

## International Maritime Organisation

### **FOURTH SESSION OF THE SUB-COMMITTEE ON NAVIGATION, COMMUNICATIONS AND SEARCH AND RESCUE 6 to 10 March 2017**

#### **1. GENERAL**

The Sub-Committee on Navigation, Communications and Search and Rescue (NCSR) held its fourth session from 6 to 10 March 2017 chaired by Mr. R. Lakeman (Netherlands). The Vice-Chair, Mr. N. Clifford (New Zealand), was also present.

The Secretary-General welcomed participants and delivered his opening address, the full text of which can be downloaded from the IMO website at the following link:

<http://www.imo.org/en/MediaCentre/SecretaryGeneral/Secretary-GeneralsSpeechesToMeetings>

NCSR 4 adopted the agenda (NCSR 4/1/Rev.1).

#### **2. DECISIONS OF OTHER IMO BODIES**

NCSR 4 noted the decisions and comments pertaining to its work made by other committees and subcommittees and took them into account in its deliberations when dealing with the relevant agenda items.

#### **3. ROUTEING MEASURES AND MANDATORY SHIP REPORTING SYSTEMS**

The Sub-Committee established an Experts Group on Ships' routeing at this session.

The Sub-Committee approved the amendments to the existing Long Sand Head two-way route and SUNK Inner precautionary area in the traffic separation scheme "In the SUNK area and in the Northern approaches to the Thames Estuary".

The Sub-Committee approved the establishment of the following new routeing measures other than TSSs:

- (i) recommended route "Off the western coast of Izu O Shima Island";
- (ii) area to be avoided "Off Peninsula de Osa in the Pacific coast off Costa Rica";
- (iii) area to be avoided "Tubbataha Reefs Natural Park Particularly Sensitive Sea Area (PSSA) in the Sulu Sea" as an associated protective measure.

The new measures detailed above to be implemented six months after adoption by the Committee, i.e. on 1 January 2018 at 0000 hours UTC.

#### **4. UPDATES TO THE LRIT SYSTEM**

LRIT is aimed at convention shipping and at the moment there are no developments that are of interest to World Sailing.

#### **5. INTERCONNECTION OF NAVTEX AND INMARSAT SAFETYNET RECEIVERS AND THEIR DISPLAY ON INTEGRATED NAVIGATION DISPLAY SYSTEMS**

The work on this output had been completed, the Sub-Committee invited MSC to delete this output from the Sub-Committee's biennial agenda.

**6. GUIDELINES ASSOCIATED WITH MULTI-SYSTEM SHIPBORNE RADIONAVIGATION RECEIVERS DEALING WITH THE HARMONIZED PROVISION OF PNT DATA AND INTEGRITY INFORMATION**

The work on this output had been completed, the Sub-Committee invited the Committee to delete this output from the Sub-Committee's biennial agenda.

**7. ADDITIONAL MODULES TO THE REVISED PERFORMANCE STANDARDS FOR INTEGRATED NAVIGATION SYSTEMS (INS) (RESOLUTION MSC.252 (83) RELATING TO THE HARMONIZATION OF BRIDGE DESIGN AND DISPLAY OF INFORMATION**

The work on this output had been completed, the Sub-Committee invited MSC to delete this output from the Sub-Committee's biennial agenda.

**8. GUIDELINES FOR THE HARMONIZED DISPLAY OF NAVIGATION INFORMATION RECEIVED VIA COMMUNICATIONS EQUIPMENT**

The Sub-Committee agreed to the establishment of the Correspondence Group on development of the Guidelines for the harmonized display of navigation information received via communications equipment, under the coordination of Norway

Recognizing that the work on development of the Guidelines had not been completed and that further work was required, the Sub-Committee agreed to invite MSC to extend the target completion year for this output to 2018.

**9. REVISED GUIDELINES AND CRITERIA FOR SHIP REPORTING SYSTEMS (RESOLUTION MSC.43(64))**

The work on this output had been completed, the Sub-Committee invited MSC to delete this output from the Sub-Committee's biennial agenda.

