INTERNATIONAL HYDROGRAPHIC ORGANIZATION



ORGANISATION HYDROGRAPHIQUE INTERNATIONALE

IHO File No. S3/3075

CIRCULAR LETTER 14/2019 04 March 2019

REPORT ON THE 6TH SESSION OF THE IMO SUB-COMMITTEE ON NAVIGATION, COMMUNICATIONS AND SEARCH AND RESCUE (NCSR 6)

References:

- A. IHO CL 25/2018 dated 12 March Report on the 5th Session of the IMO Sub-Committee on Navigation, Communications, and Search and Rescue;
- B. IHO CL 03/2019 dated 10 January Preparation for the 6th Session of the IMO Sub-Committee on Navigation, Communications, and Search and Rescue (NCSR).

Dear Hydrographer,

1. As announced in Reference A, the 6th session of the Sub-Committee on Navigation, Communications and Search and Rescue (NCSR 6) of the International Maritime Organization (IMO) was held at the IMO Headquarters in London, United Kingdom, from 16 to 25 January 2019. The IHO was represented by Director Abri Kampfer, 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, Brazil, Canada, China, Cyprus, Denmark, Egypt, Finland, France, Germany, Greece, Indonesia, IR of Iran, Ireland, New Zealand, Norway, Poland, Spain, Ukraine and United Kingdom. The following NAVAREA Coordinators were also represented: Australia (X), Canada (XVII & XVIII), France (II), New Zealand (XIV), Norway (XIX), Spain (III) United Kingdom (I) and United States (IV & XII).

2. As indicated in Reference B, the agenda for NCSR 6 included the following items of interest to IHO Member States:

Agenda Item 3: Agenda Item 6:	Routeing measures and mandatory ship reporting systems; Revised General requirements for shipborne radio equipment forming part of the GMDSS and for electronic navigational aids (resolution A.694(17)) relating to Built-In Integrity testing (BIIT) for navigation equipment;
Agenda Item 7:	Guidelines on standardized modes of operation, S-mode, (for navigational equipment);
Agenda Item 8:	Develop guidance on definition and harmonization of the format and structure of Maritime Service Portfolios (MSPs);
Agenda Item 9:	Updating of the GMDSS master plan and guidelines on MSI (maritime safety information) provisions;
Agenda Item 10:	Consequential work related to the new Polar Code;
Agenda Item 11:	Revision of SOLAS chapters III and IV for Modernization of the Global Maritime Distress and Safety System (GMDSS), including related and consequential amendments to other existing instruments;
Agenda Item 12:	Response to matters related to the Radiocommunication ITU-R Study Group and ITU World Radiocommunication Conference; and
Agenda Item 14:	Developments in GMDSS satellite services.

3. The relevant discussions, considerations and decisions / recommendations are summarized in Annex A. All meeting documents and the full report of NCSR 6 (NCSR 6/23) will be available on the IMODOCS website (https://webaccounts.imo.org/) when issued.

Hydrographic information driving marine knowledge

Dates for NCSR 7

4. The 7th session of the NCSR (NCSR 7) is currently scheduled to be held at the IMO Headquarters from 15 to 24 January 2020.

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 outcomes of NCSR 6 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.

6. Hydrographic Offices are requested to consider their NCSR and Maritime Safety Committee (MSC) pre-meeting preparations and engagement with their national maritime administrations when formulating national positions on relevant agenda items, taking into account discussions in the applicable IHO subordinate bodies to ensure a consistent approach is maintained.

7. 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. This is particularly relevant for those agenda items covering aspects of the GMDSS and the display of navigational information on various bridge equipment, for which IHO Member States have a direct interest and expertise.

On behalf of the Secretary-General Yours sincerely,

Abri Kampfer Director

Annex:

A. Summary of the Discussions at NCSR 6

Summary of the Discussions at NCSR 6

Agenda Item 3 - Routeing measures and mandatory ship reporting systems

1. The Sub-Committee approved the draft MSC circular on *Procedure for the submission of documents containing proposals for the establishment of, or amendments to, ships' routeing systems or ship reporting systems*, with a view to submission to the Committee.

