



SUB-COMMITTEE ON
RADIOCOMMUNICATIONS AND
SEARCH AND RESCUE
7th session
Agenda item 22

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REPORT TO THE MARITIME SAFETY COMMITTEE

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1 GENERAL

1.1 The Sub-Committee on Radiocommunications and Search and Rescue held its seventh session from 13 to 17 January 2003 at the Headquarters of the Organization under the Chairmanship of Mr. V. Bogdanov (Russian Federation), the Vice-Chairman, Mr. U. Hallberg (Sweden) was also present.

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

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|--|--------------------|
| ALGERIA | LATVIA |
| ARGENTINA | LEBANON |
| AUSTRALIA | LIBERIA |
| BAHAMAS | LITHUANIA |
| BANGLADESH | MALAYSIA |
| BELGIUM | MALTA |
| BRAZIL | MARSHALL ISLANDS |
| CANADA | MEXICO |
| CHILE | MOROCCO |
| CHINA | NETHERLANDS |
| COLOMBIA | NIGERIA |
| CROATIA | NORWAY |
| CUBA | PANAMA |
| CYPRUS | PERU |
| DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA | PHILIPPINES |
| DENMARK | POLAND |
| ECUADOR | PORTUGAL |
| EGYPT | REPUBLIC OF KOREA |
| ESTONIA | ROMANIA |
| FINLAND | RUSSIAN FEDERATION |
| FRANCE | SINGAPORE |
| GERMANY | SOUTH AFRICA |
| GREECE | SPAIN |
| INDONESIA | SWEDEN |
| IRAN | TURKEY |
| IRELAND | UKRAINE |
| ISRAEL | UNITED KINGDOM |
| ITALY | UNITED STATES |
| JAPAN | URUGUAY |
| | VENEZUELA |

and by the following Associate Member of IMO:

HONG KONG, China

1.3 The following United Nations specialized agencies and intergovernmental and non-governmental organizations were also represented:

UNITED NATIONS HIGH COMMISSIONER FOR REFUGEES (UNHCR)
INTERNATIONAL TELECOMMUNICATION UNION (ITU)
INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO)

WORLD METEOROLOGICAL ORGANIZATION (WMO)
INTERNATIONAL HYDROGRAPHIC ORGANIZATION (IHO)
EUROPEAN SPACE AGENCY (ESA)
COMMISSION OF THE EUROPEAN COMMUNITIES (EC)
INTERNATIONAL MOBILE SATELLITE ORGANIZATION (IMSO)
COSPAS-SARSAT
INTERNATIONAL CHAMBER OF SHIPPING (ICS)
INTERNATIONAL CONFEDERATION OF FREE TRADE UNIONS (ICFTU)
INTERNATIONAL RADIO-MARITIME COMMITTEE (CIRM)
INTERNATIONAL ASSOCIATION OF CLASSIFICATION SOCIETIES (IACS)
OIL COMPANIES INTERNATIONAL MARINE FORUM (OCIMF)
INTERNATIONAL ASSOCIATION OF INSTITUTES OF NAVIGATION (IAIN)
INTERNATIONAL FEDERATION OF SHIPMASTERS' ASSOCIATIONS (IFSMA)
INTERNATIONAL LIFEBOAT FEDERATION (ILF)
INTERNATIONAL COUNCIL OF CRUISE LINES (ICCL)
INTERNATIONAL ASSOCIATION OF DRY CARGO SHIPOWNERS
(INTERCARGO)
INTERNATIONAL SAILING FEDERATION (ISAF)
THE INTERNATIONAL MARINE CONTRACTORS ASSOCIATION (IMCA)
WORLD NUCLEAR TRANSPORT INSTITUTE (WNTI)

1.4 The Secretary-General, welcoming the participants, referred to the various activities undertaken by the Organization during 2002 when, in addition to the regular meetings of the various IMO bodies, two international conferences had been successfully concluded, namely:

- the Diplomatic Conference to adopt a Protocol to the Athens Convention, 1974; and
- the Diplomatic Conference on Maritime Security.

Referring to the Diplomatic Conference on Maritime Security, the Secretary-General expressed satisfaction with its successful conclusion in all respects providing for a well-considered regulatory regime on which to build a suitable maritime security infrastructure aimed at preventing and suppressing acts of terrorism against shipping. The Conference, which took place from 9 to 13 December 2002, was conducted in parallel with MSC 76 and the decisions of both meetings relevant to the work programme of the Sub-Committee had been brought to the attention of this session.

He recalled that one of the issues referred to the Sub-Committee by MSC 76 for consideration and advice concerned the **places of refuge**, an issue which came to prominence when the oil tanker **Prestige** sank off the north-west coast of Spain in November 2002, fortunately with no loss of life. When he had been made aware of the accident, the Secretary-General had expressed sympathy for the victims of the accident and regretted the impact it had had on the marine environment and on the fishing and other industries affected by the oil which had escaped from the stricken vessel. He subsequently urged all those involved, particularly the flag State and classification society concerned, to finalize their reports on the investigation into the casualty as soon as possible and to submit their findings to IMO without delay so that the Organization could respond promptly to any recommendation for remedial action which might be identified so that the proposals of all interested parties would be brought into the IMO system as expeditiously and effectively as possible.

The Secretary-General then reiterated his firm position that IMO should always and without exception be regarded as the **only** forum where safety and pollution prevention standards affecting international shipping should be considered and adopted and that regional, let alone unilateral, application to foreign flag ships of national requirements which went beyond the IMO standards would be detrimental to international shipping and to the functioning of the Organization itself and should be avoided.

In his concluding remarks at MSC 76, the Secretary-General had also stated that the oversight of the United Nations Convention on the Law of the Sea was not the responsibility of IMO. However, UNCLOS had awarded certain important competences to the Organization and he, therefore, would welcome debate in IMO on any matters relevant to the **Prestige** incident which laid within the Organization's area of competence.

Because of the broad interest which that accident had generated, especially in the region most affected, and the wide publicity the media had given to it, MSC 76 had decided to relax to 15 February 2003 the deadline for the submission of proposals on new work programme items on issues relating to the **Prestige** accident and also to include a separate item on **Places of refuge** in the agenda for MSC 77.

With respect to places of refuge, MSC 76 had instructed the Sub-Committee to review the outcome of NAV 48, namely the draft Guidelines on places of refuge for ships in need of assistance, along with the associated draft Assembly resolution and the draft Assembly resolution on Establishment of Maritime Assistance Services, with a view to establishing whether there was any conflict with existing SAR procedures. The Sub-Committee's advice on this and other aspects of the issue would be of great value to MSC 77 as well as to NAV 49, which had been authorized by the MSC to finalize the two draft resolutions before submitting them directly to the twenty-third session of the Assembly for adoption.

As part of the measures to enhance maritime security and to facilitate the work of the Diplomatic Conference, MSC 76 had adopted a resolution on Performance standards for a **ship security alert system** and had asked the Sub-Committee to consider them and advise MSC 77 whether any amendments were needed.

Following the adoption by the last Assembly of resolution A.920 on **Review of safety measures and procedures for the treatment of persons rescued at sea** the Sub-Committee had given preliminary consideration to the issue at the last session and the Secretary-General reiterated his main concern with respect to incidents involving persons rescued at sea and/or asylum seekers, refugees and stowaways that, unless the matter was considered in all its aspects and appropriate action was taken, there might be a negative impact on the integrity of the search and rescue system which the Organization had put in place globally to the benefit of those found in distress at sea. Since the Sub-Committee's last session, two sessions of MSC and a number of other meetings had addressed, in detail, the treatment of persons rescued at sea. A meeting of United Nations Agencies and Programmes, had taken place at UNHCR Headquarters in July 2002, to bring all those bodies together to consider a co-ordinated approach to the issue; as well as an informal meeting held in Sweden, in September 2002, to consider specific points identified by MSC 75. The reports of both meetings had been referred to the Sub-Committee for consideration and action, including the finalization of draft amendments to SOLAS chapter V and the SAR Convention for consideration by MSC 77 for approval and formal adoption at MSC 78; and also the preparation of a progress report on the matter, which, through MSC 77 and the Council, was expected to be submitted to A 23 in accordance with resolution A.920(22).

The Secretary-General then referred to the authorization of MSC 75 to the Sub-Committee to amend, if necessary, taking into account the outcome of the ITU second Conference Preparatory Meeting, the **IMO position on matters related to maritime services** for submission to the World Radiocommunication Conference scheduled to be held in Geneva in June/July 2003.

He then paid tribute to the Joint ICAO/IMO Working Group on Harmonization of Aeronautical and Maritime SAR, which, since its establishment and first meeting in 1993, had contributed significantly to the development of a **harmonized regulatory and administrative basis for a global SAR system** by preparing amendments to the Maritime SAR Convention, the IAMSAR Manual and Annex 12 to the ICAO Convention as well as by developing a number of associated guidelines. The Sub-Committee would consider the report of the ninth session of the Joint Working Group, which had been held in Hong Kong, China, in September/October 2002 and, in particular, such issues as **Mass Rescue Operations** and proposed amendments to the IAMSAR Manual.

In addition to the topics highlighted above, the Secretary-General identified the following important items on the Sub-Committee's agenda:

- **large passenger ship safety;**
- **bridge-to-bridge communications;**
- **maritime radiocommunication systems and technology;**
- **procedure for recognition of mobile-satellite systems;**
- **revision of performance standards for NAVTEX equipment;**
- **harmonization of GMDSS requirements for radio installations on board SOLAS ships; and**
- **review of performance standards as far as radiotelephone apparatus means of attachment are concerned.**

The Secretary-General, outlining that the Sub-Committee had a very heavy agenda and some complex issues to tackle, expressed confidence that it would succeed in making necessary technical and operational contributions to IMO's efforts to improve the safety of life at sea, maritime security and environmental protection.

Adoption of the agenda

1.5 The Sub-Committee adopted the agenda as set out in annex 4 to document COMSAR 7/2/2 which, together with a list of documents considered under each agenda item, is set out in annex 1. The Sub-Committee agreed, in general, to be guided in its work by the annotations to the provisional agenda contained in document COMSAR 7/1/1, as amended.

2 DECISIONS OF OTHER IMO BODIES

2.1 The Sub-Committee noted, in general, decisions and comments (COMSAR 7/2, COMSAR 7/2/1 and COMSAR 7/2/2) pertaining to its work made by DE 45, NAV 48, MSC 75 and MSC 76 and took these into account in its deliberations when dealing with relevant agenda items.

2.2 The Sub-Committee noted, in particular, the instruction by MSC 72 (MSC 72/23, paragraph 15.16) to all sub-committees to apply the Human Element Analysing Process (HEAP), given in MSC/Circ.878/MEPC/Circ.346, as a matter of priority in their work and the request to provide information on experience gained during application of that process with a view to further improvements, which the Committee would take into account in its work, as appropriate.

2.3 The Sub-Committee took account of that MSC 76 had noted (MSC 76/2/Add.1, paragraph 8) that, in considering document C 89/12/3 (Cyprus, Philippines and ICFTU), C 89 had instructed the Committees and through them, their subsidiary bodies, when developing new instruments or amendments to existing ones, to ensure that these are compatible, and not in conflict, with other instruments or international law and that they should not be interpreted or used in a way that conflicts with such instruments, in particular, those addressing human rights. The Committee instructed the Secretariat to inform the sub-committees of the Council's decision and to remind the Committee and sub-committees of this decision as and when necessary.

3 GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS)

MATTERS RELATING TO THE GMDSS MASTER PLAN

3.1 The Sub-Committee noted that, in accordance with its instructions and using information provided by Governments after January 2002, the Secretariat had issued Corr.5, Corr.6 and Corr.7 to amend GMDSS/Circ.8 (Master Plan) in April, October and November 2002, respectively.

3.2 The Secretariat informed the Sub-Committee that since issuing GMDSS/Circ.8/Corr.6 and Corr.7, it had received the updated information from Argentina, France, the Islamic Republic of Iran, Lithuania, Norway, Ukraine and Uruguay mostly regarding installation of sea Area A1/A2 and NAVTEX facilities. The Secretariat planned to issue GMDSS/Circ.8/Corr.8 in April/May 2003.

3.3 The Sub-Committee noted document COMSAR 7/3 (Finland) informing on public correspondence services provided by Turku Radio. In particular, it was noted that calls were transmitted in the VHF and MF frequency bands. The services commenced on 21 June 2002 and will be continued on a trial bases until further announcement.

3.4 Noting the above information, the Sub-Committee 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 have not already done it.

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

General

3.5 The Sub-Committee noted that, having recalled that MSC 75, taking into account the request of some delegations at COMSAR 6 that they needed more time to review the proposed amendments to the International Safety Manual and having agreed to consider them for adoption at MSC 76, the Committee had considered:

- .1 document MSC 76/22/6 (Secretariat), containing the proposed amendments to the International SafetyNET Manual together with the relevant draft MSC circular; and
- .2 document MSC 76/22/9 (Russian Federation), proposing to retain, in the Manual, the possibility of addressing not only SAR but also navigational and meteorological warnings/messages to the temporary rectangular or circular area(s) defined by the originator (SafetyNET provider), as described in the existing Annex 6 ("Message addressing") to the Manual.

Following discussion, the MSC 76 adopted the proposed amendments and approved the annotated MSC/Circ.1064 on Amendments to the International SafetyNET Manual, deciding that the amendments should enter into force on 1 January 2004 and instructed COMSAR 7 to further consider document MSC 76/22/9 and submit any comments and proposals to MSC 77.

3.6 The Sub-Committee briefly considered documents COMSAR 7/3/1 (IHO) containing a revised list of NAVAREA Co-ordinators; MSC 76/22/9 (Russian Federation) concerning draft amendments to the International SafetyNET Manual and noted COMSAR 7/INF.3 providing a report of the Chairman, International NAVTEX Co-ordinating Panel.

3.7 In order to consider the documents indicated in paragraph 3.6 above in detail, the Sub-Committee established the Operational Working Group (WG 3) under the Chairmanship of Mr. R. Swanson (United States) and instructed it to prepare:

- .1 a draft COMSAR circular - List of NAVAREA Co-ordinators, revoking COMSAR/Circ.24;
- .2 comments, proposals in light of document MSC 76/22/9; and
- .3 any recommendations and/or proposals for improving MSI services,

for consideration at Plenary.

Report of the Operational Working Group (WG 3)

3.8 Having received and considered the report of the Working Group (COMSAR 7/WP.3), the Sub-Committee approved it, in general, and took action as summarized hereunder.

List of NAVAREA Co-ordinators

3.9 The Sub-Committee, in amending COMSAR/Circ.24 – List of NAVAREA Co-ordinators, approved the draft COMSAR circular and instructed the Secretariat to issue it as COMSAR/Circ.30. The Committee was invited to endorse the action taken.

Amendments to the International SafetyNET Manual

3.10 The Sub-Committee noted that the diagram of NAVAREA/METAREA on page 7, figure 3 in the International SafetyNET Manual was incorrect; specifically the boundary between NAVAREA XI and XIII was incorrectly shown in the south-western part of NAVAREA XIII. This error was also reflected in the current Inmarsat-C MES software and in the coding of the current EGC receivers with the implication that the NAVAREA XIII messages are not received properly throughout NAVAREA XIII.

3.11 The Sub-Committee agreed that the diagram should be replaced. The impact of this change upon existing Inmarsat-C equipment was such that only new Inmarsat-C equipment, produced after (1 January 2005) should incorporate this change. Existing equipment should not have to be modified. Consequently, the Sub-Committee further agreed that, contrary to current operational guidelines, the facility for addressing messages to temporary geographical areas noted in paragraph 4.5 of the Manual, might be exceptionally used in this specific area for navigational warnings whilst this problem existed and to this effect prepared the draft MSC/Circ.1064/Add.1, given in annex 2, and invited MSC 77 to approve it.

3.12 The Sub-Committee instructed the Secretariat to include the correct diagram of NAVAREA/METAREA referred to in paragraph 3.10 when the revised International SafetyNET Manual was published to take account of the adopted amendments given in MSC/Circ.1064. The Committee was invited to endorse the aforementioned actions of the Sub-Committee on the issue.

Report by the Chairman of the International NAVTEX Co-ordinating Panel

3.13 The Sub-Committee also considered the report by the Chairman of the International NAVTEX Co-ordinating Panel (COMSAR 7/INF.3) on the status of NAVTEX services world-wide and the issues currently being addressed by the Panel and noted that, the work of the Panel continued to be dominated by issues relating to interference between stations operating on the International NAVTEX service. As well as addressing specific instances of interference, the panel continued to work with concerned Administrations and other organizations on measures to prevent interference. Such measures included working with the World Meteorological Organization through their Expert Team on Maritime Safety Services to examine the possibility of introducing standard abbreviations and formatting for the transmission of meteorological forecasts world-wide with a view to shortening these messages. Also reducing the volume of data broadcast on the international NAVTEX service by encouraging Administrations to transfer national language and national requirements data to national broadcasts. The target date of this migration remains 1 January 2005 in accordance with COMSAR/Circ.28, however, the Panel expressed concern that there was currently little momentum from the relevant Administrations to meet this target date.

PROCEDURES FOR RESPONDING TO DSC ALERTS

3.14 The Sub-Committee recalled that, endorsing a proposal by COMSAR 4, MSC 72 had decided to include, in the Sub-Committee's work programme, a new high priority item on "Procedures for responding to DSC alerts", with 2 sessions needed to complete the item.

MSC 74 concurred with a proposal by COMSAR 5 and included the item "Procedures for responding to DSC alerts" to the provisional agenda for COMSAR 6.

MSC 74 endorsed the COMSAR 5's action in issuing COMSAR/Circ.25 on Procedure for responding to DSC distress alerts by ships, to revoke COMSAR/Circs.2 and 21.

3.15 The Sub-Committee also recalled that COMSAR 6 had noted the *ad-hoc* group view that COMSAR/Circ.25 on Procedures for responding to distress alerts by ships was still relevant as guidance to operators aboard ships.

COMSAR 6 agreed that Recommendation ITU-R M.541-8 on Operational procedures for the use of digital selective calling equipment in the Maritime Mobile Service was slightly out of alignment with COMSAR/Circ.25 and instructed the Secretariat to inform ITU WP 8B that

changes to Recommendation ITU-R M.541-8 were needed to bring it into alignment with COMSAR/Circ.25.

3.16 Having noted the above information and taking into account that there were no substantial documents received under this agenda item for two consecutive sessions, the Sub-Committee invited MSC 77 to delete the agenda item "Procedures for responding to DSC alerts" from the Sub-Committee's work programme.

REPORT OF THE 12TH SESSION OF THE BALTIC/BARENTS SEA REGIONAL CO -OPERATION ON THE GMDSS

3.17 The Sub-Committee noted COMSAR 7/INF.2 (Poland) reporting on the outcome of the 12th session of the Baltic/Barents Sea Regional Co-operation on the GMDSS (BBRC/GMDSS-12) held in Gdynia, Poland, from 1 to 3 October 2002.

4 ITU MARITIME RADIOCOMMUNICATION MATTERS

RADIOCOMMUNICATION ITU-R STUDY GROUP 8 MATTERS

General

4.1 The Sub-Committee noted that MSC 75 had endorsed the COMSAR 6 action in instructing the Secretariat to convey a liaison statement concerning amendments to Recommendation ITU-R M.493-10 to the ITU WP.8B meeting in May 2002.

The IMO liaison statement was issued at ITU-R as document 8B/206-E.

ITU WORLD RADIOCOMMUNICATION CONFERENCE MATTERS

General

4.2 The Sub-Committee noted that MSC 75 had approved the IMO position on the World Radiocommunication Conference 2003 (WRC-03) agenda items on matters concerning maritime services, as prepared by COMSAR 6, for submission first to the Conference Preparatory Meeting (CPM02-2) (to be held in Geneva, Switzerland, in November 2002) and subsequently to WRC-03 (re-scheduled to meet in Geneva, Switzerland, in June/July 2003).

The Committee instructed the Secretariat to convey the IMO position to CPM02-2 and report the outcome to COMSAR 7, which could, if necessary, amend/adjust the IMO position for submission to WRC-03.

Establishment of a Working Group (WG 2)

4.3 In order to consider document COMSAR 7/4 (Secretariat) concerning the outcome of the second ITU Conference Preparatory Meeting (CPM02-02) and analyse the IMO position in light of that outcome, the Sub-Committee established the Technical Working Group (WG 2) under the Chairmanship of Mr. M. Rambaut (United Kingdom) and instructed it, taking into account comments made in Plenary, to:

- .1 amend/adjust, if necessary, the IMO position to WRC-03; and

.2 provide appropriate comments and/or recommendations,
for consideration by Plenary.

Report of the Technical Working Group (WG 2)

4.4 Having received and considered the report of the Technical Working Group (COMSAR 7/WP.1), the Sub-Committee approved it, in general, and took action as indicated hereunder.

4.5 The Sub-Committee agreed that no amendments and/or adjustments were needed to the IMO position and instructed the Secretariat to convey it to WRC-03. The Committee was invited to endorse the action taken.

4.6 In considering the IMO position to WAC-03, the Sub-Committee pointed out that in respect of using AIS on SAR aircraft there was a need to develop provision for a standard format of maritime mobile identification numbers. This format should be entirely different from MMSI used for ships, group calls and coast stations. One example of such format could be as follows:

- .1 111 MID X₁ X₂ X₃ where 111 indicates that the following mobile identification number is for aircraft used in search and rescue services.

4.7 The Secretariat was instructed to convey the operational requirement given in paragraph 4.6 above to the Study Group 8 for consideration and advice. The Committee was invited to endorse the action taken.

5 SATELLITE SERVICES (INMARSAT AND COSPAS-SARSAT)

COSPAS-SARSAT SERVICES

5.1 Observer from COSPAS-SARSAT reported (document COMSAR 7/5) on the COSPAS-SARSAT system status, in particular the following:

- .1 as at November 2002, the COSPAS-SARSAT space segment was composed of seven satellites in polar orbit and three geostationary satellites. The geostationary satellite MSG-1 of the EUMETSAT organization was launched in August 2002 and is undergoing post-launch test;
- .2 as at November 2002, the COSPAS-SARSAT Ground Segment comprised 38 operational LEOLUTs, 9 GEOLUTs and 24 MCCs;
- .3 over 284,000 distress beacons operating at 406 MHz and 680,000 of the older generation 121.5 MHz beacons were in service at the beginning of 2002. Two channels (406.025 MHz and 406.028 MHz) were open for use by COSPAS-SARSAT beacons;
- .4 COSPAS-SARSAT continued to collect data on false alerts and provided statistics on 406 MHz false alerts by category, as well as SAR false alert rate and beacon false alert rate for year 2001;

- .5 COSPAS-SARSAT had been investigating beacon technologies and developments in LUT processing performance that would allow the production at low-cost 406 MHz beacons without compromising the system performance. The advances in LUT design would permit a change of the beacon medium-term frequency stability requirements without affecting the performance of the COSPAS-SARSAT System, particularly in terms of Doppler location accuracy;
- .6 COSPAS-SARSAT Council at its 29th session in October 2002 agreed in principal with an amendment to the 406 MHz beacon specification that would allow for a change to the 406 MHz beacon frequency stability requirement. An amendment to the 406 MHz beacon specification would be approved in 2003;
- .7 at the 29th session, COSPAS-SARSAT decided to further investigate the technical, operational and funding requirements for an international 406 MHz beacon database; and
- .8 three Medium Earth Orbit SAR (MEOSAR) system providers, i.e. GPS, GLONASS and Galileo, have confirmed that their systems would be fully compatible with the existing COSPAS-SARSAT 406 MHz beacons. Nevertheless, formal commitments to provide and maintain operational MEOSAR systems have not yet been finalized by the United States, the European Commission or the Russian Federation.

5.2 It was also reported that 2002 had marked the 20th anniversary of the first COSPAS-SARSAT satellite launch and the first documented rescue made with the assistance of COSPAS-SARSAT distress alert data. COSPAS-SARSAT alert data had assisted in rescuing more than 15,000 persons world-wide.

5.3 The Sub-Committee also noted document COMSAR 7/5/1 (COSPAS-SARSAT) providing a brief description of the COSPAS-SARSAT 406 MHz Frequency Management Plan.

COSPAS-SARSAT has determined that the best way to ensure that the distress beacon message traffic does not exceed the System capacity in any portion of the available frequency band, is to divide the 406.0 – 406.1 MHz frequency band into channels, and to open the channels for beacon production as demand dictates.

Currently three 406 MHz channels have been opened for use in the COSPAS-SARSAT System: "Channel A" at 406.022 MHz is reserved for System reference beacons and "Channels B and C" at 406.025 and 06.028 MHz, respectively, are used for operational beacons.

The COSPAS-SARSAT 406 MHz Frequency Management Plan (document C/S T.012) approved at the October 2002 session of Council describes the policies, procedures and detailed technical analyses adopted by COSPAS-SARSAT for managing the use of the 406.0 – 406.1 MHz frequency band.

The COSPAS-SARSAT Council decisions in respect of COSPAS-SARSAT's use of the 406 MHz band are summarized in the 406 MHz Channel Assignment Table provided in the annex to document COMSAR 7/5/1.

5.4 As a supplement to the information submitted in document COMSAR 7/5, the delegation of Argentina informed the international maritime community that as from January 2002 the Republic of Argentina had become a part of the COSPAS-SARSAT Organization as a Ground Segment Provider.

Under a project undertaken jointly by the national air and maritime SAR authorities, which are the Argentinean Air Force and the Argentinean Navy respectively, a system has been put into operation consisting of two LEOLUTs located in Parana and Rio Grande and one GEOLUT located in Ezeiza, which operate in association with the air and maritime MCC functioning in Ezeiza.

The above-mentioned system, which has been in operation since December 2002, permits wide coverage of the southern region of South America as well as of an extensive area of the south-western Atlantic and of Antarctic waters. It constitutes an important contribution to the improvement of search and rescue services in the area.

INMARSAT SERVICES

5.5 The Sub-Committee noted that MSC 75 had adopted resolution MSC.130(75) on Performance standards for Inmarsat ship earth stations capable of two-way communications, containing performance standards for Inmarsat Fleet F 77 ship earth stations meeting the relevant requirements of resolution A.888(21) on Criteria for the provision of mobile-satellite communication systems in the GMDSS.

The Committee concurred with the COMSAR 6 view that Inmarsat Fleet F 77 communication terminals should be used on GMDSS ships and by MRCCs.

5.6 The Sub-Committee considered the formal report by IMSO (COMSAR 7/5/2) providing analysis and assessment of the performance by Inmarsat 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 2001 to 31 October 2002. It was assessed that, during this period, Inmarsat Ltd had continued to provide a sufficient quality of service to meet its obligations.

5.7 In particular, the Sub-Committee noted:

- .1 the introduction of new terminal equipment called "Inmarsat mini-C" and the opinion of IMSO that the Inmarsat mini-C terminal was fully consistent with the requirements of the existing Performance Standards for Inmarsat-C ship earth stations capable of transmitting communications (resolution A.807(19), as amended), and was therefore entirely suitable for use in the GMDSS;
- .2 the continued reduction in the number of false distress alerts resulting from the active programme of contacting problem vessels by Inmarsat Ltd;
- .3 that the first session of the IMSO Intersessional Working Group would meet to consider the further evolution of IMSO during the week immediately following COMSAR 7 (20 to 24 January 2003); and

- .4 the contents of this report in general, and in particular the conclusion that Inmarsat Ltd had continued to provide a sufficient quality of service to meet its obligations under the GMDSS during the period covered by the report.

Withdrawal of Inmarsat-A services

5.8 The Sub-Committee observed that MSC 76 had noted the information provided by IMSO in document MSC 76/18/1, namely that Inmarsat Ltd had given more than five years' notice of the scheduled withdrawal of Inmarsat-A services, to take effect on 31 December 2007 and, having agreed that such an information should be brought to the attention of Member Governments and the industry, had instructed COMSAR 7 to prepare an appropriate draft MSC circular for approval by MSC 77.

5.9 The Sub-Committee considered document MSC 76/18/1 and agreed with a proposal that Inmarsat-A services should be withdrawal.

5.10 Some delegations, including the delegation of Japan, pointed out that probably more information was needed to make a final decision; however having been provided with an explanation by IMSO and the United Kingdom on technical and operational disadvantages of Inmarsat-A service, the Sub-Committee instructed an *ad-hoc* group to prepare an appropriate draft MSC circular.

Report of the ad-hoc Drafting Group

5.11 In considering the report of the Drafting Group (COMSAR 7/WP.2), the delegation of Germany proposed to extend the date to 1 June 2008 and some delegations, including Japan, supported it. However, the majority was in favour of the date 31 December 2007, as it was drafted. The Sub-Committee agreed the draft MSC circular on Future withdrawal of Inmarsat-A services by Inmarsat Ltd, as amended, given in annex 3, and invited the Committee to approve it for dissemination to Member Governments.

Inmarsat-E system

5.12 The Sub-Committee concurred with the proposal by Germany (MSC 75/11/5) to include a specific code for a "man-over-board" alert in the Inmarsat-E protocol and instructed the Secretariat to convey this decision to the ITU-R Study Group 8 for consideration with a view for amending Recommendation ITU-R M.632-3 on Transmission characteristics of a satellite emergency position-indicating radio beacon (satellite EPIRB) system operating through geostationary satellites in the 1.6 GHz band, Table 3 – Nature of distress indications.

5.13 The Sub-Committee instructed the Secretariat to inform Inmarsat Ltd, through IMSO accordingly, and invited the Committee to endorse the action taken.

5.14 IMSO informed the Sub-Committee that this would entail only software changes which could be accomplished in about 6 months.

6 EMERGENCY RADIOCOMMUNICATIONS, INCLUDING FALSE ALERTS AND INTERFERENCE

General

6.1 The Sub-Committee noted that MSC 75 had approved circulars proposed by COMSAR 6, such as:

- .1 MSC/Circ.1039 on Guidelines for shore-based maintenance of satellite EPIRBs;
- .2 MSC/Circ.1040 on Guidelines on annual testing of 406 MHz satellite EPIRBs; and
- .3 COMSAR/Circ.29 on Guidance for the voluntary use of the standardized questionnaires and formats for reporting false alerts in collecting data on false alerts.

6.2 It was also noted that MSC 75 had concurred with the Sub-Committee's decision to extend the work of the correspondence group on false alerts, with terms of reference as indicated in COMSAR 6/22, paragraph 7.17, to 2003 and extended likewise the target completion date of the high priority item "Emergency radiocommunications, including false alerts and interference" to 2003.

6.3 Having briefly considered documents COMSAR 7/6 and COMSAR 7/6/1 (Norway) providing the report of the correspondence group on false alerts and proposed draft guidelines on monitoring and reporting on false alerts; COMSAR 7/6/2 (Norway), COMSAR 7/6/3 (COSPAS-SARSAT) and COMSAR 7/6/5 (Finland and Sweden) concerning SOLAS requirements for testing and maintenance of satellite EPIRBs, the Sub-Committee referred them to the Operational Working Group for detailed consideration.

6.4 The Operational Working Group was instructed, taking into account comments and decisions made in Plenary, to prepare:

- .1 a final draft of Guidelines to Administrations on collecting, evaluating and reporting of information on false alerts with an annotated draft MSC circular;
- .2 draft amendments to SOLAS regulation IV/15.9 with respect to testing and maintenance of satellite EPIRBs; and
- .3 any recommendations concerning the above issues,

for consideration in Plenary with a view for submission to MSC 77 for approval and appropriate action.

6.5 The Sub-Committee noted document COMSAR 7/6/4 (COSPAS-SARSAT) providing a summary on 406 MHz persistent interference sources detected by COSPAS-SARSAT participants during the period from 1991 through 2001. Although a number of interference problems had been successfully resolved through co-operation with some Administrations, new sources of interference were detected; and this activity clearly demonstrated that the monitoring programme should be continued.

6.6 The Sub-Committee invited Member Governments to note the information provided in COMSAR 7/6/4 and take action to assist in the elimination of interference sources in the 406.0 - 406.1 MHz frequency band.

Report of the Operational Working Group (WG 3)

6.7 Having received and considered the report of the Operational Working Group (COMSAR 7/WP.3), the Sub-Committee took action as indicated hereunder.

False alerts

6.8 The Sub-Committee agreed with the Working Group's opinion that there was a need for a GMDSS-SMR Voluntary Group of Experts within IMO, which could summarize and distribute lessons learned from the analysis of false alerts.

6.9 The Sub-Committee noted that a Voluntary Group of Experts, as recommended by the correspondence group, would begin work under the co-ordination of [to be determined prior to MSC 77] to analyse data on false alerts collected since 1991. Membership of the Voluntary Group of Experts is open to all interested parties and initially would be formed by members of the former correspondence group on false alerts with the following terms of reference:

- .1 consider and develop a GMDSS-SMR programme related to monitoring and evaluation of the efficiency of both the offshore and onshore part of the GMDSS and its related infrastructure within following areas:
 - .1.1 the alerting phase (ship-to-shore);
 - .1.2 detection and reception of distress alerts onshore and offshore;
 - .1.3 distribution and relay of distress alerts to appropriate authorities and inter (M)RCCs co-operation; and
 - .1.4 alerting shore-to-ship;
- .2 consider and prepare, with a view for adoption, appropriate amendments to existing relevant instruments;
- .3 consider SAR event analysis as described in document COMSAR 6/7/2;
- .4 evaluate and derive lessons learned from collected and reported anomalies;
- .5 prepare relevant reports (information documents, draft MSC and/or COMSAR circulars, etc.);
- .6 consider and develop modifications and recommendations as appropriate; and
- .7 report to the Organization.

The Sub-Committee also noted that, as an example, the International NAVTEX Co-ordinating Panel had worked successfully and independently for several years without any budgetary impact to the Organization.

6.10 The Sub-Committee agreed with the opinion of the Working Group that establishment of a GMDSS-SMR programme was important for GMDSS efficiency, and it should be a task for IMO.

6.11 The GMDSS-SMR Voluntary Group of Experts could be established, as a panel of experts similar to the Joint ICAO-IMO Working Group and the International NAVTEX Co-ordinating Panel where IMO is responsible for the Secretariat, supported by a panel of experts from the Member States. It was also important to take into account the expertise and experience gained through the years within the COSPAS-SARSAT and Inmarsat Ltd, where also a SMR programme had been developed containing elements of importance for a GMDSS-SMR.

6.12 The main purpose of the proposed establishment was to improve the reliability of distress alerting and safety related communications, thus enhancing the safety of life at sea. One should also bear in mind that new equipment will be developed through the next years to come along with a huge group of new GMDSS users as the non-SOLAS and pleasure craft fleet started to implement the GMDSS. Based on this, and experience gained throughout the implementation period of the GMDSS, one should still expect false alerts and interference which again degrade the efficiency of the GMDSS.

6.13 The Sub-Committee also agreed that since several Administrations had been collecting information on false alerts, the Voluntary Group of Experts could begin its work at the eighth session of the Sub-Committee. Therefore, the Committee was invited to extend the target completion date of the item "Emergency radiocommunications, including false alerts and interference" to 2006.

6.14 The Sub-Committee agreed a draft MSC circular on Guidelines to Administrations on reporting false alerts, given in annex 4, and invited the Committee to approve it.

Proposed draft amendments to SOLAS regulation IV/15.9

6.15 The Sub-Committee considered COMSAR 7/6/2 (Norway), COMSAR 7/6/3 (COSPAS-SARSAT) and COMSAR 7/6/5 (Finland and Sweden) on draft proposed amendments to SOLAS regulation IV/15.9 to clarify the testing and maintenance requirements for satellite EPIRBs.

6.16 The Sub-Committee agreed draft amendments to SOLAS regulation IV/15.9, as given in annex 5, and invited MSC 77 to approve and MSC 78 to adopt the amendments, as appropriate, with a proposed entry into force date on 1 January 2006.

6.17 The Sub-Committee was of the opinion that if the proposed draft amendments to SOLAS regulation IV/15.9 were approved and adopted by the Committee, then the respective changes should also be included in the preamble of resolution MSC.83(70) on Amendments to the survey guidelines under the harmonization system of survey and certification (resolution A.746(18)), as well as the Fishing Vessel Safety Code and voluntary guidelines (paragraph 9.13.8 of annex 1 and paragraph 9.13.8 of annex 2) referring to the text of SOLAS regulation IV/15.9. The Committee was invited to approve the above inclusions accordingly.

7 MATTERS CONCERNING SEARCH AND RESCUE, INCLUDING THOSE RELATED TO THE 1979 SAR CONFERENCE AND THE IMPLEMENTATION OF THE GMDSS

HARMONIZATION OF AERONAUTICAL AND MARITIME SEARCH AND RESCUE PROCEDURES, INCLUDING SAR TRAINING MATTERS

General

7.1 The Sub-Committee noted that, as requested by COMSAR 6, MSC 75 had extended the target completion date of the work programme agenda item "Harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters" to 2003.

7.2 The Sub-Committee also noted that, as approved by MSC 75, the ninth meeting of the ICAO/IMO Joint Working Group on Harmonization of Aeronautical and Maritime Search and Rescue was held in Hong Kong, China, from 30 September to 4 October 2002.

7.3 It was further noted that MSC 75 had endorsed the COMSAR 6 action in inviting the Joint Working Group to consider the questions raised by the delegation of Cyprus, supported by the delegation of the Bahamas, on the rotation of the permanent membership of the ICAO/IMO Joint Working Group and the meeting venues, which should include, e.g. on an alternative basis, the Organization's Headquarters, giving the permanent missions located in London the possibility to participate as observers at no cost to their delegations, taking into account the discussion at, and decision of, MSC 72 (MSC 72/23, paragraph 9.20) on the same issue, and report thereon to COMSAR 7.