**10. PERFORMANCE STANDARDS FOR SHIPBORNE GMDSS EQUIPMENT TO ACCOMMODATE ADDITIONAL PROVIDERS OF GMDSS SATELLITE SERVICES**

NCSR 3 had considered draft performance standards for shipborne GMDSS equipment to accommodate additional providers of GMDSS satellite services, but had not been able to complete the item. As a result, MSC 96 had extended the target completion year for this item to 2017. MSC 96 had agreed that the new performance standards should be generic and be applicable to all new equipment approved after the effective date. It was further agreed that a transition period would be required for equipment already under development.

The draft performance standard relate to convention shipping and are as World Sailing would expect in terms of operation and performance.

The work on this output has now been completed, the Sub-Committee invited MSC to delete this output from the Sub-Committee's biennial agenda.

**11. UPDATING OF THE GMDSS MASTER PLAN AND GUIDELINES ON MSI (MARITIME SAFETY INFORMATION) PROVISIONS**

The IMO NAVTEX Manual 2018 endorsed by NCSR 3 and approved by MSC 97 and comes into effect on 1 January 2018.

Only one formal report of interference on 518 kHz during hours of darkness has been received over the last 12 months. The NAVTEX station at Tallinn, Estonia has reported interference from the NAVTEX station at Mondolfo, Italy during the 2320 UTC timeslot. The Italian authorities have been contacted by the Panel and they have reset the automatic reduction of power for this timeslot accordingly. The Panel will continue to monitor the situation and assist the Italian authorities should further action be found necessary.

## **12. DRAFT MODERNIZATION PLAN OF THE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS)**

The Sub-Committee considered the report on the Modernization of the GMDSS containing the draft GMDSS Modernization Plan including three proposed new outputs:

- (a) 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;
- (b) revision of the Criteria for the provision of mobile satellite communication systems in the Global Maritime Distress and Safety System (GMDSS) (resolution A.1001(25) and MSC.1/Circ.1414);
- (c) development of performance standards for a digital Navigational Data system (NAVDAT) for broadcasting maritime safety and security related information from shore-to-ship.

After discussion proposals for a revision of resolution A.1001 (25) and MSC.1/Circ.1414, and the development of performance standards for NAVDAT were deleted from the draft Modernization Plan. Revision of resolution A.1001 (25) and MSC.1/Circ.1414 was only appropriate after the revision of SOLAS chapter IV had been completed. More technical information, including test results, was needed before NAVDAT could be considered for operation in the GMDSS.

The Sub-Committee established a Drafting Group on the modernization of the GMDSS, chaired by United States, and instructed it to:

- (i) finalize the draft Modernization Plan;
- (ii) prepare draft terms of reference for the Correspondence Group on the Modernization of the GMDSS for intersessional work to be done between NCSR 4 and NCSR 5.

On receipt of the Drafting Group's report, the Sub-Committee endorsed:

- (i) the draft Modernization Plan of the Global Maritime Distress and Safety System (annex 11 of NCSR4 report), and invited MSC to approve it;
- (ii) the proposal for a new output on the revision of SOLAS chapters III and IV for Modernization of the GMDSS, including related and consequential amendments to other existing instruments, and invited MSC to approve it for inclusion in the provisional agenda for NCSR 5, with a target completion year of 2022.
- (iii) the terms of reference of the Correspondence Group on the modernization of the GMDSS

The revision of SOLAS Chapters III and IV will enable the use of modern communication systems in the GMDSS, while removing the requirement to carry obsolete systems such as Narrow Band Direct

Printing (NBDP) if the ship does not use them to meet the functional requirements of the GMDSS. The revised GMDSS which is planned to enter into force in 2024, will provide for the introduction of new services and systems, such as other terrestrial communications using digital technologies for receiving Maritime Safety Information, and for enhanced and more reliable Search and Rescue capabilities by, for example, including the Cospas-Sarsat MEOSAR system.

