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31 March 2017

**REPORT ON THE FOURTH SESSION OF THE IMO SUB-COMMITTEE  
ON NAVIGATION, COMMUNICATIONS AND SEARCH AND RESCUE (NCSR 4)**

References:

- A. IHO CL 13/2016 dated 10 March - *Report on the 3<sup>rd</sup> Session of the IMO Sub-Committee on Navigation, Communications, and Search and Rescue*;
- B. IHO CL 12/2017 dated 10 February – *Preparation for the 4<sup>th</sup> Session of the IMO Sub-Committee on Navigation, Communications, and Search and Rescue (NCSR)*.

Dear Hydrographer,

1. As announced in Reference A, the fourth session of the Sub-Committee on Navigation, Communications and Search and Rescue (NCSR 4) of the International Maritime Organization (IMO) was held at the IMO Headquarters in London, United Kingdom, from 4 to 10 March 2017. The IHO was represented by Director Gilles Bessero, Assistant Director David Wyatt, Mr Peter Doherty, the Chair of the World-Wide Navigational Warning Service Sub-Committee (WWNWS-SC) and Mr Christopher Janus, Branch Chief, NGA Maritime Watch - NAVAREA IV/XII. National Hydrographic Offices were also represented in the delegations of several countries, including Argentina, China, Denmark, France, Germany, Greece, Ireland, Netherlands, Poland, Ukraine, United Kingdom and United States. The following NAVAREA Coordinators were also represented: Argentina (VI), Canada (XVII & XVIII), France (II), Norway (XIX), Spain (III), United Kingdom (I) and United States (IV & XII).

2. As indicated in Reference B, the agenda for NCSR 4 included the following items of interest to IHO Member States:

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| Agenda Item 3:  | Routeing measures and mandatory ship reporting systems;   |
| Agenda Item 5:  | Interconnection of NAVTEX and Inmarsat SafetyNET receivers and their display on Integrated Navigation Display Systems;  |
| Agenda Item 6:  | Guidelines associated with multi-system shipborne radionavigation receivers dealing with the harmonized provision of PNT data and integrity information;  |
| Agenda Item 7:  | Additional modules to the Revised Performance Standards for Integrated Navigation Systems (INS) (resolution MSC.252(83)) relating to the harmonization of bridge design and display of information; |
| Agenda Item 8:  | Guidelines for the harmonized display of navigation information received via communications equipment;  |
| Agenda Item 9:  | Revised Guidelines and criteria for ship reporting systems (resolution MSC.43(64));   |
| Agenda Item 10: | Performance Standards for shipborne GMDSS equipment to accommodate additional providers of GMDSS satellite services;  |
| Agenda Item 11: | Updating of the GMDSS master plan and guidelines on MSI (maritime safety information) provisions;   |

- Agenda Item 12: Draft Modernization Plan of the Global Maritime Distress and Safety System (GMDSS);
- Agenda Item 13: Analysis of developments in maritime radiocommunication systems and technology;
- Agenda Item 14: Review SOLAS chapter IV and appendix (Certificates: Forms P, R and C) to accommodate additional mobile satellite systems;
- Agenda Item 16: Response to matters related to ITU World Radiocommunication Conference;
- Agenda Item 18: Developments in GMDSS satellite services;
- Agenda Item 27: Any other business; and
- Agenda Item 28: Consequential work related to the new Polar Code.

3. The relevant discussions are summarized in Annex A. The full report of NCSR 4 (NCSR 4/29) will be available on the IMODOCS website (<https://webaccounts.imo.org/>) when issued.

#### **Dates for NCSR 5**

4. The fifth session of the NCSR (NCSR 5) is currently scheduled to be held at the IMO Headquarters from 19 to 23 February 2018.

