



IHB File No. S3/3055

CIRCULAR LETTER 34/2015
27 April 2015

**PREPARATION FOR THE 95th SESSION OF
THE IMO MARITIME SAFETY COMMITTEE (MSC)
3 to 12 June 2015, London, United Kingdom**

References:

- A. IHO CL 20/2015 dated 6 March - *IHO contribution to the implementation of e-navigation - Proposed submission to the 95th session of the IMO Maritime Safety Committee;*
- B. IHO CL 78/2014 dated 01 December - *Report on the 94th session of the IMO Maritime Safety Committee;*
- C. IHO CL 50/2014 dated 9 July - *Report on the 1st session of the Sub-Committee on Navigation, Communications and Search and Rescue (NCSR 1);*
- D. IHO CL 24/2015 dated 16 March - *Report on the 2nd session of the Sub-Committee on Navigation, Communications and Search and Rescue (NCSR 2).*

Dear Hydrographer,

1. The Circular Letter in Reference A invited Member States and the Chairs of the relevant IHO subordinate organs to review a proposed IHO submission on the implementation of e-navigation, for consideration by the 95th session of the IMO Maritime Safety Committee (MSC 95), and to provide comments, if any.
2. Seven Member States (Belgium, Canada, Chile, Finland, Portugal, Spain, and United Kingdom) and two Chairs of subordinate organs (SNPWG and S-124 CG) have responded. All responses supported the proposed submission. The responses and the outcome of their review by the IHB are provided in Annex A. The IHO submission was revised accordingly and submitted to the IMO Secretariat. It is now available on the IMODOCS website as document MSC 95/19/14. A copy is attached in Annex B for ease of reference.
3. As announced in Reference B, the 95th session of the IMO Maritime Safety Committee (MSC 95) will take place from 3 to 12 June 2015 at the IMO Headquarters in London, United Kingdom.
4. The provisional agenda for MSC 95 (MSC 95/1) includes three items of specific interest to IHO Member States, namely:
 9. *Human element, training and watchkeeping*
 11. *Navigation, communications and search and rescue*
 19. *Work programme*
5. The work programme for implementing e-navigation will be discussed under item 19. An informative presentation on e-navigation developments coordinated by the Comité International Radio-Maritime (CIRM) is planned at the end of the first day of MSC 95. The presentation will include input from the IHB regarding the IHO perspective. The presentation will be followed by a

reception co-sponsored by BIMCO, CIRM, the International Chamber of Shipping (ICS), the International Maritime Pilots' Association (IMPA) and the IHO.

6. Under item 9, the Committee will be invited to approve a draft MSC circular on *ECDIS - Guidance for good practice*. As reported in Reference C, the draft circular was endorsed by the 1st session of the Sub-Committee on Navigation, Communications and Search and Rescue (NCSR) and forwarded to the Sub-Committee on Human Element, Training and Watchkeeping (HTW) for review. The HTW agreed additional amendments to part E - *ECDIS Training*, part G - *Guidance on training and assessment in the operational use of ECDIS Simulators* and appendix 3 - *Guidance on training and assessment in the operational use of ECDIS Simulators* and has invited the Committee to approve the amended draft.

7. Agenda item 11 will consider the outcome of the 2nd session of the NCSR reported in Reference D.

8. The IHB delegation at MSC 95 will take the opportunity of its first address to the meeting to acknowledge the States which have recently joined the IHO and those which have applied for membership.

9. Member States are encouraged to liaise with and brief their national delegations at MSC 95 on issues of relevance to the IHO.

On behalf of the Directing Committee
Yours sincerely,



Gilles BESSERO
Director

Distribution:

- IHO Member States
- Chair of HSSC
- Chair of WWNWS-SC
- Chair of ENCWG
- Chair of S-100WG
- Chair of SNPWG
- Chair of S-124CG

Annexes

- A: Responses to IHO CL 20/2015 and IHB comments
- B: IHO Submission MSC 95/19/14 (*in English only; the French and Spanish versions will be made available later on the IMODOCS website*)

Responses to IHO CL 20/2015 and IHB comments

Belgium

The proposed submission has been reviewed by our colleagues of the Division Vessel Traffic Assistance of our agency MDK. They have no remarks.

