

JCOMM 3 SUMMARY REPORT

By Dr. Peter Dexter, JCOMM Co-President for Meteorology

The third session of the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM) took place in Marrakech, Morocco, 4-11 November 2009, hosted by the Government of Morocco through the Moroccan National Meteorological Administration. There were some 105 participants in the session, from 39 Members/Member States and 4 international organizations.

Opening

Officials who participated in and spoke at the opening ceremony included Mr Abdelkebir Zahoud, Moroccan Minister for the Environment and Water, Mr Michel Jarraud, Secretary-General of WMO, Dr Patricio Bernal, Executive Secretary of IOC and Mr Abdallah Mokssit, Permanent Representative of Morocco with WMO. In his address, the WMO/SG in particular emphasised the potentially important role of JCOMM in disaster risk reduction in coastal areas, and in the implementation of the new Global Framework for Climate Services, established at WCC-3. He also paid tribute to Dr. Patricio Bernal, whose time as Executive Secretary of IOC had encompassed the whole lifetime of JCOMM, and who was retiring shortly after the session. The IOC/ES, in turn, emphasised the key role of JCOMM in implementing the GOOS, and thus contributing to the GCOS and other global observing systems, as well as in supporting the delivery of key ocean services such as storm surges and ocean prediction. He made reference to the 50th anniversary of the IOC in 2010, which is also the 60th anniversary of WMO. JCOMM is to contribute to both celebrations while implementing its workplan.

As has become a tradition, JCOMM-3 awarded Outstanding Service Certificates to John Falkingham (Canada), for his contributions to sea ice services; to Michael Johnson (USA), for his contributions to ocean observing systems; and to Robert Keeley (Canada), for his contributions to ocean data management. On behalf of IFREMER/France, Jean-Louis Fellous presented an Argo float to the Moroccan National Meteorological Administration.

Requirements

This is the first of the technical agenda items, where the Commission reviews the requirements for ocean data in support of a range of application areas and other WMO and IOC programmes. These included: metocean service applications and the WMO Rolling Requirements Review (RRR); GOOS and GCOS; NWP and synoptic meteorology; polar region science and services; and the results of OceanObs09. Some points to note:

- (i) JCOMM has been active in inputting to the RRR, including recently in updating the WMO/CEOS database with requirements for ocean forecasting, as well as in producing a Statement of Guidance for Met-ocean Applications.

(ii) Developing countries were very anxious for more emphasis to be given to coastal observations and the implementation of coastal GOOS, where the potential role of JCOMM again came out. Whatever is done here will have to be in conjunction with the GOOS Regional Alliances and the GSSC, and continues to pose challenges for JCOMM, in particular regarding non-physical observations. There are also resource implications for the Commission.

(iii) There is considerable satisfaction in GCOS at the priority given by JCOMM to addressing the ocean component of the GCOS Essential Climate Variables (ECVs). The issue came up here of the need of climate scientists dealing with VOS data to have easy access to ship call signs (calibration, bias corrections, etc), which caused some consternation in certain delegations, which are concerned with ship security issues.

(iv) The role of JCOMM in assisting in the implementation of International Polar Year (IPY) legacy observing systems was again underlined, in particular Southern Ocean Observing System (SOOS). At this stage, how this role will play out in practice is unclear, but most probably through existing ocean observing system implementation groups such as the Data Buoy Cooperation Panel (DBCP), as well as coordination through the JCOMM Observations Coordination Group (OCG).

Observing systems

The formal life of JCOMM essentially covers the 10 years from the first OceanObs Conference in St Raphael (October 1999) to the second in Venice (September 2009), and the Commission has played a leading role in coordinating the implementation of an ocean observing system for climate (the open ocean component of GOOS) from around 30% to just over 60% in this period, which is an impressive achievement. Nevertheless, it's clear that the rate of implementation is now plateauing, and some significant additional efforts are required to get the process moving again. This was a recurring theme at the session, and is a primary focus for the Observations Programme Area (OPA) for the next intersessional period.