#### **Actions required from the IHO and its Member States**

5. The IHO Secretariat will ensure that the relevant subsidiary organs and subordinate bodies of the IHO are informed of the outcome of NCSR 4 and invite them to consider how it affects their activities and work plan and develop inputs to the relevant agenda items as appropriate. This action concerns primarily the Hydrographic Services and Standards Committee (HSSC) and its working groups and the WWNWS-SC. The Secretariat will follow-up in liaison with the Meso American - Caribbean Sea Hydrographic Commission (MACHC) the request for technical assistance expressed by Costa Rica in relation with the status of hydrographic surveys.

6. The Sub-Committee deferred to the Maritime Safety Committee (MSC) the proposal to activate the IMO/IHO Harmonization Group on Data Modelling (HGDM) to assist in developing guidance on the definition and harmonization of the format and structure of Maritime Service Portfolios (MSPs). Therefore, IHO Member States are invited to liaise with their national Maritime Administrations to consider supporting the proposal at MSC 98 (7-16 June). The Secretariat will monitor the documents which may be submitted on this item and consider commenting if and as appropriate.

7. National Hydrographic Offices are encouraged, in general, to maintain liaison with their national Maritime Administration to ensure that their views and interests are acknowledged in their country's views on, and contribution to, the progress of outputs affecting the provision of hydrographic services and maritime safety information.

On behalf of the Secretary-General  
Yours sincerely,



Gilles BESSERO  
Director

Annex A: Summary of the discussions at NCSR 4

### Summary of the discussions at NCSR 4

#### Agenda Item 3 - Routeing measures and mandatory ship reporting systems

1. The Sub-Committee approved amendments to the existing Long Sand Head two-way route and SUNK Inner precautionary area in the traffic separation scheme in the existing routeing system *In the SUNK area and in the Northern approaches to the Thames Estuary*, with a view to adoption by the Maritime Safety Committee (MSC).
2. The Sub-Committee approved the establishment of a new recommended route *Off the western coast of Izu o Shima Island*, with a view to adoption by the Committee.
3. The Sub-Committee approved the establishment of a new area to be avoided *Off Peninsula de Osa* in the Pacific coast of Costa Rica, with a view to adoption by the Committee. The Experts Group pointed out, in its report to the Sub-Committee, the inadequacy of hydrographic surveys, particularly off the coast of Peninsula de Osa and reported that Costa Rica had expressed the need for technical assistance in this respect due to the limited access to the expertise and resources.
4. The Sub-Committee approved the establishment of a new area to be avoided as an associated protective measure for the *Tubbataha Reefs Natural Park Particularly Sensitive Sea Area* in the Sulu, with a view to adoption by the Committee.
5. The Sub-Committee concurred to invite Costa Rica to consider the establishment of ships' routeing measures nationally within the *Golfo Dulce*, if deemed necessary, after the implementation of the area to be avoided *Off Peninsula de Osa*, if adopted, within the remit as a coastal State.
6. The Sub-Committee endorsed the opinion that the establishment of an appropriate procedure, such as referring proposed routeing measures to the Marine Environmental Protection Committee (MEPC), might be required to address issues related to the protection of the marine environment before submitting them to the NCSR.
7. The provisions agreed by the Sub-Committee will now be submitted to the MSC for adoption at its 98<sup>th</sup> session in June 2017. Implementation of the provisions mentioned will be not less than six months after adoption by the MSC.

#### Agenda Item 5 - Interconnection of NAVTEX and Inmarsat SafetyNET receivers and their display on Integrated Navigation Display Systems

#### Agenda Item 6 - Guidelines associated with multi-system shipborne radionavigation receivers dealing with the harmonized provision of PNT data and integrity information

#### Agenda Item 7 - Additional modules to the Revised Performance Standards for Integrated Navigation Systems (INS) (resolution MSC.252(83)) relating to the harmonization of bridge design and display of information

#### Agenda Item 8 - Guidelines for the harmonized display of navigation information received via communications equipment

