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SUB-COMMITTEE ON
RADIOCOMMUNICATIONS AND
SEARCH AND RESCUE
11th session
Agenda item 18

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REPORT TO THE MARITIME SAFETY COMMITTEE

Table of contents

Section		Page No.
1	INTRODUCTION – ADOPTION OF THE AGENDA – ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 2007	5
2	DECISIONS OF OTHER IMO BODIES	8
3	GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS)	9
4	ITU MARITIME RADIOCOMMUNICATION MATTERS	15
5	SATELLITE SERVICES (INMARSAT AND COSPAS-SARSAT)	18
6	MATTERS CONCERNING SEARCH AND RESCUE, INCLUDING THOSE RELATED TO THE 1979 SAR CONFERENCE AND IMPLEMENTATION OF THE GMDSS	22
7	DEVELOPMENTS IN MARITIME RADIOCOMMUNICATION SYSTEMS AND TECHNOLOGY	30
8	REVISION OF THE IAMSAR MANUAL	31
9	REVISION OF THE PERFORMANCE STANDARDS FOR SART	32
10	AMENDMENTS TO COLREGs ANNEX IV RELATING TO DISTRESS SIGNALS	35
11	GUIDELINES ON THE CONTROL OF SHIPS IN AN EMERGENCY	36
12	REPLACEMENTS FOR USE OF NBDP (RADIO TELEX) FOR MARITIME DISTRESS AND SAFETY COMMUNICATIONS IN MARITIME MF/HF BANDS	37
13	GUIDELINES FOR UNIFORM OPERATING LIMITATIONS OF HIGH-SPEED CRAFT	41

14	DEVELOPMENT OF AN E-NAVIGATION STRATEGY	41
15	WORK PROGRAMME AND AGENDA FOR COMSAR 12	49
16	ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 2008	51
17	ANY OTHER BUSINESS	51
18	ACTION REQUESTED OF THE COMMITTEE	51

LIST OF ANNEXES

- ANNEX 1 DRAFT COMSAR CIRCULAR – ANALYSIS OF MARITIME SAFETY INFORMATION PROMULGATED VIA THE EGC SAFETYNET SYSTEM AND RECOMMENDATIONS ON IMPROVING ITS QUALITY
- ANNEX 2 PRELIMINARY REVISED DRAFT DIAGRAM ON SIMPLIFIED OPERATING GUIDANCE ON INITIAL DISTRESS CALLS
- ANNEX 3 DRAFT ASSEMBLY RESOLUTION – CRITERIA FOR THE PROVISION OF MOBILE SATELLITE COMMUNICATION SYSTEMS IN THE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS)
- ANNEX 4 DRAFT RESOLUTION MSC.[...](83) – ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED
- ANNEX 5 DRAFT MSC CIRCULAR – MINIMIZING DELAYS IN SEARCH AND RESCUE RESPONSE TO DISTRESS ALERTS
- ANNEX 6 TERMS OF REFERENCE AND PROVISIONAL AGENDA FOR THE FOURTEENTH SESSION OF THE ICAO/IMO JOINT WORKING GROUP ON THE HARMONIZATION OF AERONAUTICAL AND MARITIME SEARCH AND RESCUE
- ANNEX 7 LIST OF QUESTIONS ON SAR-RELATED LRIT ISSUES THAT NEED TO BE ADDRESSED
- ANNEX 8 DRAFT MSC CIRCULAR – ADOPTION OF AMENDMENTS TO THE INTERNATIONAL AERONAUTICAL AND MARITIME SEARCH AND RESCUE (IAMSAR) MANUAL
- ANNEX 9 DRAFT RESOLUTION MSC.[...](83) – ADOPTION OF PERFORMANCE STANDARDS FOR AIS SEARCH AND RESCUE TRANSMITTER (AIS-SART) FOR USE IN SEARCH AND RESCUE OPERATIONS
- ANNEX 10 DRAFT RESOLUTION MSC.[...](84) – ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED
- ANNEX 11 DRAFT RESOLUTION MSC.[...](84) – ADOPTION OF AMENDMENTS TO THE PROTOCOL OF 1988 RELATING TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974
- ANNEX 12 DRAFT RESOLUTION MSC.[...](84) – ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CODE OF SAFETY FOR HIGH-SPEED CRAFT, 1994 (1994 HSC CODE)

- ANNEX 13 DRAFT RESOLUTION MSC.[...](84) – ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CODE OF SAFETY FOR HIGH-SPEED CRAFT, 2000 (2000 HSC CODE)
- ANNEX 14 DRAFT AMENDMENTS NEEDED TO THE MODU CODE IN RELATION TO THE REVISION OF PERFORMANCE STANDARDS FOR SART
- ANNEX 15 DRAFT RESOLUTION MSC.[...](83) – ADOPTION OF AMENDMENTS TO RESOLUTION A.802(19) ON PERFORMANCE STANDARDS FOR SURVIVAL CRAFT RADAR TRANSPONDERS FOR USE IN SEARCH AND RESCUE OPERATIONS
- ANNEX 16 PRELIMINARY DRAFT GUIDELINES ON THE CONTROL OF SHIPS IN AN EMERGENCY
- ANNEX 17 PRELIMINARY TEXT OF DRAFT MSC CIRCULAR – GUIDANCE ON CEASING REQUIREMENTS FOR NBDP RADIO TELEX INSTALLATIONS ON BOARD CERTAIN SHIPS SAILING IN SEA AREAS A3
- ANNEX 18 LONG-RANGE IDENTIFICATION AND TRACKING OF SHIPS PROVISIONAL LIST OF AGREEMENTS WHICH MAY BE REQUIRED
- ANNEX 19 LRIT – BILLING AND COSTING ISSUES
- ANNEX 20 PROPOSED REVISED WORK PROGRAMME OF THE SUB-COMMITTEE AND PROVISIONAL AGENDA FOR COMSAR 12

1 INTRODUCTION – ADOPTION OF THE AGENDA – ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 2007

1.1 The Sub-Committee on Radiocommunications and Search and Rescue held its eleventh session from 19 to 23 February 2007 at the Royal Horticultural Halls and Conference Centre, London under the Chairmanship of Mr. C. Salgado (Chile), who was elected Chairman at the start of the meeting, as decided by COMSAR 10. Correspondingly the Vice-Chairman, Mr. A. Olopoenia (Nigeria), was also re-elected.

1.2 The session was attended by delegations from the following countries:

ALGERIA	LIBERIA
ANGOLA	MALAYSIA
ANTIGUA AND BARBUDA	MALTA
ARGENTINA	MARSHALL ISLANDS
AUSTRALIA	MALAYSIA
BAHAMAS	MEXICO
BELGIUM	MOROCCO
BOLIVIA	MYANMAR
BRAZIL	NETHERLANDS
BULGARIA	NEW ZEALAND
CANADA	NIGERIA
CHILE	NORWAY
CHINA	PANAMA
COLOMBIA	PAPUA NEW GUINEA
CROATIA	PERU
CUBA	PHILIPPINES
CYPRUS	POLAND
DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA	PORTUGAL
DENMARK	REPUBLIC OF KOREA
DOMINICAN REPUBLIC	ROMANIA
ECUADOR	RUSSIAN FEDERATION
EGYPT	SAUDI ARABIA
ESTONIA	SINGAPORE
FINLAND	SLOVENIA
FRANCE	SOUTH AFRICA
GERMANY	SPAIN
GREECE	SWEDEN
ICELAND	SYRIAN ARAB REPUBLIC
INDIA	TURKEY
INDONESIA	TUVALU
IRAN (ISLAMIC REPUBLIC OF)	UKRAINE
IRELAND	UNITED KINGDOM
ISRAEL	UNITED STATES
ITALY	URUGUAY
JAPAN	VANUATU
LATVIA	VENEZUELA

and by the following Associate Member of IMO:

HONG KONG, China

1.3 The following United Nations specialized agencies were also represented:

INTERNATIONAL TELECOMMUNICATION UNION (ITU)
WORLD METEOROLOGICAL ORGANIZATION (WMO)

1.4 The session was also attended by observers from intergovernmental and non-governmental organizations:

INTERNATIONAL HYDROGRAPHIC ORGANIZATION (IHO)
EUROPEAN COMMISSION (EC)
INTERNATIONAL COSPAS-SARSAT PROGRAMME AGREEMENT
(COSPAS-SARSAT)
INTERNATIONAL MOBILE SATELLITE ORGANIZATION (IMSO)
INTERNATIONAL CHAMBER OF SHIPPING (ICS)
INTERNATIONAL CONFEDERATION OF FREE TRADE UNIONS (ICFTU)
INTERNATIONAL ASSOCIATION OF MARINE AIDS TO NAVIGATION
AND LIGHTHOUSE AUTHORITIES (IALA)
INTERNATIONAL RADIO-MARITIME COMMITTEE (CIRM)
INTERNATIONAL ASSOCIATION OF CLASSIFICATION SOCIETIES (IACS)
OIL COMPANIES INTERNATIONAL MARINE FORUM (OCIMF)
INTERNATIONAL FEDERATION OF SHIPMASTERS' ASSOCIATIONS (IFSMA)
INTERNATIONAL SALVAGE UNION (ISU)
INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS
(INTERTANKO)
INTERNATIONAL LIFEBOAT FEDERATION (ILF)
CRUISE LINES INTERNATIONAL ASSOCIATION (CLIA)
INTERNATIONAL SAILING FEDERATION (ISAF)
THE INTERNATIONAL MARINE CONTRACTORS ASSOCIATION (IMCA)
WORLD NUCLEAR TRANSPORT INSTITUTE (WNTI)
WORLD MARITIME UNIVERSITY (WMU)

Secretary-General's opening address

1.5 In welcoming the participants, the Secretary-General referred to the tragic and heavy loss of life resulting from the foundering of two ferries, the **Senopati Nusantara** and **Tristar 1**, off the coast of Indonesia late in 2006 and in 2007, of another passenger vessel, **The Lord is My Shepherd**, capsizing off Cameroon, also with loss of life. He stressed that the enormity of the losses suffered should act as a catalyst for all concerned to strengthen their resolve to ensure ships were only allowed to sail after all the measures for a safe passage had been met and that commercial considerations were never given precedence over safety.

He also referred to the incident, early in January, involving the containership **MSC Napoli**, which was, reportedly, in danger of sinking as a result of hull damage sustained during heavy weather in the Western Approaches to the English Channel. Thankfully, there was no loss of life in this case and, without wishing to pre-empt, in any way, the outcome of the ongoing accident investigation, he stated that the general view seemed to be that the decision of the United Kingdom authorities, who handled the case in close co-operation with their French

counterparts, to allow the beaching of the ship, thereby providing a place of refuge, was, in the circumstances, the right one taken bearing in mind the potential risk of severe pollution from the ship's bunkers over the long-term. The Secretary-General considered that the incident might provide useful background information in the context of agenda item 11 on developing **Guidelines on the control of ships in an emergency**. He also expressed appreciation to the Maritime and Coastguard Agency and the Royal Navy, in particular the helicopter crews, for successfully carrying out, under the co-ordination of the competent French authorities, the rescue operation by lifting all 26 crew members from the distressed vessel, in extreme weather conditions.

Recalling the **proposed amendments to resolution A.888(21)** on Criteria for the provision of mobile satellite communication systems in the GMDSS agreed by COMSAR 10, the Secretary-General referred to the principal decisions taken by MSC 82 on the issue, namely that **applications** from satellite providers submitted by Member States should be directed to the Committee; that the **evaluation** of such providers would then be undertaken by the MSC, through an appropriate mechanism complying with the provisions of resolution A.888(21); and that the **recognition** of any new provider to operate in the GMDSS should also be left to the Committee to decide on the basis of such an evaluation. As far as **oversight** of new satellite providers in the GMDSS is concerned, the Committee had reaffirmed its decision at MSC 77 that it should be carried out by IMSO, as the appropriate organization to assume such functions. Accordingly, the Committee had invited IMSO to undertake that role forthwith.

He reminded the Sub-Committee that MSC 82 had instructed COMSAR to review the proposed draft amendments to resolution A.888(21) to reflect therein the respective responsibilities of the MSC and IMSO accordingly. Any corresponding amendments to SOLAS chapter IV should also be finalized at this session for submission to MSC 83 for adoption. In speaking of the importance of creating a sound regime for the approval of new satellite providers for the GMDSS should be a matter of concern to all, the Secretary-General considered that it was equally important that IMSO Member States, on the one hand, ratify the relevant amendments to the IMSO Convention at the earliest opportunity (so as to provide the legal basis required for that Organization to carry out its role forthwith) and, on the other, that the forthcoming extraordinary IMSO Assembly next month successfully tackle all associated issues.

In drawing attention to the theme for this year's World Maritime Day "IMO's response to current environmental challenges", the Secretary-General pointed out that this theme provided an opportunity to show that the maritime sector did care about the environment and, was indeed in the forefront of this challenge. He emphasized that IMO had adopted a wide range of measures to prevent and control any pollution caused by ships which were all positive proof of the firm determination of Governments and the industry to reduce to the barest minimum the impact that shipping might have on our fragile environment. Conversely, the public's image of shipping and negative views of the industry and its regulators, following accidents that cause pollution was unfair. He urged all concerned to work together on several fronts to counter-balance such views through a determined proactive approach to environmental issues.

In the field of maritime security, the Secretary-General appreciated the Sub-Committee's contribution to the Organization's efforts to protect shipping from acts of terrorism, in particular in relation to the development of the **Long-Range Identification and Tracking of Ships** system, where further work on its establishment was expected at the current session. He further stated that he would ensure that the Secretariat has the required resources to discharge its system related responsibilities in the most efficient manner.

In relation to **search and rescue** the Secretary-General reported that in January he had opened, together with the Minister for Transport of South Africa, the sub-regional MRCC in Cape Town, following the opening, in May of last year, of another sub-regional MRCC in Mombasa, Kenya.

Concurrently with the inauguration of the Cape Town MRCC, he had also taken pleasure in assisting at the formal signing of a Multilateral Agreement among the Governments of the Comoros, Madagascar, Mozambique and South Africa on the co-ordination of maritime search and rescue services in areas adjacent to their coast, and had taken the opportunity to acknowledge the valuable contribution of all the host Governments for providing facilities, equipment, training opportunities and personnel for the two regional centres and their subsidiary sub-centres.

In highlighting some of the other important issues on the agenda, the Secretary-General referred to COMSAR's contribution to the **development of an e-navigation strategy**, in conjunction with the NAV Sub-Committee, to consider all associated aspects with the aim of assisting the MSC to develop, by next year, a strategic vision and policy direction to progress the concept further. Other items of note include the **Guidelines for the control of ships in an emergency**, also in conjunction with the NAV Sub-Committee; the **finalization of the Performance Standards for SART**; matters concerning **search and rescue**; and **GMDSS** issues.

In his concluding remarks, the Secretary-General stressed that there should be no complacency about security at any of the various venues where IMO meetings were scheduled to be held during the refurbishment period and appealed to all to abide by the security rules in place and, in particular Circular letter No.2692 and any other *ad-hoc* measures that may be necessary. In referring to the implementation of the Voluntary IMO Member State Audit Scheme in accordance with resolution A.974(24), he updated the Sub-Committee on the audits conducted so far and requested Member Governments to offer themselves for audit to facilitate the planning of audits for the next biennium and to nominate individuals as auditors from whom to choose audit teams.

Chairman's remarks

1.6 In responding, the Chairman thanked the Secretary-General for his words of guidance and encouragement and assured the Secretary-General that his advice and requests would be given every consideration in the deliberations of the Sub-Committee and its working groups.

Adoption of the agenda and related matters

1.7 The Sub-Committee adopted the agenda (COMSAR 11/1), and agreed, in general, that the work of the Sub-Committee should be guided by the annotations to the provisional agenda and timetable (COMSAR 11/1/1), as amended. The agenda of the session with the list of documents submitted under each agenda item for consideration, is set out in document COMSAR 11/INF.6.

2 DECISIONS OF OTHER IMO BODIES

2.1 The Sub-Committee noted the decisions and comments pertaining to its work made by MSC 81, FAL 33, NAV 52 and MSC 82, as reported in documents COMSAR 11/2, COMSAR 11/2/1 and COMSAR 11/2/2 and took them into account in its deliberations when dealing with relevant agenda items.

2.2 The Sub-Committee also noted that relevant decisions of STW 38, which took place less than one month ago, had been reported by the Secretariat under agenda item 6.

Improving the efficiency of meetings

2.3 The Sub-Committee noted that MSC 81 had reaffirmed that the commencement of working groups on Monday morning is an option that should be decided at the meeting with caution. However, it should be encouraged that, whenever possible, terms of reference of working groups should be agreed at the previous sessions of the parent committee(s) or sub-committee(s). Another option would be to issue the draft terms of reference of working and drafting groups at the beginning of the session, provided clear instructions are given to the tasks groups on whether or not to begin work on Monday morning, without prior consideration of the related agenda items in plenary.

2.4 The Sub-Committee also noted that MSC 81 had agreed that there should be no official splinter groups of working or drafting groups. However, where the establishment of a splinter group was necessary for the facilitation and efficiency of the work, there should be a unanimous agreement on its establishment and the outcome of the group's work should be considered and agreed by members of the respective working or drafting groups and incorporated in the report, as appropriate.

Review of the guidelines on the organization and method of work of the MSC, MEPC and their subsidiary bodies

2.5 The Sub-Committee further noted that MSC 82 had approved the Committee's revised Guidelines disseminated by means of MSC-MEPC.1/Circ.1.

3 GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS)

MATTERS RELATING TO THE GMDSS MASTER PLAN

3.1 The Sub-Committee recalled that MSC 82 had endorsed the Sub-Committee's action in issuing COMSAR/Circ.38 on List of Land Earth Station (LES) operation co-ordinators in the Inmarsat system, superseding COMSAR/Circ.11 and corrigenda.

3.2 The Sub-Committee noted document COMSAR 11/3/1 (Secretariat) advising that, in accordance with its instructions and using information provided by Governments after March 2006, the Secretariat had issued GMDSS/Circ.8/Corr.13 in April 2006 to amend GMDSS/Circ.8 (Master Plan). Countries which had provided information for Corr.13 were Canada, Indonesia, Islamic Republic of Iran, Norway, Romania, Spain, Thailand, Turkey and Viet Nam.

3.3 The Sub-Committee further noted that since issuing GMDSS/Circ.8/Corr.13, the Secretariat had received the updated information from Cape Verde, Chile, Lithuania, Japan, New Zealand, Norway, Peru and the Russian Federation. Accordingly, the Secretariat was planning to issue GMDSS/Circ.8/Corr.14 towards March/April 2007.

3.4 Noting the above information, the Sub-Committee once again requested Member States to check their national data in GMDSS/Circ.8 and corrigenda for accuracy, and provide the Secretariat with any necessary amendments, as soon as possible, and to respond to MSC/Circ.684, if they had not already done so.

OPERATIONAL AND TECHNICAL CO-ORDINATION PROVISIONS OF MARITIME SAFETY INFORMATION (MSI) SERVICES, INCLUDING REVIEW OF THE RELATED DOCUMENTS

3.5 The Sub-Committee recalled also that:

- .1 MSC 81 had endorsed the Sub-Committee's action in conveying a letter to IOC/UNESCO stating that the options to use the IMO GMDSS communication facilities for promulgating tsunami warnings through the relevant NAVAREA/METAREA co-ordinators remained available to national or regional centres, if required; and
- .2 the Secretariat had written to IOC in this regard and attended the meeting of the Executive Council of IOC in June 2006, in order to emphasize that IMO's GMDSS communication facilities would be available for promulgation of Tsunami warnings through NAVAREA/METAREA co-ordinators.

3.6 In considering document COMSAR 11/3 (IHO), the Sub-Committee noted the outcome of the eighth session of the IHO Commission on the Promulgation of Radio Navigational Warnings (CPRNW) held in Buenos Aires, Argentina, from 12 to 15 September 2006. The Sub-Committee also noted, in particular, that CPRNW had received reports that there were occurrences of 'C' codes being used incorrectly, i.e., not in accordance with the IMO SafetyNET Manual and decided to refer this issue to the GMDSS Working Group.

3.7 Having considered document COMSAR 11/3/5, the Sub-Committee noted with appreciation the report of the Chairman, International NAVTEX Co-ordinating Panel, summarizing the current issues being addressed by the Panel and its activities since COMSAR 10.

3.8 Of particular relevance was an update on the NAVTEX infrastructure in the Mediterranean, Black and Caspian Seas; Africa; the far East; the north Atlantic Ocean and South America. In addition, the Sub-Committee also noted the current operational situation with respect to NAVTEX service areas, national language broadcasts on the International NAVTEX Service, power output and interference including wider issues associated with the promulgation of Maritime Safety Information.

3.9 The delegation of Italy confirmed that two NAVTEX stations in the Mediterranean Sea were operational now whilst the delegation of Argentina stated that the establishment of a national service on 490 kHz and the subsequent transfer of national language broadcasts of 518 kHz had been implemented as of 1 February 2007.

3.10 In considering document COMSAR 11/3/2, the Sub-Committee noted the report of the work of the Joint IMO/IHO/WMO Correspondence Group on Arctic MSI Services addressing the expansion of the World-Wide Navigational Warning Service (WWNWS) into Arctic waters. The Sub-Committee decided to refer this document to the GMDSS Working Group.

3.11 Having considered document COMSAR 11/3/4 (Norway), concerning the establishment of new NAVAREAs in the Arctic seas, including delimitation between the proposed NAVAREAS XIX and XX, the Sub-Committee decided to refer this document to the GMDSS Working Group.

3.12 Having further considered document COMSAR 11/3/3 (IHO), containing a draft COMSAR circular containing a revised list of NAVAREA Co-ordinators, the Sub-Committee decided to refer this document to the GMDSS Working Group.

Establishing the GMDSS Working Group

3.13 Having briefly considered documents COMSAR 11/3/2 (Chairman of the Joint IMO/IHO/WMO Correspondence Group (CG) on Arctic MSI Services), document COMSAR 11/3/4 (Norway) and document COMSAR 11/3/3 (IHO), the Sub-Committee instructed the GMDSS Working Group, taking into account decisions of, and comments and proposals made in plenary, to:

- .1 consider documents COMSAR 11/3, COMSAR 11/3/2, COMSAR 11/3/4 and, in particular, the recommendations of the Correspondence Group (COMSAR 11/3/2), taking into account the proposals outlined in document COMSAR 11/3/4, paragraphs 2 and 3 and provide appropriate comments on the following:
 - .1 that the new Arctic NAVAREAs should be full 24/7 operations, understanding that certain parts of the NAVAREAs will not be navigable during certain times;
 - .2 to expand the Arctic WWNWS and accept Canada as the NAVAREA Co-ordinator for new NAVAREAs XVII and XVIII, Norway as the NAVAREA Co-ordinator for new NAVAREA XIX, and the Russian Federation as the NAVAREA Co-ordinator for new NAVAREAs XX and XXI;
 - .3 that new Arctic NAVAREAs be established rather than Sub-Areas of an existing NAVAREA; and
 - .4 that agreed changes to the coverage areas under the WWNWS, to include the Arctic expansion and other existing coverage gaps, within the Inmarsat system definition manual, be implemented at the same time;
- .2 consider the revised list of NAVAREA Co-ordinators given in document COMSAR 11/3/3 and finalize a draft COMSAR circular on the list of NAVAREA Co-ordinators; and
- .3 consider the need for the issuance of a COMSAR circular on the matter of incorrect 'C' Codes, as suggested in document COMSAR 11/3, paragraph 4, and if so develop a COMSAR circular on the matter of incorrect 'C' Codes,

and prepare a report for consideration by Plenary.

REPORT OF THE 16TH SESSION OF THE BALTIC/BARENTS SEA REGIONAL CO-OPERATION ON MATTERS RELATING TO THE COMSAR SUB-COMMITTEE (BBRC/COMSR-16)

3.14 The Sub-Committee noted the information provided by Finland, (COMSAR 11/INF.2) containing the report of the 16th session of the Baltic/Barents Sea Regional Co-operation on matters relating to the COMSAR Sub-Committee (BBRC/COMSR-16).

MINIMIZING WRONG AIS TRANSMISSIONS

3.15 The Sub-Committee noted that MSC 82 recalled that, following consideration of document MSC 82/21/10 (Egypt) in the context of the NAV Sub-Committee's work programme, it had agreed that the Sub-Committee should co-operate on the issue of minimizing wrong AIS transmissions as necessary.

Report of the GMDSS Working Group

3.16 Having received and considered the relevant part of the report of the GMDSS Working Group (COMSAR 11/WP.2, section 3), the Sub-Committee approved it, in general, and took action as indicated hereunder.

Establishment of new NAVAREAs in Arctic Waters

Report of the Joint IMO/IHO/WMO Correspondence Group

3.17 The Sub-Committee considered the information provided in documents COMSAR 11/3/2 (Report of the Joint IMO/IHO/WMO Correspondence Group) and COMSAR 11/3/4 (Norway) and agreed:

- .1 that all new Arctic NAVAREAs should extend up to 90 degrees North and be responsible for the promulgation of maritime safety information (MSI) in navigable waters within those areas;
- .2 that the new Arctic NAVAREAs should be fully operational 24/7, bearing in mind that certain parts of the NAVAREAs will not be navigable during certain times;
- .3 to expand the Arctic WWNWS and accept Canada as the NAVAREA Co-ordinator for new NAVAREAs XVII and XVIII, Norway as the NAVAREA Co-ordinator for new NAVAREA XIX, and the Russian Federation as the NAVAREA Co-ordinator for new NAVAREAs XX and XXI;
- .4 that new Arctic NAVAREAs be established rather than being Sub-Areas of an existing NAVAREA;
- .5 that agreed changes to the coverage areas under the WWNWS, to include the Arctic expansion and other existing coverage gaps, within the Inmarsat system definition manual, should be implemented at the same time; and
- .6 the boundary limits for the five (5) new Arctic NAVAREAs should be:
 - .1 NAVAREA XVII bound by:
67° 00'.00N 168° 58'.00W,
90° 00'.00N 168° 58'.00W,
90° 00'.00N 120° 00'.00W,
south to the Canadian coastline along the 120°00'.00W meridian;

.2 NAVAREA XVIII bound by:

A position on the Canadian coastline at the 120°00'.00W meridian to:

90° 00'.00N 120°00'.00W,
90° 00'.00N 035°00'.00W,
67° 00'.00N 035°00'.00W;

.3 NAVAREA XIX bound by:

From a position on the Norwegian coastline at 65°00'.00N to:

65° 00'.00N 005° 00'.00W,
75° 00'.00N 005° 00'.00W,
west to a position on the Greenland coastline;

From the border between Norway and Russia (Inland) to:

69° 47'.68N 030° 49'.16E,
69° 58'.48N 031° 06'.24E,
70° 22'.00N 031° 43'.00E,
71° 00'.00N 030° 00'.00E,

From this geographical position (71° 00'.00N – 030°00'.00E) further north along the 030° 00'.00E meridian to:

90° 00'.00N 030° 00'.00E,
90° 00'.00N 035° 00'.00W,
south to the Greenland coastline along the 035° 00'.00W meridian;

.4 NAVAREA XX bound by:

From the border between Norway and Russia (Inland) to:

69° 47'.68N 030° 49'.16E,
69° 58'.48N 031° 06'.24E,
70° 22'.00N 031° 43'.00E,
71° 00'.00N 030° 00'.00E,

From this geographical position (71° 00'.00N – 030°00'.00E) further north along the 030°00'.00E meridian to:

90° 00'.00N 030° 00'.00E,
90° 00'.00N 125° 00'.00E,
then south to the Russian Federation coastline along the 125° 00'.00E meridian;
and

.5 NAVAREA XXI bound by:

From a geographical position on the Russian Federation coastline at the 125°00'.00E meridian to:

90° 00'.00N 125° 00'.00E,
90° 00'.00N 168° 58'.00W,
67° 00'.00N 1 68° 58'.00W,

west to a geographical position on the Russian Federation coastline along the 67° 00'.00N parallel;

- .7 that the provision of SAR information within these new NAVAREAs would continue to be provided in accordance with currently agreed SAR regions; and
- .8 that all WNWNS guidance and other relevant documents should be updated as part of the IHO WNWNS Guidance Document Review Correspondence Group.

Accordingly, the Sub-Committee endorsed the above recommendations of the Joint IMO/IHO/WMO Correspondence Group.

3.18 WMO provided an update on the work relating to the issuing of meteorological information in the new NAVAREAS within the discussions of the Joint IOC/WMO Commission for oceanography and Marine Meteorology relating to delimitations of NAV/METAREAS. Furthermore, WMO intended to propose an IMO resolution on Metocean services similar to resolution A.706(17), as amended on Navigational warnings.

3.19 The Sub-Committee re-established the Joint IMO/IHO/WMO Correspondence Group on Arctic MSI services with the following terms of reference under the co-ordination of IHO*:

Taking into account resolution A.706(17), as amended by MSC/Circ.685, MSC/Circ.750 and MSC/Circ.957 including the relevant decisions of COMSAR 10 and COMSAR 11, the Joint IMO/IHO/WMO Correspondence Group on Arctic MSI Services should give consideration and provide comments on the following:

- .1 who will act as METAREA issuing service?
- .2 how will warnings be transmitted, and can they be monitored as required? Systems other than Inmarsat (such as HF NBDP, NAVTEX and other satellite service providers) need to be considered;

*

Co-ordinator:

Mr. Peter M. Doherty
Chairman, Commission on Promulgation of Radio Navigational Warnings
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email: Peter.M.Doherty@nga.mil

- .3 how will Inmarsat system definition manual and existing SafetyNET terminals be updated to allow receipt of MSI within the new NAVAREAs?
- .4 required training, assistance, and support from IHO/CPRNW to support new NAVAREA co-ordinators and/or from JCOMM/ETMSS for METAREA issuing services; and
- .5 submit its report to COMSAR 12.

3.20 The Sub-Committee considered the intervention by Venezuela to modify the limits of NAVAREAs IV and XII with a view to improving the safety of navigation. In the absence of any written proposal, the Sub-Committee was not in a position to propose any changes to the limits. Accordingly, the Sub-Committee invited Member Governments and international organizations to submit suitable proposals to the next session of the IHO Commission on Promulgation of Radio Navigational Warnings.