All three standing implementation panels within the OPA (DBCP, SOT and GLOSS) continue to perform effectively, with the DBCP being particularly successful in addressing new challenges and goals as the existing ones are achieved, evaluation of existing and new data telecommunication technologies, and the development of novel and cost-effective in situ wave measuring capability. The SOT continues to address the ongoing issue of maintaining the VOS fleet and XBT lines (there will likely be another scientific review of the XBT sampling requirements during the intersessional). The GLOSS provides the essential observing component to coastal and disaster management programmes, and it is foreseen to adapt its programme to cater more for the real time requirements for sea level data for tsunami monitoring, as well as the traditional requirements for sea level data for climate. The OPA maintains close relations and coordination with external implementation bodies (Argo, OceanSITES, IOCCP) through the Observations Coordination Group, and a new focus here in the next intersessional period will be the marine mammal tracking community.

The JCOMM in situ Observing Platform Support Centre (JCOMMOPS), a 3-person operation based in Toulouse and funded entirely through extra-budgetary sources, is now an indispensable and highly regarded component of the observing system coordination process, providing a range of metadata, logistics and technical support for the panels as well as for some external bodies. Efforts are now underway to partner with new implementation bodies (including space agencies) and attract additional funding to allow expansion of the JCOMMOPS functions to cover further components of the in situ observing system, and also enhance integration of satellite and in situ observations. The session adopted new terms of reference for JCOMMOPS, to facilitate its future operations and growth.

Recognizing that JCOMM should coordinate with others in working with the space agencies in ocean remote sensing, the Commission agreed that its ongoing workplan here (through the PAs) would focus on: maintaining an update set of requirements for ocean satellite data; support for the key ocean satellite missions; working with the Expert Team on Satellite Utilization and Products (ET-SUP) of the WMO Commission on Basic Systems (CBS) on the utilization of satellite data and products; facilitating the availability of ocean satellite data and products for developing countries.

As a component of the JCOMM Pilot Project for WIGOS, the Commission has proposed the establishment of a network of Regional Marine Instrument Centres (RMICs), modelled on the existing RIC network of the WMO Commission for Instruments and Methods of Observation (CIMO), and adopted a recommendation to this effect. NDBC/NOAA has offered to provide a pilot for the network, and other offers are pending.

A key role for JCOMM is to maintain liaison with the external ocean research community, so that when new instrument and communications technologies reach maturity, they can be integrated into the operational observing system coordinated by JCOMM. The DBCP has been particularly effective in this regard.

Data management

Based on an agreed and published JCOMM Data Management Strategy, the work of the DMPA is focussed on three main areas: contributions to WIGOS/WIS through the JCOMM Pilot Project for WIGOS and the Oceans Data Portal, in conjunction with IOC/IODE; standards and best practices in ocean data management, also in conjunction with IODE; and modernizing the marine climatological data management and services process.

The IODE/JCOMM Ocean Data Standards Pilot Project, coordinated through the joint JCOMM/IODE Expert Team on Data Management Practices, is a significant activity to develop, encourage and recommend the wide adoption of standards and best practices in ocean data management. As part of this process, JCOMM/IODE have already prepared and published an online catalogue of existing standards material.

The collection, management and archival of marine climatological data (primarily ships logbook data), and the preparation and publication of summaries based on these data, began formally in 1963 as an activity of CMM, the predecessor to JCOMM. The process has become increasingly sophisticated and automated over the ensuing 45 years, with a higher level of minimum QC control, electronic logbooks and expanded metadata holdings, and has spawned associated activities including the VOS Climate Project, marine data rescue through digitizing of historical logbooks, and integrated global data sets such as ICOADS. The marine climate data set is an essential component of the global climate data record, to the extent that the maintenance of the VOS fleet is now of equal importance to climatologists as it is to operational meteorology. In this context, JCOMM is now looking to the global climate community to provide some additional support in urging NMS to maintain and expand their VOS fleets. On the climate services side, CMM/JCOMM developed and maintains a Guide to the Applications of Marine Climatology and has continued to sponsor 4-yearly symposia on Advances in Marine Climatology. Selected papers from the most recent (Poland, May 2008) have been published in a special edition of the International Journal of Climatology.

