WORLD METEOROLOGICAL ORGANIZATION

JOINT WMO/IOC TECHNICAL COMMISSION FOR OCEANOGRAPHY AND MARINE METEOROLOGY (JCOMM)
EXPERT TEAM ON SEA ICE – FOURTH SESSION

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

ST PETERSBURG, RUSSIAN FEDERATION
1 TO 5 MARCH 2010

INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (OF UNESCO)

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ITEM 2.3

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REPORT BY THE SECRETARIAT

(Submitted by the Secretariat)

Summary and Purpose of Document

This document provides information on the outcomes of the Third Session of JCOMM (JCOMM-III, Marrakech, Morocco, 4-11 November 2009) that have particular relevance for the ETSI. Additionally, information on the highly relevant activities of the ETMSS is provided.

ACTION PROPOSED

The Meeting will review the information contained in this report and comment and make decisions or recommendations as appropriate

Appendices: A. JCOMM 3 Summary Report by Dr. Peter Dexter, JCOMM Co-President for Meteorology

B. JCOMM-III Final Report, Marrakech, 4-11 November 2009 (not for release)

C. JCOMM meetings between March 2007 and January 2010

DISCUSSION

1. Outcomes of the Third JCOMM Session, and recommendations to ETSI

1.1 The Third JCOMM Session (JCOMM-III) was held in Marrakech, Morocco from 4 to 11 November 2009. The remainder of this section summarizes JCOMM-III decisions and recommendations regarding the Services and Forecast Systems Programme Area (SFSPA) and ETSI. The full report JCOMM-III Final Report is attached at Appendix B . Note that although this report has been approved, it is not for general release yet.

1.2 The Commission endorsed future priority activities for the next intersessional period for the SFSPA's four Expert Teams:

- Expert Team on Operational Ocean Forecasting (ETOOF);
- Expert Team on Wind Waves and Storm Surges (ETWS);
- Expert Team on Marine Safety Services (ETMSS); and,
- Expert Team on Sea Ice (ETSI).

1.3 On specific issues of interest to the ETSI, the following should be noted:

1.3.1 New Terms of Reference for the ETSI were adopted with Vasily Smolyanitsky re-elected as the chair and seven other experts named as core members. Representatives of regional and international sea ice bodies, in particular the Baltic Sea Ice Meeting, European Ice Service, International Ice Charting Working Group and North American Ice Service will also be invited to participate at their own expense. Additional experts may be invited as appropriate, representative of the range of activities related to sea ice, on a self-funded basis.

1.3.2 JCOMM-III adopted Recommendation 5 "that a JCOMM Guide to Operational Ocean Forecasting Systems be prepared". The recommendation includes an annex that outlines the proposed Table of Contents for this guide.

1.3.3 JCOMM-III adopted Recommendation 7 to establish an IMO/WMO Worldwide Met-Ocean Information and Warning Service. This recommendation included the adoption of a well-developed guidance document for this Service annexed to the recommendation. The recommendation urges WMO Members with GMDSS Marine Broadcast System responsibilities to continue to implement their responsibilities, to keep WMO informed of changes, to liaise closely with the users and to serve as METAREA coordinator within their area of responsibility. This recommendation requests the Expert Team on Maritime Safety Services to keep the implementation of, and user response to, the IMO/WMO Worldwide Met-ocean Information and Warning Service under review and to develop proposals for amendments as necessary. Recommendation 7 also specified that the Manual on Marine Meteorological Services, Volume I, Part I, be amended accordingly. The contents of these documents are the subject of several items on the ETSI-IV agenda.

1.3.4 JCOMM-III adopted Recommendation 9 to modify the International Maritime Meteorological Tape (IMMT) format and Minimum Quality Control Standard. This recommendation specifies that amendments to the Manual on Marine Meteorological Services (WMO-No. 558) and the Guide to Marine Meteorological Services (WMO-No. 471) be adopted and that a new version of the IMMT (the primary format for the exchange of marine climatological data) and the Minimum Quality Control Standard be implemented for all data collected as of January 1, 2011. This is also the subject of an agenda item for ETSI-IV. The Expert Team on Marine Climatology was requested to review the implementation and value of these changes and to provide technical assistance as required.

1.3.5 JCOMM-III adopted Recommendation 10 detailing amendments to the WMO Global Maritime Distress and Safety System (GMDSS) Marine Broadcast Systems and specifying that the Manual on Marine Meteorological Services, Volume I, Part I, be amended accordingly. This recommendation requests the Expert Team on Marine Safety Services to

keep the implementation and user response under review and to develop proposals for amendments as necessary.

1.3.6 JCOMM-III adopted Recommendation 11 which provides new procedures, including a “fast-track” procedure, for making amendments to the WMO technical regulations including the *Manual on Marine Meteorological Services* (WMO No. 558) and the *Guide to Marine Meteorological Services* (WMO No. 471).