2. The Sub-Committee considered the proposal by France and the United Kingdom on consequential amendments to the *Recommendation on navigation through the English Channel and Dover Strait* (resolution A.475(XII), as amended) related to the termination of the voluntary ship reporting system MAREP. After consideration, the Sub-Committee:

.1 approved the draft consequential amendments to the *Recommendation on navigation through the English Channel and the Dover Strait* (resolution A.475(XII), as amended by SN/Circ.167 and SN.1/Circ.263) and invited the Committee to adopt it, with the view to being implemented six months after its adoption; and

.2 noted that other consequential amendments to existing mandatory ship reporting systems arising from the termination of MAREP were being prepared and, in the meantime, any reference to MAREP should be disregarded.

3. The Sub-Committee considered the proposal by France to revoke SN/Circ.232, as amended, on *Traffic separation scheme off Ushant, associated inshore traffic zone, and Passage de Fromveur, Chenal du Four, Chenal de la Helle and Raz de Sein* which had become obsolete. After consideration, the Sub-Committee:

.1 approved the revocations of SN/Circ.232 and SN.1/Circ.232/Add.1, with immediate effect, requested the Secretariat to issue SN.1/Circ.232/Add.2 advising on these revocations, and invited the Committee to endorse the action taken by the Sub-Committee; and

.2 noted that the *Passage du Fromveur*, *Chenal du Four*, *Chenal de la Helle and Raz de Sein* remained dangerous for navigation and unsuitable for international traffic, and that appropriate national measures were being taken to warn navigators.

4. The Sub-Committee approved the establishment of the TSS and associated routeing measures in the *Sunda Strait, Indonesia*, with a view to adoption by the Committee.

5. The Sub-Committee approved the establishment of the TSS and associated routeing measures in the *Lombok Strait, Indonesia*, with a view to adoption by the Committee.

6. The Sub-Committee invited interested Member States to verify the modified co-ordinates for the TSSs in the *Sunda Strait* and *Lambok Strait*, and submit relevant comments to MSC 101, as appropriate.

7. The Sub-Committee approved the establishment of a precautionary area with recommended directions of traffic flow in the *Sunda Strait*, with a view to adoption by the Committee.

8. The Sub-Committee approved the establishment of two precautionary areas with recommended directions of traffic flow in the *Lambok Strait*, with a view to adoption by the Committee.

9. In considering the above proposals by Indonesia, the Sub-Committee noted the information provided by Indonesia on the status of Indonesian archipelagic sea lanes (ASL) axis line geographical coordinates and nautical charts datum references which were stated in resolution MSC.72(69) (*Adoption*,

designation and substitution of ASL), confirming that the coordinates used in the designation of archipelagic sea lanes in this resolution remained the same under WGS 1984 datum.

10. The Sub-Committee considered the proposal by Brazil relating to establishment of an area to be avoided (ATBA) off the Brazilian south-east coast, in the Santos Basin region, for ships not engaged in offshore activities, in order to reduce the possibility of incidents by increasing the safety of navigation, and as an additional measure, to protect the marine environment in the region. The Sub-Committee noted the list of observations in the preliminary assessment and, in particular, that resolution A.671(16) on *Safety zones and safety of navigation around offshore installations and structures* and SN.1/Circ.295 on *Guidelines for safety zones and safety of navigation around offshore installations and structures* had not been adhered to in the proposal. Brazil, noting the list of observations identified in the preliminary assessment, advised that a revised proposal would be submitted to NCSR 7.

11. The Sub-Committee noted the information provided by Canada on the nationally established TSS within the internal waters of Canada – *Vancouver and approaches TSS, off the Strait of Georgia*.

12. The Sub-Committee noted the information provided by Japan related to the results of the questionnaire survey on the recommended route *off the western coast of Izu O Shima Island*.

13. The provisions agreed by the Sub-Committee will now be submitted to the MSC for adoption at its 101st session in June 2019. Implementation of the provisions mentioned will be one year after adoption by the MSC.

Agenda Item 6 - Revised General requirements for shipborne radio equipment forming part of the GMDSS and for electronic navigational aids (resolution A.694(17)) relating to Built-In Integrity testing (BIIT) for navigation equipment

14. The Sub-Committee considered the need to revise the General requirements for shipborne radio equipment forming part of the GMDSS and for electronic navigational aids (resolution A.694(17)) relating to Built-In Integrity Testing (BIIT) for navigation equipment.

15. The NCSR 6 noted that the introduction of BIIT would not achieve the stated aim, given in the e-navigation strategic implementation plan (SIP), of establishing if navigational equipment was displaying the correct information without manually cross checking with other equipment. Accordingly, it was concluded that this output could be deleted from the Sub-Committee's biennial agenda.