Services

The coordination, facilitation and standardization of marine and ocean product preparation and service delivery (including services for maritime safety and DRR) is a major part of the work of the Commission, and the very public “front end” of its work. Major focus areas within the Services Programme Area are: forecast systems and services; disaster risk reduction; and service delivery.

As a direct follow up to GODAE, JCOMM established in 2008 an Expert Team on Operational Ocean Forecast Systems, to help guide the transition of the new ocean forecast systems developed under GODAE into an operational environment, equivalent to NWP. At the same time, JCOMM has developed a close liaison with the science follow up, GODAE OceanView (GOV), through the Services Coordination Group. A primary focus for ET/OOFS is the preparation of a new Guide to Operational Ocean Forecast Systems, and OFS will be a priority component of JCOMM services work in the next few years.

On the other hand, work on wind waves and storm surges has been an integral part of CMM and now JCOMM for many decades, with a comprehensive WMO Wave Programme being developed by CMM in the early 1980s. Current focus in this work is directed more towards storm surges than waves, in view of the need to contribute to multi-hazard marine and coastal warning systems. The Commission is finalizing a Guide to Storm Surge Forecasting, while it convened a major international symposium on storm surges in Korea in 2007 and is now implementing many of its recommendations. At the same time, the JCOMM wave forecast verification scheme continues to operate effectively, the Guide to Wave Analysis and Forecasting is an essential source book on wave modelling, and JCOMM has recently initiated projects to expand the availability of in situ wave data, primarily for wave model verification.

JCOMM has been taking an increasingly active approach to addressing priority issues under the disaster management programmes in both WMO and IOC, in particular related to coastal and marine hazards. In addition to undertaking a series of training workshops in wave and surge forecasting, JCOMM has collaborated with the WMO Tropical Cyclone Programme (TCP) in supporting the five regional TCP bodies in the establishment of frameworks for accessing and using existing wave and surge products, which may lead eventually to regional storm surge watch schemes. JCOMM has also actively supported the WMO CBS Severe Weather Forecasting and Disaster Risk Reduction Project, in particular in the South-west Pacific, and has contributed directly to the work of the IOC Working Group on Tsunamis and other Ocean Hazards Warning and Mitigation Systems (TOWS). As a contribution to marine hazard risk assessment, ETWS and ETMC have been working to develop both storm surge and extreme wave data bases and climatologies.

A major new initiative has been a joint project with WMO Commission for Hydrology (CHy) to develop tools and capabilities to assess and forecast coastal inundation from combined storm surge, wave and river flooding events, the Coastal Inundation Forecast Demonstration Project, and this will remain an ongoing priority activity in the next intersessional period.

The coordinated and standardized preparation and delivery of metocean services to support maritime safety has been a priority for NMS and WMO since their origins in the late 19th century. These are now delivered within the context of the Global Maritime Distress and Safety System (GMDSS) of the IMO, with JCOMM having primary responsibility for international coordination and regulation. IMO has recently been encouraging WMO to formalize this work through a Worldwide Metocean Information and Warning Service, to complement the existing IMO/IHO Worldwide Navigational Warning Service.

The rapid retreat of the Arctic ice sheet in summer is leading to the establishment of new shipping routes in this region, with an associated requirement for enhanced maritime safety services. JCOMM has consequently established, in coordination with IMO and IHO, new Arctic Metareas under the GMDSS, to come into effect in late 2010. The Ice Logistics Portal developed for the IPY will continue on a long-term basis, compliant with WIS and as a contribution to the Global Cryosphere Watch. The work done by the sea ice team in developing an ice objects catalogue for use with Electronic Navigation Chart Systems is being used as a prototype for the display of a range of meteorological objects, including graphical information (weather charts), through such systems, as an eventual replacement for HF radiofacsimile.

