The first part of the intersessional period following the JCOMM second session (Halifax, September 2005) has been quite active. The following activities are briefly highlighted, and include a list of upcoming meetings and other related announcements. Remember, this communication is a two-way street and you are encouraged to submit information of interest to the wider JCOMM community for inclusion in future JCOMM Newsletters (submit to: c.clark@unesco.org).

- Possible JCOMM contributions to the development and maintenance of marine multi-hazard warning systems
- Presidents of WMO Technical Commissions
- Development of JCOMM Guide to Storm Surge Forecasting
- JCOMM interactions with industry
- GOOS Scientific Steering Group
- Argo Science Workshop on satellite altimetry and other observing elements, held in conjunction with the
- Symposium on 15 years of progress in altimetry
- Port Meteorological Officers Workshop
- Two JCOMM workshops held at ECMWF:
  - DBCP data users
  - Collection of real-time SST and temperature metadata

List of upcoming meetings
Call for applications for POGO visiting professorship programme - "Towards Operational Oceanography"
Call for papers/posters for the 9th International Workshop on Wave Hindcasting and Forecasting

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Possible JCOMM Contributions to the Development and Maintenance of Marine Multi-Hazard Warning Systems

At the Halifax session of JCOMM-II, there was strong support for JCOMM input to the development and maintenance of marine multi-hazard warning systems, in view of its existing expertise and facilities in waves and storm surges, maritime safety service formulation and delivery, and deployment and maintenance of ocean observing platforms. The Commission adopted Rec. 12 (JCOMM-II), which essentially calls for a JCOMM action plan relating to marine hazard warnings to be developed.

As a first response to this recommendation, an expert meeting on the subject was convened in Geneva, 1-3 February 2006, chaired by a JCOMM co-president. Early, rather uninformed, responses to the convening of this meeting indicated that the Commission would have to take care to ensure that the actions proposed contributed to, rather than duplicated, wider work within WMO and IOC to develop multi-hazard warning systems. The meeting successfully achieved the required balance, with the action plan containing essentially a set of very practical, technical actions to support system developments already underway. These are broadly classified into actions which:

- **Can and will be implemented immediately, within existing resources and in response to identified requirements.** Examples include the development of CREX descriptors and tables for the GTS transmission of sea level data, in support of regional tsunami early warning and mitigation systems for the Indian and Pacific Oceans, the North-eastern Atlantic, the Mediterranean and connected seas, and the Caribbean and adjacent regions, to be presented to the relevant WMO Commission for Basic Systems (CBS) ETs in May for approval and implementation; and the development also of first level quality control procedures for sea level data on the GTS.

- **Could be implemented, when requirements are clarified and resources made available.** Examples include the development of archives of extreme wave and storm surge events; and an observational network analysis of data to contribute to marine hazard warning systems.

It is anticipated that the action plan will form the basis of JCOMM input to future sessions of the IOC Intergovernmental Coordination Groups for regional tsunami early warning and mitigation systems, as well as the planned WMO symposium on multi-hazard early warning systems, to take place in Geneva in May 2006.

The final report is available at: [http://www.jcommweb.net](http://www.jcommweb.net).

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2006 WMO Meeting of the Presidents of Technical Commissions (PTC)

The 2006 meeting of WMO Technical Commission (PTC) Presidents proved to be both interesting and valuable, a view held by all the presidents, who generally declared it the best they had experienced. This was very much due to the documentation provided, which was well directed to the main issues requiring cross-Commission input and/or coordination. JCOMM is already very much involved in a number of these, such as WMO Information System (WIS), International Polar Year (IPY), Natural Disaster Prevention and Mitigation (NDPM), Long-Term Plan, and Global Earth Observing System...
of Systems (GEOSS) to a certain extent. All the presidents considered that the WMO quality management framework (QMF) was somewhat problematic. It is not that there are not already a lot of bits and pieces of the QMF already under the Technical Commissions, in the form of extensive regulations, standards and recommended practices in observations and services. Rather the problem is in coordinating and harmonizing these in some way, both across WMO and also with the International Standards Organization (ISO), which is non-trivial and also likely to be resource consuming. The JCOMM representative on the WMO Inter-Commission Task Team on the QMF is Wang Hong (China), who is also a member of the Management Committee.