NAVAREA Co-ordinators

3.21 The Sub-Committee considered the updated list of NAVAREA Co-ordinators, as provided in document COMSAR 11/3/3 and finalized the revised COMSAR circular on the list of NAVAREA Co-ordinators, and instructed the Secretariat to circulate it. The Committee was invited to endorse this action.

Incorrect use of 'C' Codes

3.22 The Sub-Committee considered the information provided in document COMSAR 11/3 (IHO) relating to the incorrect use of 'C' Codes while promulgating maritime safety information via the EGC SafetyNET system and agreed that there was an urgent need to address this issue. Accordingly, the Sub-Committee prepared a draft COMSAR circular on analysis of maritime safety information promulgated via the EGC SafetyNET system and recommendations on improving its quality as set out in annex 1, with a view to approval by the Committee, and invited the Chairman of the International SafetyNET panel to liaise with Inmarsat to inform the specific service providers accordingly.

4 ITU MARITIME RADIOCOMMUNICATION MATTERS

RADIOCOMMUNICATION ITU-R STUDY GROUP 8 MATTERS

4.1 The Sub-Committee noted that MSC 82 had endorsed its action in instructing the Secretariat to convey:

- .1 the liaison statement addressing the issue of DSC complexity to ITU-R WP.8B and IEC TC 80;
- .2 the following liaison statements to ITU-R WP.8B:
 - .1 concerning the preliminary draft revision of Recommendation ITU-R M.585-3 on Assignment and use of Maritime Mobile Service Identities;
 - .2 addressing the recommendation ITU-R M.1371-1 concerning satellite detection of AIS messages; and

- .3 on the developments in maritime radiocommunication systems and technology and implications on methods to satisfy Resolution 351 (WRC-03) under WRC-07 agenda item 1.13;
- .3 the liaison statement concerning the use of cellular phones in SAR services to the ITU Study Group 2; and
- .4 the liaison statements to WP.8B and IALA, inviting comments on the preliminary draft performance standards for survival craft AIS search and rescue transmitter (AIS-SART),

for their consideration.

4.2 The Sub-Committee noted further that a liaison statement had been received from ITU on a new developed resolution concerning the use of distress and safety radiotelephony procedures on 2 182 kHz for non-Global Maritime Distress and Safety System (GMDSS) equipped ships. ITU had informed IMO that there might be coast stations with listening watch on other distress frequencies than those used by DSC and suggested that these coast stations and frequencies be listed in the GMDSS Master Plan as this would be of importance for Search and Rescue purposes.

ITU WORLD RADIOCOMMUNICATION CONFERENCE MATTERS

4.3 The Sub-Committee noted that MSC 81 had approved:

- .1 the draft IMO position on WRC-07 agenda items concerning matters relating to maritime services, and authorized the Secretariat to convey the approved IMO position to the appropriate ITU bodies for consideration; and
- .2 the re-establishment of the Joint IMO/ITU Experts Group on Maritime Radiocommunication Matters, with the agreed terms of reference, for the development of further requirements for maritime radiocommunications and authorized an intersessional meeting of the group from 5 to 7 July 2006 at IMO Headquarters, instructing it to submit its report directly to MSC 82, since COMSAR 11 was scheduled to meet only in February 2007.

4.4 The Sub-Committee noted further that MSC 82 had approved, as an outcome of the Joint IMO/ITU Experts Group on Maritime Radiocommunication Matters, the supplementary advice on the IMO position paper and that the Secretariat had submitted it to the appropriate ITU bodies for consideration in December 2006.

4.5 The Sub-Committee considered document COMSAR 11/4 (Sweden) proposing a revision to COM/Circ.108.

4.6 The delegation of Japan, whilst supporting, in principle, the Swedish proposal was of the opinion that the ITU Radio Regulations, Article 32, was proposed to be modified by ITU's World Radiocommunications Conference 2007 to align distress call procedures for both GMDSS and non-GMDSS ships. Therefore, Japan, was of the opinion that a similar simplified flow chart for non-GMDSS ships should also be prepared by IMO.

4.7 A number of other delegations supported the Swedish proposal and were of the opinion that it was worthy of discussion in both the GMDSS and SAR Working Groups.

4.8 The Sub-Committee instructed the GMDSS Working Group, taking into account decisions of, and comments and proposals made in Plenary, to advise on the following:

- .1 the need for listing in the GMDSS Master Plan coast stations maintaining listening watch on other distress frequencies than those used by DSC and prepare appropriate comments and recommendations;
- .2 the need of a revision to COM/Circ.108 (COMSAR 11/4), and if so prepare that revision in co-operation with the SAR Working Group; and
- .3 how to ensure that the procedure given in the revised circular was reflected in any revision to the Radio Regulations prepared by ITU and prepare an appropriate recommendation,

prepare a report for consideration by Plenary.

Reports of the Working Groups

4.9 In considering the relevant part of the GMDSS Working Group's report (COMSAR 11/WP.2, section 4 and COMSAR 11/WP.2/Add.1, section 4), and the relevant part of the SAR Working Group's report (COMSAR 11/WP.3, paragraph 6.1), the Sub-Committee took action as indicated hereunder.

ITU liaison statement to IMO on Aural Listening Watch on Distress Calling Frequencies

4.10 The Sub-Committee considered a liaison statement from ITU-R WP.8B to IMO on Aural Listening Watch on Distress Calling Frequencies and agreed that there was no need for listing in the GMDSS Master Plan coast stations maintaining listening watch on other distress frequencies than those used by DSC. However, the Sub-Committee invited Member Governments to submit the details of those coast stations that maintain a listening watch on other distress frequencies other than those used by DSC to ITU with a view to include them in the relevant service publications.

Revision of COM/Circ.108

4.11 The Sub-Committee considered the proposal by Sweden (COMSAR 11/4) to revise COM/Circ.108 to produce a flow chart which better described the operating procedure for a distress alert. In particular the flow chart should stress the importance of using the distress button to initiate a distress call before commencing voice procedures. It was noted that the voice procedures were currently under discussion within the ITU. The group agreed that the flow chart given in COM/Circ.108 could usefully be updated as it was drawn before IMO standardised on the use of a distress button.

4.12 A considerable discussion resulted on the extent of the changes required to COM/Circ.108, whilst maintaining the principle that the flow chart be simple to understand. It was realised that the extent of the revision proposed by Sweden could result in an enlargement of the flow chart. Accordingly, the Sub-Committee agreed not to revise COM/Circ.108 but to prepare another circular for a simplified operating guidance on initial distress calls.

4.13 The development of this new circular proved to be difficult due to the need to describe details such as:

- different types of button procedures which might be found on ships;
- complexities of HF procedures where it is necessary to await an acknowledgement before making a voice call as there is no HF listening watch; and
- aligning the procedures with work ongoing in the ITU.

Some delegations expressed the opinion that the new circular would be confusing to mariners as it would provide two flow charts to be displayed on the bridge of a ship.

4.14 In light of the foregoing, the Sub-Committee developed a preliminary revised draft diagram on simplified operating guidance on initial distress calls as set out in annex 2 and invited Member Governments and international organizations to submit comments and proposals to COMSAR 12 with a view to finalization.

4.15 It was also noticed that the diagram appears in other documents (e.g., MSC/Circ.892, IAMSAR Manual, GMDSS Hand Book) and it was important to consider the implications in that respect. Therefore, the Sub-Committee recommended that the diagram in document COMSAR 11/4, as amended, be forwarded to the next JWG ICAO/IMO Working Group for further consideration, taking into account the clarifications provided by Sweden in the next paragraph 4.16.

4.16 Sweden expressed the opinion that the proposed draft circular was a simple flow chart meant for shipmasters and ship officers handling the radio equipment in a distress situation. It was not intended to make any changes, revision, addition or replacement to the existing COM/Circ.108, but to make it easier for radio operators onboard ship, and in line with the existing flow chart in COM/Circ.108. Hence, it was important that the proposed flow chart was displayed on board ships close to the radio equipment.

5 SATELLITE SERVICES (INMARSAT AND COSPAS-SARSAT)

INMARSAT SERVICES

5.1 The Sub-Committee considered document COMSAR 11/5/1 (IMSO) providing analysis and assessment of the performance by Inmarsat Global Ltd. of the company's obligations for the provision of maritime services within the GMDSS, as overseen by IMSO. The information covered the period from 1 November 2005 to 31 October 2006. It was assessed that, during this period, Inmarsat had continued to provide a sufficient quality of service to meet its obligations under the GMDSS.

5.2 The Sub-Committee noted that the total number of alerts in each Ocean Region was not significantly different from previous years. The totals included a number of instances when a terminal had sent multiple alerts. For instance, on one occasion in August 2006 a single vessel had originated 20 alerts within a short period of time. Inmarsat had contacted the vessels concerned with such multiple alerts and, where the alerts had been false, sought to assist the vessel to improve its procedures to avoid such occurrences in future. However, many vessels did not respond to these contacts and no further action by Inmarsat was possible.

5.3 The Sub-Committee further noted that the programme for the closure of the Inmarsat-E EPIRB service, which was approved by MSC 79 and notified in MSC/Circ.1171, has progressed throughout 2006 under the supervision of IMSO. On 1 December 2006 there were still approximately 400 EPIRBs which could not be exchanged. These were EPIRBs for which the present owners either could not be identified or did not respond to Inmarsat's invitation to exchange. The final number unaccounted for on 1 February 2007 was 301. IMSO believed that every reasonable effort had been made to contact every registered owner of an Inmarsat-E EPIRB and that Inmarsat had met fully its obligations under the closure programme agreed by IMO.

COSPAS-SARSAT SERVICES

5.4 The Sub-Committee noted document COMSAR 10/5 (COSPAS-SARSAT), providing a status report on the COSPAS-SARSAT System, including System operations, space and ground segments status, beacon population, false alert, interference, the International 406 MHz Beacon Registration Database (IBRD) and the development of the MEOSAR system.

5.5 The Sub-Committee further noted that on 16 January 2006 the International 406 MHz Beacon Registration Database (IBRD) had become available. The IBRD was hosted on the Internet at <https://www.406registration.com> and had comprehensive online help capabilities. The IBRD was freely available to users with no access to national registration facilities. Administrations that did not maintain a national registry accessible 24 hour/day might also avail themselves of the IBRD to control the registration of beacons with their MID/country code and make registration data available to SAR services. The IBRD already held over 3,000 beacon registrations from over 30 countries.

5.6 The Sub-Committee noted also that the planned SAR alerting system using satellites in medium Earth orbit (MEOSAR) would comprise 406 MHz transponders on the United States GPS satellites, the Russian Federation's GLONASS satellites and Europe's Galileo satellites. Testing had already begun using proof of concept payloads aboard six GPS satellites. Experimental ground receiving stations were currently being used in the United States and Canada, and additional experimental ground stations were under development in Europe and the Russian Federation. MEOSAR offered the promise of significantly enhanced effectiveness of the COSPAS-SARSAT System. If development proceeded as planned and described in document C/S R.012, the COSPAS-SARSAT MEOSAR Implementation Plan, the MEOSAR system would reach full operational capability from 2012. However, this achievement was dependent upon the implementation of an operational ground segment for worldwide coverage of 406 MHz transmissions. In 2007, COSPAS-SARSAT intended to initiate the development of a comprehensive 406 MHz MEOSAR Demonstration and Evaluation Plan to co-ordinate the efforts of all participating countries in the COSPAS-SARSAT System to implement global 406 MHz MEOSAR operations.

5.7 The Sub-Committee observed that worldwide still in 33.6% of maritime incidents of which COSPAS-SARSAT received distress alerts, the use of 121.5 MHz beacons was involved. In this regard Venezuela, stated that they were of the opinion that terminating the processing of information transmitted by these beacons on 1 February 2009 was not conducive to the safety of life at sea and suggested that the COSPAS-SARSAT Council should review its decision. The Sub-Committee decided to refer document (COMSAR 11/5) to the SAR Working Group to provide comments and recommendations, in particular, on the phasing out of the satellite processing of the 121.5/243 MHz beacons.

Report of the SAR Working Group

5.8 In considering the relevant part of the SAR Working Group's report (COMSAR 11/WP.3, paragraph 7.1), the Sub-Committee took action as indicated hereunder.

5.9 The Sub-Committee noted that some States might have some initial problems as these beacons are no longer detected by satellite but that COSPAS-SARSAT had made strong effort to provide advance notice of this phase-out as well as development of lower cost 406 MHz emergency beacons. It was also noted that IMO mandates the use of the 406 MHz emergency beacon and makes no provision for the 121.5/243 MHz beacon, and that ICAO has recently completed provisions for carriage of 406 MHz beacons by all aircraft on international flights to include general aviation aircraft on international flights.

5.10 The Sub-Committee noted the status of the COSPAS-SARSAT programme and particularly on the phasing-out of satellite processing of the 121.5/243 MHz beacons.

REVISION OF RESOLUTION A.888(21)

5.11 The Sub-Committee recalled that:

- .1 MSC 77 had agreed that an intergovernmental oversight, similar to the oversight presently carried out by IMSO in respect of Inmarsat Ltd., would be needed when other providers of GMDSS satellite services would, in future, be accepted and recognized by the Organization. It had, therefore, instructed the Secretariat to communicate with IMSO enquiring if that organization could carry out the oversight of future providers of satellite services for the GMDSS;
- .2 the IMSO Assembly, at its seventeenth session, agreed by an overwhelming majority that IMSO was willing to carry out the oversight of future providers of mobile-satellite communications systems services for the GMDSS;
- .3 MSC 79 had considered the issue again and confirmed and reiterated its decision that IMSO was the appropriate organization to carry out the required oversight; and
- .4 COMSAR 10, after an in-depth discussion, during which there was a clear majority who expressed support for the resolution, as revised by the Correspondence Group, agreed to the proposed amendments to resolution A.888(21), as amended for submission to MSC 81 for consideration and action, as appropriate.

5.12 The Sub-Committee noted that MSC 81 had:

- .1 considered the proposed amendments to resolution A.888(21);
- .2 agreed with the proposal from the co-ordinator of the correspondence group on the revision of resolution A.888(21) to remove the COSPAS-SARSAT EPIRB system from the list of legacy systems which would be subject to IMSO oversight, in accordance with the proposed amendments to the resolution (COMSAR 10/16, paragraph 7.1.5 of annex 10); and

- .3 recognizing, on the basis of differing opinions, that any revised resolution could not be adopted until the twenty-fifth session of the Assembly in November 2007, accordingly agreed to reconsider the proposed revised text of resolution A.888(21) at MSC 82 on the basis of further comments and proposals from Member Governments and legal advice.

5.13 The Sub-Committee noted further that during MSC 82:

- .1 a considerable debate ensued, during which the overwhelming majority of delegations, in fact, all delegations who spoke, except the delegation of the United States, reiterated the previous decisions of the Committee that IMSO was the appropriate Organization to undertake the oversight of future satellite providers in the GMDSS. Accordingly, the Committee had invited IMSO to undertake that role forthwith;
- .2 it was decided in principle as follows that:
 - .1 applications from a new satellite provider by a Member State should be submitted to MSC;
 - .2 the evaluation of the potential satellite provider should be undertaken by MSC through an appropriate mechanism according to the provisions of resolution A.888(21);
 - .3 the recognition of the satellite provider to operate in the GMDSS should be undertaken by MSC on the basis of evaluation by an appropriate mechanism; and
 - .4 the oversight, as decided by MSC 77, in all its context, should be undertaken by IMSO; and
- .3 following the debate, the Chairman proposed that:
 - .1 resolution A.888(21) should be redrafted to reflect the decision on the respective responsibilities of MSC and IMSO. The Committee accordingly, had instructed COMSAR 11 to finalize the resolution and submit to MSC 83 with a view to adoption by 25th Assembly; and
 - .2 any corresponding amendments to chapter IV should be considered and finalized by COMSAR 11 in February 2007. Accordingly, the Committee had authorized the Secretariat to circulate the finalized amendments after COMSAR in accordance with SOLAS article VIII(b)(i) with a view to adoption by MSC 83.

5.14 Norway, supported by others, expressed its concern that the introduction of new systems might delay the response time due to possible incompatibility issues between the systems. The current draft of the draft revised resolution did not specify the need for compatibility of any new system. MRCCs would need to have access to any new system equal to the existing one. Any amendment to resolution A.888(21) must ensure that there would be no delay in the distress alerting and not make work harder for RCCs.

Establishing a Drafting Group on revision of resolution A.888(21)

5.15 The Sub-Committee established a Drafting Group on revision of resolution A.888(21) and instructed it, to use as the basic document (COMSAR 10/16, annex 10), taking into account decisions of, and comments and proposals made in Plenary to:

- .1 revise resolution A.888(21) to reflect the decisions taken at MSC 82 on the respective responsibilities of MSC and IMSO; and
- .2 consider and finalize any corresponding amendments to SOLAS chapter IV,

for consideration by Plenary.

Report of the Drafting Group on revision of resolution A.888(21)

5.16 Having received and considered the report of the Drafting Group on revision of resolution A.888(21), the Sub-Committee approved the report in general and, in particular:

- .1 endorsed the draft Assembly resolution A....(25) on Criteria for the Provision of Mobile Satellite Communication Systems in the Global Maritime Distress and Safety System (GMDSS), as amended and set out in annex 3 for approval by the Committee at its eighty-third session with a view to adoption by the Assembly at its twenty-fifth session;
- .2 endorsed the corresponding draft amendments to SOLAS chapter IV, as amended and as set out in annex 4, with a view to adoption by the Committee at its eighty-third session; and
- .3 instructed the Secretariat to circulate the finalized draft amendments after COMSAR 11 in accordance with SOLAS article VIII(b)(i) with a view to adoption by the Committee at its eighty-third session.

5.17 The Committee was invited to delete the item “Amendments to SOLAS chapter IV pursuant to the criteria set out in resolution A.888(21)” from the Sub-Committee’s work programme, as the work on this item had been completed.

6 MATTERS CONCERNING SEARCH AND RESCUE, INCLUDING THOSE RELATED TO THE 1979 SAR CONFERENCE AND IMPLEMENTATION OF THE GMDSS**HARMONIZATION OF AERONAUTICAL AND MARITIME SEARCH AND RESCUE PROCEDURES, INCLUDING SAR TRAINING MATTERS**

6.1 The Sub-Committee noted that, as requested by COMSAR 10, MSC 82 had extended the target completion date for the work programme agenda item “Harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters” to 2007.

6.2 The Sub-Committee recalled that, as approved by MSC 81 and endorsed by C 96, the 13th meeting of the International Civil Aviation Organization/International Maritime Organization (ICAO/IMO) Joint Working Group (JWG) on the Harmonization of Aeronautical and Maritime Search and Rescue was held in Singapore, from 28 August to 1 September 2006.

6.3 The Sub-Committee noted that MSC 82 was informed of the recent joint publication by UNHCR and IMO, as part of the inter-agency initiative on persons rescued at sea, of a Guidance Leaflet on “Rescue at Sea” (English, French and Spanish versions), a guide to principles and practice as applied to migrants and refugees. It provides guidance on relevant legal provisions and on practical procedures to assist in the prompt disembarkation of survivors in rescue operations and measures to meet their specific needs, particularly in the case of refugees and asylum seekers.

6.4 The Sub-Committee noted further that MSC 82 recalled that, following consideration of document MSC 82/21/7 (Japan) in the context of the DE Sub-Committee’s work programme, it had agreed that the FP and COMSAR Sub-Committees should co-operate on the issue of the development of framework of requirements for life-saving appliances, as necessary and when requested by the DE Sub-Committee.

6.5 The Sub-Committee also noted that MSC 82 had:

- .1 recalled that, at its seventy-ninth session, it had noted information by the Secretariat that the World Maritime University (WMU) was, as requested by MSC 78, studying the possibility of it taking a role in co-ordinating SAR research projects to assist the Organization in its work on passenger ship safety; and
- .2 considered document MSC 82/8/4 providing the report on Phase 1 of the WMU Project on Search and Rescue Research related to Passenger Ships and document MSC 82/INF.6 providing an overview about current research and issues for future research related to search and rescue (SAR), as requested by MSC 80 and it:
 - .1 endorsed the WMU recommendation to carry out an intermediate phase to gather further information on SAR research and to develop an information platform, taking into account that the aforementioned phase will cost US\$20,000 to undertake;
 - .2 encouraged Member States to submit further information to WMU for inclusion in the proposed information platform, taking into account the information requested in Circular letter No.2650 and the subject areas highlighted in paragraph 16 of the annex to document MSC 82/8/4; and
 - .3 instructed COMSAR 11 to consider the information collected in Phase 1 and provide comments on the issues identified in the annex for further research.

6.6 During this session of the Sub-Committee, WMU provided a presentation concerning their SAR project.

6.7 In considering document COMSAR 11/6 (Secretariat), the Sub-Committee noted the report of the thirteenth session of the ICAO/IMO Joint Working Group on Harmonization of Aeronautical and Maritime Search and Rescue, held in Singapore, from 28 August to 1 September 2006. The Sub-Committee decided to refer the document to the SAR Working Group.

6.8 Having considered document COMSAR 11/6/2 (Australia, Sweden, the United Kingdom and the United States), proposing a draft MSC circular on minimizing delays in SAR response to distress alerts, the Sub-Committee decided to refer this document to the SAR Working Group.

6.9 Having further considered document COMSAR 11/6/3 (United States), regarding future trends in search and rescue communications, the Sub-Committee decided to refer this document to the SAR Working Group and the GMDSS Working Group.

6.10 In considering document COMSAR 11/6/5 (Chile), the Sub-Committee noted a proposal on promoting the use of MoUs in SAR co-operation. The Sub-Committee also decided to refer the document to the SAR Working Group.

Results of a Special Inspection campaign on Satellite EPIRBs

6.11 The Sub-Committee noted the information provided by the Republic of Korea (COMSAR 11/INF.4) on the background and outcome of a special inspection campaign conducted under the co-ordination of the Coast Guard to minimize false alerts of satellite EPIRBs and decided to refer the document to the SAR Working Group for consideration.

Establishment of SAR Working Group

6.12 The Sub-Committee established the Search and Rescue Working Group (SAR Working Group) and instructed it, taking into account decisions of, and comments and proposals made in Plenary, to:

- .1 consider documents COMSAR 11/6, COMSAR 11/6/3, COMSAR 11/6/5 and COMSAR 11/INF.4, and analyse relevant recommendations made by the Joint ICAO/IMO Working Group (JWG) and provide comments and recommendations on:
 - .1 the continued use of Ship Reporting Systems in addition to LRIT;
 - .2 the use of the SAROPs program within the wider SAR community;
 - .3 the issue that SAR requirements and advances in communications and information technologies should be reviewed by COMSAR with the objectives of improving the GMDSS and harmonizing it, if and where practicable, with aeronautical communications to update capabilities and improve interoperability, taking into account document COMSAR 11/6/3;
- .2 consider document COMSAR 11/6/2 and finalize the draft MSC circular on possible means to minimize delays in SAR response;
- .3 consider document COMSAR 11/6/5 and provide appropriate comments and recommendations on the proposal on promoting the use of MoUs in SAR co-operation;
- .4 consider document COMSAR 11/INF.4 and provide appropriate comments and proposals;

- .5 consider the information collected in Phase 1 of the WMU Project on Search and Rescue Research related to Passenger Ships (document MSC 82/8/4) and provide comments on the issues identified in the annex of document MSC 82/INF.6 for further research;
- .6 provide justification, if there is a need for extension of the target completion date of the work programme item “Harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters” to 2008;
- .7 provide justification for holding the next session of the Joint ICAO/IMO Working Group, and prepare the draft provisional agenda and also review its terms of reference;
- .8 prepare any recommendations or proposals for harmonization of aeronautical and maritime SAR procedures,

and report back to Plenary.

Report of the SAR Working Group

6.13 Having received and considered the report of the SAR Working Group (COMSAR 11/WP.3, section 3), the Sub-Committee approved it, in general, and took action as indicated hereunder.

6.14 The Sub-Committee considered the recommendation 4 of the JWG 13 to delete item 3.5 “list of references and electronic index to the IAMSAR Manual” from its agenda as no documents/proposal had been submitted for the third year in succession. The Sub-Committee concurred with the deletion of this item from the agenda of the Joint ICAO/IMO Working Group.

6.15 In considering recommendation 5 of the JWG 13, the Sub-Committee noted the information provided and agreed with the JWG’s views of the continuing importance of the development of SOLAS requirements to carry a recovery system to enhance SAR operations, bearing in mind that it was a high priority task for DE Sub-Committee to develop performance standards for recovery systems with target completion date 2008.

6.16 In considering recommendation 6 of the JWG 13, the Sub-Committee noted the information provided in the draft amendments to the IAMSAR Manual in regard to updating the sections referring to telemedical services and contained at Appendix G of the report of the JWG. The Sub-Committee after having lengthy discussion on this matter was of the opinion that the information provided in the appendix was very valuable, however, part of the contents also belongs to IAMSAR volumes II and III. Therefore, the decision was to refer the draft amendment back to the JWG for incorporating into the three volumes. Considering the renewal of the International Medical Guide being undertaken by WHO and ILO, concerns were expressed, as the new issue of the Guide should include the latest outcome of MSC.1/Circ.1218 and related amendments to the IAMSAR Manual on Telemedical Services and Medical Assistance at Sea. IMO should be ensured that the new Guide would comply with these latest practices and procedures. In that context, the Sub-Committee recommended inviting Member States to submit comments for the JWG to consider at its upcoming meeting in September 2007.

6.17 The Sub-Committee considered the JWG recommendation 7 to encourage the continued use of Ship Reporting Systems (SRS) in addition to LRIT and expressed the need for LRIT information to be readily available as and when required by SAR authorities. The Sub-Committee concurred with the view of the JWG; and was of the opinion that IMO should encourage the continued use of Ship Reporting Systems (SRS) providing more detailed information in addition to LRIT.

6.18 In considering recommendation 11 of the JWG 13, and document COMSAR 11/6/2, the Sub-Committee noted the information provided and agreed with the JWG's views and the draft circular contained in the annex of COMSAR 11/6/2. After minor editorial changes, the Sub-Committee finalized the draft MSC circular on minimizing delays in SAR response, set out in annex 5.

6.19 The delegation of Turkey stated that Turkey's position regarding the United Nation's Convention on the Law of the Sea remained unchanged within the context of the documents that include references to the said Convention.

6.20 The Sub-Committee considered the Joint Working Group's recommendation concerning the revision of SAR requirements and advances in communications and information technologies with the objectives of improving the GMDSS and harmonizing it, with aeronautical communications to update capabilities and improve interoperability. The Sub-Committee also noted the examples of topics provided in COMSAR 11/6/3 that could be considered by the Sub-Committee to review GMDSS in light of new communications technology.

6.21 In this context, the Sub-Committee recalled that Working Group on GMDSS had also noted the relevant parts of document COMSAR 11/6/3 in conjunction with relevant parts of document COMSAR 11/6.

6.22 In regard with recommendation 15 of the JWG 13, the Sub-Committee was advised by the delegation of the United States that the SAROPS search planning programme is being installed at USCG JRCCs. Administrative matters need to be resolved before further discussions on the United States' offer to share this technology with other countries. A report will be provided to the upcoming JWG session. The Sub-Committee invited the United States also to present the SAROPS search planning programme to COMSAR 12.

Promoting the use of the Memorandum of Understanding signed between Chile and IMO

6.23 The Sub-Committee noted with appreciation the information provided by Chile, and its willingness to perform technical assistance and training activities for Latin American countries, and to introduce the Global SAR Plan in all Member States. The Sub-Committee encouraged Member States to make best use of this provision.

Phase 1 of the WMU Project on Search and Rescue Research related to Passenger Ships

6.24 The Sub-Committee discussed the report on the WMU project on SAR research related to passenger ships. Various delegations supported the idea of the development of an Internet-based information platform as proposed in the annex to MSC 82/8/4. However, it was clear to the Sub-Committee that such a platform could only be of benefit if all users provided information proactively. The Sub-Committee invited Member Governments to inform WMU about the competent national point of contact to allow for proper considerations of if and how to carry out

an intermediate phase to gather information on SAR research and relevant development programmes allowing it to establish this information platform.

Harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters

6.25 The Sub-Committee agreed that there was a need of extension of the work programme item “Harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters” to 2008. This was particularly necessary for incorporation of telemedical services into all three volumes of the IAMSAR Manual and the revision of the relevant text about GMDSS/communication procedures needs close liaison between ICAO and IMO. Accordingly, the Sub-Committee invited the Committee to extend the target completion date for this item to 2008 when discussing its work programme under agenda item 15.

Joint ICAO/IMO Working Group

6.26 The Sub-Committee agreed to the continuation of the Joint ICAO/IMO Working Group for the next session planned to be held in Réunion (France) from 10 to 14 September 2007. The Sub-Committee approved the reviewed terms of reference and provisional agenda for JWG 14, as given in annex 6. The Committee was invited to endorse the decision of the Sub-Committee.

PLAN FOR THE PROVISION OF MARITIME SAR SERVICES, INCLUDING PROCEDURES FOR THE ROUTING DISTRESS INFORMATION IN THE GMDSS

SAR Services issues related to the implementation of the LRIT system

6.27 The Sub-Committee noted that MSC 81 had endorsed its view that access to the Long-range Identification and Tracking (LRIT) system and AIS data by both aeronautical and maritime SAR Authorities would provide considerable benefits to SAR services and had agreed to take this view into account when developing LRIT performance standards.

6.28 The Sub-Committee considered document COMSAR 11/6/1 by the United States discussing the need for SAR services-related issues to be considered as the Long-range Identification and Tracking (LRIT) system was further developed and implemented.

6.29 The delegations of Peru and Venezuela supported the United States’ proposal. Venezuela encouraged Member Governments to submit relevant proposals to COMSAR 12.

6.30 The Sub-Committee decided to refer document COMSAR 11/6/1 to the SAR Working Group and the Working Group on the Development of an E-Navigation strategy also dealing with LRIT issues for detailed consideration.

Report of SAR Working Group

6.31 In considering the relevant part of the SAR Working Group’s report (COMSAR 11/WP.3, paragraph 3.14), the Sub-Committee took action as indicated hereunder.

