WORLD METEOROLOGICAL ORGANIZATION

INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (OF UNESCO)

EXPERT TEAM ON SEA ICE – FIFTH SESSION

STEERING GROUP FOR THE PROJECT GLOBAL DIGITAL SEA ICE DATA BANK (GDSIDB) – THIRTEENTH SESSION

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REPORT BY THE ETMSS CHAIRPERSON

(Represented by the co-vice chairperson)

Summary and Purpose of Document

This document provides a short summary report on ETMSS activities since its last session (ETSI-IV, St. Petersburg, Russian Federation, March 2010) and priorities for the Team for the next JCOMM intersessional period 2012-2017).

ACTION PROPOSED

The Team is invited to:

(a) Note and comment on the information provided as appropriate;

(b) Provide additional recommendations and suggestions for its future workplan as appropriate.

References: None

Appendix: EMTSS Terms of Reference

DISCUSSION

Background

1. The Terms of Reference (ToR) of the Expert Team on Maritime Safety Services have not been modified by JCOMM-4. ToR and membership are available in Appendix A.

ETMSS activities & achievements since ETSI-IV

2. Implementation of the GMDSS in the Arctic: Thanks to Canada (METAREAs XVII & XVIII), Norway (METAREA XIX), the Russian Federation (METAREAs XX & XXI) and the supporting Preparation Services from Denmark and USA, the WMO component of the GMDSS in the Arctic Ocean was successfully implemented with Full Operational Capacity in July 2011 and formally celebrated during the IMO/COMSAR 15 in March 2011 to mark this significant milestone in the delivery of MSI. Both ETMSS and ETSI supported the new Issuing Services during the implementation phase. In particular, ETSI prepared the specifications for ice information in SafetyNET bulletins (including the definition of ice-edge and the common set of Sub-Areas agreed by Preparation Services), formally adopted by JCOMM-4 to be included in the Manual on Marine Meteorological Services (WMO-No. 558). The Commission also adopted the list of abbreviations for ice information to be used in NAVTEX bulletins, to be included in the list of abbreviations in the Guide on Marine Meteorological Services (WMO-No.471). The commission also requested Members / Members States providing MSI in the other METAREAs concerned, especially those covering the Southern Ocean, to follow the METAREAs XVII-XXI agreement on exchange and preparation of GMDSS sea ice information **(action SFSPA #26)**. Other GMDSS issues, like the service gap over Hudson Bay (METAREA IV), have been discussed and addressed during this period with Canada being recognized as the Issuing Service for a rectangular referenced sub-area of METAREA IV for the 2014 Shipping Season.

3. Revision of the joint IMO/IHO/WMO documentation: ETMSS contributed to the revision of the joint IMO/IHO/WMO documentation, mainly IMO Resolutions A705(17) on Promulgation of Maritime Safety Information, the Joint Manual on MSI (MSC1.Circ.1310), the International SafetyNET Manual (MSC1.Circ.1364) and the NAVTEX Manual (MSC1.Circ.1403). ETMSS also contributed to the **IMO Resolution 1051(27) on the IMO/WMO World-Wide Met-Ocean Information and Warning System (WWMIWS)**, which was formally adopted by the IMO Assembly 27 in November 2011. It complements the IMO Resolution A706(17) on the IMO/IHO World-Wide Navigational Warning Service. All those reference documents are available on the JCOMM website (http://www.jcomm.info/GMDSS). The list of METAREA Coordinators is being confirmed with the majority of services responding. The team is still awaiting confirmation from Pakistan and India. The Commission requested the Team to continue working with IHO and IMO to update the joint documentation, especially the Manual on MSI and the IMO Resolution A.705(17) **(action SFSPA #17)**. To facilitate the work of the METAREA Co-ordinators, the Commission also urged Member / Members States to disseminate all MSI prepared for GMDSS (i.e. to be broadcast on SafetyNET or International NAVTEX) on the GTS, and adopted the appropriate amendment to be included in the Manual on Marine Meteorological Services WMO-No. 558 **(action SFSPA #19)**.

