

JOINT IMO/ITU EXPERTS GROUP ON
MARITIME RADIOCOMMUNICATION
MATTERS
16th meeting
Agenda item 9

IMO/ITU EG 16/WP.1
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ENGLISH ONLY

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DRAFT REPORT TO THE NCSR SUB-COMMITTEE AND ITU

1 INTRODUCTION

1.1 The sixteenth meeting of the Joint IMO/ITU Experts Group on Maritime Radiocommunication Matters (the Group) was held by correspondence, from Friday, 3 July to Friday, 18 September 2020, chaired by Mr. C. Rissone (France).

1.2 Delegations from the following Member States registered to participate in the meeting:

ANGOLA	NETHERLANDS
AUSTRALIA	NEW ZEALAND
BELGIUM	NICARAGUA
CANADA	NIGERIA
CHILE	NORWAY
CHINA	REPUBLIC OF KOREA
EQUATORIAL GUINEA	ROMANIA
FINLAND	RUSSIAN FEDERATION
FRANCE	SAUDI ARABIA
GERMANY	SOUTH AFRICA
INDONESIA	SPAIN
IRAN (ISLAMIC REPUBLIC OF)	TURKEY
IRELAND	UNITED KINGDOM
JAPAN	UNITED STATES
MARSHALL ISLANDS	

1.3 Representatives from the following United Nations specialized agency also registered their participation:

INTERNATIONAL TELECOMMUNICATION UNION (ITU)

as well as observers from the following intergovernmental organizations:

INTERNATIONAL HYDROGRAPHIC ORGANIZATION (IHO)
EUROPEAN COMMISSION (EC)
INTERNATIONAL MOBILE SATELLITE ORGANIZATION (IMSO)

EUROPEAN CONFERENCE OF POSTAL AND TELECOMMUNICATIONS
ADMINISTRATIONS (CEPT)

and from the following non-governmental organizations in consultative status:

INTERNATIONAL CHAMBER OF SHIPPING (ICS)
INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)
INTERNATIONAL ASSOCIATION OF MARINE AIDS TO NAVIGATION AND
LIGHTHOUSE AUTHORITIES (IALA)
COMITE INTERNATIONAL RADIO-MARITIME (CIRM)
BIMCO
INTERNATIONAL TRANSPORT WORKERS' FEDERATION (ITF)

2 ADOPTION OF THE AGENDA (AGENDA ITEM 1)

2.1 The Group noted that the Maritime Safety Committee (MSC), at its 101th session (5 to 14 June 2019), authorized the convening of this meeting, and the Sub-Committee on Navigation, Communications and Search and Rescue (NCSR), at its seventh session (15 to 24 January 2020), approved the terms of reference, which were made available in Circular Letter No.4265.

2.2 The Group noted also the meeting arrangements for participation and submission of comments, as contained in Circular Letter No.4265/Add.1.

2.3 The Group agreed on the provisional agenda for the meeting, as set out in document IMO/ITU EG 16/1.

3 BRIEFING ON THE OUTCOME OF RELEVANT IMO AND ITU BODIES (AGENDA ITEM 2)

Outcome of NCSR 7

3.1 The Group noted information provided by the Secretariat (IMO/ITU EG 16/2) on issues of relevance emanating from the outcome of NCSR 7.

4 CONSIDERATION OF THE OUTCOME OF WRC-19 AND PREPARATION OF INITIAL ADVICE ON A DRAFT IMO POSITION ON WRC-23 AGENDA ITEMS CONCERNING MATTERS RELATING TO MARITIME SERVICES (AGENDA ITEM 3)

Outcome of WRC-19

4.1 The Group noted information provided by the Secretariat (IMO/ITU EG 16/3) on issues of relevance to IMO concerning the outcome of WRC-19.

Preliminary draft IMO position on relevant WRC-23 agenda items

4.2 The Group considered an initial draft for the development of the Preliminary IMO position on relevant WRC-23 agenda items submitted by the Secretariat (IMO/ITU EG 16/3/1), including comments and proposals submitted by China (IMO/ITU EG 16/3/2) and IMSO (IMO/ITU EG 16/3/3), taking into account comments by IMSO (IMO/ITU EG 16/3/Comment/1), the United States (IMO/ITU EG 16/3/Comment/2 and IMO/ITU EG 16/3/Comment/3), China (IMO/ITU EG 16/3/Comment/4), the United Kingdom (IMO/ITU EG 16/3/Comment/5) and Nigeria (IMO/ITU EG 16/3/Comment/6).

4.3 The proposals and comments considered by the Group were summarized in the paragraphs 4.5 to 4.15 below.

4.4 The Group invited NCSR 8 to note the proposals and comments and further develop the preliminary draft IMO position on relevant WRC-23 agenda items concerning matters relating to maritime services, as set out in annex 1¹.

WRC-23 agenda item 1.1

4.5 The Group considered a proposal by IMSO (IMO/ITU EG 16/3/3) on the development of an IMO position under WRC-23 agenda item 1.1 to avoid interference to GMDSS terminals operated by a recognized mobile satellite service in the frequency band 1 518-1 525 MHz and beyond to 1 559 MHz from International Mobile Telecommunications (IMT).

4.6 In this context, the Group noted comments on agenda item 1.1 submitted by:

- .1 the United States (IMO/ITU EG 16/3/Comment/3), noting that the proposal by IMSO to amend agenda item 1.11 concerning protection of interference to GMDSS terminals could be addressed instead under agenda item 1.1 (see paragraph 4.12.2);
- .2 China (IMO/ITU EG 16/3/Comment/4), supporting further actions to avoid interference to GMDSS terminals, but expressing the view that the proposal by IMSO could be out of the terms of reference of agenda item 1.1 and that, as indicated in Resolution 223 (Rev.WRC-19), the results of studies might be included in one or more ITU-R Recommendations and Reports, as appropriate; and
- .3 Nigeria (IMO/ITU EG 16/3/Comment/6), supporting the consideration of actions regarding protection of L-band maritime mobile satellite services.

4.7 Based on the above comments, the Group agreed that further consideration on this proposal would be required. Thus, the Group invited interested Member States and organizations to submit proposals to NCSR 8, as appropriate.

WRC-23 agenda items 1.2 and 1.3

4.8 The Group considered a proposal by IMSO (IMO/ITU EG 16/3/3) on the development of an IMO position under WRC-23 agenda items 1.2 and 1.3 to ensure no change in allocation of IMT networks in the band 3 600-3 800 MHz, which is immediately adjacent to the C-band feeder links used by recognized mobile satellite services operating in the frequency band 3 550-3 700 MHz, and to safeguard C-band for critical satellite communications services.

4.9 In this context, the Group noted comments and proposals on agenda items 1.2 and 1.3 submitted by:

- .1 IMSO (IMO/ITU EG 16/3/Comment/1), providing draft text for inclusion in the preliminary IMO position under agenda items 1.2 and 1.3 to ensure the continuity of existing and potential GMDSS recognized mobile satellite services;

¹ Refer to IMO/ITU EG 16/WP.1/Add.1.

- .2 the United States (IMO/ITU EG 16/3/Comment/2), supporting the preparation of an IMO position for further action at WRC-23, as proposed by IMSO, and proposing draft text and amendments to the preliminary draft text presented by the Secretariat (IMO/ITU EG 16/3/1);
- .3 China (IMO/ITU EG 16/3/Comment/4), supporting the protection of C-band feeder links used by GMDSS mobile satellite services when considering the potential identification to IMT in the frequency band 3 600-3 800 MHz;
- .4 the United Kingdom (IMO/ITU EG 16/3/Comment/5), proposing draft text for inclusion in the preliminary draft IMO position, as background information, in response to the information provided by IMSO (IMO/ITU EG 16/3/3); and
- .5 Nigeria (IMO/ITU EG 16/3/Comment/6), supporting the need to protect both L-band service links operating (space-to-Earth 1 518-1 559 MHz and Earth-to-space 1 626.5-1 660.5 MHz) and C-band feeder links (space-to-Earth 3 550-3 700 MHz and Earth-to-space 6 425-6 575 MHz) to maintain critical safety of life services provided as part of the GMDSS.

4.10 Based on the above comments, the Group updated the preliminary draft IMO position on WRC-23 agenda items 1.2 and 1.3, for further consideration by NCSR 8.

WRC-23 agenda item 1.11

4.11 The Group considered a proposal by China (IMO/ITU EG 16/3/2) providing draft text for inclusion in the preliminary IMO position under agenda item 1.11 concerning ongoing developments related to the recognition and use of BeiDou Message Service System (BDMSS) in the GMDSS.

4.12 In this context, the Group noted comments on agenda item 1.11 submitted by:

- .1 IMSO (IMO/ITU EG 16/3/Comment/1), proposing additional draft text for inclusion under agenda item 1.11, complementing the draft provided by China (IMO/ITU EG 16/3/2), adding also background information and an IMO position on the need to protect any possible interference to GMDSS terminals operated by a recognized mobile satellite service;
- .2 the United States (IMO/ITU EG 16/3/Comment/2 and IMO/ITU EG 16/3/Comment/3), proposing amendments to the draft text submitted by China (IMO/ITU EG 16/3/2), including an IMO position to confirm the ITU satellite coordination status of potential additional GMDSS mobile satellite service providers, and, in particular, the deletion of complementary text submitted by IMSO (IMO/ITU EG 16/3/Comment/1) referring to protection of interference to GMDSS terminals, indicating that this was a matter that could be addressed under agenda item 1.1;
- .3 China (IMO/ITU EG 16/3/Comment/4), expressing the view that, as indicated in Resolution 223 (Rev.WRC-19), the results of studies might be included in one or more ITU-R Recommendations and Reports, as appropriate; and
- .4 Nigeria (IMO/ITU EG 16/3/Comment/6), supporting the consideration of action regarding the protection of L-band maritime mobile satellite services.