6.32 The Sub-Committee considered SAR Services issues related to the implementation of the Long-range Identification and Tracking (LRIT) system. With the understanding that it was not easy to establish a new system (LRIT) and that there was a lack of knowledge of LRIT by many SAR authorities, the decision was made to include in the report the list of questions contained in

paragraph 1.7 of document COMSAR 11/6/1, as given in annex 7. The Sub-Committee encouraged Member States to inform their competent national authorities to address these issues and submit proposals for consideration at the next Joint ICAO/IMO WG. The Sub-Committee also noted that at a later date it might be necessary for the Organization to develop appropriate guidance in relation to co-ordination between SAR services and national LRIT authorities in relation to LRIT. Members were invited to submit suitable proposals once the LRIT system had been implemented and was functioning (COMSAR 11/WP.4/Add.1, paragraph 48; and paragraph 14.42.1 below).

Current availability of SAR services worldwide

6.33 The Sub-Committee recalled that COMSAR 8 had agreed to issuing of circular SAR.8/Circ.1 – Global SAR Plan, containing information on the current availability of SAR services, with a view that it should be issued twice a year in loose-leaf format and also be available on the IMO website, which had been endorsed by MSC 78.

6.34 The Sub-Committee further recalled that MSC 78 had urged Member Governments to respond to COMSAR/Circ.27 on Data format for a new combined SAR.2 and SAR.3 circular, attaching the questionnaire on the current availability of SAR services world-wide, as soon as possible if they had not already done so.

6.35 The Sub-Committee was informed by the Secretariat (COMSAR 11/6/4) that, in accordance with instructions and using information provided by Governments, the Secretariat had issued SAR.8/Circ.1/Corr.4 in April 2006. The countries providing information for this circular were: China, Italy, Norway, the Republic of Korea and Turkey.

6.36 The Sub-Committee was also informed that, since issuing SAR.8/Circ.1/Corr.4, it had received information and amendments from Cape Verde, Ireland, Italy, Lithuania, Malaysia, Mexico, the United States and Hong Kong, China. The Secretariat was planning to issue SAR.8/Circ.1/Corr.5 in March/April 2007.

6.37 The Sub-Committee once again reiterated its invitation to Member Governments to respond to COMSAR/Circ.27 as soon as possible if they had not already done so.

6.38 Italy stated that the information included in SAR.8/Circ.1/Corr.4 dated 21 April 2006 resulted in an overlap of its search and rescue region with a neighbouring country which could not be accepted. Italy had therefore requested the Secretary-General to provide his kind offices to bring this to the attention of the country concerned in an effort to find a mutual satisfactory solution.

Regional SAR co-operation

6.39 The Sub-Committee recalled that resolution 8 of the 1979 SAR Conference “had urged States to promote, in consultation with, and with the assistance of the Organization, support for States requesting technical assistance for:

- .1 the training of personnel for search and rescue; and
- .2 the provision of the equipment and facilities, necessary for search and rescue.”.

6.40 The Sub-Committee also recalled that MSC 69 had adopted MSC resolution MSC.70(69) on Adoption of amendments to the International Convention on Maritime Search and Rescue, 1979 clarifying the responsibilities of Governments and putting greater emphasis on the regional approach and the closest practical co-ordination between maritime and aeronautical SAR services.

6.41 The Sub-Committee further recalled that MSC 72 had endorsed COMSAR 4's identification of East and West Africa and parts of Asia and the Pacific, Central and South America and the Mediterranean regions as being the areas mainly lacking SAR and GMDSS facilities and had agreed that, in considering any remedial action needed to be taken, priority should be given to the African regions.

6.42 The Sub-Committee noted that a multilateral agreement has been signed on 16 January 2007 during the commissioning of the South African Regional Maritime Rescue Co-ordination Centre (R-MRCC). The South African MRCC was upgraded at an estimated cost of \$75,000. Apart from South Africa, there were five other countries (Angola, Madagascar, Mozambique, Namibia and Comoros) which would establish a Maritime Rescue Sub-Centre that needed to be equipped in the near future. The total estimate for equipments was US\$500,000.

6.43 The Sub-Committee noted further that for West Africa and, in particular the Liberia region group, the first meeting for the signing of the multilateral agreement was scheduled for May 2007.

6.44 The Sub-Committee noted also that the Secretariat recently had received a notification of acceptance of Resolution 1 of the Florence conference by Morocco and Madagascar. The Sub-Committee invited Member Governments and the industry to make financial or in-kind donations towards equipment and staff training of already established and proposed Regional Maritime Rescue Co-ordination Centres.

6.45 The Sub-Committee noted with appreciation the information provided by Nigeria and South Africa on the development of R-MRCCs in their countries.

6.46 The Sub-Committee, recalling the Secretary-General's opening remarks on this issue, further noted the detailed information provided by him on the progress made in the development and establishment of regional MRCCs and sub-centres in the eastern, southern and western parts of Africa, supported by financial and in-kind donations as well as funding provided by the International SAR Fund. The Secretary-General expressed appreciation for the efforts made by the countries hosting the MRCCs and MRSCs, the Secretariat at Headquarters as well and in the region and last but not least to all the donors for their support and contributions.

6.47 The Sub-Committee also noted with appreciation the kind offer of Malta to provide free training for SAR personnel at the Search and Rescue training centre in Malta. During this session of the Sub-Committee, Malta provided a presentation on its Search and Rescue Training Centre.

6.48 The Sub-Committee noted with appreciation the information provided by Japan (COMSAR 11/INF.3), about the International Workshop on Search and Rescue, held in Tokyo, hosted by Japan Coast Guard and Ocean Policy Research Foundation.

MEDICAL ASSISTANCE IN SAR SERVICES

6.49 The Sub-Committee noted that MSC 82 had:

- .1 approved MSC.1/Circ.1218 on Guidance on exchange of medical information between telemedical assistance services involved in international SAR operations; and
- .2 endorsed the action taken by the Sub-Committee in instructing the Secretariat to convey the liaison statement on replenishing ships' compulsory medical supplies and status of medical supplies on board: problems encountered and proposals to WHO and ILO for their advice, which had already been done intersessionally.

6.50 The Sub-Committee also noted that no advice had been received from either WHO or ILO.

6.51 The Sub-Committee noted that the work on the issues listed in document COMSAR 10/16, annex 15, could not be finalized and was still ongoing, in co-operation between medical experts attending the SAR Working Group. Consequently, the Sub-Committee agreed to invite the Committee to extend the target completion date for this item to 2008 when considering its work programme under agenda item 15.

7 DEVELOPMENTS IN MARITIME RADIOCOMMUNICATION SYSTEMS AND TECHNOLOGY

7.1 The Sub-Committee recalled that COMSAR 10 had:

- .1 agreed, in principle, that an XML format similar to that proposed by Japan in document COMSAR 10/7 (Japan) should be standardized for data exchange of ship reporting systems recognized by the Organization. It had been noted that XML format standards for maritime services were being developed within other fora, notably through projects supported by the European Union, although these standards did not necessarily include ship reporting systems. Therefore, the Sub-Committee had deemed it necessary to obtain further information and views from the European Commission and maritime agencies on document COMSAR 10/7 and the use of the XML format for consideration at its next session, with a view towards developing an MSC resolution regarding this standard; and
- .2 further agreed that the NAV Sub-Committee should also be asked to provide relevant comments and advice on the issue.

7.2 The Sub-Committee also recalled that NAV 52 had noted that, taking into consideration the recent changes in the technology in communications, it would be appropriate to standardize the format for ship reporting systems and agreed, in principle, with the proposed XML format standards for maritime services. The standardized XML format would contribute to reducing the heavy workload for masters and navigational officer during the navigational watch. Bearing in mind the reasons mentioned, NAV 52 had felt that it would be appropriate to implement the standardized XML format in as little time as possible. Direct data exchange ship to shore, but also between VTS and others (authorities, shipowners and shipping agencies) by XML format, would contribute to improved safety and security.

7.3 The Sub-Committee considered in general document COMSAR 11/INF.5 (European Commission) containing information on the use of XML formats for the submission and exchange of standard reports, notifications and requests for information as required by the European Directive 2002/59 on Vessel Traffic Monitoring and Information System and the supportive IT information and exchange system SafeSeaNet (SSN), and instructed the GMDSS Working Group to consider document COMSAR 11/INF.5 and, in particular, the proposed XML format standards and provide appropriate comments and recommendations.

Report of the GMDSS Working Group

7.4 In considering the relevant part of the GMDSS Working Group's report (COMSAR 11/WP.2, section 5), the Sub-Committee took action as indicated hereunder.

XML Format for Ship Reporting Systems

7.5 The Sub-Committee considered the information provided by the European Commission (COMSAR 11/INF.5) on the use of XML formats for the submission and exchange of standard reports, notifications and requests for information as required by the European Directive 2002/59 on Vessel Traffic Monitoring and Information System and the supportive IT information and exchange system SafeSeaNet (SSN) and recalled that NAV 52 had also agreed, in principle, that it would be appropriate to implement a standardized XML format with a view to improving safety and security.

7.6 In light of the foregoing, the Sub-Committee agreed that there was a need to develop a standardized XML format for maritime services and invited Member Governments and international organizations to submit details of existing messages systems and proposals to COMSAR 12. Consequently, the Sub-Committee agreed to invite the Committee to extend the target completion date for this item to 2008 when discussing its work programme under agenda item 15.

8 REVISION OF THE IAMSAR MANUAL

8.1 The Sub-Committee noted that, in accordance with the procedures prescribed in the Annex to resolution A.894(21), and being advised that ICAO had already approved the proposed draft amendments to the IAMSAR Manual, MSC 81 had adopted them for circulation by means of MSC.1/Circ.1181, and decided that the adopted amendments should enter into force on 1 June 2007.

8.2 The Sub-Committee briefly discussed the report of JWG 13 (COMSAR 11/6, sections 2, 3, 4 and 5 and appendices D to I) and instructed the SAR Working Group to consider them in detail and prepare:

- .1 draft proposed amendments to the IAMSAR Manual recommending a date of their application;
- .2 a draft MSC circular on Adoption of amendments to the IAMSAR Manual; and
- .3 relevant comments and proposals, for consideration at Plenary.

Report of the SAR Working Group

8.3 In considering the relevant part of the SAR Working Group's report (COMSAR 11/WP.3, paragraph 4.1, annex 3), the Sub-Committee endorsed the draft MSC circular on Adoption of amendments to the IAMSAR Manual, set out in annex 8, for submission to ICAO for approval and MSC 83 for adoption with an entry into force date of [1 January 2009].

8.4 The Secretariat was instructed to convey the agreed draft amendments to ICAO for approval.

8.5 The Committee was invited to take account of the response to be received from ICAO when adopting the draft MSC circular and amendments to the IAMSAR Manual.

9 REVISION OF THE PERFORMANCE STANDARDS FOR SART

General

9.1 The Sub-Committee recalled that, following consideration of document MSC 78/24/4 (Japan) proposing to revise the Performance standards for SART (resolution A.802(19)), in order to improve effective search and rescue operation, taking into account the SART using signal of circular polarization; and document MSC 78/24/19 (Norway) proposing, when revising Performance standards, to also include therein, provisions for the AIS search and rescue transponder (one for 9 GHz SART and one for AIS-SART) and, if necessary, to develop appropriate amendments to SOLAS chapters III and IV, MSC 78 decided to include, in the COMSAR Sub-Committee's work programme, a high priority item on "Revision of the Performance standards for SART", with two sessions needed to complete the item; and to instruct the DE and NAV Sub-Committees to contribute, as necessary, when requested by the COMSAR Sub-Committee (MSC 78/26, paragraph 24.26).

9.2 The Sub-Committee also recalled that COMSAR 9 had proposed to include this agenda item in the provisional agenda for COMSAR 10 and MSC 80 had subsequently agreed to the proposal.

9.3 The Sub-Committee further recalled that COMSAR 10 had:

- .1 considered the proposed review of resolution A.802(19) and agreed to take the option of including/combining AIS technology in preference to the VHF EPIRB technology and also endorsed the preliminary draft performance standards for survival craft AIS Search and Rescue Transmitter (AIS-SART) to supplement the existing SART performance standards;
- .2 further agreed to the revision of resolution A.802(19) on performance standards for Search and Rescue Transponder (SART), as proposed by Japan (COMSAR 10/12/4 and COMSAR 10/INF.9), with respect to circular polarization and endorsed the draft amendments to performance standards for SART;
- .3 approved two liaison statements addressed to ITU Working Party 8B and IALA;
- .4 concurred with the opinion of the Working Group that the NAV Sub-Committee should also be asked to take account of the relevant draft performance standards for survival craft AIS Search and Rescue Transmitter (AIS-SART) developed by COMSAR 10;

- .5 invited Administrations to consider the proposed amendments to the resolution and provide information on performance and testing of AIS-SART to COMSAR 11 for further consideration;
- .6 endorsed the draft proposed amendments to SOLAS regulations III/6.2.2 and IV/7.1.3 to reflect the development of new AIS-SART performance standards, for further consideration at COMSAR 11. In this connection, the Sub-Committee had noted that it was important to ensure that the definitions of AIS Search and Rescue Transmitter (AIS-SART) and Search and Rescue (radar) Transponder (SART) were clear so as to avoid confusing two distinct technologies; and
- .7 noted the request of the delegation of Norway that the Secretariat be tasked to carefully review all IMO Conventions, Codes etc. e.g., the 2000 HSC Code, DSC Code, MODU Code, which might have to also be amended in addition to the anticipated amendments to SOLAS chapters III and IV.

9.4 During this session of the Sub-Committee, the United Kingdom provided a presentation concerning “sea trials of the AIS SART”.

9.5 The Sub-Committee noted that a liaison statement had been received from ITU on this matter.

9.6 The Sub-Committee also noted that the liaison statement from ITU WP 8B which mentioned that there were other future SAR capabilities that could be developed in an AIS-SART by taking advantage of AIS technology and the future AIS shore infrastructure. The possibility of these future capabilities should, however, not delay the completion of the current AIS-SART performance standard.

9.7 There was some discussion on the possible use of AIS-SART for distress alert purposes. The delegation of Japan stated that in this case SAR authorities should make the necessary adjustments to their systems for handling AIS-SART alerts. The delegations of Denmark and Italy were of the opinion that the use of AIS-SART as an alerting system could harm the integrity of the GMDSS system.

9.8 Having briefly considered document COMSAR 11/9 (Japan) providing information on the performance of AIS-SART in search and rescue operations and document COMSAR 11/9/1 (IALA) providing a liaison statement from IALA with proposals to change the preliminary draft performance standards, the Sub-Committee instructed the GMDSS Working Group, taking into account decisions of, and comments and proposals made in Plenary, to consider documents COMSAR 11/9 and COMSAR 11/9/1 and, in particular to:

- .1 provide an appropriate recommendation with respect to the statement that the opportunities of receiving the signal of radar-SART would be much higher than those of AIS-SART (COMSAR 11/9);
- .2 provide appropriate recommendations with respect to the liaison statements from IALA and ITU-R WP 8B;
- .3 review the outcome of COMSAR 10 (COMSAR 10/16, Annex 29), taking into account the additional information available, and prepare a revision of the preliminary draft performance standards for survival craft AIS Search and Rescue Transmitter (AIS-SART) to supplement the existing SART performance standards (resolution A.802(19));

- .4 review the outcome of COMSAR 10 (COMSAR 10/16, Annex 33), taking into account the additional information available, and prepare the revised draft text of amendments to SOLAS regulations III/6.2.2 and IV/7.1.3; and
- .5 develop the necessary draft amendments to the 1994 HSC Code, the 2000 HSC Code and the MODU Code, in addition, to the proposed amendments to SOLAS chapters III and IV.

Report of the GMDSS Working Group

9.9 In considering the relevant part of the GMDSS Working Group's report (COMSAR 11/WP.2 and Add.1, section 9), the Sub-Committee took action as indicated hereunder.

9.10 The group considered documents COMSAR 11/9 (Japan), COMSAR 11/9/1 (IALA) and a liaison statement from ITU-R WP 8B and reviewed the outcome of COMSAR 10 (COMSAR 10/16, annexes 29 and 33) and agreed that there was a need to ensure that the definitions for AIS-SART and radar-SART were clear so as to avoid confusion with two distinct technologies. Accordingly, the Sub-Committee concurred that the Performance Standards for AIS-SART should be a separate resolution to avoid any confusion with that relating to radar-SART.

9.11 The Sub-Committee reviewed the outcome of COMSAR 10 (COMSAR 10/16, annex 29) on the draft performance standard for survival craft AIS Search and Rescue Transmitter (AIS-SART) to supplement the existing SART performance standards (resolution A.802(19)) and finalized them as amended, set out in annex 9, with a view to adoption at MSC 83.

9.12 The Sub-Committee reviewed the outcome of COMSAR 10 (COMSAR 10/16, annex 33), taking into account the additional information available, and prepared the revised draft text of amendments to SOLAS regulations III/6.2.2, III/26.2.5 and IV/7.1.3, as set out in annex 10, and invited the Committee to approve them with a view to adoption at its eighty-fourth session.

9.13 The Sub-Committee also prepared draft amendments to the Protocol of 1988 relating to the International Convention for the Safety of Life at Sea, 1974, as set out in annex 11, and invited the Committee to approve them with a view to adoption at its eighty-fourth session.

9.14 The Sub-Committee further prepared consequential amendments to the 1994 HSC Code, as set out in annex 12, and the 2000 HSC Code, as set out in annex 13, and invited the Committee to approve them with a view to adoption at its eighty-fourth session.

9.15 The Sub-Committee, prepared consequential amendments to the MODU Code, as set out in annex 14. The Sub-Committee noted that the DE Sub-Committee was revising the MODU Code and agreed that these amendments should also be reviewed by the DE Sub-Committee before being adopted by the Committee. Accordingly, the Sub-Committee invited the Committee to instruct the DE Sub-Committee to review these amendments and incorporate them when revising the MODU Code.

9.16 The Sub-Committee recalled that COMSAR 10 had endorsed the draft amendments to performance standards for SART with respect to circular polarization. The Sub-Committee invited the Committee to adopt the revision to the performance standards for SART (resolution A.802(19)), as set out in annex 15.

9.17 The Sub-Committee recognized that SART devices were not, and should not, be used for distress alerting. SART devices provided a means of locating after the transmission of a distress alert and were useful tools for SAR authorities.

9.18 In this context, the delegation of Japan expressed the view that the Performance Standards should reflect that the transmitted message should *inter alia* clearly distinguish between AIS-SART and AIS installation. A corresponding amendment was accepted by the Sub-Committee.

9.19 In developing the Performance Standards, the Sub-Committee agreed to invite the NAV Sub-Committee to consider the need for a presentation symbol for AIS-SART and invited the Committee to endorse this decision.

9.20 Furthermore, the Sub-Committee agreed that after the Performance Standards had been adopted, ITU should be advised on the need for pre-configured text formats for ‘test purposes’ (SART UNDER TEST) and for active state (SART ACTIVE) and invited Member Governments to inform their ITU delegates accordingly.

9.21 The Committee was invited to delete the item “Revision of the performance standards for SART” from the Sub-Committee’s work programme, as the work on this item had been completed.

10 AMENDMENTS TO COLREGs ANNEX IV RELATING TO DISTRESS SIGNALS

10.1 The Sub-Committee noted that MSC 81, following consideration of a proposal by Norway (MSC 81/23/12) to amend the list of distress signals in Annex IV to the COLREGs to include GMDSS distress signals as required in SOLAS chapter IV, and also to amend Annex IV by deleting distress signals which had been made redundant by the introduction of the GMDSS distress signals, had decided to include, in the work programmes of the NAV and COMSAR Sub-Committees and the provisional agendas for NAV 53 and COMSAR 11, a high priority item on “Amendments to COLREGs Annex IV relating to distress signals”, with a target completion date of 2007, and assigned the NAV Sub-Committee as co-ordinator, instructing NAV 52 to give a preliminary consideration to the matter.

10.2 The Sub-Committee also noted that NAV 52 had endorsed the views of the working group that mobile satellite providers for the Global Maritime Distress and Safety System (GMDSS) other than Inmarsat should be recognized by the COLREGs and forwarded the draft Assembly resolution containing the revised text of the proposed amendments to Annex IV of the Convention on the International Regulations for Preventing Collisions at Sea, 1972, as amended, to the Committee for adoption and communication to all Contracting Parties and Members of the Organization at least six months prior to its consideration by the Assembly. The Secretariat had been instructed to forward them to COMSAR 11 for review and comments to MSC 83.

10.3 The Sub-Committee noted further that MSC 82 had:

- .1 adopted the proposed amendments to the International Regulations for Preventing Collisions at Sea, 1972, as amended, relating to the revision of Annex IV to the COLREGs concerning the use of distress signals and approved the associated draft Assembly resolution with the proviso that, if any substantial changes were suggested by COMSAR 11, these could be conveyed to MSC 83 for adoption and subsequent submission to the twenty-fifth session of the Assembly; and

- .2 requested the Secretary-General to circulate the adopted amendments, in accordance with article VI/2 of the COLREGs, for consideration at the twenty-fifth session of the Assembly with a view to adoption.

10.4 The Sub-Committee also noted that the adopted amendments had been circulated by Circular letter No.2760 dated 18 December 2006.

10.5 The Sub-Committee considered the above proposed amendments to the International Regulations for Preventing Collisions at Sea, 1972, as amended.

10.6 The delegation of Norway stated that the proposed changes, as adopted by MSC 82 and circulated in Circular letter No.2760, were nearly in line with what they had proposed at MSC 81. They were, however, of the opinion that the term "Recognized Mobile Satellite Service Providers (RMSSP)" should be reverted back to "Inmarsat", since there was currently no proposal to include that term into SOLAS chapter IV. This was to ensure that there was consistency between the terms used in the COLREG and SOLAS. The intervention made by Norway was supported by some countries and the Sub-Committee decided to recommend this to the Committee.

10.7 The Committee was invited to delete the item "Amendments to COLREGs, Annex IV relating to distress signals" from the Sub-Committee's work programme as the work on this item had been completed.

11 GUIDELINES ON THE CONTROL OF SHIPS IN AN EMERGENCY

11.1 The Sub-Committee recalled that MSC 81 had considered document MSC 81/23/4 (Bahamas), proposing to develop guidelines covering the responsibilities of all parties in a maritime emergency, which would not create a chain of command but, if implemented by Member States as part of their emergency action plans, would clarify what the chain should be. In the opinion of the Bahamas, the guidelines would not change the responsibilities of the master, but they might avoid misunderstandings as to what a master's role should be when coastal State laws would be enforced and what their effect would be on the master and others involved in an emergency. MSC 81 had noted that, in commenting on the above proposal, IFSMA (MSC 81/23/22) had invited the Committee, when considering the proposal, to prepare clear and distinct guidelines in order to avoid misunderstanding as to where the responsibility lie in cases where the master was being ordered to take action against his own decision.

11.2 The Sub-Committee also recalled that in the context of the above proposal, MSC 81 was informed by the delegation of the United Kingdom, referring to the **Sea Empress** incident, of the SOSREP system which was developed to establish the command, control and communication procedures that were needed during maritime emergencies. The delegation also advised that, since the establishment of the SOSREP system, six years ago, it had been put into action on more than 600 occasions of which about 30 were considered as very significant and, therefore, the delegation was of the opinion that the development of appropriate guidelines would not be a single incident issue. In the course of the ensuing debate, a number of delegations, referring to the information provided by the delegation of the United Kingdom, had advised the Committee of similar national systems and supported the idea that appropriate measures should be taken to regulate internationally the issue of co-operation among parties involved in maritime emergencies.

11.3 The Sub-Committee further recalled that, having recognized the importance of the issue and that this matter should be addressed in a generic manner and not as a single incident issue, MSC 81 had decided to include, in the work programmes of the NAV and COMSAR Sub-Committees and the provisional agendas for NAV 53 and COMSAR 11, a high priority item on “Guidelines for the control of ships in an emergency”, with a target completion date of 2007, and assigned the NAV Sub-Committee as a co-ordinator, instructing NAV 52 to give a preliminary consideration to the matter.

11.4 The Sub-Committee noted that at NAV 52 there had been considerable support for the Bahamas proposal (NAV 52/17/5) suggesting the development of and providing the framework for proposed generic guidelines on the control of ships in an emergency and NAV 52 was of the opinion that the International Salvage Union should be involved, since the proposed guidelines would include a section on Guidelines for salvors.

11.5 The Sub-Committee further noted that keeping in mind the close proximity of COMSAR 11 (February 2007) and the target completion date of 2007, NAV 52 had agreed to instruct the Secretariat to forward document NAV 52/17/5 to COMSAR 11 together with its comments thereon for its review and comments.

11.6 The Sub-Committee instructed the SAR Working Group to consider document NAV 52/17/5, taking into account updates provided by the Bahamas and decisions made at Plenary, to further develop draft guidelines on the control of ships in an emergency for consideration at Plenary.

Report of the SAR Working Group

11.7 In considering the relevant part of the SAR Working Group’s report (COMSAR 11/WP.3, paragraph 5.1 and annex 4), the Sub-Committee took action as indicated hereunder.

11.8 The Sub-Committee noted that comments had been provided only on the areas applicable to SAR. Editorial comments were provided for chapters 1 to 4 only, as other chapters would require advice from other experts. Accordingly, the Sub-Committee revised the draft guidelines on the control of ships in an emergency, as set out in annex 16. The Sub-Committee instructed the Secretariat to forward them to NAV 53 for further consideration and invited the Committee to endorse this action.

11.9 The Committee was invited to delete the item “Guidelines on control of ships in an emergency” from the Sub-Committee’s work programme, as the work on this item had been completed.

12 REPLACEMENTS FOR USE OF NBDP (RADIO TELEX) FOR MARITIME DISTRESS AND SAFETY COMMUNICATIONS IN MARITIME MF/HF BANDS

12.1 The Sub-Committee recalled that COMSAR 9 had concluded that:

- .1 there was no need to retain Narrow-band direct printing (NBDP) for the original reason, i.e., to overcome language difficulties;
- .2 an HF system able to transmit data from shore to ship was necessary for dissemination of MSI in sea areas A4;

- .3 there was a need for an HF general communication system to be able to transmit data for transmission of observations and position reports from ships in sea areas A4;
- .4 NBDP carriage requirements in sea areas A3 could be deleted provided that a suitable transition period was used and that current installations were not immediately invalidated by the deletion;
- .5 due to the more robust propagation of NBDP compared to voice, NBDP could not immediately be discontinued in sea areas A4 as a distress follow-up communications;
- .6 the development of new technology for systems able to transmit data in the MF/HF bands was supported; and
- .7 it was acceptable that this new technology would make use of the frequencies currently being used for NBDP (for the time being excluding the dedicated distress communications frequencies).

12.2 The Sub-Committee noted that MSC 81 had decided to include in the Sub-Committee's work programme and the provisional agenda for COMSAR 11, a low priority item on "Replacements for use of NBDP (radio telex) for maritime distress and safety communications in the maritime MF/HF bands", with a target completion date of 2008.

12.3 The Sub-Committee noted further that a liaison statement had been received from ITU informing IMO about the draft new Recommendation ITU-R M.[HF-DATA] – Characteristic of HF radio equipment for the exchange of digital data and electronic mail in the maritime mobile service. The document advised on the possibility for replacement of some or all of the GMDSS functions of NBDP, primarily for general communications, but also for distress and safety.

12.4 The Sub-Committee considered document COMSAR 11/12 (Denmark), containing considerations and proposals for further actions on the matter of replacements for use of NBDP, including a proposal for an MSC circular giving guidance to Member Governments. Norway supported the Danish proposal. The Sub-Committee decided to refer this document to the GMDSS Working Group.

12.5 The Sub-Committee further considered document COMSAR 11/12/1 (United States), proposing to adopt a performance standard based on ITU-R M.[HF-Data] as an equivalent and eventual replacement for HF NBDP used in the GMDSS. Norway was of the opinion that there was no guarantee for the delivery of MSI messages in sea area A4, as long as there was no satellite service in operation in the polar areas. The Sub-Committee decided to refer this document to the GMDSS Working Group.

12.6 In considering document COMSAR 11/12/2 (Republic of Korea), the Sub-Committee noted the information provided about a new network protocol of digital data communications in the maritime HF band for the replacement of NBDP. Concerns were expressed by some delegations that this would require some ships to change equipment. The Sub-Committee decided to refer this document to the GMDSS Working Group.

12.7 Having briefly considered documents COMSAR 11/12 by Denmark, document COMSAR 11/12/1 by the United States and document COMSAR 11/12/2 by the Republic of Korea, the Sub-Committee instructed the GMDSS Working Group, taking into account decisions of, and comments and proposals made in Plenary, to consider documents COMSAR 11/12, COMSAR 11/12/1 and COMSAR 11/12/2 and, in particular:

- .1 advise on which functions replacement systems for NBDP will be needed and the framework for the development of a Performance Standard for such replacement system(s), indicating which functions, or parts thereof, the system(s) should be able to support, operational requirements on facilities needed for use of the system, interoperability between systems, etc.;
- .2 the need for a Performance Standard based upon ITU-R M.[HF-Data] as an equivalent and eventual replacement for HF narrow band direct-printing used in the GMDSS, and if so finalize such a draft Performance Standard; and
- .3 also advise on:
 - .1 transforming NBDP transmissions to NAVTEX-type transmissions so they can be received on board ships by a NAVTEX-type receiver covering the actual HF frequencies;
 - .2 consequences of possible near-future acceptance of one or more polar orbiting satellite communication systems to be part of the GMDSS and capable of offering broadcast of MSI in accordance with IMO resolution A.888(21); and
 - .3 possible other new technology capable of and appropriate for broadcast transmission of MSI on HF to the international shipping sailing in A4 sea areas;
- .4 finalize a draft MSC circular on the phasing out of the carriage requirements for certain ships for NBDP in A3 sea areas; and
- .5 provide appropriate comments and/or recommendations about a proposed new network protocol of digital data communications in the maritime HF band for the replacement of NBDP.

Report of the GMDSS Working Group

12.8 In considering the relevant part of the GMDSS Working Group's report (COMSAR 11/WP.2, section 7), the Sub-Committee took action as indicated hereunder.

Draft Performance Standard for HF Data and Electronic Mail used in GMDSS

12.9 The Sub-Committee considered the proposals by Denmark (COMSAR 11/12) and the United States (COMSAR 11/12/1) and noted that ITU-R Study Group 8 had adopted a draft new Recommendation ITU-R M.[HF-Data], Characteristics of HF Radio Equipment for the Exchange of Digital Data and Electronic Mail in Maritime Mobile Service. This recommendation had been circulated to all Member States for approval. The Sub-Committee agreed that while there might

be a need to develop Performance Standards as an equivalent of HF-NBDP used in the GMDSS, it would be premature to do so before the new recommendation came into force.