8. The Sub-Committee considered the progress of several outputs related to the display of navigation-related information.
9. The Sub-Committee approved the draft amendments to resolutions MSC.252(83) (Additional modules to the Revised performance standards for Integrated Navigation Systems (INS)),

MSC.306(87) (Revised performance standards for Enhanced Group Calling (EGC) Equipment) and MSC.148(77) (Revised performance standards for Narrow-Band Direct-Printing Telegraph equipment for the reception of Navigational and Meteorological Warnings and Urgent Information to Ships (NAVTEX)) addressing the interconnection of NAVTEX and Inmarsat SafetyNET receivers and their display on Integrated Navigation Systems, and invited the MSC to adopt them. A draft MSC circular on *Guidelines for Position, Navigation and Timing data processing* was finalized and endorsed with a view to approval by the MSC.

10. In support of the work item on the development of *Guidelines for the harmonized display of navigation information received via communications equipment*, the IHO submitted a document on the contribution of the S-100 framework to the harmonized display of navigation information. The Sub-Committee agreed to the establishment of a Correspondence Group under the coordination of Norway to continue the development of the guidelines and endorsed the extension of the target completion date to 2018. The Sub-Committee agreed to propose to the MSC not to develop further at this stage the proposed additional modules to the Revised Performance Standards for Integrated Navigation Systems (INS) relating to the harmonization of bridge design and display of information.

#### **Agenda Item 9 - Revised Guidelines and criteria for ship reporting systems (resolution MSC.43(64))**

11. The Sub-Committee endorsed the work on the revision of resolution MSC.43(64), as amended by MSC.111(73) and MSC.189(79) and agreed to the draft revised guidelines and criteria for subsequent adoption by the Committee as an MSC resolution.

#### **Agenda Item 10 - Performance Standards for shipborne GMDSS equipment to accommodate additional providers of GMDSS satellite services**

12. The Sub-Committee agreed to forward to the Committee a draft new MSC resolution on performance standards for a ship earth station for use in the Global Maritime Distress and Safety System (GMDSS), while noting a number of issues which should be resolved before the adoption of the proposed new resolution. In particular, the Sub-Committee agreed to keep the cover page of the draft new resolution in square brackets and invited SOLAS Contracting Governments and international organizations to submit proposals to MSC 98 for further consideration.

#### **Agenda Item 11 - Updating of the GMDSS master plan and guidelines on MSI (maritime safety information) provisions**

13. The Sub-Committee received reports from the Chair of the IMO NAVTEX Panel, including details of proposed new NAVTEX stations which had recently become operational and stations which had become or remained non-operational. The Chair of the IHO World-Wide Navigational Warning Service Sub-Committee (WWNWS-SC) reported on the activities of the sub-committee, highlighting the on-going maintenance of the documentation related to the provision of Maritime Safety Information (MSI) and the capacity building training provided to the Meso American and Caribbean Hydrographic Commission and the South West Pacific Hydrographic Commission regions. The Sub-Committee approved a revision to the in-force notification period for MSI documents after approval by the MSC. Amendments to IMO resolutions A.705(17), as amended, (*Promulgation of Maritime Safety Information*), A.706(17), as amended, (*World-Wide Navigational Warning Service*) and A.1051(27) (*IMO/WMO World-Wide Met-Ocean Information and Warning Service – Guidance Document*) as well as MSC circulars MSC.1/Circ.1310/Rev.1 (*Joint IMO/IHO/WMO Manual on Maritime Safety Information*), MSC.1/Circ.1364/Rev.1 (*Revised International SafetyNET Manual*) and MSC.1/Circ.1403/Rev.1 (*Revised NAVTEX Manual*) will come into force on 1 January following MSC approval or at another date as decided by the MSC. The Sub-Committee noted that amendments to the GMDSS Master Plan had been distributed in GMDSS/Circ.19 and Administrations were encouraged to check their national data for accuracy.

