

## Charge to Develop a Modeling Strategy for U.S. Integrated Ocean Observing System (IOOS®)

3/11/2014

### Charge to the IOOS Modeling Task Team:

The modeling strategy will:

1. Identify Regional IOOS modeling activities which:
  - a.) meet physical, hydrodynamic and/or ecological forecasting requirements;
  - b.) reflect IOOC, IOOS Program Office and IOOS Association goals (especially those of particular interest to the RAs); and
  - c.) establish the needed 2-way connections to end users and stakeholders.
2. Chose a select number of specific common [*across RAs, federal and non-federal groups*] model development challenges that are critical for advancing IOOS modeling capabilities, and recommend approaches and activities that are most needed to address these challenges and promote synergy and efficiencies amongst IOOS modeling communities [*approaches here refers to a wide range of possibilities, including process understanding, model gridding/integration across RA's, etc* ].
3. Identify and prioritize short and long term activities (potentially pilot projects) to improve the ability of IOOS to provide coastal ocean model-based products and information in response to user needs.
4. Recommend means of making appropriate regional-scale models supported by IOOS® regions accessible by Federal efforts. Include in the recommendations other pathways for models or products to be systematically or routinely accessible to local and regional decision makers.
5. Identify opportunities to coordinate Regional modeling activities with (and not duplicate efforts by) GODAE Oceanview and global ocean modeling development within the climate (e.g. WCRP/CLIVAR) community, and other related national and international efforts; and
6. Identify specific executable projects that can be accomplished in the near-term (1-3 years), considering realistic funding scenarios.

### Process and Timeline

Mar 11 Modeling Task Team charge finalized

Mar 11 IOOS Modeling Task Team established

Apr/May In-person meeting of Modeling Task Team

- Define terms Since the IOOS Modeling and Analysis Workshop (2008), there has been progress in addressing the challenges and recommendations in the workshop report. Given this progress, and the significant challenges in advancing a modeling component of IOOS,

an updated strategy is necessary. Such a modeling strategy is also called for within the National Ocean Policy Implementation Plan Appendix (page 11, 3<sup>rd</sup> bullet).

This strategy should provide specific technical input for the Interagency Ocean Observation Committee (IOOC), the U.S. IOOS Program Office, and the IOOS Association for advancing IOOS modeling capabilities over the next 5-8 years. It should identify appropriate modeling activities that are needed within the IOOS modeling subsystem (particularly amongst the IOOS Regional Associations) and identify opportunities and actions to address user needs. There should be a focus on models and assimilative frameworks that exploit observations to inform users of past, present, and future/forecasted conditions. The strategy should also address improving engagement and coordination across the federal and non-federal modeling subsystem to encourage cost-efficient activities addressing common needs.

- Discuss: role of IOOS in modeling, role of RAs, interoperability
- Working Groups defined for strategy focus areas
- Work plan agreed to by Team including: clarifying outcomes, reviewing timeline and responsibilities, deciding key issues to be addressed.

Jun 16	Revised outline, working groups established, terms defined; brief IOOC on Modeling Task Team planning and strategy outline
Jul 11	Deadline for each working group's submission of their section
Aug 8	Initial draft of combined Modeling Strategy
Aug 29	Complete review of initial draft by Modeling Task Team
Sep 19	Review of progress with IOOC, RAs and others
Sep 30	Draft Modeling Strategy released for review by IOOC, RAs and others
Oct 30	Comments Due
Nov	Revise Modeling Strategy
Dec 1	Final IOOS Modeling Strategy submitted to IOOC
Dec 30	Final IOOS Modeling Strategy released

## **Background**

Members for the Modeling Strategy Steering Team were solicited in consultation with the IOOC. Members were selected to represent modeling expertise and a cross section of federal and non-federal IOOS partners. *The IOOS Association selected seven members and the IOOS Program Office selected eight members.* The members are familiar with IOOS and represent different programs across NOAA and partner agencies. The IOOC identified two co-chairs who will have the responsibility to complete the development of the IOOS Modeling Strategy document according to the charge and timetable. The IOOS Program Office is managing the process for the IOOC and will support the effort through provision of appropriate staff. The names of the steering team members follow:

- Co-Chair: Leslie Rosenfeld, CeNCOOS
- Co-Chair: John Wilkin, MARACOOS and Rutgers University
- Project Manager: Becky Baltes, US IOOS Program Office
- Art Allen, USCG
- Antonio Baptista, Center for Coastal Margin Observation and Prediction
- Ruoying He, SECOORA and North Carolina State University
- Patrick Hogan, Navy Research Lab and GCOOS
- Alexandre Kurapov, NANOOS
- Lyon Lanerolle, NOAA/Coastal Survey Development Lab (CSDL)
- Avichal Mehra, NOAA/National Centers for Environmental Prediction (NCEP)
- Josie Quintrell, IOOS Association
- Dave Schwab, GLOS and University of Michigan
- Rich Signell, USGS
- Jane Smith, USACE
- Hendrik Tolman, NOAA/National Centers for Environmental Prediction (NCEP)