Agenda Item 7 - Guidelines on standardized modes of operation, S-mode

16. The Sub-Committee considered the report of the Correspondence Group submitted by Australia, containing draft *Guidelines for the standardization of user interface design for navigation equipment* (the draft guidelines), as set out in annex 1 to the report, a draft revision of SN.1/Circ.243/Rev.1 on *Amended guidelines for the presentation of navigational-related symbols, terms and abbreviations* and draft amendments to resolution MSC.191(79) on *Performance standards for the presentation of navigational displays*, taking into account other documents submitted.

17. In annex 1 of the Guidelines, the Sub-Committee agreed on the long version of the definition for standardization, which was considered a better description for the purpose of the S-mode. The NCSR 6 reviewed and updated icons and abbreviations in tables 1 to 6 in appendix 2 of the draft Guidelines. Particular effort was expended to complete IHO S-52 control of chart display function icons and abbreviations in table 2 of appendix 2, incorporating some proposals contained in another submission, with other modifications. In table 4 of appendix 2, due to the continual existence of raster navigational charts, the NCSR 6 agreed that some of the functions in this table for ENC should also be applied to RNC and made the necessary changes.

18. The Sub-Committee agreed to the draft MSC circular on *Guidelines for the standardization of user interface design for navigation equipment*, and invited the Committee to approve it. The NCSR 6

also agreed to the draft revision of SN.1/Circ.243/Rev.1 on *Guidelines for the presentation of navigational-related symbols, terms and abbreviations*, and invited the Committee to approve it.

Agenda Item 8 - Develop guidance on definition and harmonization of the format and structure of Maritime Service Portfolios (MSPs)

19. The Sub-Committee recalled that MSC 99 had authorized the holding of the second meeting of the IMO/IHO Harmonization Group on Data Modelling (HGDM 2), from 29 October to 2 November 2018 at IMO Headquarters, together with terms of reference approved by NCSR 5. The Sub-Committee further recalled that NCSR 5 had instructed HGDM 2 to consider also the development of a sustainable continuous review process, without substantive involvement of organs of the Organization, and invited domain coordinating bodies to submit the description of maritime services under their remit to HGDM 2.

20. The Sub-Committee considered the report of HGDM 2, chaired by Mr. Sunbae Hong (Republic of Korea). The NCSR 6 agreed with the proposed two-step approach recommended by HGDM 2, i.e. to issue an MSC resolution containing the guidance and further an MSC circular containing the descriptions of maritime services.

21. The Sub-Committee considered a number of document submissions and proposals covering the development of guidance on the definition and harmonization of the format and structure of Maritime Service Portfolios (MSPs). The NCSR 6 considered the proposal from Japan of renaming the term "maritime service" and the title of Maritime Services that include actual and physical services. After a lengthy discussion, the Sub-Committee agreed that the term "maritime service" and the associated individual Maritime Service should remain unchanged.

22. Recognizing the concerns raised during the discussion on the term "maritime service", the Sub-Committee noted that the additional phrase to be inserted into the title of the resolution and the circular would give further clarity, and agreed to add "in the context of e-navigation" after the title of the draft MSC resolution and circular, and corresponding changes were made to the annexes, as appropriate. Furthermore, in appendix 1 of the Guidance, recognizing the important role of the coordinating body of every maritime service for its further development, a new heading was added after section 2 after "Submitting organization" to identify the coordinating body.

23. The Sub-Committee considered the options for the continuous review process of Maritime Services after the adoption of the draft MSC resolution containing the Guidance on the definition and harmonization of the format and structure of Maritime Services. After consideration, the Sub-Committee agreed that the existing output 2.11 (*Develop Guidance on definition and harmonization of the format and structure of maritime service portfolios (MSPs)*) should be renamed to accommodate future work related to the descriptions of maritime services. The NCSR 6 further agreed that this was an interim measure and that the arrangements should be revised in the future according to progress made in the development of descriptions of maritime services.

24. The Sub-Committee agreed for the need for the IMO to take an increased active role in the coordination of maritime service descriptions in the context of e-navigation. The NCSR 6 agreed that the IMO should be listed as a Domain Coordinating body for all Maritime Services along with those organizations already identified.

25. The Sub-Committee approved the draft MSC resolution on Amendments to resolution MSC.191(79), and invited the Committee to adopt it. The NCSR 6 also approved the draft MSC resolution on *Guidance on the definition and harmonization of the format and structure of Maritime Services in the context of e-navigation*, and invited the Committee to adopt it.