7.4 The Sub-Committee briefly considered documents COMSAR 7/7, except section 3, and COMSAR 7/7/Add.1 (Secretariat) reporting on the outcome of the ninth meeting of the ICAO/IMO Joint Working Group; and COMSAR 8/7/2 (United Kingdom) drawing attention to the United Kingdom GMDSS Coast Station Operator Certificate (CSOC) Course and its contents.

Establishment of a Working Group

7.5 With a view to consider the above documents and proposals in detail, the Sub-Committee established the SAR Working Group (WG 1) under the Chairmanship of Mr. U. Hallberg (Sweden), Vice-Chairman of the Sub-Committee, with the following terms of reference; taking into account comments and decisions made in Plenary, to:

- .1 prepare justification, if there is a need of 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 2004;
- .2 provide comments and proposals on the development of a GMDSS Coast Station Operator Certificate (CSOC) Course and SAR Model courses;
- .3 prepare revised terms of reference for the ICAO/IMO JWG and justification and draft agenda for its next meeting;
- .4 a draft COMSAR circular on Guidance for Mass rescue operations; and

- .5 provide any recommendations or proposals for harmonization of aeronautical and maritime SAR procedures,

for consideration at Plenary.

SAR.7 CIRCULAR

7.6 The Sub-Committee noted that, as instructed, the Secretariat had issued SAR.7/Circ.4 – List of IMO documents and publications which should be held by a maritime rescue co-ordination centre (MRCC), which is available in English, French and Spanish on the IMO website.

FOLLOW-UP TO THE 2000 FLORENCE MARITIME SAR AND GMDSS CONFERENCE

7.7 The Sub-Committee noted that MSC 75 was informed that, as a part of step 3 of the 5-step approach proposed by COMSAR 4 and endorsed by MSC 72:

- .1 an assessment mission had been conducted to Kenya, the Seychelles and Tanzania to identify the needs (including financial needs) for establishing the Mombasa regional MRCC and sub-centres in Seychelles and Tanzania; and
- .2 on 3 May 2002 the Governments of Kenya, Seychelles and Tanzania had signed a Multilateral Agreement on Co-ordination of Maritime Search and Rescue Services.

Having noted the above information, MSC 75 instructed the Secretariat to continue its activities to implement the recommendations of the Florence Conference; and to report developments to MSC 77.

7.8 The Sub-Committee was informed that, taking into account the responses received, assessment missions to all countries of Regional MRCC – II (Liberia) and Regional MRCC – IV (South Africa) were being organized to conduct in the first part of 2003.

Report of the Working Group (WG 1)

7.9 Having received the report of the SAR Working Group (COMSAR 7/WP.5 and Add.1 and 2), the Sub-Committee approved it, in general, and took action as indicated hereunder.

Joint ICAO/IMO Working Group report

7.10 The Sub-Committee endorsed recommendations 9/5, 9/8, 9/9 and 9/12 of the Joint ICAO/IMO Working Group, at its ninth session and, in particular, approved the dissemination of COMSAR/Circ.31 on Mass rescue operations and invited MSC 77 to endorse that action.

7.11 The Sub-Committee supported the development of a draft GMDSS Coast Station Operator's Course (CSOC), as outlined in document COMSAR 7/7/2 (United Kingdom) as a common training standard for submission to JWG 10 and COMSAR 8 for consideration and endorsement and subsequent validation by the STW Sub-Committee as an IMO model course.

7.12 The Sub-Committee invited Member Governments to contribute to that development and to liaise with the United Kingdom delegation accordingly. The delegation of Finland, having developed similar courses, agreed to submit their comments to the United Kingdom delegation.

7.13 The Sub-Committee endorsed the continuation, terms of reference and membership of the Joint ICAO/IMO Working Group for the next session, planned to be held in Torquay, the United Kingdom from 15 to 19 September 2003 and invited the Committee to approve it.

7.14 The Sub-Committee considered and agreed the provisional agenda for JWG 10, set out in annex 6.

7.15 The delegation of Cyprus reserved its position as far as the membership of the JWG was concerned.

7.16 The Sub-Committee returned to the consideration of recommendations relating to amendments to the IAMSAR Manual under agenda item 12.

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

7.17 The Sub-Committee noted that MSC 75 had approved, as developed by COMSAR 6, MSC/Circ.1041 on Guidelines for ship operators and search and rescue (SAR) services on minimum requirements for SAR data providers holding SAR co-operation plans in accordance with SOLAS regulation V/7.3 and MSC/Circ.1000 and the provision of up-to-date plans at all times.

The Committee noted the Sub-Committee's view that there was no need of establishing reporting requirements for passenger ships in addition to those contained in MSC/Circ.1000.

7.18 It was pointed out that MSC 76 had noted that SAR co-operation plans of passenger ships transiting many SAR regions, developed in accordance with SOLAS regulation V/7.3 and the associated guidelines approved by the Committee (MSC/Circs.1000 and 1041), may be deposited with a SAR Data Provider (SDP); and, in such cases, an entry enabling location of the plans in any emergency for each ship to be registered with the International SAR Co-operation Plans Index, maintained on behalf of the Organization by MRCC Falmouth, although (see paragraph 6(a) of document MSC 76/22/12, there is no requirement to select that MRCC as SDP. In this respect, the Committee noted that ships in the index are listed in alphabetical order by name. There is also information on:

- the ship's radio callsign;
- her Maritime Mobile Service Identity (MMSI);
- the name of the company operating the ship (as defined in SOLAS regulation IX/1); and
- the name and 24-hour contact telephone number of the SAR data provider holding the ship's SAR co-operation plan.

Having considered document MSC 76/22/12 (United Kingdom), the Committee agreed with the proposal and invited Administrations to ensure that:

- .1 if using the SDP system, Index entries are correctly made by ships under their national flag, and maintained in accordance with MSC/Circs.1000 and 1041; and

- .2 the SDP should be selected on practical, common sense grounds, provided that the requirements of MSC/Circ.1041 are met.

Meanwhile, being of the opinion that MSC/Circ.1000 might need improvement from the choice of an SDP point of view, the Committee instructed COMSAR 7 to consider document MSC 76/22/12 and additional information, which the United Kingdom was invited to submit as quickly as possible. The outcome of COMSAR 7 on clarification of MSC/Circs.1000 and 1041, if necessary, should then be submitted to MSC 77 for consideration.

7.19 In this context the Sub-Committee briefly considered document COMSAR 7/7/5 (United Kingdom) combining and clarifying MSC/Circ.1000 and 1041 and decided to refer it to the SAR Working Group for further consideration.

7.20 After introduction and initial consideration of document COMSAR 7/7/1 (France) suggesting to review COMSAR/Circ.18 on Guidance on minimum communication needs of MRCCs, the Sub-Committee referred it and document COMSAR 7/7/3 (India) providing information on an International Maritime SAR Conference held in India (see paragraph 7.25), to the SAR Working Group which was instructed, taking into account deliberations made in Plenary, to prepare:

- .1 a draft MSC/Circular combining MSC/Circs.1000 and 1041;
- .2 a draft COMSAR circular reviewing COMSAR/Circ.18; and
- .3 any recommendations and proposals which seem necessary,

for consideration by Plenary.

Report of the Working Group (WG 1)

7.21 Having received and considered the report of the SAR Working Group (COMSAR 7/WP.5 and Add.1 and 2), the Sub-Committee considered document COMSAR 7/7/5 (United Kingdom) combining and clarifying the texts of MSC/Circs.1000 and 1041, as requested by MSC 76.

7.22 The proposed text of the combined MSC circular was reviewed in some detail and some issues were clarified in that process.

7.23 The Sub-Committee agreed the draft MSC circular on Guidelines for preparing plans for co-operation between SAR services and passenger ships (in accordance with SOLAS regulation V/7.3), set out in annex 7, for submission to MSC 77 with a view to approval. The Sub-Committee was of the opinion that there was no need to amend/adjust the rescue co-ordination plans developed in accordance with MSC/Circs.1000 and 1041.

COMSAR/Circ.18

7.24 The Sub-Committee, in considering document COMSAR 7/7/1 (France), agreed that the detailed review of COMSAR/Circ.18 should be undertaken by JWG 10, since it had been incorporated in the IAMSAR Manual, Volume I, which needed to be updated in harmony with the revision of COMSAR/Circ. 18 and the expertise of the aeronautical side would be needed in that process.

International Maritime SAR Conference

7.25 The Sub-Committee noted information provided by India in document COMSAR 7/7/3 on the International Maritime SAR Conference held in Chennai, India, from 7 to 8 December 2002, expressed appreciation for the initiative and successful conclusion of the Conference, recognizing the excellence of the SAR services in India.

MEDICAL ASSISTANCE IN SAR SERVICES

General

7.26 The Sub-Committee noted that MSC 75 had approved, as developed by COMSAR 6, MSC/Circ.1042 on a List of contents of the "emergency medical kit/bag" and medical consideration for its use on ro-ro passenger ships not normally carrying a medical doctor.

7.27 The Sub-Committee recalled that COMSAR 6 had instructed the Correspondence Group, subject to the authorization by MSC 75, to continue its work, under the co-ordination of France, on the following points, in close co-operation with ILO and WHO representatives, as appropriate:

- .1 to assess responsibility and liability issues involved in the context of the use of the "Emergency Medical Kit/bag" (EMK);
- .2 to provide advice on monitoring evaluation and research on the use of the medical kit in emergency incidents; and
- .3 to consider reports submitted by Member Governments on their experience gained in the use of the emergency kit, to the co-ordinator of the Correspondence Group.

7.28 The Sub-Committee noted that, endorsing a proposal by COMSAR 6, MSC 75 had decided to include, in item 6 of the Sub-Committee's work programme and the provisional agenda for COMSAR 7, a high priority subitem on "Medical assistance in SAR services", with a target completion date of 2003.

7.29 The Sub-Committee also noted that, having considered document MSC 75/11/3 (France, Germany and Sweden), the Committee, endorsing the proposal contained therein, had instructed COMSAR 7 to identify passenger ships, other than ro-ro passenger ships, which could also benefit from being equipped with the medical first-aid kit; and to prepare an appropriate draft MSC circular for approval at MSC 77.

7.30 Being informed that there were no contributions to the correspondence group, the Sub-Committee decided to refer the matter to the SAR Working Group and instructed it, taking into account comments made in Plenary, to:

- .1 consider a request by MSC 75 to identify passenger ships, other than ro-ro passenger, which could benefit from being equipped with the medical first-aid kit;
- .2 prepare an appropriate draft MSC circular, if such ships are identified; and
- .3 provide any recommendations and/or proposals concerning this issue,

for consideration in Plenary.

Report of the Working Group (WG 1)

7.31 Having received and considered the report of the SAR Working Group (COMSAR 7/WP.5 and Add.1 and 2), the Sub-Committee agreed that the guidance provided therein on responsibility and liability issues related to the use of the EMK and the evaluation of the use of the EMK in emergency incidents was very useful for all parties concerned and should therefore be made available as an MSC circular, the draft thereof is set out in annex 8, for submission to MSC 77 for approval.

7.32 Recognizing that more experience had to be gained with the EMK before being in a position to provide advice on monitoring evaluation and research in the use of EMK in emergency incidents, the Sub-Committee authorized the continuation of the Correspondence Group under the co-ordination of France* with the same terms of reference, subject to the Committee's approval of the extension of the target completion date for this item to 2004. Member Governments were invited to include medical experts in their delegations to COMSAR 8 and the Secretariat was instructed to invite ILO and WHO to participate in this exercise.

7.33 The Sub-Committee, due to the time constraints, was not able to consider the request by MSC 75 to identify passenger ships, other than ro-ro passenger ships, which could benefit from being equipped with the EMK and therefore reiterated its above request for the extension of the target completion date of this item to 2004.

8 REVIEW OF THE SOLAS AND SAR CONVENTION PROVISIONS REGARDING THE TREATMENT OF PERSONS RESCUED AT SEA

General

8.1 The Sub-Committee recalled that, as agreed by MSC/ES.1, COMSAR 6 had given preliminary consideration, within the Sub-Committee's preview, to any necessary action to give effect to the requests of the Assembly reflected in resolution A.920(22).

The Sub-Committee's deliberations on the matter (COMSAR 6/22, paragraphs 8.59 to 8.79) were submitted to MSC 75 for consideration in line with relevant proposals by Member Governments.

8.2 The Sub-Committee noted that MSC 75 had considered the issue of review of safety measures and procedures for the treatment of persons rescued at sea and had decided to include in the Sub-Committee's work programme and the provisional agenda for COMSAR 7 a high priority item on "Review of the SOLAS and SAR Convention provisions regarding the treatment of persons rescued at sea", with a target completion date of 2004.

8.3 The Sub-Committee also noted that after an extensive exchange of views, during which various proposals were made on how to take the matter forward within the momentum established by, and the provisions of, resolution A.920(22), the Committee had endorsed the Chairman's proposals, namely:

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- .1 to instruct the Secretariat to take into account the salient points in documents MSC 75/2/2/Add.2 (Norway), MSC 75/11/1 (France) and MSC 75/11/2 (Germany) in the deliberations of the July 2002 meeting in Geneva; and to report on the outcome of that meeting to MSC 76;
- .2 to receive, at MSC 76, the report of a relevant meeting in Sweden to discuss matters within the scope of resolution A.920(22) and the three aforementioned documents;
- .3 to further discuss the issue at MSC 76 on the basis of the reports of the inter-agency meeting and the Swedish initiative and decide, as appropriate, including directing COMSAR 7 on action to be taken in its context, such as:
 - .3.1 to continue the review of the provisions of the SOLAS and SAR Conventions regarding the treatment of persons rescued at sea, based on the requests of resolution A.920(22). The review should be given high priority and should be completed at COMSAR 8. The results to be reported to the Committee should, if appropriate, include specific proposals for amendments to these Conventions;
 - .3.2 to consider whether additional guidance should be developed for shipmasters, RCCs, coastal States and other interested parties to ensure that persons rescued at sea are delivered to a place of safety;
 - .3.3 to identify other issues raised during its debate and include them in the report to MSC 77 as issues that the Organization should forward to other international organizations that have responsibilities related to this issue; and
 - .3.4 to also consider the possible need for, or desirability of, effecting amendments to the FAL and SALVAGE Conventions regarding provisions relating to persons rescued at sea or in distress at sea. This task, which would involve the FAL and LEG Committees respectively, should be given lower priority than the review of the SOLAS and SAR Conventions; and
- .4 to discuss the issue further at MSC 77, taking into account the outcome of COMSAR 7 and any submissions from parties concerned.

8.4 The Sub-Committee observed that, having noted documents MSC 76/22/10 (Spain), MSC 76/22/11 (Sweden) and MSC 76/22/13 (Secretariat) on the issue and taking into account the views expressed, MSC 76 had instructed COMSAR 7, in accordance with the terms of reference set out in MSC 75/24, paragraph 11.53.3 and 4, to:

- .1 consider documents MSC 76/22/8 and MSC 76/22/13 (Secretariat), MSC 76/22/10 (Spain) and MSC 76/22/11 (Sweden);
- .2 finalize, using as a basis, document MSC 76/22/11, the text of appropriate draft amendments to SOLAS chapter V and the SAR Convention, for consideration by MSC 77 with a view to approval and adoption at MSC 78; and

- .3 prepare text, for approval by MSC 77, to form the basis for the Secretary-General's progress report to A 23 in response to the Assembly's request in resolution A.920(22).

8.5 In accordance with instructions above, the Sub-Committee considered documents MSC 76/22/8 (Secretariat) providing the outcome of the inter-agency Meeting on the treatment of persons rescued at sea held in Geneva, Switzerland, (2 and 3 July 2002); MSC 76/22/11 (Sweden) containing proposed draft amendments to the SOLAS chapter V and the SAR Convention; and COMSAR 7/8 and MSC 76/22/10 by Spain summarizing proposals on the matter and expressing the view that such proposals should not hinder national and international efforts to eradicate all forms of illegal immigration by sea.

8.6 Having considered the above documents, the Sub-Committee agreed that the text of the draft amendments developed by the informal Meeting in Sweden, as contained in document MSC 76/22/11, provided a good basis for further consideration and development by the SAR Working Group.

8.7 Some delegations felt that the text was well balanced and any amendments thereto should be considered very carefully. Some other delegations felt that the draft text produced in Sweden needed additional provisions, to cover every rescue scenario.

8.8 The proposals by Spain (MSC 76/22/10 and COMSAR 7/8) were not supported by the Sub-Committee.

8.9 After some discussion, the Sub-Committee agreed that the issue was very complex and it should be considered within the scope of IMO mandatory instruments. It was pointed out that the SOLAS Convention already contained obligations on Masters and Contracting Governments, and that there was a clear need to find a well balanced compromise.

8.10 On the other hand it was stressed that the asylum seeker and refugee issues should not be ignored and further discussions on the matter should continue on the inter-agency level.

8.11 In order to consider the matter in detail, the Sub-Committee instructed the SAR Working Group to consider documents indicated in paragraph 8.5 above and, taking into account comments and proposals made, in Plenary, to:

- .1 finalize, using as a basis document MSC 76/22/11, the text of appropriate draft amendments to SOLAS chapter V and the SAR Convention;
- .2 prepare a draft text, to form the basis for the Secretary-General's progress report to A 23 in response to the Assembly request in resolution A.920(22); and
- .3 provide any recommendations,

for consideration at Plenary.

Report of the SAR Working Group (WG 1)

8.12 Having received and considered the report of WG 1 (COMSAR 7/WP.5 and Add.1 and 2), the Sub-Committee took action as indicated hereunder.

8.13 The Sub-Committee noted that the observer of UNHCR had informed the Working Group of relevant core understandings on which the international protection regime was based and which had formed UNHCR's successful co-operation with IMO in rescue at sea matters. In the present context, these included principles designed to ensure:

- rescue of people in distress at sea, irrespective of their status;
- disembarkation;
- respect for the principle of *non-refoulement*;
- admission of asylum seekers, at least on a temporary basis; and
- access to fair and effective asylum procedures.

UNHCR was concerned that the proposals to clarify the existing regime should be consistent with the core principles. In particular, the principle of *non-refoulement*, a principle now universally recognized, which prohibited return of rescued persons to a country in which he/she may face persecution. In effect, this would require careful examination of the individual circumstances of the rescued person before a decision could be made to return him/her to the port of embarkation or country of origin. UNHCR had urged that any proposals for amendments to the SOLAS and SAR Conventions took this international obligation into account.

8.14 The Sub-Committee noted that the Working Group had considered the current inconsistency in the use of the term "search and rescue services" in the SAR and SOLAS Conventions and had agreed that this might need further consideration in the future but should be left as presently drafted in order to avoid unbalancing the current texts of SOLAS regulation V/7.

8.15 The Sub-Committee agreed the proposed amendments to the title and paragraph 1 and the second option for a new paragraph 6, as amended by the Working Group, of SOLAS regulation V/33, as well as the text for new regulation V/34*bis* (Master's discretion), derived from current regulation V/34.3, as amended.

8.16 In considering whether the replacement of the term "safe navigation" with the words "safety of life at sea" would broaden the scope of the regulation, the Sub-Committee agreed that it would be more precise in the context of search and rescue operations, including the delivery to a place of safety, but needed to be looked at in the context of a similar provision adopted in the new chapter XI-2 on Special measures to enhance maritime security.

8.17 In reviewing the new SOLAS regulation V/33.1*bis*, as developed by the informal Meeting in Sweden, the Sub-Committee noted that the text had been painstakingly drafted and was carefully balanced in its wording and any amendments thereto needed to be considered with utmost caution.

8.18 The Sub-Committee noted that the majority of the Working Group had felt that the draft text, produced in Sweden, was sufficiently strong and clear in its obligations on Contracting Governments that it would be reasonably easy to put diplomatic pressure on Contracting Governments violating their treaty obligations in future cases.

8.19 In response to the above viewpoints, the delegation of Norway had expressed the view that the present text of SOLAS regulation V/33.1*bis* could lead to a ship not being able to disembark the survivors in given circumstances, even if no Contracting Governments have violated their treaty obligations.

8.20 Since neither the SOLAS nor the SAR Conventions have, for good reasons, a mechanism to determine the legal status of persons in distress, it was considered necessary to look at other international instruments outside IMO's remit to address and find solutions related to the post SAR operation issues within the inter-agency initiative referred to in document MSC 76/22/8.

8.21 It was recognized that the SOLAS and SAR issues needed to be addressed separately from those related to status assessment and resettlement of refugees. The latter needed to be considered by States, assisted by UNHCR and other relevant organizations, in order to develop burden-sharing agreements and procedures and to discourage people from trafficking and smuggling.

8.22 The Sub-Committee agreed that there was a need to strike a balance between the obligations of the Master to come to the assistance of persons in distress at sea and the obligations of Contracting Governments to permit and assist the Master on disembarking those persons to a place of safety within a reasonable period of time. A number of delegations were of the opinion that the balance was well struck by the text produced in Sweden but that additional guidance was needed to assist the Master on the one hand and the Contracting Governments on the other to clearly understand what the provisions of this new draft regulation actually meant. Consequently, reference to "guidelines developed by the Organization" were included in both SOLAS regulation V/33.1*bis* and paragraph 3.1.9 of the Annex to SAR Convention.

8.23 The Sub-Committee agreed on the draft amendments to paragraph 2.1.1 of the Annex to the SAR Convention, as amended by paragraph 8.22 above, with respect to the inclusion of guidelines in both the SOLAS and SAR Conventions.

8.24 In considering the new proposed text for paragraph 3.1.6.4 of the Annex to the SAR Convention, the Sub-Committee agreed to simplify the text and delete the last part of the sentence, listing criteria, which would be more suitable in the guidelines to be developed. A corresponding change was agreed for the new proposed text for paragraph 4.8.5 of the Annex to the SAR Convention.

8.25 The Sub-Committee, recognizing that the new proposed paragraph 3.1.9 of the Annex to the SAR Convention contained the same provision as new SOLAS regulation V/33.1*bis* as adjusted for the purpose, consequently agreed on the proposed new text for inclusion in the Annex to the SAR Convention, noting that the delegation of Norway had similar misgivings with this provision as it had had with the new proposed SOLAS regulation V/33.1*bis*, which were shared by some delegations and observers.

8.26 During the discussion which followed the introduction of the Working Group report, the delegation of Norway made a statement which, as requested, is reproduced in its entirety in annex 9. Norway expressed support for the text produced in Sweden but also expressed serious concerns that the "system" described must be expected to fail in certain circumstances. Such failures may result in masters having rescued persons in distress at sea not being permitted by any coastal State to disembark the survivors to a place of safety within a reasonable period of time. Such concerns may prevent some masters from fulfilling their obligation to rescue persons in distress at sea. Norway was therefore of the opinion that additional provisions need to be

developed and added to the text produced in Sweden both in SOLAS and in SAR so as to eliminate these concerns. A number of delegations and observers supported the views of Norway.

8.27 The Norwegian statement was supported by a number of other delegations and observers. However, a number of other delegations supported the report of the SAR Working Group and the compromise text of the proposed draft amendments to the SOLAS and SAR Conventions.

8.28 The delegation of Denmark expressed support for the Norwegian point of view and stated that it too would have liked to see a clearer basis for the disembarkation of persons rescued at sea at the earliest and most convenient opportunity. Several other delegations and observers, whilst not objecting to the compromise text, but wishing to see further going supplementary provisions, expressed similar views.

8.29 The delegation of the United States, supported by a number of other delegations, expressed the view that there might not be so much as two different schools of thought, as had been suggested by the delegation of Norway, but rather two competing interests in the rescue at sea scenario, namely the interest of the Master to deliver the persons rescued at sea to a place of safety within a reasonable period of time and the interests of the State to protect its borders and other sovereignty concerns. Both interests could conflict at times, the latter was beyond the remit of the Organization and should be considered at the inter-agency initiative level in co-operation with other co-competent agencies and programmes. The rescue at sea and delivery to a place of safety part was under the remit of IMO and was, to that delegation's opinion, well-balanced and addressed as far as possible in the new draft SOLAS regulation V/33.1*bis*, which should provide a sufficient basis to remind Contracting Governments of their treaty obligations in cases of need. Any attempt to try to regulate any further in the delivery process would run the risk of going beyond the remit of IMO. To assist SOLAS Contracting Governments to very clearly understand their treaty obligations, and to provide the Master with clear guidance, if not some certainty as to the procedures to be followed under the new regulations, additional guidelines, perhaps containing harmonized interpretation of what these regulations actually meant, would be probably as far as IMO could go at this stage in any further development.

8.30 All delegations supporting that view considered the SOLAS amendments text developed by the SAR Working Group as the best possible compromise for the time being and, therefore, supported the recommendation of the Working Group to submit it, together with the comments made by the Sub-Committee, to MSC 77 for consideration and approval with a view to adoption at MSC 78.

8.31 Having considered the matter to some considerable extent and, recognizing that none of the delegations were actually opposing the text of the proposed SOLAS and SAR amendments, but that those supporting the Norwegian view only wished to see additional further-going regulations developed, the Sub-Committee, noting that the delegation of Norway intended to address the issue in a relevant submission to MSC 77, agreed to submit the proposed draft amendments to the two Conventions, set out in annex 10, to MSC 77 for consideration and approval with a view to adoption at MSC 78.

8.32 The Committee, if agreeable to the course of action proposed above, was invited to also agree to the development of the guidelines referred to in the proposed draft amendments at COMSAR 8.

8.32*bis* The delegation of Sweden offered to host an informal meeting to consider the issue further.

Progress report in accordance with resolution A.920(22)

8.33 The Sub-Committee noted that the Secretariat would prepare the progress report required by resolution A.920(22) for submission to MSC 77 for consideration and endorsement, incorporating adequately the relevant parts of the COMSAR 6 and 7 reports, as appropriate.

PLACES OF REFUGE

8.34 The attention of the Sub-Committee was drawn to the fact that MSC 76 had noted NAV 48 progress report on the preparation of draft Guidelines on places of refuge for ships in need of assistance, along with the associated draft Assembly resolution; as well as on the draft Assembly resolution on Establishment of Maritime Assistance Services (MAS) (NAV 48/19, paragraphs 5.10 and 5.12 and annexes 12 and 13) and had agreed that the aforementioned draft Assembly resolutions and draft Guidelines should be forwarded to COMSAR 7 for consideration whether there was any conflict with existing SAR procedures.

8.35 The Sub-Committee noted that the Committee had further authorized NAV 49, taking into account any proposals and comments made thereon by the Committee, COMSAR 7, the MEPC and the Legal Committee, to submit the final text of the Guidelines referred to above, together with the associated draft Assembly resolutions, directly to the twenty-third session of the Assembly.

8.36 The Sub-Committee referred the matter to the SAR Working Group and instructed it to:

- .1 consider annexes 12 and 13 to NAV 48/19 with a view to establishing whether there is any conflict with the existing SAR procedures; and
- .2 prepare any comments/amendments, if necessary;

for consideration at Plenary.

Report of the SAR Working Group (WG 1)

8.37 Having received and considered the report of WG 1 (COMSAR 7/WP.5 and Add.1 and 2), the Sub-Committee considered the draft Assembly resolutions on Guidelines on places of refuge for ships in need of assistance and on Maritime Assistance Service (MAS), developed by NAV 48 (NAV 48/19, annexes 12 and 13 respectively) with a view to establishing whether there was any conflict with the existing SAR procedures.

8.38 After some deliberation the Sub-Committee, appreciating the excellent work done by NAV 48 and recalling the provisions of MSC/Circ.892 on Alerting of SAR authorities, relating to the early information of MRCCs, of any problems or incidents which might develop into a distress situation, agreed to invite the Committee to instruct NAV 49 when finalizing the text of the two draft Assembly resolutions to ensure that:

- .1 the term “distress”, whenever used, should be meant as defined in the SAR Convention;
- .2 provision is made that there is one single point of contact for ship-generated communications and this should be the MRCC; and
- .3 the MRCC could, if possible, be assigned the MAS functions.

8.39 The Sub-Committee, recognizing that it would be up to Contracting Governments to decide which organization should be tasked with the MAS functions, agreed that the duties of the MAS, as set out in section 3 of the draft guidelines on Maritime Assistance Service (MAS) (NAV 48/19, annex 12), being primarily communication duties, could be well be undertaken by the MRCC; that the establishment of a new authority with functions similar to those of the MRCC could be confusing; and the MRCCs were normally the only contact points as they are available 24 hours a day and they have already been assigned the obligation to communicate with all parties/authorities concerned with respect to ships in distress or in difficulty, which could evolve into a distress situation.

8.40 The Sub-Committee invited Member Governments to send SAR experts to NAV 49 and invited MSC 77 to endorse that invitation.

9 BRIDGE-TO-BRIDGE RADIOCOMMUNICATIONS

General

9.1 The Sub-Committee recalled that MSC 74 had concurred with the proposals by France and COMSAR 5 and included in the Sub-Committee's work programme and the provisional agenda for COMSAR 6, a new high priority item "Bridge-to-bridge radiocommunications", with a target completion date of 2003.

9.2 The Sub-Committee also recalled that by document COMSAR 5/4, France proposed to undertake a general examination of bridge-to-bridge radiocommunications under the GMDSS requirements and, in particular, of the choice of a common watch and alert channel when the obligation to keep a continuous listening watch on VHF channel 16 ends.

Pointing out that bridge-to-bridge radiocommunications are related to general radiocommunications, for example, in areas where there is a vessel traffic service (VTS), France was of the opinion that it would be appropriate not to separate these two issues/items in the Sub-Committee's work programme.

Watchkeeping on VHF channel 16 by SOLAS ships

9.3 The Sub-Committee noted that MSC 75, having agreed with the recommendation of COMSAR 6 that the existing SOLAS regulation IV/12.3 concerning watchkeeping on VHF channel 16 should not be amended and the originally perceived date of cessation of watchkeeping by SOLAS ships on VHF channel 16 (i.e. 1 February 1999, the final implementation date for the GMDSS) should not be changed to 1 February 2005, as indicated in resolution MSC.77(69), had adopted resolution MSC.131(75) on Maintenance of a continuous listening watch on VHF channel 16 by SOLAS ships whilst at sea and installation of VHF DSC facilities on non-SOLAS ships, revoking resolution MSC.77(69).

By operative paragraph 1 of this resolution, the Maritime Safety Committee "DETERMINES, having regard to SOLAS regulation IV/12.3, that every ship, while at sea, shall continue to maintain, when practicable, continuous listening watch on VHF channel 16, until such time as the Maritime Safety Committee may determine the cessation of this requirement, provided that a re-assessment is undertaken by the Organization no later than 2005;"

Proper use of VHF channels at sea

9.4 It was also noted that MSC 75 had approved a draft Assembly resolution on Proper use of VHF channels at sea, as prepared by COMSAR 6, for submission, subject to any comments/amendments provided by the NAV and/or STW Sub-Committee(s), to A 23 for adoption, to revoke resolution A.474(XII).

NAV 48 was of the opinion that there was no need for any further review of the draft Assembly resolution on Proper use of VHF channels at sea.

Bridge-to bridge radiocommunications

9.5 Having noted that there were no substantial documents received under this agenda item for two consecutive sessions, the Sub-Committee decided to refer the matter to the Operational Working Group for a final review.

Report of the Operational Working Group (WG 3)

9.6 Having received the report of WG 3 (COMSAR 7/WP.3) and noting that no comments had been made on this issue, the Sub-Committee, in pursuance of *Guidelines on the organization and method of work* (MSC/Circ.931/MEPC/Circ.361, as amended), invited MSC 77 to delete the agenda item "Bridge-to-bridge radiocommunications" from the Sub-Committee's work programme.

10 LARGE PASSENGER SHIP SAFETY

General

10.1 The Sub-Committee recalled that MSC 74 had approved an updated work plan on large passenger ship safety (MSC 74/WP.6, annex 3), assigning a number of tasks to the Sub-Committee, and included a high priority item on "Large passenger ship safety" in the work programme and provisional agenda of COMSAR 6 with a target completion date of 2003.

10.2 The Sub-Committee noted that MSC 75, as part of its work on large passenger ship safety, had considered the outcome of COMSAR 6 in conjunction with the tasks assigned in the agreed work plan (MSC 74/WP.6, annex 3) and had noted that the Sub-Committee had established a Correspondence Group on Large Passenger Ship Safety to consider the outcome of MSC 75. In this regard, the Committee, noting that several new tasks had been assigned in the updated work plan on the adequacy of SAR services and the evaluation of communication equipment and practices affecting SAR services, agreed to add the following additional instructions to the correspondence group's terms of reference:

- .1 to identify and evaluate the adequacy of SAR services to rescue large numbers of persons from a large passenger ship, in particular, to consider the ability and capability of ships to handle large number of persons from large passenger ships; the capacity of SAR facilities, other than commercial ships, to handle a large number of persons from large passenger ships (size of rescue facility, rate of transfer, etc.); and the availability of SAR services by geographic region, specifically addressing time estimates to get adequate SAR on scene with and without commercial ship assistance; and

- .2 to identify and evaluate the communication equipment and practices affecting SAR operations, specifically addressing contingency planning; communication and locating capability between survival craft and SAR services; ship reporting where regionally required distress alert routing; and the compatibility between SAR resources (i.e., aircraft, ship, survival craft, etc.).

To further facilitate consideration of this high priority issue by the COMSAR correspondence group on large passenger ship safety, the Committee agreed to relax the deadline for submission of the group's report to 8 November 2002. Consequently, Members were invited to submit comments on the correspondence group's report by 13 December 2002, i.e. 4 weeks in advance of the opening of COMSAR 7.

10.3 After brief introduction of documents COMSAR 7/10 (Secretariat) reporting on the outcome of MSC 75; COMSAR 7/10/1, COMSAR 7/INF.4 and COMSAR 7/INF.5 (United Kingdom) providing the report of the correspondence group and noting its excellent work, the Sub-Committee referred them to the SAR Working Group for detail consideration and instructed it to:

- .1 briefly consider the outcome of the correspondence group (COMSAR 7/10/1, paragraph 21);
- .2 propose any further action on the issue;
- .3 propose a prioritized work plan;
- .4 review the correspondence group's terms of reference; and
- .5 report to Plenary.

Report of the SAR Working Group (WG 1)

10.4 Having received and considered the report of the SAR Working Group (COMSAR 7/WP.5 and Add.1 and 2), the Sub-Committee considered the report of the correspondence group under the co-ordination of the United Kingdom (COMSAR 7/10/1 and COMSAR 7/INF.4 and 5), and agreed that this report represented indeed a most excellent summary of all problem areas which the SAR services face globally.

10.5 It was recognized that the report and the recommendations contained a number of potential controversial information and thought provoking proposals, which required much more time for detailed consideration both at the national level, as well as by the Sub-Committee and its SAR Working Group.

10.6 The Sub-Committee endorsed the 35 recommendations given in paragraph 21.1 to .35 of the report and, recognizing that these needed to be taken into account also by other relevant sub-committees involved in the work on Large passenger ship safety, agreed to refer them to MSC 77 for consideration.

10.7 Some of the issues needed to be developed further in the future. The Sub-Committee therefore approved the continuation of the correspondence group on Large passenger ship safety with the same terms of reference as set out in document COMSAR 7/10/1, annex 1, subject to the Committee's approval to extend the target completion date of this item to 2004.

10.8 The Sub-Committee invited Member Governments to actively contribute to the work of the correspondence group under the co-ordination of the United Kingdom.*

10.9 The Sub-Committee acknowledged the tremendous amount of effort which had been required in the co-ordination of the work of this particular Correspondence Group and expressed appreciation of its co-ordinator Mr. David Jardine-Smith of the United Kingdom.

11 DEVELOPMENTS IN MARITIME RADIOCOMMUNICATION SYSTEMS AND TECHNOLOGY

General

11.1 The Sub-Committee recalled that COMSAR 6, pointing out that no substantial documents were submitted under this agenda item, had invited Member States to make their appropriate contributions concerning a national use of new technologies and radio systems to COMSAR 7.

11.2 Having considered document COMSAR 7/11 (Japan) proposing a revision of the performance standards for search and rescue radar transponders (SARTs) based on the results obtained from a recent experimental study on SARTs carried in Japan, the Sub-Committee was of the opinion that further research and studies were needed before the performance standards should be revised. In support of the proposal made in document COMSAR 7/11, the delegation of Japan made a Power Point presentation on its SARTs study.

11.3 Pointing out that the performance standards for SARTs should confirm with Recommendation ITU-R M.628-3 on Technical characteristics for search and rescue radar transponders based on horizontal polarization, the Sub-Committee invited Japan and other countries concerned to submit their appropriate proposals to the ITU-R Study Group 8 for consideration and study of the issue.

11.4 It was also acknowledged by the Sub-Committee that the Japanese proposal needed to be approved as a new work programme item; and, to this effect, Japan was invited to submit an appropriate document to the Committee.

11.5 With respect to the work programme item "Developments in maritime radiocommunication systems and technology", the Sub-Committee recalled that it had concurred with the proposal by France (COMSAR 5/3) that this item should be a permanent one in the Sub-Committee's agendas.

11.6 Meanwhile, recognizing the importance and broadness of this item, the Sub-Committee agreed that no submissions concerning performance standards for any radiocommunication equipment should be accepted and/or considered under this work programme item.

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11.7 The Committee was invited, taking into account the Sub-Committee's views above, extend the target completion date for the high priority item "Developments in maritime radiocommunication systems and technology" to 2005.

