

Brest Communiqué

*Adopted by the Partnership for Observation of the Global Oceans (POGO)
at their Sixth Meeting at Brest, France, on November 30, 2004*

Preamble

The oceans are a fundamental component of the Earth System. To understand the way our planet works, and to predict consequences of human activities and natural change, one must adopt an Earth System approach linking ocean, land and atmosphere. POGO, an independent consortium of many of the major oceanographic institutions of the world, is uniquely positioned to contribute to the development of essential systems, their implementation and co-ordination.

The Earth Observation Summit, recognizing the need to advance our collective ability to gather Earth observation data, has affirmed the need for timely, quality, long-term, global information as a basis for decision making. In order to monitor continuously the state of the Earth, to increase understanding of dynamic Earth processes, to enhance prediction of the Earth system, and to further implement environmental treaty obligations, participants recognized the need to support the creation of a comprehensive, coordinated, and sustained Earth observing system of systems.

Observation and monitoring of the ocean is vital to achieve these goals. While remote sensing from space provides global observations of the ocean surface, the rest is hidden from view. Diverse in situ sensors – some of which work autonomously – contribute indispensable and unique data, especially from subsurface waters. Most of those systems, which have been developed and implemented by the research community, need now to be maintained on a sustainable basis. The transition from research-funded programmes to sustained systems requires concerted action from the stakeholders.

Serving the Users

GEO has identified nine key areas of societal concern that will benefit from enhanced earth observations. All of them require increased knowledge of the properties of the oceans and of their variability, and the capability to forecast their evolution. For example, increased ocean observations in the equatorial Pacific has already brought significant improvements to the prediction of large-scale phenomena such as El Niño, and our ability to respond to its impacts on society. Currently, oceanographers are poised to bring similar enhancements to the observing systems of the tropical Indian Ocean, with a view to providing comparable services to the prediction of monsoon variability. Areas such as seasonal forecasting, climate change, global carbon cycle, marine ecosystems, safety at sea, maritime transport and off-shore activities, national security, natural disasters, fisheries management, marine biodiversity, are already using ocean observations, creating derived services and products, and can be rapidly improved.

Contribution of POGO to GEO

Implementation of sustained observing systems, clearly set forth by GEO, building on recommendations of expert panels such as the GOOS or GCOS, requires close and continuing partnerships among research, operational and user communities. Most of the technical and scientific expertise rests with marine research institutes and agencies that also operate the ships

and facilities needed to deploy and maintain ocean-observing systems. POGO members are exploiting in situ and satellite information in ocean modelling and forecasting services.

Towards sustained global ocean observing networks

The POGO members are holding their sixth annual meeting at the Brest Centre of Ifremer. Having reviewed recent developments in the GEO, as well as the GCOS and GOOS implementation plans, POGO reasserts its commitment to the development and implementation of sustained global observations. This requires strong, immediate and continuing coordination among research institutes and agencies, operational agencies and end users. Critical issues are:

- to conduct and apply research and development to deliver the best services to society;
- to sustain existing in situ and satellite observations of the global ocean;
- to ensure these data be of the high quality needed to achieve the GEO objectives;
- to fill significant gaps in sustained ocean observations;
- to set up the proper data management systems so that data are available to the largest user community; and
- to establish appropriate long-term funding mechanisms and institutional arrangements for all of the above.

New sensors and technology are being developed constantly, so the observing systems need to evolve. The best scientific advice is needed to update observing systems and the products they deliver.

To face the challenges outlined above, a close working relationship between operational agencies and research communities has to be maintained on a continuous basis. As the GEO organisational structures are being established, POGO urges that proper scientific and technological expertise, advice and representation be included in them at the highest level on a permanent basis.