Capacity building

During the past intersessional period, JCOMM CB work has focussed on ocean data buoy and tide gauge technology measurements and data management, as well as storm surge and wave modelling and forecasting. The new project with CHy, aimed to develop tools for coastal inundation computation from combined surge, wave and river flooding events,

has pilot projects planned for Bangladesh, the Caribbean and West Africa. JCOMM has also recently developed a set of CB principles, to guide future CB work, in particular when undertaken within the broader WMO and IOC CB programmes.

A fairly constant theme at this session was the need of developing countries for assistance in establishing and managing coastal ocean observing systems. This is likely to become a primary focus for the Observations PA, as well as for the new CB Activity Leader in the Management Committee. JCOMM will also need to work closely with the GOOS Regional Alliances and the WMO Regional Associations in assisting the development of coastal observation, analysis and forecasting systems.

WMO integrated systems

The session was fortunate to have the participation of the president of CBS, Fred Branski, both in that capacity and as a member of the US delegation. Fred made the presentations on both WIS and WIGOS under this agenda item, and was available to respond to questions and to the discussion in general. JCOMM is now a major player in both WIGOS and WIS, through the JCOMM Pilot Project for WIGOS, which seeks to enhance the availability of ocean data to the WIS, and their interoperability with other environmental data. The ocean data will be delivered to the WIS through an international ocean data portal, which is being developed under a separate but linked project with the IOC/IODE. In addition, the Russian NODC in Obninsk has already been designated as a pilot DCPC for WIS for ocean data. Some concern was expressed that, although many oceanographers make their data available on the GTS for general use, the structure and management of the GTS is such that they are not necessarily able to access GTS data streams for their own use. Hopefully a fully developed WIS will remove this obstacle.

Quality management

JCOMM, and its predecessors, CMM and IGOSS, has been engaged for many years in the development of standards and best practices in ocean observations and ocean data management, as well as in coordinating and regulating the delivery of maritime safety services. It has recently developed and made public a web catalogue of its existing standards and best practices material, which as well as making this material more widely available, will also facilitate its maintenance and updating. JCOMM is also actively engaged with IODE in the development of new standards and best practices in ocean data management and exchange. These new standards will eventually be included in the WMO Technical Regulations and contribute to the QMF.

With the adoption of an IMO/WMO Worldwide Metocean Information and Warning Service, JCOMM is now being strongly encouraged to coordinate the development and certification of QMS for maritime safety services. JCOMM will be holding a workshop in May 2010 in Melbourne, Australia, on maritime safety services, with a focus on QMS.

Technical regulations

The session adopted 5 recommendations detailing a number of amendments to the Manual on Marine Meteorological Services (WMO-No. 558) and the Guide to Marine Meteorological Services (WMO-No. 471), dealing with aspects of marine climatology, maritime safety services, and marine accident emergency support.

JCOMM programme and planning

This agenda item had a number of different but related components: JCOMM ToRs and strategy; JCOMM review; work programme and operating plan; review of resolutions and recommendations; subsidiary structure and membership; and next formal session.

There was considerable initial debate in plenary around the JCOMM ToRs, strategy and review, with eventually an ad hoc sessional working group being established to look in depth at all these issues and report to plenary on a way forward. In the event, the group, and plenary, accepted without modification the original proposals for the new Terms of Reference and Strategy, largely drafted by co-president Dexter. JCOMM was the first of the WMO TCs to restructure its ToRs in this way.

Most of the concern was with the JCOMM review. This was called for at JCOMM 2, but a lack of funding meant that it was only partially accomplished as a component of a broader review by Dr Jim Baker (former NOAA Administrator) of GOOS implementation and governance. It was proposed by the sessional working group, and adopted by plenary through a recommendation, that a full, focussed, independent review of JCOMM should take place early in the new intersessional period, with external funding. The previous management committee, including both co-presidents, was fully supportive of this approach, so hopefully the review will now take place.