12.10 The Sub-Committee noted that:

- .1 SOLAS regulation IV/10.2.1.1.3 required the distress and safety communications using direct-printing telegraphy. This meant that the distress follow-up communication was needed and the minimum delay time of communications was essential. However, as described in ITU-R M.[HF-Data], coastal stations and RCCs may be connected via the internet. In this case, the e-mail may not be delivered in real time depending on the network traffic conditions;
- .2 the new HF data and e-mail system may use a personal computer. However, it had been decided not to use a personal computer in GMDSS;
- .3 when transmitting a distress call by DSC, the NBDP could be designated as the telecommand. In this case, it was unclear how the new HF data and e-mail system would work; and
- .4 the distress related communications had to be free of charge. However, the HF Data and e-mail system currently used for general communications was being charged. To use the new system in the GMDSS, some priority for non-charging would be needed.

12.11 In light of the foregoing, the Sub-Committee invited Member Governments and international organizations to consider the proposal by the United States (COMSAR 11/12/1) and submit relevant comments and proposals to COMSAR 12.

Use of MF and HF Radio Telex

12.12 The Sub-Committee prepared the preliminary text of the draft MSC circular on Guidance on ceasing requirements for NBDP radio telex installations on board certain ships sailing in A3 sea areas, as set out in annex 17. In this context, the Sub-Committee invited Member Governments and international organizations to submit relevant comments with a view of finalization at COMSAR 12.

12.13 With regard to a possible replacement technology for the NBDP transmissions of MSI on HF used by some countries, the Sub-Committee considered the:

- .1 means of transforming these transmissions to NAVTEX-type transmissions so that they could be received on board ships by a NAVTEX-type receiver covering HF frequencies;
- .2 consequences of possible near-future acceptance of one or more polar orbiting satellite communication system to be a part of the GMDSS and capable of offering broadcast of MSI in accordance with resolution A.888(21); and
- .3 possibility of other new technology capable of and appropriate for broadcasting of MSI on HF to ships sailing in A4 sea areas,

and invited Member Governments and international organizations to submit proposals to COMSAR 12.

New network protocol for maritime data communications in HF band

12.14 The Sub-Committee considered the information provided by the Republic of Korea (COMSAR 11/12/2) on the need for a standard network protocol for HF data communications in order to effectively transmit digital data between radio stations and noted that the ITU-R recommendation M.[HF-data] included in its annex 1 examples of such systems. Accordingly, the Sub-Committee invited the Republic of Korea to submit its information to ITU-R Study Group 8.

13 GUIDELINES FOR UNIFORM OPERATING LIMITATIONS OF HIGH-SPEED CRAFT

13.1 The Sub-Committee recalled that MSC 81, endorsing a proposal by DE 49, had decided to include, in the DE Sub-Committee's work programme and the provisional agenda for DE 50, a high priority item on "Guidelines for uniform operating limitations of high-speed craft", with a target completion date of 2009, and also in the work programmes of the COMSAR, NAV and SLF Sub-Committees and the provisional agendas for COMSAR 11, NAV 53 and SLF 50, with a target completion date of 2008.

13.2 Since no substantive documents had been submitted on this issue, the Sub-Committee decided to postpone further consideration of this item to its next session when the outcome of DE 50 would also be available for the benefit of COMSAR 12.

13.3 The Sub-Committee also invited Members to submit relevant comments and suitable proposals for consideration at COMSAR 12.

14 DEVELOPMENT OF AN E-NAVIGATION STRATEGY

14.1 The Sub-Committee noted that MSC 81 had considered document MSC 81/23/10 (Japan, Marshall Islands, the Netherlands, Norway, Singapore, the United Kingdom and the United States) proposing to develop a broad strategic vision for incorporating the use of new technologies in a structured way and ensuring that their use is compliant with the various navigational communication technologies and services that are already available, with the aim of developing an overarching accurate, secure and cost-effective system with the potential to provide global coverage for ships of all sizes.

14.2 The Sub-Committee also noted that following discussion, MSC 81 had decided to include, in the work programmes of the NAV and COMSAR Sub-Committees and the provisional agendas for NAV 53 and COMSAR 11, a high priority item on "Development of an E-Navigation strategy", with a target completion date of 2008, and assigned the NAV Sub-Committee as co-ordinator, instructing NAV 52 to give preliminary consideration to the matter. MSC 81 had also agreed that the two Sub-Committees should consider the issues with the aim of developing a strategic vision with their associated work programmes for taking this issue forward and to report to MSC 85, for it to develop the necessary policy direction for further progress of this important work.

14.3 The Sub-Committee further noted that NAV 52 had:

- .1 considered document MSC 81/23/10 (Japan, Marshall Islands, the Netherlands, Norway, Singapore, the United Kingdom and the United States) on the

development of an E-Navigation strategy and document (NAV 52/17/4 (Japan)) outlining Japan's approach to E-Navigation;

- .2 recognized that it would be essential, as a first step, to develop a clear definition and objectives for the concept of E-Navigation and it was also of the opinion that a very careful and strict management of such a large project would be a critical factor for its success; and
- .3 agreed that, to progress the work for NAV 53, an intersessional Correspondence Group should be established under the co-ordination of the United Kingdom and approved the draft terms of reference of the proposed Correspondence Group.

14.4 Having considered document COMSAR 11/14 (Republic of Korea), proposing to consider the technical improvement of GMDSS equipment and the utilization of technically improved GMDSS equipment as a data communication network for E-Navigation, the Sub-Committee decided to refer this document to the Working Group on the Development of an E-Navigation strategy and LRIT issues.

14.5 Having further considered document COMSAR 11/14/1 (United Kingdom, Co-ordinator of the intersessional Correspondence Group), containing specific questions that should be addressed by COMSAR, the Sub-Committee decided to refer this document to the Working Group on the Development of an E-Navigation strategy and LRIT issues.

14.6 In considering document COMSAR 11/14/3 (Australia), the Sub-Committee noted a set of three diagrams explaining the concept of E-Navigation for the benefit and information of COMSAR 11 and to assist in the consideration of the Correspondence Group's report. The Sub-Committee decided to refer this document to the Working Group on the Development of an E-Navigation strategy and LRIT issues.

Establishment of a Working Group

14.7 Having briefly considered documents COMSAR 11/14 (Republic of Korea), COMSAR 11/14/1 (United Kingdom, Co-ordinator of the intersessional Correspondence Group) and COMSAR 11/14/3 (Australia), the Sub-Committee instructed the Working Group on the Development of an E-Navigation strategy and LRIT issues, taking into account decisions of, and comments and proposals made in Plenary, to consider documents COMSAR 11/14, COMSAR 11/14/1 and COMSAR 11/14/3 and in particular:

- .1 review technical improvements of GMDSS equipment and its utilization as a data communication network for E-Navigation;
- .2 identify the potential components of the E-Navigation strategy and proposed system architecture that fall within the remit of the Sub-Committee;
- .3 categorize the components identified in .2 into:
 - .1 communications and SAR services supported by existing infrastructure; and
 - .2 services that will need to be supported by emerging or new technologies;

- .4 identify any lessons learnt from the development and rollout of other major maritime services, for example the GMDSS; and
- .5 prepare suitable recommendations on .1 to .4 for the future work and guidance of the Correspondence Group on E-Navigation.

Report of the Working Group on the Development of an E-Navigation strategy and LRIT issues

14.8 Having received and considered the relevant part report of the Working Group on the Development of an E-Navigation strategy and LRIT issues (COMSAR 11/WP.4, section 4 to 14), the Sub-Committee approved it, in general, and took action as indicated hereunder.

14.9 The Sub-Committee agreed that the user requirements should be clearly defined by the NAV Sub-Committee before the COMSAR Sub-Committee could review the technical improvements that might be required if GMDSS equipment was to be utilized as a data communication network for E-Navigation; the development of E-Navigation should be user-driven and not technology driven; there should be equipment performance standardization, including a standard mode of operation for shipboard equipment, and the software installed in operating systems should follow a formal change control process to ensure that all elements of the E-Navigation system would operate efficiently.

14.10 The Sub-Committee also agreed that with respect to the potential components of the E-navigation strategy and proposed system architecture, issues connected with search and rescue, data communication links, and operation of the GMDSS were within its remit.

14.11 The Sub-Committee further agreed that existing GMDSS infrastructure supported SAR services and communications; however, with respect to E-navigation, broadband communication on a global basis using satellite technology would be necessary.

14.12 The Sub-Committee instructed the Secretariat to convey the aforementioned views and conclusions to the NAV Sub-Committee and the Co-ordinator of the Correspondence Group on E-Navigation for future work and guidance.

Long-Range Identification and Tracking (LRIT) of Ships

14.13 The Sub-Committee recalled that MSC 81 had:

- .1 adopted the SOLAS amendments on LRIT, by resolution MSC.202(81). The Committee also adopted resolution MSC.210(81) on Performance standards and functional requirement for the long-range identification and tracking of ships; and resolution MSC.211(81) on Arrangements for the timely establishment of the long-range identification and tracking system;
- .2 approved the establishment of an *Ad Hoc* Working Group on Engineering Aspects of LRIT and agreed that, if the LRIT system was to become operational by 31 December 2008, the *Ad Hoc* Working Group needed to complete all its work on time and submit it for consideration by MSC 82 with a view to approval;

- .3 bearing in mind that, at this stage, the purpose of the proposed SOLAS amendments on LRIT was to contribute to the enhancement of security and to aid search and rescue services, agreed that the new SOLAS regulation on LRIT should enter into force on 1 January 2008. The Committee had recognized that for the LRIT system to become operational, it was necessary to establish the International LRIT Data Centre and the International LRIT Data Exchange as well as to carry out tests and confirm the functioning of the system as envisaged in the LRIT architecture. The Committee had also noted that certain milestones in the establishment of the LRIT system were also requiring certain decisions of the Committee. As a result the Committee had agreed that the provisions of the SOLAS regulation on LRIT should start to become effective, with respect to the transmission of LRIT information by ships, as from 31 December 2008;
- .4 noting that the previously used term “oversight of the LRIT system” had now been replaced by the term “performance review and audit of certain aspects of the LRIT system”; and mindful of the importance of having in place from the outset, the necessary arrangements for the review of the performance and the auditing of the LRIT system, invited IMSO, as a possible candidate, to advise not later than at MSC 82 whether IMSO would be willing and able, bearing in mind the envisaged entry into force of the SOLAS regulation, to undertake the performance review and audit of certain aspects of the LRIT system on behalf of the Organization.

14.14 The Sub-Committee noted that MSC 82 had:

- .1 recalled that the SOLAS amendments were under the tacit amendment process and would enter into force on 1 January 2008, if they were deemed accepted by 1 July 2007 in accordance with the provisions of the resolution;
- .2 after considerable discussion decided to appoint IMSO as the LRIT Co-ordinator and invited IMSO to take whatever action it could in order to ensure the timely implementation of the LRIT system. The Committee had also invited IMSO to submit a paper to its next session, giving a detailed analysis of how it intended to undertake the role;
- .3 noted, with appreciation, the offer by the United States to build and operate an international LRIT data centre and international LRIT data exchange until such time as another centre/exchange was available, but considered that it was not in a position at that session to decide upon the location of the International LRIT Exchange and the International LRIT Data Centre;
- .4 noted CIRM’s view (document MSC 82/8/6) that with the system architecture in place the question of how to resolve the issue of communication costs and their billing now needed to be studied in order for LRIT to be implemented. In their view, there was a pressing need to look at the costs involved in employing the various types of data exchange proposed and who pays. The absence of discussion relating to communications billing thus far was of concern to CIRM members working on LRIT. It was for this reason that CIRM had proposed that the question of “communications billing” possibly be added to the terms of reference of the *Ad Hoc* engineering group;

- .5 noting that there were still outstanding issues which could only be progressed intersessionally in order to meet the timely implementation of LRIT, approved the re-establishment of the *Ad Hoc* Engineering Working Group on LRIT and instructed, among others, the Group to prepare a technical costing and billing standard within the policy framework as decided by the Committee;
- .6 in view of the very short timeframe before the due date of the implementation of the LRIT system, the Committee instructed COMSAR 11 to consider LRIT issues and extended the deadline for submission of documents on LRIT issues to 22 December 2006 and the deadline for comments to 19 January 2007. Documents submitted to COMSAR 11 on LRIT matters would be considered under item 14 (Strategy for E-Navigation). The Committee had invited Member States to ensure that appropriate LRIT experts on matters other than the specific engineering aspects were included in their delegations to COMSAR 11;
- .7 authorized the necessary two to four meetings of the intersessional *Ad Hoc* Working Group on Engineering Aspects to finalize the technical specifications in time for the deadline of the submission of the report to MSC 83. The Committee had authorized the next meeting of that group to be held in the week prior to COMSAR 11 and appreciated the kind offer by CIRM to host the meeting;
- .8 agreed that an additional intersessional MSC Working Group needed to be established for the finalization of legal and financial aspects of costing and billing and for the finalization of draft legal agreements in preparation for approval by MSC 83. The Committee had authorized this Group to meet in the May-June 2007 period, just prior to the deadlines for submission of documents to its next session;
- .9 in regard to the Data Distribution Plan to be established within the Organization, also agreed that this should be operational by 1 January 2008 to allow for operational testing before the critical date of 1 July 2008 when, according to the provisions of resolution MSC.211(81), the operational testing of the system was to begin and instructed the Secretariat accordingly; and
- .10 recalling the provisions of resolution MSC.211(81) on Arrangements for the timely establishment of the LRIT system and recognizing the extensive development, procurement, installation and testing of the LRIT system which still needed to be completed, approved the updated Road map for the timely implementation of the LRIT system (MSC 82/24, annex 16).

14.15 The Sub-Committee also noted that MSC 82 had specifically instructed COMSAR 11 to prepare:

- .1 draft templates of LRIT agreements, including guidance provided by the IMO Secretariat's Legal Division;
- .2 options with pros and cons, assessment and recommendations related to the LRIT costing and billing options including guidance provided by the *Ad Hoc* Working Group on Engineering Aspects of LRIT; and

- .3 using the input of Contracting Governments, and the IMO Secretariat's Legal Division prepare a preliminary guidance for MSC 83 on the geographic location of the International LRIT Data Exchange and the International LRIT Data Centre.

14.16 The Sub-Committee considered briefly document COMSAR 11/14/6 (United States) offering to build and operate an International LRIT Data Centre and International LRIT Data Exchange until other suitable arrangements are in place to perform these functions and to advise MSC 83.

14.17 Having considered document COMSAR 11/14/2 (CIRM), concerning the issues surrounding the billing and costing of LRIT services and suggesting answers to the questions raised during the LRIT working group at MSC 82, the Sub-Committee decided to refer this document to the Working Group on the Development of an E-Navigation strategy and LRIT issues.

14.18 In considering document COMSAR 11/14/4 (Marshall Islands), the Sub-Committee noted a status report on the establishment of a Marshall Islands National LRIT Data Centre and Vessel Tracking System (MarVTS) and a list of observations and summary recommendations which may be necessary to consider in the continuing development and implementation of LRIT systems. The Sub-Committee decided to refer this document to the Working Group on the Development of an E-Navigation strategy and LRIT issues.

14.19 Having considered document COMSAR 11/14/5 (United States), concerning the responses to costing and billing questions raised during MSC 82, the Sub-Committee decided to refer this document to the Working Group on the Development of an E-Navigation strategy and LRIT issues.

14.20 The observer from ICS stated that for a timely implementation of the LRIT system, commitment of the Member States was absolutely essential and the issue of updating the software installed in operating systems should also be addressed as it could affect the ability of ships to transmit position reports.

14.21 The observer from CIRM stated that in their opinion software updates were the responsibility of shipowners.

14.22 The Sub-Committee recalled that it had already decided under agenda item 6.2 (paragraph 6.15) to refer document COMSAR 11/6/1, discussing the need for SAR services-related issues to be considered as the LRIT system was further developed and implemented, to the Working Group on the Development of an E-Navigation strategy and LRIT issues.

14.23 Having briefly considered documents COMSAR 11/14/2 (CIRM), COMSAR 11/14/4 (Marshall Islands) and COMSAR 11/14/5 (United States), the Sub-Committee instructed the Working Group on the Development of an E-Navigation strategy and LRIT issues, taking into account decisions of, and comments and proposals made in Plenary, to consider documents COMSAR 11/14/2, COMSAR 11/14/4, COMSAR 11/14/5, COMSAR 11/14/6 and COMSAR 11/6/1 and, in particular prepare:

- .1 draft templates of LRIT agreements;

- .2 options with pros and cons, assessment and recommendations related to the LRIT costing and billing options, taking into account the information and comments contained in documents COMSAR 11/14/2 and COMSAR 11/14/5, including guidance provided by the *Ad Hoc* Working Group on Engineering Aspects of LRIT;
- .3 preliminary generic guidance [and criteria] for MSC 83 to decide on the establishment of the International LRIT Data Exchange and the International LRIT Data Centre;
- .4 comments on the United States' offer (COMSAR 11/14/6) to build and operate an International LRIT Data Centre and International LRIT Data Exchange until other suitable arrangements are in place to perform these functions; and
- .5 recommendations on how to encourage SAR authorities to co-ordinate with their respective national LRIT authorities so that SAR services-related issues are given due consideration as the LRIT system is further developed and implemented (COMSAR 11/6/1).

Report of the Working Group

14.24 In considering the relevant part of the report of the Working Group on the Development of an E-Navigation strategy and LRIT issues (COMSAR 11/WP.4/Add.1, paragraphs 15 to 50), the Sub-Committee took action as indicated hereunder.

14.25 The ICS observer voiced serious concerns over the slow progress and low level of support by Member Governments and endorsed the concerns of the Working Group that considerable time had lapsed since the adoption of SOLAS regulation V/19-1 without substantial progress having been made in relation to the timely establishment of the LRIT system; and that it was imperative that the ISWG-LRIT dealt with all pending issues, otherwise the timely establishment of the LRIT system would be in jeopardy.

14.26 Some delegations shared these concerns and were of the opinion that a direct message should be conveyed to the Committee with regard to the slow progress.

14.27 Some delegations were of the opinion that the date for the implementation of the LRIT system should be extended to 2009 as issues related to billing and costing, including software update of old shipboard equipment, had still to be addressed. Of specific concern to them were the recommendations related to billing and costing issues outlined by the Working Group in paragraphs 51.4 to 51.7 of document COMSAR 11/WP.4/Add.1.

14.28 The majority was of the view that it was premature to extend the implementation date of the LRIT system and the Organization should proceed as planned and that the mandate given by the Committee should be strictly followed.

14.29 The Secretariat informed the Sub-Committee that the relevant SOLAS amendments would enter into force on 1 January 2008, the trials and testing of the LRIT system were scheduled to start not later than 1 July 2008 and that the Committee was determined that the roadmap for the timely implementation of the LRIT system by 31 December 2008 should be strictly followed, hence the authorization for the various intersessional meetings on the LRIT development. It would be very discouraging if the Sub-Committee, at this stage, did not do

everything possible to ensure the timely implementation of the LRIT system other than accept a delay. With regard to the recommendations on billing and costing issues, it might be better for the Sub-Committee just to note the recommendations outlined in paragraphs 51.4 to 51.7 of document COMSAR 11/WP.4/Add.1.

14.30 The Chairman in his summing up noted the concerns voiced by some delegations and stated that the Sub-Committee's concerns regarding the slow progress would be conveyed to the Committee. However, as supported by the majority, the Sub-Committee had a mandate from the Committee which had to be strictly followed to ensure timely establishment of the LRIT system.

14.31 The Sub-Committee agreed that at this point in time it would be appropriate to only take note of the actions requested in paragraphs 51.4 to 51.7 of document COMSAR 11/WP.4/Add.1.

14.32 Accordingly, the Sub-Committee instructed the Secretariat to:

- .1 study the issues pertaining to the draft agreements and templates and to provide advice to the ISWG-LRIT (annex 18); and
- .2 prepare first drafts of the agreements and templates, other than any service contracts envisaged by IMSO.

14.33 The Sub-Committee strongly urged SOLAS Contracting Governments to submit their views on the issues to be addressed by the various agreements as soon as possible for the consideration of the ISWG-LRIT.

14.34 With respect to billing and costing issues (annex 19) the Sub-Committee noted the opinion of the Working Group that:

- .1 those SOLAS Contracting Government(s) that have decided to establish their own NDCs, RDCs or CDCs could have to pay both for the initial setup costs for the centres, as well as for the ongoing cost for 4 LRIT daily transmissions (paragraph 25), subject to the views expressed by China;
- .2 the cost of the LRIT Co-ordinator should be shared amongst all the DCs in the LRIT system and the costs should be equitably based on the level of effort that the LRIT Co-ordinator will expend to perform its duties;
- .3 the cost of the IDE should be shared on the basis of the volume of data sent through the IDE to a DC divided by the total amount of data sent through the IDE; and
- .4 the cost of the IDC should be shared on the basis of the volume of data requested by a DC or a SOLAS Contracting Government divided by the total amount of data requested from the IDC.

14.35 The Sub-Committee also noted the discussions relating to issues concerning profit making from the operation of the LRIT system and the recoverability of costs by means of their provision of data to other DCs.

14.36 The Sub-Committee requested SOLAS Contracting Governments to provide the approximate volume of LRIT information packages that they are likely to request in a particular period for consideration by the ISWG-LRIT.

14.37 The Sub-Committee reminded SOLAS Contracting Governments of their agreement to provide information with respect to their firm intentions in relation to the establishment of NDCs, RDCs and CDCs and urge them to provide such information for consideration by the ISWG-LRIT.

14.38 The Sub-Committee agreed to forward the preliminary criteria to be used in assessing the proposals for establishing the IDC and IDE to the ISWG-LRIT for further consideration and urged SOLAS Contracting Governments to submit detailed proposals on these issues and any other evaluation criteria for consideration by ISWG-LRIT.

14.39 The Sub-Committee drew the attention of SOLAS Contracting Governments to the potential problems they might face when implementing DCs due to problems with legacy shipborne equipment.

14.40 The Sub-Committee noted CIRM's intention to submit to the ISWG-LRIT information pertaining to the viability of the shipborne equipment for LRIT.

14.41 The Sub-Committee agreed to bring to the attention of the Committee the fact that due to technical difficulties during the terminal activation and de-activation process, transmission of LRIT information may not be available during this process at the prescribed 6-hour intervals.

14.42 The Sub-Committee noted the discussion in relation to the offer of the United States to host and build an interim IDC and IDE.

14.43 The Sub-Committee also noted:

- .1 that at a later date it might be necessary for the Organization to develop appropriate guidance in relation to co-ordination between SAR services and national LRIT authorities in relation to LRIT (see also paragraph 6.32); and
- .2 the concern that considerable time had lapsed since the adoption of SOLAS regulation V/19-1 without having made substantial progress in relation to the timely establishment of the LRIT system; and that it was imperative that the ISWG-LRIT dealt with all pending issues, otherwise the timely establishment of the LRIT system would be in jeopardy.

15 WORK PROGRAMME AND AGENDA FOR COMSAR 12

15.1 The Sub-Committee recalled that at MSC 78, the Chairman, in addressing the Committee's method of work relating to the consideration of proposals for new work programme items, had clarified that the objective of the Committee when discussing these proposals was to decide, based upon justification provided by Member Governments in accordance with the Guidelines on the organization and method of work, whether the new item should or should not be included in the Sub-Committee's work programme. A decision to include a new item in a Sub-Committee's work programme did not mean that the Committee agreed with the technical aspects of the proposal. If it was decided to include the item in a Sub-Committee's work programme, detailed consideration of the technical aspects of the proposal and the development

of appropriate requirements and recommendations should be left to the Sub-Committee concerned.

15.2 The Sub-Committee noted that MSC 81 had agreed to include, in the COMSAR Sub-Committee's work programme a low priority item on "Replacements for use of NBDP (radio telex) for maritime distress and safety communications in the maritime MF/HF bands", with a target completion date of 2008.

15.3 The Sub-Committee further noted that MSC 82 had agreed that:

- .1 following consideration of document MSC 82/21/7 (Japan) in the context of the DE Sub-Committee's work programme "development of framework of requirements for live-saving appliances", the FP and COMSAR Sub-Committees should co-operate on the issue, as necessary and when requested by the DE Sub-Committee; and
- .2 following consideration of document MSC 82/21/10 (Egypt) in the context of the NAV Sub-Committee's work programme "minimizing wrong AIS transmissions", the COMSAR Sub-Committee should co-operate on the above issue, as necessary.

15.4 Taking into account the progress made during the session and the provisions of the agenda management procedure contained in paragraphs 3.11 to 3.23 of the Guidelines on the organization and method of work (MSC-MEPC.1/Circ.1), the Sub-Committee reviewed its work programme and agenda for its next session (COMSAR 11/WP.1) and prepared proposed revisions thereof for COMSAR 12. While doing so, the Sub-Committee agreed to invite the Committee to:

- .1 delete the following work programme items, as work on them has been completed:
 - .1.1 item H.1 – Amendments to SOLAS chapter IV pursuant to the criteria set out in resolution A.888(21);
 - .1.2 item H.3 – Revision of the performance standards for SART;
 - .1.3 item H.4 – Amendments to COLREG, annex IV related to distress signals;
 - .1.4 item H.5 – Guidelines on the control of ships in an emergency;
- .2 extend the target completion dates of the following work programme items:
 - .2.1 item 6.1 – Harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters, to 2008;
 - .2.2 item 6.4 – Medical assistance in SAR services, to 2008;
 - .2.3 item H.2 – Development in maritime radiocommunication systems and technology, to 2008.

15.5 The Committee was also invited to approve the proposed revised work programme of the Sub-Committee and provisional agenda for COMSAR 12, as set out in annex 20.

Arrangements for the next session

15.6 The Sub-Committee anticipated that Working Groups on the following subjects might be established at COMSAR 12:

- .1 Search and Rescue (SAR);
- .2 GMDSS operational, including MSI matters; and
- .3 development of an E-navigation strategy.

15.7 The Sub-Committee noted that the twelfth session of the Sub-Committee has been tentatively scheduled to be held from 7 to 11 April 2008.

16 ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 2008

16.1 In accordance with rule 16 of the Rules of Procedure of the Maritime Safety Committee, the Sub-Committee unanimously re-elected Mr. C. Salgado (Chile) as Chairman and Mr. A. Olopoenia (Nigeria) as Vice-Chairman for 2008.

17 ANY OTHER BUSINESS

XML format for ship reporting systems

17.1 The Sub-Committee recalled that document COMSAR 11/INF.5 (European Commission) on the use of messages in XML standard format for ship reporting and exchange of information between ship reporting and/or ship monitoring systems had already been referred to the GMDSS Working Group under agenda item 7 (paragraphs 7.1 to 7.6 refer).

Expressions of appreciation

17.2 The Sub-Committee expressed appreciation to the following delegates and observers, who had recently relinquished their duties, retired or were transferred to other duties or were about to, for their invaluable contribution to its work and wished them a long and happy retirement or, as the case might be, every success in their new duties:

- Mr. Heru Prasetyo (Indonesia) (on return home);
- Mr. Fikret Hakgüden (Turkey) (on transfer);
- Captain Carlos Ormaechea (Uruguay) (on transfer – and who had joined the Secretariat at the beginning of this month); and
- Mr. Brian Day (ICAO) (on retirement).

18 ACTION REQUESTED OF THE COMMITTEE

18.1 The Maritime Safety Committee, at its eighty-third session, is invited to:

- .1 approve the establishment of new NAVAREAs in Arctic Waters (paragraph 3.17);
- .2 endorse the action of the Secretariat in circulating COMSAR circular on the list of NAVAREA Co-ordinators (paragraph 3.21);

- .3 approve the draft COMSAR circular on analysis of maritime safety information promulgated via the EGC SafetyNET system and recommendations on improving its quality (paragraph 3.22 and annex 1);
- .4 approve the draft Assembly resolution on Criteria for the Provision of Mobile Satellite Communication Systems in the Global Maritime Distress and Safety System (GMDSS), revoking resolution A.888(21) and MSC/Circ.1077, with a view to adoption by the Assembly at its twenty-fifth session (paragraph 5.16.1 and annex 3);
- .5 adopt the corresponding draft amendments to SOLAS chapter IV, as amended (paragraph 5.16.2 and annex 4);
- .6 approve the draft MSC circular on minimizing delays in Search and Rescue response to distress alerts (paragraph 6.18 and annex 5);
- .7 note that Member Governments were invited to inform WMU about the competent national point of contact to allow for proper considerations of whether and how to carry out an intermediate phase on gathering information on SAR research and relevant development programmes allowing it to establish this information platform (paragraph 6.24);
- .8 endorse the decision of the Sub-Committee for the convening of the 14th meeting of the ICAO/IMO JWG on Harmonization of Aeronautical and Maritime SAR intersessionally (paragraph 6.26 and annex 6);
- .9 approve the draft MSC circular on Adoption of amendments to the IAMSAR Manual (paragraph 8.3 and annex 8);
- .10 adopt the draft performance standard for survival craft AIS Search and Rescue Transmitter (AIS-SART) for use in SAR operations (paragraph 9.11 and annex 9);
- .11 approve the draft amendments to SOLAS regulations III/6.2.2, III/26.2.5 and IV/7.1.3, with a view to adoption at its eighty-fourth session (paragraph 9.12 and annex 10);
- .12 approve the draft amendments to the Protocol of 1988 relating to the International Convention for the Safety of Life at Sea, with a view to adoption at its eighty-fourth session (paragraph 9.13 and annex 11);
- .13 approve the draft consequential amendments to the 1994 HSC Code, with a view to adoption at its eighty-fourth session (paragraph 9.14 and annex 12);
- .14 approve the draft consequential amendments to the 2000 HSC Code, with a view to adoption at its eighty-fourth session (paragraph 9.14 and annex 13);
- .15 instruct the DE Sub-Committee to review the consequential amendments to the MODU Code and incorporate them when revising the MODU Code (paragraph 9.15 and annex 14);
- .16 adopt the draft amendment to the performance standards for Search and Rescue Transponder (SART) (resolution A.802(19)) (paragraph 9.16 and annex 15);
- .17 endorse the action of the Sub-Committee inviting the NAV Sub-Committee to consider the need for a presentation symbol for AIS-SART (paragraph 9.19);

- .18 endorse the recommendation of the Sub-Committee that with respect to COLREGs Annex IV relating to distress signals, the Sub-Committee agreed that the term “Recognized Mobile Satellite Service Providers (RMSSP)” should be reverted back to “Inmarsat”, since there was currently no proposal to include that new term into SOLAS chapter IV and adopt the suggested amendment for subsequent submission to the twenty fifth session of the Assembly (paragraphs 10.3 and 10.6);
- .19 endorse the action of the Sub-Committee in conveying the revised draft guidelines on the control of ships in an emergency to the NAV Sub-Committee (paragraph 11.8 and annex 16);
- .20 note that with respect to the Development of an E-Navigation strategy, issues connected with search and rescue, data communication links, and operation of the GMDSS were within the sub-Committee’s remit (paragraph 14.10);
- .21 note the outcome of the discussions with respect to the establishment of the LRIT system, especially in the context of matters pertaining to draft agreements and billing and costing issues (paragraphs 14.25 to 14.42 and annexes 18 and 19); and
- .22 approve the report in general.