The Global Maritime Distress and Safety System (GMDSS) was adopted as part of the 1988 Amendments to the International Convention for the Safety of Life at Sea, 1974 (SOLAS). It was fully implemented in 1999, and it has served the seafarer and the maritime industry well since its inception, but some of the GMDSS technologies used have not reached their full potential, and after more than 30 years since their development, some GMDSS functions could be performed by more modern technologies.

The compelling need for modernization of the GMDSS derives from the need to harmonize IMO provisions with ITU Radio Regulations and the deletion of references to obsolete communication systems such as the VHF EPIRB which has never been implemented. The review of the GMDSS also needs to incorporate correct references to present Cospas-Sarsat systems, a modified definition of Sea Area A3, provide for optional use of other terrestrial communications using digital technologies for receiving Maritime Safety Information, removal of the requirement to carry equipment for direct-printing telegraphy, reflect the correct VHF Channel 16 continuous listening watch requirements, and consideration of the need for more search and rescue locating devices on survival craft.

Further editorial revisions will include updating references in IMO instruments, for instance changing CCIR to ITU-R, replacing any references to Inmarsat by the generic reference "recognized mobile-satellite service", revision of any wording that suggests that a GMDSS work station is required separate from the ship's main radio installation, and updating footnotes to reference current IMO instruments.

A copy of the Draft Modernisation Plan is attached and is worth reading (NCSR 4/29 Annex 11).

#### *Review of the Radar SART versus the AIS SART*

The Sub-Committee considered information provided by the United States) presenting a review of the radar SART versus the AIS-SART and concluding that the AIS-SART was more cost-effective and considered to be a better technology for search and rescue purposes. The Sub-Committee was invited to consider a proposed draft COMSAR circular on this matter.

The Sub-Committee noted a general preference for the use of AIS-SART over the radar SART and agreed that more technical information would be needed to take a final decision. In this context, it was noted that an amendment in SOLAS chapter IV would be appropriate to address this matter.

The Sub-Committee agreed to address this matter further when considering amendments to SOLAS chapter IV under the proposed new output.

### **13. ANALYSIS OF DEVELOPMENTS IN MARITIME RADIOCOMMUNICATION SYSTEMS AND TECHNOLOGY**

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

**14. REVIEW SOLAS CHAPTER IV AND APPENDIX (CERTIFICATES: FORMS P, R AND C) TO ACCOMMODATE ADDITIONAL MOBILE SATELLITE SYSTEMS**

The work on this output had been completed, the Sub-Committee invited MSC to delete this output from the Sub-Committee's biennial agenda.

**15. RESPONSE TO MATTERS RELATED TO THE RADIOCOMMUNICATION ITU-R STUDY GROUP**

The operational use of new DSC Class M devices had been referred to Joint IMO/ITU Experts Group and the ICAO/IMO Joint Working Group, for detailed consideration at their next meeting and to provide advice to NCSR 4, as appropriate.

Comments provided by the United Kingdom on the operational use of new DSC Class M devices were considered. It was noted that these personal devices were to support the recovery of individuals in man overboard (MOB) situations. The United Kingdom expressed its concerns of the use of these devices, and other personal devices operating on maritime safety frequencies, in mass rescue operations. The United Kingdom was of the view that the development of personal radio devices and their possible application to mass evacuation situations, including the impacts on search and rescue, should be carefully considered. In discussion the following views were expressed:

- there was the possibility for both regulated and unregulated use of devices and IMO should provide guidance for administrations on the management and use of these devices to control the situation;
- it concerned life-saving devices and that not too much control should take place;
- there might be technical solutions to deal with a large amount of these devices in a relatively small area in the event of mass rescue operations;
- information could be included in the user manuals of the equipment;
- something could be done in the field of training of the users; and
- it was also a matter for WRC-19 under agenda item 1.9.1 in order to give guidance on this issue.

**16. RESPONSE TO MATTERS RELATED TO ITU WORLD RADIOCOMMUNICATION CONFERENCE**

Under this item, the Sub-Committee approved the terms of reference for the thirteenth meeting of the Joint IMO/ITU Experts Group.