1.3.7 New versions of the International Maritime Meteorological Tape (IMMT) format and Minimum Quality Control Standard (MQCS) were approved (IMMT-IV and MQCS-VI, to be implemented generally for all data collected as of 1 January 2011).

1.4 The Commission recognized that increased activity in Arctic and Antarctic regions by the marine community (including commercial, military and scientific) required maritime safety services in these regions, which consist of ice-infested waters. It therefore requested the ETSI to collaborate with ETMSS, under the overall direction of the EC-PORS, in implementing such services in Arctic and Antarctic METAREAs, and in proposing sea ice specifications for Maritime Safety Information to be disseminated via SafetyNET and international NAVTEX services, and included in the Annex VI of the WMO Technical Regulations (*Manual on Marine Meteorological Services* – WMO-No. 558).

1.5 The Commission expressed its appreciation to Members/Member States and the European Space Agency through the EarthWatch GMES Service Element *PolarView* project for their contributions to and participation in the Ice Logistics Portal Website (http://ipy-ice-portal.com/), which was developed in support of the International Polar Year (IPY) 2007/2008. The Commission urged Members/Member States to provide to the WMO Secretariat the appropriate metadata in order to ensure that this Portal is compliant with the WIS, and contributes to the Global Cryosphere Watch (GCW).

1.6 The Commission recognized the importance of the *Ice Analysts Workshops* in the coordination of sea ice services, including assessing differences between current practices of ice analysis and charting at National Ice Services and estimating accuracies of ice charts to meet both operational and climate needs. In this context, the Commission requested the ETSI to continue to co-sponsor and co-organize workshops in the future in order to enhance the capability of Members/Member States concerned to provide harmonized sea ice services and to understand sea ice historical variations. Recognizing the value of sea ice technical guidance material in ensuring the provision of high quality, accurate, consistent and timely sea ice services, the Commission also requested the ETSI to keep under review the relevant publications on formats and standards for sea ice information.

1.7 Noting that sea ice in situ and space-based data are crucial to both operational and climate applications, the Commission requested ETSI to keep under review requirements for sea ice observations and services.

1.8 The Commission noted the growing demand from the user community for integrated sea ice information products and to this end endorsed further development of the coupled sea ice – ocean – atmosphere numerical model approach being adopted by a number of Members/Member States. It requested the ETSI to closely cooperate with ETOOFS to further develop these numerical models, and sea ice forecasting and data assimilation techniques.

1.9 The Commission noted that the Global Digital Sea Ice Data Bank held 7 or 10-day period mapped ice data for the Arctic starting from March 1950 and for the Antarctic from January 1973, up to near the present for both regions. From the 1970s, GDSIDB ice charts could serve as ground-truth for SSM/I products (based on a comprehensive usage of all available sources of ice information and expert knowledge) or could form a unique source of ice conditions and climate for the pre-1978 period. In order to expand sea ice climatologies in collaboration with the ETMC and enhance the GDSIDB, the Commission encouraged

Members/Member States to submit sea ice data to the GDSIDB and requested ETSI to review and provide guidance to them on the operation of the database.

1.10 The Commission noted the successful development, in accordance with IMO, IHO and the International Electrotechnical Commission (IEC) standards and specifications for Marine Information Objects (MIOs), of product specification for sea ice information in Electronic Navigation Chart Systems (ENC) and the preparation of an *Ice Objects Catalogue*, which was integrated into the IHO Registry of MIOs in May 2008 (see http://195.217.61.120/iho_registry/). Taking into account that this Catalogue would provide an essential tool to enable Members/Members States to develop products specifically for ENC and would allow the implementation of software to decode and display ice information by the manufacturers of these systems, using the S-57 (in the future in S-100) chart data exchange standard, the Commission encouraged Members/Members States to make maximum use of these essential tools.

2. Collaboration with the Expert Team on Marine Safety Services

2.1 Noting the remarks at JCOMM-III, and in the context of expanding Arctic shipping, it is important for the ETSI to recognize the important role it has in collaborating with the ETMSS with respect to the implementation of Marine Safety Information in the Arctic METAREAS. In particular, the ETSI has important responsibilities with respect to sea ice in:

- The implementation of maritime safety services in the Arctic and Antarctic regions and in particular the new Arctic METAREAs
- The implementation of the IMO/WMO Worldwide Met-ocean Information and Warning Service
- Amendments to the WMO technical regulations including the *Manual on Marine Meteorological Services* (WMO No. 558) and the *Guide to Marine Meteorological Services* (WMO No. 471).

3. International Ice Charting Working Group

3.1 During October 12-16, 2009, the Secretariat hosted the 10th meeting of the IICWG at WMO Headquarters in Geneva. As an advisory body to the ETSI, the IICWG-X was successful in validating a number of items that are before the ETSI 4th Session including:

- Sea ice information in Electronic Navigation Charts;
- Updates to SIGRID-3 formats; and
- The Ice Logistics Portal.

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