

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

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**RELATIONSHIP OF THE COMMISSION WITH PROGRAMMES AND BODIES OF WMO  
AND IOC, AND WITH EXTERNAL ORGANIZATIONS**

**BACKGROUND MATERIAL**

**SUMMARY**

**CONTENT OF DOCUMENT:**

Relationship of the Commission with programmes and bodies of WMO and IOC, and with external organizations

**RELATED DOCUMENT:**

**JCOMM-4/Doc.11:** Relationship with Programmes and Bodies of WMO and IOC, and External Organizations

## **RELATIONSHIP OF THE COMMISSION WITH PROGRAMMES AND BODIES OF WMO AND IOC, AND WITH EXTERNAL ORGANIZATIONS**

### **I. Programmes and Bodies of WMO and IOC**

#### **IOC-WMO-UNEP-ICSU Global Ocean Observing System (GOOS)**

1. JCOMM is an implementation coordination mechanism for a number of aspects of GOOS.
2. The 26th session of the IOC Assembly (June 2011, Paris)<sup>1</sup> adopted a resolution strengthening and streamlining the Global Ocean Observing System (GOOS) and reforming its governance structure. This reform responded to requests of previous Assembly and IOC Executive Councils, and was put forward for debate by the IOC-WMO-UNEP Intergovernmental Committee for GOOS (I-GOOS). It builds on a number of reviews of GOOS as well as the draft Framework for Ocean Observing developed after the OceanObs'09 conference.
3. The Assembly decided to recommit the IOC to a GOOS that is a holistic system of global, regional and coastal observations and products, aligned with a Framework for Ocean Observing and oriented to an essential ocean variable approach, promoting GOOS's role in informing key societal issues as expressed in UN conventions, and reinforcing global participation through capacity development. It reformed the governance structure of GOOS by confirming that the IOC governing bodies are directly responsible for the governance of GOOS. It dissolved the Intergovernmental Committee for GOOS (I-GOOS), the GOOS Scientific Steering Committee (GSSC), and its subsidiary panels (the Panel for Integrated Coastal Observations PICO and the Ocean Observations Panel for Climate OOPC).
4. The Assembly created the (interim)<sup>2</sup> GOOS Steering Committee (GSC) as a group of experts, with five IOC Member State appointed experts and up to ten additional scientific and technical experts. Recognizing the role of JCOMM and IODE as related coordinating and implementing bodies, each has an ex officio seat on the GSC. It should be noted that OOPC is also co-sponsored by the Global Climate Observing System (GCOS) and the World Climate Research Programme (WCRP) and so still exists while the GSC organizes its work through sub-panels.
5. At its Ninth Session (November 2011, Paris), the JCOMM Management Committee decided that the PA Coordinators and relevant Expert Teams should formally review the "Prioritized Action Plan for Implementation of the Coastal Module of GOOS" that was recently compiled by the GOOS Panel for Integrated Coastal Observing (PICO), with a view to articulating JCOMM support of delivery of services in the coastal zone, in particular related to coastal hazards.

#### **IOC International Ocean Data and Information Exchange (IODI)**

6. The collaboration between JCOMM and the IOC International Oceanographic Data and Information Exchange (IODI) is very strong, specifically in the JCOMM Data Management Programme Area. This is thanks to the substantial similarity between the objectives of IODI and the JCOMM DMPA but also due to the participation of the same experts in IODI and JCOMM DMPA activities. In addition, one of the IODI Co-Chairs (Ms Sissy Iona) is also Chair of the JCOMM DMCG. The shared objectives have also led to joint or collaborative activities such as the Pilot Projects on Ocean Data Standards, Ocean Data Portal and the JCOMM Pilot Project for WIGOS.

