

**JOINT WMO-IOC TECHNICAL COMMISSION  
FOR OCEANOGRAPHY AND MARINE  
METEOROLOGY (JCOMM)**

**JCOMM-III/BM. 3**

Submitted by: Co-presidents of JCOMM

**THIRD SESSION**  
Marrakech, Morocco,  
4 to 11 November 2009

Date: 29.IX.2009  
Original Language: English only  
Agenda Item: 3

## **REPORT BY THE CO-PRESIDENTS OF THE COMMISSION**

### **BACKGROUND MATERIAL**

#### **SUMMARY**

**Reference:** JCOMM-III/Doc. 3

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- Background material

## **BACKGROUND MATERIAL**

### **Introduction**

1. The Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM) has come a long way since the development of the concept of a joint WMO-IOC technical commission in the mid-1990s, and its formal establishment in 1999. This report provides a summary of the activities undertaken by the Commission since JCOMM-II (Halifax, Canada, September 2005) to October 2009, the major challenges and issues that the Commission had faced during this period, and would continue to face in the years to come. More information is given in the reports of the chairpersons of the Programme Area Coordination Groups and in documents submitted under relevant agenda items.

### **Fifth, sixth and seventh sessions of the JCOMM Management Committee (MAN)**

2. The membership of the JCOMM Management Committee (MAN) has remained relatively stable over the past four years, with only two changes from those elected in Halifax. The Committee met formally four times during the period; in addition, a JCOMM Bureau (co-presidents, PA coordinators and the Secretariat) met several times by teleconference, to address specific and pressing issues, which proved to be a very effective way of doing business. The co-presidents were able to engage all other members of the JCOMM Management Committee in specific tasks and projects, which greatly enhanced the effectiveness of the Committee and added to its achievements.

3. MAN-5 (Geneva, October 2006), MAN-6 (Paris, December 2007) and MAN-7 (Melbourne, December 2008) sessions reviewed the activities, which had taken place since its last session, and addressed the evolving needs of each of its programme areas. It agreed upon necessary steps for JCOMM to take within the WMO and UNESCO/IOC strategic planning processes, including preparation of the JCOMM Operating Plan 2010-2013. The MAN-7 also reviewed the Commission's contributions to specific WMO and UNESCO/IOC programmes and projects. It reviewed the JCOMM working structure, the progress in planning the third session of the JCOMM, scheduled to be held from 4 to 11 November 2009, in Marrakech, Morocco, and agreed upon the provisional agenda. The Management Committee meeting reports are available at <http://www.jcomm.info/JCOMM-MR>.

### **Programme Areas' activities**

4. The operational ocean observing system being implemented by the Observations Programme Area (OPA) has continued to grow, being around 61% complete against the GCOS requirements in August 2009, with three key components now fully implemented (VOSclim, surface drifters and Argo). The system also incorporates several new elements, including "animal oceanographers" – specially equipped marine mammals. The OPA has close relations with external bodies operating some of the system elements (including OceanSITES and the International Ocean Carbon Coordination Project (IOCCP), and the Argo programme). An important support facility for ocean observations for a number of years now has been JCOMMOPS, and some effort has been put into the process of expanding and transforming this facility into an observing programme support centre, with full external funding.

5. The Data Management Programme Area (DMPA), working closely with the IODE of UNESCO/IOC, has completed data management strategic and implementation plans, which include in particular joint work in developing end-to-end data management technology for ocean data, and an ocean data portal, to facilitate data discovery and access. Work is underway to compile a virtual catalogue of existing JCOMM material on standards and best practices, as well as on the management of existing and new standards in key aspects of ocean data management. Substantial progress has been made in the design and implementation of a WIGOS Pilot Project

for JCOMM, which will greatly enhance the accessibility of key ocean data sets through UNESCO/IOC-IODE Ocean Data Portal (ODP) and WIS.

6. A highlight of the intersessional period has been the implementation of operational ocean forecast systems, developed under the Global Ocean Data Assimilation Experiment (GODAE) Project. To assist in this process, and as a direct follow up to GODAE, JCOMM has established an Expert Team on Operational Ocean Forecast Systems (ET OOPS) under the Services Programme Area (SPA), to guide and facilitate the standardization of these new systems. JCOMM/SPA has also developed close relations with the new GODAE Ocean View (GOV) Steering Team as a means to coordinate the efficient transition of a new generation of ocean forecasting models and systems from a research to an operational environment. The SPA has also further developed and enhanced existing maritime safety services, including the addition of five new METAREAs in the Arctic Ocean, in cooperation with IMO. Substantial work has been put into the development of storm surge forecast services, including the preparation and publication of a new Guide to Storm Surge Forecasting, and the convening of a major international symposium on storm surges (Seoul, October 2007). The work on storm surges is undertaken in support of the major cross-cutting programmes in both WMO and UNESCO/IOC relating to disaster risk reduction.

### **Cross-cutting issues and activities**

7. Capacity building under JCOMM is undertaken largely within the three Programme Areas, with guidance and coordination provided by the Management Committee, and in accordance with a set of JCOMM Capacity Building Principles. Major events in the past intersessional period include two training workshops on wave and surge forecasting; courses and workshops on ocean data buoys and tide gauges; a workshop for Port Meteorological Officers; and workshops on ocean data management, in conjunction with IODE.

8. The outline of a comprehensive requirements document for ocean satellite data in support of JCOMM programme activities has been prepared for JCOMM-III by the cross-cutting team on satellite data requirements, while many JCOMM experts have been involved in the campaign to encourage satellite agencies to proceed with the JASON-3 ocean topography mission and the Sentinel-3B ocean-dedicated satellite.

