



Promoting Implementation of Multi-Disciplinary Sustained Ocean Observations

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Since the OceanObs'09 Conference, the ocean observing community has been improving coordination and collaboration amongst physical, biogeochemical and biology/ecosystem communities. Societal and scientific requirements for sustained observations are being captured in Essential Ocean Variables (EOVs), many of which are also Essential Climate Variables (ECVs) as defined by the Global Climate Observing System reporting to the UNFCCC. Significant progress has been made through the introduction of the Framework for Ocean Observing in 2012 and the creation and refinement of the disciplinary EOVs, based on expert evaluation of feasibility and impact.

With advances in observing technology, and the definition of EOVs, clear opportunities exist to improve the coordinated planning and implementation of observing activities measuring EOVs across the three disciplines of physical, biogeochemical and biology/ecosystem oceanography. In early 2017, a workshop examined priority steps forward with the objectives:

- To build on the established societal and scientific requirements expressed in EOVs, identify the key applications and phenomena that will benefit from co-located multi-disciplinary sustained observations
- To identify near-term innovation priorities for observing platforms and sensors to enable multi-disciplinary observations, and
- To identify programmatic and professional connections between existing and emerging observing networks that will increase multi-disciplinary observations.

To support these objectives and to provide a mechanism for looking at convergence across the oceans disciplines, three preselected demonstration themes were defined and discussed:

- Changes in plankton communities (including ocean color),
- Oxygen minimum zones,
- Open ocean/shelf interactions (including boundary currents)

These themes were chosen because they represent global and challenging problems that are best addressed through collaboration of physical, biogeochemical and biological observations and analyses. Thus they are effective to examine the benefits and impacts of collaboration. This presentation will provide initial outcomes of the workshop and preliminary recommendations from the discussions of the demonstration themes.