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<sup>1</sup> The final report can be downloaded at <http://ioc-unesco.org/ioc-26>

<sup>2</sup> recognizing that the GOOS co-sponsors WMO, UNEP, and ICSU also had to confirm the reform of governing structures

7. Future enhancements to the work plan of the JCOMM DMPA could focus on capturing and addressing requirements expressed by the OPA and SPA - the OPA as providers of data, and the SPA as users of data, with the need for a coherent, coordinated, standards-driven, stepwise-evolving data management system in between them, and in between other data providers and users that JCOMM seeks to help. The IODE ODP and WMO WIS should focus more on improving these systems to provide data, products and services required by the OPA and SPA.

8. There exists also another area where IODE and WMO interests are similar, i.e. distance education. More efforts need to be made to promote convergence between WMO's ETR, COMET and IODE's OceanTeacher to provide, under JCOMM, an integrated distant-learning environment as relevant to the objectives of JCOMM.

9. The IOC Project Office for IODE in Oostende, Belgium, hosts the [www.jcomm.info](http://www.jcomm.info) web site and associated databases, a key tool for communication and work for the secretariats at IOC and WMO supporting JCOMM.

### **WMO Space Programme (SAT)**

10. The WMO Congress, at its fifteenth session (Cg-XV, Geneva, May 2007) considered the progress, and results from the sessions of the Consultative Meetings on High-level Policy on Satellite Matters and stressed that the WMO user community and space agencies should be represented at the highest level at the sessions. The Consultative Meetings should continue to provide advice and guidance on policy-related matters and should maintain a high-level overview of the WMO Space Programme (SAT). Subsequently, WMO Technical Commissions including JCOMM continue providing technical consultation through the WMO Commission for Basic Systems (CBS) to SAT - Jean-Louis Fellous and Craig Donlon are presently acting as technical experts to the Expert Team on Satellite Utilization and Products (ET-SUP) to represent the needs and requirements of the JCOMM community.

11. WMO SAT also acts as a catalyst to improve the utilization of satellite data and products, and to better communicate with Satellite Operators and users, e.g. the Coordination Group for Meteorological Satellites (CGMS). Under the coordination between SAT and OPA Activity Leader for Satellite Data Requirement (Dr David Halpern), following the discussion at the previous Management Committee (2010), a working paper on sea surface temperature was submitted on behalf of IOC to CGMS-39 (3-7 October 2011, St. Petersburg, Russian Federation). A working paper on satellite information requirements for coastal applications was also submitted to CGMS.

12. Members / Member States at JCOMM-III were encouraged to make maximum use of the Virtual Laboratory for Education and Training in Satellite Meteorology (VL), for their capacity building activities on marine forecasting.

### **WMO Disaster Risk Reduction (DRR) Programme and WMO/CBS Severe Weather Forecasting Demonstration Project (SWFDP)**

13. Noting that storm surges are included in the top ten hazards of concern for WMO Members (WMO Country-level DRR survey, 2006 ([http://www.wmo.int/pages/prog/drr/natRegCap\\_en.html](http://www.wmo.int/pages/prog/drr/natRegCap_en.html))), JCOMM's efforts in this area are focused on providing technical guidance (e.g. developing material on standard methodologies, providing advice to demonstration/pilot initiatives) through its Expert Teams concerned, primary and foremost the Expert Team on Wind Waves and Storm Surges, and other SFSPA Teams to a wider extent.

14. It is commonly understood and agreed that the key role of and responsibility for JCOMM is to assist in implementing the marine component of DRR and related projects. For example, JCOMM through ETWS is providing technical advice to the regional Severe Weather Forecasting Demonstration Project (SWFDP) in southern Africa regarding the waves in West Indian Ocean and the Lake Victoria, and planned for the similar engagement in the regional SWFDP in South-west

Pacific as well as for the Southeast Asia / South-China Sea. The recently developed regional SWFDP in Bay of Bengal will closely collaborate with the regional sub-project of the JCOMM-CHy Coastal Inundation Demonstration Project (CIFDP) for Bangladesh, for the implementation of a “Cascading Forecasting Process”, in view of maximizing synergies between two projects by effectively using the improved NWP products to the application modelling/forecasting in coastal zones. It is desirable that the Commission support such a cooperation and encourage Members / Member States to actively participate in the relevant projects initiatives.