12 REVISION OF THE IAMSAR MANUAL

General

12.1 The Sub-Committee noted that, following an intervention by the delegation of Greece, supported by the delegation of Cyprus, reiterating the reservation they had registered at COMSAR 6 with respect to the amendments concerning aeronautical advice to MRCCs (section 1) as had been modified by COMSAR 6, and with the concerning statement of the Sub-Committee's Vice-Chairman and Chairman of the SAR Working Group, MSC 75 had referred that particular section to the ICAO/IMO Joint Working Group for clarification and advice to COMSAR 7.

12.2 The Sub-Committee also 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, MSC 75 had adopted the remaining of the proposed amendments to the IAMSAR Manual, i.e. all the amendments save for section 1, for dissemination by means of MSC/Circ.1044, having decided that the amendments should enter into force on 1 July 2003.

12.3 The Sub-Committee noted section 3 and appendixes E and F of the Joint Working Group report (COMSAR 7/7) suggesting draft amendments to the Manual and referred them to the SAR Working Group (WG 1) for consideration.

12.4 Following the proposal submitted by Greece (COMSAR 7/7/4) regarding the Report of the 9th session of the JWG in Hong Kong, China (COMSAR 7/7), the Greek delegation pointed out that the interventions of Greece regarding the amendments to the IAMSAR Manual were not motivated by local, regional or political concerns, taking also into account that the JWG is a technical body.

The only concern was to avoid to cover with the proposed amendments internationally situations concerning administrative "entities" not recognized by the United Nations. This was not a political issue and it is accepted that IMO and ICAO bodies follow the United Nations policy.

12.5 The SAR Working Group was instructed to consider the relevant parts of document COMSAR 7/7 and, taking into account comments made in Plenary, prepare:

- .1 draft amendments to the IAMSAR Manual recommending a date of their application together with the associated draft MSC circular on their adoption; and
- .2 relevant comments and proposals.

Report of the SAR Working Group (WG 1)

12.6 Having received the report of the SAR Working Group (COMSAR 7/WP.5), the Sub-Committee considered and agreed the draft MSC circular, as amended, on Adoption of the amendments to the IAMSAR Manual and the incorporated amendments, set out in annex 11, for submission to ICAO for approval and to MSC 77 for adoption.

12.7 The Secretariat was instructed to convey the proposed draft amendments to ICAO for approval.

12.8 The Committee was invited to take account of the response received from ICAO and adopt the draft MSC circular on Adoption of the amendments to the IAMSAR Manual.

13 DEVELOPMENT OF A PROCEDURE FOR RECOGNITION OF MOBILE-SATELLITE SYSTEMS

General

13.1 The Sub-Committee recalled that MSC 72 (May 2000) in consideration of the adoption by A 21 of resolution A.888(21) had requested the Sub-Committee (MSC 72/23, paragraph 21.33 refers):

- .1 to apply the criteria set out in the Annex to the resolution, in particular the procedure set out in section 1 of the Annex, when evaluating mobile-satellite systems notified by Governments for possible recognition for use in the GMDSS;
- .2 to consider developing, in connection with any decisions relating to the above, amendments to the provisions of the relevant SOLAS chapter IV regulations; and
- .3 to ensure that, for mobile-satellite communication systems to be recognized by the Organization for use in the GMDSS, they should be compatible with the appropriate SOLAS requirements and also that any such recognition should not result in substantial changes having to be made to existing procedures and equipment performance standards.

13.2 The Sub-Committee also recalled that COMSAR 6 had discussed in some detail the possible steps of a procedure for recognizing such mobile-satellite communication systems, as follows:

- .1 nomination of system by an Administration to the Organization in line with criteria set out in section 1 of the Annex to resolution A.888(21);
- .2 verification point by point of compliance with criteria or explanation of equivalent capabilities;
- .3 description of operational capability or operational trials;
- .4 evaluation of nomination by the Maritime Safety Committee; and
- .5 the MSC takes decision and approves an appropriate circular.

Recognizing that the development of a procedure for recognition of mobile-satellite systems, including the process of evaluation within the Organization, was still at a formative stage, the Sub-Committee invited Member Governments and interested organizations to submit relevant proposals to COMSAR 7 for consideration.

13.3 The Sub-Committee briefly considered document COMSAR 7/13 (Denmark) containing a proposed draft procedure for recognition of mobile-satellite systems and referred it to the Operational Working Group for further consideration.

13.4 The Operational Working Group (WG 3) was instructed to consider document COMSAR 7/13 and, taking into account comments and decisions made in plenary, to:

- .1 finalize a draft procedure for evaluation and possible recognition of mobile-satellite systems notified for use in the GMDSS;
- .2 prepare a draft annotated MSC circular; and
- .3 recommend further action on this work programme item,

for consideration at Plenary.

Report of the Operational Working Group (WG 3)

13.5 The Sub-Committee considered the report of the Operational Working Group (COMSAR 7/WP.3) and took action as summarized hereunder.

13.6 The Sub-Committee agreed the draft MSC circular on Procedure for evaluation and possible recognition of mobile-satellite systems notified for use in the GMDSS, given in annex 12, and invited the Committee to approve it.

13.7 The Sub-Committee, noting that work on this issue had been completed, invited the Committee to delete this item from the Sub-Committee's work programme.

13.8 The Sub-Committee also agreed with the opinion of the Working Group that there was a need for an agenda item at each subsequent session of the Sub-Committee to address any possible nominated mobile-satellite systems. This could be a separate agenda item for action by the Sub-Committee or it could be handled under the existing agenda item "Satellite services (Inmarsat and COSPAS-SARSAT)". Taking the above into account, the Committee was invited to authorize the Sub-Committee to consider any nominated mobile-satellite systems under the work programme item "Satellite services (Inmarsat and COSPAS-SARSAT)".

13.9 The Sub-Committee noted the opinion of the Working Group that it might be useful, desirable and, perhaps, necessary to review* resolution A.888(21) to ensure that criteria was kept current and certain phases, which could be interpreted as impediments, were clarified. The Committee was invited to authorize the Sub-Committee to review resolution A.888(21) under the work programme item "Satellite services (Inmarsat and COSPAS-SARSAT)".

* Resolution A.888(21), operative paragraph 3.(c), 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".

14 REVISION OF PERFORMANCE STANDARDS FOR NAVTEX EQUIPMENT

General

14.1 The Sub-Committee recalled that, having considered the report of the Working Group (COMSAR 6/WP.4), COMSAR 6 had concurred with the Group's opinion that the performance standards should be updated and that, in addition to the points in document COMSAR 6/17, consideration should be given to include a mandatory data and printer interface and to specify message memory capacity, and had invited Members to submit their comments and proposals to COMSAR 7 for consideration.

14.2 The Sub-Committee noted that, as requested by COMSAR 6, MSC 75 had replaced the low priority by a high priority of the work programme item "Revision of the performance standards for NAVTEX equipment".

14.3 The Sub-Committee noted documents COMSAR 7/14 (Denmark, Poland and United Kingdom) and COMSAR 7/14/1 (United States) and after brief discussion referred them to the Technical Working Group for detail consideration.

14.4 The Technical Working Group was instructed, taking into account decisions of, and comments and proposals made in Plenary, to:

- .1 prepare draft revised performance standards for NAVTEX equipment and an associated draft MSC resolution; and
- .2 any comments and/or recommendations regarding this issue,

for consideration at Plenary.

Report of the Technical Working Group (WG 2)

14.5 Having received and considered the report of the Technical Working Group (COMSAR 7/WP.1), the Sub-Committee took action as indicated hereunder.

14.6 The Sub-Committee agreed to the draft MSC resolution on Adoption of the revised performance standards for narrow-band direct-printing telegraph equipment for the reception of navigational and meteorological warnings and urgent information to ships (NAVTEX), given in annex 13, for submission to the seventy-seventh session of the Committee for adoption.

14.7 In completing revisions of Performance Standards for NAVTEX Equipment, the Sub-Committee agreed that NAVTEX messages could be displayed on an integrated navigation system. The carriage of NAVTEX receivers on ships is required under SOLAS IV/7.1.4. Since NAVTEX messages include information necessary for the safe navigation of ships, displaying such messages on an integrated navigation display may be appropriate and useful, and may benefit the mariner by placing information necessary for the safe navigation of the ship in one place. The Sub-Committee invited the Committee to instruct the NAV Sub-Committee to consider the requirement that integrated navigation systems be capable of displaying NAVTEX information. The NAV Sub-Committee may also consider that integrated navigation systems might be capable of displaying data received from SafetyNET receivers.

14.8 The Sub-Committee instructed the Secretariat to convey to the International Electrotechnical Commission, Technical Committee 80 the liaison statement given in annex 14 and request them to include a definition of a Data connection capable of interfacing to NAVTEX receivers and invited the Committee to endorse the action taken.

14.9 The Committee was invited to delete the item "Revision of performance standards for NAVTEX equipment" from the Sub-Committee's work programme, as the work has been completed.

15 REVIEW OF PERFORMANCE STANDARDS PROVISIONS (RESOLUTION A.809(19)) TO REQUIRE MEANS OF ATTACHMENT OF RADIOTELEPHONE APPARATUS TO ITS USER

General

15.1 The Sub-Committee noted that, in considering a proposal by Norway (MSC 75/22/6) to amend resolution A.809(19) on Performance standards for survival craft two-way VHF radiotelephone apparatus, to eliminate the risks of losing the equipment during distress situations and problems associated with technical means currently being acceptable according to the performance standards contained in resolution A.809(19), MSC 75 had decided to include, in the Sub-Committee's work programme and the provisional agenda for COMSAR 7, a high priority item on "Review of performance standards provisions (resolution A.809(19)) to require means of attachment of radiotelephone apparatus to its user", with a target completion date of 2003.

15.2 After brief consideration of document COMSAR 7/15 (Norway), the Sub-Committee referred it to the Technical Working Group, which was instructed, taking into account decisions and comments made in Plenary, to:

- .1 finalize draft amendments to resolution A.809(19); and
- .2 prepare an associated draft MSC resolution,

for consideration at Plenary.

Report of the Technical Working Group (WG 2)

15.3 Having received and considered the report of the Technical Working Group (COMSAR 7/WP.1), the Sub-Committee agreed to the draft MSC resolution on Adoption of the revised performance standards for survival craft portable two-way VHF radiotelephone apparatus, given in annex 15, for submission to the Committee with a view for adoption.

15.4 The Committee was also invited to note that annex 2 to resolution A.809(19) specifying performance standards for two-way VHF radiotelephone apparatus for fixed installation in survival craft is still valid.

15.5 The delegate of Liberia proposed that paragraph 2.2.11 of the annex to the draft MSC resolution mentioned in paragraph 15.3 above should read as follows:

“With provisions to be fitted into a secured pouch on the front of a life jacket of the person in distress. This microphone should be fitted with a quick release attachment (1.5 – 2mm string 30 - 60 cm long), in the event it endangers the safety of the person in

distress. For reception purposes, this pouch should be perforated, and should have velcro secure flap so that the phone is not inadvertently released.”

15.6 The Committee was invited to delete the agenda item "Review of performance standards provisions (resolution A.809(19)) to require means of attachment of radiotelephone apparatus to its user" from the Sub-Committee's work programme, as the work has been completed.

16 MEASURES TO ENHANCE MARITIME SECURITY

MARITIME SECURITY

16.1 The Sub-Committee noted that MSC 75 had recalled its discussion on the maritime security issues and decided to include, in the work programmes of the DSC, COMSAR, NAV and STW Sub-Committees and provisional agendas for DSC 7, COMSAR 7 and STW 34, a high priority item on “Measures to enhance maritime security”, with a target completion date of 2004, instructing NAV 48 to commence the work on the matter.

Upon the recommendation of the MSWG, and noting that the Legal and FAL Committees were identified by resolution A.924(22) to participate in the review and would, therefore, be informed of the ongoing work accordingly, the Committee:

- .1 instructed NAV 48 to complete the technical specifications for all AIS related-standards in time for the December Conference;
- .2 instructed NAV 48 to consider the issue of security of the AIS equipment against outside interference, taking into account the work done by DE 45 (MSC 75/17/2/Add.1) in this respect;
- .3 instructed the NAV and COMSAR Sub-Committees to start work on a system for long-range tracking and identification, taking into account the functional requirements, developed by the MSWG in this respect (see MSC 75/24, paragraph 17.115 and MSC 75/WP.18, annex 8); and
- .4 instructed NAV 48 to start work on the means of raising alarm on ships under terrorist attack on a priority basis, taking into account the work done by COMSAR 6 and DE 45 (MSC 75/17/2 and Add.1) and the draft regulation [XI/5] developed by the MSWG.

LONG-RANGE IDENTIFICATION SYSTEM

16.2 The Sub-Committee took note that MSC 75 had noted that the MSWG, in considering the functional requirements for a long-range identification system for submission to NAV 48 to enable that Sub-Committee to consider the issue and had advise the Maritime Security Conference accordingly, had agreed on a more general approach to the functional requirements, thereby requesting the experts at NAV 48 to advise on the different scenarios with regard to the interrogation intervals, the polling distance and costs of the various options. The agreed draft functional requirements including some notes by the small group which developed them for clarification are given in annex 8 to document MSC 75/WP.18.

The MSWG had also been made aware (MSC 75/17/7) that AIS may be used by ships under threat for sending an alarm to a shore station. It is possible that this station may be a VTS Centre. This possibility should be taken into account by the NAV and COMSAR Sub-Committees when developing guidelines regarding the means of ship alerting.

MSC 75, taking account of its decisions concerning maritime security issues, concurred with COMSAR 6 and instructed the Secretariat to request ITU WP.8B and, through IMSO, Inmarsat Ltd. to:

- .1 study the feasibility of providing long-range tracking with Inmarsat-C polling or using the data output available from AIS equipment; and
- .2 make necessary technical changes to MF/HF and Inmarsat equipment standards such that the relevant AIS data may be available to any appropriate national authority, including SAR authorities, using GMDSS communication equipment.

A liaison statement from IMO to ITU-R WP.8B on the above matter was issued as document 8B/266-E.

IMSO was requested accordingly by a letter of 30 July 2002, Ref. No. T2/6.01.

NAV 48 noted that its Technical Working Group had agreed with the functional requirements for a long-range identification and tracking system for security purposes as proposed by the MSWG, namely that:

- .1 the system was intended to enhance the security of coastal States by providing information about vessel traffic in a timely manner to enable the State to take any appropriate action; and
- .2 the system should:
 - enable the identification and tracking of ships at sea;
 - provide the competent authority of the coastal State with the identity and position of the ship;
 - ensure that the information is provided to the competent authority in a secure and confidential manner, with due regard to commercial sensitivity;
 - not provide information to other ships; and
 - be capable of working with different densities of shipping traffic.

NAV 48 also noted the analysis of the use of Inmarsat-C equipment and long-range AIS equipment made by the MSWG but pointed out, however, that long-range AIS was a polling system similar to Inmarsat-C and not a broadcast system as identified by the MSWG. The NAV Sub-Committee further noted that the Working Group had observed that the use of HF radio suggested by the MSWG would involve equipment to automatically select the correct operating frequency in order to provide an easy user interface and also for encryption in order to maintain confidentiality of the information.

NAV 48 further noted that the Working Group had studied the comparison of the use of Inmarsat-C equipment and long-range AIS equipment made by the MSWG and advised that Inmarsat-C was the most appropriate existing system for security purposes. However, it had pointed out that ships equipped for operation in sea areas A1 and A2 may not carry Inmarsat-C equipment.

Noting the ISWG's discussion on the issue of long-range identification and tracking, MSC 76, taking also into account document MSC 76/4/21 (ICS *et al.*), agreed, in principle, to consider the Inmarsat-C polling as a system for long-range tracking and identification, subject to further study by the NAV and COMSAR Sub-Committees, which were instructed to proceed accordingly.

SHIP SECURITY ALERT SYSTEM

16.3 The Sub-Committee noted that MSC 76 had agreed, in principle, that a performance standards were needed for new equipment and that such standards should be approved at the current session. It, therefore, instructed a small group to finalize them on the basis of the text provided in document MSC 76/4/2 (United States), taking into account the comments made in Plenary, for adoption by means of an MSC resolution. Having considered the report of the Drafting Group (MSC 76/WP.8), the Committee adopted resolution MSC.136(76) on Performance standards for ship security alert systems.

The Committee requested COMSAR 7 to consider the adopted performance standards and advise MSC 77 whether any amendments thereto were necessary.

OUTCOME OF THE 2002 SOLAS CONFERENCE ON MARITIME SECURITY

16.4 The Sub-Committee also noted that, as requested by MSC 76, the Chairman had brought to its attention document SOLAS/CONF.5/DC/3 which was used as a reference document when considering the work programme of the Committee and the sub-committees emanating from the outcome of the 2002 SOLAS Conference on Maritime Security.

MSC 76, having discussed various requests of the 2002 SOLAS Conference contained in the Conference resolutions, agreed to give them detailed consideration at MSC 77 and decided, in the meantime, to instruct COMSAR 7 to note, in the context of resolution 10 on Early implementation of long-range ship's identification and tracking, that SOLAS Contracting Governments have been invited to encourage ships entitled to fly the flag of their State to take the necessary measures so that they are prepared to respond automatically to Inmarsat-C polling, or to other available systems and requested the Sub-Committee to report to MSC 77 for the Committee to provide further direction on the above issue.

16.5 Taking into account the above information and proposals made by the United States, Brazil and the Chairman of the *ad-hoc* group, who was involved in the deliberations of the matter at many levels including MSC 75 MSWG and ISWG, the Sub-Committee observed the following:

- .1 the performance standards for ship security alert systems (SSASs) had been proposed in generic way, which had been endorsed by the Committee;
- .2 probably, some guidelines/interpretations were needed to detail/clarify and describe the performance standards for SSASs;
- .3 this body of IMO should deal with technical aspects of the issue only;

- .4 an VHF AIS had been selected as a short-range identification and tracking system of ships;
- .5 Inmarsat-C or any systems could be used for identification and tracking of ships in a long-range; and
- .6 many other points related to the matter.

16.6 Finally, after considerable discussions of the issue, the Sub-Committee decided to establish a drafting group, which was instructed, taking into account comments and proposals made in plenary, to:

- .1 consider the proposal by the Chairman of the *ad-hoc* drafting group at MSC 76, and prepare a draft MSC circular on Guidance concerning the description of the Ship Security Alert System;
- .2 consider any proposed amendments to the Performance Standards as prescribed in Resolution MSC.136/76 (COMSAR 7/2/2, annex 1) and advise the Sub-Committee; and
- .3 using the proposal by the United States and Brazil as basis, prepare draft recommendations on functional requirements for long-range identification and tracking of ships.

REPORT OF THE DRAFTING GROUP

16.7 Having received and considered the report of the Drafting Group (COMSAR 7/WP.4 and Add.1), the Sub-Committee approved it, in general, and took action as summarized hereunder.

GUIDANCE ON PROVISION OF SHIP SECURITY ALERT SYSTEMS

16.8 The Sub-Committee agreed a draft MSC circular Guidance on provision of ship security alert systems, given in annex 16, with minor editorial changes to align it with the contents of SOLAS chapter XI-2 and the ISPS Code and invited the Committee to approve it, and provide further advice and instructions to the Sub-Committee.

AMENDMENTS TO PERFORMANCE STANDARDS FOR SSASs

16.9 The Committee was invited to consider and adopt the proposed draft amendments to the performance standards for ship security alert systems (resolution MSC.136(76)) as follows:

“3 Power Supply

Where the ship security alert system is powered from the ship’s main source of electrical power, it should, in addition, be possible to operate the system from ~~another appropriate~~ ***an alternative*** source of power”.

“6 Transmission of security alerts

“6.1 In all cases, transmission initiated by security alert system activation points should include a unique code/identifier indicating that the alert has not been generated in accordance with GMDSS distress procedures. The transmission should include the ship identity and current position *associated with a date and time*. The transmission should be addressed to a shore station and should not be addressed to ship stations.”

LONG-RANGE SHIP’S IDENTIFICATION AND TRACKING

16.10 The Sub-Committee considered the draft recommendation on functional requirements for long-range identification and tracking of ships, given in annex 17.

16.11 In order to achieve long-range identification and tracking, the Sub-Committee was of the opinion that further regulations would be required in the SOLAS Convention and invited Administrations to submit their suitable proposals to COMSAR 8 for consideration.

16.12 The Sub-Committee was of the opinion that any such future regulations should be qualified with the requirement that, while all reasonable steps are taken to maintain the relevant equipment on board in efficient working order, malfunctions of that equipment should not be considered as a reason for delaying the ship in ports where repair facilities are not readily available, provided suitable arrangements are made by the master to execute a voyage to a port where repairs can take place.

16.13 The Sub-Committee noted that the drafting group had discussed the need for a global tracking scheme including guidelines for interchanging data among Administrations, as appropriate, and that the group was of the opinion that:

- .1 whenever satellite systems are used, IMSO or another appropriate body could be required in order to co-ordinate identification and tracking among land earth stations, as appropriate; and
- .2 IMSO or another appropriate body will be required to report to the Committee on recommended guidelines on the implementation of the long-range ship identification and tracking service.

However, the Sub-Committee was of the opinion that further work was required on the issue of a global tracking scheme and invited members to submit their proposals to COMSAR 8.

16.14 The Sub-Committee, agreeing that in order to have detailed discussion on this issue more guidance would be needed, invited the Committee to consider all policy issues relating to the long-range ship identification and tracking, taking into account the draft recommendation on functional requirements, given in annex 17, and instruct COMSAR 8 accordingly and instruct NAV 49 to consider the issue further.

16.15 The delegation of Brazil expressed its particular view that the Sub-Committee should have reported to NAV 49 through MSC 77 its assessment on the adequacy and availability of the Inmarsat-C polling as a system for long-range tracking and identification, as requested by MSC 76.

Acts of violence against ships Directives for Maritime Rescue Co-ordination Centres (MRCCs)

16.16 The Sub-Committee noted that the ICAO/IMO JWG at its 9th session had recognized that MSC 76 and the Diplomatic Conference might also raise other issues for consideration and it would be premature for the JWG to amend the existing guidance in MSC/Circ. 967 and the newly revised MSC/Circ.623/Rev.3.

The JWG expressed the opinion that the role of the MRCC should focus mainly on receiving and relaying the alerts to security authorities of the ship's flag State and the State responsible for the SRR where the incident is located, and to the shipping company concerned. Alerts received by any one of these authorities or by the ship's company should be relayed to the others. MRCCs should monitor security threat situations since the need for a SAR response could develop.

It was also considered important that the JWG followed the developments on maritime security closely in order to ensure that SAR systems and GMDSS are not compromised.

The JWG was of the opinion that, in view of the anticipated further debate on a number of fundamental issues concerning maritime security alerts, it would be appropriate to await the outcome of MSC 76 and the Diplomatic Conference before the current guidance provided to MRCCs is revised.

16.17 The Sub-Committee also noted that MSC 76, endorsing the ISWG's action in referring document MSC 76/ISWG/WP.5, annex 4 to the aforementioned JWG for consideration and appropriate action and taking into account the relevant part of the report of that working group (MSC 76/4/3) (which had not come up with the requested guidance but had, instead, raised a number of fundamental issues which required further advice and debate before any firm decisions were made), had noted that, in the view of the JWG, the existing guidance in MSC/Circ.967 covered the maritime security incident scenario and that it had been drafted with such concerns in mind to address piracy/armed robbery attacks and other security threats, such as terrorist attacks.

16.18 The Sub-Committee, taking into account the above information, considered document COMSAR 7/16 (France) and was of the opinion that it was premature to consider, at this stage, any amendments to MSC/Circ.967 and to any other circulars without further instructions and advice which should be provided by MSC 77.

CONNECTION OF AIS TO THE RADIO STATION'S RESERVE POWER SOURCE

16.19 The Sub-Committee recalled that that COMSAR 6 had noted COMSAR 6/INF.7 (Germany) suggesting that AIS required by new SOLAS chapter V should be connected to the radio station's reserve power source(s). Recognizing the value of AIS use in many applications, the Sub-Committee was of the opinion that a connection of additional equipment to the radio station's reserve power source(s) might require changes in SOLAS regulations IV/13.2 and 13.8.

COMSAR 6 agreed that the matter should be considered further and invited Germany to submit simultaneously the appropriate proposal to MSC 76 and COMSAR 7 for consideration, subject to the Committee's authorization.

16.20 The Sub-Committee considered document COMSAR 7/16/1 (United States and Germany) proposing to connect AIS to the radio station's reserve power source and after, considerable discussion agreed that the matter should be considered further at COMSAR 8, if instructed by the Committee.

16.21 Therefore, MSC 77 was invited to consider the above proposal and authorize NAV 49 and COMSAR 8 to consider the issue further.

ADDITIONAL CODES FOR NATURE OF DISTRESS IN THE INMARSAT-E SYSTEM

16.22 The Sub-Committee recalled that COMSAR 6 had noted COMSAR 6/INF.6 (Germany) and determined that, until the MSC decides upon the recommended actions to be taken by MRCCs on receipt of a "piracy/terrorist attack" alert, it was premature to reach a decision in relation to any additional nature of distress codes needed in the Inmarsat-E system. The Committee was invited to note the Sub-Committee's view on this matter.

16.23 The Sub-Committee noted that, having considered document MSC 75/11/5 (Germany) proposing the inclusion of codes for "Piracy" and "Person overboard" in the Inmarsat-E system and being advised that COMSAR 6 had already noted the proposal by Germany and determined that, until the Committee decided upon the recommended actions to be taken by MRCCs on receipt of a "piracy/terrorist attack" alert, it would be premature to reach a decision in relation to any additional nature of distress codes needed in the Inmarsat EPIRB system, the Committee referred document MSC 75/11/5 to COMSAR 7 for consideration of the relevant parts and advice, as appropriate.

16.24 The Sub-Committee also noted document MSC 75/11/5 and agreed that further instructions were needed from the Committee for further consideration of the matter.

16.25 The Committee was invited to note the above deliberations on the issue and decide as appropriate.

17 HARMONIZATION OF GMDSS REQUIREMENTS FOR RADIO INSTALLATIONS ON BOARD SOLAS SHIPS

General

17.1 The Sub-Committee noted that MSC 75 had concurred with a proposal by COMSAR 6 on extending the target completion date for the agenda item "Harmonization of GMDSS requirements for radio installations on board SOLAS ships" to 2003.

17.2 After a brief introduction of documents COMSAR 7/17 (Norway), COMSAR 7/17/1 (Germany) and COMSAR 7/17/2 (Ireland) containing proposed draft guidelines on harmonization of GMDSS requirements for radio installations on board SOLAS ships, the Sub-Committee referred them to the Technical Working Group and instructed it, taking into account any decisions of, and comments and proposals made in Plenary, to:

- .1 consider documents COMSAR 7/17, COMSAR 7/17/1 and COMSAR 7/17/2 in detail; and

- .2 prepare the draft guidelines on harmonization of GMDSS requirements for radio installations on board SOLAS ships and an annotated draft COMSAR circular for consideration in Plenary.

Use of direct-printing telegraphy for distress and safety purposes by SOLAS ships

17.3 The Sub-Committee recalled, that having considered the termination of live telex issue, COMSAR 6 had distinguished between the use of telex on landlines, in the satellite links of Inmarsat systems and on MF/HF frequencies. As for the satellite links, it concluded that “direct-printing” could be replaced by data communication systems. Also with regard to the landlines, it was of the opinion that telex could be replaced by other data communication systems.

It was pointed out that, if the requirement for MF/HF radio telex was removed, this might lead to incompatibility between ships selecting different systems. Additionally, the reliability and availability of replacement systems should be considered. It was also pointed out that there was, at present, no alternative to MF/HF radio telex in sea areas A4.

17.4 The Sub-Committee noted that MSC 76 had considered a proposal by Norway (MSC 76/20/5) calling for the reconsideration of the need for mandatory requirements for MF/HF equipment to be fitted with direct-printing telegraphy for ships operating in sea areas A3 and A4 as required by chapter IV of the 1974 SOLAS Convention and the applicable performance standards; and, if the outcome of the reconsideration indicates that the relevant requirements for direct-printing telegraphy could be deleted without negative consequences for safety at sea, while making equipment cheaper and easier to operate, to develop appropriate draft amendments to both the SOLAS Convention and the relevant performance standards.

17.5 Following discussions, the Committee decided to refer document MSC 76/20/5 to COMSAR 7 for consideration and for advice to MSC 77 on whether work to develop appropriate amendments should be undertaken.

17.6 Having noted the above, the Sub-Committee instructed the Technical Working Group to consider document MSC 76/20/5, taking into account the view expressed by COMSAR 6 (COMSAR 6/22, paragraphs 8.38 to 8.43), and advise Plenary accordingly.

Report of the Technical Working Group

17.7 Having considered the report of the Technical Working Group (COMSAR 7/WP.1), the Sub-Committee took action as summarized hereunder.

Harmonization of GMDSS requirements for radio installations on board SOLAS ships

17.8 The Sub-Committee agreed to use the proposal contained in document COMSAR 7/17 as the basis to prepare the guidelines for harmonization of GMDSS requirements for radio installations on board SOLAS ships and recognised that proposed draft guidelines contain information from other organizations and felt that this information would be helpful to those planning GMDSS installations on board SOLAS ships.

17.9 The Sub-Committee prepared the draft COMSAR circular on Harmonization of GMDSS requirements for radio installations on board SOLAS ships, given at annex 18, for approval by the Committee.

17.10 The Committee was invited to delete the item "Harmonization of GMDSS requirements for radio installations on board SOLAS ships" from the Sub-Committee's work programme, as the work on this item had been completed.

USE OF DIRECT-PRINTING TELEGRAPHY FOR DISTRESS AND SAFETY PURPOSES BY SOLAS SHIPS

17.11 The Sub-Committee noted that narrow-band direct printing (NBDP) was used in the GMDSS for its compatibility with DSC. As the technical characteristics are similar for these two systems, the range of operation is the same, hence NBDP is, from a purely technical point of view, a good choice as a follow-up to a DSC distress alert. In certain circumstances, where a DSC call is successful a voice call might not be possible. The Sub-Committee agreed that though there is currently limited use of NBDP, until a viable alternative is found that will operate under the same conditions as DSC and perform all the present functions of NBDP, NBDP should be retained. The Committee was invited to endorse the Sub-Committee's opinion on this issue.

17.12 The Sub-Committee noted that new mobile-satellite systems and HF email systems are currently being used at sea and could be considered as an alternative at a later stage, but this would need to be approved and adopted by the Organization for use within the GMDSS. The Sub-Committee further noted that as technology is continuously being developed, it would be necessary to retain the agenda item on "Development in maritime radiocommunication systems and technology" on a continuous basis so that any new developments can be brought to the attention of the Sub-Committee.

18 AMENDMENT TO THE DSC CODE AND THE 1994 HSC CODE – AGENDA ITEM DELETED BY MSC 76

19 REVIEW OF THE FAL AND SALVAGE CONVENTION ON PROVISIONS TO ADDRESS THE TREATMENT OF PERSONS RESCUED AT SEA

General

19.1 The Sub-Committee noted that MSC 75 had considered the issue of review of safety measures and procedures for the treatment of persons rescued at sea and had decided to include in the Sub-Committee's work programme and the provisional agenda for COMSAR 7 a low priority item on "Review of the FAL and SALVAGE Convention provisions to address the treatment of persons rescued at sea" (to consider in conjunction with work carried out by the FAL and Legal Committees respectively), with a target completion date of 2004.

19.2 The Sub-Committee also noted that at LEG 85, noting that the MSC had identified the SALVAGE Convention as one of the instruments which might need to be reviewed, and that document LEG 85/10/2 called particular attention to article 10 of that Convention, which refers to the obligation of the Master to render assistance to persons in danger of being lost at sea, the observer of CMI had recalled that the SALVAGE Convention was primarily a private law convention, and the provisions of article 10 were intended to ensure that the exercise of that duty did not negate a claim of salvage. He expressed the view that the SALVAGE Convention might not be the most appropriate vehicle for addressing the public law issue of treatment of persons rescued at sea.

LEG 85 decided that there was no specific action to be taken at that session, but it noted that it might be requested by other IMO bodies to examine particular issues, and that it would need to decide at its next session what interim report to submit to the Council for transmission to the twenty-third Assembly.

19.3 Having noted that there were no substantial documents submitted under this agenda item for consideration, the Sub-Committee agreed to refer the matter to the SAR Working Group to brainstorm the issue and advice at Plenary as appropriate.

Report of the SAR Working Group

19.4 The Sub-Committee, having considered the report of the SAR Working Group (COMSAR 7/WP.5 and Add.1 and 2), took action as summarized hereunder.

19.5 The Sub-Committee, noting the comments provided by LEG 85 (MSC 76/22/13), as referred to in paragraph 18.2 above and further noting that FAL 30 was expected to consider the issue in the context of the FAL Convention later this month, agreed that it would be premature for COMSAR 7 to advise the two Committees on any action to be taken until its work on amendments to the SOLAS and SAR Conventions was completed and approved by the Committee and the direction of that process was clear.

19.6 The Sub-Committee therefore agreed to inform LEG 86 and FAL 30 of its work undertaken on the SOLAS and SAR amendments so that the two Committees can take it into account in their review, in order to avoid any inconsistencies in the different Conventions.

19.7 The Secretariat was instructed to inform LEG 86 and FAL 30 accordingly.

SAR operation off Cape Horn

19.8 The delegation of Germany informed the Sub-Committee that in the early hours of 13 December 2002 a distress message was received via satellite from a German yacht named **Ole Hoop** which, at that point, was on route from "Easter Island" to "Cape Horn" at a position approximately 200 nautical miles to the West of "Cape Horn" in the Chilean search and rescue region. The crew of this well equipped yacht consisted of two highly experienced German citizens who were on their second round-the world trip.

19.9 The Chilean MRCC conducted and co-ordinated for almost two weeks an extensive search operation, involving enormous efforts, first in the ocean region referred to above and later along the Chilean Coast. Not only Chilean sea and air search units but also Chilean fishing vessels, the United States research vessel **Melville** and a large tanker of the Stena Group present in the area, participated in the search. Unfortunately, the operation was unsuccessful and was called off on 26 December 2002.

19.10 While thanking the MRCC of Chile and all those involved during the Christmas SAR mission, Germany pointed out that this case had, like many cases in the past, again proven that motivated seafarers, who risk their lives to rescue persons in distress at sea, are the societies humanitarian bridgeheads on the oceans. With regard to the ongoing consideration of the treatment of persons rescued at sea, Germany pointed out that such seafarers constituted a precious resource which should not be put at risk without good reason.

20 WORK PROGRAMME AND AGENDA FOR COMSAR 8

REVIEW OF THE GUIDELINES FOR THE DESIGN AND CONSTRUCTION OF OFFSHORE SUPPLY VESSELS (OSV GUIDELINES)

20.1 The Sub-Committee noted that MSC 75 had considered document MSC 75/22/2 (Australia), proposing that the Guidelines for the design and construction of offshore supply vessels (resolution A.469(XII)) be reviewed and made mandatory under the 1974 SOLAS Convention either in the form of a Code or by directly incorporating, into the Convention, the technical provisions of the Guidelines as well as the survey and certification requirements. The reason behind the proposal was that the Guidelines had been adopted in 1981 and were based on the requirements of the Convention as amended in that year, while a number of amendments to SOLAS and other IMO instruments (such as the Intact Stability Code) had since been adopted which might affect the Guidelines. Following discussion, in the course of which it was agreed that the Guidelines should not be made mandatory, the Committee decided to include, in the work programmes of the FP, COMSAR, NAV, DE (co-ordinator) and SLF Sub-Committees, a high priority item on “Review of the OSV Guidelines”, with three sessions needed to complete the item.

As the Guidelines stated that they were applied in addition to the OSV Guidelines and stipulated that, where the Guidelines set forth alternative safety standards to those contained in the OSV Guidelines, the provisions of the Guidelines should be followed, as appropriate, the Committee agreed that the respective aforementioned Sub-Committees should bear in mind the Guidelines, as appropriate, in the course of the revising of the OSV Guidelines; and invited the MEPC to note the above decision.

REVISION OF THE FORMS OF NUCLEAR SHIP SAFETY CERTIFICATES

20.2 The Sub-Committee also noted that MSC 75 had considered a proposal by the Russian Federation (MSC 75/22/7) calling for the revision of the forms of the nuclear ship safety certificates to bring their contents in line with the requirements of the 1974 SOLAS Convention, as amended since its entry into force in 1980. After consideration of the matter, the Committee decided to include, in the work programmes of the DE (co-ordinator), COMSAR and NAV Sub-Committees, a low priority item on “Revision of the forms of nuclear ship safety certificates”, with two sessions needed to complete the item.

20.3 Having considered document COMSAR 7/20 (Russian Federation), the Sub-Committee decided to include this work programme item in the provisional agenda for COMSAR 8.

PROPOSED AMENDMENTS TO UPDATE THE DSC CODE AND THE 1994 HSC CODE

20.4 The Sub-Committee further noted that MSC 76 had recalled that MSC 75 had considered a proposal by Australia (MSC 75/12/2) that amendments should be made to the DSC Code and the 1994 HSC Code to align their requirements with those of the 1974 SOLAS Convention and the 2000 HSC Code at the earliest reasonable opportunity, namely as part of the next revision of the 1994 HSC Code scheduled for 2005. Australia had further suggested that, in the meantime, an MSC circular should be issued to bring the discrepancies to the attention of owners, flag States, port States, classification societies and others involved in the operation of craft covered by the DSC Code and the 1994 HSC Code. Following consideration of the proposal and of relevant modifications, MSC 75 had agreed that there was a need to consider the draft circular further, noting the offer of the delegation of Australia to submit a revised version of the draft circular to

this session, with a view to approval. MSC 75 had also included, in the work programmes of the DE (co-ordinator), COMSAR and NAV Sub-Committees, a high priority item on "Amendments to the DSC Code and 1994 HSC Code", with a target completion date of 2004.