9. JCOMM is directly involved in all the major WMO cross-cutting activities, including WIGOS, WIS and the QMF. It has provided strong support for the implementation of the IPY, through all programme areas and the Management Committee, and has developed strong links, and joint projects, with other WMO Technical Commissions and major UNESCO/IOC subsidiary bodies.

10. While past interactions between JCOMM and the WMO Regional Associations has not been strong, it is important that this be further developed in the future, from the perspective, both of the importance of regional and local marine observations to the overall ocean observing system, as well as for enhancing regional and local forecast capabilities for extreme events affecting coastal areas.

### **External interactions**

11. JCOMM now has widespread recognition as the primary implementation body for the Global Ocean Observing System, while the requirements specified in the GCOS Implementation Plan (GCOS-92) form the backbone of the ocean observing system being implemented by the Commission. The Ocean Observation Panel for Climate (of GOOS, GCOS and the WCRP) is a primary science advisory body for JCOMM. JCOMM has developed joint activities with CCI and CHy, and provides significant support to the tsunami programme of UNESCO/IOC, through the OPA in particular. The Commission has strong links with IMO and IHO in maritime safety-related issues; it is involved in the implementation of a number of tasks in the GEO workplan; and it has

strong links with key peak bodies in the private sector, including the International Chamber of Shipping and the offshore Oil and Gas Producers Forum.

### **Strategic planning and development**

12. The adoption, in both the WMO and the UNESCO/IOC, of strategic plans based around a set of strategic objectives and expected results, accompanied in WMO (and probably also UNESCO/IOC in the future) by a results-based management (RBM) system focused on these expected results, has posed a major challenge. JCOMM, as with the other WMO Technical Commissions and major subsidiary bodies of UNESCO/IOC, has responded successfully to this new approach, with all its major programme activities mapped onto the combined set of expected results.

13. At the same time, the Management Committee believes that JCOMM should maintain a programmatic approach to its work, as it is much easier for all those involved in JCOMM work to associate with and work towards an identifiable JCOMM programme. To this end, the Commission has revised, updated and shortened the JCOMM Strategic Plan, the new version of which is to be presented at JCOMM-III. This new plan will align with the strategic objectives and expected results of both parent Organizations, but at the same time address these within the existing programme structure. In line with this, all programme areas have developed operating plans, combined into a single JCOMM operating plan, again aligned with the expected results and Secretariat operating plans.

14. In response to the proposal put forward at JCOMM-II for an external review of the Commission during the current intersessional period, a limited version of this review has taken place during the first half of 2009.

15. In the light of the ever-diminishing resources, and in response to the concerns of the parent Organizations to improve the efficiency and effectiveness of their major subsidiary bodies, the Management Committee will be proposing to JCOMM-III some streamlining of the subsidiary body structure, to reflect developing and new work priorities, in line with the expected results.

### **Communications and outreach**

16. The JCOMM Website (<http://www.jcomm.info>), with linked components maintained by both the WMO and the UNESCO/IOC, is a major resource and outreach tool for the Commission, in facilitating communications and information sharing, both internally and externally. Likewise, a regular electronic JCOMM newsletter has proven popular as an information-sharing tool for both the JCOMM members and the external marine community. The Commission has maintained an extensive technical publication programme: a new Guide to Storm Surge Forecasting has been prepared, and major revisions are underway for the Manual on Marine Meteorological Services and the Guide to Wave Analysis and Forecasting, while the dynamic part of the Guide to the Applications of Marine Climatology has been updated with the results from CLIMAR-III (Gdansk, Poland, May 2008).

### **Major issues and challenges**

17. JCOMM has had to address a number of major challenges and issues during the past four years, and most of these will continue to challenge it in the years to come.

18. Resources, both financial and human, will remain a major issue for the Commission. As with all technical commissions, it is in a situation of diminishing regular budget funding, in both WMO and UNESCO/IOC, and it therefore has to be realistic in adjusting its work programme to fit within the available budget. To date JCOMM has had some success in attracting extrabudgetary resources (notably for JCOMMOPS), and this remains a potential to be further exploited in the future. Even more of a concern is the diminishing supply of the human resources so essential to its

work. The national agencies, on which it relies for expertise, are themselves being increasingly squeezed in this area, and are thus reluctant to release staff to undertake international work. To address this, JCOMM needs to demonstrate to these agencies and to Members/Member States generally, that they themselves will derive value from the engagement of their experts internationally, and at the same time make the Commission's work as attractive as possible for these experts. JCOMM also needs to be realistic, in adjusting its work programme to suit the available resources. The Management Committee will therefore go to JCOMM-III with a reduced work programme, which can be realistically implemented in the coming intersessional period.

19. As noted, a highlight of the past four years has been the effort made by JCOMM to support the operational implementation of ocean forecast systems and the delivery of real-time ocean services. This will remain a challenge and focus in the coming intersessional period. Other future technical challenges include:

- (a) Long-term maintenance and further implementation of the in situ observing system;
- (b) Support for wider efforts in WMO and UNESCO/IOC, and in the international ocean community generally, to ensure the long-term maintenance of key ocean satellite missions;
- (c) Ensuring proper coordination across the JCOMM Programme Areas and with external bodies and programmes;
- (d) Ongoing engagement with processes in the WMO and the UNESCO/IOC, such as WIS, WIGOS, which will include closer integration with IODE in ocean data management;
- (e) Enhanced involvement in coastal issues, including the implementation of coastal GOOS, and further support for DRR and UNESCO/IOC-ICAM; and
- (f) Response to the increasing pressure to become involved in non-physical oceanography.

20. The future for JCOMM will indeed be challenging, but also exciting, as the relevance and role of the Commission in addressing the major issues in marine meteorology and oceanography becomes ever more apparent and sought after.

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