GCOOS Buildout Plan V.2.0

Overview of Updated and New Sections
GCOOS Board Meeting
17 March 2014
Tallahassee, FL
Overview

• Broad Stakeholder Input
• Most Sections Updated – examples
• New Section - examples
  – Executive Summary
  – Introduction to Observing System Components
  – Ecosystem Monitoring
  – Cost Estimates
• Next Steps Discussion on Tuesday
Comments Sought Widely

- Posted on GCOOS website since 2011
- Notices to GCOOS Members and Newsletter listservs
- Announcements during internal and external telecons
- Presentations at conferences
- Direct emails to subject-matter experts and to leaders of Gulf organizations, such as GOMA and GoMURC

Updates also include *Deepwater Horizon* lessons learned.

Board approved Table of Contents for V.2.0
• Autonomous Underwater Vehicles (AUVs)
  – Added recommendation for profiling floats (e.g., Argo)
  – Year 1: profiling glider cross-shelf transects – hypoxic zone and HABs area off Central W. Coast of FL
  – Years 2 & 3: add profiling gliders on Shelf conveyer belt (complementing mooring transects)

• Autonomous Surface Vehicles (ASVs) (Wave Glider and Sailbuoy)
  – Northern Gulf – riverine inputs

Credit: USM
Updated Section Example: Aircraft Observations and Unmanned Aerial Systems (UAS)

- Aircraft-based
  - LIDAR
  - Integrated airborne imaging and mapping
  - Aerial surveys

- UAS
  - to complement other sampling
  - applications include counts, health assessment and movement / tracking of sea life; pollution monitoring; object detection, and air sampling
Updated Section Example: DMAC

- Incorporation of different data types (e.g., water quality – Integrated Water Quality Network, nutrients, biological data, broader ecosystem monitoring data)
- Hire subject matter expert for new areas
- Consider subject matter expert for Social Networking Software
- Increase support to 100% for Information Architect
- Entrain new data providers (including Citizen Scientists) and users
- Interface with Modeling Subsystem
- Build Decision-Support Tools
Updated Section Example: Outreach and Education

- Develop O/E activities that support the GCOOS mission and raise public awareness of the U.S. IOOS
- Develop activities that enhance ocean and climate literacy initiatives
- Facilitate dialogue between GCOOS information users and data providers
- Provide technology workforce development opportunities
- Provide professional development opportunities
- Incorporate GCOOS data into STEM (Science, Technology, Engineering and Math) education in the Gulf
Updated Section Example: Detailed Element Descriptions

- Detailed Element Descriptions developed for each element in the BOP
  - Valuable resources; they are much more detailed than their corresponding sections in the BOP
  - Not all are current yet
- Not directly in the BOP, but linked from it
- Will be posted on GCOOS website and will also be summarized as new material on website
New Sections

• Executive Summary
  • Overview of BOP for broad public dissemination and communication (glossy publication)

• Introduction to Observing Components
  • Overview of the different observing components to provide an “integrated” view of the system for the Gulf
    • Strengths and weaknesses of different types of technology
    • Spatial and temporal scales for each technology
    • Approach to using these technologies collectively for holistic understanding of the Gulf
New Section: Ecosystem Monitoring

• Some material included in V.1.0, but now significantly expanded
• Input from over 40 subject matter experts, existing plans
• Focus on Living Marine Resources (fisheries, marine mammals, sea turtles, plankton, seabirds and coastal birds), Habitats, and Monitoring for Restoration Projects
• For each: Context and Existing Capabilities, Relevant Plans and Reports, Needs, Recommendations
• Overall Recommendations
  – Enhancements to System for broader ecosystem monitoring
  – Continued development of a Gulf Collaborative Forum to identify and implement additional ecosystem monitoring needs
• 15 pp. section + Appendix F (and 60 pp. Detailed Element Desc.)
New Section: Cost Estimates

- Recommended initial enhancements to the existing system with a cost estimate of ~$42M in 2014 dollars (for one year capital costs and O&M)
- With additional costs for broader ecosystem monitoring
Future Steps

Discussion on Tuesday

• Update several Detailed Element Descriptions
• Cost estimates certainly not complete
• New Executive Summary
• Overview of the BOP for broad dissemination

Credit: Chris Simioniello