In this regard, the Committee considered document MSC 76/8/1 (Australia, Norway, United Kingdom and IACS), containing a revised version of the draft MSC circular referred to in paragraph 4 above incorporating the comments made at MSC 75, and approved MSC/Circ.1057 on Proposed amendments to update the DSC Code and the 1994 HSC Code, having agreed to some modifications to the cover of the circular.

With regard to the proposal made in document MSC 76/8/1 that there was, in view of the approval of the MSC circular, no need for immediate action under the new work programme item on "Amendments to the DSC Code and 1994 HSC Code" already included in the work programmes of the DE, COMSAR and NAV Sub-Committees and that, instead, the work programme item should be renamed "Review of the 2000 HSC Code and amendments to the DSC Code and 1994 HSC Code" and assigned to the DE (co-ordinator), FP, COMSAR, NAV and SLF Sub-Committees, with two sessions needed to complete the item, commencing the work in 2004 as part of the next scheduled review of the 2000 HSC Code, MSC 76 concurred with the proposal and agreed to modify the work programmes of the Sub-Committees concerned accordingly.

ADVENTURE NAVIGATION AND THE INTERNATIONAL CONVENTION ON MARITIME SEARCH AND RESCUE

20.5 The Sub-Committee noted that, having considered document MSC 76/20/4 (Chile), MSC 76 had decided, to include, in the work programmes of the NAV and COMSAR Sub-Committees, a low priority item on "Recommendations on high-risk oceanic crossings by adventure craft", with one session needed to complete the item; and to assign the NAV Sub-Committee as the co-ordinating Sub-Committee.

PROPOSED CHANGES TO THE SUB-COMMITTEE'S WORK PROGRAMME

20.6 Taking into account the progress made at this session and the provisions of the agenda management procedure, the Sub-Committee revised its work programme (COMSAR 7/WP.6) based on that approved by MSC 76 (COMSAR 7/2/2, annex 3) and prepared a revised work programme and provisional agenda for COMSAR 8, as set out in annex 19, for consideration and approval by the Committee. While reviewing the work programme, 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 - Procedures for responding to DSC alerts;
 - .1.2 item H.3 - Development of a procedure for recognition of mobile-satellite systems;
 - .1.3 item H.5 - Bridge-to-bridge radiocommunications;
 - .1.4 item H.7 - Revision of performance standards for NAVTEX equipment;

- .1.5 item H.9 - Review of performance standards provisions (resolution A.809(19)) to require means of attachment of radiotelephone apparatus to its user; and
- .1.6 item L.1 - Harmonization of GMDSS requirements for radio installations on board SOLAS ships;
- .2 delete the following work programme item as it is covered by item 7 on “Casualty analysis”:
 - .2.1 item 1.2 - Replies to questionnaire on casualties;
- .3 extend the target completion date of the following work programme items:
 - .3.1 item 6.1 - Harmonization of aeronautical and maritime search and rescue, including SAR training matters, to 2004;
 - .3.2 item 6.4 - Medical assistance in SAR services, to 2004;
 - .3.3 item H.4 - Developments in maritime radiocommunication systems and technology, to 2005;
 - .3.4 item H.6 - Large passenger ship safety, to 2004; and
 - .3.5 item H.8 - Emergency radiocommunications, including false alerts and interference, to 2006; and
- .4 replace the number of sessions by the target completion date for the following work programme items:
 - .4.1 item H.11 - Review of the 2000 HSC Code and amendments to the DSC Code and the 1994 HSC Code (co-ordinated by DE); and
 - .4.2 item L.2 - Revision of the forms of nuclear ship safety certificates (co-ordinated by DE).

ARRANGEMENTS FOR THE NEXT SESSION

20.7 It was proposed that Working Groups on the following matters be established at COMSAR 8:

- .1 GMDSS operational matters;
- .2 SAR matters; and
- .3 technical matters.

DATES OF THE NEXT SESSION

20.8 The Sub-Committee was advised that its eighth session had been tentatively scheduled to be held from 16 to 20 February 2004.

INTERSESSIONAL MEETING

20.9 The Sub-Committee noted that the tenth session of the ICAO/IMO Joint Working Group on Harmonization of Aeronautical and Maritime Search and Rescue was scheduled to be held in Torquay, the United Kingdom, from 15 to 19 September 2003; and invited the Committee to approve this intersessional meeting (see also paragraph 7.13).

21 ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 2004

21.1 The Sub-Committee, being informed of its Chairman's decision to relinquish his office at the end of the current year, expressed to Mr. V. Bogdanov deep appreciation for the outstanding contribution he had made over many years to the work of IMO and this Sub-Committee; and wished him happiness in life and success in all his professional undertakings.

21.2 The Sub-Committee decided to postpone the election of Chairman for 2004 to the opening of the next session, COMSAR 8, in February 2004.

21.3 The Sub-Committee unanimously re-elected Mr. U. Hallberg (Sweden), as Vice-Chairman for 2004.

22 ANY OTHER BUSINESS**TEMPERATURE REQUIREMENTS FOR 9 GHZ SARTS**

22.1 The Sub-Committee noted document COMSAR 7/22 (Denmark) providing information on experience of using SARTs stowed in liferafts at air temperature down to minus 35° C or lower and pointing out that a revision of performance standard for SARTs could be necessary.

22.2 The Sub-Committee was of the opinion that Denmark and, probably other countries facing the same experience, should provide a justification for requesting the Committee to include an appropriate item in the work programme of the Sub-Committee and its provisional agenda.

WORLD-WIDE RADIONAVIGATION SYSTEM – GALILEO SERVICES AND ARCHITECTURE

22.3 As well as MSC 76, the Sub-Committee also noted with interest the information provided by the European Commission (MSC 76/INF.4) on the World-Wide Radionavigation System - Galileo services and architecture, including the current baseline of the GALILEO satellite navigation system.

EXPRESSIONS OF APPRECIATION

22.4 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. Eirik Bliksrud (Norway – Chairman, Technical Working Group of the Sub-Committee) (on transfer to other duties);
- Mr. Captain W.S. Moreira (Brazil) (on retirement);

- Captain Peter Olsson (Germany) (on retirement);
- Mr. R. Soluri (United States – Chairman, International SafetyNET Co-ordinating Panel) (on retirement); and
- Mr. Richard Swanson (United States – Chairman, Operational Working Group of the Sub-Committee) (on retirement).

23 ACTION REQUESTED OF THE COMMITTEE

23.1 The Committee, at its seventy-seventh session is invited to:

- .1 endorse the Sub-Committee's action in instructing the Secretariat to issue COMSAR/Circ.30 – List of NAVAREA Co-ordinators, revoking COMSAR/Circ.24 (paragraph 3.9);
- .2 approve the draft MSC/Circ.1064/Add.1 on Amendments to the International SafetyNET Manual, supplementing MSC/Circ.1064 (paragraph 3.11 and annex 2);
- .3 endorse the Sub-Committee's action in instructing the Secretariat to include the correct diagram of NAVAREA/METAREA into the revised International SafetyNET Manual based on the adopted amendments given in MSC/Circ.1064 (paragraph 3.12);
- .4 endorse the Sub-Committee's action in instructing the Secretariat to convey the unchanged IMO position concerning maritime mobile services to the ITU World Radiocommunication Conference, 2003 (WRC-03, to be held in Geneva, Switzerland, from 9 June to 4 July 2003) (paragraph 4.5);
- .5 endorse the Sub-Committee's action in instructing the Secretariat to convey a statement to Study Group 8 on the operational need to develop provisions for a standard format of MMSI numbers to be used in AIS on SAR aircraft (paragraphs 4.6 and 4.7);
- .6 approve the draft MSC circular on Future withdrawal of Inmarsat-A services by Inmarsat Ltd (paragraph 5.11 and annex 3);
- .7 endorse the agreement and action taken by the Sub-Committee relating to a specific code for a "man-over-board" alert for inclusion in the Inmarsat-E protocol; and the relevant instructions to the Secretariat (paragraphs 5.12 and 5.13);
- .8 endorse the Sub-Committee's action in instructing the Secretariat to:
 - .8.1 convey the decision given in sub-paragraph .7 above to ITU-R Study Group 8 for consideration with a view to amend Recommendation ITU-R M.623-3 on Transmission Characteristics of a satellite emergency position indicating radio beacon (satellite EPIRB) system operating through geostationary satellites in the 1.64 Hz band, Table 3 – Nature of distress indications; and

- .8.2 inform Inmarsat Ltd through IMSO accordingly (paragraphs 5.12 and 5.13);
- .9 approve the draft MSC circular on Guidelines to Administrations on reporting false alerts (paragraph 6.14 and annex 4);
- .10 approve the proposed draft amendments to SOLAS regulation IV/15.9, with a view to adoption at MSC 78 and a proposed entry-into-force date on 1 January 2006 (paragraph 6.16 and annex 5);
- .11 approve, subject to the approval and adoption of the proposed draft amendments to SOLAS regulation IV/15.9, the inclusion of respective changes in the preamble of resolution MSC.83(70) on Amendments to the survey guidelines under the harmonization system of survey and certification (resolution A.746(18)), as well as in the fishing vessel Safety Code and Voluntary Guidelines (paragraph 9.13.8 of annex 1 and paragraph 9.13.8 of annex 2) (paragraph 6.17);
- .12 endorse the Sub-Committee's action in issuing COMSAR/Circ.31 on Mass rescue operations (paragraph 7.10);
- .13 approve the convening of the tenth session of the Joint ICAO/IMO Working Group on Harmonization of Aeronautical and Maritime SAR scheduled to take place in Torquay, United Kingdom, from 15 to 19 September 2003 (paragraphs 7.13 and 19.9);
- .14 approve the draft MSC circular on Guidelines for preparing plans for co-operation between search and rescue services and passenger ships (in accordance with SOLAS regulation V/7.3), combining and revoking MSC/Circs. 1000 and 1041 (paragraph 7.23 and annex 7);
- .15 approve the draft MSC circular on Guidance on responsibility and liability issues related to the use of the emergency medical kit/bag and evaluation of its use in emergency incidents (paragraph 7.31 and annex 8);
- .16 approve, taking into account the discussion and comments made at COMSAR 7, the proposed draft amendments to the SOLAS and SAR Conventions with a view to adoption at MSC 78 (paragraphs 8.13 to 8.31 and annexes 9 and 10);
- .17 agree, subject to decisions made under sub-paragraph .16, to the development of the guidelines referred to in the proposed draft amendments to the SOLAS and SAR Conventions (paragraph 8.32);
- .18 instruct NAV 49, when finalizing the text of the two draft Assembly resolutions on Guidelines on places of refuge for ships in need of assistance and on Maritime Assistance Service (MAS), to ensure that:
 - .1 the term "distress", whenever used, should be meant as defined in the SAR Convention;
 - .2 provision is made that there is one single point of contact from ship-generated communications and this should be the MRCC; and

- .3 the MRCC could, if possible, be assigned the MAS functions (paragraph 8.38);
- .19 endorse the Sub-Committee's action in inviting Member Governments to send their SAR experts to NAV 49 when finalizing the two draft Assembly resolutions mentioned in sub-paragraph .20 above (paragraph 8.40);
- .20 consider the recommendations on large passenger ship safety matters endorsed by the Sub-Committee, as given in paragraph 21 of document COMSAR 7/10/1 (paragraph 10.6 and document MSC 77/4);
- .21 adopt the proposed draft amendments to the IAMSAR Manual; and approve the associated draft MSC circular (paragraph 12.6 and annex 11);
- .22 approve the draft MSC circular on Procedure for evaluation and possible recognition of mobile-satellite systems notified for use in the GMDSS (paragraph 13.6 and annex 12);
- .23 agree that the Sub-Committee considers any future nominated mobile-satellite system for use in the GMDSS under its work programme item on "Satellite services (Inmarsat and COSPAS-SARSAT)" (paragraph 13.8);
- .24 authorize the Sub-Committee to review, under its work programme item on "Satellite services (Inmarsat and COSPAS-SARSAT)" resolution A.888(21) with a view to keeping it updated to secure the long-term integrity of the GMDSS (paragraph 13.9);
- .25 adopt the draft MSC resolution on Adoption of the revised performance standards for narrow-band direct-printing telegraph equipment for the reception of navigational and meteorological warnings and urgent information to ships (paragraph 14.6 and annex 13);
- .26 instruct the NAV Sub-Committee to consider the requirement for integrated navigation systems being capable of interfacing with NAVTEX receivers (paragraph 14.7);
- .27 endorse the Sub-Committee's action in instructing the Secretariat to convey the agreed liaison statement to the International Electrotechnical Commission (Technical Committee 80) with a request to include in the integrated display system a definition of Data connection capable of interfacing with NAVTEX receivers (paragraph 14.8 and annex 14);
- .28 adopt the draft MSC resolution on Adoption of the revised performance standards for survival craft portable two-way VHF radiotelephone apparatus (paragraph 15.3 and annex 15);
- .29 approve the draft MSC circular on Guidance on provision of ship security alert systems; and provide further instructions on the matter, if necessary (paragraph 16.8 and annex 16);
- .30 consider and adopt the proposed draft amendments to the performance standards for ship security alert systems (resolution MSC.136(76)) (paragraph 16.9);

- .31 consider policy issues relating to long-range ship identification and tracking, taking into account the draft recommendation on functional requirement; instruct NAV 49 to further consider the issue; and advise COMSAR 8 accordingly (paragraph 16.14 and annex 17);
- .32 consider the proposal by Germany and the United States to connect AIS to the radio station's reserve power source and, if so decided, authorize NAV 49 and COMSAR 8 to consider the matter further (paragraphs 16.19 to 16.21);
- .33 instruct the Sub-Committee in the context of Germany's proposal (MSC 75/11/5) for the inclusion of a code "Piracy" in the Inmarsat-E system (paragraphs 16.23 to 16.25);
- .34 approve the draft COMSAR circular on Harmonization of GMDSS requirements for radio installations on board SOLAS ships (paragraphs 17.9 and annex 18);
- .35 endorse, with respect to document MSC 76/20/5 (Norway) referred to COMSAR 7, the Sub-Committee's advice that the existing mandatory requirements for MF/HF equipment to be fitted with direct-printing telegraphy should be retained (paragraph 17.11); and
- .36 approve the report in general.

23.2 In reviewing the work programme of the Sub-Committee, the Committee is invited to consider the revised work programme and draft provisional agenda for COMSAR 8 suggested by the Sub-Committee (annex 19) in general and, in particular, to:

- .1 delete the item "Procedures for responding to DSC alerts", as there were no substantial documents received under this item for two consecutive sessions (paragraph 3.16);
- .2 extend the target completion date of the high priority item "Emergency radiocommunications, including false alerts and interference" to 2006 (paragraph 6.13);
- .3 extend the target completion date of the high priority item "Medical assistance in SAR services" to 2004 (paragraph 7.32);
- .4 delete the item "Bridge-to-bridge radiocommunications", in pursuance of Guidelines on the organization and method of work (MSC/Circ.931/MEPC/Circ.361, as amended) (paragraph 9.6);
- .5 extend the target completion date of the high priority item "Large passenger ship safety" to 2004 (paragraph 10.7);
- .6 extend the target completion date of the high priority item "Developments in maritime radiocommunication systems and technology" to 2005 (paragraph 11.7);
- .7 delete the item "Development of a procedure for recognition of mobile-satellite systems", as the work has been completed (paragraph 13.7);

- .8 delete the items “Revision of performance standards for NAVTEX equipment”, as the work has been completed (paragraph 14.9);
- .9 delete the item “Review of performance standards provisions (resolution A.809(10)) to require means of attachment of radiotelephone apparatus to its user”, as the work has been completed (paragraph 15.6);
- .10 delete the item “Harmonization of GMDSS requirements for radio installation on board SOLAS ships”, as the work has been completed (paragraph 17.10); and
- .11 delete the items “Replies to questionnaire on casualties”, as it is covered by the item “Casualty analysis” (paragraph 19.6.4.1).

ANNEX 1

AGENDA FOR THE SEVENTH SESSION AND LIST OF DOCUMENTS

1 Adoption of the agenda

| | | |
|--------------|-------------|--|
| COMSAR 7/1 | Secretariat | Provisional agenda for the seventh session |
| COMSAR 7/1/1 | Secretariat | Annotations to the provisional agenda |

2 Decisions of other IMO bodies

| | | |
|--------------|-------------|---|
| COMSAR 7/2 | Secretariat | Decisions of the seventy-fifth session of the MSC |
| COMSAR 7/2/1 | Secretariat | Decisions of the forty-fifth session of the DE and forty-eighth session of the NAV Sub-Committees |
| COMSAR 7/2/2 | Secretariat | Decisions of the seventy-sixth session of the MSC |

3 Global Maritime Distress and Safety System (GMDSS)

| | | |
|----------------|--|---|
| COMSAR 7/3 | Finland | General communication matters – Public correspondence service resumed by Turku Radio |
| COMSAR 7/3/1 | IHO | Operational and Technical Co-ordination Provisions of Maritime Safety Information (MSI) Services, including Review of related documents – List of NAVAREA Co-ordinators |
| COMSAR 7/INF.2 | Poland | Report of the 12 th session of the Baltic/Barents Sea Regional Co-operation on the GMDSS (BBRC/GMDSS-12) |
| COMSAR 7/INF.3 | Chairman of the International NAVTEX Co-ordinating Panel | Promulgation of Maritime Safety Information. International NAVTEX Service |
| MSC 76/22/9 | Russian Federation | Draft amendments to the International SafetyNET Manual |
| COMSAR 7/WP.3 | | Report of the Operational Working Group |

4 ITU maritime radiocommunication matters

| | | |
|---------------|-------------|--|
| COMSAR 7/4 | Secretariat | Outcome of the ITU Conference Preparatory Meeting (CPM02-2) for WRC-03 |
| COMSAR 7/WP.1 | | Report of the Technical Working Group |
| COMSAR 7/WP.3 | | Report of the Operational Working Group |

5 Satellite services (Inmarsat and COSPAS-SARSAT)

| | | |
|---------------|---------------|---|
| COMSAR 7/5 | COSPAS-SARSAT | Status of the COSPAS-SARSAT Programme |
| COMSAR 7/5/1 | COSPAS-SARSAT | COSPAS-SARSAT 406 MHz Frequency Management Plan |
| COMSAR 7/5/2 | IMSO | Analysis and assessment of the GMDSS performance of Inmarsat Ltd. |
| MSC 75/11/5 | Germany | Additional codes for nature of distress in the Inmarsat-E System |
| MSC 76/18/1 | IMSO | Future withdrawal of Inmarsat-A services by Inmarsat Ltd. |
| COMSAR 7/WP.2 | | Report of the <i>Ad-Hoc</i> Drafting Group of Plenary |

6 Emergency radiocommunications, including false alerts and interference

| | | |
|--------------|---------------|--|
| COMSAR 7/6 | Norway | Report of the Correspondence Group on False Alerts |
| COMSAR 7/6/1 | Norway | Draft Guidelines on False Alerts |
| COMSAR 7/6/2 | Norway | Annual test of satellite EPIRBs |
| COMSAR 7/6/3 | COSPAS-SARSAT | Testing of satellite EPIRBs in SOLAS regulation IV/15.9, MSC/Circ.1039 and MSC/Circ.1040 |
| COMSAR 7/6/4 | COSPAS-SARSAT | Interference in the 406.0 – 406.1 MHz Frequency Band |

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|---|--------------------|--|
| COMSAR 7/6/5 | Finland and Sweden | Draft changes to the text of SOLAS regulation IV-15.9 |
| COMSAR 7/WP.3 | | Report of the Operational Working Group |
| 7 Matters concerning search and rescue, including those related to the 1979 SAR Conference and the implementation of the GMDSS | | |
| COMSAR 7/7 COMSAR 7/7/Add.1 | Secretariat | Report of the ninth session of the ICAO/IMO Joint Working Group on Harmonization of Aeronautical and Maritime Search and Rescue |
| COMSAR 7/7/1 | France | Plan for the provisions of maritime SAR services, including procedures for routing distress information in the GMDSS – Revision of COMSAR/Circ.18 - Guidance on minimum communication needs of MRCCs |
| COMSAR 7/7/2 | United Kingdom | Harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters – GMDSS Coast Station Operator Certificate (CSOC) Course |
| COMSAR 7/7/3 | India | International Maritime Search and Rescue Conference |
| COMSAR 7/7/4 | Greece | Report of the ninth session of the ICAO/IMO Joint Working Group on Harmonization of Aeronautical and Maritime Search and Rescue |
| COMSAR 7/7/5 | United Kingdom | Guidelines for preparing plans for co-operation between search and rescue services and passenger ships (in accordance with SOLAS V/7-3) |
| MSC 76/22/12 | United Kingdom | Submission of entries to the International SAR Co-operation Plans Index in accordance with SOLAS regulation V/7.3 and MSC/Circs.1000 and 1041 |
| COMSAR 7/WP.3 | | Report of the Operational Working Group |

COMSAR 7/WP.5
COMSAR 7/WP.5/Add.1
COMSAR 7/WP.5/Add.2

Report of the SAR Working Group

8 Review of the SOLAS and SAR Convention provisions regarding the treatment of persons rescued at sea

| | | |
|---|-------------|---|
| COMSAR 7/8 | Spain | Review of safety measures and procedures for the treatment of persons rescued at sea |
| MSC 76/22/8 | Secretariat | Review of safety measures and procedures for the treatment of persons rescued at sea |
| MSC 76/22/10 | Spain | Review of safety measures and procedures for the treatment of persons rescued at sea |
| MSC 76/22/11 | Sweden | Outcome of informal meeting on “Safety measures and procedures for the treatment of persons rescued at sea” |
| MSC 76/22/13 | Secretariat | Review of safety measures and procedures for the treatment of persons rescued at sea - Outcome of LEG 85 |
| COMSAR 7/WP.5 COMSAR 7/WP.5/Add.1 COMSAR 7/WP.5/Add.2 | | Report of the SAR Working Group |

9 Bridge-to-bridge radiocommunications

No documents submitted

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| COMSAR 7/WP.3 | | Report of the Operational Working Group |
|---------------|--|---|

10 Large passenger ship safety

| | | |
|---------------|--|------------------------------------|
| COMSAR 7/10 | Secretariat | Outcome of MSC 75 |
| COMSAR 7/10/1 | United Kingdom (as Co-ordinator of the Correspondence Group) | Report of the Correspondence Group |

| | | |
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| COMSAR 7/INF.4 | United Kingdom (as Co-ordinator of the Correspondence Group) | Annexes to the report of the Correspondence Group |
| COMSAR 7/INF.5 | United Kingdom (as Co-ordinator of the Correspondence Group) | Annex to the report of the Correspondence Group: passenger ship operator's questionnaire |
| MSC 75/WP.12 (Background document) | Working Group | Report of the Working Group on Large passenger ship safety |
| COMSAR 7/WP.5 COMSAR 7/WP.5/Add.1 COMSAR 7/WP.5/Add.2 | | Report of the SAR Working Group |

11 Developments in maritime radiocommunication systems and technology

| | | |
|-------------|-------|--|
| COMSAR 7/11 | Japan | Revision of the performance standards for Search and Rescue Radar Transponder (SART) |
|-------------|-------|--|

12 Revision of the IAMSAR Manual

No documents submitted

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|---|--|---------------------------------|
| COMSAR 7/WP.5 COMSAR 7/WP.5/Add.1 COMSAR 7/WP.5/Add.2 | | Report of the SAR Working Group |
|---|--|---------------------------------|

13 Development of a procedure for recognition of mobile-satellite systems

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|---------------|---------|---|
| COMSAR 7/13 | Denmark | Development of a procedure for recognition of mobile-satellite systems for use in the GMDSS |
| COMSAR 7/WP.3 | | Report of the Operational Working Group |

14 Revision of performance standards for NAVTEX equipment

| | | |
|---------------|---|--|
| COMSAR 7/14 | Denmark, Poland and the United Kingdom | Draft recommendation on Performance Standards |
| COMSAR 7/14/1 | United States | Comments to the United Kingdom's and other Administrations' proposed Draft Revision of Performance Standards for NAVTEX Equipment |
| COMSAR 7/WP.1 | | Report of the Technical Working Group |

15 Review of performance standards provisions (resolution A.809(19)) to require means of attachment of radiotelephone apparatus to its user

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|---------------|--------|---|
| COMSAR 7/15 | Norway | Proposed amendment to resolution A.809(19) |
| MSC 75/22/6 | Norway | Performance standards for survival craft two-way radiotelephone apparatus |
| COMSAR 7/WP.1 | | Report of the Technical Working Group |

16 Measures to enhance maritime security

| | | |
|--------------------------------------|---------------------------|---|
| COMSAR 7/16 | France | Acts of violence against ships – Directives for Maritime Rescue Co-ordination Centres (MRCCs) |
| COMSAR 7/16/1 | United States and Germany | Connection of AIS to the radio station's reserve power source |
| COMSAR 7/WP.4 COMSAR 7/WP.4/Add.1 | | Report of the Drafting Group |

17 Harmonization of GMDSS requirements for radio installations on board SOLAS ships

| | | |
|---------------|---------|--|
| COMSAR 7/17 | Norway | Proposed installation guidelines |
| COMSAR 7/17/1 | Germany | Proposed Draft Guidelines – GMDSS requirements for radio installations on board SOLAS ships |
| COMSAR 7/17/2 | Ireland | Contribution towards the development of a COMSAR circular containing guidelines for radio installations on board SOLAS ships |
| MSC 76/20/5 | Norway | The use of direct-printing telegraphy for distress and safety purposes by SOLAS ships |
| COMSAR 7/WP.1 | | Report of the Technical Working Group |
| COMSAR 7/WP.3 | | Report of the Operational Working Group |

18 Review of the FAL and SALVAGE Convention provisions to address the treatment of persons rescued at sea

No documents submitted

COMSAR 7/WP.5
COMSAR 7/WP.5/Add.1
COMSAR 7/WP.5/Add.2

Report of the SAR Working Group

19 Work programme and agenda for COMSAR 8

COMSAR 7/20

Russian Federation

Proposal to the provisional agenda for COMSAR 8

COMSAR 7/WP.6

Note by the Chairman

20 Election of Chairman and Vice-Chairman for 2004

No documents submitted

21 Any other business

COMSAR 7/22

Denmark

Temperature requirements in the performance standards for 9 GHz SAR Transponders (SARTs)

MSC 76/INF.4

European Commission

World-Wide Radionavigation System - Presentation of the GALILEO Services and Architecture

22 Report to the Maritime Safety Committee

COMSAR 7/WP.7
COMSAR 7/WP.7/Add.1
COMSAR 7/WP.7/Add.2

Draft Report to the Maritime Safety Committee

ANNEX 2**DRAFT MSC CIRCULAR
ON
AMENDMENTS TO THE INTERNATIONAL SAFETYNET MANUAL**

1 The Sub-Committee on Radiocommunications and Search and Rescue (COMSAR), at its seventh session (13 to 17 January 2003), as instructed by MSC 76 further reviewed MSC/Circ.1064 and the guidance on the operation of the International SafetyNET Services, as amended, and agreed that in addition to the adopted amendments given in MSC/Circ.1064, the following guidance should also be brought to the attention of Member Governments:

"Exceptionally in NAVAREA XIII, Administrations should be aware that owing to certain features of the existing Inmarsat-C receivers within this area, the facility for addressing messages to temporary geographic areas, as noted in paragraph 4.5 of the Manual, may be used for promulgation of navigational warnings".

2 The Maritime Safety Committee, [at its seventy-seventh session (28 May to 6 June 2003)], adopted the aforementioned additional guidance and invited Member Governments to bring it to the attention of all concerned.

3 This circular supplements MSC/Circ.1064.

ANNEX 3**DRAFT MSC CIRCULAR
ON
FUTURE WITHDRAWAL OF INMARSAT-A SERVICES BY INMARSAT LTD**

1 The Maritime Safety Committee (MSC), at its seventy-sixth session (2 to 13 December 2002), noted information provided by the International Mobile Satellite Organization (IMSO), namely that Inmarsat Ltd had given more than five years' notice of the scheduled withdrawal of Inmarsat-A services to take effect on 31 December 2007 and, having agreed that such information should be brought to the attention of Member Governments, instructed the Sub-Committee on Radiocommunications and Search and Rescue (COMSAR) to act accordingly at its seventh session (13 to 17 January 2003).

2 The MSC, at its seventy-seventh session (28 May to 6 June 2003), approved, as proposed by COMSAR 7, an explanatory note on a future withdrawal of Inmarsat-A services by Inmarsat Ltd as from 31 December 2007, given in annex.

3 Member Governments are invited to bring the annexed information to the attention of all parties concerned.

ANNEX

**INFORMATION ON FUTURE WITHDRAWAL OF
INMARSAT-A SERVICES BY INMARSAT LTD**

1 Inmarsat-A is the original analogue service provided via the Inmarsat satellites and was first introduced in 1982.

2 The last type-approval by Inmarsat for a new model of maritime Inmarsat-A ship earth station (SES) was granted in 1991. No new Inmarsat-A SES models have been type-approved since then.

3 Although Inmarsat-A SESs are approved for fitting in ships as part of their GMDSS equipment; however, the communication capabilities provided by Inmarsat-A SESs are now provided more efficiently and effectively by other types of digital Inmarsat terminals, and the number of Inmarsat-A terminals that remain in use on board ships is declining rapidly.

4 Bearing in mind the efforts being made by the International Telecommunication Union (ITU) to promote the more efficient use of spectrum, and the requirement for Inmarsat Ltd to hand back to the ITU the Country Codes used for Inmarsat-A services before 2009, Inmarsat Ltd is planning to launch new satellites within this time frame which will not be able to support Inmarsat-A services.

5 Inmarsat Ltd had formerly indicated that 5-years notice would be given for the withdrawal of Inmarsat-A services and has now informed the Organization that these services will be withdrawn on 31 December 2007.

ANNEX 4

**DRAFT MSC CIRCULAR
ON
GUIDELINES TO ADMINISTRATIONS ON REPORTING FALSE ALERTS**

1 The Sub-Committee on Radio Communications and Search and Rescue (COMSAR), at its seventh session (13 to 17 January 2003), developed Guidelines to Administrations on reporting false alerts, given in the annex.

2 The Maritime Safety Committee, [at its seventy-seventh session (28 May to 6 June 2003)], with a view to ensuring that the problem of false alerts is handled properly, agreed the annexed Guidelines the purpose of which is to advise Administrations how to collect information using the standardized forms when reporting false alerts to the Organization.

3 Member Governments are invited to bring these Guidelines to the attention of all parties concerned.

ANNEX

GUIDELINES TO ADMINISTRATIONS ON REPORTING FALSE ALERTS

1 Background

1.1 Ships to which the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended, applies were permitted to install radio equipment for the Global Maritime Distress and Safety System (GMDSS) from 1 February 1992.

1.2 SOLAS ships constructed on or after 1 February 1995 were required to carry GMDSS radio equipment. All SOLAS ships were required to carry GMDSS radio equipment from 1 February 1999.

1.3 With the installation of GMDSS radio equipment, false distress alerts have become a major problem to the efficient operation of search and rescue services, thus having potentially serious effects on real distress situations and the safety of life at sea.

1.4 False alerts in the IAMSAR Manual are defined as: *“Any alert received by the SAR system indicating an actual or potential distress situation, when no such situation actually exists”*.

1.5 Due to an increasing problem it was decided to start collection of data on the causes for false alerts.

1.6 Statistics from (M)RCCs show that the percentage of false alerts are approximately 95-100% of the total alerts received, mainly caused by lack of knowledge of the relevant conventions, codes and regulations.

1.7 Over the next years to come, new equipment will be developed, along with a huge group of new GMDSS users, as the non-SOLAS and pleasure craft fleet starts to implement the GMDSS. Based on experience gained throughout the implementation period of the GMDSS, one should therefore still expect false alerts and “interference” within the system, which degrade the efficiency of the GMDSS.

1.8 The monitoring of the overall efficiency and possible anomalies is therefore of vital importance.

2 Procedures on how to collect information on false alerts

2.1 The whole chain of actions related to false alerts starts upon reception of the alert at the (M)RCC. The operational procedures for handling an alert at the (M)RCC is laid down in MSC/Circ.959 - *“Interim procedures for RCCs on receipt of distress alerts”*. If the alert is proved to be false, the next step should be to seek as much information as possible on what caused the activation of the distress alert, and this should be done as soon as possible, while the GMDSS operator onboard have a fresh memory about what happened.

2.2 The different alerting systems within the GMDSS have different capabilities. Therefore there have been developed different questionnaires for each alerting system containing questions sufficient for the use in a GMDSS-SMR (System Monitoring and Reporting) programme (see COMSAR/Circ.29 “*Guidance for the voluntary use of the standardized questionnaires and formats for reporting false alerts in collecting data on false alerts*”).

2.3 The questionnaires are prepared for Inmarsat-C and in “telex-mode” and therefore the layout looks complicated. If e-mail or other equivalent communication facilities are available on board, such systems could be used, thus providing the ship with a more user-friendly layout. If such facilities are available on board the ship, the (M)RCC may use the questionnaire as a guideline when using voice communications for investigation.

2.4 One should also bear in mind a possible increase in workload at the (M)RCCs when investigating false alerts. However, this is necessary in the endeavour of reducing the number of false alerts. The use of modern forms of communications and preformatted messages will ease the burden for the (M)RCCs.

3 How to record information

3.1 The record should give information on the reason why the false alert was transmitted, with references to the questionnaires and, if necessary, to other relevant information sources of interest.

3.2 The monitoring of false alerts consists, in general, of two parts:

- .1 the monitoring of alerting system performance and anomalies. This may be performed by system operators of special interests or an overall System Monitoring and Reporting Programme; and
- .2 the monitoring of operational false alerts and determining cause of activation. This may be performed by Administrations in co-operation with authorized agencies.

3.3 Operational false alerts may have a variety of origins and causes. In general these are divided into categories such as:

- .1 “mishandling”;
- .2 “human error”;
- .3 “technical”;
- .4 “mounting failure”; or
- .5 “environmental conditions” .

Under these categories it is defined “types” of causes related to each of the different alerting systems capabilities. COMSAR/Circ.29 contains examples of “types” of causes and different categories.

3.4 Administrations should take into account the above mentioned system to catalogue the causes and to endeavour establishment of paper or electronic recording systems, which enable systemised lessons learned to be derived.

4 Co-operation between agencies

4.1 The investigation of false alerts should not only focus on causes for activation, but also look for other anomalies which might endanger the ship's safety, such as:

- .1 improper coding of the alerting systems;
- .2 wrong or no position given in the distress alert;
- .3 improper and/or multiple transmissions of DSC relay alert;
- .4 identity not found in database or database not available; or
- .5 other anomalies which might cause confusion among SAR Authorities about which ship was in distress and its position.

4.2 A co-operation between all involved agencies should be established; due to the fact that a false distress alert may involve more agencies than if the distress alert was real. It is important that the agencies involved have a common understanding of the importance of such an investigation.

4.3 The agencies or bodies involved upon a false distress alert may be:

- .1 if received through VHF-, MF-, HF-DSC: the ship, the coast radio station receiving the distress alert, the associated (M)RCC, the licensing authority and the maritime authorities;
- .2 if received through the Inmarsat system: the ship, the land earth station, the associated (M)RCC, register countries licensing bureau, the maritime authorities and Inmarsat Ltd; and
- .3 if received through COSPAS-SARSAT: the ship, the Mission Control Centres (MCCs), one or more (M)RCCs, registered country's licensing bureau, the maritime authorities and the COSPAS-SARSAT organization.

5 How to derive lessons learned

5.1 Determination of the cause of false alerts is totally dependent on the feedback and information received from national (M)RCCs and SAR points of contacts (SPOCs). National Administrations should therefore encourage their (M)RCCs and SPOCs to provide timely information, which describes the cause and disposition for activations of each false distress alert. One should also look for both specific causes and general trends.

5.2 An example of this is the investigation conducted by COSPAS-SARSAT (COMSAR 5/7) during 1998 on the number of false alerts produced by specific type approved 406 MHz EPIRB models in use in the Spanish search and rescue regions (SRRs). The collected information related specifically to the beacon false alert rate, and it was discovered that of 155 false alerts from a

population of 4990 registered 406 MHz EPIRBs, the beacon false alert rate was significantly higher for some beacon models than others.

5.3 Further investigations against manufacturers and users would then establish what exactly causes these activations, and appropriate measures may be taken to solve the problem.

6 Evaluation of, and statistics on, false alerts

6.1 The false alert rate can be calculated in three ways, as a function of the beacon population, as a function of total alerts transmitted to SAR authorities and as a function of specific alerting device models. This can be calculated as described below.

.1 False alert rate as a function of population

The false alert rate as function of the total beacon population can be viewed as a method of tracking false alerts from a System perspective. The rate could be calculated by dividing the number of false alerts and undetermined alerts occurring world-wide with the reporting Administration country code(s), by the estimated total of ship installations of the specific alerting device with the reporting Administrations country code(s).

$$\text{False alert rate} = \frac{\text{False and undetermined alerts world-wide with reporting country code(s)}}{\text{Estimated total number of ship installations with reporting country code(s)}}$$

.2 False alert rate as a function of the total number of alerts

The false alert rate calculated as a function of the total number of alerts can be viewed as representing the SAR response perspective and is the traditional view of false alert rate. This rate should be calculated by dividing the number of false alerts and undetermined alerts transmitted to SAR authorities of the reporting country, by the number of total alerts transmitted to the SAR authorities within its search and rescue region (SRR).

$$\text{System operation perspective} = \frac{\text{Number of the false alerts and undetermined alerts received at the responsible (M)RCC}}{\text{Total number of alerts received at the responsible (M)RCC}}$$

.3 False alert rates as a function of alerting equipment model

The false alert rate for each alerting equipment model is used as a first step for identifying possible problems with specific variants of models. This rate is calculated by dividing the number of false alerts attributed to a given equipment model variant (e.g. beacon model, type and activation method) transmitted to SAR authorities of the reporting country, by the number of equipment of that model, registered in the reporting country's registration database.

$$\text{False alert rate by equipment model} = \frac{\text{Number of model false alerts received and transmitted to SAR authority}}{\text{Estimated numbers of equipment model registered}}$$

6.2 Administrations are encouraged to conduct further analysis on those models that exhibit high false alert rates with a view to identifying their causes. Caution is advised in drawing conclusions in respect of possible beacon problems from this data since experience has shown that false alerts can be caused by factors not related to equipment design.