The session adopted the subsidiary body structure proposed by the Management Committee. Savi Narayanan did an excellent job in chairing the sessional committee which developed proposals for membership of the various subsidiary bodies. Overall, there is a fair regional and gender balance through the Commission, though the more technical teams still lean towards the developed countries in Europe, North America and Asia.

The Government of the Republic of Korea, through the provincial government of Jeollanamdo Province and the city of Yeosu, has made a formal offer to host JCOMM 4 in Yeosu in 2012, in conjunction with their 2012 Expo (with the theme of “The living Ocean and Coast”).

Scientific lectures

There was no scientific/technical conference at this JCOMM session. Instead, the Management Committee had agreed that a set of four science/technical lectures should be embedded in the general session programme (in plenary, with full interpretation services), on the general theme of the socio/economic benefits of metocean information and services, with some focus on the north-west African region. The lectures were given by

John Zillman (Australia, former president of WMO); Geoff Holland (Canada, former chair of IOC); Malika Bel Hassen-Abid (Tunisia, co-chair of IODE); and Hassan Bouksim (Morocco, now member of the JCOMM Management Committee). The lecture texts and presentation material have been published on the JCOMM web site as a JCOMM technical report.

In addition, there were some six side meetings, scheduled during lunch breaks and early evenings, on scientific/technical topics of direct programme relevance, given by specialists present at the session. The ppts of these presentations have also been published on the web site as a JCOMM technical report. These side meetings were all very well attended, were well received, and provided participants with excellent in-depth insights into key aspects of the technical work of JCOMM.

Elections

By the regulations of the parent organizations, JCOMM requires 39 credentialed Members/Member States with voting rights (one third of the Members/Member States represented on the Commission) in order to conduct the election. Although there were 39 Members/Member States represented, those with valid credentials and voting rights came to only 35. However, the Secretariat did an excellent job in marshalling sufficient proxies for a valid vote.

As there was only one candidate for meteorology co-president, Peter Dexter was re-elected by acclamation. However, there were two candidates for the oceanography co-president – Dr Alexander Frolov from the Russian Federation, and Dr Johnny Johannessen from Norway. The result of the ballot for this position saw Dr Frolov elected.

Closure

The session closed just before lunchtime on Wednesday 11 November, with special tributes being paid to Dr. Jean-Louis Fellous, the outgoing ocean co-president. The session functioned very smoothly, all the chairs managed their plenaries effectively, and there was a good level of debate on most issues of importance.

General conclusions

The workplan coming out of the session is realistic and achievable, focussed on key priority areas such as the observing system, contributions to WIS/WIGOS, ocean forecasting, disaster risk reduction, and coastal ocean observations and services, especially for the Small Island Developing States (SIDS) and Least Developed Countries (LDCs). There has been a substantial renewal in upper JCOMM management, which is encouraging for the future, and the new PA coordinators (Ming Ji and Sissy Iona) are highly competent and enthusiastic.

Clearly there will need to be substantial changes in the way in which JCOMM functions, in particular with regard to the intergovernmental aspects in line with the ongoing

changes for WMO Technical Commissions (TCs). The 4-yearly sessions are too infrequent, too cumbersome and too expensive to be cost-effective, and this latest session of JCOMM well illustrates these issues. On the other hand, the Commissions actually do the bulk of the technical work required to keep WMO and IOC Members/Member States operating in a coordinated and coherent way, and are highly regarded in the external scientific and technical community. This is certainly the case for JCOMM, which has a very high standing in the international ocean community in particular, while its work in regulating and coordinating maritime safety services is also much appreciated in the global shipping community, and its peak organizations like IMO and ICS. Nevertheless, JCOMM should be prepared to embrace and actively work towards changes as they are proposed.

