

1. OVERVIEW

JCOMM, as a joint mechanism of WMO and IOC, is committed to improving and expanding the availability of operational marine data necessary for monitoring, understanding and forecasting both short and long term meteorological variations, has shown good progress during the last intercessional period. It is recognized that JCOMM reflects the traditional complementarity and synergies between IOC and WMO activities in fields related to ocean monitoring, with priority to the interface with the atmosphere and climate change studies (oceans/climate relation and climate change prediction).

JCOMM is a global organization with:

- A current membership of approximately 250 experts in marine meteorology and oceanography, and almost all national delegations include approximately equal numbers of meteorologists and oceanographers providing support to the marine community.
- A global network to provide maritime services including the provision of warnings and weather and sea bulletins according to a broadcast schedule, in conformity with procedures laid down under the Global Maritime Distress and Safety System (GMDSS) protocols within SOLAS.
- 6500 volunteer merchant vessels observing meteorology and surface oceanography.
- 120 volunteer vessels observing subsurface temperature and salinity.
- 1400 drifters observing meteorology and surface oceanography.
- 100s of moored ocean buoys for meteorology and ocean parameters.
- 10-20 volunteer merchant and research vessels making upper atmosphere vertical soundings.
- Partnership with global programs such as Argo, a pilot program utilizing up to 3000 diving profilers to collect synoptic vertical profiles of upper ocean temperature and salinity.
- 400 tidal stations for sea level. Some are reporting in real time.
- Arctic and Antarctic ice monitoring.
- Collaborations with the satellite community, facilitating on-line acquisition and calibration/validation of altimeter/scatterometer/SAR data, as examples.
- The capacity to provide end-to-end data management support, data acquisition guidance, data management, data exchange.
- Information dissemination mechanisms, e.g. through JCOMMOPS and the JCOMM Products Bulletin.
- 20 - 30 lead nations in numerical modelling/data assimilation.
- A strong commitment to embracing and supporting new technologies in all elements of JCOMM.
- A major focus on capacity building and implementation assistance for services.

2. JCOMM II – Scientific Conference

The second session of the Joint WMO/IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM) took place in Halifax, Nova Scotia, Canada, 19 to 27 September 2005, hosted jointly by the Canadian Department of Fisheries and Oceans (DFO) and the Meteorological Service of Canada (MSC). It was preceded by a scientific conference – Operational Oceanography and Marine Meteorology in the 21st Century.

The Scientific Conference was conceived both to showcase some of the achievements associated with the work of the Commission, as well as to provide recommendations and pointers for its future directions. Some 37 oral papers and 22 scientific posters were presented during the two and a half days, to around 130 participants from 30 countries.

At the end of the Conference, a summary focusing on lessons and messages for JCOMM, as following:

(a) Celebrating success

- More than a century of successful international collaboration
- Confirmation by marine observations of the dominant role of the oceans in climate variability and change
- Marine observations and services vital to many community sectors
- Established global marine observing and information systems

(b) Common themes

- Need to involve all participants and users in planning, development and implementation of marine systems and products
- The fragility of observing existing systems, both in situ and satellite
- The observing systems can and do serve multiple needs and applications
- Better integration is required of shelf and open ocean systems
- A much enhanced standardization of data and information formats and protocols is required, together with catalogues of data and information sources
- Ever-increasing use of automated observing systems, with new and multiple sensors, and exploiting a range of communication systems
- Products must be user oriented, with the private sector playing a key role in the production and delivery of information to end users

(c) Messages for JCOMM

- Develop an action plan to address priority issues: sustained funding for the observing system; homogeneous access and greater visibility for data and products; implementation of new technologies; observations in EEZs
- Involvement of the private sector in JCOMM planning and development
- Coordination and collaboration with regional systems and GOOS Regional Alliances in JCOMM development

Overall, the Conference was a great success, with very positive support for the concept, role and future development of JCOMM.

3. JCOMM II – Session (excerpt from JCOMM Newsletter, December 2005)

Around 115 delegates from 43 Members/Member States, representatives from six international organizations were represented at the Second Session of JCOMM.

Scientific input and external interactions

The relationship and interactions between JCOMM and both GOOS and GCOS (and the OOPC) in deep ocean physical oceanography and climate are now well-established and effective, with the ocean component of the GCOS Implementation Plan (GCOS 92) having been adopted by JCOMM as the scientific basis for its operational ocean observing system. The interaction of JCOMM with the non-physical and coastal components of GOOS, however, is less clear. While it was generally agreed that JCOMM can and should take on the implementation of the major physical components of the GOOS Coastal Implementation Plan, when the requirements for these are clearly defined and established (e.g. through pilot projects), the same is not necessarily true for non-physical elements, which may be better suited to implementation through the GOOS Regional Alliances (GRAs). To help with this overall process, it was agreed to set up an ad hoc task team, comprising representatives of JCOMM, the GOOS Scientific Steering Committee and the GOOS Regional Alliances, to address both coastal GOOS implementation and the general interaction between JCOMM and the GRAs.

Two very topical issues, which engendered substantial discussion, were natural disaster reduction, specifically tsunami and other marine multi-hazard warning systems, and GEOSS. While there was a strong

sentiment in the meeting that JCOMM should contribute in some way to tsunami warning mechanisms, this was tempered by the need to ensure no duplication of and full coordination with existing projects and mechanisms now in place in IOC and WMO. At the same time, it was recognized that the existing JCOMM expertise in services (e.g. storm surges and waves), observing systems (sea level, ocean data buoys), and warning dissemination mechanisms (marine meteorological warning services) could best be utilized in the context of a comprehensive marine multi-hazard warning system. In a recommendation on the subject, the Commission has charged the Management Committee with developing a plan for a JCOMM contribution in this area.

