

INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION  
(of UNESCO)

Nineteenth Session of the IOC Committee on International Oceanographic Data  
and Information Exchange (IODE-XIX)  
Trieste, Italy, 12-16 March 2007

**Reports on activities of the NODCs and DNAs**  
(Robert Gelfeld)

At previous Sessions of the Committee this agenda item consisted only of brief interventions by Member States to mention highlights in the national reports. In preparation for IODE-XIX, and in line with recommendations by the IODE review and the IOC Assembly, the Secretariat revised the national report format to obtain more quantitative information that would enable to identify trends at the national level, as well as questions to identify capacity building and general IODE programme needs.

The Letter of Invitation for IODE-XIX (Circular Letter 2211) contained a request to submit reports on national activities in marine data and information management to the IOC Secretariat in accordance with the guidelines (Doc. IOC/IODE-XIX/Inf.2). Changes included background information, description of national data flow, structure of marine data management, strengths and weaknesses, suggested improvements, future national activities, and national, regional or international projects.

For IODE-XIX thirty-four National Reports were received for Data Management and twenty-two reports for Marine Information. This is approximately 40% and 25% of the total National Reports expected. The National Reports are a unique opportunity for Member States to take stock of where they are and give other Member States the opportunity to view what others are doing. The poor showing for the submission of the National Reports make a detailed analysis incomplete. The IODE Member States are encouraged to adhere to the deadlines set for future IODE sessions.

The resources available to data centers (**Question 5 - Resources available to your data centre**) indicated that the majority of the Member States (75%) have seen a decrease in budget and staff working at their data centres. Data Centres are being asked to do more with less. Travel and training resources for most centres are critical for Member States to benefit from membership in IODE primarily through the contacts in other centres and the experience they share. They gain much from participation in the international projects and interactions with the scientific community who are usually also present at meetings.

An overwhelming number of Member states (85%) now provide their service online (**Question 6 - Online services provided by the data centre**). The Member States submitting reports have requested that IODE expand and develop its OceanPortal (<http://www.oceanportal.org>) to help them provide links for their online services..

The Member States continue to collect and archive all types of oceanographic data (**Question 7 - IODE data flow**). More of these data are available online and the majority of Member States (80%) have a metadata catalog - though the reports indicate that these need to be made available online. The range of data types handled by Member States showed that 92% of the existing data centers deal with physical oceanographic data, 78% also with chemical data, 72% with biological data, 55% with marine meteorology and atmospheric data, and 52% with geological and geophysical data. 65% of the data centers process delayed-mode data and 30% real-time data. About 50% consider they deal with data relevant to GOOS. Most data centers receive data from government and academic agencies and a smaller proportion (approximately one-third) also

receive data from privately funded research institutions and/or from industry. In terms of services provided, most provide quality controlled delayed-mode data. In addition, 54% offer data on-line.

The majority of the reporting Member States (**Question 8- Oceanographic data policy**) apply the 'IOC Oceanographic Data Exchange Policy' adopted as Resolution IOC-XXII-6 in 2003? (see <http://www.ioode.org/contents.php?id=200> ). This includes the timely, free and unrestricted international exchange of oceanographic data and associated metadata that is essential for the efficient acquisition, integration and use of ocean observations gathered by the countries of the world for a wide variety of purposes including the prediction of weather and climate, the operational forecasting of the marine environment, the preservation of life, the mitigation of human-induced changes in the marine and coastal environment, as well as for the advancement of scientific understanding that makes this possible. This policy should be reviewed by each Member State and should become part of their Oceanographic Data Policy.

For the majority of Member States (**Question 9- Role of the NODC at the national level**) oceanographic data are collected by different government departments, by universities, and by private companies. The Member States noted further that, especially in developing countries, the NODCs provided a bridge between the IOC programmes and national institutions.

All Member States are participating in some level of national and international programmes/projects (**Question 10- Cooperation in national and international programmes/projects**). The Member States felt that the IODE Project Office in Oostende, Belgium has become a very important oceanographic data and information management center. The Project office has created an environment facilitating the further development and maintenance of IODE and partner data and information management projects, services and products. It has improved the efficiency and effectiveness of the data and product/service stream between the stage of sampling and the user; and assists in strengthening the capacity of Member States to manage oceanographic data and information and to provide ocean data and information products and services required by users. All Member States recommended strengthening the IODE Project Office through secondments, extra-budgetary monetary contributions and participation in IODE training courses.

The Majority of the Member States submitting National Reports expressed the following (**Question 11- IODE Priorities for 2007-2008**):

**Should IODE start a new project and if so which one:**

IODE should concentrate on improving existing programs including OceanTeacher, OceanExpert. The current ODINAFRICA program should continue to be enhanced and the newer ODIN programs (ODINCARSA, ODINBLACKSEA, ODINCINDIO, ODINECET, ODINWESTPAC, and ODINBLACK) developed to the furthest degree as resources permit.

**Should IODE work on developing any new manuals and guides (or revise existing ones):**

All of the Member States agreed that quality control should be a priority including reviewing and revising existing manuals where appropriate. It was suggested that it would be worth revisiting Manuals and Guides No. 5 "*Guide for establishing a National Oceanographic Data Centre*" which was last revised 10 years ago. Providing guidelines and standards for data processing and management would improve skills and practises in the Member States which would in turn improve interoperability of data. Consolidation of a set of standards would benefit every member of IODE. A suggestion of a place to start would be in such areas as naming ocean variables, in deciding an inventory record structure, in generating unique tags for data, in setting information content standards for archives, in promoting standard data access technology. This is also of importance to JCOMM and could be done as a cooperative programme using ETDMP and other groups in JCOMM to assist.

**What IODE projects would you consider as the highest priority for the next inter-sessional period?**

The development of the OceanDataPortal should be a priority for IODE; linked with this is continuing the metadata (i.e. SG-MEDI) and marineXML vocabulary work. Developing the OceanDataPortal would also be of benefit to the Member States to raise awareness of the availability of oceanographic data on a worldwide basis. This could lead to how to build a distributed network of oceanographic data centres enabling the searching and retrieving of data sets.

The Marine Information Management community would like to see a coordination of existing E-repositories and establishment of new systems and training people to manage these systems.

**Can you suggest new capacity building project that IODE should start:**

The IODE capacity building strategy implemented through the ODINAFRICA and ODINCARSA projects had substantially increased the capacity of the participating country as reflected in the national reports. The newer ODIN programs (ODINBLACKSEA, ODINCINDIO, ODINECET, ODINWESTPAC, and ODINBLACK) should continue to develop.

Very few Member States answered this (**Question 12- National requirements**). Those that did answer felt that IODE should continue to support the capacity building/empowerment activities. It was also felt that IODE should help coordinate International Polar Year (IPY) activities for Member States.

The Member States all felt that (**Question 13- IODE impact**) participation in IODE has raised the profile of Member States as leading oceanographic data centres on a worldwide platform, and improved links and cooperation with other NODCs. Member States have benefited from membership in IODE by receiving historical and modern ocean profile data which is distributed as part of the World Ocean Database (WOD) to all member states in the form of products. Many Member States has hosted scientists and data managers from IODE Member States which has been mutually beneficial. Each centre benefits from membership in IODE through communication with the contacts in other centres and the experiences they share. Each Member State has gained much from participation in the international projects and interactions with the scientific community who are usually also present at meetings. IODE strengthens the role of Member States in the long run in contrast to project data centres, which are only alive for a short period.

The full reports submitted by the IODE National Coordinators for oceanographic data management and IODE National Coordinators for marine information management are available in Document IOC/IODE-XIX/8 add.

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