26. The Sub-Committee agreed to invite the Facilitation Committee (FAL) to consider the Maritime Service descriptions 4 and 8 and provide comment and advice on the best way forward. The NCSR 6 also agreed to the draft MSC circular on *Initial descriptions of maritime services in the context of e-navigation*, and invited the Committee to approve it

Agenda Item 9 - Updating of the GMDSS master plan and guidelines on MSI (maritime safety information) provisions

27. The Sub-Committee noted the information provided by the Secretariat on updates to the *Global Maritime Distress and Safety System (GMDSS) Master Plan*, as disseminated through GMDSS.1/Circ.22 on 30 July 2018. The completion of the development of the new Global Integrated Shipping Information System (GISIS) module on Shore-based facilities for the GMDSS, to replace the existing GMDSS.1 circulars on the GMDSS Master Plan, including the migration process of the information contained in the annexes of GMDSS.1/Circ.22, was also noted. The NCSR 6 encouraged Member States to check and verify the accuracy of information migrated into the new GMDSS module of the GISIS and, if necessary, to update the information as soon as possible.

28. The Sub-Committee considered the matter of monitoring Enhanced Group Call (EGC) broadcasts over different satellite systems and noted a number of issues that should be addressed for an overall monitoring. A number of delegations expressed concerns regarding the possible involvement of IMSO in MSI monitoring or in related MSI operational issues; views were expressed that the oversight functions of IMSO were only related to clearly defined communication services provided by recognized satellite service providers. The NCSR 6 noted the explanation provided by the Chair of the International SafetyNET Panel, supported by the observer of WMO, that monitoring of MSI messages was the responsibility of the source of the information and that there would be no role for IMSO.

29. Support was expressed by Member States for a single point of distribution concept, which could be one of the possible solutions to address MSI distribution through multiple recognized satellite service providers, and which should be as straightforward as possible by using a simple interface. In this context, it was noted that urgent consideration should be given to this issue due to the introduction of new GMDSS satellite service providers. In addition, concerns were expressed regarding possible financial implications associated with the introduction of new GMDSS satellite service providers and the distribution of MSI over multiple systems.

30. After consideration, the Sub-Committee agreed that the function of oversight of services, and MSI related operational functions, could not be performed by a same entity or organization. In this regard, the NCSR 6 agreed that Member States and international organizations should be invited to submit proposals at a future session to address the monitoring issues of EGC messages in a multi-provider environment.

31. The Sub-Committee considered the information provided by the United States on the progress made in the development of an operational manual for the Iridium mobile satellite enhanced group call service, including the current draft of the Iridium global satellite enhanced group calling system Manual. During the consideration, a view was expressed that the use of the abbreviation "EGC" throughout the manual should be avoided to avoid confusion with the general use of the term "enhanced group call".

32. After consideration, the Sub-Committee agreed that when the draft of the Iridium global satellite enhanced group call system Manual was sufficiently developed, the same process could be followed as the one agreed for Fleet Safety (i.e. circulation by means of an MSC circular providing interim guidance). In this context, the NCSR 6 noted that the draft of the Iridium global satellite enhanced group call system Manual was expected to be reviewed by the IHO WWNWS Sub-Committee Document Review Working Group, at its seventeenth meeting, taking place from 29 to 31 January 2019 at the IMO, and that if the draft were to be sufficiently developed, it would be submitted by the IHO WWNWS-SC to the next session of the Committee for circulation as provisional text.

33. The Sub-Committee reviewed the draft revised Terms of Reference and Authorization and Certification Process and proposed new name for the International SafetyNET Coordinating Panel. After lengthy discussions the NCSR 6 agreed the proposed revisions and the re-naming to be the IMO Enhanced Group Call (EGC) Coordinating Panel to align with the IMO NAVTEX Coordinating Panel.

34. The Sub-Committee considered supplementary information on the Inmarsat Fleet Safety for inclusion in the International SafetyNET Manual and prepared an interim guidance pending its inclusion in the revised International SafetyNET Manual. In this connection, having agreed that specifications for equipment installation should not be addressed in draft COMSAR/Circ.32 (under review as part of the amendments consequential to the modernization of the GMDSS), the NCSR 6 agreed to the draft interim guidance on the technical requirements for Fleet Safety, including its installation specifications, and the associated draft MSC circular, with a view to adoption by MSC 101.