4.13 Based on the above comments, the Group updated the preliminary draft IMO position on WRC-23 agenda item 1.11, for further consideration by NCSR 8.

WRC-23 agenda items 1.15, 1.16 and 1.17

4.14 The Group noted the comments by IMSO (IMO/ITU EG 16/3/Comment/1), provided during the commenting stage, on WRC-23 agenda items 1.15, 1.16 and 1.17 and, recognizing the need for further discussion and consideration, invited interested Member States and organizations to submit proposals to NCSR 8, as appropriate.

WRC-23 agenda item 4

4.15 The Group noted the comments by Nigeria (IMO/ITU EG 16/3/Comment/6), provided during the commenting stage, on WRC-23 agenda item 4 recommending that the IMO/ITU Experts Group should take steps to call for a revision of Resolution 223 at WRC-23 to ensure the protection of critical GMDSS services using L-band and C-band and, recognizing the need for further discussion and consideration, invited interested Member States and organizations to submit proposals to NCSR 8, as appropriate.

5 CONSIDERATION OF RELEVANT WORK IN ITU-R (AGENDA ITEM 4)

No documents were submitted under this agenda item.

6 MODERNIZATION OF THE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS) (AGENDA ITEM 5)

Draft amendments to the 1974 SOLAS Convention

6.1 The Group reviewed the draft amendments to SOLAS chapters III and IV and the forms of certificates and records of equipment, agreed in principle by NCSR 7, submitted by the Secretariat (IMO/ITU EG 16/5), and considered comments and proposed editorial corrections submitted by the United States (IMO/ITU EG 16/5/9) and the Secretariat (IMO/ITU EG 16/5/20 and IMO/ITU EG 16/5/21), taking also into account comments on the above documents submitted by France (IMO/ITU EG 16/5/Comment/1), the United States (IMO/ITU EG 16/5/Comment/3 and IMO/ITU EG 16/5/Comment/7), Japan (IMO/ITU EG 16/5/Comment/8), Germany (IMO/ITU EG 16/5/Comment/14), the Russian Federation (IMO/ITU EG 16/5/Comment/15) and the United Kingdom (IMO/ITU EG 16/5/Comment/16).

6.2 The main editorial corrections considered by the Group were summarized in paragraphs 6.4 to 6.24 below. Minor editorial corrections not requiring consideration were reflected directly in the draft amendments.

6.3 The Group invited NCSR 8 to consider the updated draft amendments to SOLAS chapters III and IV, including related amendments to the forms of certificates and records of equipment, as set out in annex 2².

Regulation III/6 – Communications

6.4 The Group revised the text of the amendment to regulation III/6 in order to clarify the number of regulations being amended. The related footnote was also amended to clarify that

² Refer to IMO/ITU EG 16/WP.1/Add.2. All the editorial corrections were indicated with track changes (red and blue).

the provisions related to two-way VHF radiotelephone apparatus and search and rescue locating devices were relocated under chapter IV (not the regulations) and the reason for retaining the paragraph numbers in regulation III/6.

Regulation IV/2 – Terms and definitions

6.5 The Group agreed that the existing definition of "Direct-printing telegraphy" and the proposed new definition for "Enhanced Group Call (EGC)" should be deleted as these terms would no longer be used in the chapter.

6.6 The Group agreed also to amend the term "SART" as "Radar SART" to provide a clear distinction with "AIS-SART". Other parts of the chapter were also amended accordingly.

6.7 During the commenting stage, the United Kingdom (IMO/ITU EG 16/5/Comment/16) invited the Group to consider amending the last part of the definition of "Maritime Safety Information (MSI)" to include the phrase "delivered through coordinated broadcast to ships" and append a sentence stating that "The international services are delivered in the English language".

6.8 Noting that the above proposal could require further consideration, the Group invited interested Member States and organizations to submit proposals to NCSR 8, as appropriate.

Regulation IV/5 – Provision of radiocommunication services

6.9 The Group agreed to amend the footnote under regulation IV/5.2 to clarify that the information on shore-based facilities for the GMDSS is no longer circulated by means of GMDSS circulars, but rather through the Global Integrated Shipping Information System (GISIS).

Regulation IV/7 – Radio equipment: General

6.10 During the commenting stage, the Group was invited to consider:

.1 a comment by Germany (IMO/ITU EG 16/5/Comment/14) concerning the requirement in regulation IV/7.1.1.2 for VHF radio installations for radiotelephony on the frequencies 156.300 MHz (channel 6), 156.650 MHz (channel 13) and 156.800 MHz (channel 16), given that current marine radios can operate in all RR Appendix 18 frequencies; and

.2 a proposal by the United States (IMO/ITU EG 16/5/Comment/7) concerning the addition of a new footnote to regulation IV/7.1.4 clarifying carriage requirements, as follows:

"* This information is provided for certain coastal areas by International NAVTEX service in English on 518 kHz, and by national NAVTEX services on 490 kHz or 4 209.5 kHz which may be in other languages. Beyond NAVTEX service areas information is provided by recognized mobile satellite service providers using an EGC service. In order to meet this regulation, ships operating in NAVTEX service areas need to be equipped with a NAVTEX receiver, and ships that operate beyond any NAVTEX area need to be equipped with an EGC receiver operating on a recognized mobile satellite service."

6.11 Noting that the above proposals would require further consideration, the Group invited interested Member States and organizations to submit proposals to NCSR 8, as appropriate.

Regulation IV/8 – Radio equipment: Sea area A1

6.12 In order to enhance presentation and readability, the Group agreed to relocate the options to fulfil the requirement of regulation IV/8.1.1 concerning a radio installation capable of initiating the transmission of ship-to-shore distress alerts operating through the satellite service on 406 MHz, under a new paragraph 2.

Regulation IV/9 – Radio equipment: Sea areas A1 and A2

6.13 The Group agreed to reinstate existing regulation IV/9.1.2 to retain the option for a separate radio installation capable of maintaining a continuous DSC watch on the frequency 2 187.5 kHz. Consequently, the related amendment to regulation 9.1.1 was deleted.

6.14 Similarly as done under regulation IV/8, the Group agreed to relocate the options to fulfil the requirement of regulation IV/9.1.3 concerning a secondary means of initiating the transmission of ship-to-shore distress alerts under a new paragraph 3.

Regulation IV/10 – Radio equipment: Sea areas A1, A2 and A3

6.15 The Group agreed to reinstate existing regulation IV/10.1.3 to retain the option for a separate installation capable of maintaining a continuous DSC watch on the frequency 2 187.5 kHz, as done under regulation 9. Consequently, the related amendment to regulation 10.2 was deleted.

6.16 In addition and consistent with the amendments to regulations IV/8 and 9, the Group agreed to relocate the options to fulfil the requirement of regulation IV/10.1.4.1 under a new paragraph 3.

Regulation IV/11 – Radio equipment: Sea areas A1, A2 and A4

6.17 The Group agreed to relocate the options to fulfil the requirement of regulation IV/11.1.3 under a new paragraph 4, as done with previous regulations.

6.18 The Group agreed also to convert draft regulation 11.1.4 into a separate paragraph 2 under this regulation, including consequential renumbering of existing paragraphs.

6.19 The Group considered a proposal by the United States (IMO/ITU EG 16/5/Comment/7), submitted during the commenting stage, recommending to reinstate sea area "A3" as part of the title of regulation IV/11, on the understanding that regulation 11 should apply to ships engaged on voyages beyond sea areas A1 and A2 and A3, but remaining within sea area A4. In this context, the Group noted a comment by the Russian Federation (IMO/ITU EG 16/5/Comment/15) indicating that regulation IV/11 should define the equipment that shall be carried by ships engaged in voyages in sea areas A1, A2 and A4 and that sea area A3 should not be part of this regulation, according to the definitions for sea areas provided under regulation IV/2.

6.20 Noting that draft regulation IV/11 did not contain any requirements for carriage of equipment provided for sea area A3 (i.e. recognized mobile satellite service ship earth station), the Group agreed to keep the title of the regulation, as agreed by NCSR 7.

Appendix – Certificates

6.21 In order to improve presentation and avoid repetition, the Group agreed to consolidate the draft amendments to the forms of certificates and records of equipment into fewer paragraphs.

6.22 The Group agreed also to correct references to items to be deleted in the Record of Equipment for Cargo Ship Safety (Form E) and Record of Equipment for Cargo Ship Safety (Form C) taking into account the amendments adopted by resolution MSC.380(94) (concerns renumbering only).

6.23 The Group agreed further to remove the draft amendments to the Cargo Ship Safety Certificate from the set of amendments to the 1974 SOLAS Convention and to include them as draft amendments to the Protocol of 1988 relating to the 1974 SOLAS Convention.

6.24 In addition to the above, the Group agreed to amend references to "Secondary means of alerting" in the records of equipment to read "Secondary means of initiating the transmission of ship-to-shore distress alerts".

Consequential amendments to existing instruments other than SOLAS

Amendments to SOLAS Protocols and related Codes

6.25 The Group considered proposals related to consequential amendments to the 1978 and 1988 SOLAS Protocols, the 1989 and 2009 MODU Codes, the 1994 and 2000 HSC Codes, the 1983 and 2008 SPS Codes and the Polar Code, as indicated in the following paragraphs.