#### **Agenda Item 12 - Draft Modernization Plan of the GMDSS**

14. The Sub-Committee endorsed the draft Modernization Plan of the GMDSS for approval of the MSC. The NCSR endorsed the proposal for a new output on the revision of SOLAS Chapter III and IV for the Modernization of the GMDSS and agreed the terms of reference of the Correspondence Group to continue the modernization of the GMDSS under the coordination of the United States, in anticipation of the Committee's approval.

#### **Agenda Item 13 - Analysis of developments in maritime radiocommunication systems and technology;**

15. The Sub-Committee noted that no documents, other than documents related to the recognition of Iridium, had been submitted on this item for two consecutive sessions. Having further noted that the item had become obsolete since the Sub-Committee had adequate outputs under which information on developments in maritime radiocommunication systems and technology could be submitted, it was agreed to invite the Committee to delete this output.

#### **Agenda Item 14 - Review SOLAS chapter IV and appendix (Certificates: Forms P, R and C) to accommodate additional mobile satellite systems**

16. The Sub-Committee endorsed the revised draft text of the amendments to the SOLAS chapter IV Convention, with a view to approval and consequential adoption by the Committee. The Sub-Committee also endorsed the revised draft text of amendments to the appendix to the SOLAS Convention, related to Certificates, with a view to approval and consequential adoption by the Committee.

#### **Agenda Item 16 - Response to matters related to ITU World Radiocommunication Conference**

17. The Sub-Committee agreed that the liaison statements received from the International Telecommunication Union (ITU) should be included in the agenda of the forthcoming meeting of the Joint IMO/ITU Experts Group; the Sub-Committee also approved the draft terms of reference for their thirteenth meeting, which is programmed to take place at the IMO from 10 to 14 July 2017.

#### **Agenda Item 18 - Developments in GMDSS satellite services**

18. The Sub-Committee agreed that the recognition of the Inmarsat FleetBroadband Maritime Safety Data Service for use in the GMDSS should be treated as a new application, although it was noted that not all elements of IMO resolution A.1001(25) - *Criteria for the provision of Mobile Satellite Communication Systems in the Global Maritime Distress and Safety System (GMDSS)* – would be applicable and that it would be subject to the International Mobile Satellite Organization's (IMSO) evaluation.

19. The Sub-Committee further agreed that it should conduct an evaluation of the criteria set out in resolution A.1001(25) comprising a number of capabilities and that IMSO should undertake the necessary technical and operational assessment.

#### **Agenda Item 26 - Election of Chair and Vice-Chair for 2018**

20. The Sub-Committee unanimously elected Mr Ringo Lakeman (Netherlands), as Chair, and Mr Nigel Clifford (New Zealand), as Vice-Chair, for 2018.

#### **Agenda Item 27 - Any other business -**

21. The IHO reported on the monitoring of ECDIS issues and Electronic Navigational Chart (ENC) coverage. The IHO confirmed the withdrawal of the previous versions of the IHO standards for ECDIS on 31 August 2017 as agreed at NCSR 3 in 2016, following the entry into force of the revised set of IHO standards in August 2015. It was noted that some items of MSC.1/Circ.1503

(*ECDIS – Guidance for good practice*) related in particular to operating anomalies will no longer be relevant for up-to-date ECDIS and the Sub-Committee was invited to consider revising the Circular in connection with the possible development of port State Control guidelines on ECDIS. Noting the relevant considerations by the IMO Sub-Committee on Implementation of IMO Instruments (III) and the revision of the section of the Circular on ECDIS training by the IMO Sub-Committee on Human Element, Training and Watchkeeping (HTW), the Sub-Committee decided not to take further actions.

22. As invited at MSC 96, the IHO submitted a document proposing the activation of the IMO/IHO Harmonization Group on Data Modelling (HGDM) to assist in developing guidance on the definition and harmonization of the format and structure of Maritime Service Portfolios (MSPs) in support of the implementation of e-navigation. During the discussions that followed the introduction of the submission in plenary, general support was expressed for the activation of the HGDM and the Sub-Committee agreed to instruct the Navigation Working Group (WG) to advise on the proposed modalities and prepare a draft work plan for the Sub-Committee's consideration.