7 How to report collected information

7.1 The COSPAS-SARSAT has put in place a system monitoring and reporting programme, (document C/S A.003), part of which contains guidelines for COSPAS-SARSAT Participants to collect data on beacon populations and activations, and to provide reports to the Organization. It should be stressed that data is only collected and reported to the COSPAS-SARSAT by Participants in the Programme. Specifically, data is collected and reported by more than 20 Mission Control Centres (MCCs) in the ground system network, which receive feedback information from the (M)RCCs or to whom the MCCs have transmitted distress alert data.

7.2 Administrations not being a participant of the COSPAS-SARSAT Programme are requested to report investigations on 406 MHz false alerts directly to IMO, as appropriate.

7.3 Inmarsat Ltd is also running a SMR programme, called the Distress Alert Quality Control System (DAQCS), which is able to generate a number of statistical reports on distress alerting (real and false) via Inmarsat systems. Unlike (M)RCCs Inmarsat Ltd keeps information about all alerts handled by the Inmarsat systems, and may share certain reports with (M)RCCs or maritime Administrations. Information on distress alerts received from (M)RCCs may also be used as a comparison with Inmarsat's own data to achieve the highest quality of distress services. Inmarsat Ltd also sends messages to all ships sending multiple Inmarsat-C distress alerts within a month, if number of alerts from the same ship is >2. The purpose of this message is to enquire from the Master the reason(s) for sending alerts and to offer advice and assistance in the correct operation of Inmarsat communication equipment and to identify any problems.

7.4 Each SAR authority should, via the associated LES or MCC, report an instant feedback whether an alert was false or not, and a preliminary cause. Both Inmarsat Ltd, through IMSO, and the COSPAS-SARSAT will then, based on investigations gathered, provide IMO with annual false alert statistics and analysis with an overall view.

7.5 Until a superior GMDSS-SMR Voluntary Group of Experts is established as agreed by COMSAR 7, Administrations are encouraged to submit annual statistics on the cause of false alerts received within own Search and Rescue Region, using the formats decided upon for such reporting as described in COMSAR/Circ.29, to IMO.

7.6 When an overall GMDSS-SMR Voluntary Group of Experts is established, the procedures for reporting false alerts might be reported as:

- .1 Inmarsat alerts being reported through the Inmarsat system; and
- .2 406 MHz alerts being reported through the COSPAS-SARSAT system.

7.7 DSC alerts should be analysed by Administrations and reported directly to IMO.

ANNEX 5

PROPOSED DRAFT AMENDMENTS
TO SOLAS REGULATION IV/15.9

CHAPTER IV

RADIOCOMMUNICATIONS

Regulation 15
Maintenance requirements

Amend existing paragraph 9 as follows:

“9 Satellite EPIRBs shall:

- .1 be tested at intervals not exceeding 12 months for all aspects of operational efficiency with particular emphasis on ~~frequency stability, signal strength~~ **checking the emission on operational frequencies, and coding and registration.** However, in cases where it appears proper and reasonable, the Administration may extend this period to 12 +/-3 months. The test may be conducted on board the ship or at an approved testing ~~or servicing~~ station; **and**
- .2 **be subject to maintenance at intervals not exceeding five years, to be performed at an approved shore-based maintenance facility.”**

Strike through means to delete text
Bold indicates new text

ANNEX 6**PROVISIONAL AGENDA FOR THE TENTH SESSION OF THE JWG ICAO/IMO
(TO BE HELD IN THE UNITED KINGDOM 15 TO 19 SEPTEMBER 2003)**

- 1 Adoption of the agenda**
- 2 Consideration of terms of reference - future work of the Joint Working Group and priorities:**
 - .1 briefing on the outcome of COMSAR 7 and MSC 77
 - .2 briefing on outcome of ICAO activities related to the JWG work
 - .3 JWG role in facilitating improved subregional co-operation
- 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 reviewing ICAO Annex 12 amendment proposals for closer aeronautical maritime harmonization
 - .4 further work on the IAMSAR Manual, availability for training – institutions, priority items for amendments
 - .5 list of references and electronic index to the IAMSAR Manual
- 4 SAR operational principles, procedures and techniques:**
 - .1 safety of large passenger ships
 - .2 mass rescue operations, taking account of experiences from the major disasters
 - .3 medical assistance in SAR services
 - .4 effects of measures to enhance maritime and aeronautical security on SAR services
 - .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 subregional arrangements

- .3 quality/improvement, needs assessment, risk management, (subregional) and resource allocation
- .4 implementation and operation of the “International SAR fund”
- .5 evaluate 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
- .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
- .3 future trends in SAR communications
- .4 minimum communications needs for RCCs

8 SAR personnel staffing and training:

- .1 development of RCC Staff Certificates
- .2 development of joint SAR courses based on the IAMSAR Manual
- .3 development of a GMDSS Coast Station Operators model course

9 Any other business

10 Report to ICAO and the COMSAR Sub-Committee

ANNEX 7

**DRAFT MSC CIRCULAR
ON
GUIDELINES FOR PREPARING PLANS FOR CO-OPERATION BETWEEN
SEARCH AND RESCUE SERVICES AND PASSENGER SHIPS
(IN ACCORDANCE WITH SOLAS REGULATION V/7.3)**

1 The Maritime Safety Committee (MSC), at its seventy-seventh session (28 May to 6 June 2003), recalled that MSC 74 approved MSC/Circ.1000 on Guidelines for preparing plans for co-operation between SAR services and passenger ships (in accordance with SOLAS regulation V/7.3) and that MSC 75 approved MSC/Circ.1041 on Guidelines for ship operators and the search and rescue (SAR) services on minimum requirements for SAR Data Providers holding SAR co-operation plans in accordance with SOLAS regulation V/7.3 and MSC/Circ.1000 and the provision of up-to-date plans at all times.

2 The Committee, at its seventy-sixth session (2 to 13 December 2003), being of the opinion that MSC/Circ.1000 might need improvement from the choice of an SDP point of view, instructed COMSAR 7 to consider combining and clarifying MSC/Circs.1000 and 1041, and submit the results to MSC 77 for consideration.

3 The Committee, having considered the recommendations made by the COMSAR Sub-Committee at its seventh session (13 to 17 January 2003), approved Guidelines for preparing plans for co-operation between search and rescue services and passenger ships (in accordance with SOLAS regulation V/7.3), as set out in the annex, combining and revoking MSC/Circs.1000 and 1041.

4 Having approved the annexed Guidelines, the Committee concurred with the Sub-Committee's opinion that there was no need to amend/adjust the search and rescue co-operation plans developed in accordance with MSC/Circs.1000 and 1041.

5 Member Governments are invited to bring the annexed guidelines to the attention of SAR service providers, shipowners, ship operators, ship masters and all other parties concerned and to use the provisions contained therein as appropriate.

ANNEX

GUIDELINES FOR PREPARING PLANS FOR CO-OPERATION BETWEEN SEARCH AND RESCUE SERVICES AND PASSENGER SHIPS

(IN ACCORDANCE WITH SOLAS REGULATION V/7.3)

1 Introduction

1.1 The purpose of these Guidelines is to provide a uniform basis for the establishment of plans for co-operation between passenger ships and SAR services¹ in accordance with SOLAS regulation V/7.3. Co-operation plans developed in accordance with the Guidelines will meet the requirements of the regulation.

1.2 These Guidelines are applicable to all passenger ships to which SOLAS chapter I applies. They are relevant to the safety management system maintained by passenger ships in accordance with the International Safety Management (ISM) Code, and in particular to the section of the safety management system dealing with emergency preparedness. They may also be taken into consideration when drawing up SAR co-operation plans for passenger ships in the domestic trade.

2 Aims and objectives of SAR co-operation planning

2.1 The aim of SAR co-operation planning is to enhance mutual understanding between ship, company and SAR services so that, in the event of an emergency, all three parties will be able to work together efficiently. This is best achieved by the prior exchange of information, and by conducting joint emergency response exercises.

2.2 The objectives of SAR co-operation planning are:

- .1 to link the SAR response plans of the company, the passenger ship, and relevant SAR services so that these plans complement each other;
- .2 to enable the early and efficient establishment of contact in the event of emergency between the passenger ship, her operators' shore-based emergency response system, and the SAR services. The SAR co-operation plan should ensure that all relevant contact details are known to each of the three parties beforehand, and that these details are kept up-to-date;
- .3 to provide the SAR services with easily accessible and up-to-date information about the ship – in particular her intended voyage and her communications and emergency response systems; and
- .4 to provide the ship and her operators with easily accessible information about SAR and other emergency services available in the ship's area of operation, to assist in decision-making and contingency planning.

¹ *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.

2.3 The co-operation plan is of use when a passenger ship suffers an emergency herself, or when she responds as a SAR facility², particularly when acting as On Scene Co-ordinator³.

3 The regulation

3.1 The text of SOLAS V/7.3 is as follows:

“Passenger ships, to which chapter I applies, shall have on board a plan for co-operation with appropriate search and rescue services in event of an emergency. The plan shall be developed in co-operation between the ship, the company as defined in regulation IX/1, and the search and rescue services. The plan shall include provisions for periodic exercises to be undertaken to test its effectiveness. The plan shall be developed based on the guidelines developed by the Organisation.”

4 General requirements

4.1 The SAR co-operation plan does not replace more detailed emergency response plans already in place, whether as part of the company’s safety management system or the SAR services’ arrangements. But these plans should be linked so that the tripartite response to an emergency involving a passenger ship – ie, the response on-board, from the company’s emergency response organisation ashore, and from the SAR services – is co-ordinated effectively and efficiently. The SAR co-operation plan serves as that link.

4.2 The co-operation plan should contain the basic information which will enable the response to any emergency to commence without delay. This information will include direct contact details for the three parties – ship, company, and SAR services or SAR data provider⁴ as described in section 6.

4.3 Each of the parties to the co-operation plan should have access to a controlled copy⁵ of it, so that each then knows what information is already available to the others.

4.4 Guidelines on testing the co-operation arrangements between ship, company, and SAR services are at section 9 below.

5 SAR co-operation plan frameworks

5.1 The co-operation plan should be concise and user-friendly, so as to enable its easy use in emergency conditions. Depending on the type of trade the passenger ship is in, the co-operation plan should be drawn up according to the frameworks set out in Appendices 1 or 2 to these Guidelines. The frameworks and the SAR co-operation planning process are described in sections 7 and 8 below, and are illustrated by flow diagrams at Appendix 3.

² *Search and rescue facility*. Any mobile resource, including designated search and rescue units, used to conduct search and rescue operations.

³ *On-scene co-ordinator*. A person designated to co-ordinate search and rescue operations within a specified area.

⁴ The ‘search and rescue data provider’ is defined in the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual as “a source for a rescue co-ordination centre to contact to obtain data to support search and rescue operations...” (Vol I, page xi).

⁵ Document control, including controlled distribution of the copies of the plan held aboard the ship, by the company, and by the SAR services, is essential to ensuring that all copies are kept up-to-date.

5.2 The use of common frameworks enables SAR service personnel to find the information they require rapidly, whatever ship or company they are dealing with. Likewise, ship's crew members, or members of the company emergency response team ashore, are able to find the information they require, whatever the SAR region⁶ in which the emergency has occurred.

5.3 The frameworks are designed to enable modules of information (about different ships or SAR services, for example) to be easily added to the co-operation plan, or removed from it if no longer relevant, without the need for the whole co-operation plan to be revised.

6 Use by ships trading through many SAR regions

6.1 It will significantly enhance the effectiveness and efficiency of the response to an emergency if passenger ship crews and operators have developed a good mutual understanding with the SAR services available to them. This is as true for passenger ships which routinely transit many SAR regions as for any other passenger ship. Direct co-operation planning between ships, companies and local SAR services is encouraged wherever possible.

6.2 However, there are administrative difficulties in maintaining *direct* links between a ship transiting many SAR regions, such as some cruise ships, and each SAR service with which she might come into contact. For such ships it is not necessary to hold a copy of the ship's SAR co-operation plan at all the Rescue Co-ordination Centres⁷ (RCCs) whose regions she transits, nor to maintain on board extensive and up-to-date details of each and every SAR service.

6.3 The administrative difficulties can be overcome by use of the SAR data provider system, which permits the use of contact points between the global SAR service and cruise ship operators.

6.4 Under this system, the SAR data provider holds the ship's SAR co-operation plan on behalf of the SAR services. SAR services contact the SAR data provider to obtain the co-operation plan when it is required.

6.5 The company or ship should select a suitable SAR data provider. A shipping company, RCC, or other suitable entity may act as an SAR data provider. However, the ship cannot be her own SAR data provider, as this would negate the fundamental concept of easing the load on ship's staff during an emergency.

6.6 The SAR data provider must be able to provide essential information rapidly to the parties concerned. In order to achieve this, each SAR data provider should:

- .1 arrange for easy, continuous and immediate access to its SAR co-operation plans for relevant shipping companies and operators and for all RCCs with responsibilities in the operating areas of the ships concerned;

⁶ *Search and rescue region.* An area of defined dimensions associated with a rescue co-ordination centre within which search and rescue services are provided.

⁷ *Rescue co-ordination centre.* A unit responsible for promoting efficient organization of search and rescue services and for co-ordinating the conduct of search and rescue operations within a search and rescue region.

- .2 ensure that essential technical capabilities, such as computers and communications links, are reliable and are redundant or have arrangements in place for rapid repair, and are provided with sources of emergency power. Establishing a back-up SAR data provider may satisfy this requirement;
- .3 ensure that updates to plans are made promptly, and that back-up data in paper or electronic form is kept in a suitable safe location and is readily available; and
- .4 ensure that, if staff are necessary to provide data access to authorised users, such personnel are always available to handle urgent requests, trained to properly retrieve and transmit the needed information, and proficient in the use of the English language; and
- .5 ensure that pertinent information in the International SAR Co-operation Plans Index, including information on the primary and any back-up SAR data providers, is kept up-to-date. Details of the Index, and the procedure for updating it, are at section 8 below.

6.7 SAR data providers should only release copies of co-operation plans to those parties named in the plans' controlled distribution lists – and to co-ordinating RCCs on request, in the event of emergency or for contingency planning purposes.

6.8 A passenger ship such as a ferry, which trades on fixed routes, should not use the SAR data provider system, but should compile a co-operation plan incorporating details of all the SAR services along her route, in accordance with Appendix 1 of these Guidelines. Other passenger ships transiting many different SAR regions, perhaps on a seasonal basis, such as some cruise ships, may choose to use the SAR data provider system. Such ships are not required to include in the co-operation plan information beyond that set out in Appendix 2 to these Guidelines.

6.9 Flow diagrams summarising the SAR co-operation planning process in both cases are given at Appendix 3.

6.10 Regardless of which system ships use, they are still encouraged to liaise as best they can with relevant SAR services. Direct communications, where practicable, will always be better than indirect.

7 Administrative requirements for ships not using the SAR data provider system

7.1 The procedure described in this paragraph is that for ships *not* using the SAR data provider system – that is, passenger ships on fixed routes, such as ferries. These ships and/or their operators will work with the relevant SAR services to complete and maintain a SAR co-operation plan drawn up in accordance with the framework set out in Appendix 1 of these Guidelines. The first flow diagram in Appendix 3 illustrates this process. The procedure for ships which *are* using the SAR data provider system is described in section 8 below.

7.2 In order to compile a SAR co-operation plan in accordance with Appendix 1 of these Guidelines, the ship, or the company, should contact one of the SAR services responsible for the area in which the ship operates.

7.3 The ship or company and the SAR services each complete their own sections of the framework. The ship or company is responsible for providing the information in module 1 'The company' and module 2 'The ship(s)'. The SAR services are responsible for providing the introductory paragraphs, module 3 'The RCCs' and module 4 'SAR facilities'. It is recommended that neighbouring SAR services each hold copies of the others' modules of information, so that the ship or company need only contact one SAR service in order to complete the whole co-operation plan.

7.4 Module 5 'Media relations' and module 6 'Periodic exercises' should be considered jointly. Module 5 is intended to contain brief details of how the company and the SAR services will co-ordinate their response to news media interest in any emergency and should include contact details for their respective press/public relations officers. The requirements of module 6, Appendix 1, are considered in more detail at section 9 below.

7.5 Copies of the completed co-operation plan should be distributed to each of the three parties to emergency response – the ship, the company, and the relevant SAR services. A controlled distribution system should be used to ensure that all parties maintain an up-to-date copy.

7.6 The co-operation plan should be written in:

- .1 the on-board working language(s) of the passenger ship; and
- .2 English and, if agreed, a language or languages commonly used by the ship, the company and the SAR services.

The aim is that all those likely to need to refer to the co-operation plan should have a copy readily available in a language in which they are fluent. The co-operation plan may be provided and distributed electronically if agreed between the ship, the company and the SAR services.

7.7 SAR co-operation plans, once they have been agreed for a particular ship, should be recognised by the SAR services of all Administrations.

7.8 The originator of each module of the co-operation plan (the ship, company, or SAR service, as appropriate) is responsible for keeping it up-to-date and ensuring that all those holding controlled copies of the module are advised of changes. Each holder of a controlled copy of the co-operation plan is responsible for making and recording notified changes.

7.9 All parties should know where the controlled copies of the SAR co-operation plan are held. Each SAR co-operation plan should therefore contain a controlled distribution list, and each party to it should ensure that all relevant staff are aware of its existence, where it is stored, and how it may be used.

8 Administrative requirements for ships which are using the SAR data provider system

8.1 The procedure described in this section is that for passenger ships that transit many SAR regions and choose to use the SAR data provider system. These ships and/or their operators will identify a SAR data provider (seeking advice from relevant SAR services as necessary) and will complete and maintain a SAR co-operation plan drawn up in accordance with the framework set

out in Appendix 2 of these Guidelines. The second flow diagram in Appendix 3 illustrates this process. The procedure for ships *not* using the SAR data provider system is described in section 7 above.

8.2 If the SAR data provider system is being used, the ship or company and the SAR data provider each complete their own sections of the framework, as appropriate. Module 4 'Media relations' and module 5 'Periodic exercises' should be considered jointly. Module 4 is intended to contain brief details of how the company will co-ordinate with the SAR services their response to news media interest in any emergency, and should include contact details of the company's press/public relations officers. The requirements of module 5 are considered in more detail at section 9 below.

8.3 Controlled copies of the completed co-operation plan should be distributed by the company and be held by the ship, the company and the SAR data provider. A controlled distribution system should be used to ensure that all parties maintain an up-to-date copy.

8.4 All parties should know where SAR data is held. Each copy of the plan should therefore contain a controlled distribution list, and each party to it should ensure that all relevant staff are aware of its existence, where it is stored, and how it may be used.

8.5 It is not essential that every RCC through whose SAR region the ship trades should hold a copy of the co-operation plan on file, only that each RCC should be able to obtain a copy from the relevant SAR data provider without delay. The SAR data provider holds copies of the co-operation plan for onward distribution to the co-ordinating RCC on request, in the event of an emergency or for contingency planning purposes.

8.6 Likewise it is not essential for the ship to carry details of each and every SAR region's resources, if the SAR data provider system is being used. However, the ship should always be able to obtain such details.

8.7 It is recommended that the ship carry on board details of the SAR services in regions in which she spends the majority of her time. But as a minimum, the ship should carry contact details for her SAR data provider, as set out in the framework at Appendix 2.

8.8 The co-operation plan should be written in:

- .1 the on-board working language(s) of the passenger ship; and
- .2 English and, if agreed, a language or languages commonly used by the ship, the company, and the SAR data provider.

The aim is that all those likely to need to refer to the co-operation plan should have a copy readily available in a language in which they are fluent. The co-operation plan may be provided and distributed electronically if agreed between the ship, the company and the SAR data provider. The SAR data provider must maintain a copy of each co-operation plan in at least the English language, and must be able to transmit it immediately to the co-ordinating RCC on request, in the event of an emergency or for contingency planning purposes. Paragraph 6.5 above details the required capabilities of the SAR data provider in this context.

8.9 SAR co-operation plans, once they have been agreed for a particular ship, should be recognised by the SAR services of all Administrations.

8.10 The originator of each module of the co-operation plan (the ship, company, or the SAR data provider, as appropriate) is responsible for keeping it up-to-date and ensuring that all those holding controlled copies of the module are advised of changes. Each holder of a controlled copy of the co-operation plan is responsible for making and recording notified changes.

8.11 It is necessary to have a means of identifying who is acting as a particular ship's SAR data provider, to enable co-ordinating RCCs to obtain a copy of the co-operation plan on request, in the event of emergency or for contingency planning purposes.

8.12 The International SAR Co-operation Plans Index enables users to look up a ship by any of three means of identification (name, callsign or MMSI), and to identify who is that ship's SAR data provider and how to contact them. Information in the Index is deliberately limited: the co-operation plans themselves are the prime documents. Index entries are submitted, and kept up-to-date, by the SAR data provider.

8.13 Index entries, and any subsequent amendments, should be submitted by the SAR data provider to:

International SAR Co-operation Plans Index
HM Coastguard
Pendennis Point
Castle Drive
FALMOUTH TR11 4WZ
United Kingdom

tel: +44 1326 211569
fax: +44 1326 319264.

The telephone is staffed 0845 - 1700 local time, Monday to Friday.

Entries should be made for all passenger ships using the SAR data provider system in accordance with these Guidelines; ie, ships which trade through many SAR regions. Entries for other passenger ships trading internationally will also be accepted. Entries should include:

- ship's name;
- callsign;
- MMSI;
- company identity;
- SAR data provider identity; and
- SAR data provider's 24-hour contact telephone number.

8.14 Entries received are added to the International SAR Co-operation Plans Index, which has been linked to the website of the United Kingdom's Maritime and Coastguard Agency at www.mcga.gov.uk/sandr/coop.htm. Users with access to the Internet are recommended to visit this website to obtain the details of a particular ship's SAR data provider. Instructions on use of the Index are included on the site. Users who do not have access to the Internet are invited to contact MRCC Falmouth (24-hour telephone: +44 1326 317575) if a SAR co-operation plan is required in an emergency. MRCC Falmouth will then provide the caller with details of the relevant SAR data provider and will be able to assist further if required.

8.15 It should be noted that, although the International SAR Co-operation Plans Index is administered at MRCC Falmouth, and MRCC Falmouth also acts as SAR data provider for some ships, the two functions are distinct. Generally, it is recommended that operators choose a SAR data provider within the ship's geographical area of operation.

8.16 It is, however, essential, if the SAR data provider system is to be used, that an entry is made on the International SAR Co-operation Plans Index as described in paragraph 8.13 above.

9 Periodic exercises

9.1 The regulation requires that the co-operation plan include provisions for periodic exercises to be undertaken to test its effectiveness.

9.2 Both frequency and type of exercise will depend on the circumstances in which the ship operates, availability of SAR service resources, etc.

9.3 While it is very important that SAR co-operation arrangements be tested from time to time – by, for example, requesting local SAR service involvement in exercises already being run in accordance with the ISM Code and each ship's safety management system requirements – it is also important that the benefits of such exercises are not diluted by *over*-exercising, or by always exercising in particular ways or with particular authorities. Therefore, the ship should not be required to exercise her SAR co-operation arrangements more than once in any twelve month period.

9.4 The aim should be to test all parts of the emergency response network realistically, over time. A wide variety of scenarios should be employed; different SAR services should be involved if appropriate; and exercises should be so arranged as to allow all relevant staff (including relief staff) to participate over time.

9.5 Various types of exercise are acceptable: 'full-scale' or 'live', 'co-ordination', and/or 'communications' exercises⁸ may all be appropriate, so long as the fundamental principle of co-operation between ship, company and SAR services is exercised. 'Tabletop' exercises, SAR seminars and liaison exchanges involving ship's personnel, shore-based company emergency response personnel and SAR service personnel can also be beneficial.

9.6 Exercises should be co-ordinated, to ensure efficient use of available resources. The principle of reciprocity applies. If a ship has conducted a SAR co-operation exercise within the last twelve months, she should be deemed by all parties to have fulfilled the requirements of the regulation: the 'SAR service' should be considered a global entity in this context. Likewise, the SAR services of individual states should co-operate to ensure that passenger ships' exercise requirements are distributed between them in a way appropriate to available resources.

9.7 Exercises conducted under this regulation should occasionally include the passenger ship taking on the role of a SAR facility – and in particular the role of On Scene Co-ordinator, if appropriate.

9.8 Ships which have participated in actual SAR incidents may be deemed to have fulfilled the exercise requirements of this regulation.

⁸ IAMSAR Manual, Vol I, Chapter 3.3 refers.
I:\COMSAR\7\23-FINAL.DOC

9.9 Exercises conducted under this regulation should be formally recorded by all the main participants (ship, company, and SAR service). The record should include at least the date, location and type of exercise, and a list of the main participants. A copy of the record should be available aboard the ship for inspection.

10 Keeping the co-operation plan up-to-date

10.1 The information contained in each SAR co-operation plan should be kept up-to-date. Review, updating and auditing of the SAR co-operation plan should be conducted as part of the safety management system required by the ISM Code.

10.2 SAR service and SAR data provider information contained in each SAR co-operation plan should be reviewed, updated and audited in a similar way.

10.3 The International SAR Co-operation Plans Index must also be kept up-to-date. It is the SAR data provider's responsibility to ensure that this is done. SAR data providers should therefore check whether any amendments made to the co-operation plan affect the Index entry and, if so, should proceed in accordance with section 8 above.

APPENDIX 1

**PLAN FOR CO-OPERATION BETWEEN SEARCH AND RESCUE SERVICES AND
PASSENGER SHIPS NOT USING THE SAR DATA PROVIDER SYSTEM**

(IN ACCORDANCE WITH SOLAS REGULATION V/7.3)

List of Contents

Introduction⁹

Description of a Plan for Co-operation¹⁰

1 The Company¹¹

.1 name and address

.2 contact list

.1 24 hour emergency initial and alternative contact arrangements

.2 further communications arrangements (including direct telephone / fax links to relevant personnel)

.3 Chartlet(s) showing details of route(s) and service(s) together with delimitation of relevant search and rescue regions (SRRs)¹²

.4 liaison arrangements between the Company and relevant RCCs¹³

.1 provision of relevant incident information

- how specific information will be exchanged at the time of an incident, including details of persons, cargo and bunkers on board, SAR facilities and specialist support available at the time, etc

.2 provision of liaison officer(s)

- arrangements for sending Company liaison officer(s) to the RCC, with access to supporting documentation concerning the Company and the ship(s); eg, copies of fire control & safety plans as required by the flag state

⁹ To be prepared by the SAR Service

¹⁰ To be prepared by the SAR Service

¹¹ As defined in the ISM Code

¹² The chartlet may be replaced by a simple description, if appropriate.

¹³ ie, how Company and SAR Service are to work together in the event of an emergency, including the provision of that information which will only be available at the time

2 The ship(s)¹⁴

.1 [ship 1]¹⁵

.1 basic details of the ship

- MMSI
- callsign
- country of registry
- type of ship
- gross tonnage
- length overall (in metres)
- maximum permitted draught (in metres)
- service speed
- maximum number of persons allowed on board
- number of crew normally carried
- medical facilities

.2 communications equipment carried¹⁶

.3 simple plan of decks and profile of the ship, transmittable by electronic means, and including basic information on

- lifesaving equipment
 - firefighting equipment
 - plan of helicopter deck / winching area with approach sector
 - helicopter types for which helicopter deck is designed
 - means on board intended to be used to rescue people from the sea
- or
from other vessels

and a colour picture of the ship

.2 [ship 2 – as for ship 1, etc]

3 The RCC(s)¹⁷

.1 search and rescue regions along the route

- chartlet showing SRRs in relevant area of ships' operation

.2 SAR mission co-ordinator¹⁸ (SMC)

- definition
- summary of functions

¹⁴ To be prepared by the Company

¹⁵ Enter here the ship's name

¹⁶ Enter here basic information on the ship's communications fit, frequencies available, identifiers, etc

¹⁷ To be prepared by the SAR service

¹⁸ Search and rescue mission co-ordinator (SMC). The official temporarily assigned to co-ordinate response to an actual or apparent distress situation.

- .3 on scene co-ordinator (OSC)
 - definition
 - selection criteria
 - summary of functions
- 4 SAR facilities¹⁹
 - .1 [SRR]²⁰
 - .1 RCC/RSCs along the route
 - addresses
 - .2 communications
 - equipment
 - frequencies available
 - watch maintained
 - contact list (MMSIs, callsigns, telephone, fax and telex numbers)
 - .3 general description and availability of designated SAR units (surface and air) and additional facilities along the route, eg:
 - fast rescue vessels
 - other vessels
 - heavy / light helicopters
 - long range aircraft
 - fire fighting facilities
 - .4 communications plan
 - .5 search planning
 - .6 medical advice / assistance
 - .7 firefighting, chemical hazards, etc
 - .8 shore reception arrangements
 - .9 informing next-of-kin
 - .10 suspension / termination of SAR action
 - .2 [SRR 2 – as for SRR 1, etc]

¹⁹ To be prepared by the SAR service.

²⁰ Enter here the name of the relevant state.

5 Media relations²¹

6 Periodic exercises²²

²¹ To be prepared jointly by the Company and each SAR Service concerned.

²² Frequency, form and content of training to be considered jointly by the Company and the SAR Service(s) concerned.

APPENDIX 2

SIMPLIFIED PLAN FOR CO-OPERATION BETWEEN SEARCH AND RESCUE SERVICES AND PASSENGER SHIPS USING THE SAR DATA PROVIDER SYSTEM

(IN ACCORDANCE WITH SOLAS REGULATION V/7.3)

Introduction

1 The Company²³

.1 name and address

.2 contact list

.1 24 hour emergency initial and alternative contact arrangements

.2 further communications arrangements (including direct telephone / fax links to relevant personnel)

.3 Chartlet(s) showing details of route(s) and service(s) together with delimitation of relevant search and rescue regions (SRRs)²⁴

2 The ship(s)²⁵

.1 [ship 1]²⁶

.1 basic details of the ship

- MMSI
- callsign
- country of registry
- type of ship
- gross tonnage
- length overall (in metres)
- maximum permitted draught (in metres)
- service speed
- maximum number of persons allowed on board
- number of crew normally carried
- medical facilities

²³ As defined in the ISM Code

²⁴ The chartlet may be replaced by a simple description, if appropriate.

²⁵ To be prepared by the Company

²⁶ Enter here the ship's name

- .2 communications equipment carried²⁷
- .3 simple plan of decks and profile of the ship, transmittable by electronic means, and including basic information on
 - lifesaving equipment
 - firefighting equipment
 - arrangements for working with helicoptersand a picture of the ship

.2 [ship 2 – as for ship 1, etc]

3 SAR Data Provider

.1 []²⁸

.1 address

.2 contact arrangements

4 Media relations²⁹

5 Periodic exercises³⁰

²⁷ Enter here basic information on the ship's communications fit, frequencies available, identifiers, etc

²⁸ Enter here the name of the SAR data provider.

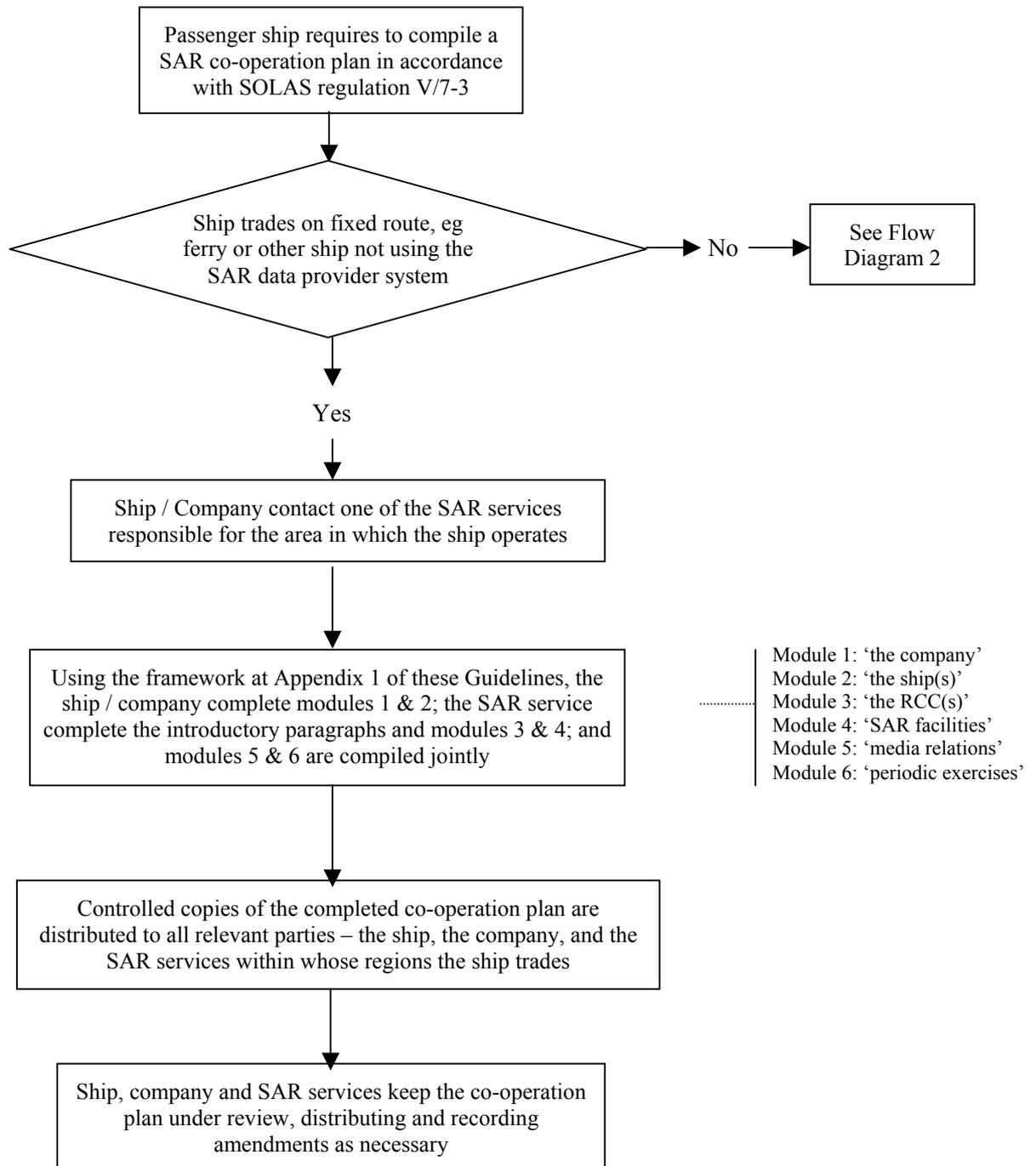
²⁹ Details of the Company's arrangements for working with the news media should be entered here.

³⁰ Exercises should be co-ordinated between the parties involved to ensure efficient use of available resources.