The discussions on the WMO Long-term Plan (LTP) were directed to simplifying and tightening the plan, particularly from the perspective of external readers. Many of the presidents still have a problem with mixing expected results which relate to the implementation of the scientific and technical programmes, with those of a largely supporting/Secretariat nature (e.g., languages, documentation, meetings). It is hoped that this will be rectified in the next 7LTP.

There was a presentation on GEO/GEOSS, followed by some interesting discussions. It is clear that the Technical Commissions will continue to have a potentially major role to play in developing and implementing the GEO Task Matrix, but it is not so clear that this role is always being best exploited. This is something that JCOMM must continue to monitor carefully.

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Expert Meeting on the Development of the JCOMM Guide to Storm Surge Forecasting

The development of a JCOMM Guide to Storm Surge Forecasting was jump-started by an expert group meeting in Geneva (8-10 February 2006). The group developed and agreed on the Table of Contents for the Guide, and adopted an implementation plan for its preparation. The final report is available at: http://www.jcommweb.net.

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JCOMM/Industry/GOOS Task Team

JCOMM-II recognized that both IOC and WMO had worked for many years with various organizations representing industrial and commercial marine-related activities and companies. The JCOMM Scientific Conference immediately proceeding the JCOMM-II session included a specific focus on JCOMM-industry interactions, and came up with some recommendations for the future. In addition, at least one Member/Member State had previous experience with promoting interactions with industry. On this basis, JCOMM-II had agreed to further develop the Commission’s interactions and engagement with the private sector, in particular through the establishment of a joint JCOMM/Industry/GOOS Task Team to provide advice on the issue. This task team was subsequently established, and held its first meeting at IOC in Paris on 3-4 March 2006.

As a first step, the task team reviewed the available background information, as a basis for guidance to possible future actions. Using this information, as well as constructive suggestions for interactions from industry representatives, the task team then developed a set of proposals designed to enhance involvement of both JCOMM and GOOS with
the private sector. These proposals and actions addressed, in one way or another, the following issues:

- Raising the profile of GOOS in political, public and private sectors and clarifying the role and benefits of GOOS to society and to commercial enterprises;
- Recommending to the JCOMM Management Committee and the GOOS management bodies, avenues for enhancing awareness and understanding of GOOS and JCOMM by the private sector companies likely to be stakeholders;
- Recommending approaches to and assist with identification of industry requirements for GOOS and JCOMM data and products; and
- Recommending and assisting in the selection of private sector experts for GOOS and JCOMM sub groups such as expert teams and task teams.

In the event, the meeting was even more successful than expected. The industry representatives were well-chosen, enthusiastic about the consultation process, and active in proposing actions to carry the process forward (and also in identifying funding to support this!). A concrete set of actions was identified, to further entrain private sector involvement in and support for the GOOS and JCOMM process.

Global Ocean Observing System (GOOS) -- Global Ocean Scientific Steering Committee

JCOMM-II called for a number of activities to be actively pursued in close collaboration with the GOOS community, including two new ad hoc teams discussed and endorsed at the 9th meeting of the GOOS Scientific Steering Committee (6-8 March 2006, Paris):

- a JCOMM/GOOS task team on industry (see article above);
- a JCOMM/GSSC coastal GRA task team (article next issue).

The GSSC final report is available at:

Second Argo Science Workshop

The Second Argo Science workshop was held in conjunction with the "Symposium celebrating 15 years of progress in Radar Altimetry", Venice, Italy, 13-18 March 2006, and included a shared full day of oral and poster presentations on the theme of the "Integrated approach" that highlighted the synergy between satellite altimetry and other observing system elements (including Argo). The Argo community held two full days of oral and poster sessions that were attended by as many as 200 scientists and fostered lively discussions. The themes of the oral sessions were heat and salt, watermass properties, ocean circulation, climate applications and operational use, the upper ocean, and new technologies and future prospects.

When Argo held its first workshop in Tokyo in November 2003, the Argo array consisted of 950 floats. Shortly before the second workshop the array passed the 80% (2400 float) milestone. The growth of the array to its present global extent has meant that the papers at the second workshop could address global issues of sea level rise and
heat storage. A particular highlight was the many excellent papers focused on the Southern Ocean where (south of 40°S) Argo is now producing CTD profiles at 40 times the pre-Argo rate. There were also several examples of the use of Argo data by operational ocean and climate centres.

The 43 oral and 92 poster presentations are available at http://www.argo.ucsd.edu. A new Argo promotional brochure that tells the story of Argo’s development, documents its current status and explores the potential for the array’s development and exploitation is also available at this site.