Canada

Canada supports the comments by the IHO on the proposal to approve six outputs on e-navigation in relation to the proposed amended High-level Action 5.2.6, "Development and implementation of e-navigation".

Canada wishes to acknowledge and thank Norway and others for their work on the proposal for six outputs on e-navigation as well as an amended High-level Action 5.2.6.

Chile

We have taken note of the proposed text to be submitted to the MSC 95 session and we would like to offer the following comments:

1. We appreciate the involvement of IHB, on behalf of IHO, in the preparation of the proposal coordinated by Norway to be submitted to the 95th session of the MSC, dealing with e-navigation. We are confident that IMO MSs appreciate IHO's contribution.
2. We feel that there is an inconsistency. On one side the IHB DC decided not to support the final text of Norway, endorsed by several IMO MSs, because it did not consider in full the IHB comments and on the other side, under paragraph 4 of the draft IHO proposal it is indicated that "the IHO supports the proposed amended High-level Action 5.2.6".
3. Examining the text of the draft IHO proposal, we think that the wording referring to proposed outputs N° 1, N° 2, N° 4 and N° 6 really do not strongly contribute to the discussion and do not offer a concrete action to be followed.
4. We agree that we must highlight the concept covered by the comment on the proposed output N° 5.

IHB comment: The IHB confirms that the objective of the IHO paper is to support the proposed amended High-level Action 5.2.6 while inviting further consideration of the scope of the proposed associated outcomes.

Finland

The original document submitted by Norway and others do contain relevant and advocated proposals for the work plan and outputs on implementation of the e-Navigation Strategy.

In addition, the Finnish HO supports a separate submission from IHO as proposed by IHB where our role in implementing e-Navigation is described.

Portugal

The Portuguese Hydrographic Institute has no relevant comments to the proposed text.

Nevertheless, this Institute considers that the proposed outputs will contribute significantly to enhance the safety of navigation and the environment protection, contributing assuredly towards the development of the e-navigation Strategy Implementation Plan, and for a better and sustainable global maritime transportation system.

Spain

Following the review of the documents submitted, this HO has no further comment.

United Kingdom

In response to the above CL, UK have the following comments to make on the outputs from the amended High-level Action 5.2.6.

S-Mode

UK agrees that the impact of S-mode on ECDIS standards is not clearly addressed. Moreover, just implementing this as a set of guidelines would seem unlikely to have the desired effect. Since S-mode is fundamentally about the display of base navigational chart data, the IHO should take a strong lead, aiming for a mandated solution. It is acknowledged that this will have a significant impact on regulators, equipment manufacturers, ship owners and ship operators, but that the safety benefits of global harmonisation will only be delivered through such an approach. Furthermore, and to support any implementation of S-mode, changes to ECDIS software needs to be regulated, otherwise within the current regime there would be no requirement to implement S-mode.

Output 1 as currently defined is immature. It is suggested that a pragmatic starting point is to deliver consolidated user requirements.

INS

UK agrees that new modules for INS can only be considered alongside outputs 5 and 6 and therefore suggest stronger wording to propose that this output should be delayed because of these dependencies. In addition, UK believes that attempts to harmonise too soon are likely to restrict industry led development of user friendly solutions.

UK does not consider this is an area of IHO expertise and is therefore content with a brief statement.

Ship Reporting Systems

UK agrees with the position that the IHO doesn't consider ship reporting to be something it should comment on.