While JCOMM has already achieved some recognition within GEOSS, in the context of being an implementation mechanism specified in the GCOS Implementation Plan, the Commission felt the need to enhance this recognition, both in GEO and at national level. There was an understanding that GEOSS holds potential benefits for JCOMM and its programme, for resources, but more importantly in standardization, coordination and data exchange, but to gain these benefits JCOMM will need to have a higher profile in the process.

Programme Areas

The core business of JCOMM takes place within the Programme Areas, and there was a clear recognition that the work is progressing well, with broad satisfaction with past achievements and ongoing activities. Highlights included:

- (i) The GMDSS Marine Broadcast System is operating smoothly, with the new web site increasingly utilized. There are some ongoing technical issues, including in particular the possible transmission of graphics over Inmarsat, as a part of the GMDSS services;
- (ii) The MPERSS is now operational, a new standing Expert Team established, and an embryo web site developed;
- (iii) Outline of a guide to storm surge forecasting has been prepared. The finalization of this guide is a priority for the new intersessional period;
- (iv) The Sea Ice Team is preparing a substantial input to the IPY
- (v) The surface buoy network is now essentially complete. Overall, the ocean in situ observing system is some 53% implemented, with the JCOMM plan driving to full implementation by 2010;
- (vi) There is close ongoing interaction with pilot projects and experimental systems such as Argo, OceanSITES, Ocean Carbon, etc;
- (vii) A successful integration of ship-based observations (VOS, ASAP and SOOP) is taking place under the new Ship Observations Team;
- (viii) JCOMM has agreed to a re-engagement with the concept of bulk purchase of consumables for ocean observations, initially XBTs, but with possible extensions to other types;
- (ix) The value and further development of JCOMMOPS as a major technical information and support portal for in situ ocean observing systems is clearly recognized;
- (x) The SEACAMP Project is finally operational.

With regard to data management, although a full merger of JCOMM/DM and IOC/IODE is not yet being planned, the practical coordination and cooperation between JCOMM and IODE is now almost seamless. Similarly, interaction with the WMO Information Systems (WIS) is developing well. The Marine Climatological Summaries Scheme continues to operate well, and some progress has been made with pilot projects in ocean data management.

A major new area of work for JCOMM in the next intersessional period, and which was the subject of considerable effort and discussion in the lead up to and during the session, relates to operational oceanographic products and services. JCOMM adopted a recommendation, which proposes a number of specific issues and topics for the Commission to work with the ocean modelling and research community, in particular the Global Ocean Data Assimilation Experiment (GODAE), to help transition from pilot projects to true operational oceanography. These include standardized formats, protocols, procedures and nomenclature for the operational delivery of ocean data, products and services, as well as, more generally, the building of the business case for operational oceanography.

JCOMM development

The Commission approved, with some amendments, the draft JCOMM Strategy Document, and agreed strongly on the need for the preparation of an accompanying Implementation Plan. The Commission also agreed on the need for the preparation and implementation of a JCOMM Communications Plan, to provide a coherent and directed approach to communications and outreach.

The observations programme area has already developed extensive observing system performance monitoring, with the results available through JCOMMOPS. The session agreed that JCOMM should now implement a full system-wide performance monitoring, based on the Implementation Plan, with clear objectives, milestones, timelines, performance indicators, etc. This will be valuable in a number of ways, including for WMO and IOC Secretariat programme performance monitoring and for the full internal review of JCOMM, planned to take place prior to JCOMM-III.

Structure and nominations

Two new co-presidents were elected at the session. Dr Peter Dexter (Australia) is now co-president for meteorology, to replace Johannes Guddal, while Dr Jean-Louis Fellous (France) has become the co-president for oceanography, replacing Savi Narayanan. The new Programme Area Coordinators are Dr Craig Donlon (U.K.), Services, Mr Mike Johnson (USA), Observations, and Mr Robert Keeley (Canada), Data Management. There is no longer a separate Programme Area for Capacity Building, with this work now to be undertaken by specialist rapporteurs within each of the other Programme Areas. It is hoped that this will allow the JCOMM capacity building activities to be more directly related to the technical work areas of the Commission. There is also a new, cross-cutting Task Team of rapporteurs on satellite data requirements. As with the capacity building rapporteurs, members of this satellite team will also work directly with the three programme areas. The new structure of JCOMM is shown in the accompanying figure.

4. Implementation during the Intersessional Period

JCOMM-II agreed an extensive programme of work, of which the successful completion is going to require input and support from everyone in the JCOMM community, the members of the expert teams and panels, of course, but also all members of the Commission itself. In terms of priority issues for the next four years, these include, though not exclusively:

- (i) The further development of oceanographic products and services, and the transition to operational oceanography;
- (ii) An enhanced involvement in and support for natural disaster reduction and marine multi-hazard warning systems;
- (iii) Full implementation of the ocean observing system and its long-term maintenance on an operational basis, including existing pilot projects such as Argo and the key ocean satellite missions;
- (iv) An active engagement with the GOOS community in the implementation of the GOOS Coastal Implementation Plan;
- (v) Substantial enhancement of JCOMM data management and its integration with IODE and WIS;
- (vi) A greater involvement of smaller maritime countries, in particular, in the work of the Commission;
- (vii) An engagement with the private sector in support of the implementation of the JCOMM work programme and of operational oceanography in general.



Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology

Management Committee
 2 Co-Presidents,
 3 PA Coordinators,
 rep. of Team Sat. Data Req.,
 rep. of Team on Capacity Building,
 rep. of TT on Resources,
 reps. of GOOS, GCOS, IODE,
 additional experts