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Statement from The Symposium on 15 Years of Progress in Altimetry

The past fifteen years of satellite altimetry has enabled remarkable advances in a variety of disciplines. With these advances in mind, the 510 attendees from 30 countries at this Symposium offered the following consensus recommendations to sustain and advance our capabilities in satellite altimetry (extracted from Fellous, J.-L. et al., "Summary of the Future of Altimetry Session", in Proceedings of the "15 Years of Progress in Radar Altimetry" Symposium, Venice, Italy, 13-18 March 2006, ESA Special Publication SP-614, 2006).

Recommendations:

1. Recognizing the importance of monitoring climate change – as reflected in the GCOS requirements that have been endorsed by the UNFCCC and GEOSS, as well as new products and services enabled with the advent of operational oceanography – which underpin European GMES Core Services,

   (a) Maintain continuity of the high-accuracy Jason altimetry time series established by TOPEX/Poseidon and Jason-1, and being continued with OSTM/Jason-2, through implementation of a Jason-3; and at the same time,

   (b) Maintain continuity with altimeters on at least two complementary, high-inclination satellites – such as the present GFO and ENVISAT and the future Sentinel-3, AltiKa, and NPOESS, with the option to reactivate ERS-2 when needed.

2. Recognizing the significant potential of emerging technologies required to facilitate new discoveries in geophysics, mesoscale and coastal oceanography, and terrestrial hydrology, extend the capability of altimetry to denser observational coverage through the development of swath altimetry.

3. Recognizing the importance of data policy to the dramatic impact that TOPEX/Poseidon and Jason-1 continue to have in a variety of fields, maintain an open data policy – with timely access, including near-real time data distribution for operational purposes – to calibrated and quality controlled data for the benefit of all users.

4. Recognizing the critical role that it plays, especially in satellite altimetry, any operational system – must be well grounded in, and maintain a continuing partnership with, the scientific community.
5. Recognizing the benefits of joint efforts as exemplified by ERS-1 & -2, TOPEX/Poseidon, GFO, Jason-1, ENVISAT, and OSTM/Jason-2, broad collaboration between engineering and science, research and operations, and international partners must be maintained in future endeavors.

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Third International Workshop of Port Meteorological Officers (PMO-III)

The International Port Meteorological Officers (PMOs) Workshop, sponsored by the Deutscher WetterDienst (DWD) and WMO, was held at Bundesamt für Seeschiffahrt und Hydrographie (BSH) (Hamburg, Germany, 23-24 March 2006), was the third in a series aimed at providing information to PMOs on recent developments in marine services. Attended by thirty-nine participants from twenty-four countries, the major aims of these workshops are to enhance communications with PMOs, and include discussions about WMO publication No. 47 and the promotion of global standards of service.

The workshop made a number of recommendations dealing with: (i) ship security, (ii), migration to table driven code forms, (iii) updating procedures for WMO publication 47, (iv) proposed actions to recruit more ships, (v) education and outreach, (vi) improvement of VOSClim data submission, (vii) proper installation of instruments on ships, (viii) updating list of Inmarsat Land Earth Stations (LES), (ix) ship inspection forms, (x) reporting on observing practices, (xi) monitoring, quality information, and feedback, (xii) web tools, and (xii) requirements for national reports. These recommendations would be discussed during the next SOT and JCOMM Management Committee meetings.

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DBCP Data Users and Technology Workshop

The aim of the DBCP data users and technology workshop was to optimise buoy design, deployment strategies and data management to maximise the usefulness of buoy data, both in terms of their impact on model forecasts and their value for money. An additional aim was the need to develop and validate new generations of sensors and observing platforms to address future requirements in terms of spatial and temporal measurement densities, improving the impact of buoy data, smart in situ data selection, communications options, data processing and overall value for money. The participants agreed that this process in which the DBCP has an established track record can take many years.

The workshop was very active and productive, and many recommendations were made in terms of technical developments in support of operational NWP, SST analysis, ocean modeling, climate forecast requirements as well as NWP, climate variability and predictability research requirements. Held at ECMWF (27-28 March 2006), the 28 participants (coming from twelve countries) recommended, among other things, the distribution in real-time high resolution of SST drifter data (i.e., for resolution of the diurnal cycle); new satellite data transmission schemes to better address user requirements (e.g., using two-way telecommunication); development of new sensor technology (e.g., salinity, waves, temperature profiles, pCO2); ways for standardizing instrumentation, deployment packages and practices; and improvement in instrument reliability and life-time for even more cost-effective buoys (smart buoy concept).
This workshop proved a useful exercise for participants from developing countries, the participants recommended a training course for the African and Western Indian Ocean region, in close cooperation with ODINAFRICA, on the application and management of data from in situ oceanographic and marine meteorological observations.