1978 and 1988 SOLAS Protocols

6.26 The Group considered draft amendments to the 1988 SOLAS Protocol submitted by the Secretariat (IMO/ITU EG 16/5/21) and prepared related amendments to the forms of certificates (i.e. Passenger Ship Safety Certificate and Cargo Ship Safety Certificate), as set out in annex 3³, for consideration by NCSR 8.

6.27 The Group noted that no amendments to the 1978 SOLAS Protocol were necessary in connection to the draft amendments to SOLAS chapters III and IV.

1989 and 2009 MODU Codes

6.28 The Group considered draft amendments to the Code for the Construction and Equipment of Mobile Offshore Drilling Units, 2009 (2009 MODU Code) (resolution A.1023(26), as amended) submitted by Ireland (IMO/ITU EG 16/5/4), taking into account comments by the Secretariat (IMO/ITU EG 16/5/22), France (IMO/ITU EG 16/5/Comment/2) and the United States (IMO/ITU EG 16/5/Comment/7).

6.29 The Group reviewed the draft amendments to the 2009 MODU Code, taking into account the updated draft amendments to SOLAS chapter IV, and prepared the requisite draft MSC resolution.

6.30 Based on the draft amendments to the 2009 MODU Code, preliminary draft amendments to the 1989 MODU Code (resolution A.649(16), as amended), which is still in force for existing MODUs built before 1 January 2012, were prepared by the Secretariat,

³ Refer to IMO/ITU EG 16/WP.1/Add.2.

including the requisite MSC resolution. The Group noted that some issues would still require further consideration, in particular, concerning radio equipment requirements for MODUs drilling in different sea areas (refer to annex 5, paragraph 11.5.2, text in square brackets).

6.31 The Group noted also that the footnote under paragraph 11.9 of both Codes, containing the list of Performance Standards, should be updated at a later stage in line with the footnote under SOLAS regulation IV/14.

6.32 The Group invited NCSR 8 to consider the draft amendments to the 2009 MODU Code and the preliminary draft amendments to the 1989 MODU Code, including the requisite MSC resolutions, as set out in annexes 4 and 5⁴, respectively, noting that further work on the draft amendments was still required.

6.33 The Group invited also interested Member States and organizations to review the preliminary draft amendments to the 1989 MODU Code and submit proposals to NCSR 8, as appropriate.

1994 and 2000 HSC Codes

6.34 The Group considered draft amendments to the International Code of Safety for High-speed Craft, 2000 (2000 HSC Code) (resolution MSC.97(73), as amended) submitted by Norway (IMO/ITU EG 16/5/5), taking into account comments by the Secretariat (IMO/ITU EG 16/5/22), France (IMO/ITU EG 16/5/Comment/2), the United States (IMO/ITU EG 16/5/Comment/7), Germany (IMO/ITU EG 16/5/Comment/14) and the United Kingdom (IMO/ITU EG 16/5/Comment/16).

6.35 The Group considered also draft amendments to the International Code of Safety for High-speed Craft, 1994 (1994 HSC Code) (resolution MSC.36(63), as amended) submitted by the Secretariat (IMO/ITU EG 16/5/22). The Group noted that the whole text of chapter 14 on radiocommunications had been replaced in the past by a paragraph referring to the provisions contained in chapter 14 of the 2000 HSC Code.

6.36 The Group reviewed the draft amendments to the 1994 and 2000 HSC Code, taking into account the updated draft amendments to SOLAS chapter IV, and prepared the requisite draft MSC resolutions.

6.37 During the review process, the Group noted that further consideration was needed with regard to:

- .1 the need to amend also chapter 8 (Life-saving appliances and arrangements), section 8.2 (Communications), concerning two-way VHF radiotelephone apparatus and search and rescue locating devices, as well as amendments to the Record of equipment for High-Speed Craft Safety Certificate, set out in annex 1 of both Codes;
- .2 references in paragraph 14.7.1.3 referring to provisions contained in chapter 8, which should be relocated under chapter 14;
- .3 references in paragraph 14.13.2 referring to SOLAS regulations II-1/42 and 43;

⁴ Refer to IMO/ITU EG 16/WP.1/Add.3.

- .4 the use of the term "certificate" in paragraph 14.15.10.1, which was left in square brackets;
- .5 paragraph 14.18.2 left in square brackets; and
- .6 updating existing and missing footnotes.

6.38 The Group invited NCSR 8 to consider the draft amendments to the 1994 and 2000 HSC Codes, including the requisite MSC resolutions, as set out in annexes 6 and 7⁵, respectively, noting that further work on the draft amendments was still required.

6.39 The Group invited also interested Member States and organizations to consider the issues identified pending consideration and submit proposals to NCSR 8, as appropriate.

1983 and 2008 SPS Codes

6.40 The Group considered draft amendments to the Code for Special Purpose Ships 2008 (2008 SPS Code) (resolution MSC.266(84), as amended) submitted by Norway (IMO/ITU EG 16/5/5), taking into account comments by the Secretariat (IMO/ITU EG 16/5/22), France (IMO/ITU EG 16/5/Comment/2) and the United Kingdom (IMO/ITU EG 16/5/Comment/16).

6.41 The Group noted that the 2008 SPS Code needed only amendments to the Record of Equipment for Special Purpose Ship Safety Certificate (Form SPS) and that the 1983 SPS Code (resolution A.534(13), as amended) required similar amendments.

6.42 Based on the draft amendments to the 2008 SPS Code, draft amendments to the 1983 SPS Code, which is still applicable to special purpose ships certified before 13 May 2008, were prepared by the Secretariat, including the requisite MSC resolution.

6.43 The Group invited NCSR 8 to consider the draft amendments to the 1983 and 2008 SPS Codes and the requisite MSC resolutions, as set out in annexes 8 and 9⁶, respectively.

Polar Code

6.44 The Group noted information provided by Norway (IMO/ITU EG 16/5/5) advising that no consequential amendments to the Polar Code were necessary, in particular, to chapter 10 (Communication) contained in part I-A. The Group also noted information provided by the Secretariat (IMO/ITU EG 16/5/22) inviting the Group to consider the need to revise the additional guidance contained in part I-B, section 11 (Additional guidance to chapter 10 (Communication)), to address, for example, the availability of non-geostationary satellite systems.

6.45 In the absence of any further comments or proposals, the Group agreed to refer the matter to NCSR 8 for further consideration and invited interested Member States and organizations to submit proposals to NCSR 8, as appropriate.

⁵ Refer to IMO/ITU EG 16/WP.1/Add.3.

⁶ Refer to IMO/ITU EG 16/WP.1/Add.3.

Amendments and revisions to resolutions and circulars

6.46 The Group considered consequential amendments and/or revisions to resolutions and circulars, as indicated in the following paragraphs.

6.47 During the consideration, the Group took into account relevant decisions of NCSR 7 (NCSR 7/23, paragraph 11.36), in particular, that whenever possible, requirements in resolutions adopted by the Assembly should be adopted by MSC resolutions to facilitate their future revisions, bearing in mind that resolution A.886(21), by which the Assembly resolved that the functions of adopting performance standards for radio and navigational equipment, as well as amendments thereto, should be performed by the Maritime Safety Committee on behalf of the Organization.

Resolution A.699(17)

6.48 The Group considered a draft revision of the *System performance standard for the promulgation and co-ordination of maritime safety information using high-frequency narrow-band direct printing* (resolution A.699(17)) submitted by Germany (IMO/ITU EG 16/5/11), taking into account comments by France (IMO/ITU EG 16/5/Comment/2) and the United States (IMO/ITU EG 16/5/Comment/7).

6.49 The Group reviewed the proposal and prepared a draft MSC resolution revising and superseding resolution A.699(17) as from the date of entry into force of the related SOLAS amendments.

6.50 The Group invited NCSR 8 to consider the draft MSC resolution on System performance standard for the promulgation and coordination of maritime safety information using High-Frequency narrow-band direct printing, as set out in annex 10⁷.

Resolutions A.700(17) and MSC.148(77), as amended

6.51 The Group considered the draft revisions and proposed consolidation of the *Performance standards for narrow-band direct-printing telegraph equipment for the reception of navigational and meteorological warnings and urgent information to ships (MSI) by HF* (resolution A.700(17)) and the revised *Performance standards for narrow-band direct-printing telegraph equipment for the reception of navigational and meteorological warnings and urgent information to ships (NAVTEX)* (resolution MSC.148(77), as amended) submitted by Germany (IMO/ITU EG 16/5/12), taking into account comments by France (IMO/ITU EG 16/5/Comment/2), the United States (IMO/ITU EG 16/5/Comment/7), China (IMO/ITU EG 16/5/Comment/12) and the United Kingdom (IMO/ITU EG 16/5/Comment/16).

6.52 Noting general support for the consolidation of the above resolutions, the Group prepared a draft MSC resolution revising and consolidating resolutions A.700(17) and MSC.148(77), as amended, which would be applicable to NAVTEX receiver equipment and equipment for the reception of NBDP broadcasts of navigational and meteorological warnings and urgent information to ships by HF installed on or after the date of entry into force of the related SOLAS amendments. The Group noted that the following issues, in particular, would still require further consideration:

- .1 a proposal to amend the title of the MSC resolution, as follows: "Performance standards for the terrestrial reception of MSI to ships by NAVTEX and HF";

⁷ Refer to IMO/ITU EG 16/WP.1/Add.4.

- .2 a proposal for inclusion of a new paragraph 1.1 in the annex, adding a reference to SOLAS regulations and clarifying carriage requirements; and
- .3 the numbers of messages and characters in square brackets, as indicated in paragraphs 6.1.1 and 6.2.1 of the annex to the draft MSC resolution.

