

## The Ocean Observations Physics and Climate Panel (OOPC) Terms of Reference

Recognizing the need for ocean observations beyond those for climate, and the increased need to connect to societal issues in the coastal zone, OOPC's role has evolved to oversee the Ocean component of the Global Climate Observing System (GCOS) and the physical variables for the Global Ocean Observing System (GOOS), while defining sustained ocean observing requirements for the World Climate Research Program (WCRP) and supporting assessments (i.e. IPCC), monitoring, projections and research.

### **Its specific Terms of Reference are as follows:**

1. Assess, review and prioritise requirements for sustained ocean observations of physical Essential Ocean Variables (EOVs), and ocean Essential Climate Variables (ECVs) in support of GOOS, GCOS and WCRP by:
  - 1.1. Engaging the broad stakeholder community (primary scientific) to assess, review and update requirements for EOVs and ECVs;
  - 1.2. Assessing the readiness of observing technologies, identifying those that have high feasibility and high potential impact in delivering required information;
  - 1.3. Assessing the adequacy of present global EOV/ECV observations to make recommendations for phased implementation, contributing to the GCOS Implementation Plan and GOOS Implementation Plan, and
  - 1.4. Providing an authoritative source of guidance on the development of national coastal and ocean observing requirements and observing system implementation plans.
2. Work with the GOOS Observations Coordination Group (OCG) and other relevant regional bodies to coordinate observing networks that contribute to ocean ECVs and physics EOVs by:
  - 2.1. Encouraging GOOS Regional Alliances (GRAs) and national commitments to regional and global observing networks;
  - 2.2. Promoting common best practices and observing standards for global and national observations;
  - 2.3. Encouraging readiness of emerging networks, particularly those that fill observing gaps or lower costs per observation;
  - 2.4. Promoting data sharing for global and national observations and adherence to IOC data policy, GCOS Monitoring Principles and WMO data policy;
  - 2.5. Identifying opportunities for synergistic cooperation and/or common technical support, and
  - 2.6. Developing metrics for implementation.

3. Work with the International Ocean Data Exchange (IODE), WMO Information System (WIS), GRAs and other partner organizations (e.g. Group for Earth Observing (GEO), WCRP) to review the status of and requirements for data and information management, availability, and resultant products encouraging interoperability and stringent evaluation of fitness for purpose.
  4. Help develop a process for ongoing evaluation of the observing system in liaison with users of the data, based on the optimum suite of platforms for required variables, spatial and temporal scales and accuracy through:
    - 4.1. Delivering scientific Leadership in evaluating requirements for ECVs and EOVs;
    - 4.2. Engaging with Modelling community on use of and requirements for observations for ocean model development, state estimates, ocean and climate prediction and observing system evaluation to feed back into the observing system;
    - 4.3. Providing guidance to networks on requirements for implementation.
  5. Support global ocean observing activities by involved parties (national/regional activities including GRAs and global programs) through liaison and advocacy for agreed plans.
  6. Report to the GOOS Steering Committee, GCOS Steering Committee and WCRP Joint Scientific Committee on the progress in implementing the ocean component of the GCOS Implementation Plan and the physics component of the GOOS Framework for Ocean Observations.
    - 6.1. Coordinate with other GCOS and GOOS Panels, and liaise with WCRP and other relevant entities such as WMO and IOC commissions on ocean observing system issues.
-