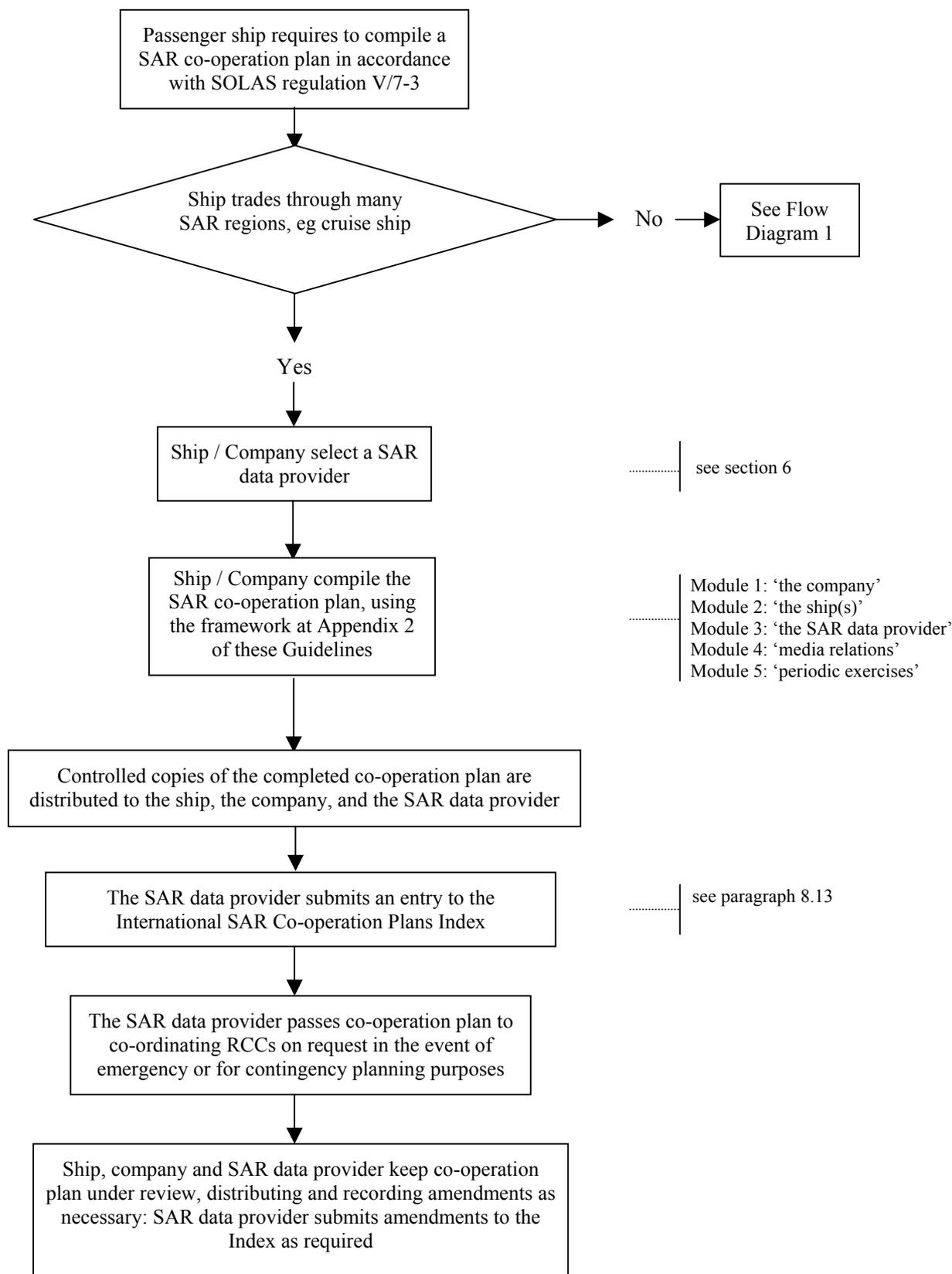
APPENDIX 3

SAR CO-OPERATION PLANNING: FLOW DIAGRAMS

1 Administrative requirements for ships *not* using the SAR data provider system (section 7)



2. Administrative requirements for ships which *are* using the SAR data provider system (section 8)



ANNEX 8**DRAFT MSC CIRCULAR
ON
GUIDANCE ON RESPONSIBILITY AND LIABILITY ISSUES RELATED TO THE USE
OF THE EMERGENCY MEDICAL KIT/BAG AND EVALUATION OF ITS USE IN
EMERGENCY INCIDENTS**

1 The Maritime Safety Committee (MSC), at its seventy-seventh session (28 May to 6 June 2003), recalled that MSC 75 had approved MSC/Circ.1042 on the List of contents of the Emergency Medical Kit/Bag and Medical considerations for its use on ro-ro passenger ships not normally carrying a medical doctor.

2 Having considered the recommendation of the Sub-Committee on Radiocommunications and Search and Rescue (COMSAR), at its seventh session (13 to 17 January 2003), MSC 77 approved the Guidance on responsibility and liability issues related to the use of the emergency medical kit/bag and evaluation of the use of the emergency medical kit/bag in emergency incidents, as set out in the annex.

3 Member Governments are also invited to bring the annexed Guidance to the attention of SAR service providers, National Maritime Authorities, shipowners, ship operators, ship masters, medical authorities, medical services and others concerned.

4 Member Governments are also invited to report on their experience gained in the use of the Emergency Medical Kit/Bag (EMK) to the Organization.

ANNEX

GUIDANCE ON RESPONSIBILITY AND LIABILITY ISSUES RELATED TO THE USE OF THE EMERGENCY MEDICAL KIT/BAG AND EVALUATION OF THE USE OF THE EMERGENCY MEDICAL KIT/BAG IN EMERGENCY INCIDENTS

1 Responsibility and liability issues related to the use of the EMK

1.1 The master of the ship is responsible for medical care on board ships which have no doctor as part of the crew (ILO Convention 164/9).

This responsibility includes making use of any existing and relevant measures to provide the patient with the best possible medical care:

- Examination of the patient and assessment of the severity of the medical incident
- Providing first aid
- Getting medical advice by TMAS or calling for a doctor among the passengers
- Providing medical facilities including the emergency medical kit and performing medical care
- Taking the operational decision in the light of the best medical advice (care on board, ship diversion, medevac,..)

1.2 If there is a medical doctor among the passengers he will be asked for advice by the ship's master. When the doctor agrees to intervene in the case, he will be responsible for his own medical action. However, at any time, the master can get telemedical advice from a TMAS either to confirm the passenger doctor's action or to help him in rendering the best possible care. At all times, the captain should supervise the performance of the treatment and be ready to provide assistance as required.

1.3 If there is no doctor on board, the master's responsibility can be shared with a remote doctor through TMAS. The degree of responsibility/liability of the master/doctor would be determined in the first instance by an assessment of how they fulfilled their pre-established duties.

1.4 In relation to the kit itself, it is an obligation on the master and the ship's company to keep the emergency medical kit in good repair. If either neglected to do so, both would be open to an action for damages in negligence/tort. Assuming the kit is in good repair but something goes wrong with the treatment given by the passenger doctor leading to physical injury to or death of the patient, the passenger doctor might be liable if he acted negligently. In assessing negligence the court would ask whether the doctor acted reasonably in all circumstances of the case. The emergency nature of the situation will be taken into account, in assessing what was reasonable action on the doctor's part.

1.5 The master or the ship's company would not incur liability merely by asking for the doctor's assistance. Nor would the master or the ship's company normally be liable vicariously for any negligence on the doctor's part in treating the patient – this is because the doctor in such a situation would not be employed by the company nor could the doctor be regarded as acting as the agent of the company.

1.6 However, in line with precedents in air transport, it is recommended that the companies offer insurance or legal assistance to cover cases where passengers qualified as doctors accept at the request of the master to assist another passenger or a member of the crew and take part of the responsibility on a voluntary basis.

2 Evaluation of the use of the EMK in emergency incidents

2.1 In order to monitor evaluation and research in the use of the EMK in emergency incidents, the “Debriefing Form”, given in the appendix was developed.

2.2 This “Debriefing Form” should be included in the “Emergency Medical Kit”.

2.3 After each case of a medical emergency in which the kit has been opened or offered, this form should be filled in by the ship’s officer responsible for medical care on board and sent to a Central Institution designated by the National Maritime Authority.

2.4 This Central Institution is invited to send these forms and when possible an evaluation report to the Organization.

APPENDIX

**EMERGENCY MEDICAL KIT
Debriefing Form**

VESSEL:

Flag:
Type:

Number of Crew:
Number of Passengers:

INCIDENT

Date:
Time (local):
Time to the nearest Port:

Hours

Weather Conditions: Good
Rough
Very Rough

PATIENT

Crewmember
Accident

Passenger
Illness

Age:
Severity Mild
Serious
Vital

Diagnosis / Symptoms:

.....
.....
.....

USER

Medical Doctor
Nurse

Speciality:
Paramedic

Crew Member

Telemedical Consultation (TMAS)

Yes
No

RESULTS

Recovery
Worsening

Improvement
Death

Steady

DECISION

Care onboard
Delay caused by the incident:

Ship Diversion
.....

Medevac
Hours

COMMENTS

(Used Medicines / Equipment, Missing Equipment, Problems, Complications, Proposals for improvement).

ANNEX 9

STATEMENT BY THE DELEGATION OF NORWAY

The obligation to rescue persons in distress at sea has been developed over centuries and is also reflected in various international conventions, State practice has been quite consistent in respect of allowing survivors to come ashore to a place of safety. The situations where this has been denied by the coastal State concerned represent rare exceptions.

There are currently two schools of thought in international legal theory. One school holds the opinion that State practice in addition to the various relevant instruments of international law, has created an obligation under international law for coastal States to accept survivors from distress incidents. Norway shares this view. The other school of thought considers that State practice and the relevant international instruments do not form the basis for such an obligation. Mr. Chairman, as we interpret Assembly Resolution A.920(22), IMO is currently tasked to choose between those two schools.

Let me once again express our support for the Norrköping text, which is excellent as far as it goes. Hopefully, the system provided for in the proposal will resolve most if not all disembarkations issues. But if it fails, as we fear it may in certain situations, no solution is prescribed. In our view, the Norrköping proposal on its own therefore falls short of addressing the task assigned to us by Assembly Resolution A.920(22), since it does not ensure that Masters will be able to deliver survivors to a place of safety on all cases and circumstances.

We fear that the proposal now on the table, if adopted, will be read by some as a confirmation that there is never, under any circumstances, any obligation under international law for any **particular** State to allow survivors to be delivered to a place of safety. Indeed, the obligation for States to cooperate and coordinate is clearly spelled out. Any States **in general** are obliged to allow delivery of survivors to a place of safety. But **no particular** State is obliged to allow this. It may therefore be argued that according to the draft new provisions any State may refuse delivery to a place of safety without being in breach of its obligations under international law.

The SAR system is dependent on cooperation and assistance from merchant vessels. Norway's concern is that if the Master is not assured that he will be able to deliver survivors to a place of safety without undue delays in all types of circumstances, this may lead some Masters to turn a blind eye to distress situations and thus prevent persons in distress at sea from being rescued.

Mr Chairman, the question each and every Delegation is obliged to consider, is whether there exists or should exist a legal obligation for particular coastal states to allow survivors to a place of safety, or if such rule does exist and should be explicitly spelled out on binding international provisions. Unfortunately, it is not clearly provided for in the text proposed by the SAR Working Group. Norway therefore intends to submit proposals to MSC 77 to address this issue.

ANNEX 10

PROPOSED DRAFT AMENDMENTS TO THE SOLAS AND
SAR CONVENTIONS

Regulation 2

Definitions

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.

Regulation 33

Distress ~~messages~~ situations: Obligations and procedures

1 The master of a ship at sea which is in a position to be able to provide assistance on receiving a ~~signal~~ **information** from any source that persons are in distress at sea, is bound to proceed with all speed to their assistance, if possible informing them or the search and rescue service that the ship is doing so. **This obligation to provide assistance applies regardless of the nationality or status of such persons or the circumstances in which they are found.** If the ship receiving the distress alert is unable or, in the special circumstances of the case, considers it unreasonable or unnecessary to proceed to their assistance, the master must enter in the log-book the reason for failing to proceed to the assistance of the persons in distress, taking into account the recommendation of the Organization, to inform the appropriate search and rescue service accordingly.

1bis Contracting Governments shall coordinate and cooperate to ensure that Masters of ships providing assistance by embarking onboard persons in distress at sea are released from their obligations with minimum further deviation from the ships' intended voyage, provided that releasing the Master of the ship does not further endanger the safety of life at sea. The Contracting Government responsible for the search and rescue region in which such assistance is rendered shall exercise primary responsibility for ensuring such coordination and cooperation occurs, so that survivors assisted are disembarked from the assisting ship and delivered to a place of safety, taking into account the particular circumstances of the case and guidelines developed by the Organization. In these cases the relevant Contracting Governments shall arrange for such disembarkation to be effected as soon as reasonably practicable.

2 The master of a ship in distress or the search and rescue service concerned, after consultation, so far as may be possible, with the masters of ships which answer the distress alert, has the right to requisition one or more of those ships as the master of the ship in distress or the search and rescue service considers best able to render assistance, and it shall be the duty of the master or masters of the ship or ships requisitioned to comply with the requisition by continuing to proceed with all speed to the assistance of persons in distress.

Strike through means to delete text
Bold indicates new text

3 Masters of ships shall be released from the obligation imposed by paragraph 1 on learning that their ships have not been requisitioned and that one or more other ships have been requisitioned and are complying with the requisition. This decision shall, if possible be communicated to the other requisitioned ships and to the search and rescue service.

4 The master of a ship shall be released from the obligation imposed by paragraph 1 and, if his ship has been requisitioned, from the obligation imposed by paragraph 2 on being informed by the persons in distress or by the search and rescue service or by the master of another ship which has reached such persons that assistance is no longer necessary.

5 The provisions of this regulation do not prejudice the Convention for the Unification of Certain Rules of Law Relating to Assistance and Salvage at Sea, signed at Brussels on 23 September 1910, particularly the obligation to render assistance imposed by article 11 of that Convention.*

6 Masters of vessels who have embarked persons in distress at sea shall treat them with humanity, within the capabilities and limitations of the ship.

Regulation 34

Safe navigation and avoidance of dangerous situations

1 Prior to proceeding to sea, the master shall ensure that the intended voyage has been planned using the appropriate nautical charts and nautical publications for the area concerned, taking into account the guidelines and recommendations developed by the Organization.**

2 The voyage plan shall identify a route which:

- .1 takes into account any relevant ships' routing systems;
- .2 ensures sufficient sea room for the safe passage of the ship throughout the voyage;
- .3 anticipates all known navigational hazards and adverse weather conditions; and
- .4 takes into account the marine environmental protection measures that apply, and avoids as far as possible actions and activities which could cause damage to the environment.

~~3 The owner, the charterer, or the company, as defined in regulation IX/1, operating the ship or any other person, shall not prevent or restrict the master of the ship from taking or executing any decision which, in the master's professional judgement, is necessary for safe navigation and protection of the marine environment.~~

* The International Convention on Salvage, 1989, done at London on 28 April 1989, entered into force on 14 July 1996.

** Refer to the Guidelines for Voyage Planning, adopted by the Organization by resolution A.893(21).

Regulation 34 bis

Masters discretion

The owner, the charterer, or the company, as defined in regulation IX/1, operating the ship or any other person shall not prevent or restrict the master of the ship from taking or executing any decision which, in the master's professional judgement, is necessary for safety of life at sea and protection of the marine environment.

ANNEX TO THE SAR CONVENTION

Chapter 2 - Organization and co-ordination

2.1.1 Parties shall, as they are able to do so individually or in co-operation with other States and, as appropriate, with the Organization, participate in the development of search and rescue services to ensure that assistance is rendered to any person in distress at sea. On receiving information that any person is, or appears to be, in distress at sea, the responsible authorities of a Party shall take urgent steps to ensure that the necessary assistance is provided. **The notion of a person in distress at sea also includes persons in need of assistance who have found refuge on a seaboard in a remote location within an ocean area inaccessible to any rescue facility other than as provided for in the annex.**

2.1.10 Parties shall ensure that assistance be provided to any person in distress at sea. They shall do so regardless of the nationality or status of such a person or the circumstances in which that person is found.

Chapter 3 - Co-operation between States

3.1.6 Each Party should authorize its rescue co-ordination centres:

- .1 to request from other rescue co-ordination centres such assistance, including vessels, aircraft, personnel or equipment, as may be needed;
- .2 to grant any necessary permission for the entry of such vessels, aircraft, personnel or equipment into or over its territorial sea or territory;
- .3 to make the necessary arrangements with the appropriate customs, immigration, health or other authorities with a view to expediting such entry; and
- .4 **to make the necessary arrangements in co-operation with other RCCs to identify the most appropriate place(s) for disembarking persons found in distress at sea.**

3.1.9 Parties shall co-ordinate and co-operate to ensure that Masters of ships providing assistance by embarking onboard persons in distress at sea are released from their obligations with minimum further deviation from the ships' intended voyage, provided that releasing the Master of the ship does not further endanger the safety of life at sea. The Party responsible for the search and rescue region in which such assistance is rendered shall exercise primary responsibility for ensuring such co-ordination and co-operation occurs, so that survivors assisted are disembarked from the assisting ship and delivered to at place of safety, taking into account the particular circumstances of the case and guidelines developed by the Organization. In these cases the relevant Parties shall arrange for such disembarkation to be effected as soon as reasonably practicable.

Chapter 4 - Operating procedures

Termination and suspension of search and rescue operations

4.8.5 The rescue coordination centre or rescue sub-centre concerned shall initiate the process of identifying the most appropriate place(s) for disembarking such persons. It shall inform the vessel or vessels and other relevant parties concerned thereof.

ANNEX 11**DRAFT MSC CIRCULAR
ON
ADOPTION OF AMENDMENTS TO THE INTERNATIONAL
AERONAUTICAL AND MARITIME SEARCH
AND RESCUE (IAMSAR) MANUAL**

1 The Maritime Safety Committee (MSC), at its [seventy-seventh session, 28 May to 6 June 2003], having been informed that the International Civil Aviation Organization had approved amendments to the IAMSAR Manual, as prepared by the Joint ICAO/IMO Working Group on Harmonization of Aeronautical and Maritime Search and Rescue and endorsed by the Sub-Committee on Radiocommunications, Search and Rescue at its seventh session (13 to 17 January 2003), adopted the annexed amendments in accordance with the procedure laid down in resolution A.894(21).

2 MSC 77 decided that the amendments should enter into force on [1 July 2004].

ANNEX

SECTION 1

**Proposed amendments to the IAMSAR Manual,
Volume I, paragraph 1.8, and Volume II, paragraph 6.1.2**

- 1 In sub-paragraph (a), 3rd line, after “coastal SAR installations”, add a comma and the following words: “including RCCs and RSCs as far as these centers are located in coastal areas and are used exclusively to co-ordinate search and rescue operations.”
- 2 Add a new sub-paragraph (c): “The above-mentioned coastal installations should, in time of armed conflict, display the distinctive emblem (red cross or red crescent), according to regulations issued by their competent authorities.”
- 3 Add a new sub-paragraph (d): “It is recommended that Parties to a conflict notify the other Parties with the name, description and locations (or area of activity) of their above-mentioned rescue craft and coastal installations in the area they are located.”

SECTION 2

**Proposed amendments to the IAMSAR Manual
Volume I, Paragraph 2.3.4, and Volume II, paragraph 3.4.4**

- 1 Volume I: Add at the end of paragraph 2.3.4, as follows:

“A Coastal State may have a MRCC but not be able to be provided with an ARCC. In such a case the SAR Manager should arrange a suitable organizational relationship to provide the MRCC with aeronautical advice. Advice may be available from aeronautical facilities close to hand, such as an aerodrome tower, an ARCC, a Flight Information Centre (FIC), or an area control centre (ACC).”
- 2 Volume II: Add to the bottom of paragraph 3.4.4, as follows:

“An MRCC may also request an ATS unit to provide the above information in the case of an aeronautical incident at sea. The MRCC should communicate first with a local ATS unit, such as an aerodrome tower. An ARCC, a Flight Information Centre (FIC) or an area control centre (ACC) may also have relevant information, or may be able to assist with investigations using aeronautical communications and resources.”

SECTION 3

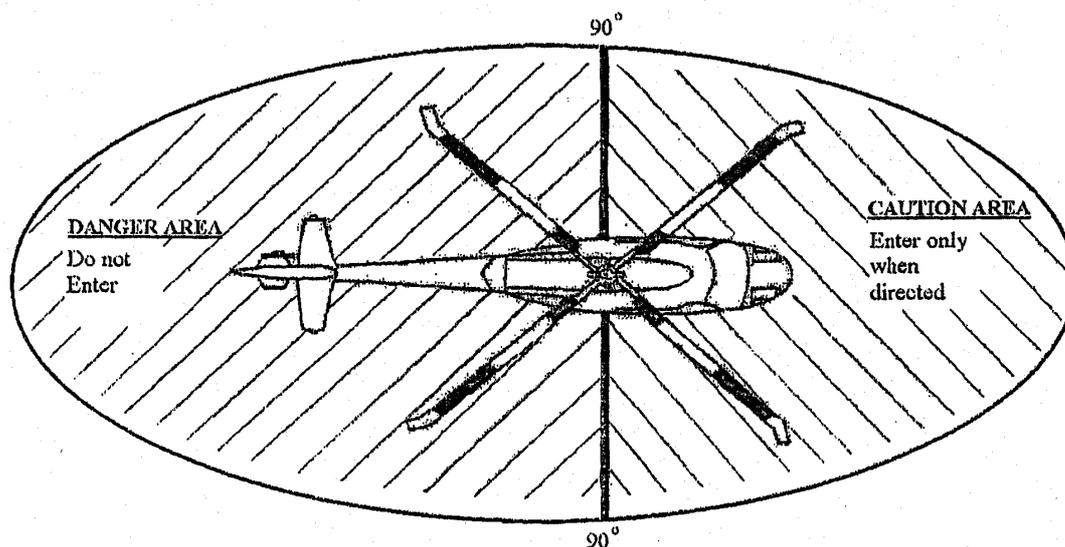
**Proposed amendments to
the IAMSAR Manual, Volume III**

Safety Precautions when approaching or leaving a helicopter

After the end of the paragraph on **Safety Preparations**, add a new paragraph on page 2-31 of Volume III

■ **Safety Precautions when approaching or leaving a helicopter**

- Do not approach or depart a helicopter UNLESS directed to do so by the pilot or crewman



Generic Safety Illustration

ANNEX 12**DRAFT MSC CIRCULAR
ON
PROCEDURE FOR EVALUATION AND POSSIBLE RECOGNITION OF MOBILE-
SATELLITE SYSTEMS NOTIFIED FOR USE IN THE GMDSS**

1 The Maritime Safety Committee, at its seventy-second session (MSC 72) in May 2000, requested the Sub-Committee on Radiocommunications and Search and Rescue (COMSAR) to develop a procedure for recognition of mobile-satellite systems for use in the GMDSS.

2 The Maritime Safety Committee, [at its seventy-seventh session (28 May to 6 June 2003)], with a view to ensuring that a proper procedure is put in place for evaluation and possible recognition of mobile-satellite systems notified for use in the GMDSS, approved the Procedure prepared by the Sub-Committee on Radiocommunications and Search and Rescue (COMSAR) at its seventh session, as set out in the annex. The attached annex also facilitates the evaluation and possible recognition of such mobile-satellite systems by the Sub-Committee on Radiocommunications and Search and Rescue and final adoption by the Maritime Safety Committee.

3 Member Governments are invited to use the annexed Procedure when submitting mobile-satellite communication systems to be recognized by the Organization for use in the GMDSS and to bring the annexed Procedure to the attention of all parties concerned.

ANNEX

PROCEDURE FOR EVALUATION AND POSSIBLE RECOGNITION OF MOBILE-SATELLITE SYSTEMS NOTIFIED FOR USE IN THE GMDSS

Background

Assembly resolution A.888(21) on Criteria for the provision of mobile-satellite communication systems for use in the GMDSS forms the basis for evaluation and possible recognition of mobile-satellite systems notified by Governments to the Organization for use in the GMDSS.

Procedure

In accordance with section 1 of the Annex to resolution A.888(21) the following procedure should apply for evaluation and possible recognition of mobile-satellite systems notified by Governments for use in the GMDSS:

Administration Action

1 Governments, either individually or in co-operation, notify the Organization of a mobile-satellite system intended for use in the GMDSS, including the necessary documentation indicating:

- .1 that the mobile-satellite communication system notified conforms to the criteria set out in resolution A.888(21);
- .2 the coverage area and the extent of coverage area from shore of the mobile-satellite system notified;
- .3 that the provisions of resolution A.707(17) on charges for distress, urgency and safety messages are complied with;
- .4 availability of the mobile-satellite system concerned, using standard statistical calculations or by actual operation experience; and
- .5 statement or evidence of economic viability for long-term provision of service.

Sub-Committee on Radiocommunications and Search and Rescue Action

1 Verification by comparison between the documentation received and the criteria, set out in the Annex to resolution A.888(21), that the notified system complies with all criteria contained in the Annex to resolution A.888(21).

2 Verification by examination of the documentation received from the notifying Government or Governments that:

- .1 the mobile-satellite communication system is compatible with the SOLAS requirements; and

.2 recognition of the mobile-satellite system will not result in substantial changes having to be made to existing procedures or equipment performance standards.

3 If necessary, development of new performance standards and/or procedures for the particular mobile-satellite system.

4 If necessary, development of proposals for amendments to the provisions of the relevant regulations in Chapter IV of the 1974 SOLAS Convention, as amended.

5 Forward to the Maritime Safety Committee the recommendation with respect to the nominated mobile-satellite system including all relevant supporting documentation.

Maritime Safety Committee Action

1 Appropriate decisions regarding recognition of the notified system for use in the GMDSS.

General

1 Governments* which license or authorise Mobile Satellite Systems, recognised by the Organization should make available to the Organization at each session of the Sub-Committee, a report of availability and performance of the system. This report should indicate whether or not the mobile-satellite system continues to meet the criteria contained in resolution A.888(21).

2 The Organization includes and maintains in the GMDSS Master Plan details of all areas covered by the mobile-satellite communication systems and by the individual coast earth stations operating in the systems recognized for use in the GMDSS.

* **Note:** IMSO is considering expanding the scope of its oversight and this may result in oversight responsibility for all GMDSS satellite participants

ANNEX 13

**DRAFT MSC RESOLUTION
ON
ADOPTION OF THE REVISED PERFORMANCE STANDARDS FOR NARROW-BAND
DIRECT-PRINTING TELEGRAPH EQUIPMENT FOR THE RECEPTION OF
NAVIGATIONAL AND METEOROLOGICAL WARNINGS AND URGENT
INFORMATION TO SHIPS (NAVTEX)**

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 886(21), by which the Assembly resolved that the functions of adopting performance standards for radio and navigational equipment, as well as amendments thereto, should be performed by the Maritime Safety Committee on behalf of the Organization,

NOTING the carriage requirement in SOLAS chapter IV 7.1.4 for a receiver capable of receiving International NAVTEX narrow-band direct-printing (NBDP) broadcasts for the promulgation of navigational and meteorological warnings to shipping,

NOTING FURTHER the success of the International NAVTEX service in the promulgation of Maritime Safety Information (MSI),

NOTING ALSO with regard to the enhanced storage, processing and display possibilities offered by recent technical advances,

CONSIDERING that further growth in information promulgated to ships will be constrained by the capacity of the International NAVTEX service and the increasing importance of National NAVTEX services,

HAVING CONSIDERED the recommendations on the revision of resolution A.525(13) made by the Sub-Committee on Radiocommunications and Search and Rescue at its seventh session,

1. ADOPTS the revised Recommendation on Performance Standards for Narrow-Band Direct-Printing Telegraph Equipment for the Reception of Navigational and Meteorological Warnings and Urgent Information to Ships (NAVTEX), set out in the Annex to the present resolution;

2. RECOMMENDS Governments to ensure that NAVTEX receiver equipment:

- (a) if installed on or after [1 July 2005], conforms to performance standards not inferior to those specified in the annex to the present resolution; and
- (b) if installed before [1 July 2005], conforms to performance standards not inferior to those specified in the Annex to resolution A.525(13).

ANNEX

REVISED RECOMMENDATION ON PERFORMANCE STANDARDS FOR NARROW-BAND DIRECT-PRINTING TELEGRAPH EQUIPMENT FOR THE RECEPTION OF NAVIGATIONAL AND METEOROLOGICAL WARNINGS AND URGENT INFORMATION TO SHIPS (NAVTEX)

1 INTRODUCTION

The equipment, in addition to meeting the requirements of the Radio Regulations, the provisions of Recommendation ITU-R M.540 applicable to shipborne equipment and the general requirements set out in resolution A.694(17), should comply with the following performance standards.

2 GENERAL

The equipment should comprise radio receivers, a signal processor and:

either

- .1 an integrated printing device; or
- .2 a dedicated display device¹, printer output port and a non-volatile message memory; or
- .3 a connection to an integrated navigation system and a non-volatile message memory.

3 CONTROLS AND INDICATORS

Details of the coverage areas and message categories which have been excluded by the operator from reception and/or display should be readily available.

4 RECEIVERS

4.1 The equipment should contain one receiver operating on the frequency prescribed by the Radio Regulations for the international NAVTEX system. The equipment should contain a second receiver capable of working at the same time as the first on at least two other frequencies recognised for the transmission of NAVTEX information. The first receiver should have priority in the display or printing of received information. Printing or displaying of messages from one receiver should not prevent reception by the other receiver.

4.2 The receiver sensitivity should be such that for a source with an e.m.f. of 2 μ V in series with a non-reactive impedance of 50 Ω , the character error rate is below 4%.

¹ Where there is no printer, the dedicated display device should be located in the position from which the ship is normally navigated.

5 DISPLAY DEVICE AND PRINTER

5.1 The display device and/or printer should be able to display a minimum of 32 characters per line.

5.2 If a dedicated display device is used, the following requirements should be met:

- .1 an indication of newly received unsuppressed messages should be immediately displayed until acknowledged or until 24 hours after receipt; and
- .2 newly received unsuppressed messages should also be displayed.

5.3 The display device should be able to display at least 16 lines of message text.

5.4 The design and size of the display device should be such that displayed information is easily read under all conditions by observers at normal working distances and viewing angles.

5.5 If automatic line feed entails division of a word, this should be indicated in the displayed/printed text.

5.6 When displaying received messages on a display device, a clear indication of the end of a message should be given by automatically adding line feeds after the message or including some other form of delineation. The printer or printer output should automatically insert line feeds after completing print of the received message.

5.7 The equipment should display/print an asterisk if the character is received corrupted.

5.8 Where the printer is not integrated, it should be possible to select the following data to be output to a printer:

- .1 all messages as they are received;
- .2 all messages stored in the message memory;
- .3 all messages received on specified frequencies, from specified locations or having specified message designators;
- .4 all messages currently displayed; and
- .5 individual messages selected from those appearing on the display.

6 STORAGE

6.1 Non-Volatile Message Memory

6.1.1 For each receiver fitted it should be possible to record at least 200 messages of average length 500 characters (printable and non-printable) in non-volatile message memory. It should not be possible for the user to erase messages from memory. When the memory is full, the oldest messages should be overwritten by new messages.

6.1.2 The user should be able to tag individual messages for permanent retention. These messages may occupy up to 25% of the available memory and should not be overwritten by new messages. When no longer required, the user should be able to remove the tag on these messages which may then be overwritten in normal course.

6.2 Message Identifications

6.2.1 The equipment should be capable of internally storing at least 200 message identifications for each receiver provided.

6.2.2 After between 60 and 72 h, a message identification should automatically be erased from the store. If the number of received message identifications exceeds the capacity of the store, the oldest message identification should be erased.

6.2.3 Only message identifications which have been satisfactorily received should be stored; a message is satisfactorily received if the error rate is below 4%.

6.3 Programmable Control Memories

6.3.1 Information for location (B1)¹ and message (B2)¹ designators in programmable memories should not be erased by interruptions in the power supply of less than 6 h.

7 ALARMS

The receipt of search and rescue information (B2 = D) should give an alarm at the position from which the ship is normally navigated. It should only be possible to reset this alarm manually.

8 TEST FACILITIES

The equipment should be provided with a facility to test that the radio receiver, the display device/printer and non-volatile message memory are functioning correctly.

9 INTERFACES

9.1 The equipment should include at least one interface for the transfer of received data to other Navigation or Communication equipment.

9.2 All interfaces provided for communication with other Navigation or Communication equipment should comply with the relevant international standards².

9.3 If there is no integrated printer, the equipment should include a standard printer interface.

¹ See Recommendation ITU-R M.540-2

² IEC 61162

ANNEX 14**LIAISON STATEMENT TO THE INTERNATIONAL
ELECTROTECHNICAL COMMISSION,
TECHNICAL COMMITTEE 80****Integrated navigation display (WG13)**

In completing revisions to Performance Standards for NAVTEX Equipment, the Sub-Committee on Radiocommunications and Search and Rescue agreed that NAVTEX messages could be displayed on an integrated navigation display of a type recognised by IMO for that purpose. The carriage of NAVTEX receivers on ships is required under SOLAS IV/7.1.4. Since NAVTEX messages include information necessary for the safe navigation of ships, displaying such messages on an integrated navigation display may be appropriate and useful, and may benefit the mariner by placing information necessary for the safe navigation of the ship in one place. The Sub-Committee on Radiocommunications and Search and Rescue (COMSAR) has recommended that the printing requirement for NAVTEX be retained, unless it is decided that NAVTEX information can be included in an integrated navigation display of a type approved by the Sub-Committee on Safety of Navigation. The COMSAR Sub-Committee has requested the Sub-Committee on Safety of Navigation to consider the requirement that integrated navigation display systems be capable of displaying NAVTEX information. Since the Inmarsat-C SafetyNET system required on ships under SOLAS IV/7.1.5 also provides information necessary for the safe navigation of ships, inclusion and displaying of data received from SafetyNET receivers should also be considered in this requirement. Pending concurrence from the NAV Sub-Committee, the COMSAR Sub-Committee requests you to consider inclusion of this capability.

Data interface (WG6)

The IMO Sub-Committee on Radiocommunications and Search and Rescue (COMSAR) has recommended that maritime safety information received over NAVTEX and Inmarsat-C SafetyNET systems be considered for presentation on an integrated display system. Similarly, such a system should be capable of controlling necessary functions of the NAVTEX and SafetyNET receivers, such as configuring frequencies, subject identifiers and stations to be received and alarms. The COMSAR Sub-Committee requests you to include a data interface definition capable of meeting this requirement.

ANNEX 15**DRAFT MSC RESOLUTION
ON
ADOPTION OF THE REVISED PERFORMANCE STANDARDS FOR SURVIVAL
CRAFT PORTABLE TWO-WAY VHF RADIOTELEPHONE APPARATUS**

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 886(21), by which the Assembly resolved that the functions of adopting performance standards for radio and navigational equipment, as well as amendments thereto, shall be performed by the Maritime Safety Committee on behalf of the Organization,

NOTING regulation III/6.2.1 of the 1988 amendments to the International Convention for the Safety of Life at Sea (SOLAS), 1974, concerning radiocommunications for the Global Maritime Distress and Safety System (GMDSS), which requires that ships be provided with survival craft two-way VHF radiotelephone apparatus and that such apparatus shall conform to appropriate performance standards not inferior to those adopted by the Organization,

RECOGNIZING the need to improve the previously adopted, by resolution A.809(19), annex 1, performance standards for survival craft portable two-way VHF radiotelephone apparatus,

HAVING CONSIDERED the recommendation on the revision of annex 1 to resolution A.809(19) made by the Sub-Committee on Radiocommunications and Search and Rescue at its seventh session,

1. ADOPTS the revised Recommendation on Performance Standards for Survival Craft Portable Two-Way VHF Radiotelephone Apparatus, set out in the annex to the present resolution;
2. RECOMMENDS Governments to ensure that survival craft portable two-way VHF radiotelephone apparatus:
 - (a) if installed on or after [1 July 2005], conform to performance standards not inferior to those specified in the annex to the present resolution; and
 - (b) if installed before [1 July 2005], conform to performance standards not inferior to those specified in annex 1 to resolution A.809(19).

ANNEX

REVISED RECOMMENDATION ON PERFORMANCE STANDARDS FOR SURVIVAL CRAFT PORTABLE TWO-WAY VHF RADIOTELEPHONE APPARATUS

1 INTRODUCTION

The survival craft portable two-way VHF radiotelephone, in addition to meeting the requirements of the Radio Regulations, the relevant ITU-R Recommendations and the general requirements set out in resolution A.694(17), should comply with the following performance standards.

2 GENERAL

2.1 The equipment should be portable and capable of being used for on-scene communication between survival craft, between survival craft and ship and between survival craft and rescue unit. It may also be used for on-board communications when capable of operating on appropriate frequencies.

2.2 The equipment should comprise at least:

- .1 an integral transmitter/receiver including antenna and battery;
- .2 an integral control unit including a press-to-transmit switch; and
- .3 an internal microphone and loudspeaker.

2.3 The equipment should:

- .1 be capable of being operated by unskilled personnel;
- .2 be capable of being operated by personnel wearing gloves as specified for immersion suits in regulation 33 of chapter III of 1974 SOLAS Convention;
- .3 be capable of single-handed operation except for channel selection;
- .4 withstand drops on to a hard surface from a height of 1 m;
- .5 be watertight to a depth of 1 m for at least 5 min;
- .6 maintain watertightness when subjected to a thermal shock of 45°C under conditions of immersion;
- .7 not be unduly affected by seawater, or oil, or both;
- .8 have no sharp projections which could damage survival craft;
- .9 be of small size and light weight;

- .10 be capable of operating in the ambient noise level likely to be encountered on board ships or in survival craft;
- .11 have provisions for its attachment to the clothing of the user and also be provided with a wrist or neck strap. For safety reasons, the strap should include a suitable weak link to prevent the bearer from being ensnared;
- .12 be resistant to deterioration by prolonged exposure to sunlight; and
- .13 be either of a highly visible yellow/orange colour or marked with a surrounding yellow/orange marking strip.

3 CLASS OF EMISSION, FREQUENCY BANDS AND CHANNELS

- 3.1 The two-way radiotelephone should be capable of operation on the frequency 156.800 MHz (VHF channel 16) and on at least one additional channel.
- 3.2 All channels fitted should be for single-frequency voice communication only.
- 3.3 The class of emission should comply with Appendix 19 of the Radio Regulations.

4 CONTROLS AND INDICATORS

- 4.1 An on/off switch should be provided with a positive visual indication that the radiotelephone is switched on.
- 4.2 The receiver should be provided with a manual volume control by which the audio output may be varied.
- 4.3 A squelch (mute) control and a channel selection switch should be provided.
- 4.4 Channel selection should be easily performed and the channels should be clearly discernible.
- 4.5 Channel indication should be in accordance with Appendix 18 of the Radio Regulations.
- 4.6 It should be possible to determine that channel 16 has been selected in all ambient light conditions.

5 PERMISSIBLE WARMING-UP PERIOD

The equipment should be operational within 5 s of switching on.

6 SAFETY PRECAUTIONS

The equipment should not be damaged by the effects of open-circuiting or short-circuiting the antenna.

7 TRANSMITTER POWER

The effective radiated power should be a minimum of 0.25 W. Where the effective radiated power exceeds 1 W, a power reduction switch to reduce the power to 1 W or less is required. When this equipment provides for on-board communications, the output power should not exceed 1 W on these frequencies.