6.53 The Group noted that resolutions A.700(17) and MSC.148(77), as amended, would still remain valid for equipment installed before the date of entry into force of the related SOLAS amendments. Thus, revocation of these resolutions would not be necessary.

6.54 The Group invited NCSR 8 to consider the draft MSC resolution on Performance standards for narrow-band direct-printing telegraph equipment for the reception of navigational and meteorological warnings and urgent information to ships (NAVTEX) and HF-MSI, as set out in annex 11⁸, noting that further work on the draft resolution would still be required.

6.55 The Group invited also interested Member States and organizations to submit proposals to NCSR 8 on issues requiring further consideration, as appropriate.

Resolution A.801(19), as amended

6.56 The Group considered draft amendments to the *Provision of radio services for the Global Maritime Distress and Safety System (GMDSS)* (resolution A.801(19), as amended) submitted by France (IMO/ITU EG 16/5/2), taking into account comments by France (IMO/ITU EG 16/5/Comment/2), the United States (IMO/ITU EG 16/5/Comment/7), Australia (IMO/ITU EG 16/5/Comment/11), Germany (IMO/ITU EG 16/5/Comment/14) and the United Kingdom (IMO/ITU EG 16/5/Comment/16).

6.57 The Group reviewed the proposal and prepared a draft MSC resolution revising and superseding resolution A.801(19), as amended, noting, in particular, that the following issues would require further consideration:

- .1 cover of the resolution: application date of the revised provisions;
- .2 annex 1 "Recommendation on provision of radio services for the GMDSS":
 - .1 options proposed to revise paragraph 3 concerning information on sea areas and shore-based GMDSS services; and
 - .2 the need to redraft new sub-paragraph 4.6 concerning general radiocommunications as part of GMDSS services;
- .3 annex 2 "Criteria for use when providing shore-based digital selective calling (DSC) facilities for use in the GMDSS":
 - .1 appendix 1 "Basic principles for establishing HF DSC coast stations for sea areas A3 and A4": new paragraph proposed for insertion concerning ocean areas and proposed amendments to paragraphs 2.1 and 2.5; and
 - .2 the need to retain references to "telex";

⁸ Refer to IMO/ITU EG 16/WP.1/Add.4.

- .4 annex 3 "Criteria for establishing GMDSS sea areas": the need to amend the footnote under section 3.3 concerning "double sideband emissions"; and
- .5 annex 5 "Criteria for use when providing mobile satellite service shore-based facilities for use in the GMDSS": the need for further amendments to make the criteria more generic and applicable to all recognized mobile satellite service providers.

6.58 The Group invited NCSR 8 to consider the draft MSC resolution on Provision of radio services for the Global Maritime Distress and Safety System (GMDSS), as set out in annex 12⁹, noting that further work on the draft resolution would still be required.

6.59 The Group invited also interested Member States and organizations to submit proposals to NCSR 8 on issues requiring further consideration, as appropriate.

6.60 In addition, the Group noted the proposals by France (IMO/ITU EG 16/5/2), supported by Australia, concerning the development of guidelines for the installation of coast stations operated by an RCC and the consideration of the HF DSC coast station network as a world network. In this respect, the Group recalled that NCSR 6 had invited interested Member States and international organizations to submit proposals to the Committee for a new output on the matter of guidelines for the installation of coast stations operated by an RCC (NCSR 6/23, paragraph 11.20).

Resolutions A.802(19), as amended, and A.530(13)

6.61 The Group considered the draft revision of the *Performance standards for survival craft radar transponders for use in search and rescue operations* (resolution A.802(19), as amended) submitted by Germany (IMO/ITU EG 16/5/16), taking into account comments by France (IMO/ITU EG 16/5/Comment/2), the United States (IMO/ITU EG 16/5/Comment/7) and the United Kingdom (IMO/ITU EG 16/5/Comment/16).

6.62 The Group reviewed the proposal and prepared a draft MSC resolution revising resolution A.802(19), as amended, and correcting information about the signal structure which was originally documented in resolution A.530(13) on *Use of radar transponders for search and rescue purposes*.

6.63 The Group noted that the draft MSC resolution would supersede resolutions A.802(19), as amended, and A.530(13), as from the date of entry into force of the related SOLAS amendments.

6.64 The Group invited NCSR 8 to consider the draft MSC resolution on Performance standards for search and rescue transponders, as set out in annex 13¹⁰.

Resolution A.803(19), as amended

6.65 The Group considered a draft revision of the *Performance standards for shipborne VHF radio installations capable of voice communication and digital selective calling* (resolution A.803(19), as amended) submitted by Germany (IMO/ITU EG 16/5/13), taking into account comments by the United States (IMO/ITU EG 16/5/18 and IMO/ITU EG 16/5/Comment/7), France (IMO/ITU EG 16/5/Comment/2), Japan (IMO/ITU EG 16/5/Comment/9) and Germany (IMO/ITU EG 16/5/Comment/14).

⁹ Refer to IMO/ITU EG 16/WP.1/Add.4.

¹⁰ Refer to IMO/ITU EG 16/WP.1/Add.4.

6.66 The Group reviewed the proposal and prepared a draft MSC resolution revising resolution A.803(17), as amended, noting that further work would still be required, in particular, with respect to:

- .1 Part A – General, section 2, paragraph 2.7: concerning the operation of the distress button to activate a distress alert; and
- .2 Part B – Transmitter:
 - .1 section 2 – Frequency stability and accuracy, which is pending to be developed; and
 - .2 paragraph 6.3.1 concerning audio power of loudspeaker and telephone handset.

6.67 The Group noted that resolution A.803(17), as amended, would still remain valid for equipment installed before the date of entry into force of the related SOLAS amendments. Thus, revocation of this resolution would not be necessary.

6.68 The Group invited NCSR 8 to consider the draft MSC resolution on Performance standards for shipborne VHF radio installations capable of voice communication and digital selective calling, as set out in annex 14¹¹, noting that further work on the draft resolution would still be required.

6.69 The Group also invited interested Member States and organizations to submit proposals to NCSR 8 on issues requiring further consideration, as appropriate.

Resolutions A.804(19), as amended, and A.806(19), as amended

6.70 The Group considered the draft revision and consolidation of the *Performance standards for shipborne MF radio installations capable of voice communication and digital selective calling* (resolution A.804(19), as amended) and the *Performance standards for shipborne MF/HF radio installations capable of voice communication, narrow-band direct-printing and digital selective calling* (resolution A.806(19), as amended) submitted by Germany (IMO/ITU EG 16/5/14), taking into account comments by the United States (IMO/ITU EG 16/5/18 and IMO/ITU EG 16/5/Comment/7), France (IMO/ITU EG 16/5/Comment/2) and Japan (IMO/ITU EG 16/5/Comment/9).

6.71 The Group reviewed the proposal and prepared a draft MSC resolution consolidating and revising resolutions A.804(19), as amended, and A.806(19), as amended, noting that further consideration would still be required, in particular, with respect to:

- .1 application date of the new performance standards;
- .2 Part B – Transmitter:
 - .1 section 1 – Frequencies and classes of emission: options concerning DSC routine frequencies; and
 - .2 paragraph 1.6: period to change the transmitter from operation on any frequency; and

¹¹ Refer to IMO/ITU EG 16/WP.1/Add.4.

- .3 Part C – Receivers, section 1 – Frequencies and classes of emission: options concerning DSC routine frequencies.

6.72 The Group noted that resolutions A.804(19), as amended, and A.806(19), as amended, would still remain valid for equipment installed before the date of entry into force of the related SOLAS amendments. Thus, revocation of these resolutions would not be necessary.

6.73 The Group invited NCSR 8 to consider the draft MSC resolution on Performance standards for shipborne MF and MF/HF radio installations capable of voice communication, digital selective calling and reception of maritime safety information, as set out in annex 15¹², noting that further work on the draft resolution would still be required.

6.74 The Group invited also interested Member States and organizations to submit proposals to NCSR 8 on issues requiring further consideration, as appropriate.

Resolution A.807(19), as amended

6.75 The Group considered a draft revision of the *Performance standards for Inmarsat-C ship earth stations capable of transmitting and receiving direct-printing communications* (resolution A.807(19), as amended) submitted by the United Kingdom (IMO/ITU EG 16/5/6), taking into account comments by France (IMO/ITU EG 16/5/Comment/2), IMSO (IMO/ITU EG 16/5/Comment/6), the United States (IMO/ITU EG 16/5/Comment/7) and Germany (IMO/ITU EG 16/5/Comment/14).

6.76 The Group reviewed the proposal and prepared a draft MSC resolution revising resolution A.807(19), as amended, noting that further consideration would still be required, in particular, with respect to:

- .1 new paragraph 2.2 concerning the requirement for the Inmarsat-C receiver to operate in the presence of an interfering signal;
- .2 the need to align the wording of new paragraphs 3.8 to 3.10 with that contained in the *Performance standards for a ship earth station for use in the GMDSS* (resolution MSC.434(98)); and
- .3 references to "direct-printing communications", in particular when referring to SOLAS regulations, given that this term was removed from the draft revision of SOLAS chapter IV.

6.77 The Group noted that resolution A.807(19), as amended, would still remain valid for equipment installed before the date of entry into force of the related SOLAS amendments. Thus, revocation of this resolution would not be necessary.

6.78 The Group invited NCSR 8 to consider the draft MSC resolution on Performance standards for Inmarsat-C ship earth stations capable of transmitting and receiving direct-printing communications, as set out in annex 16¹³, noting that further work on the draft resolution would still be required.