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**Workshop for Establishing a Metadata Pilot Project**

Initiated by the request of the seventh Global Ocean Observing System Steering Committee (GSSC-VII), the workshop for establishing a pilot project to collect in real-time metadata from sea surface temperature and temperature profiles was organized to explore the feasibility of facilitating the use of ocean temperature information by increasing the quality and quantity of relevant metadata (real time as well as delayed mode). Held at ECMWF (28-29 March 2006), with representatives from data users, platform operators and manufacturers, the workshop was attended by twenty-one participants who discussed metadata issues of metadata.

The workshop was a good opportunity to share information on current activities regarding metadata collection and transmission. The participants identified users’ requirements and category, and developed a matrix for real-time metadata in support of (i) data assimilation and ocean field analysis; (ii) ocean modelling; (iii) ocean modelling validation; (iv) climate forecast; (v) seasonal to decadal climate variability; (vi) numerical weather prediction; (vii) satellite calibration; (viii) satellite validation; (ix) SST analysis; (x) operational activities (e.g., weather forecasters, disaster response); (xi) quality assurance activities serving above applications, and (xii) diagnostic by platform operators. The matrix will be dynamically updated as the pilot project evolves.

A successful step to launch the pilot project, noted with appreciation, is that the National Marine Data & Information Service (NMDIS, China) and the National Data Buoy Center (NDBC, USA) have kindly offered to host metadata servers. Participants also developed terms of references for the META-T pilot project steering committee, and with great enthusiasm for the project -- not only from data/observation operators but also from metadata users -- urged that further support for implementation of this project be sought.

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**Upcoming Meetings**

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21-28 June 2006
IOC/EC-XXXIX
Paris

September 2006 (TBD)
4th Regional Workshop on Storm Surges and Wave Forecasting
Manila

24-29 Sep. 2006
9th International Workshop on Wave Hindcasting and Forecasting
Victoria, Canada

5-7 Oct. 2006
5th meeting of the JCOMM Management Committee
Geneva

10-12 Oct. 2006
Meeting of the JCOMM Data Management Coordination Group (DMCG)
Geneva

10-12 Oct. 2006
GCOS SC-XIV
Geneva

16-20 Oct. 2006 (TBD)
IGST-XI
Beijing

16-20 Oct. 2006
22nd session of the Data Buoy Cooperation Panel (DBCP)
La Jolla, USA

26th session of the Argos Joint Tariff Agreement (JTA)
La Jolla, USA

31 Oct.-3 Nov. 2006 (TBD)
PIRATA-12
Miami

13 Nov. 2006
LMEs Forum
Cape Town

14-17 Nov. 2006
3rd Forum of the GOOS Regional Alliances
Cape Town

November 2006 (TBD)
3rd meeting of the JCOMM Services Coordination Group (SCG-III)
Exeter, UK

See full calendar at:
http://www.wmo.ch/web/aom/marprog/Forthcoming-Events/forthcoming-events.htm

Call for Applications:
Nippon Foundation - POGO Visiting Professorship Programme - "Towards Operational Oceanography"

The Partnership for Observation of the Global Oceans (POGO), a forum of institutions involved in oceanographic observations, scientific research, operational services, education and training, has just announced the Nippon Foundation-POGO Visiting Professorship Programme for 2006-2007. The programme’s theme is "Towards Operational Oceanography", and offers the opportunity for an experienced oceanographer to provide training and mentoring to scientists from a host institute in a developing country. Applications are due by 15 August 2006; details are available at:

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Call for Papers/Posters:
9th International Workshop on Wave Hindcasting and Forecasting

An international workshop on wave prediction in coastal areas sponsored by Environment Canada, the US Army Engineer Research and Development Center’s Coastal and Hydraulics Laboratory, and JCOMM, will be held in Victoria, British Columbia, 24-29 September 2006. Papers and posters are solicited for this session themed “Extreme Storm Seas”. Deadline: immediate. Additional information is available at: http://www.oceanweather.com/waveworkshop.

Opinions expressed in attributed articles appearing in the JCOMM newsletter are the author’s opinions and do not necessarily reflect those of WMO and IOC.