BIIT for Navigational Equipment

UK agrees with the statement that the impact of BIIT for navigation equipment will need to be considered in terms of standards for ECDIS, but wishes to emphasize the point made on S-mode above. Without a mandatory updating regime for ECDIS, any work done on BIIT will only be advisory, and will therefore not be a satisfactory response to what is described in Annex B to CL20 as a 'compelling need'. Considering that this impacts on the integrity of navigational data as displayed on ECDIS, the IHO should strongly propose IMO consideration of mandatory updating of ECDIS as a significant contribution to navigational safety.

Harmonized Display of navigational information

UK agrees with the IHO observation that the HGDM is still dormant, but suggests strengthening this by questioning whether anything is really "ongoing" in terms of development of CMDS.

MSPs

UK agrees with the IHO statement on the development of MSPs, but suggests that further comment is required pointing out that it is unclear how the harmonisation and scrutiny of MSPs will take place, and what this will mean in practice. UK believes that attempts to harmonise MSPs too soon are likely to restrict and the development of innovative solutions. The IHO contribution is to provide the data standards which can be used by service providers.

UK agrees with the stated arrangements for IHO contribution to e-navigation

IHB comment: *The inputs from the United Kingdom have been partially reflected in the amended text of the final IHO submission (paragraphs 5, 9 and 13). The IHB considers that the IHO has no justification to comment on the risk that harmonizing too soon would restrict innovation in relation to Integrated Navigation Systems (INS) and Maritime Service Portfolios (MSPs). The UK proposal that the IHO "take a strong lead aiming for mandated solutions" in relation to the S-Mode and BIIT seems to contradict somewhat the UK position on INS and MSPs and in all cases, the IHB feels that it would be premature.*

Chair of the SNPWG

My comment is related to numbers 11 and 16.

11. As reported in NCSR 2/11, three product specifications based on S-100 which are relevant to navigational warning services are being developed. The IHO is developing S-124 - Navigational warnings. The Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM) of the World Meteorological Organization (WMO) and of the Intergovernmental Oceanographic Commission (IOC) is developing S-411 - Sea ice and S-412 - Met-ocean forecasts.

I understand that these Product Specifications have been reported as being relevant to nav warning services to NCSR.

16. The Nautical Information Provision Working Group (NIPWG) is tasked to develop high level specifications for a combined MSP covering the provision of hydrographic services to mariners, in accordance with the e-navigation SIP.

Would it be feasible to mention that the S-122 (Marine Protected Area) ProdSpec is under development and that it will be the first ProdSpec which will work together with S-124 (Navigational Warnings)?

Background:

Some MPAs are of temporal nature and will be established if indications of the presence of certain types of animals are given. This might be broadcasted based on S-124. The portrayal of such temporal areas (based on S-122) could be initiated (automatically or manually) by the broadcast signal and the ECDIS system internal interaction between S-122 and S-124.

***IHB comment:** The IHB considers that MSC is not the appropriate forum to consider the details of the various S-1xx Product Specifications developed by the SNPWG, at this early stage of their development and of the development of S-124.*

Leader of S-124 CG

My feeling is that the 6 proposed outputs don't reflect enough the tasks related to the shore side to be undertaken to implement e-navigation: maritime services (MSPs) via data and communications (taking into account the revised GMDSS). Thus, I agree with the IHO's draft comments in general and especially those related to the Common Maritime Data Structure (CMDS) and T14, to the MSPs (T17), to the coordination with the on-going review of the GMDSS.

However, I have a small comment about §8: the development of the CMDS and the development of MSPs seem to be pre-requisites to the implementation of the harmonized display of navigation information. They are possibly not pre-requisites to the development of the guideline for the harmonized display (shipboard requirements) which could be seen as the driver of the developments of the CMDS and MSPs. In all cases, these developments are closely linked and should be coordinated.

The §10 seems in line with this point of view.