¹² Refer to IMO/ITU EG 16/WP.1/Add.4.

¹³ Refer to IMO/ITU EG 16/WP.1/Add.4.

6.79 The Group invited also interested Member States and organizations to submit proposals to NCSR 8 on issues requiring further consideration, as appropriate.

6.80 With regard to the proposal by IMSO (IMO/ITU EG 16/5/Comment/6) to amend the *Interim guidance on technical requirements for Fleet Safety* (MSC.1/Circ.1611), the Group recalled that the technical requirements for Fleet Safety had been incorporated in the revised International SafetyNET Services Manual prepared by NCSR 7 (NCSR 7/23, annex 6), which would revoke MSC.1/Circ.1611 after its approval. Thus, the Group agreed that any consequential amendments to the technical requirements for Fleet Safety should be addressed as part of a future revision of the International SafetyNET Services Manual, as appropriate.

Resolution A.814(19)

6.81 The Group considered draft amendments to the *Guidelines for the avoidance of false distress alerts* (resolution A.814(19)) submitted by IMSO (IMO/ITU EG 16/5/8), taking into account comments by France (IMO/ITU EG 16/5/Comment/2), the United States (IMO/ITU EG 16/5/Comment/7) and Germany (IMO/ITU EG 16/5/Comment/14).

6.82 The Group reviewed the proposal and prepared a draft MSC resolution revising and superseding resolution A.814(19), noting that further consideration would still be required, in particular, with respect to:

- .1 operational procedures for cancelling false distress alerts in the GMDSS contained in the appendix, which should be updated taking into account ITU Resolution 349 (Rev.WRC-12, adopted in 2012); and
- .2 procedures using "Distress self-cancel operation", as recommended by Germany.

6.83 The Group invited NCSR 8 to consider the draft MSC resolution on Guidelines for the avoidance of false distress alerts, as set out in annex 17¹⁴, noting that further work on the draft resolution would still be required.

6.84 The Group also invited interested Member States and organizations to submit proposals to NCSR 8 on issues requiring further consideration, as appropriate.

Resolution MSC.130(75)

6.85 The Group considered the comments by IMSO (IMO/ITU EG 16/5/8), supported by the United States (IMO/ITU EG 16/5/Comment/7), indicating that no amendments to the *Performance standards for Inmarsat ship earth stations capable of two-way communications* (resolution MSC.130(75)) to update references to resolution A.888(21) with resolution A.1001(25) were necessary. France (IMO/ITU EG 16/5/Comment/2), commenting on this matter, was of the view that resolution MSC.130(75) should be amended given that resolution A.888(21) had been revoked by resolution A.1001(25).

6.86 The Group noted that resolution A.888(21) was only referred to in the cover page of resolution MSC.130(75), which was still valid at the time of adoption, and that no references to resolution A.888(21) were contained in the annex to the resolution (i.e. the text of the performance standards). Thus, the update of this reference could only be conducted by means of a complete revision of the resolution and not by an amendment.

¹⁴ Refer to IMO/ITU EG 16/WP.1/Add.4.

6.87 The Group noted also that the appropriate recommendations concerning the application of resolution A.1001(25) to ship earth stations which form part of the GMDSS were stated in the cover page of the *Performance standards for a ship earth station for use in the GMDSS* (resolution MSC.434(98)).

6.88 Taking into account the above comments, the Group invited interested Member States and organizations to consider the need to revise resolution MSC.130(75) and, if deemed to be necessary, submit proposals to NCSR 8, as appropriate.

Resolution MSC.149(77)

6.89 The Group considered a proposal to revise the *Performance standards for survival craft portable two-way VHF radiotelephone apparatus* (resolution MSC.149(77)), submitted by the United States during the commenting stage (IMO/ITU EG 16/5/Comment/7), to update references to SOLAS regulation III/6.2.1 in the cover page of the resolution, which were now re-located under SOLAS chapter IV, and to insert a new paragraph in the annex, under the introduction section, referring to the requirement for survival craft portable two-way radiotelephone apparatus, as required by SOLAS regulations IV/7.2.2 and 7.3.2.

6.90 The Group noted that the proposed revision was purely editorial to update and/or insert references to the updated SOLAS regulations and that no further amendments were proposed to other sections of the performance standards. It was also noted that the amendments to the cover page of the resolution could only be performed by means of a complete revision of the resolution and not by an amendment.

6.91 Based on the above, the Group invited interested Member States and organizations to consider the need to revise resolution MSC.149(77) and, if deemed to be necessary, submit proposals to NCSR 8, as appropriate.

Resolution MSC.80(70)

6.92 The Group considered draft amendments to the *Performance standards for radiocommunication equipment* (resolution MSC.80(70)) submitted by the Russian Federation (IMO/ITU EG 16/5/3), taking into account comments by France (IMO/ITU EG 16/5/Comment/2), the United States (IMO/ITU EG 16/5/Comment/7) and the United Kingdom (IMO/ITU EG 16/5/Comment/16).

6.93 The Group reviewed the proposal and prepared a draft MSC resolution amending resolution MSC.80(70).

6.94 The Group invited NCSR 8 to consider the draft MSC resolution on Amendments to the Performance standards for radiocommunication equipment (resolution MSC.80(70)), as set out in annex 18¹⁵.

6.95 The Group invited also the ICAO/IMO Joint Working Group on Harmonization of aeronautical and maritime search and rescue to confirm the amendments concerning references to the ICAO Convention.

MSC/Circ.1460/Rev.2

6.96 The Group considered a draft revision of the *Guidance on the validity of radiocommunications equipment installed and used on ships* (MSC.1/Circ.1460/Rev.2)

¹⁵ Refer to IMO/ITU EG 16/WP.1/Add.4.

submitted by the United States (IMO/ITU EG 16/5/19), taking into account comments by China (IMO/ITU EG 16/5/Comment/12), Germany (IMO/ITU EG 16/5/Comment/14) and the United States (IMO/ITU EG 16/5/Comment/7 and IMO/ITU EG 16/5/Comment/18).

6.97 The Group noted that the proposed draft revision of MSC.1/Circ.1460/Rev.2 would address the removal of references to, and requirements for, HF NBDP transceivers and the updating of VHF radiocommunication equipment, according to RR Appendix 18.

6.98 The Group noted also the view of China (IMO/ITU EG 16/5/Comment/12) that there was no urgency to revise MSC.1/Circ.1460/Rev.2 to recommend the update of equipment as soon as practical in keeping with the in-force dates of RR Appendix 18, as proposed in paragraph 5 of the draft revised circular, and suggesting instead to encourage Administrations to take a practical approach to update existing analogue equipment to digital technologies, with an appropriate transition period, taking into account the cost effectiveness and availability of digital equipment for both coast and ship stations.

6.99 The Group noted further the views of Germany (IMO/ITU EG 16/5/Comment/14) that the aim of the current circular in force (i.e. MSC.1/Circ.1460/Rev.2) was to prevent a premature carriage of equipment which should not be used before 2024 and that the current version of MSC.1/Circ.1460/Rev.2 fulfilled this purpose and should remain unchanged.

6.100 The Group noted the comments by United States (IMO/ITU EG 16/5/Comment/18), sharing the view of China, that coast stations capable of VHF digital radio communication services were not readily available worldwide, and that it was not urgent for shipborne VHF radiotelephone equipment to be compatible with them. However, the United States indicated that ITU-R WRC 2012, 2015 and 2019 not only accommodated the use of digital channels in RR Appendix 18, but also simplex use of what previously had been duplex channels. As noted in paragraph 3 of the proposed draft revision of MSC.1/Circ.1460/Rev.2, these changes also "affect the use of other frequencies used for VHF meteorological, navigational and urgent marine information broadcasts, port operations and VTS." Thus, the reason for revising MSC.1/Circ.1460/Rev.2 to urge the update of VHF radiotelephone equipment as soon as practical was not to be compatible with digital base stations, but instead to be compatible with existing analogue base stations currently providing the safety services on RR Appendix 18 channels, as revised by the above-mentioned WRCs.

6.101 Recognizing that further discussion and consideration was needed, the Group agreed to refer the draft revision of MSC.1/Circ.1460/Rev.2, as submitted by the United States, to NCSR 8, for further consideration.

6.102 The Group invited NCSR 8 to consider the draft revision of MSC.1/Circ.1460/Rev.2 submitted by the United States, as set out in annex 19¹⁶, taking into account the comments above.

6.103 The Group invited also interested Member States and organizations to submit proposals to NCSR 8, as appropriate.

MSC/Circ.803

6.104 The Group considered a draft revision of *Participation of non-SOLAS ships in the Global Maritime Distress and Safety System (GMDSS)* (MSC/Circ.803) submitted by Germany (IMO/ITU EG 16/5/15), taking into account comments by France (IMO/ITU EG 16/5/Comment/2), the United States (IMO/ITU EG 16/5/Comment/7),

¹⁶ Refer to IMO/ITU EG 16/WP.1/Add.5.

the Russian Federation (IMO/ITU EG 16/5/Comment/15) and the United Kingdom (IMO/ITU EG 16/5/Comment/16).

6.105 Noting general support for the proposal, the Group reviewed the draft revision of MSC/Circ.803, noting that further consideration would still be required, in particular, with respect to:

- .1 the use of the terms "ships" and "vessels" and the general application of the circular;
- .2 the use of the term "illegal" in annex 1, new paragraph 5;
- .3 the reference to "protection of the GMDSS" in annex 1, new paragraph 13; and
- .4 the two options for annex 1, paragraph 14.

6.106 The Group invited NCSR 8 to consider the draft revision of MSC/Circ.803, as set out in annex 20¹⁷, noting that further work on the draft circular would still be required.