Priority for each Programme Area

Observations Programme Area (OPA) overview (excerpt from OPA report to JCOMM-III)

By Ms Candyce Clark, JCOMM/OPA Coordinator

The implementation goals of the OPA continue to be guided by the ocean chapter of the GCOS Implementation Plan, and a major focus of the next intersessional work will be an increased emphasis on system-wide performance metrics based on Essential Climate Variables (ECVs) as a way to further integrate and rationalize the observing networks. These ECV-based metrics will be informed by the GCOS-92 update, and outcomes from the OceanObs'09 Conference (Venice, 2009) and the Third World Climate Conference (Geneva, 2009). Additional non-climate requirements come from the CBS Rolling Review of Requirements, and OPA will continue to work with the DM and SFSP Programme Areas in defining OPA implementation goals. The Marrakech session emphasized the importance for OPA to continue the dialogue between those who implement the networks and potential users asking for new capabilities based on their requirements, in order to balance technological capability, network optimization, and funding interest.

The three OPA teams – Data Buoy Cooperation Panel (DBCP), Ship Observations Team (SOT), and the Group of Experts for the Global Sea Level Observing System (GLOSS) – all have full work plans for the coming intersessional period. The OPA Coordination Group (OCG) will continue to support, integrate and rationalize these JCOMM networks as well as with the other teams and networks that participate in OCG's work (Argo profiling float programme, OceanSITES, and the International Ocean Carbon Coordination Project (IOCCP)). OCG work is also supported by a leader from the satellite data and capacity building communities. JCOMMOPS (see article below) will continue its progress made towards integrating the observing networks as well as to work with the Observing System Monitoring Centre for real-time monitoring of the observing system.

Guidance from the Commission's third session for the implementation goals of OPA includes the following priority activities:

- (i) Complete and sustain the initial observing system (target 100% completion), and update the OPA implementations goals to take into account input from the OceanObs'09 Conference (Venice, 2009);
- (ii) Integrate with the WMO Integrated Global Observing System (WIGOS), including review and update of appropriate WMO and UNESCO/IOC technical publications (target: four WMO publications and two IOC publications) and establishment of Regional Marine Instrument Centres (RMIC) (target: six regions);
- (iii) Enhance in situ global wave observing capability and quality in support of satellite products and ocean models through evaluation of wave measurements, and development of new cost-effective technology (target: improved quality and new technology available);
- (iv) Increase use of high data rate satellite telecommunications (target: relevant platforms using high data rate);
- (v) Implement the Partnership for New GEOSS Applications concept (PANGEA) for forging partnerships with developing countries for their use of ocean observations and products and their participation in the maintenance of the observing networks (target: one workshop per year);
- (vi) Explore mechanisms (including funding) for JCOMMOPS to partner with other agencies and programmes (e.g., space-based) for the benefit of JCOMM (target: new funding and expanded JCOMMOPS);
- (vii) Coordinate with DMCG to complete the JCOMM "Oceanographer's and Marine Meteorologist's Cookbook for Submitting Data in Real Time and in Delayed Mode" (target: publish as JCOMM Technical Report).

Data Management Programme Area (DMPA) Priority for intersessional period (excerpt from DMPA report to JCOMM-III)

By Ms Sissy Iona (JCOMM/DMPA Coordinator), Mr Greg Reed (IOC/IODE Co-Chair) and Mr Peter Pissierssens (IOC Secretariat)

The Commission endorsed the following priorities for the next intersessional period for the DMPA:

- (i) Develop standards and best practices in the marine community through the IODE/JCOMM Standards Process;
- (ii) Continue the work under WIGOS Pilot Project to make the ODP and WIS interoperable as well as ocean data systems interoperable with ODP and/or WIS;
- (iii) Upgrade present BUFR encoding for marine variables to include instrumentation metadata;
- (iv) Complete Meta-T and ODAS implementation and capture of instrument/platform metadata;
- (v) Modernization of the Marine Climatological Summary Scheme;
- (vi) Review and update the JCOMM Data Management Plan;
- (vii) Update Catalogue of Standards and Best Practices and contribute to the implementation of QMS in compliance with WMO-QMF;
- (viii) Review and update DMPA web site;
- (ix) Encourage organization of MARCDAT-III and CLIMAR-IV meetings.