***IHB comment:** The comment on paragraph 8 is reflected in the text of the final IHO submission.*

IHO Submission MSC 95/19/14

**E**

MARITIME SAFETY COMMITTEE
95th session
Agenda item 19

MSC 95/19/14
14 April 2015
Original: ENGLISH

WORK PROGRAMME

Comments on implementing e-navigation to enhance the safety of navigation and protection of the marine environment

Submitted by the International Hydrographic Organization

SUMMARY

<i>Executive summary:</i>	This document presents comments, from the IHO perspective, on the proposal to approve six outputs on e-navigation in relation to the proposed amended High-level Action 5.2.6, "Development and implementation of e-navigation"
<i>Strategic direction:</i>	5.2
<i>High-level action:</i>	5.2.6
<i>Planned output:</i>	No related provisions
<i>Action to be taken:</i>	Paragraph 19
<i>Related documents:</i>	Resolution MSC.232(82); MSC-MEPC.1/Circ.4/Rev.3; MSC 90/28, MSC 90/28/Add.1; MSC 94/18/8, MSC 94/18/10; MSC 95/19/8; NAV 59/6/4, NAV 59/INF.6; NCSR 2/11 and NCSR 2/22/2

Background

1 This document is submitted in accordance with paragraph 6.12.5 of the *Guidelines on the organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.4/Rev.3), and comments on document MSC 95/19/8.

2 At its ninety-fourth session, the Maritime Safety Committee (MSC) approved the e-navigation Strategy Implementation Plan (SIP), as set out in document NCSR 1/28, annex 7. The Committee also considered document MSC 94/18/8, proposing the plan of work for the Organization for the harmonized implementation and future development of e-navigation, together with document MSC 94/18/10, and recognizing the importance of e-navigation and that the Organization should take a leading role, invited Member Governments to:

- .1 review each of the tasks listed in the SIP with a view to reducing the number of outputs;

[https://edocs.imo.org/Final Documents/English/MS C 95-19-14 \(E\).docx](https://edocs.imo.org/Final Documents/English/MS C 95-19-14 (E).docx)



- .2 prepare a full justification for each reviewed output in accordance with the information required in annex 3 to resolution A.1062(28);
- .3 prepare a comprehensive prioritized plan of work, which should include the time required for the completion of each output; and
- .4 submit the information to MSC 95 for consideration with a view for inclusion in the post-biennial agenda of the Committee.

3 Accordingly, document MSC 95/19/8 submitted by Norway and others proposes an amended High-level Action 5.2.6 on "Development and implementation of e-navigation" and six related outputs:

- .1 guidelines on standardized modes of operation (S-mode);
- .2 an update 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;
- .3 a revision of the *Guidelines and criteria for ship reporting systems* (resolution MSC.43(64), as amended) relating to standardized and harmonized electronic ship reporting and automated collection of onboard data for reporting;
- .4 amendments to the general requirements for shipborne radio equipment forming part of the global maritime distress and safety system (GMDSS) and for electronic navigational aids (resolution A.694(17)) relating to Built-In Integrity Testing (BIIT) for navigation equipment;
- .5 *Guidelines on the harmonized display of navigation information received from communications equipment*; and
- .6 consideration of reports on development and implementation of Maritime Service Portfolios (MSPs) (and other e-navigation reports) by Member States and other international organizations.

4 As a co-sponsor of MSC 94/18/8, the International Hydrographic Organization (IHO) continues to support the proposed amended High-level Action 5.2.6 and its outputs. Subject to their approval by the Committee, the proposed outputs .1, .2, .4, .5 and .6 could potentially impact the work programme of the IHO. This document therefore comments on these five proposed outputs from the perspective of the IHO.

S-mode

5 The S-mode concept is partially implemented in the current IMO ECDIS performance standard (resolution MSC.232(82)) and the associated IHO chart display standard (S-52 – *Specifications for Chart Content and Display Aspects of ECDIS*). If this output introduces additional requirements, the impact on the ECDIS standards will have to be considered. This aspect is not clearly addressed in the analysis of the implications of the proposed output and the IHO questions what would be the real impact of a set of guidelines.