8 RECEIVER PARAMETERS

8.1 The sensitivity of the receiver should be equal to or better than 2 μ V e.m.f. for a SINAD ratio of 12 dB at the output.

8.2 The immunity to interference of the receiver should be such that the wanted signal is not seriously affected by unwanted signals.

9 ANTENNA

The antenna should be vertically polarized and, as far as practicable, be omnidirectional in the horizontal plane. The antenna should be suitable for efficient radiation and reception of signals at the operating frequency.

10 RECEIVER OUTPUT

10.1 The audio output should be sufficient to be heard in the ambient noise level likely to be encountered on board ships or in a survival craft.

10.2 In the transmit condition, the output of the receiver should be muted.

11 ENVIRONMENTAL CONDITIONS

The equipment should be so designed as to operate over the temperature range -20°C to +55°C. It should not be damaged in stowage throughout the temperature range -30°C to +70°C.

12 POWER SUPPLY

12.1 The source of energy should be integrated in the equipment and may be replaceable by the user. In addition, provision may be made to operate the equipment using an external source of electrical energy.

12.2 Equipment for which the source of energy is intended to be user-replaceable should be provided with a dedicated primary battery for use in the event of a distress situation. This battery should be equipped with a non-replaceable seal to indicate that it has not been used.

12.3 Equipment for which the source of energy is intended to be non-user-replaceable should be provided with a primary battery. The portable two-way radiotelephone equipment should be fitted with a non-replaceable seal to indicate that it has not been used.

12.4 The primary battery should have sufficient capacity to ensure 8-hour operation at its highest rated power with a duty cycle of 1:9. This duty cycle is defined as 6-second transmission, 6-second reception above squelch opening level and 48-second reception below squelch opening level.

12.5 Primary batteries should have a shelf life of at least 2 years, and if identified to be user-replaceable should be of a colour or marking as defined in 2.3.13.

12.6 Batteries not intended for use in the event of a distress situation should be of a colour or marking such that they cannot be confused with batteries intended for such use.

13 LABELLING

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

- .1 brief operating instructions; and
- .2 expiry date for the primary batteries.

ANNEX 16**DRAFT MSC CIRCULAR
ON
GUIDANCE ON PROVISION OF SHIP SECURITY ALERT SYSTEMS**

1 The Sub-Committee on Radiocommunications and Search and Rescue (COMSAR), at its seventh session (13 to 17 January 2003), taking into account the urgency and importance of implementing SOLAS regulation XI-2/6 on Ship Security Alert Systems adopted by the Conference of Contracting Governments to the SOLAS Convention, 1974 (7-13 December 2002) to be used in the enhancement of Maritime Security, prepared the guidance on provision of ship security alert systems.

2 The MSC, at its seventy-seventh session (28 May to 6 June 2003), agreed to the proposed guidance regarding Ship Security Alert Systems, as set out in the annex.

3 Member Governments are requested to bring the annexed guidance to the attention of Maritime Administrations, shipmasters, port authorities, port facility security operators, national authorities responsible for security, shipping companies, system manufacturers and designers.

ANNEX

GUIDANCE ON PROVISION OF THE SHIP SECURITY ALERT SYSTEM

1 Regulation 6 of SOLAS chapter XI-2 requires ships to be provided with a ship security alert system. Section A/9 of the International Ship and Port Facility Security (ISPS) Code requires ships to carry a ship security plan. Performance standards for ship security alert systems are given in resolution MSC.136(76). This Circular gives guidance on the design of ship security alert systems provided to comply with the SOLAS regulation.

2 The intent of the ship security alert system is to send a covert signal or message from a ship which will not be obvious to anyone on the ship who is not aware of the alert mechanism. It is of use therefore in circumstances where a ship wishes to inform a person ashore of a problem with a minimum number of the persons onboard aware of the action. The procedures for the security alert are agreed with the ship's Administration as part of the ship security plan and ideally should be individual to the ship. It is not intended that the ship security alert procedures should be to an internationally agreed standard or conform to any particular format for all ships.

3 Possible methods of achieving the alert are as follows:

- .1 a system may employ proprietary tracking equipment provided by traffic service providers. The ship then carries a concealed equipment box working over a satellite system on its upper deck which transmits a position report at, typically, 6-hourly intervals. Interruption of power to the equipment or arming of the equipment by means of sensors or manual buttons causes the equipment to transmit a different format of position report. The tracking service providers monitor the transmission reports and inform the Company when the transmission format changes;
- .2 a system may utilise modifications of GMDSS equipment.* Some GMDSS equipment is not very suitable for modification as it is optimised for "all station" calling and may involve manual setting of frequencies etc and provides confirmation on the ship of messages sent. In these types of systems the ship security alert contains identifiers to ensure that it is not possible to confuse it with a GMDSS distress, urgency or safety alert; and
- .3 a system may utilise the exchange of messages containing key words between a ship and, typically, the Company. These messages may be by speech or data communications. Ship equipment which may be used includes cellular phones in coastal areas and satellite services away from coastal areas. It may be possible to use GMDSS VHF/MF/HF equipment in areas where there are coastal facilities for receiving addressed calls.

This list is not intended as exhaustive and is not intended to inhibit future developments.

* Inmarsat is developing modifications to existing equipment that will allow for this service to be implemented.

4 The ship security alert system requires two activation points, one of which should be on the bridge. These will typically be fixed or portable telephone handsets, fixed or portable keypads or fixed or portable buttons.

5 Measures should be incorporated in the activation points to avoid their inadvertent operation and the generation of false alerts.

ANNEX 17**DRAFT RECOMMENDATION ON FUNCTIONAL REQUIREMENTS FOR
LONG-RANGE IDENTIFICATION AND TRACKING OF SHIPS****Functional requirements**

1 The following functional requirements were agreed at MSC 76 for a system for long-range identification and tracking:

- .1 The system is intended to enhance the security of coastal States by providing information about vessel traffic in a timely manner to enable the State to take any appropriate action; and
- .2 the system should;
 - .1 enable the identification and tracking of ships at sea.
 - .2 provide the competent authority of the coastal State with the identity and position of the ship.
 - .3 ensure that the information is provided to the competent authority in a secure and confidential manner, with due regard to commercial sensitivity.
 - .4 not provide information to other ships.
 - .5 be capable of working with different densities of shipping.

Further detailed functional requirements

2 The system used for long-range identification, tracking and reporting of ships should meet the following functional requirements:

- .1 enable all ships subject to SOLAS Chapter XI-2 to be capable of being tracked and identified;
- .2 enable data to be collected only under the authority of a Contracting Government of a coastal State;
- .3 ensure that data is protected from unauthorised access or disclosure.
- .4 be capable of permitting the frequency of updates to be determined by a Contracting Government of a coastal State. (Frequency of updates should normally not exceed every 4 hours but more frequent updates may be necessary);
- .5 provide reports, which include position, a date/time of position and ship identification;

- .6 permit costs to be borne by Contracting Governments requesting the data, and be free of charge to shipping;
- .7 use any technology which has been notified to IMO and which meets the performance and interface requirements of the Organization;
- .8 permit Contracting Governments to use long-range ship reports to supplement ship reporting systems used for search and rescue purposes, as recognized by IMO, and other potential safety uses of information when practicable;
- .9 be capable of being switched off on board (in circumstances to be developed); and
- .10 permit a shipmaster or flag State to be informed of the coastal State which is collecting the data.

ANNEX 18

**DRAFT COMSAR CIRCULAR
ON
HARMONIZATION OF GMDSS REQUIREMENTS FOR RADIO
INSTALLATIONS ON BOARD SOLAS SHIPS**

1 The Sub-Committee on Radiocommunications and Search and Rescue (COMSAR), at its seventh session (13 to 17 January 2003) agreed that there were a need for harmonization of GMDSS requirements for radio installations on board SOLAS ships and prepared guidelines for the installation of equipment, given in the annex.

2 The Maritime Safety Committee, at its [seventy-seventh session (28 May to 6 June 2003)], concurred with the view of the Sub-Committee and encouraged the use of these guidelines when implementing new GMDSS installations.

3 Member Governments are invited to bring the annexed guidance to the attention of all concerned, in particular, shipowners, ship operators, shipping managers, manufacturers and surveyors.

ANNEX

**GUIDELINES FOR THE HARMONIZATION OF GMDSS REQUIREMENTS FOR
RADIO INSTALLATIONS ON BOARD SOLAS SHIPS**

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1 General

These guidelines were developed in order to provide administrations, ship owners and marine electronics companies with an unambiguous interpretation of the radio installation requirements in SOLAS chapter IV, as amended, and adopted IMO resolutions. References are also made to IMO circulars, the STCW Convention and ITU Radio Regulations.

The core elements of this document give guidelines on GMDSS installations on board ships. However, additional useful information is included from other bodies who are involved when maritime radio equipment is installed.

1.1 Application

Radio equipment installed on a SOLAS ships should meet the relevant IMO requirements and ITU recommendations and should be of a type approved by the administration.

These Guidelines are applicable when installing GMDSS radio equipment on board SOLAS ships .

The rules in these guidelines also apply to radio installations on mobile offshore drilling units as prescribed in the MODU code.

(See chapter 9 regarding GMDSS requirements offshore)

Cargo ships of less than 300 gross tonnage (gt) and fishing/catching vessels are as a general rule not covered by SOLAS requirements. However, if such ships/vessels are going to install GMDSS radio equipment on a voluntary basic or mandatory basic according to national laws, these guidelines should be followed as far as practicable.

These guidelines reflect to a large extent unambiguous requirements in accordance with the relevant rules and regulations, see subsection 1.2. below. Other practical installation solutions than the ones emerging from these guidelines may, however, be accepted as long as the international requirements as laid down in the SOLAS Convention etc are met and the installation is considered to be equivalent.

Note: - The marine electronics company which installs the radio equipment should be responsible for giving the radio operators proper familiarisation in the use of the installed radio equipment before it is put into operation.

1.2 Rules and regulations

.1 These guidelines are prepared in accordance with the following conventions, regulations, instructions and guidelines:

- .1 SOLAS 1974 as amended
- .2 IMO Resolutions (Performance standards) and IMO Circulars
- .3 ITU (International Telecommunication Union) Radio Regulations (RR)

- .4 International Standards - ISO 8468 1990 (E), annex A
- .5 The STCW Convention (Standard of Training, Certification and Watchkeeping)

1.3 Drawings

1.3.1 General

Specified drawings (plans of the radio installation) should be prepared out well before the work on a new building or reconstruction of ships or offshore units is started. Insufficient or missing drawings may result in deficiencies during radio survey and could lead to expensive repairs costs later. (Resolution A. 746(18) item 8)

For the radio installation the following drawings should be prepared:

- .1 Antenna drawing
- .2 Radio arrangement drawing
- .3 Wiring diagram

For new buildings the antenna and radio arrangement drawings should at least be of size 1:50.

Approved “as installed” wiring diagram, radio arrangement as well as antenna drawings should be kept available on board the ship for presentation during radio survey etc.

1.3.2 Antenna drawings

Antenna drawings should show all antennas seen from fore or aft position, the port or starboard position and from above. This applies to the following antennas:

- .1 All transmitting antennas including location of antenna tuner
- .2 All receiving antennas including GNSS antennas
- .3 Radar antennas
- .4 Satellite communication antennas
- .5 The location of float-free EPIRBs

1.3.3 Changes in the antenna arrangement

When changes are made in the antenna arrangement, modified antenna drawings should be prepared.

1.3.4 Radio arrangement drawings (Lay-out of bridge and communication room)

These drawings should show the location of the following equipment:

- .1 Controllers for transmitting distress alarm
- .2 VHF radio installations, including any control units
- .3 MF or MF/HF installation, including any control units, telex printers etc.
- .4 Satellite communication equipment, including terminals, printers etc.
- .5 Watchkeeping receivers for VHF ch. 70, 2187.5 kHz, and HF distress channels in 4, 6, 8, 12 and 16 MHz bands
- .6 NAVTEX and EGC receivers
- .7 Radar transponders and EPIRB's (if located on the navigating bridge)
- .8 Hand held (two-way) GMDSS VHF transceivers and their chargers
- .9 Emergency light powered from a reserve source of energy to illuminate the mandatory radio equipment
- .10 Battery charger (for the reserve source of energy)
- .11 Fuse box.

1.3.5 Wiring diagram

These drawings should show the following connections etc.:

- .1 Antenna connections
- .2 Connections to telephone exchange (PABX), fax machine etc.
- .3 Connections to the ships mains, emergency source of energy, and the reserve source of energy (batteries), and switching systems for all radio- and radio navigation equipment
- .4 Which radio equipment (including emergency light) being connected to each power unit/source
- .5 Fuses for all radio equipment
- .6 Uninterruptible Power Supply (UPS) with all connections and fuses, if installed as power for mandatory radio equipment. (Block diagram showing how the UPS operates, showing the fuses and switch-over connections to alternative power supplies, by-pass switch etc.)
- .7 Any connections (interface connections) between satellite navigator/ GNSS and GMDSS radio equipment
- .8 Battery chargers for the reserve source of energy

- .9 Connections to gyro (if applicable)
- .10 Type of cables used in the installation
- .11 Connections to VDR (if applicable)

1.4 Instruction manuals and publications

The following instruction manuals and publications should be available on board:

- .1 Users manual (in English) for all radio equipment and battery chargers
- .2 Specifications and battery capacity calculations for the installed batteries
- .3 ITU (International Telecommunication Union) publications according to requirements in the Radio Regulations.

1.5 Tools and spare parts

As a minimum requirement the ship should have the following tools and spare parts readily available on board:

- .1 Spare fuses for all radio equipment, battery circuit and main fuses where safety fuse (“melting” fuse) are used
- .2 Reserve emergency lamps
- .3 Tools necessary for simple servicing
- .4 Acid specific density meter if the ship is fitted with lead acid accumulators
- .5 Multi-meter.

If the ship makes use of the “on board maintenance” method, it should be equipped with extensive test equipment and spare parts, which enable maintenance and repairs of all mandatory radio equipment while at sea.

1.6 Maintenance requirements

Ships equipped with GMDSS radio installation should meet specific requirements as to maintenance methods for the radio installation. Irrespective of sea areas, the ship should not leave harbour without being able to transmit distress alert ship-to-shore by at least two separate and independent radio communication systems.

(SOLAS 1974, as amended, chapter IV/4.1)

SOLAS ships in sea areas A1 and A2 are required to use at least one of the three specific maintenance methods, whereas convention ships in areas A3 and A4 should use a combination of two methods.

(SOLAS 1974, as amended, chapter IV.15 and IMO resolution A.702(17))

1.6.1 Shore-based maintenance

- .1 The shipping company/ship may have a written agreement with a marine electronic company or be able to present a written declaration/plan showing how shore-based maintenance is to be carried out.

(IMO resolution A.702(17), Annex, item. 3)

- .2 A Radio Safety Certificate issued by an Administration should in general be a sufficient proof that satisfied adequate maintenance arrangement has been made.

(IMO resolution, A.702(17) and Com/circ. 117)

1.6.2 At-sea electronic maintenance

If the shipowner chooses at-sea electronic maintenance, personnel with necessary qualifications and authorization for servicing the equipment must be present on board. All necessary instruments and spare parts for repair of all radio equipment must also be available when the ship is at sea.

(IMO resolution. A.702(17))

1.6.3 Duplication of equipment

The following additional equipment should be installed in sea areas A3 and A4:

- .1 VHF with DSC controller
- .2 Approved satellite ship earth station or complete MF/HF radio telephony station with DSC and NBDP. (See note)

(IMO resolution A.702(17))

Note: - Ships in the A3 sea areas may choose between duplication with either complete MF/HF transceiver or approved satellite ship earth station. Ships in regular trade in sea areas A4 must duplicate with a complete MF/HF installation. Ships in sea area A4 which are not in regular trade in that area may duplicate with approved satellite ship earth station, provided a MF/HF installation is used as main station.

1.7 Ship Station Radio Licence

- .1 A ship station radio licence in accordance with the Radio Regulations should be issued to the ship.
- .2 The licensee (normally the shipowner) is responsible for applying for a radio licence in due time before the installation take place.

(RR. Art. 18)

Note: - The Maritime Mobile Service Identity (MMSI) number stipulated in the radio licence should be coded into the DSC equipment, and if appropriate also into the satellite EPIRB. If the national authority accept serial number or call sign for identification of EPIRB's, the correct serial number or call sign must be coded into the EPIRB.

All these identities must be changed when a ship is transferred to another flag, and appropriate steps taken to ensure databases held ashore are kept current

1.8 Application for activation of satellite equipment

The licensee is also responsible for registration and service activation of satellite ship earth station.

1.9 De-activation of satellite equipment when transferring a ship to foreign flag

When transferring a ship to foreign flag, the licensee/shipowner must inform the appropriate Licensing Authority immediately concerning de-activation of satellite equipment.

1.10 Initial and annual radio survey, issuance, renewal and endorsement of Safety Radio Certificates

Survey of radio installation on SOLAS ships should be carried out in accordance with the rules laid down in IMO Res. A.746(18) "Survey Guidelines under the harmonized system of survey and certification" R 8 (adopted by IMO), and SOLAS 1974 as amended, chapter I, part B. It is important to note the following text in this resolution:

- .1 "The radio survey should always be performed by a fully qualified radio surveyor who has adequate knowledge of the IMO's relevant Convention, particularly SOLAS and associated performance standards, and appropriate ITU Radio Regulations. The radio survey should be carried out using suitable test equipment capable of performing all relevant measurements required by these guidelines."
- .2 It is considered as very important that the responsible radio operator (holding a GOC or ROC certificate) are properly instructed and trained in how to use the GMDSS radio equipment.
- .3 The International Convention of Training, Certification and Watch keeping of Seafarers (STCW 1995) requires that the radio operator performing watch keeping duties should:
 - .1 ensure that watch is maintained on the frequencies specified in the Radio Regulations and SOLAS Convention; and
 - .2 while on duty, regularly check the operation of the radio equipment and its sources of energy and report to the master any failure of this equipment.
- .4 The radio licence and certificate for the radio operator/operators should be checked during the survey.

2 Functional requirements

2.1 General

- .1 The functional Requirements of the GMDSS are detailed in SOLAS chapter IV, regulation 4.

It is of great safety importance that all requirements laid down are fulfilled. The most important requirement is that “Every ship, while at sea, should be capable of transmitting ship-to-shore distress alerts by at least two separate and independent means each using a different radio communication service”. It should be possible to initiate such alerts from the position from which the ship is normally navigated.

- .2 Under certain conditions the satellite EPIRB may be used to meet this requirement if installed close to the navigation bridge or if it can be remote activated from the bridge.
- .3 In addition to the above mentioned requirements, it should be possible to initiate the transmission of DSC distress alerts from the navigation bridge on VHF, and also on MF or HF, provided that the MF or HF equipment is obligatory in the trade area of the ship.

(SOLAS, chapters IV/8 and 9)

- .4 All ships should keep continuous watch on VHF channel 70 by use of a DSC receiver.
- .5 Ships with MF requirements should in addition keep continuous watch on MF DSC 2187,5 kHz and on HF DSC distress and safety channels if required to have HF radio equipment installed (see also subsection 4.2.4 and 4.2.5).
- .6 IMO has at MSC 75 and in accordance with resolution MSC.131(75) decided to require all vessels to maintain, when practical, a continuous listening watch on VHF channel 16 until such time as the Maritime Safety Committee may determine the cessation of this requirement, taking into account that a re-assessment will be undertaken by the Organization no later than 2005.
- .7 Watch should also be kept with NAVTEX and/or with EGC receiver. The watch should be kept at the position from which the ship is normally navigated.

(SOLAS 1974, as amended, chapters IV/8 and 9 and chapter IV/12)

2.2 Sea areas (definitions)

- .1 A1 means an area within the radiotelephone coverage of at least one VHF coast station in which continuous DSC alerting is available, as may be defined by a Contracting Government.
- .2 A2 means an area, excluding sea area A1, within the radiotelephone coverage of at least one MF coast station in which continuous DSC alerting is available, as may be defined by a Contracting Government.

.3 A3 means an area, excluding sea areas A1 and A2, within the coverage of an Inmarsat geostationary satellite in which continuous alerting is available (76 °N and 76 °S).

.4 A4 means an area outside sea areas A1, A2 and A3.

2.3 Equipment requirements (including duplication of equipment) for SOLAS ships

GMDSS equipment requirements in force for all passenger ship in international trade as well as cargo ships of 300 gt. and upwards in international trade:

(SOLAS 1974, as amended, chapter IV and IMO resolution A.702(17))

| Equipment | A1 | A2 | A3 Inmarsat solution | A3 HF solution | A4 |
|---|----------------|----------------|----------------------------|----------------------|----------------|
| VHF with DSC | x | x | x | x | x |
| DSC watch receiver channel 70 | x | x | x | x | x |
| MF telephony with MF DSC | | x | x | | |
| DSC watch receiver MF 2187,5 kHz | | x | x | | |
| Inmarsat ship earth station with EGC receiver | | | x | | |
| MF/HF telephony with DSC and NBDP | | | | x | x |
| DSC watch receiver MF/HF | | | | x | x |
| Duplicated VHF with DSC | | | x | x | x |
| Duplicated Inmarsat SES | | | x | x | |
| Duplicated MF/HF telephony with DSC and NBDP | | | | | x |
| NAVTEX receiver 518 kHz | x | x | x | x | x |
| EGC receiver | x ¹ | x ¹ | | x | x |
| Float-free satellite EPIRB | x | x | x | x | x ⁴ |
| Radar transponder (SART) | x ² | x ² | x ² | x ² | x ² |
| Hand held GMDSS VHF transceivers | x ³ | x ³ | x ³ | x ³ | x ³ |
| For passenger ships the following applies from 01.07.97 | | | | | |
| “Distress panel” (SOLAS chapter IV/6.4 and 6.6) | x | x | x | x | x |
| Automatic updating of position to all relevant radiocommunication equipment chapter IV/6.5. This also applies for cargo ships from 01.07.02 (chapter IV, new regulation 18) | x | x | x | x | x |
| Two-way-on-scene radiocommunication on 121,5 or 123,1 MHz from the navigating bridge. (SOLAS chapter IV/7.5) | x | x | x | x | x |

1) Outside NAVTEX coverage area.

2) Cargo ships between 300 and 500 gt.: 1 set. Cargo ships of 500 gt. and upwards and passenger ships: 2 sets.

3) Cargo ships between 300 and 500 gt.: 2 sets. Cargo ships of 500 gt. and upwards and passenger ships: 3 sets.

4) Inmarsat E-EPIRB cannot be utilized in sea area A4.

3 Basic equipment - supplementary requirements

3.1 General requirements

Every radio installation should:

- .1 be so located that no harmful interference of mechanical, electrical or other origin affects its proper use;
- .2 be so located as to ensure electromagnetic compatibility (EMC) and avoid harmful interference to other equipment and systems;
- .3 be so located as to ensure the greatest possible degree of safety and operational availability, with warning notice when appropriate;
- .4 be protected against the harmful effects of water, extremes of temperature and other adverse environmental conditions;
- .5 be provided with emergency lighting, which is independent of the main and emergency sources of electrical power for the illumination of the radio controls; and
- .6 be clearly marked with the ship's call sign, MMSI number and other identities as appropriate.
- .7 be so located that no magnetic compass lies within the stated Compass Safe Distance of the equipment.

(SOLAS 1974 as amended, chapter IV/6.2)

3.2 Navigational Safety VHF

Control of the VHF used for navigational safety must be available at the conning position (in the front of the navigation bridge), and where necessary, from the wings of the bridge.

Portable VHF equipment may be used to provide navigational safety from the wings of the bridge.

(SOLAS 1974, as amended, chapter IV.6.3)

3.3 Marking of radio equipment and notices

- .1 All radio equipment should be duly marked with type designation. The marking should be clearly visible when the equipment has been installed.
- .2 The radio installation should be duly marked with the ship's call sign, the ship's station identity and other codes applicable for the use of the radio equipment.
- .3 DSC operation procedures should be posted near the DSC equipment on the navigation bridge. Emergency procedures should be posted near the relevant equipment on the bridge.

- .4 “GMDSS operating guidance for masters of ships in distress situations” and the procedure “False alerts”, both drawn up by IMO, should be posted on the navigation bridge.

3.4 Emergency lights

- .1 All mandatory radio equipment should have reliable emergency lighting powered from a reserve source of energy, which normally is the radio batteries. This light should give adequate illumination of the controls for safe operation of the radio equipment, and the working table for reading and writing.
- .2 Means should be provided for dimming any light source on the equipment which is capable of interfering with navigation, i.e. by adjustable light or by use of a curtain etc. during night-time.
- .3 For VHF transceivers located openly in the front of the bridge, a screened light concentrating on each single piece of equipment, should be used. Scale illumination (powered from a reserve source of energy) may be accepted provided it is sufficient for the operation of call control devices both on the VHF transceivers and the VHF transceivers and the DSC controllers.
- .4 Ceiling light may be used for equipment located in a separate radio workstation, providing it is not dazzling the navigator on watch.

(IMO resolution A.694(17), item 3.3.)

- .5 The emergency light should have its own fuse circuit and fuses in each circuit. These fuses should be connected before of the main fuses in order to prevent blown main fuses to cause interruption of the emergency light.
- .6 Switches for emergency lights must be properly marked.

3.5 Recommended installation

In order to meet all requirements and recommendations concerning the location of all units included in a GMDSS radio installation, it is recommended to establish either a “radio work station” in connection with the navigating bridge, or a separate “communication office” outside the navigation bridge with remote controls on the bridge. It must be emphasized, however, that the suggestions in subsections 3.5 - 3.7 below are to be considered as guidelines only. Other solutions and combinations are equally acceptable as long as the general requirements and recommendations outlined are fulfilled.

(SOLAS 1974, as amended, chapter IV, COM/Circ. 105 and ISO 8468: 1990(E))

3.5.1 Radio work station

- .1 The work station should be located in the aft of the navigation bridge so that the navigator has an over all view of the navigation while operating the radio equipment. If the work station and the rest of the navigation on bridge are

separated by a wall it must be made of glass or fitted with windows. There must be no lockable door between the work station and the navigation bridge.

- .2 When the work station is being used during night-time, a curtain must be provided in order to avoid dazzling effect from the lights.
- .3 All mandatory radio equipment (except mandatory VHF, see subsection 4.1.1.) should be located in the radio work station. Watch receivers may alternatively be located elsewhere on the navigation bridge.

Note: - It is essential that satisfactory watch (clearly audible signals/visual alarms) can be maintained at the position from which the ship is normally navigated. If it is not possible to maintain satisfactory watch, alarm indicators on MF or MF/HF and Inmarsat equipment, including EGC printer, must be located outside this work station.

(IMO resolution A.664(16), A.807(19) Annex item 3.2 regarding EGC, and A.610(15), A.806(19) Annex D item 8 regarding MF and MF/HF DSC requirements, and SOLAS 1997 chapter IV.12 regarding watch-keeping requirements)

- .4 MF/HF RF power amplifiers should be located in a separate and screened room. Antenna tuners should, as a general rule, be located outdoors below the antenna.

3.5.2 Communication office

- .1 The communication office may be located as required by the shipping company, e.g. in connection to the captain's office. It should be possible to make public calls and perform general radiocommunications on MF or HF and/or through satellite from the communication office, if such calls cannot be made from a suitable location elsewhere on the ship.
- .2 All equipment for written correspondence, as well as telephone services for MF/HF and Inmarsat, should be located in the communication office.
- .3 The remote operation panels for the mandatory equipment must be located in a central position on the navigation bridge, in order to fulfil the requirements for transmitting distress alerts from the navigation bridge.

Note: - Consideration should also be given to the requirements for navigational safety communication and subsequent distress communications on MF or HF. When MF/HF DSC is included in the mandatory basic or duplicated radio equipment, it must be possible to conduct distress- and safety communications from the navigating position, and the MF/HF DSC controller must be installed in this position.

(IMO resolutions A.804(19) and A.806(19))

- .4 Watch receivers and NAVTEX/EGC receivers should be located on the navigation bridge.
- .5 VHF transceivers with DSC used for navigational safety should be located in the front of the navigation bridge.

3.6 Ships with integrated bridge system (IBS)

- .1 Ships constructed to satisfy the IBS requirements for single-manned navigating bridge should have the operation panels for mandatory GMDSS equipment installed as close to the conning position as possible.
- .2 Equipment for the transfer of radio telephone calls via radio (VHF, MF or MF/HF) or satellite to other areas of the ship should be placed close to the other GMDSS equipment near the conning position.
- .3 It should be possible also to operate printed communications (data communications via radio and/or Inmarsat) from other areas of the ship.

3.7 Ships with integrated radiocommunication systems (IRCS)

- .1 The IRCS is a system in which individual radiocommunication equipment and installations are used as sensors, i.e. without the need for their own control units, providing outputs to and accepting inputs from the operator's position, called workstations. Such workstations are called "GMDSS workstations" if they include control and monitoring of all equipment and installations provided on a ship for the GMDSS which are also suitable for general radiocommunications. The IRCS workstation should be installed in a console located in a central position on the navigation bridge.

Transmitting and receiving equipment may be located outside the navigation bridge.

- .2 The IRCS should comprise at least two GMDSS workstations each connected to each GMDSS radiocommunication sensor over a network or connection system. At least two printers should be installed. All requirements laid down in SOLAS 1974, as amended, chapter IV, should be fulfilled.

(IMO resolutions A.811(19))

4 GMDSS radio equipment

4.1 Location of VHF transceivers and VHF DSC controllers

- .1 VHF with DSC forming part of the mandatory VHF communication equipment for safety of navigation should be located in the conning position. This equipment may be connected to several remote control units, i.e. on the wings of the navigation bridge, provided that the navigating bridge has priority. If such "combined" equipment is chosen, it should be possible to transmit DSC distress alert from the conning position.
- .2 If the ship is equipped with extra VHF transceiver (without DSC) with channels required for navigational safety, located in the conning position, another central location of the mandatory DSC VHF equipment on the navigation bridge (in navigating position) can be accepted.

(SOLAS 1974, as amended, chapters IV 4.1.5, 4.1.9 and 6.3.)

Note: - With regard to the location of equipment and distress alerts, the same requirements also apply to the duplicated DSC VHF equipment for ships in sea areas A3 and A4. The duplicated VHF transceiver can, however, be located in the “navigating position” instead of in the conning position.

(IMO resolution. A.702(17), Annex, item 2.1.)

In order to conduct power measurements, easy access to the antenna output of each equipment should be provided.

(SOLAS 1974, as amended, chapter. IV 15.2 and IMO resolution A.746 (18))

4.2 Continuous watch on DSC VHF channel 70

Continuous watch on DSC VHF channel 70 can be met by:

- .1 a separate VHF channel 70 watch receiver. It should not be muted or interrupted when using other radio equipment, or
- .2 a dedicated watch receiver combined with the VHF transceiver. It should be installed so as to maintain watch even when the VHF equipment is used for telephony, or
- .3 VHF with DSC permanently locked on channel 70 for reception and transmission of DSC calls only. To deal with other correspondence on other channels, an additional VHF-transceiver must be installed, which may be without the DSC-function.

(IMO resolution A 694 (17) and A 803 (19), Com/Circ. 105)

4.3 Location of MF/HF transceivers

- .1 If the equipment is main or duplicated equipment, it must be possible to activate the distress alert from the navigation bridge. If the equipment can be remote operated from other positions on board the ship, priority should be given to the unit on the navigation bridge.
- .2 With regard to a MF installation, the requirement for DSC distress alerts on 2187,5 kHz can also be fulfilled by a remote-activated MF control unit locked on 2187,5 kHz with alert activated from the navigation bridge.

Note: - DSC on MF is required in sea areas A2, A3 and A4, irrespective of selected radio equipment solution. It should therefore always be possible to activate the DSC distress alerts on 2187,5 kHz from the navigation bridge.

If combined MF/HF radio equipment is chosen as mandatory GMDSS equipment, it should also be possible to activate the distress alert from the navigating bridge on the mandatory HF DSC frequencies.

If MF/HF installation is chosen as duplicated equipment (Inmarsat option) on a ship with A3, there is no requirement for an extra DSC watch receiver.

(SOLAS 1974, as amended, chapters IV. 9.2, 10.3 and COM/Circ. 105/Clarification)

- .3 RF power amplifiers should, as a general rule, not be located in the navigation bridge area. Location in such area may, however, be accepted if it can be granted that the EMC requirements are fulfilled. The antenna tuner should, as a general rule, be located in an outdoor position below and close to the antenna.

(IMO resolution A. 813(19))

- .4 The MF or MF/HF transmitter should be equipped with an instrument or other provisions indicating antenna current or power delivered to the antenna.

(IMO resolutions A.804(19) and A.806(19) Annex 6.1)

- .5 If the transmitter antenna is not permanently connected to the transmitter, it should be automatically connected before the distress alert is transmitted.

4.4 Watch-keeping receivers for DSC

- .1 Depending on the trade area and mandatory radio equipment of the ship, continuous watch is required via separate receivers for DSC channel 70, MF DSC 2187.5kHz and HF DSC 8414.5 kHz, as well as minimum one of the frequencies 4207.5 kHz, 6312 kHz, 12577 kHz and 16804.5 kHz.

(SOLAS 1974, as amended, chapter IV/12)

- .2 The watch receiver for VHF DSC channel 70, MF DSC 2187.5 kHz and HF DSC scanning receiver must be located so that the alarm is clearly audible and visible all over the navigation bridge.

(IMO resolutions A.804(19), COM/Circ 105)

- .3 It must be possible to read the DSC alert messages on the navigation bridge. The printer (if any) or display etc. may be common for all DSC watch receivers, provided that messages coming in simultaneously are arranged in queue and printed as soon as the printer/display is ready.

(IMO resolutions A.803(19), A 804(19) and A.806(19))

- .4 Easy access to the antenna connector should be possible in order to conduct test of the equipment by means of measuring instruments.

Note: - There is no requirement for a duplicated MF/HF DSC watch receiver for ships in sea areas A3 or A4 when maintenance method “duplication of equipment” is used.

(IMO resolution A.702(17), Annex item 2.1)

4.5 Watch-keeping on MF or MF/HF DSC

4.5.1 Continuous watch on the MF DSC distress frequency 2187.5 kHz to be kept by:

- .1 a separate DSC watch receiver locked on 2187.5 kHz, or
- .2 a dedicated watch receiver combined with the MF radiotelephone.

Note: - If DSC operation is desirable on other frequencies, an additional scanning receiver should be provided. Other frequencies than those used for distress and safety should not be included in the receiver dedicated for DSC emergency watchkeeping. A single DSC decoder may be used to serve both the DSC watch and the additional scanning receiver.

(COM/Circ.105)

4.5.2 Continuous watch on MF/HF DSC distress and safety frequencies to be kept by:

- .1 a separate DSC MF/HF DSC scanning receiver for distress and safety frequencies only; or
- .2 a dedicated MF/HF DSC scanning watch receiver for distress and safety DSC frequencies only combined with the MF/HF radiotelephone.

(COM/Circ. 105)

Note: - If DSC operation is desirable on other frequencies, an additional scanning receiver should be provided. The receiver may be combined with the watch receiver for MF DSC. A single DSC decoder may be used to serve both the DSC distress and safety frequency scanning receiver and the additional scanning receiver only if continuous watch for distress and safety calls can be maintained.

(SOLAS 1974, as amended, chapters IV.2.1.2, 10.2.2, 12.1.3 and COM/Circ. 105)

4.5.3 Watch-keeping on DSC calling frequencies

- .1 For watch-keeping on other frequencies than distress- and safety frequencies (national and international DSC calling frequencies), a separate scanning receiver should be provided.

Note: - According to SOLAS chapter IV/4.1.8, there is a general requirement for transmitting and receiving "General communications". Ships in sea areas A2 should according to this requirements, and according to SOLAS chapter IV/9.3, be able to transmit and receive general radiocommunications on MF or MF/HF telephony or NBDP or Inmarsat ship earth station. Ships in sea area A2, which is equipped in accordance with the minimum SOLAS requirements (i.e. VHF and MF with DSC), should be provided with equipment for listening and calling on national and international MF DSC calling frequencies. Alternatively, they may be provided with Inmarsat equipment in order to fulfil the "general" and "public" correspondence requirements.

According to IMO's Performance Standards, Res. A.804(19) and A.806(19), it is required that the DSC equipment should have possibilities as to be used also for "public correspondence". For ships in sea areas A3 and A4 the installed equipment (MF/HF or Inmarsat, depending on installation solution) should also be used for common radiocommunications. In these sea areas the requirements for "general" or "public correspondence" are normally fulfilled either by using the HF or Inmarsat equipment.

(SOLAS 1974, as amended, chapters IV/ 10 and 11)

4.6 Satellite ship earth station (SES)

- .1 If the equipment is the main station or duplicated equipment, it must be possible to activate the distress alert from the navigation bridge.

(SOLAS 1974, as amended, chapter IV.10.3)

- .2 The terminal and telephone, if any, may be placed in a "radio work station" in connection with the navigation bridge or in a separate communication office.
- .3 The satellite terminal and/or external printers may also be located elsewhere in the ship.

Note: - Attention should be made to IMO resolution A807(19), Annex 3.2 regarding Inmarsat-C, which has the following text:

"It should be possible to initiate and make distress calls from the position from which the ship is normally navigated and from at least one other position designated for distress alerting".

The words "one other position designated for distress alerting" is only actual for ships which have defined an additional place/room on board to be such "other position". Normally it will be accepted that Inmarsat C equipment is installed in the "radio work station" if it is provided with facilities for conducting distress alerts from the navigation bridge. It is, however, recommended that the Inmarsat C terminal, including additional equipment, should be located on the navigation bridge in order to make it possible to conduct follow-up distress communication from this position.