4. Revision of WMO No. 558 & 471: new versions of the Manual on Marine Meteorological Services (WMO-No. 558) and the Guide on Marine Meteorological Services (WMO-No. 471)

have been prepared. The new edition of the Manual was endorsed by the Commission (changes adopted during JCOMM-4, provision of sea ice information, availability of MSI prepared for the GMDSS on the GTS, and references to the WWMIWS and METAREA Coordinators, still to be inserted). But some parts of the Manual, especially Volume I, Part IV (training in the field of marine meteorology) and Volume II (regional aspects), need to be updated. The new draft of No. 471 is to be reviewed. Finally, the overall structure of the Manual and the Guide need to be checked.

5. JCOMM Marine Meteorological Monitoring Survey (MMMS): in order to monitor the effectiveness of the marine meteorological and oceanographic information produced and transmitted by NMHSs, a survey was conducted in 2011/2012, using feedback from the maritime users. The questionnaire was reviewed by the Team, and the WMO Secretariat implemented the first online version of this questionnaire, which should enable the dissemination of surveys more frequently. The results of this survey and the online questionnaire are available on the JCOMM website (http://www.jcomm.info/MMMS). The Commission requested the Team and Secretariat to conduct surveys more often (2 years, **i.e. next in 2013/2014 - action SFSPA #18**) with the support of the Issuing Services, and to use these surveys to gather additional user requirements. In response to this request the team is working on the next version of the on-line survey with an expectation it will be available for the maritime users this spring of 2014 and it is the plan of the Team to hold this surveys on a bi-annual basis.

Priorities for ETMSS work plan

6. Graphical products for mariners, contribution to e-Navigation and review of the GMDSS: JCOMM-4 re-emphasized the usefulness of numerical/graphical products for mariners. The increase of Electronic Navigation Charts (ENC) systems on SOLAS vessels as regulatory material and the emergence of the e-navigation concept within IMO reinforce the priority given to this requirement. ETSI have been developing the Ice Objects Catalogue and is engaged in developing the S-1xx version (latest IHO standards) of this catalogue, which includes descriptions of extended set classes, attributes and presentation libraries. In 2009, ETMSS initiated the development of a catalogue of Met-Ocean Object Classes and Attributes. Following JCOMM-4 the writing team (led by the United States of America representative on the ETMSS team), created the first draft of the Encoding Documents in summer of 2013 and distributed for comments from the ETMSS members. Those comments were incorporated into a second draft of the Encoding Documents and the first draft of Product Specification Documents was created. Both are currently under review by the ETMSS members **(action SFSPA #20)**. The next steps include proceeding with registration in IHO S1xx and engage the IHO and TSMAD for the creation of a IHO domain for a Met-Ocean Feature Catalogue, similar to the path followed by ETSI on the Sea Ice Feature Catalogue. As not all the SOLAS vessels are equipped with ENCs, the Commission requested the continuing broadcast of MSI in text format. Considering the concerns of the Issuing Services on the high telecommunication cost of providing both text and graphical products, the Team is also encouraged to explore issuing MSI in text format that can be displayed on ENC systems.

7. A new version of the template to be used for self-assessment reports by Issuing Services was developed in the fall of 2013 based comments from Team members with a focus on improving the clarity and utility. This template was used for self-assessment reports requested of the Issuing Services in the November-December 2013 period. The results will be used for, and reviewed during, the upcoming Second Maritime Safety Services Enhancement Workshop.

8. A Second Maritime Safety Services Enhancement Workshop, gathering the representatives of all Issuing Services, is expected to take place in August 2014 in Wellington, New Zealand. The Workshop will be focused on the review of the self-assessment reports, QMS training and practises (identified as a priority by the commission), as well the maintenance and update of the GMDSS, including a discussion on a work plan goal to revise, or merge the existing reference publications (WMO No. 471 and WMO No. 558). This workshop will be held in conjunction with a similar activity taking place for the NAVAREA Coordinators, with the expectation of a joint session during one of the days of the Workshop.