18.2 In reviewing the work programme of the Sub-Committee, the Committee is invited to consider the revised work programme suggested by the Sub-Committee (annex 20) in general and, in particular, to:

- .1 delete “Amendments to SOLAS chapter IV pursuant to the criteria set out in resolution A.888(21)” (paragraph 5.17);
- .2 delete “Revision of the performance standards for SART” (paragraph 9.21);
- .3 delete “Amendments to COLREG, annex IV related to distress signals” (paragraph 10.7);
- .4 delete “Guidelines on the control of ships in an emergency” (paragraph 11.9);
- .5 extend the target completion date of the following work programme items, namely:
 - .1 “Harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters” (paragraph 6.25);
 - .2 “Medical assistance in SAR services” (paragraph 6.51); and
 - .3 “Development in maritime radiocommunication systems and technology” (paragraph 7.6).

18.3 The Committee is also invited to approve the proposed agenda for the Sub-Committee’s twelfth session (annex 20), which has been developed using the agenda management procedure.

ANNEX 1**DRAFT COMSAR CIRCULAR****ANALYSIS OF MARITIME SAFETY INFORMATION PROMULGATED VIA
THE EGC SAFETYNET SYSTEM AND RECOMMENDATIONS
ON IMPROVING ITS QUALITY**

1 The Sub-Committee on Radiocommunications and Search and Rescue (COMSAR), at its eleventh session (19 to 23 February 2007) noted that the IHO Commission on the Promulgation of RadioNavigational Warnings (CPRNW) had received reports that there were occurrences of ‘C’ codes being used incorrectly, i.e., not in accordance with the International SafetyNET Manual. In particular $C_2 = 14$ (shore-to-ship distress alert relay) had been used with “Urgency” priority rather than the obligatory “Distress” priority; SAR messages had been transmitted using $C_2 = 24$ (Met warnings to a circular area), although $C_2 = 34$ and $C_2 = 44$ have been allocated for Search and Rescue Co-ordination traffic; and C_4 repetition code being used incorrectly resulting in messages, especially some long weather messages, being received unnecessarily on more than one occasion.

2 Accordingly, COMSAR 11 analysed the Maritime Safety Information promulgated via the EGC SafetyNET system and recommended measures to improve its quality as set out in annex.

3 The Maritime Safety Committee, at its eighty-third session [(3 to 12 October 2007)], endorsed the recommendations of COMSAR 11.

4 Member Governments are invited to bring this recommendation to the attention of all concerned for information purposes and in particular, to ensure that ‘C’ codes are used correctly.

ANNEX

**ANALYSIS OF MARITIME SAFETY INFORMATION PROMULGATED VIA
THE EGC SAFETYNET SYSTEM AND RECOMMENDATIONS
ON IMPROVING ITS QUALITY¹**

This annex gives an analysis of misuse of various ‘C’ codes by Maritime Safety Information (MSI) providers and recommends operational guidance for them on promulgating meteorological, navigational and search and rescue (SAR) information as required by the International SafetyNET Manual, 2003 edition, Annex 4. Recommendations given in this annex are in accordance with the SafetyNET Manual.

1 EGC SafetyNET Services

The International SafetyNET Manual defines the following services, service codes (types) and message priorities for promulgating Maritime Safety Information (MSI) given in the table:

	EGC SafetyNET service	Service code (type)	Message priority
1	Navigational Warning services	C ₂ = 13 – Coastal warnings C ₂ = 31 – NAVAREA warnings	C ₁ = 1 (Safety) – normally C ₁ = 2 (Urgency) – exceptionally at discretion of MSI provider
2	Meteorological services	C ₂ = 13 – Met warnings or forecasts to coastal area C ₂ = 24 – Met warnings to circular area C ₂ = 31 – Met warnings or forecasts to METAREA	C ₁ = 1 (Safety) – always for forecasts and warnings) C ₁ = 2 (Urgency) – always for urgent tropical cyclone warnings only
3	SAR services: a) shore-to-ship distress alert	C ₂ = 14 – Shore-to-ship DA to circular area	C ₁ = 3 (Distress) – always
	b) SAR co-ordination traffic	C ₂ = 34 – SAR co-ordination to rectangular area C ₂ = 44 – SAR co-ordination to circular area	C ₁ = 1 (Safety) – determined by the phase of emergency C ₁ = 2 (Urgency) – determined by the phase of emergency C ₁ = 3 (Distress) – determined by the phase of emergency
	c) shore-to-ship urgency and safety traffic	C ₂ = 31 – Urgency and Safety traffic	C ₁ = 1 (Safety) C ₁ = 2 (Urgency)
	d) general (all ships call within the Inmarsat ocean region)	C ₂ = 00	C ₁ = 2 (Urgency) C ₁ = 3 (Distress)
4	Piracy countermeasures broadcast messages	C ₂ = 04 – Nav warning to rectangular area	C ₁ = 1 (Safety)
5	<i>Weather graphical service</i>	<i>C₂ = 21 – Service not yet developed</i>	<i>TBC</i>
6	<i>Chart correction service for fixed areas</i>	<i>C₂ = 73 – Service not yet developed</i>	<i>TBC</i>

Figure 1. Allocation of service and priority codes for EGC SafetyNET services

¹ The circular (annex) should be read in conjunction with COMSAR/Circ.36, annex 1 “Steps to be taken for the promulgation of tsunami warning and other natural disaster warnings using the international SafetyNET service”.

The figure shows that each type of the SafetyNET service is allocated with a certain priority code C_1 and service code C_2 , which should be used by all MSI providers.

2 EGC SafetyNET broadcast parameters

To broadcast a SafetyNET message an MSI provider should submit C codes with the message, usually five or six codes, which are known as broadcast parameters and included in the message header. Each C code controls an individual broadcast parameter and is assigned a numerical value in accordance with the International SafetyNET Manual.

The EGC SafetyNET broadcast command syntax is as follows:

EGC $C_0, C_1, C_2, C_3, C_4, C_5$

Where the word EGC is the start command and:

C_0 – Ocean Region – to identify the ocean region if the addressed Inmarsat C Land Earth Station (LES) operates in more than one ocean region (optional code);

C_1 – Message Priority

$C_1 = 1$ – Safety priority;

$C_1 = 2$ – Urgency priority; and

$C_1 = 3$ – Distress priority

C_2 – Service code – see Figure 1.

C_3 – Address code – consists of 2, 4, 10 or 12 numerical or alpha-numerical characters which define a geographical address for the message. An address may be a fixed area defined by IMO as NAVAREA/METAREA, an MSI provider-defined circular or rectangular area or a coastal area.

C_4 – Repetition code – allows a message to be repeated a finite number of times or at specific intervals until cancelled by the information provider, for example:

$C_4 = 01$ – transmit once on receipt;

$C_4 = 11$ – transmit on receipt followed by repeat 6 minutes later; and

$C_4 = 19$ – transmit broadcast every 24 hours with an echo (repetition) 6 minutes after each broadcast.

More repetition codes are defined in the SafetyNET Manual, Annex 4.

C_5 – Presentation code

$C_5 = 0$ (or 00) – for the SafetyNET services, the presentation code is always 0 (or 00, subject to the registered LES access procedure).

3 EGC SafetyNET Log

All Inmarsat C Mobile Earth Stations (MESs), capable of receiving MSI, have an EGC Log, which contains information on all SafetyNET messages received by the terminal.

Disk Filename	Modem Filename	LES	Service	Priority	Bits	Date & Time	Size	Ref.No.	Routing
07012405.egc	EGC.915	321	MET/NAV Warning/Forecast	Safety	7 Bit IA5	07-01-24 04:31	2159	1409	Prn+Mem
07012403.egc	EGC.913	321	SAR Coordination	Safety	7 Bit IA5	07-01-24 04:03	1561	1408	Prn+Mem
07012211.egc	EGC.854	304	Distress Alert Relay	Distress	7 Bit IA5	07-01-23 01:14	732	9153	Prn+Mem
07012210.egc	EGC.829	322	Coastal Warning/Forecast	Safety	7 Bit IA5	07-01-22 22:04	232	739	Prn+Mem
07012207.egc	EGC.826	317	NAV Warning	Safety	7 Bit IA5	07-01-22 21:03	2260	681	Prn+Mem
07012206.egc	EGC.825	322	MET Warning	Safety	7 Bit IA5	07-01-22 20:46	614	3570	Prn+Mem

Figure 2. Example of the EGC Log

This information includes:

- Disk/Modem File name of the received message (given by the MSI);
- LES ID – retrieved from the received message;
- Service type – how MES’s software translates C₂ service code and it is retrieved from the message address;
- Priority (Safety, Urgency or Distress) – how MES’s software translates priority code C₁ and it is retrieved from the message address;
- Presentation code (7-bit ASCII code) – how MES’s software translates presentation code C₅ and it is retrieved from the message address;
- Message size – usually in number of bits or characters;
- Date/time when the message was received;
- Message reference number – unique number given by the addressed LES; and
- Message routing (memory or memory and printer) – set up by the MES operator or a mandatory routing for Urgency and Distress priority messages.

*Note: Messages shown in **bold** are unread. Messages displayed in red colour are SafetyNET messages broadcast with Urgency (P₂) and Distress (P₃) priorities.*

Each C₂ service code has a unique “decoding” by Inmarsat C software, which is presented in the EGC log and message header when it is displayed on the screen or printed.

- C₂ = 00 – General Call
- C₂ = 04 – Nav Warning
- C₂ = 13 – Coastal Warning/Forecast
- C₂ = 14 – Distress Alert Relay
- C₂ = 24 – Met Warning (*see note below*)
- C₂ = 31 - MET/NAV Warning/Forecast
- C₂ = 34 – SAR Co-ordination
- C₂ = 44 – SAR Co-ordination

Note: These “translations” of service codes may vary between different manufactures of MESs. Service code C₂=24 may be decoded as “Met/Nav Warning” in the header of received messages.

4 Monitoring of MSI and misuse of C-codes

Monitoring of MSI broadcast in the Atlantic Ocean Region – East (AOR-E), Atlantic Ocean Region – West (AOR-W), Indian Ocean Region (IOR) and Pacific Ocean Region (POR) shows that some MSI providers do not follow IMO requirements (recommendations) and misuse C₁ (priority), C₂ (address) and C₄ (repetition) codes. This results in misunderstanding of MSI service/type, multiple reception of unwanted messages, delay in reacting to vital information and its reception on ships, etc.

4.1 Improper use of C₁ priority codes

This refers mainly to C₂=14 “Ship-to-Shore distress alerts” which require using C₁=3 **Distress** priority code only. When a message is received on a ship, the header of the message is displayed and printed as:

- LES xxx - MSG 1210 – **Distress Urgent** Call to Area: 14N 66W 300 – PosOK, where:
 - LES xxx – ID of the LES;
 - MSG 1210 – Reference number of the message;
 - **Distress** Call to Area – decoding of C₂=14 code;
 - **Urgent** – decoding of C₂=2 code;
 - 14N 66W 300 – circular position the message was sent to, where 14N 66W – centre of the circle and 300 is radius of the circle in nautical miles; and
 - PosOK – indicator that the MES’s position status is valid or the position was updated within the last 12 hours.

The message header contains reference to two different priorities – Distress and Urgent (the same refers to the EGC log, see Figure 1), which misleads mariners about the message importance and its content. It is an important issue, particularly for non-SOLAS users, where an EGC message with Urgency and Distress priority may NOT be printed out automatically and there might be some delays in reacting to the vital information.

If a message is submitted with P₂ (Urgency) priority and another message is sent with P₃ (Distress) priority afterwards, the P₂ priority message will be aborted and the P₃ priority message will be handled first. It means that a message with the distress priority content but sent with the urgency priority may be delayed in reaching its destination.

4.2 Improper use of C₂ service codes

There are cases when MSI providers submit EGC SafetyNET message using improper C₂ service codes and a sample is given below:

LES xxx – MSG 5213 – **Met/NavWarn Urgent Call** to Area: 35N 23E 300 – PosOK
FROM: MRCC xxx
TO: ALL SHIPS IN SOUTHEAST MEDITERRANEAN SEA

SAR SITREP NO: 02

FISHING BOAT ‘xxx’ WITH THREE PERSONS ON BOARD DEPARTED FROM xxx ISLAND ON xxx AT NOONTIME AND SINCE THEN NO INFORMATION ABOUT HER. PARTICULARS ... SHIPS SAILING IN VICINITY ARE KINDLY REQUESTED TO KEEP A SHARP LOOK OUT INFORMING MRCC ...

REGARDS
DUTY OFFICER

The message was sent using service code $C_2 = 24$ “Met/Nav warning to circular area” as shown in the message header but the message content is a Search and rescue co-ordination message as shown in the message. It may delay delivery of the vital SAR information and jeopardise safety of life at sea.

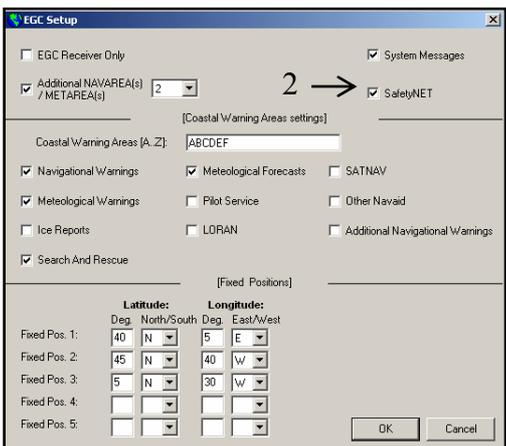
Some MSI providers use improper service codes when compiling their information and many ships therefore receive unwanted information for the areas where these ships **may never navigate**.

Another example is using rectangular addressing, e.g. service code $C_2 = 04$, for coastal warnings whereby the addressed rectangular area covers areas far beyond coastal areas.

Reception of EGC SafetyNET Coastal Warnings is an option and to receive these messages, MESSs should be programmed or set up accordingly, otherwise Coastal warnings will not be received, regardless of the ship’s position. If a coastal warning-type message is addressed to a rectangular area, **ALL** ships, whose position is inside the addressed rectangle, will receive the message. The main problem here is not only misusing service codes, which are specified by the International SafetyNET Manual, but reception (and printing) of multiple unwanted messages which ships may never require.

Note: Coastal Warnings broadcast via the EGC SafetyNET service is not available in all NAVAREAs/METAREAs and its availability should be checked with local MSI providers, Chairman of the SafetyNET Co-ordinating Panel of through national or International Lists of Radio Signals.

It is important to remind SafetyNET users how to set up a ship’s terminal to receive MSI which is required during the voyage.



The screenshot shows the 'EGC Setup' window. Callout 1 points to the 'Additional NAVAREA(s) / METAREA(s)' dropdown menu. Callout 2 points to the 'SafetyNET' checkbox. Callout 3 points to the 'Coastal Warning Areas (A..Z):' text field. Callout 4 points to a group of checkboxes including 'Navigational Warnings', 'Metereological Warnings', 'Ice Reports', and 'Search And Rescue'. Callout 5 points to the 'Fixed Positions' table.

Fixed Pos.	Latitude:		Longitude:	
	Deg.	North/South	Deg.	East/West
Fixed Pos. 1:	40	N	5	E
Fixed Pos. 2:	45	N	40	W
Fixed Pos. 3:	5	N	30	W
Fixed Pos. 4:				
Fixed Pos. 5:				

Legend:

1. Setting additional (secondary) NAVAREA/ METAREA to receive MSI to an additional area. It may be more than one area on some MES models and software versions.
2. EGC SafetyNET service selection and it is always active on SOLAS compliant MESSs.
3. Coastal Warning Areas B₁ codes, value A-Z and available in the International Lists of Radio Signals.
4. Coastal Warning message type B₂ codes, A – nav warnings, B – met warnings, C – ice reports, D – SAR info, E- met forecasts, F – pilot service, H – LORAN service, H – SATNAV messages, K – other navaid messages, L – additional nav warnings.

Figure 3. EGC Setup screen (may vary between different MES models)

Note: All MSI, which is addressed to NAVAREA/METAREA, rectangular or circular area, will be received by ships if the ship’s position is INSIDE the addressed area. Geographical boundaries of all NAVAREA/METAREA are coded into MESSs’ firmware and all ships’ “know” which area the ship is in, so these messages will be received automatically.

4.3 Improper use of C₄ repetition codes

The International SafetyNET Manual defines various repetition codes which are used by MSI providers to “instruct” the Inmarsat C system to repeat a International SafetyNET message a finite number of times or at specific intervals until cancelled by the information provider.

MSI is submitted for broadcast with repetitions, either 6 minutes later (or with 6 minutes “echo”) after initial broadcast or every 1, 2, 3, 4,...48,... or 120 hours until cancelled by the MSI provider. Each message, when submitted for broadcast, is given a reference number (see paragraph 3). When the message is received by the MES, the reference number is “recorded” by the mobile terminal and stored in the memory. When the same message is re-broadcast later, using any C₄ repetition codes, MESs receive it and “recognise” the reference number by cross-checking the list of numbers of already received messages. In this case, the message will not be printed out for a second time.

Note: An EGC message, which requires a multiple broadcast, should be addressed with the proper repetition code and requires only a single submission to the LES. The process of repeated broadcast will be controlled by the repetition code.

When the same SafetyNET message is submitted for broadcast for a second (or third or more) time, the addressed LES will give the message another reference number and mobile terminals will not be able to “recognise” it as the same message. In this case each subsequent message submitted to the LES for repetition will be received by MESs and printed out.

The SafetyNET monitoring shows that some MSI providers do not use the recommended repetition code and in this case MESs receive and print unwanted numbers of messages, which will fill up the MES’s memory rather quickly and waste printing paper.

Note: Some MSI is broadcast only once on receipt using repetition code C₄ = 01.

Below is an example of the same weather forecast submitted for broadcast twice and having two different reference numbers:

LES xxx – MSG 1032 – MetWarn/Fore Safety Call to Area: xx – PosOK
xxx CSAT 23423440010402 xx-NOV-2006 09:55:41 103000
SECURITE
HIGH SEAS BULLETIN FOR METAREA xx ISSUED AT 0800 ON xx NOV 2006 BY
THE MET OFFICE ...

LES xxx – MSG 1033 – MetWarn/Fore Safety Call to Area: xx – PosOK
xxx CSAT 23423440010402 xx-APR-2006 10:10:13 103453
SECURITE
HIGH SEAS BULLETIN FOR METAREA xx ISSUED AT 0800 ON xx NOV 2006 BY
THE MET OFFICE ...

The message (size about 4,800 characters) was received and printed twice since it was submitted to the LES for broadcast twice and was given two separate reference numbers – 103000 and 103453.

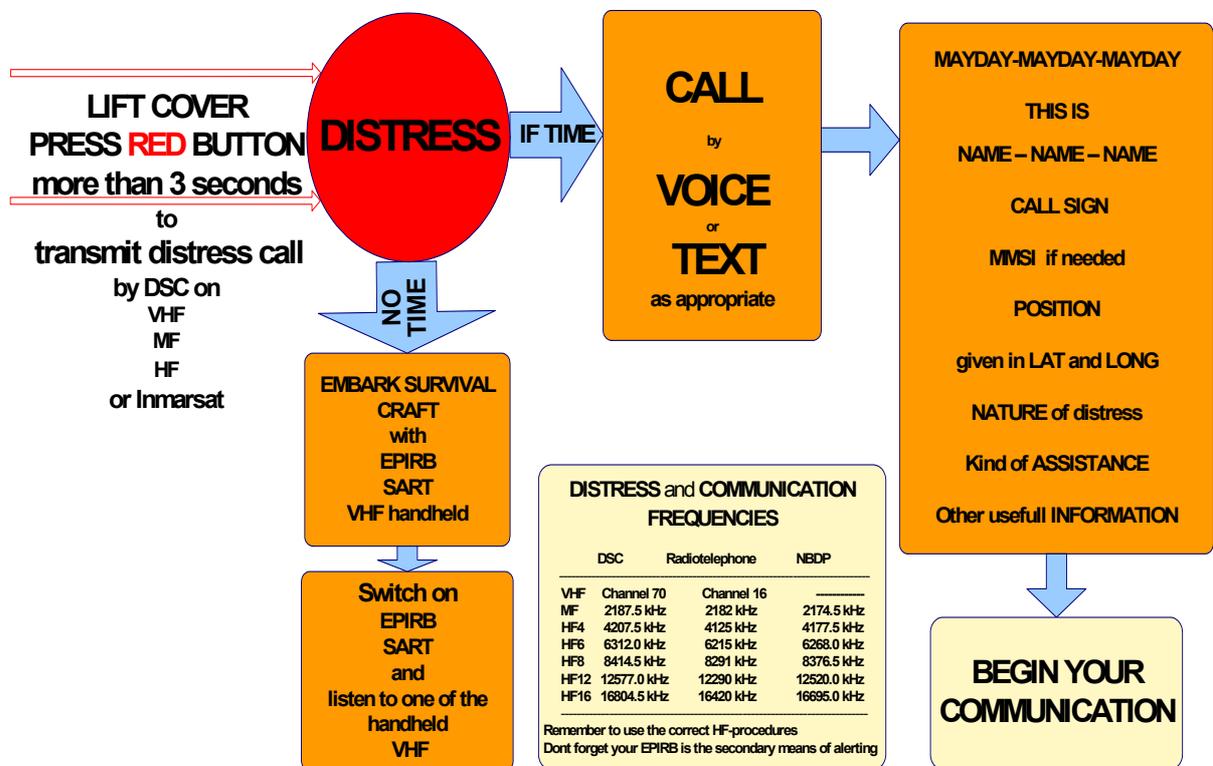
If the message had been submitted once with, for example C₄=11 (transmit on receipt followed by repeat 6 minutes later), it would have been given one reference number and received and printed only once.

ANNEX 2

PRELIMINARY REVISED DRAFT DIAGRAM ON
SIMPLIFIED OPERATING GUIDANCE ON INITIAL DISTRESS CALLS

ANNEX

SIMPLIFIED OPERATING GUIDANCE ON INITIAL DISTRESS CALLS



ANNEX 3

**DRAFT ASSEMBLY RESOLUTION [A...(25)]
adopted on [*date*]****CRITERIA FOR THE PROVISION OF MOBILE SATELLITE
COMMUNICATION SYSTEMS IN THE GLOBAL MARITIME
DISTRESS AND SAFETY SYSTEM (GMDSS)**

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention of the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety,

RECALLING ALSO that regulation IV/5 of the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended in 1988, requires each Contracting Government to undertake to make available, either individually or in co-operation with other Contracting Governments, as they may deem practical and necessary, appropriate shore-based facilities for space and terrestrial radiocommunication services having due regard to the recommendations of the Organization,

TAKING INTO ACCOUNT resolution 322(Rev.Mob-87) of the World Administrative Radio Conference, 1987, relating to coast stations and coast earth stations assuming watchkeeping responsibilities on certain frequencies in connection with the implementation of distress and safety communications for the GMDSS,

TAKING INTO ACCOUNT ALSO resolution 3, Recommendation on the Early Introduction of the Global Maritime Distress and Safety System (GMDSS) Elements, adopted by the 1988 SOLAS Conference introducing the GMDSS,

NOTING resolution A.801(19) on the Provision of radio services for the GMDSS, as amended,

NOTING ALSO that future mobile satellite communication systems might have the potential to offer maritime distress and safety communications,

NOTING FURTHER the decision of the Maritime Safety Committee, at its 82nd session, that the oversight of future satellite providers in the GMDSS should be undertaken by IMSO,

RECOGNIZING that mobile satellite communication systems for use in the GMDSS should fulfil performance criteria adopted by the Organization,

RECOGNIZING ALSO the need for the Organization to have in place criteria against which the capabilities and performance, of mobile satellite communication systems for use in the GMDSS may be verified and evaluated;

1. ADOPTS the Criteria for the Provision of Mobile Satellite Communication Systems in the GMDSS set out in the Annex to the present resolution;

2. INVITES Governments, when permitting ships flying their countries' flag to carry maritime mobile satellite equipment for use in the GMDSS to require those ships to carry equipment which can utilize only those satellite systems that have been recognized by IMO and conform to the Performance Standards adopted by the Organization for use in the GMDSS, in accordance with the criteria set out in sections 2 to 5 of the Annex;
3. REQUESTS the Maritime Safety Committee to:
 - (a) apply the criteria set out in the Annex to the present resolution, via the procedure set out in section 2 of the Annex, for the evaluation of satellite systems notified by Governments for possible recognition for use in the GMDSS, within the context of the relevant regulations of SOLAS chapter IV; and
 - (b) ensure that mobile satellite communication systems recognized by the Organization for use in the GMDSS are compatible with all appropriate SOLAS requirements, and also that such recognition takes into account existing operational procedures and equipment performance standards;
4. REQUESTS the Maritime Safety Committee to keep this resolution under review and take appropriate action as necessary to secure the long-term integrity of the GMDSS; and
5. REVOKES resolution A.888(21) and MSC/Circ.1077.

ANNEX

CRITERIA FOR THE PROVISION OF MOBILE SATELLITE COMMUNICATION SYSTEMS IN THE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS)

1 DEFINITIONS

1.1 Mobile Satellite Communication System

The mobile satellite communication system (satellite system) means the space segment, the arrangements for controlling the space segment, the network control facilities controlling the access to the space segment, the earth stations and maritime mobile terminals operating in the system. The satellite system will include, or interface with, the following elements:

- .1 **Earth station** means any fixed satellite communication station acting as a gateway between the space segment and the terrestrial networks.
- .2 **Maritime mobile terminal** means any radiocommunication equipment working through a satellite communication system recognized for use in the GMDSS on board a ship.
- .3 **Space segment** means the satellites and the radiocommunication facilities they carry both for control and to provide GMDSS services and includes the forward and return communication links with the earth.
- .4 **Terrestrial networks** means the communication networks providing land-based subscriber communication facilities such as telephone, facsimile or data communications.

1.2 Mobile Satellite Communication Service means any service which operates through a satellite system and is recognized by the Organization for use in the GMDSS.

1.3 Coverage area

The Coverage Area of the satellite system is the geographical area within which the satellite system provides an availability in accordance with the criteria stated in section 3.5 in the ship-to-shore and shore-to-ship directions, and within which continuous alerting is available.

1.4 Availability

The availability of any mobile satellite communication system or service is defined as the percentage of time in which the system or service as a whole is available for access to and communications through the system, calculated according to the following formula:

$$A = \frac{(\text{scheduled operating time}) - (\text{downtime})}{(\text{scheduled operating time})} \times 100\%$$

where:

Scheduled operating time = 100% of the time period being reported on; and
Downtime = the total time during the period for which the recognized GMDSS system or service was not operationally available.

Note: Definitions and calculations of availabilities of communications circuits in the Maritime Mobile-Satellite Service are given in ITU-R M.828-1.

2 RECOGNITION OF MOBILE SATELLITE COMMUNICATION SYSTEMS FOR USE IN THE GMDSS

2.1 The evaluation and recognition of satellite systems participating, or wishing to participate in the GMDSS is undertaken by the Organization.

2.2 Application for Recognition

2.2.1 Satellite system providers wishing to participate in the GMDSS should apply to the Organization, through a Member State, for recognition as a radio system providing maritime distress and safety satellite communication capabilities for use in the GMDSS. Such applications should be notified to the Organization by Governments, either individually or in co-operation with other Governments. The application will be reviewed by the Maritime Safety Committee (MSC) in relation to its policy for the expansion of satellite services in the GMDSS. If the MSC decides that there are no objections in principle to the application, it will forward the application to the COMSAR Sub-Committee for evaluation. Recognition of the satellite provider to operate in the GMDSS will be undertaken by the Committee on the basis of the evaluation report.

2.2.2 The Governments concerned should make available to the Organization all necessary information to enable it to evaluate the satellite system in relation to the criteria indicated below.

In particular, Governments proposing such satellite systems for possible recognition and use in the GMDSS should provide evidence to show that:

- .1 the satellite system conforms with all the criteria specified in this Annex;
- .2 the charging policies and provisions of resolution A.707(17), as amended, on Charges for distress, urgency and safety messages through the Inmarsat system, are complied with;

- .3 there is a well-founded confidence that the Company concerned will remain viable for the foreseeable future and will remain in a position to deliver the required services over an extended period in keeping with the expectations of the Organization and the maritime industry on the continuity, durability and reliability of the service; and
- .4 the provider of the satellite system is ready to submit any recognized services to oversight by IMSO and sign the required Public Services Agreement (PSA) with that organization.

2.3 Verification and Evaluation

2.3.1 The COMSAR Sub-Committee should verify and—evaluate the information, seeking clarification as required direct from the service provider concerned, and decide whether the satellite system meets the criteria established by in this resolution. In reaching its decision, The COMSAR Sub-Committee should take into account the provisions of the relevant regulations of chapter IV of the 1974 SOLAS Convention, as amended and the criteria established by this resolution.

2.3.2 Recognition by the Organization should be recorded in an MSC Resolution entitled: **Statement of Recognition of Maritime Mobile Satellite Services provided by [Company Name]**, detailing the specific services provided by the Company which have been recognized by the Organization. A copy of the Statement of Recognition should be provided to IMSO.

2.3.3 If, following evaluation, the Organization is unable to recognize the Company or the service(s) offered for the GMDSS, the Organization should communicate this decision to the Company and IMSO in writing, setting out the reasons for the decision and any actions the Company may take to achieve recognition in the future.

2.4 The Public Services Agreement

2.4.1 Recognized services are subject to oversight by IMSO according to the rules and arrangements set out in the Public Services Agreement (PSA) concluded between the Service Provider and IMSO. No maritime satellite system should be used in the GMDSS unless it has first been recognized by the Organization in accordance with the above procedure and the Service Provider has signed a Public Services Agreement with IMSO.