23. While the Navigation WG unanimously agreed to recommend the activation of the HGDM, it had a lengthy discussion on the scope and parameters of its future work, particularly in respect to the inclusion of the MSPs, for which no IMO instrument had yet been developed. The WG agreed that the primary purpose for the work of the HGDM was to harmonize existing systems, and that there was an urgent need to have IMO and IHO to commence this work, bearing in mind that services were still being developed without a Common Maritime Data Structure. The WG agreed that the HGDM was required to work within the scope of the existing Terms of Reference, as agreed by MSC 90. However, it noted that the output of this agenda item referred to MSP, whereas the Terms of Reference as agreed by MSC 90 did not. After some discussion the WG agreed on the work plan set out in Appendix 1. The WG agreed also to recommend to the Sub-Committee Mr Sunbae Hong, Head of e-navigation, Maritime Industry and Technology Division, Ministry of Oceans and Fisheries, Republic of Korea, as the chair.

24. Although the recommendations of the WG were supported in plenary by a number of delegations, including Australia, France, Germany, Panama, Norway, Republic of Korea, Sweden, and United States, the Sub-Committee did not endorse the proposal to activate the group and referred it to the MSC, inviting interested parties to submit proposals related to the proposed work plan and to a possible revision of the HGDM terms of reference for further consideration at MSC 98.

25. The Navigation WG discussed the issue of how to carry on with the work ahead on e-navigation and invited the Sub-Committee to consider tasking the IMO Secretariat to develop a project plan on e-navigation, with support from interested delegations and other international organisations. After discussions in plenary, the Sub-Committee agreed to invite interested parties to submit proposals for the revision of the e-navigation Strategy Implementation Plan (SIP) at the next session. In addition, the international organisations that are involved in the work and progress on e-navigation were invited to provide an up-date on their work to the Organization. The report provided by the IHO at this session was noted as an example.

#### **Agenda Item 28 - Consequential work related to the new Polar Code**

26. After noting the general support for the reconsideration of the performance standards for navigation and communication equipment in support of the implementation of the Polar Code, the Sub-Committee established a Correspondence Group (CG) under the coordination of Germany, agreed its terms of reference and invited MSC 98 to endorse the establishment of the CG.

## Appendix 1

### **Proposed work plan for consideration at the first meeting of the IMO/IHO Harmonization Group on Data Modelling (HGDM)**

(extract from NCSR 4/WP.4)

1. To specify the architecture, implementation and management of the Common Maritime Data Structure (CMDS) necessary to support MSPs, taking into account evolving e-navigation needs, including data streaming, as well as current and future communication means;
2. To identify and propose work to harmonize the development of MSP use cases within the e-navigation concept in accordance with the ToR of the HGDM, as set out below in this annex;
3. To harmonize, in particular, the role of S-100 and the related Geographic Information Registry and of submitting organizations in the implementation and management of the CMDS in order to ensure the harmonization and interoperability of related product specifications;
4. To identify and propose work items that may require further consideration by the HGDM, under its current or revised terms of reference, and develop recommendations to that effect, if and as appropriate; and
5. To submit an interim report to NCSR 5.

#### **Proposed schedule of meetings**

**June 2017:** MSC 98 to consider approving one annual meeting of the HGDM in 2017, requesting C 118 to endorse the meeting to last 5 days, as follows:

**16 - 20 October 2017:** 1<sup>st</sup> meeting of the HGDM

**September 2018:** 2<sup>nd</sup> meeting (expected)

Documents submitted to meetings of the HGDM should be received by the IMO Secretariat at least four weeks prior to each session. Commenting documents should be received at least one week prior to each session.