**17. MEASURES TO PROTECT THE SAFETY OF PERSONS RESCUED AT SEA**

MSC 96 had approved MSC.1/Circ.896/Rev.2 on *Interim measures for combating unsafe practices associated with the trafficking, smuggling or transport of migrants by sea*.

The Sub-Committee noted that MSC 97, taking into account that the humanitarian crisis in the Mediterranean region was far from being resolved, had invited Member States and international organizations to submit documents to the next session, and encouraged Member States to report incidents information via the facilitation module in GISIS.

**18. DEVELOPMENTS IN GMDSS SATELLITE SERVICES**

The MEOSAR system commenced on 13 December 2016 with the anticipation that the initial Full Operational Capability (FOC) would be achieved in 2019.

It was noted that existing 406 MHz beacons, known as First Generation Beacons, would be fully compatible with the MEOSAR system, so that there would be no requirement to replace existing beacons and that the second-generation beacons, currently under development, and anticipated to

become available in 2018, would provide better performance and additional functionality, and thereby eventually improve the performance of the Cospas-Sarsat system as a whole.

Training material (video modules) on the Cospas-Sarsat system in general, and the MEOSAR system in particular, that may be used by interested parties to improve knowledge and understanding of the system. The training material was expected to be available for all users on the Cospas-Sarsat website by the end of 2017.

The International 406-MHz Beacon Registration Database (IBRD), which will be undergoing a comprehensive redevelopment in the near future. The IBRD is available at no cost to users with no access to national registration facilities or that wish to upload their national records to ensure 24/7 access for RCCs. It was further noted that through registering beacons in the system, the IBRD also aimed at helping Administrations to facilitate proper registration by beacon owners while avoiding administrative costs and inconvenience to their governments.

Contracting Governments with 406-MHz beacon registration databases should investigate the usefulness and appropriate methods of adding fields or using existing fields within their databases, to permit the association of a 406-MHz beacon's Hex ID with the IDs of one or more combined-device transmitters, including an AIS ID (e.g. for an EPIRB-AIS combined device) and other types of IDs that might be associated with other combined-device transmitters.

#### **19. REVISED PERFORMANCE STANDARDS FOR EPIRBs OPERATING ON 406 MHZ (RESOLUTION A.810(19)) TO INCLUDE COSPAS-SARSAT MEOSAR AND SECOND GENERATION BEACONS**

There was a wide ranging discussion that included issues related to the return link service, the need for further operational testing of the revised duty cycle, the combining of AIS and EPIRB capabilities in any single device, the required timetable to support Cospas-Sarsat second generation beacon activities and possible mandatory GNSS-position reporting capability.

The pending launch of EPIRB-AIS devices, with the EPIRB Hex ID transmitted in the AIS message as a Message 14 Safety Related Broadcast Message was noted (incorporated into the RTCM 11000.4 Standard).

#### **20. FURTHER DEVELOPMENT OF THE PROVISION OF GLOBAL MARITIME SAR SERVICES**

The introduction into service of MEOSAR by Cospas-Sarsat would increase the volume of SAR related alerts, change the way in which alerts were generated and delivered and hence lead to the need for ever increasing coordination and cooperation between aviation and maritime administrations and their associated SAR services. In this regard, it was recognized that harmonized procedures and accurate information for exchanges between aeronautical and maritime RCCs, particularly RCC contact details and SAR region details, were critical steps to have in place to provide effective delivery of these alerts.

The Global SAR plan is updated on a daily basis and it was important to provide updated information directly into GISIS. Having updated information available would enable Rescue Coordination Centres to act promptly without losing precious time the moment they were dealing with a distress situation.

It was agreed that there was a need to widen the range of SAR experts participating in relevant meetings to ensure representation from across all areas of the world.

#### **21. GUIDELINES ON HARMONIZED AERONAUTICAL AND MARITIME SEARCH AND RESCUE PROCEDURES, INCLUDING SAR TRAINING MATTERS**

It was noted that some light-emitting diodes (LEDs) used in emergency equipment, navigation aids and obstruction lighting were not detectable by night vision equipment, and recognized that this posed a significant safety risk.

