data Buoy

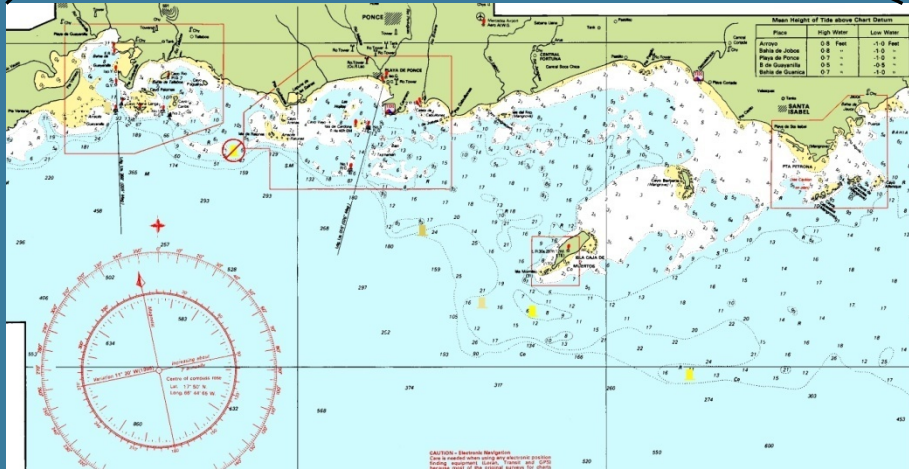
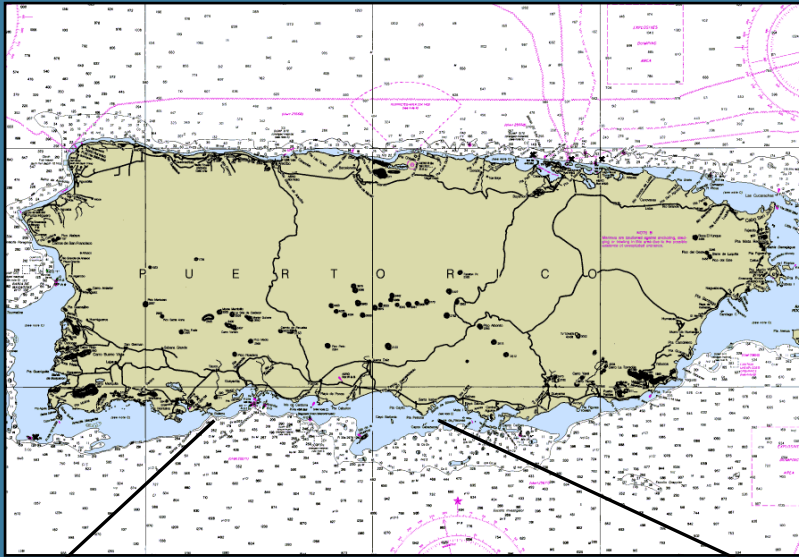
- Contract for data buoy executed
- Buoy under fabrication at University of Maine
- Consultations for buoy emplacement site performed (USCG Harbor Safety and Security Committee)
- Site survey executed
- Permit application underway

# CarlCOOS Data Buoy

- Patterned after successful GOMOOS Buoy design
- Optimized for tropical conditions
- Collaborative development, deployment and operation UPRM / U. Maine



# CarlCOOS Data Buoy Site Consultations



- Zonal bands Atlantic and Caribbean
- Buoy data to be representative of band
- CarlCOOS Buoy #1 for Caribbean zone
- Service to Ports:
  - Ponce
  - Port of the Americas
  - Guayanilla
  - Tallaboa
- Service to recreational interests
- Data to serve for model validation