JCOMM Service and Forecast Systems Program Area Overview

By Dr Ming Ji, JCOMM/SFSPA Coordinator

The third session of the Commission established three primary thrusts for the Service and Forecast Systems Program Area. They are: i) ensuring marine weather safety for mariners at sea including emergency response for maritime distress; ii) reducing risks of natural disasters on coastal communities due to coastal extratropical storms and land falling tropical storms; and iii) the emerging area of establishing operational ocean forecasting services. These service thrusts resulted in the reestablishment of three expert teams (ETs) under the SFSPA: Expert Team on Marine Safety Services (ETMSS), its responsibilities will also include maritime emergency response; Expert Team on Wind wave and Storm surge (ETWS), and Expert Team on Sea Ice (ETSI). In response to the thrust iii), the Commission established a new expert team for the JCOMM Services, i.e., the Expert Team on Operational Ocean Forecast Systems (ETOOFS) and renamed the Service Program Area to Service and Forecast Systems Program Area (SFSPA). The Commission also reestablished the Service Coordination Group (SCG) which is critical for coordinating SFSPA projects carried out by expert teams.

Development of Climate Service for mitigation and adaptation of climate change impacts has emerged as a major driver for JCOMM services. This links to two priority focus areas for SFSPA. They are: a) providing weather and sea ice information and emergency

response services to ensure the navigation and maritime safety for the Arctic Ocean, and b) providing enhanced warning and forecast services for coastal hazards and inundation to reduce disaster risks resulting from natural hazards and consequences of global sea level rise such as storm surge.

The ETMSS and ETSI will jointly lead the effort to coordinate the expansion of navigation safety and emergency response services into the Arctic Ocean through the implementation of GMDSS there by 2011. This effort includes incorporating sea ice information into the suite of marine weather warning and forecasts to address the particular challenge of navigating in the icy waters. In addition, the two teams will also lead a project toward developing a capability to incorporate critical marine weather forecast variables such as wind/wave into electronic navigation charts (ENC), based on the successful efforts by ETSI that had made ENC compatible sea ice charts.

The priority activity for ETWS is to implement recommendations from the first JCOMM symposium on storm surge. ETWS will lead demonstration projects in coastal hazard and inundation forecasting, developing a database for extreme waves, and developing a storm surge climatology through collaboration with the Expert Team on Marine Climatology of the DMPA.

As a direct follow up to the successful conclusion of the Global Ocean Data Assimilation Experiment (GODAE), the Commission formally codified the ETOOFS which was established in 2008 to help guide the transition of the new ocean forecast systems developed under GODAE into operational services. The Commission also strongly endorsed the concept that ETOOFS will maintain a close liaison with the GODAE Ocean View, the follow up science effort in numerical ocean forecasting system improvements. The Commission adopted a recommendation to request ETOOFS to lead the creation of a Guide for Ocean Forecast Systems. In addition, ETOOFS will also have a strong focus on evaluation of the global ocean observing system and their future requirements.

SFSPA Plan

The current intersessional period between JCOMM-III (Nov. 2009) and JCOMM-IV (May 2012) is unusually short with merely two and half years. At the JCOMM-III, the Commission endorsed a comprehensive list of priority activities for each Service Program Area Expert Team. However, the SFSPA will take a project oriented management approach to focus on a limited number of priority projects that are of high impact, many of them cross expert teams in nature, and are considered as “low hanging fruit” to ensure achieving expected outcomes within this short intersessional period. Some of the key projects include: Coordinate the implementation of GMDSS; Create an initial catalogue of marine and oceanographic parameters for Electronic Navigation Charts; Develop experimental suites of on-demand arctic marine weather and sea ice products; Disseminate a demonstration suite of marine weather service products via weather.gmdss.org; Conduct a survey of ship operators and other operational oceanographic service users; Begin the development of the Guide for Ocean Forecasting Systems; and develop the extreme wave data base and storm surge climatology.