2.4.2 IMSO should conduct its oversight of the recognized services on a continuing basis.

2.4.3 Responsibility for ensuring compliance with the standards established by this annex, other relevant mandatory international instruments and, to the extent necessary, those recommendations, resolutions and procedures of IMO and ITU which are of a recommendatory nature, insofar as they relate to the provision of GMDSS services, rests with IMSO under the terms of the Public Services Agreement.

2.5 Reports

IMSO should, at least once a year, make available to the Organization a report on the availability, performance and other relevant information concerning each recognized service during the period since the preceding report in accordance with section 3.5.2 of the criteria indicated below.

3 CRITERIA AND REQUIREMENTS FOR THE RECOGNIZED MOBILE SATELLITE COMMUNICATION SYSTEM

3.1 Functional requirements*

Satellite systems for maritime distress and safety communication services and forming part of the GMDSS radio systems specified in chapter IV, regulation 5 of the 1974 SOLAS Convention, as amended, should provide capabilities for at least the following maritime distress and safety communications:

- .1 ship-to-shore distress alerts/calls;
- .2 shore-to-ship distress relay alerts/calls;
- .3 ship-to-shore, shore-to-ship and ship-to-ship search and rescue co-ordinating communications;
- .4 ship-to-shore transmissions of Maritime Safety Information;
- .5 shore-to-ship broadcast of Maritime Safety Information; and
- .6 ship-to-shore, shore-to-ship, and ship-to-ship general communications.

3.2 Capacity

The satellite system should be designed for and should provide adequate channel and power capacity for processing effectively, and with an availability as stated in section 3.5, the maritime distress, urgency, safety and general communication traffic estimated to be required by the ships using the system.

3.3 Priority access

3.3.1 Satellite systems in the GMDSS should be capable of processing maritime distress, urgency, safety and routine communications in accordance with the message priority as defined by the ITU Radio Regulations. The order of processing these communications should be:

- .1 distress;
- .2 urgency;
- .3 safety; and
- .4 routine (general communications).

* – Resolution A.801(19) “Provision of Radio Services for the Global Maritime Distress and Safety System (GMDSS)”, Annex 5 “Criteria for use when providing Inmarsat shore-based facilities for use in the GMDSS”;

– Resolution A.887(21) “Establishment, Updating and Retrieval of the Information Contained in the Registration Databases for the Global Maritime Distress and Safety System (GMDSS)”;

– Resolution A.694(17) “General requirements for shipborne radio equipment forming part of the Global Maritime Distress and Safety System (GMDSS) and for electronic navigational aids”;

– IMO International SafetyNET Manual;

– Resolution A.664(16) “Performance Standards for Enhanced Group Call Equipment”; and

– Appropriate IEC Standards and ITU Recommendations.

3.3.2 In implementing these four levels of priority:

- .1 Distress alerts and distress calls (level 1) should be given priority treatment by providing immediate access to satellite channels. For store and forward systems, distress alerts and calls should be placed ahead of all other traffic.
- .2 Satellite systems used for providing other mobile satellite communications in addition to maritime communications should be capable of automatically recognizing requests for maritime communications from:
 - maritime mobile terminals; and
 - recognized entities of critical importance for safety at sea, such as MRCCs, hydrographic and meteorological offices, medical centres, etc., registered with the earth station.

The system should process such maritime communications in the ship-to-shore and shore-to-ship directions for levels 1 to 3 with priority over other communications.

- .3 In processing maritime distress, urgency, safety and routine communications, the satellite system and the earth station should be capable of:
 - .1 automatically recognizing the message or access priority for ship-to-shore communications;
 - .2 automatically recognizing the message or access priority for shore-to-ship communications, if any are provided, from, as a minimum, recognized entities of importance for safety at sea, registered by the earth station;
 - .3 preserving and transferring the priority;
 - .4 giving distress alerts and distress calls immediate access, if necessary by pre-emption of ongoing communications of routine priority;
 - .5 automatically recognizing maritime distress communications, and of routing automatically maritime distress alerts and distress calls directly to an associated MRCC, or responsible RCC, if this capability exists; and
 - .6 processing maritime urgency and safety communications in the ship-to-shore and shore-to-ship directions with the required priority, for example by allocating the first vacant channel, if no channel is immediately available.
- .4 Selection and use of message or access priority for urgency and safety transmissions by maritime mobile terminals should preferably be automatic and should be restricted to calls to special, recognized entities such as medical centres, maritime assistance, hydrographic and meteorological offices, etc., registered with the earth station. The earth station should automatically route such calls directly to the relevant entity.

3.4 Coverage area

3.4.1 The definition of the Coverage Area is given in section 1.3.

3.4.2 The Coverage Area is to be delineated on a map and also described in relation to the sea areas defined in Chapter IV regulation 2 of the SOLAS Convention. Documentation on the coverage area of the satellite system, as defined in section 1.3, should be forwarded to the Organization.

3.4.3 Information on coverage areas for satellite systems forming part of the GMDSS should be published by the Organization in the GMDSS Master Plan.

3.5 Availability

3.5.1 The satellite system should provide continuous availability for maritime distress and safety communications in the ship-to-shore and shore-to-ship directions.

3.5.2 The availability of the space segment, provision of spare satellite capacity and the network control function (i.e. the network availability), as defined in section 1.4 above, should be monitored by IMSO, which should report on the recorded availability of the system to the Organization at least once every year.

3.5.3 Service providers should advise their associated RCCs and IMSO of planned outages of recognized services and advise ships of scheduled downtime and known interruptions in service and any other relevant network information. Service providers should also advise IMSO of unscheduled interruptions in any recognized services, as soon after the commencement of the interruption as possible, and when the recognized services have been restored.

3.5.4 Network availability. The complete mobile satellite communication network, including earth stations for the recognized services is expected to achieve at least 99.9% availability (equivalent to a total of 8.8 hours down time per year).

3.6 Restoration and spare satellites

3.6.1 Spare satellite capacity and arrangements prepared in advance should be provided for ensuring that, in the event of a partial or total satellite failure, the recognized maritime distress and safety communication services can be restored in the area concerned to their normal availability, within no more than one hour after the event of a satellite failure.

3.6.2 Full information on the means and arrangements prepared for restoration of the maritime distress and safety communication services in the event of a satellite failure should be notified to IMSO. IMSO and the Service Provider should conduct exercises from time to time to prove the efficiency and effectiveness of these planned arrangements.

3.7 Identification

The satellite system should be capable of automatically recognizing and preserving the identification of maritime mobile earth stations.

3.8 Information to be made available to SAR authorities

For all distress urgency and safety communications, the maritime mobile terminal identification number or Maritime Mobile Service Identity (MMSI) should be an integral part of the distress alert and provided to the RCC with the alert. When available, all additional registration, commissioning or other data relevant to the search and rescue or prosecution of false alert should be referenced to this number and made available to the proper SAR authority or RCC upon request.

3.9 Reception of distress alerts

The satellite system should allow for addressing a maritime distress alert to a specific MRCC chosen by the ship's operator and covering the area concerned, but should also provide for automatic routing of manually initiated maritime distress alerts. Means should be provided to allow the MRCC to easily identify the system and specific mobile station from which an alert or other priority message has been received, to enable the MRCC to establish shore-to-ship communications with the ship concerned.

3.10 Control of maritime mobile terminals

Access control arrangements for controlling and giving, or temporarily rejecting, access for maritime mobile terminals to the system should at all times allow maritime mobile terminals access for transmission of maritime distress alerts/calls and distress messages.

3.11 Test facilities

The system should provide facilities making it possible for maritime mobile terminals to test the distress capability of their stations without initiating a distress alert/call.

4 CRITERIA AND REQUIREMENTS FOR EARTH STATIONS

4.1 Functional requirements

4.1.1 Earth stations serving the GMDSS should:

- .1 be in continuous operation;
- .2 be connected to an associated RCC;
- .3 keep continuous watch on all appropriate satellite communication channels; and
- .4 be capable of transmission and reception of at least the maritime distress and safety communications services included in paragraph 3.1.

4.2 Priority

4.2.1 The earth station should be capable of automatically recognizing the priority of ship-to-shore and shore-to-ship communications, and should preserve the priority and process maritime mobile communications with the four levels of priority specified in paragraph 3.3.1.

4.2.2 Priority access should be given for distress alerts and calls in real time. In any case, distress alerts and calls should be given priority treatment by providing immediate access to satellite channels, and distress alerts and calls for store and forward systems should be placed ahead of all routine traffic. Any satellite system designed for use in the GMDSS should be able to recognize the four levels of priority and give appropriate access for communications in the ship-to-shore direction and in the shore-to-ship direction for distress, urgency and safety traffic originated by RCCs or other Search and Rescue Authorities.

4.2.3 Limitations in existing public switched networks on facilities for indication and use of priority access codes might necessitate special arrangements such as use of leased lines between, for example, MSI providers and the earth station, until such facilities become available in the public switched network.

4.3 Pre-emption

Satellite systems participating in the GMDSS should make arrangements to ensure that it will always be possible for an MRCC to obtain an immediate connection to a maritime mobile terminal on demand. This may be achieved by a process of pre-emption or by other suitable means approved by IMSO.

4.4 Routeing of maritime distress alerts

4.4.1 The satellite system should have reliable communication links to one or more associated MRCCs. These links may be implemented directly between the MRCC and an earth station, or some other suitable point in the system's network. The arrangements between the system and the MRCC are subject to approval by the national administration.

4.4.2 The system's network should be capable of automatically recognizing maritime distress and safety communications and of routeing, as far as possible automatically, the maritime distress alerts/calls directly to the associated MRCC, via a highly reliable communication link. In cases where capability exists, the system may route alerts directly to the responsible RCC as defined in the IAMSAR Manual.

4.4.3 The earth station or other relevant part of the system's network should be provided with an aural and visual alarm to alert a designated responsible person in the event that automatic connection to the MRCC cannot be achieved within 60 seconds. In this case, all necessary action should be taken to immediately inform the MRCC of the details of the distress alert or call. Personnel should always be available to react to such an alarm so as to ensure that the distress alert or call can be forwarded to an MRCC within 5 minutes of the alarm being triggered. All messages with distress or urgency priority should sound an alarm at the earth station or other relevant part of the system's network, which should require manual cancellation.

4.4.4 The MRCC should be provided with reliable communication links to the system's network for efficient handling of shore-to-ship distress alert relays and distress traffic, preferably via dedicated communication links.

4.5 Identification

The system should be capable of automatically identifying ship earth stations. If another identification than the Maritime Mobile Service Identity (MMSI) is used in the system, a means should be provided 24h a day to easily identify the ship and to provide all the appropriate additional information, including the MMSI number where available, to the MRCC necessary for effecting the rescue.

4.6 Voice communication systems

4.6.1 The communication links for mobile-satellite voice communication systems should be connectable to the public switched network in accordance with relevant ITU-T Recommendations.

4.6.2 Satellite systems using the public switched network for routing maritime distress calls and distress traffic to and from MRCCs should, upon receipt of ship-to-shore or shore-to-ship distress alerts/calls or distress traffic, immediately attempt to establish the connection necessary for transfer of the distress alert or distress message.

4.7 Data communication systems

4.7.1 The communication links for mobile-satellite data communication systems should be connectable to the public data communication network in accordance with relevant ITU-T Recommendations. The system should provide capability for transfer of the identity of the calling subscriber to the called subscriber. Maritime distress alerts/calls and distress messages should include the ship identity and the earth station identity or other means of identifying the point of access to the satellite network.

4.7.2 Satellite systems using the public switched network for routing distress alerts/calls and distress traffic to and from MRCCs should, on receipt of ship-to-shore or shore-to-ship distress alerts/calls or distress traffic, immediately attempt to establish the connection necessary for transfer of the distress alert or distress message.

4.8 Store and forward systems

Satellite systems using store and forward communication systems should:

- .1 make an initial attempt to deliver a ship-to-shore or shore-to-ship message within 60 seconds for any maritime distress alert or distress traffic, and 10 minutes for all other maritime messages, from the time the receiving station receives the message. The message should include the ship identity and the earth station or system identity; and
- .2 generate notification of non-delivery immediately once the message is considered non-deliverable, for maritime distress alerts and distress messages not later than 4 minutes after the reception of the alert or message.

4.9 Facilities for broadcast of Maritime Safety Information

4.9.1 Satellite systems forming part of the GMDSS should technically be capable of offering facilities for broadcast of Maritime Safety Information (MSI) from MRCCs and authorized providers of MSI, such as Hydrographic Offices and Meteorological Offices, to ships at sea.

4.9.2 Such facilities for broadcast of MSI should provide for automatic, continuous and reliable reception on board ships and should, as a minimum, fulfil the requirements specified in sections 4.9.3 to 4.9.8 below.

4.9.3 The facilities should provide for recognition of and processing the four levels of priority specified in paragraph 3.3.1.

4.9.4 It should be possible to address the broadcast of MSI to all properly equipped ships within a specified area for at least the following types of areas:

- .1 the entire region covered by the satellite or system over which the transmission is made;
- .2 the NAVAREAs/METAREAs as established by the International Maritime Organization (IMO), the International Hydrographic Organization (IHO) and the World Meteorological Organization (WMO) respectively; and
- .3 a temporary area chosen and specified by the originator of the MSI message, including circular or rectangular user-specified areas appropriate for broadcast of distress alerts relays and search and rescue co-ordinating communications.

4.9.5 The facilities should provide for transmission of at least the types of Maritime Safety Information required by SOLAS, as follows:

- .1 search and rescue co-ordination information, including distress alerts relays;
- .2 navigational warnings; and
- .3 meteorological warnings and forecasts.

4.9.6 The facilities for broadcast of navigational and meteorological warnings should include possibilities for:

- .1 scheduling the broadcast at fixed times or transmitting messages as unscheduled broadcast transmissions; and
- .2 automatic repetition of the broadcast with time intervals and number of broadcast transmissions as specified by the MSI provider, or until cancelled by the MSI provider.

4.9.7 The facilities should provide for marking MSI messages with a unique identity, making it possible for the shipborne equipment for reception of these broadcasts to automatically ignore messages already received.

4.9.8 The broadcast service should in addition provide facilities for broadcasts similar to NAVTEX to coastal areas not covered by the International NAVTEX Service, in accordance with the identification system (i.e., the identification characters B1, B2, B3, B4) used in the International NAVTEX Service.

5 ADDITIONAL RECOMMENDED CAPABILITIES

5.1 Mobile satellite service providers are encouraged to:

- .1 route Automatic Location Identification (ALI) and Automatic Number Identification (ANI) in accordance with appropriate ITU-T Recommendations with distress calls originating from MSS terminals directly to responsible RCCs for voice and data calls;
- .2 automatically route information contained in registration databases in accordance with resolution A.887(21) in a recognizable format with the distress call to the responsible RCC, once means are established for doing so; and
- .3 be capable of retrieving maritime safety information in a timely manner from NAVAREA, METAREA, other relevant co-ordinators, and the International Ice Patrol Service, in a standard format and process established by those co-ordinators.

6 NOVEL TECHNIQUES

Satellite systems may be permitted to use novel techniques to provide any of the capabilities required by this resolution. Approval to use such novel techniques for a period of up to 12 months may be given provisionally by IMO in order to allow early introduction and proper evaluation of the technique. Final recognition of a novel technique may be given by the Organization only after receiving a report allowing full technical and operational evaluation of the technique.

7 LEGACY SERVICES

7.1 All satellite-based systems and services for the GMDSS which were already approved and in use before the entry into force of this resolution are exempt from the requirements of paragraphs 2.1, 2.2 and 2.3. These systems are:

- .1 Inmarsat-A (due to be withdrawn 31 December 2009)
- .2 Inmarsat-B
- .3 Inmarsat-C
- .4 The International SafetyNET Service

* *See footnote.*

7.2 The services defined in paragraph 7.1 are subject to requirements of paragraph 2.4.

* IMO has decided that Inmarsat Fleet 77 already meets the requirements of Assembly resolution A.888(21) and recommended that Fleet 77 terminals should be used in GMDSS ship installations and by Rescue Co-ordination Centres.

ANNEX 4

**DRAFT RESOLUTION MSC.[...](83)
(adopted on [.. 2007])****ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CONVENTION
FOR THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING FURTHER article VIII(b) of the International Convention for the Safety of Life at Sea (SOLAS), 1974, hereinafter referred to as “the Convention”, concerning the procedures for amending the Annex to the Convention, other than the provisions of chapter I thereof,

HAVING CONSIDERED, at its [eighty-third] session, amendments to the Convention proposed and circulated in accordance with article VIII(b)(i) thereof:

1. ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention, the text of which is set out in the Annex to the present resolution;
2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on [1 January 2009], unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world’s merchant fleet, have notified their objections to the amendments;
3. INVITES Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on [1 July 2009] upon their acceptance in accordance with paragraph 2 above;
4. REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;
5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

ANNEX

PROPOSED AMENDMENTS TO THE 1974 SOLAS CONVENTION, AS AMENDED

CHAPTER IV

RADIOCOMMUNICATIONS

Part A

General

1 The following new regulation 4-1 is added after the existing regulation 4:

Regulation 4-1

GMDSS satellite providers

The Maritime Safety Committee shall determine the criteria, procedures and arrangements for the evaluation, recognition, review and oversight of the provision of mobile satellite communication services in the Global Maritime Distress and Safety System (GMDSS) pursuant to the provisions of this chapter.

ANNEX 5

DRAFT MSC CIRCULAR

**MINIMIZING DELAYS IN SEARCH AND RESCUE RESPONSE
TO DISTRESS ALERTS**

1 The Maritime Safety Committee (MSC), at its [eighty-third session (3 to 2 October 2007)], recognizing the importance of minimizing delays in SAR response to distress alerts by encouraging Member States to fulfil their obligations under the SAR Convention and other international instruments, approved the guidance prepared by the Sub-Committee on Radiocommunications and Search and Rescue (COMSAR), at its eleventh session, as set out in the annex.

2 Member Governments are invited to bring the annexed guidance to the attention of SAR authorities and all other parties concerned.

ANNEX

STATE OBLIGATIONS UNDER THE SAR CONVENTION AND OTHER INTERNATIONAL INSTRUMENTS

1 INTRODUCTION

1.1 The purpose of this circular is to minimize delays in SAR response to distress alerts, and in particular, distress alerts received by the COSPAS-SARSAT system. It reminds States of their obligations under the SAR Convention and other relevant international instruments. Selected extracts from these documents are listed indicatively as means of better understanding State obligations and how such obligations can be met individually or in co-operation with other States. Whereas the conventions and similar instruments provide the standards and recommendations, the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual contains detailed guidance on how to attain them.

1.2 Definitions of particular relevance and as defined in the IAMSAR Manual:

- Rescue co-ordination centre (RCC): A unit responsible for promoting efficient organization of SAR services and for co-ordinating the conduct of SAR operations within a SAR region.
- Search and rescue region (SRR): An area of defined dimensions, associated with a rescue co-ordination centre, within which SAR services are provided.
- Search and rescue service: The performance of distress monitoring, communication, co-ordination and search and rescue functions, including provision of medical advice, initial medical assistance, or medical evacuation, through the use of public and private resources, including co-operating aircraft, vessels and other craft and installations.
- Search and rescue point of contact (SPOC): RCCs and other established and recognized national points of contact which can accept responsibility to receive COSPAS-SARSAT alert data to enable the rescue of persons in distress.

1.3 Whether or not a State is signatory to a convention with SAR provisions, the State nonetheless takes on certain responsibilities when it declares an SRR. A key purpose of declaring an SRR is to ensure that distress alerts are routed to the correct RCC in a timely manner so that proper operational co-ordination is conducted. This does not necessarily mean that an RCC or SPOC has to conduct all of the response effort; however, it does mean it will co-ordinate the response effort. This co-ordination role could include serving as a point of contact to advise that the RCC needs further support or, at times, that another unit may be better able to serve that purpose. Mutual co-operation and co-ordination among States and between maritime and aeronautical SAR authorities can further support the provision of adequate and prompt SAR services.

2 INTERNATIONAL INSTRUMENTS

2.1 International Convention for the Safety of life at Sea (SOLAS), Consolidated Edition, 2004

CHAPTER IV

Radiocommunications

Part B

Undertakings by Contracting Governments

Regulation 5

Provision of radiocommunication services

1 Each Contracting Government undertakes to make available, as deems practical and necessary either individually or in co-operation with other Contracting Governments, appropriate shore-based facilities for space and terrestrial radiocommunications services having due regard to the recommendations of the Organization.

CHAPTER V

Safety of navigation

Regulation 7

Search and rescue services

1 Each Contracting Government undertakes to ensure that necessary arrangements are made for distress communication and co-ordination in their area of responsibility and for the rescue of persons in distress at sea around its coasts. These arrangements shall include the establishment, operation and maintenance of such search and rescue facilities as are deemed practicable and necessary, having regard to the density of the seagoing traffic and the navigational dangers and shall, so far as possible, provide adequate means of locating and rescuing such persons.

2.2 International Convention on Maritime Search and Rescue (SAR), 1979

Annex

Chapter 2

Organization and co-ordination

2.1.3 To help ensure the provision of adequate shore-based communication infrastructure, efficient distress alerting, and proper operational co-ordination to effectively support search and rescue services, Parties shall, individually or in co-operation with other States, ensure that sufficient search and rescue regions are established ...

2.1.9 Parties having accepted the responsibility to provide search and rescue services for a specified area shall use search and rescue units and other available facilities for providing assistance to a person who is, or appears to be, in distress at sea.

2.3.2 Each rescue co-ordination centre and rescue sub-centre, established in accordance with paragraph 2.3.3, shall arrange for the receipt of distress alerts originating from within its search and rescue region. Every such centre shall also arrange for communications with persons in distress, with search and rescue facilities, and with other rescue co-ordination centres or rescue sub-centres.

Chapter 3:

Co-operation between States

3.3.1 Parties shall co-ordinate their search and rescue organizations and should, whenever necessary, co-ordinate search and rescue operations with those of neighbouring States.

Chapter 4:

Operating procedures

4.2.1 Parties, either individually or in co-operation with other States, shall ensure that they are capable on a 24-hour basis of promptly and reliably receiving distress alerts from equipment used for this purpose within their search and rescue regions. Any alerting post receiving a distress alert shall:

- .1 immediately relay the alert to the appropriate rescue co-ordination centre or sub-centre, and then assist with search and rescue communications as appropriate; and
- .2 if practicable, acknowledge the alert.

2.3 Convention on International Civil Aviation, *Annex 12 – Search and Rescue*

Chapter 2: Organization

2.1 Search and Rescue Services

2.1.1 Contracting States shall, individually or in co-operation with other States, arrange for the establishment and prompt provision of search and rescue services within their territories to ensure that assistance is rendered to persons in distress. Such services shall be provided on a 24-hour basis.

2.1.1.1 Those portions of the high seas or areas of undetermined sovereignty for which search and rescue services will be established shall be determined on the basis of regional air navigation agreements. Contracting States having accepted the responsibility to provide search and rescue services in such areas shall thereafter, individually or in co-operation with other States, arrange for the services to be established and provided in accordance with the provisions of this annex.

2.2 Search and Rescue Regions

2.2.1 (...) Note 1. – Search and rescue regions are established to ensure the provision of adequate communication infrastructure, efficient distress alert routing and proper operational co-ordination to effectively support search and rescue services. Neighbouring States may co-operate to establish search and rescue services within a single SAR region.

2.4.1 Each rescue co-ordination centre shall have means of rapid and reliable two-way communication with:

- f) all maritime rescue co-ordination centres in the region and aeronautical, maritime or joint rescue co-ordination centres in adjacent regions;
- i) alerting posts;
- j) the COSPAS-SARSAT Mission Control Centre servicing the search and rescue region.

Chapter 3: Co-operation

3.2.5 States shall designate a search and rescue point of contact for the receipt of COSPAS-SARSAT distress data.

Chapter 5: Operating procedures

5.2.4 In the event that an emergency phase is declared in respect of an aircraft whose position is unknown and may be in one of two or more search and rescue regions, the following shall apply:

- a) When a rescue co-ordination centre is notified of the existence of an emergency phase and is unaware of other centres taking appropriate action, it shall assume responsibility for initiating suitable action in accordance with 5.2 and confer with neighbouring rescue co-ordination centres with the objective of designating one rescue co-ordination centre to assume responsibility forthwith.
- b) Unless otherwise decided by common agreement of the rescue co-ordination centres concerned, the rescue co-ordination centre to co-ordinate search and rescue action shall be the centre responsible for:
 - the region in which the aircraft last reported its position; or
 - the region in which the distress site is located as identified by the COSPAS-SARSAT system.

2.4 United Nations Convention on the Law of the Sea (UNCLOS), 1982, Article 98

2 Every coastal State shall promote the establishment, operation and maintenance of an adequate and effective search and rescue service regarding safety on and over the water and, where circumstances so require, by way of mutual regional arrangements, co-operate with neighbouring States for this purpose.

2.5 Convention on the High Seas, 1958, Article 12

2 Every coastal State shall promote the establishment and maintenance of an adequate and effective search and rescue service regarding safety on and over the sea and – where circumstances so require – by way of mutual regional arrangements co-operate with neighboring States for this purpose.

2.6 COSPAS-SARSAT Programme Management Policy, document C/S P.011

5.2.1 SAR Points of Contact (SPOCs)

SPOCs are Mission Co-ordination Centres (MCCs), RCCs and other established and recognized national points of contact that can accept or assume responsibility for the co-ordination and the fast and effective transfer of COSPAS-SARSAT alert data to enable the rescue of persons in distress. To avail themselves of the System, States should:

- designate a single SAR point of contact (SPOC) for receiving COSPAS-SARSAT alert and location data for distress locations in their SAR area of responsibility;
- provide the address, telephone, telex or facsimile number or AFTN address of their SPOC to the COSPAS-SARSAT Secretariat; and
- develop a comprehensive plan for the distribution of alert and location data to SAR authorities, as appropriate.

3 Conclusion

3.1 In the interests of efficient SAR response, and hence the saving of lives at sea, States declaring responsibility for SAR Regions are urged to ensure that they comply with the spirit of the conventions and other international documents listed in paragraph 2 above – and particularly the COSPAS-SARSAT Programme Management Policy mentioned in paragraph 2.6 – and that they provide and maintain arrangements necessary for the reception and acknowledgement of, and the capability to respond to, distress alerts, including those derived from the COSPAS-SARSAT system.

ANNEX 6**TERMS OF REFERENCE AND PROVISIONAL AGENDA FOR THE
FOURTEENTH SESSION OF THE ICAO/IMO JOINT WORKING GROUP ON THE
HARMONIZATION OF AERONAUTICAL AND MARITIME SEARCH AND RESCUE****TERMS OF REFERENCE**

- 1 This Joint Working Group (JWG) is established to develop recommendations and information to support the IMO Sub-Committee on Radiocommunications and Search and rescue and/or ICAO, as appropriate, on any matters pertinent to harmonization of international maritime and aeronautical SAR.
- 2 The JWG will meet as necessary, subject to approval of the IMO Maritime Safety Committee and ICAO, with meetings hosted and supported by IMO and ICAO on an alternating basis.
- 3 Invitations to participate in the JWG will be submitted to respective Member States by both IMO and ICAO.
- 4 Language services will not be provided during JWG meetings.
- 5 JWG meetings will generally take place annually about midway between meetings of the IMO Sub-Committee on Radiocommunications and Search and Rescue.
- 6 The JWG will provide an active interface between IMO and ICAO for harmonization of maritime and aeronautical SAR plans and procedures in accordance with the 1985 MoU between IMO and ICAO, and with Resolution 1 of the 1979 International Conference on Maritime Search and Rescue.
- 7 The JWG will review and develop proposals relating to harmonization in various matters including:
 - a) provisions of conventions, plans, manuals and other documents affecting SAR;
 - b) SAR operational principles, procedures and techniques;
 - c) SAR system administration, organization and implementation methods;
 - d) RCC/RSC equipment and facility designations and standards;
 - e) SAR communications; and
 - f) SAR personnel staffing and training.
- 8 Need for JWG continuation will be reviewed by IMO and ICAO on an ongoing basis; the JWG will be discontinued when either organization concludes the work is no longer cost effective, and formally informs the other of its decision to discontinue.

PROVISIONAL AGENDA

- 1 Adoption of the agenda
 - Election of a chairperson.
- 2 Consideration of terms of reference – future work of the Joint Working Group and priorities:
 - .1 briefing on the outcome of COMSAR 11 and MSC 82; and
 - .2 briefing on outcome of ICAO activities related to the Joint Working Group work.
- 3 Provisions of conventions, plans, manuals and other documents affecting SAR:
 - .1 status of the Maritime SAR Convention;
 - .2 progress report on the possible alignment of the IMO Area SAR Plans, GMDSS Master Plan and ICAO Regional Air Navigation Plans;
 - .3 progress report on work by the Air Navigation Commission in advancing provisions for carriage of ELTs and in reviewing States' responses to the provisions;
 - .4 further work on the IAMSAR Manual, availability for training – institutions, priority items for amendments; and
- 4 SAR operational principles, procedures and techniques:
 - .1 safety of passenger ships;
 - .2 mass rescue operations, taking account of experiences from major disasters;
 - .3 medical assistance in SAR services;
 - .4 effects of measures to enhance maritime and aeronautical security on SAR services; and
 - .5 development of procedural strategies for the practical provision of SAR services.
- 5 SAR system administration, organization and implementation methods:
 - .1 regional SAR databases i.e. SDP, facilities;
 - .2 development of guidelines for sub-regional SAR organization;
 - .3 quality assurance, improvement, needs assessment, risk management (including sub-regional organizations) and resource allocation;

- .4 implementation and operation of the “International SAR Fund”; and
 - .5 evaluating the effect of various technical co-operation projects in co-operation with relevant governments, organizations and agencies with a view to assess their impact on implementing and maintaining SAR services.
- 6 RCC/RSC equipment and facility designations and standards:
- .1 establishment of RCCs and in particular JRCCs; and
 - .2 status of AIS and related systems in aeronautical and maritime SAR.
- 7 SAR communications:
- .1 status of the GMDSS;
 - .2 status of aeronautical communications systems for distress and SAR, including:
 - .2.1 establishment of IBRD;
 - .2.2 suitability of PLBs for carriage by ships and aircraft; and
 - .2.3 registration of PLBs;
 - .3 future trends in SAR communications including cell phones;
 - .4 minimum communications needs for RCCs; and
 - .5 non-GMDSS Communications systems which may be used for distress alerting.
- 8 SAR personnel staffing and training:
- .1 development of RCC Staff Certificates; and
 - .2 development of joint SAR courses based on the IAMSAR Manual.
- 9 Any other business
- 10 Report to ICAO and the COMSAR Sub-Committee

ANNEX 7

**LIST OF QUESTIONS ON SAR-RELATED LRIT ISSUES
THAT NEED TO BE ADDRESSED**

List of questions on SAR-related LRIT issues that need to be addressed:

- a) How will Rescue Co-ordination Centres (RCCs) access LRIT data?
- b) What is the procedure for on-demand LRIT information?
- c) What audit recordkeeping and restrictions might be required of SAR authorities who obtain LRIT data for SAR?
- d) Will there be provisions for collecting LRIT data from ships beyond 1000 miles offshore for SAR?
- e) Will Governments limit LRIT data for SAR purposes, and if so, by what mechanism?
- f) What SAR-related guidance needs to be provided to those responsible for the operation of LRIT and to SAR authorities?
- g) Will some Governments incorrectly or prematurely assume, as some did when GMDSS was introduced, that LRIT will reduce or eliminate the need for other SRSs for SAR?
- h) What is the process for ICAO access to LRIT information for aeronautical RCCs with maritime SAR regions? and
- i) Should development of SAR guidance, e.g., IAMSAR Manual or MSC circular, await experience gained after LRIT has been in operation?

