CariCOOS Development Plan: Current Status of Observing System Assets

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CaRa Stakeholders Council

San Juan, PR
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CarICOOS 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
CarICOOS Data Buoy

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

- Zonal bands Atlantic and Caribbean
- Buoy data to be representative of band
- CarICOOS 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
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 (CAROA)

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

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HF radar constitutes a robust technology for detection and visualization of surface ocean currents in real time. It is sometimes used as a higher-resolution tool for maritime safety, operations planning, emergency responses and environmental management. HF radar can be further used for vessel identification and tracking adding further to its contribution to security. The CAROA region, incorporating the Exclusive Economic Zones of Puerto Rico (PR) and the US Virgin Islands (USVI), currently lacks HF radar installations. As part of the Integrated Coastal Ocean Observing Initiative, CAROA is developing a regional HF Radar Plan based on engaged regional stakeholder needs, existing knowledge of current variability patterns and hot spots, and fiscal constraints.

The Plan contemplates phased implementation of a network of radar 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 complimentary but logically aligned radial systems for the two sub-regions. This strategy will allow the administrative flexibility necessary particularly for permit applications and management.