6.107 The Group invited also interested Member States and organizations to submit proposals to NCSR 8 on issues requiring further consideration, as appropriate.

COMSAR/Circ.16

6.108 The Group considered a proposal by Canada (IMO/ITU EG 16/5/7) presenting options to either revise the *Guidelines on the configuration of the reserve source or sources of energy used to supply radio installations on GMDSS ships* (COMSAR/Circ.16) or consolidate the Guidelines into section 7.3 of COMSAR/Circ.32, noting the duplication of contents.

6.109 Taking into account comments by France (IMO/ITU EG 16/5/Comment/2), the United States (IMO/ITU EG 16/5/Comment/7) and the United Kingdom (IMO/ITU EG 16/5/Comment/16), the Group agreed that COMSAR/Circ.16 should be consolidated into section 7.3 of COMSAR/Circ.32.

6.110 Consequently, the Group invited interested Member States and organizations to submit proposals to NCSR 8 on any necessary amendments to COMSAR/Circ.32 for this consolidation.

COMSAR/Circ.32

6.111 The Group considered draft amendments to *Harmonization of GMDSS requirements for radio installations on board SOLAS ships* (COMSAR/Circ.32) submitted by the United States (IMO/ITU EG 16/5/10), taking into account comments by France (IMO/ITU EG 16/5/Comment/2), the United States (IMO/ITU EG 16/5/Comment/4 and IMO/ITU EG 16/5/Comment/7), the Netherlands (IMO/ITU EG 16/5/Comment/13), Germany (IMO/ITU EG 16/5/Comment/14) and the United Kingdom (IMO/ITU EG 16/5/Comment/16).

6.112 Noting general support for the inclusion of the draft amendments, the Group prepared draft amendments to COMSAR/Circ.32, sections 5 and 6, to be further incorporated in the preliminary draft revision of COMSAR/Circ.32 agreed by NCSR 7 (NCSR 7/WP.5, annex 5),

¹⁷ Refer to IMO/ITU EG 16/WP.1/Add.5.

noting that further work and consideration would still be required, as indicated in the draft amendments.

6.113 The Group invited NCSR 8 to consider the draft amendments to COMSAR/Circ.32, sections 5 and 6, as set out in annex 21¹⁸, noting that further work would still be required.

6.114 The Group invited also interested Member States and organizations to submit proposals to NCSR 8 on issues requiring further consideration, as appropriate.

6.115 The Group noted the proposal by CIRM (IMO/ITU EG 16/5/Comment/5), submitted during the commenting stage, on further amendments to the wording of section 1.4 of the draft revision of COMSAR/Circ.32 agreed by NCSR 7, as follows:

".1 user's manual for all radio equipment and battery chargers to be provided by the equipment manufacturer (in English. Ship owners, operators and managers may, if considered necessary, also provide versions of these manuals [and/or in the working language of the ship, if available]) for all radio equipment and battery chargers;"

6.116 Noting that the above proposal could require further consideration, the Group invited interested Member States and organizations to submit proposals to NCSR 8, as appropriate.

COMSAR/Circ.33

6.117 The Group considered a draft revision to *GMDSS Coast Station Operator's Certificate (CSOC) model course* (COMSAR/Circ.33) submitted by France and ITF (IMO/ITU EG 16/5/17), taking into account comments by France (IMO/ITU EG 16/5/Comment/2), the United States (IMO/ITU EG 16/5/Comment/7), Japan (IMO/ITU EG 16/5/Comment/10) and the United Kingdom (IMO/ITU EG 16/5/Comment/17).

6.118 Noting general support to the proposal, the Group prepared a preliminary revision of COMSAR/Circ.33, noting that further work and consideration would still be required.

6.119 The Group invited NCSR 8 to consider the preliminary draft revision of COMSAR/Circ.33, as set out in annex 22¹⁹, noting that further work would still be required.

6.120 The Group invited also interested Member States and organizations to submit proposals to NCSR 8, as appropriate.

Work plan for related and consequential amendments to existing instruments other than SOLAS

6.121 Based on the work conducted at this session, the Group updated the Work plan for related and consequential amendments to existing instruments other than SOLAS, as set out in annex 23²⁰.

6.122 The Group invited NCSR 8 to consider the work still remaining and to decide, as appropriate.

¹⁸ Refer to IMO/ITU EG 16/WP.1/Add.5.

¹⁹ Refer to IMO/ITU EG 16/WP.1/Add.5.

²⁰ Refer to IMO/ITU EG 16/WP.1/Add.6.

6.123 The Group also invited interested Member States and organizations to submit proposals to NCSR 8 on instruments still pending revision and/or further consideration.

7 CONSIDERATION OF THE USE OF PUBLIC BROADBAND COMMUNICATION AND TECHNICAL STANDARDIZATION FOR PUBLIC MOBILE NETWORKS IN THE CONTEXT OF MARITIME SAFETY (AGENDA ITEM 6)

7.1 The Group considered a proposal by the Republic of Korea (IMO/ITU EG 16/6) on the need to conduct an impact analysis of public mobile broadband communication technologies newly introduced at sea in the context of maritime safety, and recommending that:

- .1 the Experts Group should continuously monitor the status of maritime application of new public mobile communication technologies that could be used at sea, such as LTE and 5G, and evaluate their impact from the viewpoint of maritime safety and environmental protection;
- .2 based on the results of the impact evaluation, the position of IMO and ITU should be reflected in the development of international standards for maritime mobile communication technology in progress at 3GPP, if necessary; and
- .3 to ensure the continued implementation of the above-mentioned proposals under the leadership of IMO and ITU, this agenda item should remain included in the Terms of Reference (TOR) of the Experts Group.

7.2 The Group noted the following comments on document IMO/ITU EG 16/6 submitted by:

- .1 France (IMO/ITU EG 16/6/Comment/1), supported by Germany (IMO/ITU EG 16/6/Comment/4), proposing that an in-depth discussion should take place first at NCSR level to provide clear directions to the Experts Group on any necessary actions related to the use of public broadband communication;
- .2 IMSO (IMO/ITU EG 16/6/Comment/2), on issues to be considered for the possible use of public mobile phones under the GMDSS; and
- .3 Japan (IMO/ITU EG 16/6/Comment/3), expressing the view that it would be premature to suggest any concrete output at this stage, such as the position of IMO and ITU to 3GPP, and that IALA and any other interested Member States and organizations should be invited to continuously inform the Experts Group, under the agenda item of any other business, of any future useful maritime radiocommunication technologies.

7.3 Based on the comments above, the Group invited interested Member States and organizations to submit proposals to NCSR 8 for consideration and in-depth discussion on the use of public broadband communication and, in particular, to enable the Sub-Committee to provide clear directions to the Experts Group, as appropriate.

8 CONSIDERATION OF THE ELECTROMAGNETIC INTERFERENCE (EMI) EFFECTS OF LIGHT EMITTING DIODE (LED) LIGHTING SYSTEMS AND OTHER SOURCES OF EMI ON BOARD VESSELS (AGENDA ITEM 7)

8.1 The Group had for its consideration the following proposals related to electromagnetic interference (EMI) effects of Light Emitting Diode (LED) lighting systems and other sources of EMI on board vessels submitted by:

- .1 the Netherlands (IMO/ITU EG 16/7) on an alternative approach for solving the issue of EMI effects of LED lighting systems when co-located on board maritime vessels, and the EMI effects of LED on aeronautical systems; and
- .2 the United States (IMO/ITU EG 16/7/1) summarizing the progress to date in reviewing the EMI protection criteria from deck-mounted unintentional emitters and presenting a number of proposals for consideration to address this matter.

8.2 The Group took also into account comments by France (IMO/ITU EG 16/7/Comment/1), the Netherlands (IMO/ITU EG 16/7/Comment/2), the United States (IMO/ITU EG 16/7/Comment/3), China (IMO/ITU EG 16/7/Comment/4), Germany (IMO/ITU EG 16/7/Comment/5) and the United Kingdom (IMO/ITU EG 16/7/Comment/6).

8.3 The Group recognized that due to the many different proposals and comments submitted at this session, further consideration and discussion would still be required on this matter to enable an appropriate exchange of views and the formulation of relevant recommendations. However, in order to progress the consideration, the Group noted the main proposals and comments, as summarized in the following paragraphs.

Implementation of a mandatory dial-indication requirement for VHF/MF/HF radio receiving equipment

8.4 The Group noted that the proposal by the Netherlands and the United States concerning the implementation of a mandatory dial-indication requirement for VHF/MF/HF radio receiving equipment to show the actually received (RF) noise levels on a colour scaling (e.g. green-orange-red), based on the current rules, was supported by some delegations.

8.6 The Group noted also that the above proposal could be introduced by amending relevant instruments (e.g. *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)) and/or relevant performance standards) and that it could also include a requirement for recording historical measurements and for interfacing with the bridge alert management (BAM) system. In addition, IMO performance standards for spectrum-dependent radiocommunications and navigation equipment, when updated, could include means for alerting operators through its BAM system when harmful interference is detected.

8.7 In this context, the Group noted the view of China (IMO/ITU EG 16/7/Comment/4) that the proposed dial-indication might not show the whole EMC picture of the VHF/MF/HF radio receiving equipment (in accordance with IEC 60945), in particular, measuring the noise levels of all frequency bands. In addition, the proposal would only address interference from radiated emissions instead of from conducted emissions.

8.8 The Group noted also the view of the United Kingdom (IMO/ITU EG 16/7/Comment/6) that, before such changes were made to bridge equipment, sufficient trials should be

undertaken under operational conditions to prove the effectiveness of such functionality, without distracting or making more demands on the bridge crew.