9. Quality Management System (QMS) for MSI: The Team will continue to monitor the WMO contribution to the GMDSS using the MMMS and the self-assessment reports to be provided annually by all Issuing Services/METAREA Coordinators. Recalling that ISO practices or certificates, although not mandatory at this stage but which may be required in the future by bodies in charge of the coordination of international systems, JCOMM-4 encouraged the NMS concerned to implement a QMS that includes the provision of MSI, to ensure the use of best practices and the improvement of value for mariners. A QM training, focused on Internal Audit procedures, was provided to Issuing Services by a QM specialist supporting the Australian Bureau of Meteorology during the Maritime Safety Services Enhancement Workshop in May 2010. Additionally in 2013 a Task Team was struck from ETMSS members to develop a draft of Marine Competency Requirements (following the work done for the Aviation community). This first draft has been completed and it being sent to the WMO EC Panel of Experts for Education and Training for comments, and then will be sent to the WMO EC-66 to initiate the Members' review and comments period of the exercise. After receiving input from the Members and experts, a version will be finalized for the WMO Congress with final approval expected for May 2015.

10. Marine Environmental Accident Responses: during the past years, the Marine Pollution Emergency Response Support System (MPERSS) has been extended to the Arctic Ocean, with minimum capabilities achieved. It should be developed beyond the minimum requirements in the future. The enhancement of the capabilities of Members, including the MPERSS Area Meteorological and Oceanographic Coordinators (AMOCs), to be able to provide appropriate products in case of complex events such as radioactive leaks or oil releases at the bottom of the ocean, is also a priority for JCOMM. The strategy to update the users requirements for MPERSS and the potential consequences on the AMOC Terms of Reference should be considered.

11. Guidelines for marine volcanic ash advisory **(action SFSPA #22)**: As volcanic ash floating on the sea surface has the potential to disable a ship's engine through its water intake, the Team is working on developing guidelines for advisories for such events. The team will be consulting with the secretariats for CBS and CAeM on ongoing activities and interactions with the Volcanic Ash Advisory Committee (VAAC) and the role of WMO bodies/programmes. Members of the team will prepare a draft guideline, as appropriate to the general direction of WMO in this area, for METAREA/NAVAREA Coordinators, for warnings related to marine volcanic ash.

12. ETMSS continues to support the JCOMM GMDSS website (http://weather.gmdss.org). A number of Issuing Services are providing the relevant met. MSI bulletins (including the text ice information) for inclusion on the site. It would be appropriate to add other relevant sea ice graphical/numerical safety products or appropriate links with other portals providing such information.

13. Contribution to the provision of navigational warnings for severe solar magnetic storms **(action SFSPA #23)**: severe solar magnetic storms can disrupt positioning systems, satellite communications and HF radio communications, and therefore might cause severe disturbance in receiving MSI, in particular during the present peak solar activity period. The Team will develop a guideline for National Meteorological Services that are responsible to provide relevant information for Navigational warnings. Once the guideline is prepared the Team will discuss the matter with the relevant parts of IHO on required actions.

Appendix: 1

Appendix

Terms of Reference and Membership of Expert Team on Maritime Safety Services (ETMSS)

Terms of reference

The Expert Team on Maritime Safety Services, in close collaboration with international organizations and other entities representing users' interests, such as the International Maritime Organization (IMO), International Hydrographic Organization (IHO), International Chamber of Shipping (ICS), International Mobile Satellite Organization (IMSO), and other concerned organizations and bodies on maritime safety, search and rescue and marine pollution issues, including the Global Maritime Distress and Safety System (GMDSS), shall:

(a) In support of the Maritime Safety, Efficiency, and Search and Rescue (SAR) operations:

(i) Monitor and review the operations of marine broadcast systems, including for the GMDSS and others for vessels not covered by the International Convention for the Safety of Life at Sea;

(ii) Monitor and review technical and service quality standards for meteorological and oceanographic maritime safety information, particularly for the GMDSS, and provide assistance and support to Members/Member States as required;

(iii) Propose actions as appropriate to meet requirements for international coordination of meteorological and related communication services;

(iv) Develop technical advice and guidance material on Marine Meteorological Services, including keep under review the *Manual on Marine Meteorological Services* (WMO-No. 558), the *Guide on Marine Meteorological Services* (WMO-No. 471) and *Weather Reporting* (WMO-No. 9, Volume D – *Information for Shipping*), and provide assistance and support to Members/Member States as required;

(b) In support of the Marine Pollution Emergency Response Support System (MPERSS):

(i) Monitor implementation and operations of MPERSS; review and suggest, as necessary, improvements to the contents of the overall system plan; (in consistency with the International Convention for the Prevention of Pollution from Ships , and other international conventions);

(ii) Facilitate coordination and cooperation amongst the Area Meteorological and Oceanographic Coordinators (AMOCs) of MPERSS, in particular, with a view to ensuring full and ongoing operations in all areas, as well as the exchange of relevant advice, information, data and products between AMOCs, as appropriate and required;

(c) Monitor requirements by ensuring feedback from the user communities is obtained through appropriate and organized channels and applied to improve the relevance, effectiveness and quality of services;

(d) Liaise with and gather input from Expert Team on Sea Ice, Expert Team on Waves and Coastal Hazards Forecasting Systems, and Expert Team on Operational Ocean Forecasting Systems on all aspects of sea ice, sea state, storm surge and ocean circulation relevant to the operation and improvement of maritime safety services and maritime accident emergency support;

(e) Ensure effective coordination and cooperation with concerned organizations, bodies and Members/Member States on maritime safety issues and marine accident emergency support needs;

(f) Assist Members/Member States in the implementation of services and in the development of standardized methods for the quality assurance related to the provision of MSI, especially for the GMDSS, through capacity-building activities;

(g) Develop, in accordance with existing standards (for example, from the International Hydrographic Organization), graphical/numerical product specification for marine parameters, foremost wind, sea state, currents and sea ice, in Electronic Navigation Chart Systems;

(h) Provide advice to the Services and Forecasting Systems Coordination Group and other JCOMM groups, as required, on issues related to maritime safety services and marine accident emergency support;

(i) Continue to liaise closely with relevant groups and teams of organizations, such as IMO, IHO, ICS, IMSO, EMSA, etc., to coordinate and improve maritime safety services, SAR and marine accident emergency support.

As a general principle, these terms of reference will be implemented through specific, defined, time-limited projects.

General membership

The membership consists of a core membership of up to eight members, including the chairperson, selected to ensure an appropriate range of expertise in the provision of services for maritime safety and efficiency, SAR operations and marine pollution response.
The following experts serve as core members of the ETMSS:

Neal Moodie (Australia)
John Parker (Canada)
Jing Xu (China)
Marja Aarnio-Frisk (Finland)
Satoshi Sugimoto (Japan)
Bruce Hackett (Norway)
Timothy Rulon (United States)

Additional members have been selected during JCOMM-4:

Alicia Guadalupe Cejas (Argentina)
Lin Mu (China)

Giovanni Coppini (Italy)
Christian Paulmann (Germany)
Evgeny Nesterov (Russian Federation)

Additional experts may be invited as appropriate, representative of a range of activities related to the implementation of services for maritime safety and efficiency, SAR operations and marine pollution response, as well as representatives of international organizations and other entities representing users' interests, such as the IMO, IHO, ICS, IMSO, and other user groups, on a self-funded basis, and in general with no resource implications to JCOMM.

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