### **Other WMO Programmes and Technical Commissions**

15. JCOMM's relationship and cooperative activities with the Tropical Cyclone Programme (TCP) and the Commission for Hydrology (CHy) are introduced in JCOMM-4/Doc. 8.2. A need for JCOMM to work closely with the Commission for Aeronautical Meteorology (CAeM) has been emphasized in the context of Quality Management Systems aspects, which is dealt with in JCOMM-4/Doc. 9.

16. With emerging requirement for Commission's contribution to the Global Framework for Climate Services (GFCS), closer cooperation with other Technical Commissions such as the Commission for Climatology (CCI) and Commission for Agrometeorology (CAgM) may be required. The 16th WMO Congress also requested JCOMM to collaborate with the hydrological community through CHy and the World Weather Research Programme (WWRP) under CAS to support the required scientific and technical development, to address the issue of freshwater inflow to the oceans in the Polar Regions.

### **IOC Tsunami warning and coastal management programmes**

17. Cooperation between the IOC tsunami and coastal management programmes is covered in JCOMM-4/Doc. 8.2. At its Ninth Session, the JCOMM Management Committee noted that, particularly in the area of services delivery, two areas of responsibility in the Parent Organizations should be considered; (a) monitoring and predictions, and (b) preparedness, response and planning. It noted that JCOMM's strength and responsibilities were primarily on the former, and the Commission could efficiently be linked and contribute to the latter area by building collaborative relationships with relevant WMO and IOC programmes. In this context, the Committee emphasized the usefulness of cooperation between JCOMM and IOC/ICAM programme as well as tsunami and sea level programmes, and recommended to strengthen the joint activities during the next intersessional period.

18. Collaborative activities between IOC's Integrated Coastal Area Management (ICAM) programme and JCOMM, mainly on developing new guidelines for Hazard Awareness and Risk Mitigation (ICAM Dossier No. 5), have been considered by the Management Committee. JCOMM as a Commission considered this interaction and collaboration to be very valuable, benefiting from the direct link with the coastal community of interdisciplinary nature.

### **Global Climate Observing System (GCOS) and the World Climate Research Programme (WCRP)**

19. JCOMM supports GCOS and the WCRP through actions that respond to needs for sustained ocean observations for these programmes. These links are maintained through the GCOS-GOOS-WCRP Ocean Observations Panel for Climate and are further detailed in JCOMM-4/Doc. 5.1.

## **II. External Organizations**

### **International Maritime Organization (IMO)**

20. The IMO is the UN specialized agency with responsibility for the safety and security of shipping and the prevention of marine pollution by ships. JCOMM on behalf of WMO and IOC closely works with IMO in its first mission and in particular on safety-related marine meteorological services, as detailed in JCOMM-4/Doc. 8.3.

### **International Hydrographic Organization (IHO)**

21. The IHO is an intergovernmental consultative and technical organization that supports the safety of navigation and the protection of the marine environment. JCOMM on behalf of WMO and IOC works with IHO on safety-related marine meteorological services, as detailed in JCOMM-4/Doc. 8.3.

### **International Mobile Satellite Organization (IMSO) and Inmarsat**

22. IMSO is the intergovernmental organization that oversees certain public satellite safety and security communication services provided via the Inmarsat satellites. Inmarsat is a private satellite communication provider and provides access to the Global Maritime Distress and Safety System (GMDSS). JCOMM works with IMSO and Inmarsat on safety-related services.

### **Group on Earth Observations (GEO) and the Global Earth Observing System of Systems (GEOSS)**

23. JCOMM, in its role as coordinating implementation of ocean and marine meteorological observations, data management, and services, provides an important contribution to the Societal Benefit Areas of the Global Earth Observing System of Systems. It is represented in GEO through the participation of WMO, IOC, and GOOS.