8.9 Based on the above comments, the Group invited NCSR 8 to note the above proposal and comments concerning the implementation of a mandatory dial-indication requirement for VHF/MF/HF radio receiving equipment, and decide, as appropriate.

Use and development of standards

Standard being developed by RTCM SC137

8.10 In response to the proposal by the United States (IMO/ITU EG 16/7/1) concerning the development of standards by the Radio Technical Commission for Maritime Services Special Committee 137 (RTCM SC137), the Group noted the views of France (IMO/ITU EG 16/7/Comment/1), supported by Germany (IMO/ITU EG 16/7/Comment/5) and the United States (IMO/ITU EG 16/7/Comment/3), and China (IMO/ITU EG 16/7/Comment/4), indicating that RTCM SC137 should consider establishing EMC limits based upon Recommendation ITU-R M.1467 for IMO-recognized MF/HF safety systems. Furthermore, the Group noted the view of China (IMO/ITU EG 16/7/Comment/4) that, recognizing the possible inclusion of NAVDAT into the GMDSS, establishing EMC limits for this system should be considered as well.

8.11 The Group noted also the view of the Netherlands (IMO/ITU EG 16/7/Comment/2) that some equipment might be out of the scope of the work being conducted by RTCM SC137 and that careful consideration should be given to any new requirements for specific equipment, such as air-conditioning equipment, active antennas with their power supplies, window wiper equipment, etc.

IEC standards

8.12 The Group noted that the proposal by the United States (IMO/ITU EG 16/7/1) for IEC TC18 to be invited to update IEC 60533 - *Electrical and electronic installations in ships - Electromagnetic compatibility (EMC) - Ships with a metallic hull* to include appropriate risk-based EMC requirements was supported in general. This could include a mandatory baseline measurement of the prevailing noise levels on board newly built ships during sea trials, maintained during the lifetime of the ship.

8.13 The Group noted views of China (IMO/ITU EG 16/7/Comment/4) that all electric equipment installed in the bridge should be tested for EMC in accordance with IEC 60945 - *Maritime navigation and radiocommunication equipment and systems - General requirements - Methods of testing and required test results* to meet relevant limits or, for newly introduced equipment on board, if it is not possible to meet the limits set out in IEC 60945, an adjusted EMC limit could be established after a large amount of tests, which should be at the same safety level as those prescribed in IEC 60945; and a separate EMC limit for array LED should be established based on tests, including its distance from other electric equipment, on the condition of not interfering with the normal operation of other equipment.

8.14 The Group invited NCSR 8 to note the above comments and proposals concerning the use and development of standards and to take any necessary actions, as appropriate.

Protection criteria for recognized mobile satellite service ship earth stations

8.15 The Group noted that the proposal by the United States (IMO/ITU EG 16/7/1) for IMSO to be invited to make protection criteria available for recognized mobile satellite ship

earth stations was supported by some delegations. A view was expressed that further consideration of this proposal would be necessary.

8.16 Based on the above, the Group invited NCSR 8 to consider this proposal and decide, as appropriate.

8.17 Furthermore, the Group invited ITU-R WP 5B and WP 1A to note the discussions under this agenda item, in general.

9 ANY OTHER BUSINESS (AGENDA ITEM 8)

Draft revisions of resolutions MSC.163(78) and MSC.333(90)

9.1 The Group considered draft revisions of the Performance standards for shipborne simplified voyage data recorders (S-VDRs) and voyage data recorders (VDRs) (resolutions MSC.163(78) and MSC.333(90), respectively) submitted by the Secretariat (IMO/ITU EG 16/8), taking into account comments by the United States (IMO/ITU EG 16/8/2 and IMO/ITU EG 16/8/Comment/3), France (IMO/ITU EG 16/8/Comment/1), CIRM (IMO/ITU EG 16/8/Comment/2) and the United Kingdom (IMO/ITU EG 16/8/Comment/5).

9.2 The Group recalled that the revisions of resolutions MSC.163(78) and MSC.333(90) were necessary as consequential amendments due to the adoption of the *Performance standards for float-free emergency position-indicating radio beacons (EPIRBs) operating on 406 MHz* (resolution MSC.471(101)), applicable to float-free EPIRBs operating on the frequency 406 MHz, which form part of the GMDSS, installed on or after 1 July 2022.

9.3 The Group noted information provided by the United States (IMO/ITU EG 16/8/2) regarding IEC efforts to update its associate EPIRB and VDR technical and testing standards.

9.4 Taking into account additional amendments proposed by CIRM (IMO/ITU EG 16/8/Comment/2), supported by the United Kingdom (IMO/ITU EG 16/8/Comment/5), and the comments by the United States (IMO/ITU EG 16/8/Comment/3), the Group prepared draft amendments to resolutions MSC.163(78) and MSC.333(90).

9.5 The Group noted that due to the small number of amendments a complete revision of resolutions MSC.163(78) and MSC.333(90) would not be necessary.

9.6 The Group invited NCSR 8 to consider the draft amendments to resolutions MSC.163(78) and MSC.333(90), as set out in annexes 24 and 25²¹, respectively.

Locating devices fitted with AIS

9.7 The Group considered a proposal by the United States (IMO/ITU EG 16/8/1) concerning the possible implementation of a cancelation protocol for locating devices fitted with AIS, such as AIS-SART, EPIRB, MOB-AIS, and certain Personal Locator Beacons (PLB), upon deactivation following a recovery or an inadvertent activation.

9.8 The Group took into account comments by Australia (IMO/ITU EG 16/8/3), France (IMO/ITU EG 16/8/Comment/1), the United States (IMO/ITU EG 16/8/Comment/3), Turkey (IMO/ITU EG 16/8/Comment/4) and the United Kingdom (IMO/ITU EG 16/8/Comment/5).

²¹ Refer to IMO/ITU EG 16/WP.1/Add.7.

9.9 The Group noted the comments by Australia (IMO/ITU EG 16/8/3), supported by others, expressing the view, inter alia, that the procedure described by the United States would:

- .1 only be relevant to beacons that could internally identify that the process was correctly followed and format an AIS safety test message transmission to advise of the manual cancellation;
- .2 require AIS equipped ships, aircraft and SAR assets to interpret the format of the AIS safety test message and display the cancellation message; and
- .3 require appropriate user and responder education, including guidance on the design of the device for operation by a person under stress to avoid an unintended cancellation,

and that the impact on SAR authorities should be considered in determining whether to proceed with the development of a cancellation message/protocol.

9.10 Furthermore, views were expressed indicating that:

- .1 the deactivation of these devices and/or cancellation message should be initiated by SAR services;
- .2 SAR operations should not be terminated by depending on a cancellation done via AIS only;
- .3 procedures for deactivation and cancellation should be clearly separated in order to avoid any confusion;
- .4 adequate training should be given to seafarers who handle these devices to avoid an increase in the number of false alerts and mishandlings; and
- .5 while a cancellation function would be a worthwhile topic to explore, the ICAO/IMO Joint Working Group on Harmonization of aeronautical and maritime search and rescue should first assess the operational matters, including behaviours and needs, before considering technical matters.

9.11 In response to the above comments, the United States indicated, inter alia, that:

- .1 the current Cospas-Sarsat protocol does not address cancelling an AIS locating signal and, at present, it would just cease to transmit when the cancellation cycle completes;
- .2 the transmission of a cancellation message on both 406 MHz and AIS would be beneficial for SAR authorities by informing them of an intended cancellation;
- .3 providing a method for a cancellation notification might not reduce the number of false alerts, but might aid in faster resolution of the ones initiated; and
- .4 remote control deactivation of these devices would not be feasible, unless every device has its own unique ID to avoid inadvertent deactivation of the wrong device.

9.12 The Group noted that the United States was seeking the Expert Group's opinion if development of a cancellation protocol for devices using AIS was technically feasible, noting that ITU-R M.1371-5 was currently open for amendments, offering an opportunity to include an AIS locating device cancellation message, with the understanding that its protocol or requirements should be defined in other IMO or IEC instruments (e.g. IMO performance standards). The Group noted also the United States' intention to prepare a submission to the ICAO/IMO Joint Working Group to confirm the operational need and define the requirements and, if so, submit a draft AIS cancellation protocol for consideration at a future session of the Experts Group.

9.13 Recognizing that further consideration was needed, the Group invited interested Member States and organizations to seek the view of the ICAO/IMO Joint Working Group on operational matters concerning the implementation of a cancellation protocol and to submit relevant proposals to NCSR 8, as appropriate.

Progress of an IHO Correspondence Group

9.14 The Group noted information provided by Australia (IMO/ITU EG 16/INF.2) on the progress of an IHO Correspondence Group to develop an application programming interface (API) standard to support the machine-to-machine transfer of Enhanced Group Call (EGC) shore-to-ship information through recognized GMDSS mobile satellite service providers.

ITU-R meeting schedule

9.15 The Group noted that the following relevant ITU meetings were scheduled:

- .1 WP 5D, from 5 to 16 October 2020 (E-Meeting);
- .2 WP 4C, from 21 to 27 October 2020 (E-Meeting);
- .3 WP 4A, from 28 October to 5 November 2020 (E-Meeting);
- .4 SG 4, on 6 November 2020 (E-Meeting);
- .5 WP 5A, from 9 to 20 November 2020;
- .6 WP 5B, from 9 to 20 November 2020;
- .7 WP 5D, from 17 to 19 November 2020;
- .8 SG 5, from 23 to 24 November 2020;
- .9 WP 1A, from 24 November to 2 December 2021;
- .10 WP 5D, from 1 to 12 February 2021;
- .11 WP 5A, from 3 to 14 May 2021;
- .12 WP 5B, from 3 to 14 May 2021;
- .13 WP 1A, from 25 May to 2 June 2021;
- .14 WP 4C, from 26 May to 1 June 2021; and

.15 WP 4A, from 2 to 11 June 2021.