Harmonization of bridge design and display of information

6 The proposal includes the development of a new module to the performance standards for Integrated Navigation Systems (INS) concerning the display of information received via communications equipment. The IHO notes that this component needs to be closely coordinated with proposed outputs 5 (Harmonized display of navigation information) and 6 (Maritime Service Portfolios).

Built-In Integrity Testing (BIIT) for navigation equipment

7 This proposed output addresses the revision of resolution A.694(17) and the associated industry standard IEC 60945. Both documents are referenced in the ECDIS performance standard (MSC.232(82)). If this output is accepted, the impact on ECDIS standards will have to be considered.

Harmonized display of navigation information

8 The development of the Common Maritime Data Structure (CMDS) based on IHO standard S-100 – Universal Hydrographic Data Model and the further development of the relevant proposed Maritime Service Portfolios (output 6) will require to be closely coordinated with the development of guidelines for the harmonized display of navigation information.

9 The development of the CMDS is addressed in task T14 of the e-navigation SIP. Annex 7 of MSC 95/19/8 reports this task as "work ongoing" and refers to the IMO/IHO Harmonization Group on Data Modelling (HGDM) established by MSC 90 (MSC 90/28/Add.1, annex 22). The IHO notes that the HGDM is still dormant and questions whether any significant activities are on-going in terms of development of the CMDS. According to its terms of reference, the HGDM should be chaired by an IMO Member State.

10 Any new requirements affecting the provision of Maritime Safety Information (MSI) arising from the proposed output should be considered in the context of the ongoing review of the Global Maritime Distress and Safety System (GMDSS). Therefore, the IHO recommends that the implementation of the proposed output, if approved, be coordinated closely with that review.

11 As reported in NCSR 2/11, three product specifications based on S-100 and relevant to navigational warning services are being developed. The IHO is developing S-124 – *Navigational warnings*. The Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM) of the World Meteorological Organization (WMO) and of the Intergovernmental Oceanographic Commission (IOC) is developing S-411 – *Sea ice* and S-412 – *Met-ocean forecasts*.

Maritime Service Portfolios

12 The proposed output is limited to the consideration of reports submitted by Member States and international organizations. This proposal is supposed to address task T17 of the e-navigation SIP which aims at developing a resolution on Maritime Service Portfolios (MSPs). That objective is not reflected in the proposal.

13 The IHO notes that the development and implementation of MSPs involve several organizations and require their agreement on the output, in accordance with the deliverable of task T17, and coordination of its delivery by the IMO, in accordance with the recognized leading role of the Organization. It is unclear how the harmonization and scrutiny of MSPs will take place, and what this will mean in practice.

14 As indicated in paragraph 8 above, the further development of the MSPs would seem to be a pre-requisite to the development of guidelines for the harmonized display of navigation information.

Arrangements for the IHO contribution to the e-navigation Strategy Implementation Plan

15 The contribution of the IHO to the e-navigation SIP is coordinated by the IHO Hydrographic Services and Standards Committee (HSSC). The HSSC relies on a number of specialized working groups (WG). A new structure of working groups has been in effect since 1 January 2015.

16 The Nautical Information Provision Working Group (NIPWG) is tasked to develop high level specifications for a combined MSP covering the provision of hydrographic services to mariners, in accordance with the e-navigation SIP.

17 The maintenance of the current IHO standards for ECDIS has been regrouped under the ENC Standards Maintenance Working Group (ENCWG). The S-100 Working Group (S-100WG) leads the development of IHO standards for IHO e-navigation-based services. The development of S-100-based product specifications is now assigned to dedicated project teams or subgroups which draw on the expertise of the relevant organ(s) specialized in the subject-matter and of the S-100WG.

18 The IHO welcomes the participation of expert contributors from other international organizations and from industry.

Action requested of the Committee

19 The Committee is invited to consider the views and information provided above in its deliberations on document MSC 95/19/8 and take whatever action is deemed appropriate.