35. The Sub-Committee considered draft amendments to *Recommendation on promulgation of Maritime Safety Information* (resolution A.705(17), as amended), and the associated draft MSC resolution. In this regard, the NCSR 6 discussed at length whether or not SAR-related information should formally be part of the NAVTEX broadcast messages and it was noted that there might not be a common understanding of whether the term "distress traffic" included SAR-related information.

36. The Sub-Committee approved the draft revised *Recommendation on promulgation of Maritime Safety Information*, and the associated draft MSC resolution, with a view to adoption by MSC 101. However the differences remained on whether SAR-related information should be included as part of NAVTEX broadcast messages, and in fact whether SAR should be considered as MSI. This was a result of the proposed amendments to SOLAS chapter IV, in which a revised definition had been proposed to include 'Search and Rescue related information'. It was noted that this was contrary to the information contained in the *IMO NAVTEX Manual* (MSC.1/Circ.1403/Rev.1) dated 25 November 2016 and remained to be resolved by the Correspondence Group and the IMO/ITU Expert Group with appropriate input from relevant bodies.

37. The Sub-Committee approved the draft revised *IMO/IHO Worldwide Navigational Warning Service* (resolution 706(17), as amended) guidance document, and the associated draft MSC resolution, with a view to adoption by MSC 101. In addition the NCSR 6 approved the draft revised *IMO/WMO World-Wide Met-Ocean information and Warning Service* (resolution 1051(27) guidance document, and the associated draft MSC resolution, with a view to adoption by MSC 101.

Agenda Item 10 - Consequential work related to the new Polar Code

38. The Sub-Committee considered the draft *Guidance for navigation and communication equipment intended for use on ships operating in polar waters*, as set out in the annex to the report of the Correspondence Group, taking into account the comments made. Regarding the echo sounding equipment guidance in section B.8, having deleted the reference to mechanical shock in module A, the NCSR 6 observed that ships expecting ice break situations would be strengthened to ensure the transducers fitted would be able to withstand mechanical shocks and made corresponding deletion of this item from this module.

39. The Sub-Committee considered the proposed inclusion in the draft guidance of a recommendation that one of the two echo-sounders required by the provisions in the Polar Code, part I-A, paragraph 9.3.2.1.1 should have a forward-looking capability, as well as recommendations relevant to Ship Security Alert Systems (SSAS). After consideration, the NCSR 6 agreed that these recommendations should not be included in the draft guidance.

40. The Sub-Committee agreed to the draft MSC circular on *Guidance for navigation and* communication equipment intended for use on ships operating in polar waters, and invited the Committee to approve it.

Agenda Item 11 - Revision of SOLAS chapters III and IV for Modernization of the Global Maritime Distress and Safety System (GMDSS), including related and consequential amendments to other existing instruments

41. The Sub-Committee considered the draft amendments to SOLAS chapters III and IV and endorsed the agreement that the remaining work concerning the draft amendments to SOLAS chapters III and IV should focus on unresolved issues identified in square brackets and the revision of all footnotes

in SOLAS chapter IV. The NCSR 6 agreed, in principle, to the draft amendments to SOLAS chapters III and IV, other than the remaining work identified and endorsed the agreement with regard to the actions by the Sub-Committee on Ship Systems and Equipment (SSE) in connection with the draft amendments to SOLAS chapters III and IV, including any consequential amendments to existing instruments. The Sub-Committee noted the consideration with regard to the actions by the Sub-Committee on Human Element, Training and Watchkeeping (HTW) in connection with the draft amendments to SOLAS chapters III and IV, including any consequential amendments to existing instruments.

42. The Sub-Committee noted the progress made on the consequential amendments to existing instruments related to the amendments to SOLAS chapters III and IV and endorsed the updated draft work plan for the review of existing instruments related to the amendments to SOLAS chapters III and IV.

