Deep Ocean Observing Strategy
Terms of Reference

Dec. 2016 Draft

Objectives: The purpose of the Deep Ocean Observing Strategy is to improve understanding of the state of the deep ocean with respect to baseline conditions, response to climate variability and response to human disturbance. DOOS will identify approaches to address key scientific questions and societal needs, design and evaluate appropriate observing systems, pilot projects, and process studies. The evaluation of observing systems and data will follow the accepted principles outlined in the Framework for Ocean Observing and Global Climate Observing System monitoring principles.

Terms of Reference:

1. Build understanding on what is most important to observe.
    - Identify important science and societal questions and relevant variables for stakeholders
    - Identify the high priority processes and phenomena in the deep ocean to observe
2. Provide a hub for integration opportunities:
    - Act as an agent to coordinate existing deep observing activities across disciplines to form a systematic, sustained deep-ocean observing system.
    - Act as an integrator to create linkages among appropriate research, intergovernmental, industry, regulatory and funding agencies to achieve deep-ocean societal objectives through science.
    - Foster observing activities at community identified multi-use, multi-disciplinary sites, representing different key biogeochemical and ecological regimes and questions.
3. Coordinate observations to:
    - Utilize existing platforms for new sensors or integration of physical, biogeochemical and biological sensors in order to improve observing efficiency.
    - Document the state of deep-ocean observing
    - Identify standards and best practices for observing the deep sea
4. Develop deep observing requirements
    - Identify the EOVs specific to the deep ocean and add deep-ocean specifications to existing GOOS EOVs
    - Identify gaps (knowledge, geographic, variables, technical, data) and emerging systems relative to the key science and societal questions
5. Build readiness in observing technology and techniques
    - Promote new technology developments and assess their suitability to address key scientific questions, management issues, or early warning of ocean hazards/extreme events.

    - Build ability to use technologies, and facilitate transfer of technology to developing countries
6. Foster availability, discoverability, and usability of deep ocean data.
    - Promote fit –for-purpose data
7. Create a common community science implementation guidance / plan for deep-ocean observing
    - Advocate for deep observations particularly as outlined within the science implementation plan