# CarlCOOS Data Buoy Site Survey



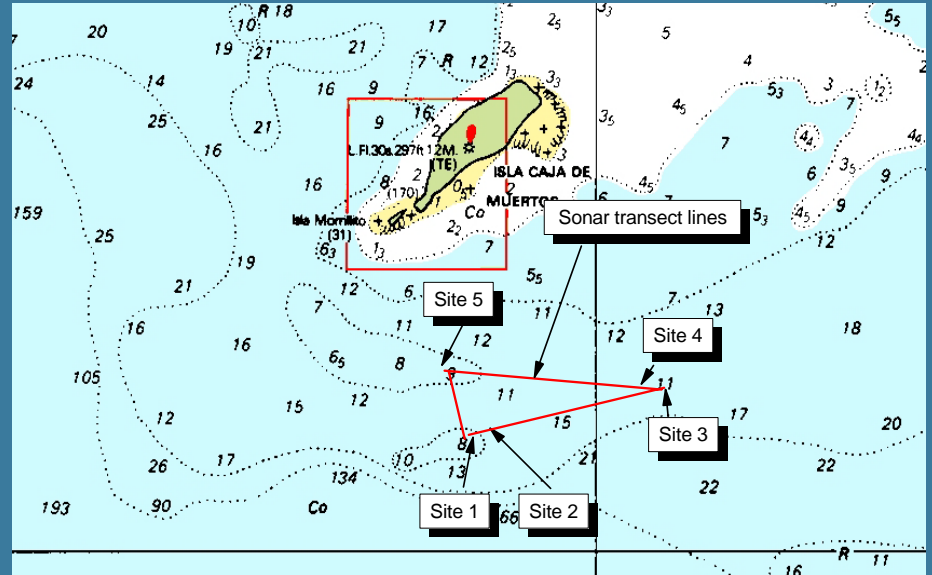
## CarlCOOS Data Buoy 1 SITE EVALUATION

J. Corredor  
J. Morell

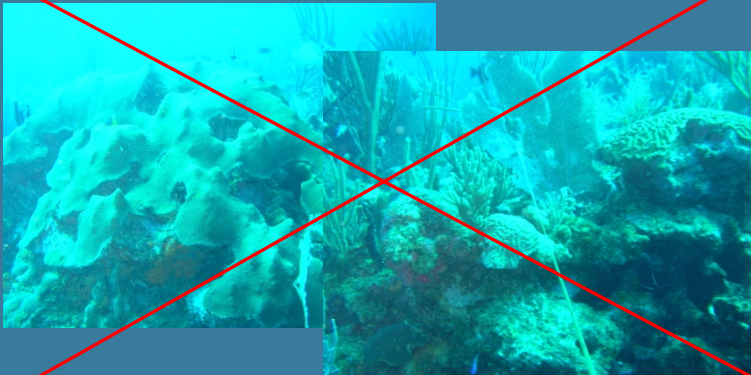
Caja de Muertos location

November 13, 2008

The CarlCOOS Ocean Observing program calls for the emplacement of two coastal ocean data buoys on the shelf edge of the Puerto Rico/ Virgin Islands region. Five prospective sites for emplacement of CarlCOOS Data Buoy 1 on the south coast of Puerto Rico were evaluated by SCUBA assisted phototranssect. The five sites surveyed are located to the Southeast of the island of Caja de Muertos on the outer insular shelf edge of PR.



Site 1. Sensitive coral reef



Site 5. NMFS approved



# HF Radar

- Leveraged funding for proof-of-concept deployment secured from DHS through Stevens Institute of Technology. Rutgers COOL is main partner
- HF Radar Gap Analysis for PR and USVI completed through CaRA participation in National HF Radar Plan (funds pending)

# HF Radar

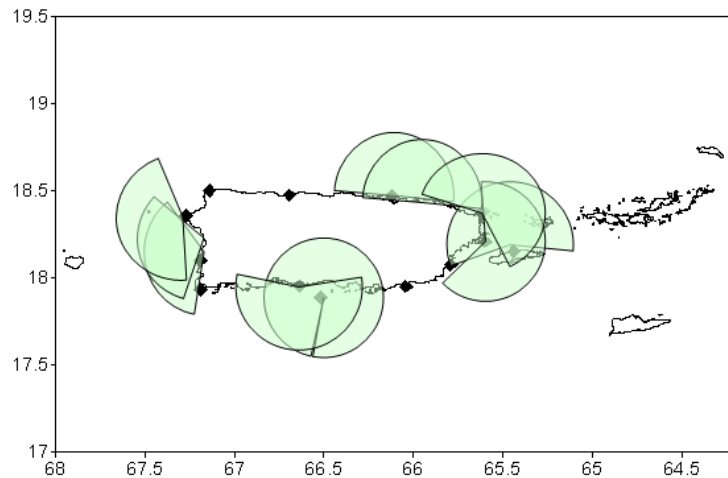
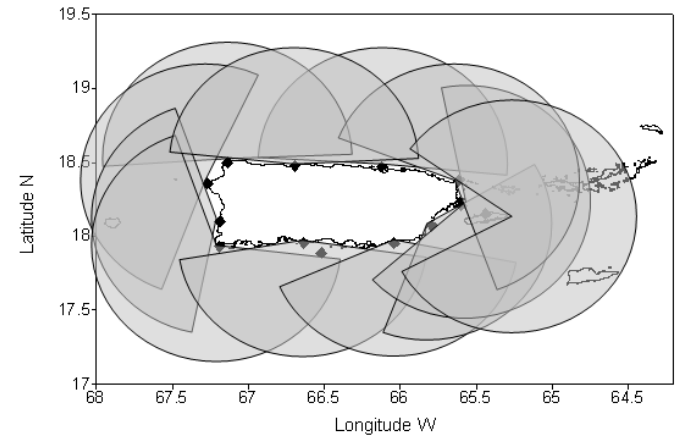


Caribbean Regional Association for Coastal Ocean Observing (CaRA)

## HF Radar Gap Analysis for Puerto Rico and the US Virgin Islands

Prepared by: Jorge Corredor, Julio Morell, Roy Watlington, Jorge Capella

HF radar constitutes a robust technology for detection and visualization of surface ocean currents in real time to distances of 200 km making it a highly desirable tool for maritime safety, operations planning, emergency response and environmental management. HF radar can be further used for vessel identification and tracking adding further to its contribution to security. The CaRA region, encompassing the Exclusive Economic Zones of Puerto Rico (PR) and the US Virgin Islands (USVI) currently lacks HF radar installations. As part of its Integrated Coastal Ocean Observing initiative, CaRA is developing a regional HF Radar Plan based on expressed regional stakeholder needs, existing knowledge of current variability patterns and hot spots, and fiscal constraints. The Plan contemplates phased implementation of a nested network of mid and short-range stations encompassing the region. Proposed implementation phases are prioritized according to user needs. Given administrative differences between PR and the USVI, we propose to develop two complementary but largely independent systems for the two sub-regions. This strategy will allow the administrative flexibility necessary particularly for permit applications and management.



### USVI HF Radar

St. Croix:

- Ham's Bluff
- Cottongarden Bay

St. John:

- Maria Bluff

St. Thomas:

- Fort Hill, Water Is.

Vieques:  
Punta Este