43. The Sub-Committee approved the draft terms of reference for the 15th meeting of the Joint IMO/ITU Experts Group on Maritime Radiocommunication Matters and agreed with the advice by the Group that five days were required for the meeting, which is programmed to be held 8 to 12 July 2019 at the IMO in London. The NCSR 6 also endorsed the re-establishment of the Correspondence Group on the Modernization of the GMDSS, under the coordination of United States, and approved its terms of reference. The contact details for the coordinator are:

Mr. Robert L. Markle Markle Marine Safety Services 206 Johnston Farm Lane Woodstock, GA 30188 United States Tel./Text: +1 703 283-2266 Email: bob@markle.com

Agenda Item 12 - Response to matters related to the Radiocommunication ITU-R Study Group and ITU World Radiocommunication Conference

44. The Sub-Committee recalled that NCSR 5 had instructed IMO/ITU EG 14 to prepare the necessary liaison statements on the possible interferences with L-band maritime satellite communications, and to forward them directly to ITU-R Working Party 5B (WP 5B) and the European Conference of Postal and Telecommunications Administrations (CEPT). The NCSR 6 noted that MSC 99 had endorsed the above action and, having noted that the issue of possible interference of terrestrial mobile communications with L-band maritime satellite communications was of great concern to the maritime industry, encouraged maritime administrations to liaise closely with their national authorities attending meetings of ITU and regional bodies concerned with spectrum management, with the aim of addressing this safety critical issue.

45. Furthermore, MSC 99 had requested the Secretariat to send a letter to ITU outlining the concerns; stressing the effect on Global Maritime Distress and Safety System (GMDSS) services; and bringing to their attention the concerns of the Organization regarding ensuring safety of life at sea.

Agenda Item 14 - Developments in GMDSS satellite services

46. The Sub-Committee noted that MSC 99, following consideration of the report of NCSR 5, adopted resolution MSC.450(99) on *Statement of recognition of maritime satellite services provided by Inmarsat Global Ltd.* In addition the NCSR 6 noted that MSC 99, after a lengthy debate, adopted resolution MSC.451(99) *on Statement of recognition of the maritime mobile satellite services provided by Iridium Satellite LLC* and invited IMSO to monitor the implementation and report to the Committee when the Public Services Agreement (PSA) with Iridium had been concluded and the Letter of Compliance had been issued.

47. The Sub-Committee noted that MSC 99, having considered a document submitted by China, forwarding an application for the recognition of the BeiDou Message Service System (BDMSS) and use in the GMDSS, and informing that, in compliance with the criteria specified in resolution A.1001(25), all necessary information for the evaluation of the satellite system would be made available to the Organization, had referred the application to the NCSR Sub-Committee for evaluation of the detailed information, to be provided in due course, and authorized the Sub-Committee to invite IMSO to conduct the Technical and Operational Assessment, as appropriate. The NCSR 6, having noted the information provided by China related to BDMSS, including its status, functional capabilities and development plan, invited China to provide all the necessary information to the Sub-committee in due course for evaluation of the satellite system in relation to the criteria set out in resolution A.1001(25), taking into account the guidance laid down in MSC.1/Circ.1414.

48. The Sub-Committee noted the concerns expressed by the delegation of the Russian Federation regarding the decrease in the coverage area of the Inmarsat SafetyNET system in certain geographic areas, particularly after the migration of services from Inmarsat-3 to Inmarsat-4 satellites in 2018. The Russian Federation referred in particular to the altered service area of the system for the Indian Ocean region and, especially, in the Arctic zone, resulting in a reduction of services in European waters, excluding some areas with heavy ship traffic from coverage. It was further noted that the Russian Federation and Inmarsat were working together to find mutually acceptable technical solutions to improve the situation and maintain an adequate level of navigation safety in the NAVAREAs under the responsibility of the Russian Federation. The Russian Federation agreed to inform IMO on the results of this work. The NCSR 6 also noted the concerns expressed by the United States, referring in particular to the Inmarsat-4 coverage map, as presented in figure 3 of NCSR 6/14, which showed gaps in coverage in the regions of Alaska and Greenland and in the southern part of the Pacific and Atlantic oceans that did not exist before under the previous satellite constellation.

Agenda Item 21 - Election of Chair and Vice-Chair for 2019

49. The Sub-Committee unanimously elected Mr Ringo Lakeman (Netherlands), as Chair, and Mr Nigel Clifford (New Zealand), as Vice-Chair, for 2019

Agenda Item 22 - Any other business

50. The Sub-Committee noted the information provided by Denmark and the United Kingdom related to the United Kingdom Marine Accident Investigation Branch (MAIB) and Danish Maritime Accident Investigation Board (DMAIB) safety study of ECDIS use on board ships. Maritime administrations, national Hydrographic Offices and other interested parties were invited to take any actions considered appropriate as a result of the information provided in the study.