Having acknowledged the significance of risk, the view was that this matter should be brought to the attention of administrations for their appropriate action. It was recommended that the Sub-Committee highlights the importance of the matter and draws the attention of Member States to this issue for their consideration and action, as appropriate, to address the safety risks.

## **22. AMENDMENTS TO THE IAMSAR MANUAL**

Amendments to the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual on the use of common terminology for mobile satellite systems recognized for use in the GMDSS should be developed and incorporated into the planned revision of the manual scheduled to be completed in 2019.

The proposed amendments to the IAMSAR Manual are to be sent to ICAO/IMO SAR JWG 24 for further consideration. Input from Member Governments was invited through ICAO/IMO SAR JWG.

## **23. REVISED GUIDELINES FOR PREPARING PLANS FOR COOPERATION BETWEEN SEARCH AND RESCUE SERVICES AND PASSENGER SHIPS (MSC.1/CIRC.1079)**

The draft revised MSC/Circ.1079 on the *Guidelines for preparing plans for co-operation between search and rescue services and passenger ships* was considered but is of little interest to World Sailing.

## **24. UNIFIED INTERPRETATION OF PROVISIONS OF IMO SAFETY, SECURITY, AND ENVIRONMENT RELATED CONVENTIONS**

ICS expressed concern that the unified interpretation of COLREG Annex I/10(a)(i), implied that it was acceptable for any vessel within 1000 m of the bow of a very large ship not to be able to see its sidelights, and therefore may be unable to determine the aspect of an approaching vessel, taking into account the definition of a head on situation in COLREG Rule 14. Therefore, the unified interpretation highlighted a particular risk for very small vessels. This may only be addressed effectively by an appropriate amendment to the COLREG to address the requirements for the positioning of masthead and sidelights on very large vessels.

Some delegations argued that the time period for which the sidelights of a large vessel were not visible to a small vessel was very short and therefore not of major concern.

After some discussion it was agreed that in the absence of alternatives the UI provided a good interim solution and necessary clarity for the industry. The Group invited the Sub-Committee to endorse the Unified Interpretation, with a view to approval by MSC.

Notwithstanding the above, the Group recognized the need to amend the COLREG in order to provide a long-term solution and, therefore, agreed to request the Sub-Committee to invite Member States to submit proposals for a new output to MSC.

## **25. BIENNIAL STATUS REPORT AND PROVISIONAL AGENDA FOR NCSR 5**

The Sub-Committee agreed to establish at its next session working, experts and drafting groups on the following subjects:

- routing measures and mandatory ship reporting systems;
- updates to the LRIT system;
- guidelines for the harmonized display of navigation information received via communications equipment;
- guidelines on standardized modes of operation, S-mode;
- develop guidance on definition and harmonization of the format and structure of Maritime Service Portfolios (MSPs);
- consequential work related to the new Polar Code;
- 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;
- ITU related matters;
- developments in GMDSS satellite services;
- revised Performance Standards for EPIRBs operating on 406 MHz (resolution A.810(19)) to include Cospas-Sarsat MEOSAR and second generation beacons;
- SAR matters;
- unified interpretation of provisions of IMO safety, security, and environment related Conventions.

The Sub-Committee noted that the fifth session had been tentatively scheduled to take place from 19 to 23 February 2018.

## **26. ELECTION OF CHAIR AND VICE-CHAIR FOR 2018**

In accordance with the Rules of Procedure of the Maritime Safety Committee, the Sub-Committee unanimously re-elected Mr. R. Lakeman (Netherlands) as Chair and Mr. N. Clifford (New Zealand) as Vice-Chair for 2018.

## **27. ANY OTHER BUSINESS**

The Sub-Committee noted the information provided by Argentina on the plan for installing AIS Aids to Navigation on the Antarctic Continent for the purpose of enhancing the safety of navigation.

## **28. CONSEQUENTIAL WORK RELATED TO THE NEW POLAR CODE**

This will be considered in the report on MSC 98

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