ANNEX 8

DRAFT MSC CIRCULAR

**ADOPTION OF AMENDMENTS TO THE INTERNATIONAL AERONAUTICAL
AND MARITIME SEARCH AND RESCUE (IAMSAR) MANUAL**

1 The Maritime Safety Committee (MSC), at its [eighty third session (3 to 12 October 2007)], having been informed that the International Civil Aviation Organization (ICAO) had approved the amendments to the IAMSAR Manual prepared by the Joint ICAO/IMO Working Group on Harmonization of Aeronautical and Maritime Search and Rescue, and that they had been endorsed by the Sub-Committee on Radiocommunications and Search and Rescue (COMSAR) at its eleventh session (19 to 23 February 2007), adopted the annexed amendments in accordance with the procedure laid down in resolution A.894(21).

2 The Committee decided that the amendments should enter into force on [1 June 2008].

ANNEX

SECTION 1

PROPOSED AMENDMENTS TO IAMSAR MANUAL – VOLUME I

1 Chapter 1

- Make changes to the existing paragraph 1.3.1 to 1.3.5 as follows (new text underlined, deletions ~~struck through~~):

“1.3.1 As Party to the International Convention for the Safety of Life at Sea (SOLAS), the International Convention on Maritime Search and Rescue, or the Convention on International Civil Aviation, a Party undertakes to provide certain aeronautical and/or maritime SAR co-ordination and services. ~~The international community expects these commitments to be fulfilled.~~ Reference to Search and Rescue is also contained in the UN Convention on Law of the Sea, 1982. This Convention includes a general statement at Article 98, paragraph 2, dealing with search and rescue:

‘Every coastal State shall promote the establishment, operation and maintenance of an adequate and effective search and rescue service regarding safety on and over the water and, where circumstances so require, by way of mutual regional arrangements, co-operate with neighbouring States for this purpose.’

The international community expects these commitments to be fulfilled by all State parties.

- 1.3.2** These services can be provided by States individually establishing effective national SAR organizations, or by establishing a SAR organization jointly with one or more other States. The role of agreements and plans in establishing SAR services will be discussed throughout this Manual.
- 1.3.3** Appendix (K) provides an overview of the relevant Articles, Annexes and Chapters of the International Convention on Maritime Search and Rescue and the Convention on International Civil Aviation.
- 1.3.34** Every State should have in place statutes and related provisions that establish a legal foundation for establishing a SAR organization and its resources, policies, and procedures.
- 1.3.45** SAR managers should seek legal advice on how domestic and international laws pertain to SAR policies and procedures.
- 1.3.56** State legislative provisions should be aligned with accepted principles of international law, and may serve purposes such as:”

Proposed amendments to IAMSAR Manual – Volume I

2 Chapter 2

- Make changes to paragraph 2.2.11 as follows (new text underlined, deletions ~~struck through~~):
 - “2.2.11 On-scene channels are used between SRUs and the OSC. The SMC should specify an on-scene communications channel for use by all SRUs based on the equipment carried by the SRUs. If an on-scene radio frequency is required for communications between air and surface facilities involved in a SAR operation, distress and on-scene frequencies may be used. Designated SAR aircraft operating in maritime areas ~~must~~ should be equipped with a frequency for communicating with vessels during SAR operations.”
- Add new paragraphs 2.2.12 and 2.2.13 as follows:
 - “2.2.12 Administrations should encourage voluntary fitting of air band radio equipment, especially on marine SAR units and government vessels, but also on SOLAS ships operating in areas where working with aircraft not fitted with maritime band radio equipment is known to be a possibility.
 - 2.2.13 SAR Co-ordinators should consider the possible need for communications between aircraft and surface units within their SAR Regions, and ensure that this need can be met event for aircraft that cannot communicate directly on maritime frequencies. Typically the RCC should be able to provide a communication link between the aircraft and surface units with their own equipment or by making other arrangements. SAR and government vessels should be encouraged to be able to fit equipment to communicate directly on aeronautical frequencies. Passenger ships subject to the SOLAS Convention are required to have this capability.”

3 Chapter 4

- Make changes in paragraph 4.4.4, subparagraph (c) as follows (new text is underlined, deletions ~~struck through~~):
 - “(c) Some ships may carry radios for use in survival craft capable of transmitting and receiving ~~on the frequency 500 KHz (radiotelegraphy)~~ and on the frequency 2182 KHz kHz (radiotelephony). Some vessels may also carry portable survival craft VHF transceivers. Appendix G provides more information on carriage for SOLAS Ships.”

4 Appendix A

- Make changes to Appendix A as follows (new text is underlined, deletions struck through):

“Article 1

A Search and Rescue Organization shall be established for the provision of search and rescue services to ~~to [State’s aeronautical or maritime] craft, and foreign craft.~~ in accordance with the IMO International Convention on Maritime Search and Rescue 1979, as amended and the Convention on International Civil Aviation, Annex 12.

The Search and Rescue Organization shall, as far as its primary function permits, assist in other emergencies.

Article 2

The ~~Departments~~ competent national authorities ~~civil aviation and/or Merchant Marine~~ shall be responsible for the provisions ~~organization and operation~~ of the Search and Rescue ~~Organization~~ services.

Article 3

During search and rescue operations, the ~~Departments~~ competent national ~~civil aviation and/or Merchant Marine~~ authorities shall be entitled to call for the collaboration and support of other Government services.

The ~~Departments~~ competent national ~~civil aviation and/or Merchant Marine~~ authorities shall be authorized to conclude agreements concerning the provision of assistance with local (State, provincial, municipal) authorities and suitable private agencies or persons.

Article 4

The ~~Departments~~ competent national ~~civil aviation and/or Merchant Marine~~ authorities shall be responsible for negotiating the terms of international agreements with the Search and Rescue organization of other States.*

All Government services concerned shall take measures to facilitate, as far as possible, the immediate and temporary entry of personnel, and their equipment, from other States who, in agreement with the ~~Departments~~ competent national ~~civil aviation and/or Merchant Marine~~ authorities are participating in search and rescue operations. All Government services concerned shall seek to implement, as appropriate, the search and rescue recommendations and standards of *the International Civil Aviation Organization and/or the International Maritime Organization.*”

* Depending on the administrative practices, agreements of this type may have to be endorsed at higher levels.

- 5 – Insert a new appendix K as follows:

“Appendix K

National responsibilities of Contracting States under International Conventions

1 AVIATION ARRANGEMENTS

1.1 The Convention on International Civil Aviation (Chicago Convention) provides a basis for international co-operation between Contracting States in the provision of international civil aviation SAR services. The Chapters, Articles and Annexes detail certain principles and arrangements in order that international civil aviation services may be developed in a safe and orderly manner, international air transport established on the basis of equality of opportunity and all such services operated soundly and economically.

1.2 The Convention articles and annexes, include the following:

Articles specific to search and rescue and aircraft emergencies are addressed as follows:

Articles 1 and 2	Airspace and Sovereignty;
Article 12	Rules and Regulations;
Article 25	Search and Rescue;
Article 26	Accident and Incident Investigation;
Article 28	Air Navigation Facilities;
Article 31	Certificate of Airworthiness;
Article 32	Licences of Personnel; and
Article 68	Designation of Routes and Airports.

1.3 Details of the Articles are elaborated in Annexes to the Convention.

The Annexes that have a bearing on emergency situations involving aircraft are the following:

Annex 2	Rules of the Air;
Annex 3	Meteorological Services;
Annex 6	Operation of aircraft and helicopters;
Annex 10	Communications;
Annex 11	Air Traffic Services including the responsibilities for search and rescue alerting and in-flight emergency response;
Annex 12	Search and Rescue;
Annex 13	Aircraft Accident Investigation;
Annex 14	Aerodrome and Heliport Design and Operations; and
Annex 17	Security and Unlawful Interference.

1.4 It should be noted that the Chicago Convention does not provide any minimum response standards or sanctions in relation to the non-provision of aviation search and rescue services but relies on Contracting States to provide a level of service commensurate with their perceived requirements and available resources. There is also an assumption that neighbouring countries will work together to achieve the common good.

2 MARITIME ARRANGEMENTS

2.1 The International Convention on Maritime Search and Rescue, 1979, known as the SAR Convention 1979, is designed to provide a framework for carrying out search and rescue operations following accidents at sea.

2.2 The SAR Convention, as amended, clarifies the responsibilities of Governments and puts emphasis on the regional organizational approach and co-ordination between maritime and aeronautical operations.

2.3 Articles I to VIII of the Convention discuss the general obligations of Parties under the Convention, and the obligations or rights of vessels provided for in other international instruments.

2.4 The chapters and resolutions that have a bearing on the management of emergency incidents involving persons in distress at sea, include the following:

- Chapter 1** Terms and definitions used;
- Chapter 2** Organization and co-ordination of Search and Rescue services;
- Chapter 3** Co-operation between States;
- Chapter 4** Overview of Rescue Co-ordination Centre and Rescue Sub-Centre operating procedures; and
- Chapter 5** Operational requirements of ship reporting systems.”

SECTION II

PROPOSED AMENDMENTS TO THE IAMSAR MANUAL – VOLUME II

1 Chapter 1

- In paragraph 1.10.3, add the new following text after sub-section (c). The added text should appear as sub-section (d).

“1.10.3

- (d) On the other hand, the type of information that the RCC spokesman could release, depending on the specific circumstances of the SAR operation, includes, but is not limited to:

general reason for the SAR operation;

type of aircraft or vessel involved;

owner/operator of the aircraft or vessel (only after the owner/operator has been informed and given consent);

name of vessel/flight number (only after the owner/operator has been informed and given consent);

number of people on board;

general area being searched;

number and types of aircraft and vessels engaged in the search and the number of hours flown;

arrangements for land or marine search (as applicable);

~~number of sighting or hearing reports received;~~

details of other authorities participating in the search;

contact number for use by the next of kin to obtain information;

contact number for further information; and

contact number for media enquiries.”

2 Chapter 2

- Make changes to paragraph 2.3 as follows (new text is underlined, deletions ~~struck through~~) and renumber the paragraphs accordingly:

“2.3.1 ~~Vessels~~ Ships communicate with coast radio stations and with each other on maritime frequencies available in MF, HF and VHF bands. The GMDSS (Global Maritime Distress and Safety System) is mandatory for all SOLAS ships from 1999. Volume I, Appendix G provides more information on carriage requirements for SOLAS ships.

~~2.3.3. Use of 500 KHz for Morse Code distress, safety and calling transmissions has historically been popular, and has often overcome language barriers. However with the event of more advanced technologies, use of 500 KHz is decreasing. As of February 1999, international requirements to have this capability aboard ships will cease. Silence periods on this frequency are observed for three minutes twice an hour, beginning at 15 and 45 minutes past each hour, to facilitate reception of distress calls, and in the and in the last 15 seconds of each period to announce distress, urgency, or safety broadcasts.~~

2.3.43 ~~The frequency 2182 KHz~~ kHz, an international maritime voice distress, safety and calling frequency may be also available in SAR aircraft. ~~Silence periods on this frequency are observed for three minutes twice an hour, beginning on the hour and at 30 minutes past each hour, to facilitate reception of distress calls.~~

~~2.3.5 MF Radio Alarms. A number of coast and ships stations are equipped to transmit the radio alarm signal on 500 KHz radiotelegraphy or 2182 KHz radiotelephony by means of an automatic signal-generating device. The signal actuates automatic devices giving an alarm to attract attention of operators not maintaining an aural watch, and is followed by the Morse signal "SOS SOS SOS" on 500 KHz radiotelegraphy and the spoken words "MAYDAY MAYDAY MAYDAY" on 2182 KHz.~~

~~a) The telegraphy distress alarm consists of a series of twelve dashes sent in one minute, the duration of each dash being four seconds, and the duration of the interval between consecutive dashes being one second.~~

~~b) The radiotelephony alarm consists of two audio frequency tones transmitted alternately (similar in sound to a two-tone siren used by some ambulances). It is sent continuously for a period lasting from 30 seconds to a minute. A long continuous tone at the end of the alarm signifies that the signal originated from a coast station and not a ship station.~~

~~e) Radio alarms may only be used to announce:~~

~~That a distress call or message is about to follow; or~~

~~That transmission of an urgent meteorological warning; or~~

~~The loss of a person overboard, when help of other vessels is required and cannot be satisfactorily obtained by use of the urgency signal only.~~

~~d) Tests of radio alarms are prohibited."~~

3 Appendix G

– In second paragraph of G.2.15, insert the underlined text as follows:

Communications equipment. All aircraft should be equipped to maintain good communications with their RCC (either directly or indirectly) and other SAR facilities. SAR aircraft, particularly those engaged in oceanic searches, should be equipped to communicate with vessels or survival craft. They also should be able to communicate with survivors on VHF-FM Channel 16 (156.8 MHz) and VHF-AM on 121.5 MHz and 123.1 MHz. SAR co-ordinators should consider the possible need for communications between aircraft and surface units within their SAR Regions, and ensure that this need can be met even for aircraft that cannot communicate directly on maritime frequencies. Typically the RCC should be able to provide a communication link between the aircraft and surface units directly or by making other arrangements. SAR and government vessels should be encouraged to be able to communicate directly on aeronautical frequencies. Passenger ships subject to the SOLAS Convention are required to have this capability."

- In second paragraph of G.3.9, insert the underlined text as follows:

“Communications. The communications requirements for SAR vessels are generally the same as those for SAR aircraft. Good direct or indirect communications with the RCC, RSC, and other SAR units are essential. All SAR units must have radiocommunications to guard and communicate on the international distress frequency being used by the ship or other craft in distress. Radio equipment should be capable of operating on MF/HF and VHF/UHF to communicate with the RCC and rescue units. SAR co-ordinators should consider the possible need for communications between aircraft and surface units within their SAR Regions, and ensure that this need can be met even for aircraft that cannot communicate directly on maritime frequencies. Typically the RCC should be able to provide a communication link between the aircraft and surface units with their own equipment or by making other arrangements. SAR and government vessels should be encouraged to fit equipment to be able to communicate directly on aeronautical frequencies. Passenger ships subject to the SOLAS Convention are required to have this capability. Chapter 2 discusses selection of radio frequencies.”

SECTION III

PROPOSED AMENDMENTS TO THE IAMSAR MANUAL – VOLUME III

1 Section 2

- Add the following text on page 2-42 at the end of chapter “Contact with the Media”:

“On the other hand, the type of information that the RCC spokesman could release, depending on the specific circumstances of the SAR operation, includes, but is not limited to:

general reason for the SAR operation;

type of aircraft or vessel involved;

owner/operator of the aircraft or vessel (only after the owner/operator has been informed and given consent);

name of vessel/flight number (only after the owner/operator has been informed and given consent);

number of people on board;

general area being searched;

number and types of aircraft and vessels engaged in the search and the number of hours flown;

arrangements for land or marine search (as applicable);
~~number of sighting or hearing reports received;~~
details of other authorities participating in the search;
contact number for use by the next of kin to obtain information;
contact number for further information; and
contact number for media enquiries.

2 Section 3

– Delete in page 3-10 the following crossed out text:

~~“Radio Telegraph (WT)~~

- ~~• Radio telegraph is a Morse Code service provided in the MF and HF maritime bands. For distress alerting, it is used on the frequencies 500 MHz and 8364 KHz.~~
 - ~~• After 1 February 1999, SOLAS vessels are not required to continue use of the service.~~
 - ~~• This service overcomes language barriers, but it depends upon trained radio or less.~~
 - ~~• Ship to shore WT working frequencies are 425, 454, 458, 468, 480 and 512 KHz.~~
 - ~~• During their hours of service, ships are supposed to watch on 500 KHz for three minutes twice per hour beginning at h + 15 and h + 45 by an operator using headphones or loudspeaker.~~
- ~~□ During these periods of silence, only distress, urgency and safety signals are permitted.”~~

ANNEX 9

**DRAFT RESOLUTION MSC.[...](83)
(adopted on [.. 2007])**

**ADOPTION OF PERFORMANCE STANDARDS FOR AIS SEARCH
AND RESCUE TRANSMITTER (AIS-SART)
FOR USE IN SEARCH AND RESCUE OPERATIONS**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution A.886(21) on Procedure for the adoption of, and amendments to, performance standards and technical specifications, by which the Assembly resolved that the function of adoption performance standards and technical specifications, as well as amendments thereto shall be performed by the Maritime Safety Committee,

RECOGNIZING that new designs of radar are being introduced which do not employ traditional pulsed technology,

RECOGNIZING ALSO that ships are now fitted with an automatic identification system (AIS),

NOTING the results of operational trials on AIS Search and Rescue Transmitter (AIS-SART) reported by Governments,

HAVING CONSIDERED the recommendation made by the Sub-Committee on Radiocommunications and Search and Rescue at its eleventh session, and the Maritime Safety Committee at its eighty-third session,

1. ADOPTS the Recommendation on Performance Standards for AIS Search and Rescue Transmitter (AIS-SART) for Use in Search and Rescue Operations set out in the Annex to the present resolution;
2. RECOMMENDS Governments to ensure that AIS-SARTs used in search and rescue operations installed on or after [1 January 2009] conform to the performance standards not inferior to those set out in annex to the present resolution.

ANNEX

**DRAFT PERFORMANCE STANDARDS FOR
SURVIVAL CRAFT AIS SEARCH AND RESCUE TRANSMITTER (AIS-SART)**

1 INTRODUCTION

AIS Search and Rescue Transmitter (AIS-SART), in addition to meeting the requirements of the relevant ITU-R Recommendation and the general requirements set out in resolution A.694(17)*, should comply with the following performance standards.

2 GENERAL

The AIS-SART should be capable of transmitting messages that indicate the position, static and safety information of a unit in distress. The transmitted messages should be compatible with existing AIS installations. The transmitted messages should be recognized and displayed by assisting units in the reception range of AIS-SART, and clearly distinguish the AIS-SART from an AIS installation.

2.1 The AIS-SART should:

- .1 be capable of being easily activated by unskilled personnel;
- .2 be fitted with means to prevent inadvertent activation;
- .3 be equipped with a means which is either visual or audible, or both visual and audible, to indicate correct operation;
- .4 be capable of manual activation and deactivation; provision for automatic activation may be included;
- .5 be capable of withstanding without damage drops from a height of 20 m into water;
- .6 be watertight at a depth of 10 m for at least 5 min;
- .7 maintain water tightness when subjected to a thermal shock of 45°C under specified conditions of immersion;
- .8 be capable of floating (not necessarily in an operating position) if it is not an integral part of the survival craft;
- .9 be equipped with buoyant lanyard, suitable for use as a tether, if it is capable of floating;
- .10 not be unduly affected by seawater or oil;

* Publication IEC 60945.

- .11 be resistant to deterioration in prolonged exposure to sunlight;
- .12 be of a highly visible yellow/orange colour on all surfaces where this will assist detection;
- .13 have a smooth external construction to avoid damaging the survival craft;
- .14 be provided with an arrangement to bring the AIS-SART antenna to a level of at least 1 metre above sea level, together with illustrated instructions;
- .15 be capable of transmitting with a reporting interval of 1 minute or less;
- .16 equipped with an internal position source and be capable of transmitting its current position in each message; and
- .17 be capable of being tested for all functionalities using specific test information.

2.2 The AIS-SART should have sufficient battery capacity to operate for 96 h within a temperature range of -20°C to $+55^{\circ}\text{C}$, and to provide for testing of the functions on the equipment. The AIS-SART should have a unique identifier to ensure the integrity of the VHF data link.

2.3 The AIS-SART should be so designed as to be able to operate under ambient temperatures of -20°C to $+55^{\circ}\text{C}$. It should not be damaged in stowage throughout the temperature range of -30°C to $+70^{\circ}\text{C}$.

2.4 The AIS-SARTs should be detectable at a range of 5 nautical miles over water.

2.5 The AIS-SART should continue transmission even if the position and time synchronization from the positioning system is lost or fails.

2.6 The AIS-SART should transmit within 1 minute of activation.

3 TECHNICAL CHARACTERISTICS

Technical characteristics of the AIS-SART should be in accordance with relevant ITU recommendations.

4 LABELLING

In addition to the items specified in resolution A.694(17) on general requirements, the following should be clearly indicated on the exterior of the equipment:

- .1 brief operating and test instructions; and
- .2 expiry date for the primary battery used.

ANNEX 10**DRAFT RESOLUTION MSC.[...](84)
(adopted on [.. 2008])****ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CONVENTION
FOR THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING FURTHER article VIII(b) of the International Convention for the Safety of Life at Sea (SOLAS), 1974, hereinafter referred to as “the Convention”, concerning the procedures for amending the Annex to the Convention, other than the provisions of chapter I thereof,

HAVING CONSIDERED, at its [eighty-fourth] session, amendments to the Convention proposed and circulated in accordance with article VIII(b)(i) thereof:

1. ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention, the text of which is set out in the Annex to the present resolution;
2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on [1 July 2009], unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world’s merchant fleet, have notified their objections to the amendments;
3. INVITES Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on [1 January 2010] upon their acceptance in accordance with paragraph 2 above;
4. REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;
5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

**PROPOSED AMENDMENTS TO
SOLAS CHAPTER III – LIFE-SAVING APPLIANCES AND ARRANGEMENTS
AND SOLAS CHAPTER IV – RADIOCOMMUNICATIONS**

CHAPTER III

Regulation 6
Communications

Replace paragraph 2.2 as follows:

“2.2 *Search and rescue locating devices*

At least one search and rescue locating device shall be carried on each side of every passenger ship and of every cargo ship of 500 gross tonnage and upwards. At least one search and rescue locating device shall be carried on every cargo ship of 300 gross tonnage and upwards but less than 500 gross tonnage. Such search and rescue locating devices shall conform to performance standards not inferior to those adopted by the Organization.* The search and rescue locating devices** shall be stowed in such location that they can be rapidly placed in any survival craft other than the liferaft or liferafts required by regulation 31.1.4. Alternatively one search and rescue locating device shall be stowed in each survival craft other than those required by regulation 31.1.4. On ships carrying at least two search and rescue locating devices and equipped with free-fall lifeboats one of the search and rescue locating devices shall be stowed in a free-fall lifeboat and the other located in the immediate vicinity of the navigation bridge so that it can be utilized on board and ready for transfer to any of the other survival craft.”

Regulation 26
Additional requirements for ro-ro passenger ships

Replace paragraph 2.5 as follows:

“Liferafts carried on ro-ro passenger ships shall be fitted with a search and rescue locating device in the ratio of one search and rescue locating device for every four liferafts. The search and rescue locating device shall be mounted inside the liferaft so its antenna is more than one metre above the sea level when the liferaft is deployed, except that for canopied reversible liferafts the search and rescue locating device shall be so arranged as to be readily accessed and erected by survivors. Each search and rescue locating device shall be arranged to be manually erected when the liferaft is deployed. Containers of liferafts search and rescue locating devices shall be clearly marked.”

* Refer to the Recommendation on performance standards for survival craft radar transponders for use in search and rescue operations, adopted by the Organization by resolution A.802(19), [as amended] and the Recommendation on performance standards for survival craft AIS Search and Rescue transmitters (AIS-SART), adopted by the Organization by resolution MSC... (83).

** One of these search and rescue locating devices may be the search and rescue locating device required by regulation IV/7.1.3.

CHAPTER IV

Regulation 7

Radio equipment: General

Replace subparagraph 1.3 as follows:

- “.3 a search and rescue locating device capable of operating either in the 9 GHz band or on frequencies dedicated for AIS, which:”

ANNEX 11

**DRAFT RESOLUTION MSC.[...](84)
(adopted on [..... 2008])****ADOPTION OF AMENDMENTS TO THE PROTOCOL OF 1988 RELATING TO THE
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING FURTHER article VIII(b) of the International Convention for the Safety of Life at Sea (SOLAS), 1974 (hereinafter referred to as “the Convention”) and article VI of the Protocol of 1988 relating to the Convention (hereinafter referred to as “the 1988 SOLAS Protocol”) concerning the procedure for amending the 1988 SOLAS Protocol,

HAVING CONSIDERED, at its eighty-fourth session, amendments to the 1988 SOLAS Protocol proposed and circulated in accordance with article VIII(b)(i) of the Convention and article VI of the 1988 SOLAS Protocol,

1. ADOPTS, in accordance with article VIII(b)(iv) of the Convention and article VI of the 1988 SOLAS Protocol, amendments to the appendix to the Annex to the 1988 SOLAS Protocol, the text of which is set out in the Annex to the present resolution;
2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention and article VI of the 1988 SOLAS Protocol, that the said amendments shall be deemed to have been accepted on [1 July 2009], unless, prior to that date, more than one third of the Parties to the 1988 SOLAS Protocol or Parties the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world’s merchant fleet, have notified their objections to the amendments;
3. INVITES the Parties concerned to note that, in accordance with article VIII(b)(vii)(2) of the Convention and article VI of the 1988 SOLAS Protocol, the amendments shall enter into force on [**1 January 2010**], upon their acceptance in accordance with paragraph 2 above;
4. REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the Convention and article VI of the 1988 SOLAS Protocol, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Parties to the 1988 SOLAS Protocol;
5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Parties to the 1988 SOLAS Protocol.

ANNEX

**MODIFICATIONS AND ADDITIONS TO THE ANNEX TO THE
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974**

APPENDIX

**MODIFICATIONS AND ADDITIONS TO THE APPENDIX TO
THE ANNEX TO THE INTERNATIONAL CONVENTION
FOR THE SAFETY OF LIFE AT SEA, 1974**

(Note: In view of a number of amendments which have not yet entered into force or have been approved with a view to adoption, the references to the existing items need to be checked at the stage of the adoption.)

Record of Equipment for Passenger Ship Safety Certificate (Form P)

1 In the Record of Equipment for Passenger Ship Safety Certificate (Form P), in section 2, the existing item 11.1 is deleted and replaced by the following:

- “11.1 Number of search and rescue locating devices
- 11.1.1 Radar search and rescue transponders (SART)
- 11.1.2 AIS search and rescue transmitters (AIS-SART)”

2 In the Record of Equipment for Passenger Ship Safety Certificate (Form P), in section 3, the existing item 6 is deleted and replaced by the following:

- “6 Ship’s search and rescue locating device
- 6.1 Radar search and rescue transponder (SART)
- 6.2 AIS search and rescue transmitter (AIS-SART)”

Record of Equipment for Cargo Ship Safety Equipment Certificate (Form E)

3 In the Record of Equipment for Cargo Ship Safety Equipment Certificate (Form E), in section 2, the existing item 9.1 is deleted and replaced by the following:

- “9.1 Number of search and rescue locating devices
- 9.1.1 Radar search and rescue transponders (SART)
- 9.1.2 AIS search and rescue transmitters (AIS-SART)”

Record of Equipment for Cargo Ship Radio Certificate (Form R)

4 In the Record of Equipment for Cargo Ship Safety Radio Certificate (Form R), in section 2, the existing item 6 is deleted and replaced by the following:

- “6 Ship’s search and rescue locating device
- 6.1 Radar search and rescue transponder (SART)
- 6.2 AIS search and rescue transmitter (AIS-SART)”

Record of Equipment for the Cargo Ship Safety Certificate (Form C)

5 In the Record of Equipment for Cargo Ship Safety Certificate (Form C), in section 2, the existing item 10.1 is deleted and replaced by the following:

- “10.1 Number of search and rescue locating devices
- 10.1.1 Radar search and rescue transponders (SART)
- 10.1.2 AIS search and rescue transmitters (AIS-SART)”

6 In the Record of Equipment for Cargo Ship Safety Certificate (Form C), in section 3, the existing item 6 is deleted and replaced by the following:

- “6 Ship’s search and rescue locating device
- 6.1 Radar search and rescue transponder (SART)
- 6.2 AIS search and rescue transmitter (AIS-SART)”

Record of Equipment for the Nuclear Passenger Ship Safety Certificate (Form PNUC)

7 In the Record of Equipment for Nuclear Passenger Ship Safety Certificate (Form PNUC), in section 2, the existing item 11.1 is deleted and replaced by the following:

- “11.1 Number of search and rescue locating devices
- 11.1.1 Radar search and rescue transponders (SART)
- 11.1.2 AIS search and rescue transmitters (AIS-SART)”

8 In the Record of Equipment for Nuclear Passenger Ship Safety Certificate (Form PNUC), in section 3, the existing item 6 is deleted and replaced by the following:

- “6 Ship’s search and rescue locating device
- 6.1 Radar search and rescue transponder (SART)
- 6.2 AIS search and rescue transmitter (AIS-SART)”

Record of Equipment for the Nuclear Cargo Ship Safety Certificate (Form CNUC)

9 In the Record of Equipment for Nuclear Cargo Ship Safety Certificate (Form CNUC), in section 2, the existing item 10.1 is deleted and replaced by the following:

- “10.1 Number of search and rescue locating devices
- 10.1.1 Radar search and rescue transponders (SART)
- 10.1.2 AIS search and rescue transmitters (AIS-SART)”

10 In the Record of Equipment for Nuclear Cargo Ship Safety Certificate (Form CNUC), in section 3, the existing item 6 is deleted and replaced by the following:

- “6 Ship’s search and rescue locating device
- 6.1 Radar search and rescue transponder (SART)
- 6.2 AIS search and rescue transmitter (AIS-SART)”

ANNEX 12**DRAFT RESOLUTION MSC.[...](84)
(adopted on [..... 2008])****ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CODE OF SAFETY
FOR HIGH-SPEED CRAFT, 1994 (1994 HSC CODE)**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

NOTING resolution MSC.36(63), by which it adopted the International Code of Safety for High-Speed Craft, 1994 (hereinafter referred to as “the 1994 HSC Code”), which has become mandatory under chapter X of the International Convention for the Safety of Life at Sea (SOLAS), 1974 (hereinafter referred to as “the Convention”),

NOTING ALSO article VIII(b) and regulation X/1.1 of the Convention concerning the procedure for amending the 1994 HSC Code,

HAVING CONSIDERED, at its eighty-fourth session, amendments to the 1994 HSC Code proposed and circulated in accordance with article VIII(b)(i) of the Convention,

1. ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the 1994 HSC Code, the text of which is set out in the Annex to the present resolution;
2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on [1 July 2009] unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world’s merchant fleet, have notified their objections to the amendments;
3. INVITES Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on [1 January 2010] upon their acceptance in accordance with paragraph 2 above;
4. REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;
5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

**DRAFT AMENDMENTS TO THE INTERNATIONAL CODE OF SAFETY
FOR HIGH-SPEED CRAFT (1994 HSC CODE)**

**(IN ADDITION TO THE ANTICIPATED AMENDMENTS TO SOLAS CHAPTERS III AND IV
IN RELATION TO THE REVISION OF PERFORMANCE STANDARDS FOR SART)**

**CHAPTER 8
LIFE-SAVING APPLIANCES AND ARRANGEMENTS**

8.2 Communications

Existing paragraph **8.2.1** is replaced as follows:

“.2 at least one search and rescue locating device shall be carried on each side of every passenger high-speed craft and every cargo high-speed craft of 500 gross tonnage and upwards. Such search and rescue locating device should conform to performance standards not inferior to those adopted by the Organization.² The search and rescue locating device should be stowed in such locations that they can be rapidly placed in any one of the liferafts. Alternatively, one search and rescue locating device should be stowed in each survival craft.”

