

Input from WMO to Report of the Secretary-General on Oceans and the Law of the Sea, 2002

A. Salient issues arising in 2002

- (i) Ocean data buoys, both freely drifting and moored, constitute valuable and sometimes unique sources of essential meteorological and oceanographic data from remote ocean areas. Such data, which are reported in real time via satellite, are distributed globally and made freely available on the Global Telecommunications System (GTS) of the World Weather Watch of WMO. The data are input operationally into a variety of meteorological and oceanographic models, as well as being archived for delayed-mode applications. They directly support meteorological forecast and warning services (including for maritime safety), global climate and global change monitoring, research and prediction (including El Nino/La Nina), and meteorological and oceanographic research.

Unfortunately, vandalism of these buoys, both deliberate and accidental, is a major ongoing problem in many parts of the world. As well as the increased costs to buoy operators, this vandalism also leads to a significant loss of essential observational data, with consequent negative impacts on meteorological and oceanographic services, including those supporting maritime safety. It is thought that fishermen contribute a large proportion of the vandalism of both types.

- (ii) Meteorological and oceanographic observations made by ships at sea (under the WMO Voluntary Observing Ships scheme, VOS) and transmitted to shore in real time are an essential component of the observational data used by National Meteorological Services in the preparation of maritime safety services. Such services directly support safety of navigation and of life and property at sea. The observations are also critical to an enhanced scientific understanding of fluxes at the air-sea interface, and eventually to the modelling and prediction of such fluxes in coupled atmosphere-ocean climate models. The availability of such observations has, unfortunately, been stable or decreasing for several years, for a number of reasons, and efforts are also required to enhance data quality.
- (iii) It is clear that many developing countries lack the capacity either to participate in and contribute to the major marine observation and services programmes of WMO and IOC, or to benefit from the data and products which these programmes generate. This in turn means that the programmes themselves are deficient in data, product and service availability in many major ocean areas, which is to the detriment of all maritime users. This is particularly the case in large parts of the major global ocean basins. At the same time, isolated capacity building efforts in individual countries in the marine area have often been not cost-effective and have had minimal overall impact.

B. Measures being undertaken

In response to these issues, various actions are being undertaken by WMO, most often in close cooperation with the IOC, specifically:

- (i) Both the Observations Coordination Group of the Joint WMO/IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM) and the Data Buoy Cooperation Panel (DBCP, a JCOMM subsidiary body) have again addressed the problem of vandalism of ocean data buoys in the past year. A number of possible new measures have been suggested, including collaboration once more with the International Hydrographic Organization in the issue of formal notices to mariners describing the applications of ocean data buoys and the value of these data to maritime safety. In addition, National Meteorological Services are being advised to collaborate with national media outlets to include similar messages in meteorological forecasts and warnings, particular to fishermen.
- (ii) WMO continues to make major efforts to enhance the VOS scheme, in support of maritime safety and global climate studies. At the request of WMO, the International Maritime Organization (IMO) reissued a revised MSC/Circ. 1017 relating to the VOS. Member Governments were invited to bring the circular to the attention of ship owners, ship managers, masters and crews and to encourage them to support WMO and their National Meteorological Services by offering their ships as VOS. In addition, a VOC Climate Project has been implemented, to provide a subset of VOS data and metadata of enhanced quality, to support global climate studies and provide a reference data set for the whole VOS fleet.
- (iii) In collaboration with IOC, WMO has developed a Western Indian Ocean Marine Applications Project (WIOMAP), for the enhancement of marine observing networks, data management and services in this important ocean region. This is a regional cooperative project involving both meteorological and oceanographic agencies and institutions in island and coastal countries in the Western Indian Ocean. The WIOMAP project document was finalized in the first half of 2002, and reviewed in detail at an Implementation Planning Meeting for WIOMAP, held in Mauritius in November 2002 in conjunction with a conference to establish an Indian Ocean component of the Global Ocean Observing System. It is hoped that the document will be finalized and approved by the heads of agencies concerned during 2003, for submission to potential funding bodies, both national and international.

C. Intergovernmental and interagency coordination and cooperation

The Joint WMO/IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM) continued to receive enhanced recognition during 2002 as the primary intergovernmental body responsible for the coordination and management of operational oceanography on a global basis. As such, it is also recognized as the implementation mechanism for global GOOS. All issues of an operational nature involving ocean observing systems, data management and services are now referred directly to JCOMM for resolution, including those noted in section B above.