It was further noted that the full meeting schedule was available on the ITU website.

IMO meeting schedule

9.16 The Group noted that the following relevant IMO meetings were scheduled:

- .1 extraordinary sessions of the Maritime Safety Committee, the Legal Committee, the Marine Environment Protection Committee, the Technical Cooperation Committee and the Facilitation Committee (remote meeting from 16 to 18 September 2020);
- .2 the twenty-seventh meeting of the ICAO/IMO Joint Working Group on Harmonization of aeronautical and maritime search and rescue (remote meeting on 12, 13 and 15 October 2020); and
- .3 102nd session of the Maritime Safety Committee (remote meeting from 4 to 11 November 2020).

9.17 The Group noted also that the programme of meetings for 2021 had not yet been confirmed.

Planning for the seventeenth meeting of the Group

9.18 The Group noted that NCSR 7 had invited the MSC to authorize, subject to endorsement by the Council, the holding of a meeting of the Experts Group in 2021.

10 REPORTS TO THE NCSR SUB-COMMITTEE AND ITU (AGENDA ITEM 9)

Action requested of the NCSR Sub-Committee

10.1 NCSR 8 is invited to:

- .1 note the proposals, comments and progress made on the development of the preliminary draft IMO position on relevant WRC-23 agenda items and further develop the draft IMO position (paragraphs 4.2 to 4.15, and annex 1);
- .2 consider the updated draft amendments to the 1974 SOLAS Convention, including editorial corrections (paragraphs 6.1 to 6.24, and annex 2);
- .3 consider the consequential draft amendments to the 1988 SOLAS Protocol (paragraphs 6.26 and 6.27, and annex 3);
- .4 consider the draft amendments to the 2009 MODU Code and the preliminary draft amendments to the 1989 MODU Code, including the requisite MSC resolutions (paragraphs 6.28 to 6.32, and annexes 4 and 5);
- .5 consider the draft amendments to the 1994 and 2000 HSC Codes, including the requisite MSC resolutions (paragraphs 6.34 to 6.38, and annexes 6 and 7);

- .6 consider the draft amendments to the 1983 and 2008 SPS Codes, including the requisite MSC resolutions (paragraphs 6.40 to 6.42, and annexes 8 and 9);
- .7 consider if amendments to the additional guidance contained in part I-B, section 11, of the Polar Code would be necessary (paragraphs 6.44 and 6.45);
- .8 consider the draft MSC resolution on System performance standard for the promulgation and co-ordination of maritime safety information using High-Frequency narrow-band direct printing, which revises and supersedes resolution A.699(17) (paragraphs 6.48 to 6.50, and annex 10);
- .9 consider the draft MSC resolution on Performance standards for narrow-band direct-printing telegraph equipment for the reception of navigational and meteorological warnings and urgent information to ships (NAVTEX) and HF-MSI, which revises and consolidates resolutions A.700(17) and MSC.148(77), as amended (paragraphs 6.51 to 6.54, and annex 11);
- .10 consider the draft MSC resolution on Provision of radio services for the Global Maritime Distress and Safety System (GMDSS), which revises and supersedes resolution A.801(19), as amended (paragraphs 6.56 to 6.58, and annex 12);
- .11 consider the draft MSC resolution on Performance standards for search and rescue transponders, which revises and supersedes resolutions A.802(19), as amended, and A.530(13) (paragraphs 6.61 to 6.64, and annex 13);
- .12 consider the draft MSC resolution on Performance standards for shipborne VHF radio installations capable of voice communication and digital selective calling, which revises resolution A.803(19), as amended (paragraphs 6.65 to 6.68, and annex 14);
- .13 consider the draft MSC resolution on Performance standards for shipborne MF and MF/HF radio installations capable of voice communication, digital selective calling and reception of maritime safety information, which revises and consolidates resolutions A.804(19), as amended, and A.806(19), as amended (paragraphs 6.70 to 6.73, and annex 15);
- .14 consider the draft MSC resolution on Performance standards for Inmarsat-C ship earth stations capable of transmitting and receiving direct-printing communications, which revises resolution A.807(19), as amended (paragraphs 6.75 to 6.78, and annex 16);
- .15 consider the draft MSC resolution on Guidelines for the avoidance of false distress alerts, which revises and supersedes resolution A.814(19) (paragraphs 6.81 to 6.83, and annex 17);
- .16 note the consideration concerning the revision of resolution MSC.130(75) on Performance standards for Inmarsat ship earth stations capable of two-way communications (paragraphs 6.85 to 6.88);

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- .17 note the consideration concerning the revision of resolution MSC.149(77) on *Revised performance standards for survival craft portable two-way VHF radiotelephone apparatus* (paragraphs 6.89 to 6.91);
- .18 consider the draft MSC resolution on Amendments to the Performance standards for radiocommunication equipment (paragraphs 6.92 to 6.95, and annex 18);
- .19 note the consideration concerning the draft revision of MSC.1/Circ.1460/Rev.2 on *Guidance on the validity of radiocommunications equipment installed and used on ships* and, decide, as appropriate (paragraphs 6.96 to 6.103, and annex 19);
- .20 consider the draft revision of MSC/Circ.803 on *Participation of non-SOLAS ships in the Global Maritime Distress and Safety System (GMDSS)* (paragraphs 6.104 to 6.106, and annex 20);
- .21 note the consideration concerning the consolidation of COMSAR/Circ.16 on *Guidelines on the configuration of the reserve source or sources of energy used to supply radio installations on GMDSS ships* into section 7.3 of COMSAR/Circ.32 (paragraphs 6.108 to 6.110);
- .22 consider the draft amendments to COMSAR/Circ.32 on *Harmonization of GMDSS requirements for radio installations on board SOLAS ships*, sections 5 and 6 (paragraphs 6.111 to 6.113, and annex 21);
- .23 consider the preliminary draft revision of COMSAR/Circ.33 on *GMDSS Coast Station Operator's Certificate (CSOC) model course* (paragraphs 6.117 to 6.119, and annex 22);
- .24 note the updated work plan for related and consequential amendments to existing instruments other than SOLAS, consider the work still remaining and to decide, as appropriate (paragraphs 6.121 and 6.122, and annex 23);
- .25 note the consideration concerning the use of public broadband communication and technical standardization for public mobile networks in the context of maritime safety (paragraphs 7.1 to 7.3);
- .26 note the comments and proposals on electromagnetic interference (EMI) effects of Light Emitting Diode (LED) lighting systems and other sources of EMI on board vessels, and consider, in particular, the proposals concerning the implementation of a mandatory dial-indication requirement for VHF/MF/HF radio receiving equipment, the use and development of standards and the development of protection criteria for recognized mobile satellite service ship earth stations, and take any necessary actions, as appropriate (paragraphs 8.1 to 8.17);
- .27 consider the draft MSC resolutions on Amendments to the Performance standards for shipborne simplified voyage data recorders (S-VDRs) (resolution MSC.163(78)) and amendments to the Performance standards for voyage data recorders (VDRs) (resolution MSC.333(90)) (paragraphs 9.1 to 9.6, and annexes 24 and 25);

- .28 note the consideration on a proposal related to the possible implementation of a cancelation protocol for locating devices fitted with AIS (paragraphs 9.7 to 9.12); and
- .29 note the report in general.

Action requested of ITU-R

10.2 ITU-R WP 4C is invited to note the comments and progress made on the development of the preliminary draft IMO position on WRC-23 agenda item 1.11, subject to further consideration by NCSR 8 (paragraphs 4.11 to 4.13, and annex 1).

10.3 ITU-R WP 5A is invited to note the comments and progress made on the development of the preliminary draft IMO position on WRC-23 agenda item 1.3, subject to further consideration by NCSR 8 (paragraphs 4.8 to 4.10, and annex 1).

10.4 ITU-R WP 5B is invited to note:

- .1 the comments and proposals on electromagnetic interference (EMI) effects of Light Emitting Diode (LED) lighting systems and other sources of EMI on board vessels and that NCSR 8 was invited to consider, in particular, the proposals concerning the implementation of a mandatory dial-indication requirement for VHF/MF/HF radio receiving equipment, the use and development of standards and the development of protection criteria for recognized mobile satellite service ship earth stations, and take any necessary actions, as appropriate (paragraph 8.1 to 8.17, and 10.1.26); and
- .2 the comments and progress made on the development of the preliminary draft IMO position on WRC-23 agenda items, subject to further consideration by NCSR 8 (paragraphs 4.2 to 4.15, and annex 1).

10.5 ITU-R WP 5D is invited to note the comments and progress made on the development of the preliminary draft IMO position on WRC-23 agenda items 1.1 and 1.2 (paragraphs 4.2 to 4.7, and annex 1).

10.6 ITU-R WP 1A is invited to note comments and proposals on electromagnetic interference (EMI) effects of Light Emitting Diode (LED) lighting systems and other sources of EMI on board vessels and that NCSR 8 was invited to consider, in particular, the proposals concerning the implementation of a mandatory dial-indication requirement for VHF/MF/HF radio receiving equipment, the use and development of standards and the development of protection criteria for recognized mobile satellite service ship earth stations, and take any necessary actions, as appropriate (paragraphs 8.1 to 8.17, and 10.1.26).