SECOORA REGIONAL COASTAL OCEAN OBSERVING SYSTEM

OVERVIEW OF SECOORA RCOOS PROJECTS

RCOOS PI Meeting
NCSU, Raleigh, NC

May 20, 2016

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Agenda

8:50am – 9:15am  Welcome and Overview of SECOORA RCOOS Projects (Vembu Subramanian)

9:15am – 9:30am  Instructions for Breakout Sessions (Debra Hernandez)

Break out sessions Topics:

- Topic 1: SECOORA RCOOS Plan (Moderator: Vembu; Rapporteur: Robert Weisberg)
- Topic 2: SECOORA Data Portal and Website (Moderator: Abbey; Rapporteur: Kyle Wilcox)
- Topic 3: SECOORA Fellowship (Moderator: Debra; Rapporteur: Megan)

9:30am – 10:15am Break Session 1

10:15am – 10:30am Coffee/Water Break

11:15am – 12:00pm Breakout Session 2

12:00pm – 12:15pm Boxed Lunch

12:30pm – 1:15 pm Report out from Breakout Sessions and Next steps and Adjourn

- Moored (buoys) and Coastal Stations (30%)
- High Frequency Radar (27%)
- Program Development and Outreach (19%)
- Data Management and Communications (13%)
- Modeling (11%)
  • Circulation
  • Fisheries management
  • Inundation, surge
  • Water Quality (beach, shellfish)

Year 1: $ 2.01 M  
Year 2: $ 2.23 M  
Year 3: $ 2.49 M  
Year 4: $ 2.53 M  
Year 5: $ 2.60 M
Proposal Title: Southeast Coastal Ocean Observing Regional Association (SECOORA): Supporting Resilient Ecosystems, Communities and Economies

• Submitted US IOOS Proposal (August 2015)
  – $20 M over five years (2011 -2016)
• Received $2.5 M (Year 1)
• Descoping and Proposal submission in progress (Due July 31, 2016)
RCOOS Schematic

*Includes proposed and existing projects

SECOORA Governance and Management

STAKEHOLDER ENGAGEMENT THEMES
Resilient Ecosystems • Resilient Communities • Resilient Economies

- Ecosystems: Water Quality and Living Marine Resources
- Climate Change
- Coastal Hazards
- Marine Operations

INTEGRATED PRODUCTS AND FORECASTS

- Harmful Algal Bloom Forecasting for West Florida Shelf
- Southeast Seasonal Continental Shelf Ecosystem Advisory Report
- Vulnerability of Crustacean Fisheries to Climate Change
- Swimming Advisory
- Shellfish Advisory
- Marine Weather Portal
- Real-Time and Historical Data Portal

OBSERVATIONS
- 23 In situ Stations, Some Measure Ocean Acidification Variables*
- 17 High Frequency Radars*
- Harmful Algal Bloom Event Sampling
- Southeast Atlantic Glider Observatory
- Ocean Sound Observing Initiative
- Satellite Observations

MODELS
- Swimming Beach and Shellfish Water Quality
- West Florida Shelf Coastal Ocean Model
- Coupled Marine Environmental Assessment and Prediction

Data Assimilation
Adaptive Sampling
Goals and Objectives (2016)

Goal 1. Continue SECOORA’s region-wide governance and communication to manage RA and engage users and stakeholders in coastal observing science

Objectives:
- Maintain governance and management for the RA and RCOOS
- Engage users and other stakeholders to prioritize investments
- Maintain and operate DMAC
Goal 2: Maintain existing core observation investments in the region

Objectives: Maintain and operate Moored and Coastal stations.

Principal Investigators:
UNCW CORMP: 9 stations
Lynn Leonard (PI), Jennifer Dorton (Co-PI)

USF COMPS: 6 stations
Robert H. Weisberg (PI), Yonggang Liu (Co-PI)

USF COMPS: 6 inshore stations
Mark E. Luther (PI), Clifford R. Merz (Co-PI), Jeff Scudder (Co-PI)

UGA: 1 Ocean Acidification Gray's Reef Buoy Scott Noakes (PI), Wei-Jun Cai (Co-PI)
Goal 2: Maintain existing core observation investments in the region

Objectives: Maintain fifteen HFR distributed throughout the region.

USC (2-WERA HFR) – George Voulgaris
- Georgetown, SC; Caswell Beach, NC

UM (4-WERA HFR) – Nick Shay
- Crandon Park, FL; Virginia Key, FL
- Turkey Point (TBI), FL; Dania Beach, FL

UNC-CH (3-CODAR HFR) – Harvey Seim
- Duck, NC; Cape Hatteras, NC
- Core Banks, NC

USF (4-CODAR) – Robert Weisberg
- Reddington Shores, FL; Venice, FL (C)
- Naples, FL; TBI

SkIO (2-WERA HFR) – Dana Savidge
- St. Catherine, GA
- Jekyll Island, GA
Goal 3: Begin to address geographic gaps in observations

Objectives: Establish a regional glider observatory in the SAB
Install a new coastal water quality station in Charleston Harbor.

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<th>Glider PIs</th>
<th>Coastal water quality station</th>
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<td>UNC-CH</td>
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<td>• Harvey Seim</td>
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<td>• Ruoying He</td>
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Goal 4: Continue delivery of operational models and products

Objectives:

• Enhance and operate a Coupled Marine Environmental Assessment and Prediction System for the SE (NCSU – Ruoying He)

• Downscaling from the Deep-ocean, across the Continental Shelf and into the Estuaries (USF – Robert Weisberg)

• Provide an Early Warning System for Swimming Beach and Shellfish Harvesting Waters (USC – Dwayne Porter)

• Optimize and enhance the SECOORA Marine Weather Portal (UNCW – Jennifer Dorton)
Goal 5: Initiate new operational products to meet additional user needs ($4.5 M)

**Objectives:**

- Implement a HAB forecasting system for the WFS (FWC/FWRI)
- Provide seasonal ecosystem advisory reports for the SE continental shelf (Roffer)
- Assess vulnerability of marine crustacean fisheries of the SE to climate change (SCDNR)
Goal 6: Enhance the observing system ($4.5 \text{ M}$)

Continue building critical elements of the observing system by adding biogeochemical and marine sound sensors, and HFRs

- Improve the seafloor observatory near Gray’s Reef OA buoy (USF)
- Add and maintain comprehensive OA sensor packages at 4 buoys (UNCW/USF)
- Implement a regional ocean sound observing initiative (MOTE)
- Install and operate new HFR east of Port Canaveral, FL (FIT/UM)
THANK YOU!!!!!!!