### **World Ocean Council**

24. The World Ocean Council (WOC) brings together a wide range of ocean industries (e.g., shipping, oil and gas, fisheries, aquaculture, tourism, renewable energy, ports, dredging, cables and pipelines, and maritime legal, financial and insurance communities) in an international coalition to coordinate:

- the development of science-based solutions for managing industry impact on the marine environment;
- developing industry support for ocean science to guide responsible operations;
- coordinate industry engagement with other ocean stakeholders;
- assist industry in improving environmental performance;
- facilitate interaction among sectors to reduce ocean use conflicts;

25. At the Sixth Session of the JCOMM Ship Observations Team (SOT, 11-15 April 2011, Hobart, Australia), the Team agreed to work with the WOC to approach the shipping industry, the IMO, and the ICS in a coordinated way, in order to improve ship-based observations.

26. A WOC Smart Ocean/Smart Industries workshop (12-13 December, Paris) hosted by the IOC brought together representatives from a range of ocean industries government agencies, intergovernmental organizations, and academic institutions involved in ocean and climate

observations. The workshop sought to improve collaboration between ocean industries and the scientific community in ocean and marine meteorological observations. A Working Group will be established to develop an improved cooperation and will include JCOMM representatives.

### **International Telecommunication Union (ITU)**

27. The ITU and Telecom Italia jointly hosted a 'Green Standards Week' in Rome from 5-9 September 2011 with the objective of exploring ways in which Information and Communications Technology (ICT) might be used in support of a greener planet. Structured as series of three workshops, the final one was entitled 'Submarine Cables for Ocean/Climate Monitoring and Disaster Warning', and was jointly organized by ITU, WMO and IOC. Retired copper cables have traditionally been used for bulk ocean transport estimation, and new-cabled observatories such as NEPTUNE have afforded new opportunities for earth and ocean observation. Little regard, however, has so far been paid to the potential use of yet-to-be-laid fibre-optic telecommunications cables as vehicles for ocean and climate observation. A particularly interesting application would be in tsunametry, where the seabed seismometer and bottom pressure recorder could enjoy secure power and reliable communications without the current reliance on a vandal-prone surface communications buoy. ITU, IOC, and WMO are continuing their collaboration.

### **Satellite Telecommunications Forum**

28. The WMO Commission for Basic Systems has instigated a move towards a forum, similar to the current Argos JTA, that will aim to engage other satellite service providers in a synergistic way and IOC will work closely with both the WMO and the FAO in developing this concept using the Argos JTA as a model. This initiative recognises that several satellite service providers are currently serving the needs of environmental monitoring in a fragmented and, from a user point of view, sub-optimal way, and that, the development of a forum may allow the provision of better services to the Earth Observation community, at a lower cost than at present. A preparatory workshop for this international satellite data telecommunications forum will be held in Toulouse, 23-24 April 2012.

### **Other Programmes and Organizations to consider for the Commission's work**

29. The JCOMM Management Committee regularly reviews the relationships with the following other programmes and organizations:

- In WMO (mainly in the context of the International Polar Decade, IPD)
    - Antarctic Observing Network (AntON)
    - Global Cryosphere Watch (GCW)
  - Under Co-Sponsored Programmes and Bodies of WMO and UNESCO/IOC:
    - Global Framework for Climate Services (GFCS), once its governance structure is decided
  - Under Organizations and bodies:
    - International Maritime Organization (IMO), in the context of the Commissions' work for maritime safety
    - Food and Agriculture Organization (FAO), in the context of developing a user forum for satellite telecommunication, as well as in the development of JCOMM's work supporting oceanic fisheries.
  - Under non-UN system organizations and programmes:
    - Southern Ocean Observing System (SOOS)
    - Sustained Arctic Observing Network (SAON)
    - International Chamber of Shipping (ICS)
    - International Association of Lighthouse Authorities (IALA)
-