

NOAA Climate Observation Division  
COD Community Workshop  
Tuesday 16 June 2015

*Looking Toward the Future of Observations and their Contribution to Societal Benefits*

1525 Session 7A

**Breakout Groups**

Question:

**How should the observing system be configured to best quantify the present and predict the future state of ...**

1. ... **Sea Level**, to identify steric and mass-related variability, regionally and globally, on seasonal to multi-decadal timescales?

**Location: Conference Room 1 (Auditorium)**

***Facilitator: Mark Merrifield; Rapporteur: Billy Sweet***

2. ... patterns and/or trends of **Climate Variability** in ocean temperature, salinity (i.e., EOVs), biogeochemistry, and circulation on interannual (e.g., ENSO) to multi-decadal timescales?

**Location: Conference Room 2 (#1602)**

***Facilitator: Renellys Perez; Rapporteur: Adrienne Sutton***

3. ... **Air-Sea Exchange** of heat, momentum, climate-relevant compound, and fresh water to identify changes in forcing functions driving oceanic and atmospheric conditions?

**Location: Conference Room 3 (#1604)**

***Facilitator: Lisan Yu; Rapporteur: Mark Bourassa***

Topics to discuss in each breakout:

- Develop ideas and list (in bulleted form) how the global observing system should be configured in the next 5 years to best analyze the outcomes for your group.
  - What needs exist for observing platforms and related activities and how best can COD justify seeking new resources for these efforts?
    - What are the observation systems, data management, products, emerging technologies, and partnerships needed in preparation for OceanObs'19? Be sure ideas being generated are reflected in the COD Strategic Plan Goals/Objectives.
      - Please note partnerships that are required beyond NOAA that should be pursued to strengthen collaboration on these issues
      - What types of technology development could enhance your system configuration?
  - Provide examples of priorities for improvement in capabilities.
  - What issues of user and societal relevance can best be addressed with observations/analysis as the foundation? Provide examples of connections to the societal benefits listed on the following page.

### **Report out (Wednesday at 0900)**

- Provide bulleted recommendations to the Climate Observation Division (with some assessment of readiness), particularly those with the potential to be initiated, and/or developed, before OceanObs'19
- Rapporteur's report out in plenary
  - o Summarize your group's discussion and provide bulleted responses to the guidance questions
  - o Provide a set of prioritized recommendations to COD describing what we need to do as a community in the next 5 years (to potentially share with CPO, OAR, and NOAA HQ)

### **User and Societal Benefits**

What observing elements help...

- Satellite calibration/validation?
- Model development?
- Improve weather forecasting?
- Reduce loss of life and property from extremes?
- Understand regional/global Ocean Acidification?
- Improve global and coastal ocean forecasting?
- Sea ice forecasting?
- Understand, assess, predict, mitigate, and adapt to climate variability and change?
- Support marine transportation?
- Understand the effect of environmental factors on human health and well being?
- Protect and monitor water resources?
- Understand drought and water resources issues?
- Support sustainable agriculture and forestry, and combat land desertification?
- Aid in monitoring and managing energy resources?
- Monitor the marine environment and aid in developing the capacity to make ecological forecasts?
- Other?

Note:

The system configuration and its ongoing evolution should take into account that while some objectives are immediately within reach, others are more demanding in terms of observational technologies, and will need to be incorporated into the system first on a pilot basis and later as technology development leads to demonstration of cost-effective implementation.