**CHAPTER 14
RADIOCOMMUNICATIONS**

14.6 Radio equipment: general

Existing subparagraph **14.6.1.3** is replaced as follows:

“.3 a search and rescue locating device which:”

² Refer to the Recommendation on performance standards for survival craft radar transponders for use in search and rescue operations, adopted by the Organization by resolution A.802(19), [as amended] and the Recommendation on performance standards for survival craft AIS Search and Rescue transmitters (AIS-SART), adopted by the Organization by resolution MSC... (83).

ANNEX 13**DRAFT RESOLUTION MSC.[...](84)
(adopted on [..... 2008])****ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CODE OF SAFETY FOR
HIGH-SPEED CRAFT, 2000 (2000 HSC CODE)**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

NOTING resolution MSC.97(73), by which it adopted the International Code of Safety for High-Speed Craft, 2000 (hereinafter referred to as “the 2000 HSC Code”), which has become mandatory under chapter X of the International Convention for the Safety of Life at Sea (SOLAS), 1974 (hereinafter referred to as “the Convention”),

NOTING ALSO article VIII(b) and regulation X/1.2 of the Convention concerning the procedure for amending the 2000 HSC Code,

HAVING CONSIDERED, at its eighty-fourth session, amendments to the 2000 HSC Code proposed and circulated in accordance with article VIII(b)(i) of the Convention,

1. ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the 2000 HSC Code, the text of which is set out in the Annex to the present resolution;
2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on [1 July 2009] unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world’s merchant fleet, have notified their objections to the amendments;
3. INVITES Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on [1 January 2010] upon their acceptance in accordance with paragraph 2 above;
4. REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;
5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

**DRAFT AMENDMENTS TO THE INTERNATIONAL CODE OF SAFETY
FOR HIGH-SPEED CRAFT, 2000**

**(IN ADDITION TO THE ANTICIPATED AMENDMENTS TO SOLAS CHAPTERS III AND IV
IN RELATION TO THE REVISION OF PERFORMANCE STANDARDS FOR SART)**

**CHAPTER 8
LIFE-SAVING APPLIANCES AND ARRANGEMENTS**

8.2 Communications

Existing sub-paragraph **8.2.1.2** is replaced as follows:

“8.2.1 Craft shall be provided with the following radio life-saving appliances:

- .2 at least one search and rescue locating device shall be carried on each side of every passenger high-speed craft and every cargo high-speed craft of 500 gross tonnage and upwards. Such search and rescue locating device shall conform to performance standards not inferior to those adopted by the Organization.* The search and rescue locating device shall be stowed in such locations that they can be rapidly placed in any one of the liferafts. Alternatively, one search and rescue locating device shall be stowed in each survival craft.”

**CHAPTER 14
RADIOCOMMUNICATIONS**

14.7 Radio equipment: general

Existing sub-paragraph **14.7.1.3** is replaced as follows:

“.3 a search and rescue locating device which:”

* Refer to the Recommendation on performance standards for survival craft radar transponders for use in search and rescue operations, adopted by the Organization by resolution A.802(19), [as amended] and the Recommendation on performance standards for survival craft AIS Search and Rescue transmitters (AIS-SART), adopted by the Organization by resolution MSC... (83).

ANNEX 14

**DRAFT AMENDMENTS NEEDED TO THE MODU CODE IN RELATION TO THE
REVISION OF PERFORMANCE STANDARDS FOR SART****MODU Code****Chapter 10***Life-saving appliances***10.13 Radio life-saving appliances**

Amend subparagraph **10.13.2** to read as follows:

“Search and rescue locating device

10.13.2 All lifeboats should carry a search and rescue locating device. In addition, at least two search and rescue locating devices should be available on the MODU, so stowed that they can be rapidly placed in any liferaft. All search and rescue locating devices should conform to performance standards not inferior to those adopted by the Organization.*”

* Refer to the Recommendation on performance standards for survival craft radar transponders for use in search and rescue operations, adopted by the Organization by resolution A.802(19), [as amended] and the Recommendation on performance standards for survival craft AIS Search and Rescue transmitters (AIS-SART), adopted by the Organization by resolution MSC... (83).

ANNEX 15

**DRAFT RESOLUTION MSC.[...](83)
(adopted on [.. 2007])**

**ADOPTION OF AMENDMENTS TO RESOLUTION A.802(19) ON PERFORMANCE
STANDARDS FOR SURVIVAL CRAFT RADAR TRANSPONDERS
FOR USE IN SEARCH AND RESCUE OPERATIONS**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution A.886(21) on Procedure for the adoption of, and amendments to, performance standards and technical specifications, by which the Assembly resolved that the function of adoption performance standards and technical specifications, as well as amendments thereto shall be performed by the Maritime Safety Committee,

HAVING CONSIDERED the recommendation made by the Sub-Committee on Radiocommunications and Search and Rescue at its eleventh session, and the Maritime Safety Committee at its eighty-third session,

1. ADOPTS the amendments to resolution A.802(19) on performance standards for survival craft radar transponders for use in search and rescue operations;
2. RECOMMENDS Governments to ensure that SARTs used in search and rescue operations installed on or after [1 January 2009] conform to the performance standards not inferior to those set out in annex to the present resolution.

ANNEX

**DRAFT AMENDMENTS TO RESOLUTION A.802(19) ON PERFORMANCE
STANDARDS FOR SURVIVAL CRAFT RADAR TRANSPONDERS
FOR USE IN SEARCH AND RESCUE OPERATIONS**

Amend section 2, paragraph 2.5 as follows:

“2.5 Horizontal polarization or circular polarization* should be used for transmission and reception.”

* New text, as highlighted.

ANNEX 16

**PRELIMINARY DRAFT GUIDELINES ON THE CONTROL OF SHIPS
IN AN EMERGENCY**

Table of contents:

- 1 Introduction**
- 2 Purpose**
- 3 Definitions**
- 4 General Guidance**
- 5 Guidelines for Coastal State**
- 6 Guidelines for Master**
- 7 Guidelines for Salvors**

Note: The proposed modifications against document NAV 52/17/5 are highlighted.

1 Introduction

1.1 It is recognized that, in an emergency, the lines of authority command and control must be clear and the responsibilities of each of the parties involved must be unambiguous.

1.2 There are two major issues:

- Having a clear chain of command in an emergency is essential if efforts to save life and property and prevent pollution are to be maximized; and
- There has been a growing tendency for those involved in an incident to be treated as if they have committed a crime; these guidelines will help to clarify one element of the problems leading to seafarers and others being criminalized.

1.3 Where safety of life is involved, the provisions of the SAR Convention should be followed. Where a ship is in need of assistance but safety of life is not involved, these guidelines should be followed.

2 Purpose of these guidelines

2.1 The purpose of these guidelines is to provide Member Governments, shipmasters, companies, salvors and others engaged in a maritime emergency with a framework of authority within which they will be expected to operate.

3 Definitions

Ship in need of assistance means a ship in a situation, apart from one requiring rescue of persons on board, that could give rise to loss of the vessel or an environmental or navigational hazard.

IAMSAR Manual means the International Aeronautical and Maritime Search and Rescue Manual.

Intervention Convention means the International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (1969) and the Protocol relating to Intervention on the High Seas in Cases of Pollution by Substances Other Than Oil (1973).

ISM Code means the International Safety Management Code, made mandatory under SOLAS chapter XI, regulation 3.1.

MRCC means the Maritime Rescue Co-ordination Centre.

MAS means the Maritime Assistance Service as defined in Assembly resolution A.950(23).

SAR Convention means the International Convention on Maritime Search and Rescue, 1979.

4 General Guidance

4.1 During the ~~S~~earch and ~~R~~escue (SAR) phase of a maritime emergency, there is an assumption within the SAR Convention that ~~all~~ co-ordination ~~of the SAR response~~ will be carried out either ~~from the shore~~ ~~by the RCC~~ or by an on-scene ~~commander~~ ~~co-ordinator~~ who will not normally be the master of the ship in distress. The SAR Convention and the IAMSAR Manual do not define the responsibilities of the master of the ship in distress. ~~h~~However, ~~the underlying premise is that he remains in command of his ship and~~ his co-operation with the SAR operation is assumed.

4.2 If, once the ~~Search and Rescue~~ SAR phase of an emergency is over, the ship is still in need of assistance, or a ship does not require evacuation but is in need of assistance, the role and responsibilities of the various parties are less clear.

ANNEX 17

PRELIMINARY TEXT OF DRAFT MSC CIRCULAR

**GUIDANCE ON CEASING REQUIREMENTS FOR NBDP RADIO TELEX
INSTALLATIONS ON BOARD CERTAIN SHIPS SAILING IN SEA AREAS A3**

1 The use of narrow-band radio telex (in the following named NBDP) in maritime MF and HF radiocommunications has for some years been decreasing. The shipborne NBDP equipment has in practice not been quite easy to operate, and due to the very limited use of NBDP it has therefore also been difficult for ship operators to maintain their experience on use of the equipment.

2 The Sub-Committee on Radiocommunications and Search and Rescue considered at its 9th meeting (February 2005) the matter and possible consequences. The Sub-Committee concluded, amongst other things, that:

- .1 there was no need to retain NBDP for the original reason, i.e. to overcome language difficulties;
- .2 an HF system able to transmit data from shore to ship was necessary for dissemination of MSI in sea areas A4;
- .3 there was a need for an HF general communication system able to transmit data for transmissions of observations and position reports from ships in sea areas A4;
- .4 NBDP carriage requirements in sea areas A3 could be deleted, provided that a suitable transition period was used and that current installations were not immediately invalidated by the deletion; and
- .5 due to the more robust propagation of NBDP compared to voice, NBDP could not immediately be discontinued in sea areas A4 as a distress follow-up communications.

3 Taking into account the limited use of MF and HF NBDP radio telex, it will probably be desirable for ship owners of existing ships sailing in A3 areas not to be enforced to keep existing HF NBDP equipment on board and to maintain the ship operator's experience in operating the NBDP equipment. Likewise, as the current MF/HF NBDP radio telex system is expected in few years time to be replaced by other suitable technology or technologies, it will be desirable for new ships choosing the HF A3 option not to be enforced to install NBDP equipment, which later on probably would be obsolete.

4 Member Governments might therefore, taking into account that reception of MSI broadcast from shore might for some ships be dependent on reception of MSI in form of HF radio telex messages or use of HF systems able to transmit data from shore to ship, consider encouraging:

- .1 existing ships sailing in sea areas A3 and using the HF option given in SOLAS regulation IV/10.2.1.3, to disconnect and take away their MF/HF NBDP radio telex installation; and
- .2 new ships choosing the HF A3 option not be required to install MF/HF NBDP radio telex equipment.

ANNEX 18

**LONG-RANGE IDENTIFICATION AND TRACKING OF SHIPS
PROVISIONAL LIST OF AGREEMENTS WHICH MAY BE REQUIRED**

<i>Agreement</i>				
<i>Party 1</i>	<i>Party 2</i>	<i>Purpose</i>	<i>Model</i>	<i>Comments</i>
The S-G acting on behalf of Contracting Governments*	IMSO as designated LRIT Co-ordinator, provided the IMSO Assembly ensures that the necessary legal framework and any needed administrative, financial and organizational arrangements are in place	Performance of functions of LRIT Co-ordinator	No	<p>Only one agreement is required and thus there is no need to develop models.</p> <p>The practice of the Organization has been that the S-G negotiates agreements between IMO and other organizations within the framework of the decisions of the competent IMO body, as necessary.</p> <p>The development of the agreement may commence once the related decisions of the forthcoming extra-ordinary session of the IMSO Assembly become known.</p> <p>In view of the increasing number of States becoming Contracting Governments, consideration will need to be given on how State which becomes Contracting Government after the conclusion of the agreement will be bound by the agreement.</p>

* Contracting Governments refers to Contracting Governments to the 1974 SOLAS Convention.

<i>Agreement</i>				
<i>Party 1</i>	<i>Party 2</i>	<i>Purpose</i>	<i>Model</i>	<i>Comments</i>
The S-G acting on behalf of Contracting Governments	Entity (State or public or private entity)	Provision of the International LRIT Data Centre	No	<p>Only one agreement is required since the operating assumption is that only one International LRIT Data Centre will be established and thus there is no need to develop models.</p> <p>To some extent the structure and content of the agreement will be dependant on who is providing the service (e.g., a State, a public or private entity).</p> <p>In addition, consideration will need to be given in case of private entities where they are established and where the actual centre (including any back-up systems) will be physically located.</p> <p>The question of protection of the information contained in the centre (or the exchange) from any form of legal process needs to be considered.</p> <p>It may require a separate agreement with the State where the centre (or exchange) will be physically located.</p> <p>The text of the agreement may need to be accepted by the expanded MSC before it is signed.</p>
The S-G acting on behalf of Contracting Governments	Entity (State or public or private entity)	Provision of the International LRIT Data Exchange	No	--- ditto ---

<i>Agreement</i>				
<i>Party 1</i>	<i>Party 2</i>	<i>Purpose</i>	<i>Model</i>	<i>Comments</i>
Contracting Government	International LRIT Data Centre	Services as LRIT Data Centre	Yes	The existence of a model agreement will enable the Contracting Governments which do not establish National or Regional LRIT Data Centres or are a party to a Co-operative one to establish a working relation with the International LRIT Data Centre in a short time using the recommended model agreement. Standardization required for the LRIT system to function.
The S-G acting on behalf of Contracting Governments	LRIT Data Centres (National, Regional, Co-operative and International)	Access to the LRIT Data Distribution Plan	[Yes]	Consideration should be given to establishing at the MSC level any needed arrangements and conditions and thus avoid the need for detailed agreements through which the matter will be regulated. Standardization required for the LRIT system to function.
The S-G acting on behalf of Contracting Governments	International LRIT Data Exchange	Access to the LRIT Data Distribution Plan	[Yes]	--- ditto ---

Contracting Government	National LRIT Data Centre	Provision of services	No	This is an internal issue between the Contracting Government concerned and the LRIT Data Centre.
Contracting Government	Regional LRIT Data Centre	Provision of services	No	This is an internal issue between the Contracting Governments establishing the LRIT Data Centre.

<i>Agreement</i>				
<i>Party 1</i>	<i>Party 2</i>	<i>Purpose</i>	<i>Model</i>	<i>Comments</i>
Contracting Government	National or Regional LRIT Data Centre providing services as Co-operative LRIT Data Centre	Provision of services	No	<p>This is an issue for negotiation between the Contracting Governments establishing the National or Regional LRIT Data Centre and the Contracting Government(s) seeking the provision of co-operative services.</p> <p>In the case of Regional LRIT Data Centre(s), there is a need to clarify whether the agreement will be between the interested Contracting Governments (as party 1) and the Contracting Governments establishing the data centre (as party 2) or with the Regional LRIT Data Centre as an entity (as party 2).</p> <p>To some extent, the model agreement between Contracting Governments and the International LRIT Data Centre may be of use.</p>

ANNEX 19**LRIT – BILLING AND COSTING ISSUES****Overview**

The *Ad Hoc* Working Group on Engineering Aspects of LRIT met from February 12-16 in London under the chairmanship of Sam Ryan (Canada). One of the items that was discussed under its Terms of Reference was the technical costing and billing standard.

The group discussed the various scenarios that might occur with respect to transactions to begin to determine where costing and billing issues may arise. Progress was made, however, it was clear to the group that further policy was required before more indepth analysis could be undertaken.

As part of the technical costing and billing standard work item, the group reviewed and discussed the eight billing questions included in MSC 82/WP.10, annex 2, as well as the billing responses contained in:

- COMSAR 11/14/2 Billing Responses, and
- COMSAR 11/14/5 Billing Responses.

While the group recognized that policy discussions and decisions would be taking place at COMSAR 11, it was determined that it would be useful to examine all areas of the system where cost is likely to occur, discuss the billing issues at each point, and provide advice to COMSAR where possible.

Further work will continue on the technical issues related to costing and billing both secretarially and at subsequent meetings of the *Ad Hoc* Working Group.

Review of COMSAR 11/14/2 and COMSAR 11/14/5

Michael Rambaut (CIRM) presented the COMSAR 11/14/2 paper, submitted by CIRM to investigate the issues surrounding the billing and costing of LRIT services and to suggest answers to the questions raised during the LRIT working group at MSC 82. Alex Weller (United States) then presented the COMSAR 11/14/5 paper submitted by the United States responding to questions raised in COMSAR 11/2/2 and MSC 82/WP.10, annex 2.

The subgroup then identified areas of commonality within the papers and highlighted issues where there was a divergence of opinion and discussed with a view to providing guidance to COMSAR where appropriate. Overall, the subgroup noted the high degree of commonality between the responses in the two papers, which was viewed as a positive development in the evolution of LRIT.

Following is the list of the eight questions, each with related Guidance to COMSAR 11 from the *Ad Hoc* Engineering Working Group:

Q1. *Is it intended that a Contracting Government will pay per transaction?*

R1. *Guidance to COMSAR*

The Ad Hoc Working Group supports the views put forward in COMSAR 11/14/2 and COMSAR 11/14/5 that Contracting Governments are likely to pay per transaction.

Q2. *Does a Contracting Government that does not request the system have to pay anything, including the start up costs of the International Data Centre?*

R2. *Guidance to COMSAR*

The Ad Hoc Working Group supports the views put forward in COMSAR 11/14/2 and COMSAR 11/14/5 that if Contracting Governments don't use the system, they don't pay for it, including the start-up costs.

Q3 *Can individual Contracting Governments profit by unilaterally setting prices for the provision of data?*

and

Q4. *How will a fair profit be determined for the various commercial entities that will be providing services within the LRIT System such as Application Service Providers?*

R3 and R4. *Guidance to COMSAR*

The Ad Hoc Working Group agrees that in order for the International LRIT System to work, service providers have to see a benefit in the form of profits, and supports the suggestion put forward by the United States in COMSAR 11/14/5 that the market should drive the profit margins for commercial entities, as well as the CIRM view that there should be fair and open competition.

The Ad Hoc Working Group also supports the view expressed in COMSAR 11/14/2 and COMSAR 11/14/5 that Contracting Governments should not be prevented from setting prices for the provision of data, provided that they do so on a fair, non-discriminatory, reasonable and equitable basis, and that the audit process conducted by the LRIT Co-ordinator will then provide visibility to differential charges (as opposed to profits) being made by various Contracting Governments.

The subgroup did not reach any consensus as to whether there should be any standardization of the profit element in any part of the LRIT system.

Q5. Since SAR services do not pay for the LRIT information they request and receive, how will this be included in the overhead costs for the entire LRIT system?

R5. Guidance to COMSAR

The Ad Hoc Working Group supports the view expressed in COMSAR 11/14/2 and COMSAR 11/14/5 that the costs of LRIT are to be free of charge to SAR authorities as stipulated in the performance standard and should therefore be treated as an overhead cost of the LRIT system, distributed across the entire system to be borne by the Contracting Governments that request LRIT data for non-SAR purposes, just as other overhead items are paid.

It was noted that there are precedents within IMO for limiting cost exposure in relation to the use of communications systems for SAR purposes. Whilst these precedent arrangements do not apply directly to the LRIT case, they may indicate a direction in which the LRIT solution could be sought. The group therefore considered that:

- 1) All LRIT reports carried by any CSP must be paid for at the standard rate; noting that no individual report will be identifiable as being for SAR purposes at that point in the system;*
- 2) The provision of LRIT data free of charge for SAR purposes to a SAR service should be limited, in order to constrain the cost of the provision of that information; and*
- 3) One possible way to limit such cost exposure, whilst providing all the information needed to begin a SAR operation, would be to prescribe the information provided free to an initial poll of all ships within a [fixed] [suitable] radius of the SAR datum position.*

Q6. Will the cost per transaction be the same for all purchasers of LRIT information at a given data centre?

R6. Guidance to COMSAR

The Ad Hoc working group supports the view that there will be variations in cost between providers incurred at various points in the LRIT system and that it is a matter of policy to determine:

- whether differential pricing is desirable;*
- whether cost recovery and/or profit is desirable; and*
- the most desirable billing mechanism.*

The Ad Hoc working group is committed to undertaking further work in the development of possible billing options to provide guidance to the Committee for consideration at the Intersessional MSC Working Group.

The Ad Hoc working group also notes that information would be subject to audit by the LRIT Co-ordinator and review by the Committee, which will provide a check and balance to the system. There may be merit in adopting a wait-and-see approach that allows market forces to establish pricing with the introduction of regulation by the Committee only if and as required.

Q7. For Data Centres, who pays for position reports that are not requested?

R7. Guidance to COMSAR

The Ad Hoc Working Group supports the view that this question is moot given that regulation V/19-1 states that all ships to which the regulation applies must transmit 4 positions per day. Consequently, and as per the earlier response under R2, Contracting Governments having their own national DC, or co-opting into a Regional or Co-operative Data Centre will bear all, or a proportion of co-opting, of any associated costs (of obtaining the baseline 4 position reports per day). Those Contracting Governments whose ships report to the IDC might have no operational costs, with the associated costs being borne by the International LRIT System. In the case of the IDC, there may be a number of reports per day unrequested by Flag States, the costs of which will have to be distributed across the system (as overhead).

For the system to work efficiently it is necessary that the number of unrequested and unpaid-for reports be minimized.

Q8. How will the costs of the LRIT Co-ordinator as well as the IDE and IDC be funded?

R8. Guidance to COMSAR

The Ad Hoc Working Group supports the view that the costs of the LRIT Co-ordinator are overhead costs, but seeks further policy direction from IMO on how the IDE and the IDC should be funded and other overhead costs should be dealt with in the LRIT system. The cost of oversight to industry should be sensible, non-discriminatory, provide value for money, and be applied in a fair and reasonable way.

Conclusions

This had been the first session at which costing and billing issues were considered in detail. The Group had attempted to analyse the key issues, and identify the points in the LRIT network where costs would arise, by undertaking a review of each of the possible question and response scenarios in the operational LRIT system. This analysis had been generally successful but it had brought into focus the high level of complexity in the proposed system design. More work remains to be done to reach a full understanding of the costs, billing and cash flows through the LRIT network. Much of this analysis can be done by correspondence between sessions of the Group. It had not been possible at this session to develop any realistic estimates of actual cost levels for any of the cost elements identified. The Group looks forward to an early resolution to outstanding policy issues related to costing and billing in order to ensure the timely implementation of the LRIT system.

ANNEX 20

**PROPOSED REVISED WORK PROGRAMME OF THE SUB-COMMITTEE
AND PROVISIONAL AGENDA FOR COMSAR 12**

		Target completion date/number of sessions needed for completion	Reference
1	Global Maritime Distress and Safety System (GMDSS)		COMSAR 10/16, section 3 COMSAR 11/18, section 3
	.1 matters relating to the GMDSS Master Plan	Continuous	COMSAR 10/16, paragraphs 3.1 to 3.4 COMSAR 11/18, paragraphs 3.1 to 3.4
	.2 exemptions from radio requirements	Continuous	COMSAR 4/14, paragraphs 3.38 to 3.41
2	Promulgation of maritime safety information (MSI) (in co-operation with ITU, IHO, WMO and IMSO)		
	.1 operational and technical co-ordination provisions of maritime safety information (MSI) services, including review of the related documents	Continuous	COMSAR 10/16, paragraphs 3.5 to 3.29 COMSAR 11/18, paragraphs 3.5 to 3.22
3	ITU World Radiocommunication Conference matters	Continuous	COMSAR 10/16, paragraphs 4.3 to 4.6 and 4.13 to 4.20 COMSAR 11/18, paragraphs 4.3 to 4.16
4	Radiocommunication ITU-R Study Group 8 matters	Continuous	COMSAR 10/16, paragraphs 4.1, 4.2 and 4.9 to 4.12 COMSAR 11/18, paragraphs 4.1 and 4.2
5	Satellite services (Inmarsat and COSPAS-SARSAT)	Continuous	COMSAR 10/16, section 5 COMSAR 11/18, section 5

- Notes:**
- 1 "H" means a high priority item and "L" means a low priority item. However, within the high and low priority groups, items have not been listed in any order of priority.
 - 2 Items printed in bold letters have been selected for the provisional agenda for COMSAR 12.

Sub-Committee on Radiocommunications and Search and Rescue (COMSAR) (continued)

		Target completion date/number of sessions needed for completion	Reference
6	Matters concerning search and rescue, including those related to the 1979 SAR Conference and the implementation of the GMDSS		
.1	harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters	2007 [2008]	COMSAR 10/16, paragraphs 6.1 to 6.16 COMSAR 11/18, paragraphs 6.1 to 6.26
.2	plan for the provision of maritime SAR services, including procedures for routing distress information in the GMDSS	Continuous	COMSAR 10/16, paragraphs 6.27 to 6.41 COMSAR 11/18, paragraphs 6.27 to 6.48
.3	revision of the IAMSAR Manual	Continuous	MSC 71/23, paragraph 20.2; COMSAR 10/16, section 8 COMSAR 11/18, section 8
.4	medical assistance in SAR services	2007 [2008]	MSC 75/24, paragraph 22.29; COMSAR 10/16, paragraphs 6.42 to 6.49 COMSAR 11/18, paragraphs 6.49 to 6.51
7	Casualty analysis (co-ordinated by FSI)	Continuous	MSC 70/23, paragraphs 9.17 and 20.4; MSC 78/26, paragraph 24.8
H.1	Amendments to SOLAS chapter IV pursuant to the criteria set out in resolution A.888(21)	3 sessions	MSC 72/23, paragraph 21.33.1.2

Sub-Committee on Radiocommunications and Search and Rescue (COMSAR) (continued)

		Target completion date/number of sessions needed for completion	Reference
H.2	Developments in maritime radiocommunication systems and technology	2007 [2008]	MSC 74/24, paragraph 21.25.1; COMSAR 10/16, section 7 COMSAR 11/18, section 7
H.3	Revision of the performance standards for SART	2007	MSC 78/26, paragraph 24.26; COMSAR 10/16, section 12
H.4	Amendments to COLREGs Annex IV relating to distress signals (co-ordinated by NAV)	2007	MSC 81/25, paragraphs 23.24 and 23.38
H.5	Guidelines on the control of ships in an emergency (co-ordinated by NAV)	2007	MSC 81/25, paragraphs 23.22 and 23.28 to 23.32
H.6	Guidelines for uniform operating limitations of high-speed craft (co-ordinated by DE)	2008	MSC 81/25, paragraph 23.45
H.7	Development of an e-navigation strategy (co-ordinated by NAV)	2008	MSC 81/25, paragraphs 23.34 to 23.37
L.1	Replacements for use of NBDP (radio telex) for maritime distress and safety communications in maritime MF/HF bands	2008	MSC 81/25, paragraph 23.23

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PROPOSED PROVISIONAL AGENDA FOR COMSAR 12*

- Opening of the session
- 1 Adoption of the agenda
 - 2 Decisions of other IMO bodies
 - 3 Global Maritime Distress and Safety System (GMDSS)
 - .1 matters relating to the GMDSS Master Plan
 - .2 operational and technical co-ordination provisions of maritime safety information (MSI) services, including review of the related documents
 - 4 ITU maritime radiocommunication matters
 - .1 Radiocommunication ITU-R Study Group 8 matters
 - .2 ITU World Radiocommunication Conference matters
 - 5 Satellite services (Inmarsat and COSPAS-SARSAT)
 - 6 Matters concerning search and rescue, including those related to the 1979 SAR Conference and the implementation of the GMDSS
 - .1 harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters
 - .2 plan for the provision of maritime SAR services, including procedures for routing distress information in the GMDSS
 - .3 medical assistance in SAR services
 - 7 Developments in maritime radiocommunication systems and technology
 - 8 Revision of the IAMSAR Manual
 - 9 Replacements for use of NBDP (radio telex) for maritime distress and safety communications in maritime MF/HF bands
 - 10 Guidelines for uniform operating limitations of high-speed craft
 - 11 Development of an e-navigation strategy
 - 12 Work programme and agenda for COMSAR 13
 - 13 Election of Chairman and Vice-Chairman for 2009
 - 14 Any other business
 - 15 Report to the Maritime Safety Committee

* Agenda item numbers do not necessarily indicate priority.