4.7 Connection of external located data terminal to mandatory Inmarsat C ship earth station in the GMDSS

If the licensee/shipowner wants to connect the mandatory Inmarsat-C terminal i.e. to the ship's PC-network or to an outside located data terminal, all mandatory GMDSS requirements in accordance with SOLAS 1974, as amended, should always be fulfilled.

In that case, the dedicated printer should be connected permanently to the output of the mandatory Inmarsat terminal's printer output. A manually operated and duly marked switch, located near the Inmarsat terminal, should be installed to disconnect the Inmarsat terminal from the external equipment.

4.8 Extra requirements for passenger ships

- .1 A distress panel should be installed at the conning position, i.e. within the range of the manoeuvring console in the front of the navigating bridge.
- .2 This panel should contain either one single button which, when pressed, indicates a distress alert using all radiocommunication installation required on board for that purpose, or;
- .3 one button for each individual radio installation which are installed.
- .4 The **distress alert panel** should clearly and visually indicate whenever any button or buttons have been pressed. Means should be provided to prevent inadvertent activation of the button or buttons.

Note: - The alert button or buttons should be protected against inadvertent activation by use of a spring loaded lid or cover permanently attached by e.g. hinges in order to fulfil the requirement of carrying out “at least two independent actions” when transmitting distress alert, cf. IMO requirements in force from 23 November 1996. (The button or buttons should be pressed for at least 3 seconds before the alarm is activated).

- .5 If the installed satellite EPIRB is used as the secondary (mandatory) means of distress alerting and is not remotely activated, it should be acceptable to have an additional EPIRB (406 MHz or Inmarsat-E float-free or manual) installed on the navigation bridge near the conning position.
- .6 Information on the ship’s position should be continuously and automatically provided to all relevant radiocommunication equipment to be included in the initial distress alert when the button or buttons on the distress panel is pressed. (i.e. interface connection from the ship’s GNSS receiver should be provided, where GNSS is not integrated)

(SOLAS 1974 as amended, chapter IV/6.4)

- .7 The **distress alert panel** is normally included in the distress panel and should provide visual and aural indication of any distress alert or alerts received on board and should also indicate through which radiocommunication service the distress alerts have been received.

(SOLAS 1974, as amended, chapter IV.6.6)

Note: - The following guidelines (table) should apply with regards to the connection of equipment to the distress panel in order to fulfil the IMO requirements concerning ship-to-shore distress alerts by at least two separate and independent means:

| Sea areas | Equipment |
|--------------------------|---|
| A1 | VHF DSC, VHF DSC EPIRB or satellite EPIRB |
| A1+A2 | VHF DSC, MF DSC, satellite EPIRB |
| A1+A2+A3 (alternative 1) | VHF DSC, MF DSC, Inmarsat, satellite EPIRB |
| A1+A2+A3 (alternative 2) | VHF DSC, MF/HF DSC, satellite EPIRB |
| A1+A2+A3+A4 | VHF DSC, MF/HF DSC, Inmarsat, satellite EPIRB |

Note: - Only radio equipment according to SOLAS 1994, as amended, chapter IV are required to be connected to this distress panel to fulfil the requirement for ship-to-shore distress alerts by means of at least two separate and independent means. The duplicated equipment, as required by IMO Res. A702(17) ships in sea areas A3 and A4, are therefore in general not required to be connected to the distress panel if it is granted that distress alert can be transmitted from the duplicated equipment in a position close to the installed distress panel.

4.9 NAVTEX and EGC (Enhanced Group Call) receiver

- .1 The printer for NAVTEX and Inmarsat EGC receiver should be located on the navigation bridge. As mandatory equipment in the GMDSS, these receivers should also, as a general rule and in the same way as required for other permanent installed equipment, have their own permanent installed power supplies with fuse circuits/fuses, cf. subsection 7.19. Antenna and antenna cable should also be permanently installed.
- .2 The mandatory requirement for an EGC receiver may be combined with Inmarsat equipment. It is recommended that a dedicated EGC receiver is used, enabling continuous reception of MSI (Maritime Safety Information) messages independent of whether the Inmarsat equipment is being used or not. "Class 3 EGC" is included in the Inmarsat C, but only shares the antenna with this equipment and functions in parallel with and separate of the Inmarsat C equipment.

(SOLAS 1974, as amended, chapters IV.7.1.4 and 7.1.5, and IMO resolution A.701(17))

4.10 Satellite float-free EPIRB

The satellite float-free EPIRB should be located/installed so that the following requirements are fulfilled:

- .1 The EPIRB should - with greatest possible probability - float free and avoid being caught in railings, superstructure etc., if the ship sinks.
- .2 The EPIRB should be located so that it may be easily released manually and brought to the survival craft by one person. It should therefore not be located in a radar mast or any other places which can only be reached by vertical ladder.

(SOLAS 1974, as amended, chapters IV.7.1.6, 8.1.5.2, 9.1.3.1, 10.1.4.1, 10.2.3.1 and IMO resolutions A.763(18), A.810(19), and A.812(19))

Note: - A float-free EPIRB may also be used to fulfil the requirements for one piece of equipment (of two), which is capable of transmitting distress alert to shore from or near the navigating bridge of the ship. Under such conditions the float-free EPIRB must fulfil the following **additional requirements** with regards to location/installation:

- .3 The EPIRB must be installed in the vicinity of the navigation bridge, i.e. on the wings of the navigation bridge. Access via vertical ladder should not be accepted.

A location on the top of the wheelhouse may be accepted to fulfil the requirement if accessible by stairs.

(SOLAS 1974, as amended, chapter IV/7 and Com/circ. 105)

or

- .4 It may be possible to activate the EPIRB remotely from the bridge. If remote activation is used, the EPIRB should be installed so that it has unobstructed hemispherical line of sight to the satellites.

(COM /Circ. 105)

Note: - It should be considered that the main function of the EPIRB is float-free activation. If the additional requirements mentioned above cannot be met without reducing the reliability of the float-free activation, priority must be given to this requirement. Alternatively, two float-free EPIRBs should be installed.

- .5 The EPIRB should be equipped with a buoyant lanyard suitable for use as a tether to life raft etc. Such buoyant lanyard should be so arranged as to prevent its being trapped in the ship's structure.

(IMO resolution A.810(19))

- .6 The EPIRB should be marked with the ship's call sign, serial number of EPIRB, MMSI number (if applicable), 15 Hex ID, and battery expiry date.

4.11 Radar transponders (SART)

- .1 The radar transponders should be placed in brackets on both sides of the ship and preferably visible from the navigation bridge. It must be easy to bring the transponders to the lifeboats or life-rafts. A visible location inside the navigation bridge, close to the outer doors, is recommended.

Alternatively one radar transponder should be placed in bracket in each survival craft (normally covered lifeboats) if such location permits rapid replacement of the SART's into any survival crafts which may be used in emergency situations.

The SART should be provided with a pole or other arrangement compatible with the antenna pocket in the survival craft in order to fulfil the required height of at least 1 meter above sea level.

- .2 On ships carrying at least two radar transponders and equipped with free-fall lifeboats one of the radar transponders should be stowed in a free-fall lifeboat and the other located in the immediate vicinity of the navigation bridge so it can be utilized on board and ready for transfer to any of the other survival craft.

(SOLAS 1974, as amended, chapter III.6.2.2 and IMO resolution A.802(19))

- .3 The SART's should have waterproof marking with operational instructions, battery expiry date and the ship's name and call sign.

4.12 Hand held (Two-way) GMDSS VHF transceivers

- .1 Obligatory hand held VHF transceivers including their emergency batteries (primary batteries normally of Lithium type) should be located in a central and easily accessible position on the navigation bridge. If such equipment is placed in a lockable cabinet, it must be possible to get easy access to the hand held VHF transceivers without the use of tools.
- .2 Primary batteries must be sealed for use only in emergency situations and marked by the supplier with battery expiry date. The battery will be considered as exhausted and used if its seal is broken, and a new battery will be requested during radio survey, cf. the IMO requirement for 8-hours operation in emergency situations.
- .3 If hand held VHF with re-chargeable NiCd batteries (secondary batteries) are used for on-board communications, chargers for these batteries should be provided.

(SOLAS 1974, as amended, chapter III.6.2.1 and IMO resolutions A.762(18) and A.809(19))

- .4 Hand held VHF transceivers should have waterproof marking with the ship's name and call sign. The primary battery must be marked with expire date. Channel numbers must be stated on the equipment.

4.13 Hand held VHF transceivers and communications from the wings of the navigation bridge

Requirements for radiocommunications from the wings of the navigation bridge are laid down in the SOLAS Convention. In order to fulfil this requirement, mandatory hand held GMDSS VHF can be used. (see subsection 4.10). Alternatively a simplex VHF transceiver (single frequency only) or remote controlled units with channel selector, loudspeaker and microphone may be installed in these positions. These remote controlled units must be controlled by a VHF installed in the front of the navigation bridge.

(SOLAS 1974 as amended, chapter IV.6.3. and COM/Circ 105 Clarification)

4.14 Aeronautical mobile emergency radiocommunication equipment

- .1 All passenger ships should be provided with means for two-way on-scene radiocommunications for search and rescue purposes using the aeronautical frequencies 121.5 MHz and 123.1 MHz from the navigation bridge.

Such equipment should be marked with the ships name and call sign. The primary battery must be marked with expiry date.

(SOLAS 1974 as amended, chapter IV.7.5)

- .2 Approved equipment may be of a fixed type or a hand held type. The equipment should be provided with the frequencies 121.5 MHz and 123.1 MHz only.

4.15 GNSS – navigational satellite system

- .1 In passenger ship's irrespective of size, information on the ship's position should be continuously and automatically provided to all relevant radiocommunication equipment. With such connections the ship's position will be included in the initial distress alerts.

(SOLAS 1974, as amended, chapters IV/6.5 and V/19)

- .2 In cargo ships, where GNSS/GNSS should be installed in accordance with new chapter V/19, automatic updating of the ship's position into the DSC equipment and Inmarsat equipment should be possible. If such automatic updating is not possible, it is required to enter the ship's position manually into relevant GMDSS equipment at intervals not exceeding 4 hours whenever the ship is under way.

(SOLAS 1974, as amended, chapter IV, new regulation 18)

If the GNSS is connected to the GMDSS equipment, it should (similar to the mandatory GMDSS equipment) be supplied with energy from the reserve source of energy/batteries.

(SOLAS 1974, as amended, chapter IV 13.8)

4.16 Connections of Navigational sensors

4.13.1 GNSS - Receiver

A GNSS receiver should be connected to the relevant radio communication equipment (DSC controller, GMDSS satellite equipment) in order to provide information on the ship's position continuously and automatically to the radio equipment.

This GNSS receiver should (similar to the mandatory GMDSS equipment) also be supplied from the reserve source of energy/batteries.

4.13.2 Heading sensor

If the GMDSS satellite equipment requires automatic antenna adjustment according to ships heading, the heading sensor (GYRO) should be connected.

In this case the GYRO should also be supplied with energy from the reserve source of energy/batteries.

5 Antenna installation

5.1 General

Special attention should be paid to the location and installation of the different antennas on a ship in order to ensure effective and efficient communication. Incorrect installed antennas will degrade the performance of the radio equipment and will reduce the range of radiocommunications.

5.2 Location of VHF antennas

- .1 VHF antennas should be placed in a position which is as elevated and free as possible, with at least 2 metres horizontal separation from constructions made by conductive materials.
- .2 VHF antennas should have a vertical polarisation.
- .3 Ideally there should not be more than one antenna on the same level.
- .4 The location of mandatory VHF-antennas should be given priority compared with mobile telephone antennas. If they are located on the same level, the distance between them should be at least 5 meters.
- .5 It is recommended to use double screened cable with a maximum loss of 3 dB.
- .6 All outdoor installed connectors on the coaxial cables should be watertight by design in order to give protection against water penetration into the antenna cable.
- .7 AIS VHF antenna should be installed safely away from interfering high-power energy sources like radar and other transmitting radio antennas, preferably at least 3 metres away from and out of the transmitting beam.
- .8 The AIS VHF antenna should be mounted directly above or below the ship's primary VHF radiotelephone antenna, with no horizontal separation and with minimum 2 m vertical separation. If it is located on the same level as other antennas, the distance apart should be at least 5 metres.

5.3 Location and choice of MF/HF antennas

- .1 The mounting arrangement of the antenna or pedestal must be constructed in order to withstand the strain from swaying and vibration.

The transmitting whip antenna should be installed as vertical as possible.
- .2 Wire-antennas should be protected against breakage by having a weak link installed.
- .3 Whip antennas should be installed as vertical as possible and located in an elevated position on the ship at least 1 metre away from conductive structures.
- .4 Attention must be paid to self-supportive vertical antennas and their swaying radius.
- .5 The recommended minimum length of the antenna is 8 metres.
- .6 The down lead from the base of the antenna to the antenna tuner should be insulated and run as vertically as possible and not less than 45 degrees towards the horizontal plane.

- .7 The transmitting antenna should have an insulation resistance to earth which is recommended to be of more than 50 M Ω in dry weather and of no less than 5 M Ω in humid weather (transmitter to be disconnected when measuring).

5.4 Location of antenna tuner for MF/HF transceiver

The antenna tuner should normally be located externally (outdoor) and as close to the antenna as possible, and so that the down lead wire/cable from the antenna should be as vertical as possible.

5.5 Receiving antennas

- .1 As a general rule, all receivers including watch-keeping receivers should have their own separate antenna.
- .2 Antennas for watch-keeping receivers should be located as far away as possible from MF/HF transmitting antennas in order to minimise receiver blocking.

5.6 Satellite communication antennas

5.6.1 General

- .1 In general, satellite antennas must be located so that they have a 360 degree free view for the satellite at all times. In practice terms this can be difficult to achieve due to shadow sectors from nearby structures.
- .2 It is recommended for Inmarsat-A , B and F-77 antennas (stabilized directional antennas) that communication should be maintained with the satellite down to an elevation of minus 5 degrees. For Inmarsat-C (omni-directional antenna) it is recommended that communication should be maintained with the satellite down to an elevation of minus 5 degrees in the fore and aft direction and minus 15 degrees in the port and starboard direction.

5.6.2 Satellite communication antenna installation

The following guidelines should be observed in order to fulfil the above recommendations:

- .1 The antenna should be located at the top of the radar mast; or
- .2 On a pedestal, in the radar mast, or on the top deck so that:
 - for directive antennae; shadows from constructions, especially within a distance of 10 metres, is maximum 6 degrees;
 - for omnidirectional antennas; shadows from constructions, especially within a distance of 1 metre, is maximum 2 degrees.
- .3 Antennae must be installed in a readily accessible location.

- .4 They should not be located in an area where they can be damaged by heat and smoke.
- .5 The satellite antenna must not be located on the same plane as the ships radar antenna.
- .6 GNSS antennas should not be located close to or on the same plane as the Inmarsat antenna.
- .7 Consideration should be given to installing the Inmarsat antenna on a suitable pedestal.

(Ref. IMO resolutions A.698(17), A-663(16), A 807(19) and Inmarsat Design and Installation Guidelines)

Note: - The mast/or pedestal must be constructed so that vibrations are reduced as much as possible.

5.6.3 Safe antenna distances

The following “safe distance” from Inmarsat antennas to other antennas and to the compass are recommended:

- .1 Distance to the HF antenna should be more than 5 metres.
- .2 Distance to VHF antennas should be more than 4 metres.
- .3 Distance to the magnetic compass should be more than 3 metres.

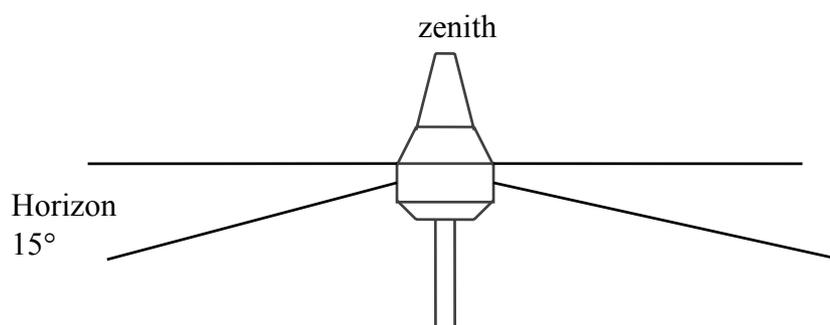
(Cf. the installation manual for the equipment and Inmarsat guidelines)

5.6.4 Inmarsat-C antenna

The antenna should be constructed so as to function up to 15 degrees pitch and roll. In order to obtain this result, the antenna should be located in such position that no objects or constructions down to 15 degrees below the horizon are degrading the performance of the equipment.

Note: - As it may be difficult to fulfil this recommendation fore-and-aft, the free area in this direction may be reduced to 5° below the horizon.

(IMO resolutions A663(16) and A.807(19))

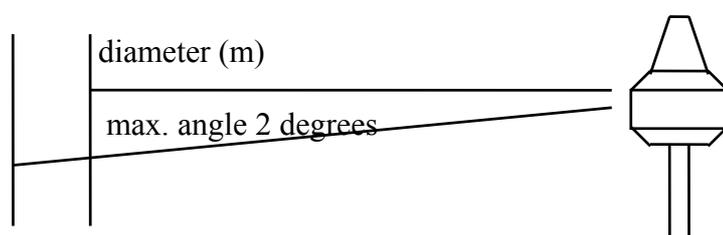


5.6.5 Calculation of distance to obstructions:

If obstructions such as i.e. mast, funnel etc. is unavoidable, the following guidelines should apply:

The distance to the obstruction should be so that the obstruction only covers a 2 degrees sector.

Note: - In such case the safe distance will be the following: 20 x the diameter of the obstruction (in metres).



If two Inmarsat C antennae are installed the vertical distance between them should be at least 1 meter to eliminate interference.

5.6.6 Antenna cable

The manufacturers specifications regarding total attenuation and maximum DC resistance (short-circuit in one end) must be complied with. Only double-screened cable should be used.

5.6.7 Antennas for voluntary radio equipment

Antennas for voluntary radio equipment may be located on deck, provided its use does not interfere with antennas of mandatory radio equipment. When mobile telephone is installed on board ships, special attention should be made to the facts that some types of mobile telephones (especially GSM telephone equipment) may interfere with the ship's navigational equipment (especially GNSS) and other electronic equipment.

5.7 Installation of coaxial cables

Coaxial cables should be installed in separate ducting and at least 10 cm away from power supply cables.

Incorrect installation of cables may change their characteristic impedance resulting in power reflections, which will attenuate the RF signal and reduce the efficiency of the radio equipment.

In VHF antennas the reflected power should not be greater than 10% of the measured output power.

The following guidelines should be applied when bending coaxial cables:

- .1 Cables should be crossed at right angles.
- .2 Where there is one bend in a permanent fixture the bending radius should be 5 times the cables' outside diameter.
- .3 Where there are several bends, the bending radius should be 10 times the outside diameter of the cable.
- .4 When using flexible cable the bending radius should be 20 times the outside diameter of the cable.

6 EMC, earthing and screening

6.1 Electromagnetic Compatibility (EMC)

6.1.1 General

All reasonable and practical steps should be taken to ensure EMC compatibility between the equipment concerned and other radio communication and navigational equipment carried on board in compliance with the relevant requirements of chapter IV and V of the SOLAS Convention as amended. In order to avoid interference the following rules applies:

- .1 Radio installations must not cause harmful interference to other electronic, electrical or navigational systems on board ships.
- .2 However, these other systems must not cause harmful interference to the radio installation.
- .3 In order to avoid electromagnetic noise interference it is essential that manufacturers guidelines relating to EMC, screening and earthing are correctly followed.

(SOLAS 1974, as amended, IV/6.2.1 and chapter V/17 and IMO resolutions A694(17) and A.813(19))

6.1.2 Voluntary radio equipment

Additional, voluntarily carried Non-GMDSS radio equipment like e.g.

- Mobile telephone
- Radio amateur stations
- Satellite stations

Operation of such equipment is at the discretion of the master. It may be installed on the bridge provided that the EMC requirements are fulfilled and navigation and radio communication is not degraded

6.2 Screening of cables

In order to avoid interference the following guidelines should apply with regards to screening of cables:

- .1 Coaxial down leads must be used for all receiving antennas and the coax screen should be connected to ground on at least one end.
- .2 All cables within a distance of 2 metres from a transmitting antenna must be screened and the screen properly earthed in a metal tube or duct.

6.3 Earthing

Earthing of radio equipment should be carried out in accordance with appropriate guidelines for Earthing in Maritime Installations required in international standards. Great care should be taken in order to fulfil the following rules:

- .1 Each unit of radio equipment must have a separated earth connection.
- .2 MF/HF antenna tuners must be earthed with either a copper bar or copper band.
- .3 The earthing bar or strap must be as short as possible, should not be more than one metre in length, and should be at least 60 mm in width.
- .4 For earthing straps up to 5 metres in length the width should be at least 100 mm (May be relevant on board vessels made of wood or synthetic materials).
- .5 It should be noted that a long earthing strap or bar will act as an antenna and radiate energy.
- .6 Copper bars and straps should be brazed to the steel bulkhead in order to eliminate corrosion and vibration and make a good earth connection.
- .7 Great care should be taken when earthing radio equipment on ships with aluminium superstructures in order to avoid galvanic corrosion. An approved and acceptable method of earthing should be used on such vessels.

Note: - Insufficient earthing of the power amplifier may lead to capacitive and inductive connections between power cables etc. and cause interference to fire alarms, navigational equipment, inter-com. and other equipment. The transmitter output power may also be reduced.

7 Sources of energy

7.1 Main source of electrical power

The main source of electrical power is defined as the ship's mains. All the basic and duplicated equipment must have an independent power supply from the ships mains. The battery charging arrangement used to charge any batteries associated with the reserve source of energy must also have an independent supply from the ships mains.

It is not advisable to provide the main source of electrical power to the GMDSS communications equipment through the battery charger. If a fault occurs in the battery charger, which renders it defective, it may not be possible to operate the equipment from the ship's mains. Batteries used in the reserve source of energy will become discharged eventually leading to loss of all power supplies.

(SOLAS 1974, as amended, chapter II and IMO resolution A.702(17) Annex item. 2.3)

7.2 Emergency source of electrical power

The emergency source of electrical power is defined as the emergency supply and is usually taken from the ship's emergency generator. SOLAS requirements for the emergency source do not apply to cargo ships of less than 500 gross tonnage (gt). All other SOLAS ships constructed on or after 1 July 1986 are required to have an emergency source of electrical power. It should be observed that the GMDSS requirements concerning the emergency source have been made compulsory only for ships constructed **later than** 1 February 1995.

The emergency source must be adequate to operate both the basic and duplicated equipment (if applicable) for the duration as specified in SOLAS chapter II, i.e. 18 hours on cargo ship and for 36 hours on passenger ship.

(SOLAS 1974, as amended, chapters II-1/42 and 43)

7.3 Reserve source of energy

.1 The radio reserve source or sources of energy should meet the requirements set out in regulation IV/13 of SOLAS 1974, as amended, and in IMO resolutions A.694(17) and A.702(17), as applicable. It usually consist of rechargeable batteries and is used to supply the communication equipment in the event of failure of the ship's mains and emergency source of electrical power.

All passenger ships irrespective of size and cargo ships of 300 gt. and upwards should have a reserve source or sources of energy for the operation of the basic equipment, and the duplicated equipment if such equipment is required.

.2 The changeover from the ship's mains or emergency supply to the reserve source of energy should be done automatically and in such a manner that both the basic and duplicated communications equipment will be connected simultaneously. Where the changeover is done manually, the switch should be readily accessible to the radio operator, clearly labelled and located on the navigation bridge. Such changeover should not result in the loss of data stored in memories.

.3 One bank of batteries may be acceptable if the capacity is sufficient to operate both the basic and duplicated radio equipment simultaneously. The battery capacity should also be sufficient to operate the gyro (if applicable), GNSS, and emergency light.

.4 Any fault in the radio batteries or the battery charger should not affect both the basic and duplicated radio equipment and should not prevent the operation of the radio equipment from the ships mains or emergency supply.

- .5 The reserve source of energy must be capable of operating the radio installation for at least:
 - .1 1 hour on ships provided with an emergency supply which is adequate to operate the radiocommunications equipment for a period of 18 hours on cargo ships and 36 hours on passenger ships; or
 - .2 6 hours on ships not provided with an emergency supply as outlined in (a) above.

(SOLAS 1994, as amended, chapters IV 13.2, 13.4, 13.5, 13.8 and IMO resolutions A.694(17), A.702(17) – Annex item 2.3, COMSAR/Circ.. 16)

7.4 Radio battery capacity

When defining the minimum required battery capacity, consideration should be given to the expected extreme temperatures for the location of the battery and reduction of its capacity during its lifetime in addition to the loads which are to be connected to it.

- .1 The batteries must have enough capacity to operate all the GMDSS radio equipment for the specific times outlined in 7.3.5 above. The total load for the entire radio installation should be calculated prior to the installation of any radio batteries for the reserve supply.
- .2 Where the basic and duplicated radio equipment cannot be operated simultaneously, the battery capacity should be sufficient to operate the equipment with the highest power consumption.
- .3 Where the basic and duplicated radio equipment are connected simultaneously the battery capacity should be sufficient to meet the average consumption of all connected equipment including any additional loads such as printers, VDU's etc.
- .4 If the capacity requirement of radio batteries is to be maintained over their normal life cycle, an extra 40% capacity should be added to the minimum calculated capacity.
- .5 When calculating discharge time the following guidelines may be of assistance:
 - .1 The capacity of a lead acid battery is normally quoted at 20 hours of discharge at an operational temperature of 20 degrees C.
 - .2 The capacity at 1 hour discharge is approximately 50% of the capacity at 20 hours discharge.
 - .3 The capacity at 6 hours discharge is approximately 80% of the capacity at 20 hours discharge.
 - .4 For batteries other than the lead acid type the capacity at 1 hour discharge is approximately 60% of the capacity at 10 hours discharge and 6 hours discharge will be approximately 92% of the capacity at 10 hours discharge.

- .6 The capacity of the radio batteries should be checked at intervals not exceeding 12 months when the ship is not at sea. One method of checking the capacity is to fully discharge and recharge the batteries using normal operation current over a period of 10 hours. Assessment of the charge condition can be made at any time, but it should be done without significant discharge of the battery when the ship is at sea. Another method could be to check the capacity by means of a battery tester, e.g. in connection with a radio survey.

(SOLAS 1974, as amended, chapter IV/13 and IMO resolution A.702(17), COMSAR/Circ. 16)

Note: - When determining the battery capacity the following must also be taken into consideration:

- The battery is normally not fully charged.
- Reduction of capacity due to ageing.
- Reduction of capacity due to high or low temperatures.
- Reduction of capacity due to rapid discharge.

7.5 Radio batteries

The batteries should be properly marked with type or construction, rated capacity, and installation date. The marking must be visible when the batteries have been installed and during their lifetime. A label warning of explosion danger should be displayed near the installed batteries.

- .1 Any type or construction of batteries (e.g. lead acid, alkaline, maintenance free, traction, semi-traction, etc.) may be used as reserve source or sources of energy, taking into consideration the environmental conditions of the location where they are installed.
- .2 The battery should maintain its rated capacity when inclined at any angle up to 22 ½ degrees in any orientation.
- .3 All battery units must be securely braced so that they will not be dislocated by movement of the ship.
- .4 An instruction manual which contains all necessary specifications of the batteries should be available on board. The information should include at least:
 - .1 capacity and temperature range within which the stated capacity is maintained for the specific operation period i.e. 1 hour or 6 hours;
 - .2 charging voltage and current limits in order to keep batteries fully charged while preventing overcharging;
 - .3 actual specific gravity of the electrolyte and/or cell voltages or the voltage of the fully charged battery;
 - .4 guidelines on how to carry out a controlled discharge test;

- .5 methods of determining the condition of charge of the battery, e.g. check of specific gravity of electrolyte (acid density) or check of battery cell voltage/battery voltages by using an accurate measuring instrument in according with the battery manufacturer's specifications;
 - .6 requirement for ventilation; and
 - .7 requirement for maintenance.
- .5 Equipment requiring a lower voltage than the total voltage of the battery bank should not be connected to a part of the battery bank.
- .6 The batteries should be installed in the upper part of the ship, in an elevated position and as close to the radio equipment as possible.
- .7 An outdoor located battery case should be avoided due to considerable temperature variation.
- Note: - Ideal location for the radio batteries is in a battery room with a constant temperature of approx. 20 degrees C.
- The location should in general satisfy the manufacturers specifications with regards to temperature tolerance and environmental strain in accordance with IEC 60945 or other equivalent standards.
- .8 Batteries of different types, different cell constructions, different capacities or different manufacturers should not be mixed in a battery bank.
 - .9 Batteries of different types and different cell construction should not be installed in the same location if they can affect each other.
 - .10 Sufficient ventilation for batteries should be provided, as required by the battery manufacturer.
 - .11 Electrical installations including battery chargers, located in the battery room should be intrinsically safe.
 - .12 Sufficient space between batteries or battery banks should be provided in order to enable inspections and maintenance.
 - .13 The cabling from the batteries should be protected against earth- and short-circuits and be appropriately fused and installed according to recognized international standards (IEC 60092-101 and IEC 60533) . Battery cables should have sufficient dimensions to prevent voltage reduction at peak current consumption.

(SOLAS 1974, as amended, chapter V/13 and COMSAR/Circ. 16)

7.6 Uninterruptible power supplies (UPS)

A UPS is defined as a device which for a specific period of time supplies continuous power to radio equipment independent of any power failures in the ship's main or emergency source of electric energy. The UPS, installed as the reserve source or sources of energy, should meet the general requirements set out in regulation IV/13 of the SOLAS 1974, as amended, and in resolution A.694(17), as applicable, and should also comply with the following requirements:

- .1 Comprise an automatic charger, complying with requirements set out in SOLAS/IV chapter 13; and
- .2 comprise rechargeable accumulator batteries, complying with the guidelines regarding automatic chargers.
- .3 Provisions should be made for an aural alarm and visual indication at the position from which the ship is normally navigated, indicating any failure in the UPS which is not monitored by the alarm and indicators required by the guidelines regarding automatic chargers.
- .4 The UPS should be operational within 5 seconds of switching on.
- .5 The UPS should be so designed and constructed that it is protected against damage resulting from disconnecting the batteries or, with the battery disconnected, short-circuiting the UPS battery connections. If this protection is provided by electronic means it should automatically reset following removal of the open or short-circuit conditions.

(COMSAR/Circ. 16)

Note: - If the UPS does not fulfil the requirements in accordance with SOLAS chapter IV/13 and IMO resolution A.702(17), two separate UPS systems should be installed; one for the basic radio equipment and one for the duplicated equipment.

The capacity of batteries used in UPS systems is normally stated at a discharge time of 10 hours. When discharging such batteries at shorter time, i.e. 1 hour in accordance with the GMDSS requirements, it will only be possible to utilize approx. 60% of the battery capacity. It is therefore recommended to dimension such batteries to be one and a half times larger than the total load.

7.7 Automatic battery chargers

Automatic chargers for radio batteries should meet the general requirements set out in regulation IV/13 of SOLAS 1974, as amended and IMO resolution A.694(17) and should also comply with the following requirements:

- .1 The charger must be capable of recharging the completely discharged accumulator batteries to the minimum required capacity within 10 hours.
- .2 The charger should be capable of keeping the batteries appropriate charged as prescribed by the manufacturer for permanent charging

- .3 The supplied voltage and current should always be within the tolerance limits prescribed by the battery manufacturer, taking into account the environmental temperature of the battery, likely to be experienced in ship. A protection should be provided against over charging or discharging of batteries from a possible fault in the charger.
- .4 The automatic charger should be provided with a visual indication that it is switched on. An indication of the battery voltage and charge/discharge current should be available on the navigation bridge.
- .5 Provisions should be made for an aural alarm and visual indication at the position from which the ship is normally navigated, indicating when the charging voltage or current is outside the limits given by the manufacturer. It should not be possible to disable this alarm and indication and it should only be possible to acknowledge and silence the alarm manually. Both the alarm condition and indication should reset automatically when normal charging condition has been restored. Failure of the alarm system should not interrupt the charging or discharging of batteries.
- .6 The automatic charger should be operational within five seconds of switching on or after a power supply interruption.
- .7 The automatic charger should be so designed and constructed that it is protected against damage resulting from disconnection the batteries or, with the battery disconnected, short-circuiting the battery connection. If this protection is provided by electronic means it should automatically reset following removal of the open or short-circuit conditions.

(SOLAS 1974, as amended, chapter IV.13.6.1, COMSAR/Circ. 16)

Note: - As said in item 7.1 above it is not advisable to provide the main source of energy to the GMDSS equipment through the battery charger. However, if the battery charger is used to supply parts of the GMDSS installation directly, i.e. the MF/HF transceiver, the capacity of the charger should be dimensioned for simultaneous supply of connected equipment and maintaining a sufficient charging of the batteries in accordance with SOLAS 1974, as amended, chapter IV/13.2.

7.8 Protection of circuits for accumulator batteries

- .1 Battery circuits (i.e. the cables from battery case/room) should be protected against short-circuit and overload. The protection device is to be installed as near as possible to the batteries.
- .2 When conductors from the batteries are not protected against short-circuit and overload, they are to be installed so as to be proof against short circuit and earth faults. The requirements for short-circuit protection also apply to charge current circuits.

Note: - For certain applications it may be necessary to establish measures which may conflict with these requirements. As an example, screening of battery cables can be

required to avoid electro-magnetic interference, e.g. by using single-core insulated cables without screening installed in separate metal pipes which are properly earthed. Special measures should then be established to reduce the possibility of mechanical damage to the cables.

Equivalent solutions may be accepted, e.g. by using double-screened cables in the battery room with explosion-proof fuses. The inner screen must be treated according to Ex-rules, but the outer screen can be treated according to what is necessary to achieve good EMC-screening. The outer screen can e.g. be earthed at both ends to protect against High Frequency EMC-fields.

8 Cabling and wiring

- .1 The cabling and wiring in the radio installation should be designed so as to prevent electrical interference to radio and navigational equipment.
- .2 Cables must have the correct dimension to prevent voltage reduction to radio equipment when full load. The voltage reduction in copper conductors is calculated as follows: Voltage drop = $0,035 \times \text{length (m)} \times \text{total load (A)}$ divided by the cross section in squared mm).
- .3 In order to reduce interference it is essential to have good separation between signal cables and those cables carrying higher voltages.
- .4 All cabling and wiring must be of a type approved and suitable for use on board ships.

8.1 Battery circuits – fuses and breakers

- .1 Each radio system should have separate fuses for both AC and DC voltages to which it is connected. AC and DC fuse boards should be located on the bridge or in close proximity to the bridge.
- .2 A single fault in one of the power units must not affect both the basic and duplicated radio equipment.
- .3 All fuses and breakers must be clearly marked and labelled to clearly indicate which equipment is being protected.

Note: - A VHF with DSC, a MF/HF DSC transceiver, a NBDP with printer, and Inmarsat equipment with a VDU and printer are each considered as a “radio system”.

9 Installation of GMDSS radio equipment on board mobile offshore drilling units (MODU)

Mobile offshore drilling units should, fulfil the GMDSS requirements laid down IMO`s MODU Code, as revised in 1991. This revision introduced provisions based on the GMDSS requirements. All GMDSS requirements should as a general rule be fulfilled. However, for drilling units the requirement for duplication may be considered as fulfilled if the radio installation complies with regulation 11.5.2 of the MODU Code as follows:

- .1 Each unit while stationary at the site, including when engaged in drilling operations, should comply with all requirements prescribed in chapter IV of the SOLAS amendments that are applicable to ship sailing through the same area
- .2 Taking into account the different types of accident which may occur on the MODU, additional radio equipment should be installed in a room or position, which could be the bridge or an emergency control room, situated as far as practical from the radio equipment fitted in compliance with section 11.5.1, so that a single accident in any part of the MODU could deprive the MODU of all facilities for radiocommunications.
- .3 The additional radio equipment should comply with the following regulations of the 1988 SOLAS amendment for MODUs drilling in:
 - .1 sea area A1, the equipment prescribed in regulation IV/7.1.1;
 - .2 sea area A2, the equipment prescribed by regulations IV/7.1.1 and IV/9.1.1; and
 - .3 sea area A3, the equipment prescribed by regulations IV/7.1.1 and IV/10.1.1, plus 10.2; or alternatively, as required by regulations IV/7.1.1 and 10.2.1; 4 sea area A4, the equipment prescribed by regulations IV/7.1.1 and IV/10.2.1.
- .4 If the acoustic noise level in a room fitted with operating controls for radio equipment is so high or could be so high, during particular operating conditions, that it may disturb or prevent proper use of the radio equipment, adequate noise protection should be provided by mechanical or other means, in association with the operating controls for the radio equipment.

Note: - All requirements for chapter IV of the 1988 SOLAS amendments referring to “from the position the ship is normally navigated” should be applied as meaning “from a position (or from the positions), which is continuously manned and which is controlling the MODU. Watch-keeping on DSC and other emergency and calling channels should be kept from a position which is continuously manned. Watch-keeping and the operation of all radio equipment which are required on board should be carried out by a person holding a GOC/GMDSS or ROC/GMDSS (if only A1 installation) radio operator certificate.

ANNEX 19

**REVISED WORK PROGRAMME OF THE SUB-COMMITTEE AND
PROPOSED PROVISIONAL AGENDA FOR COMSAR 8**

| | | Target completion date/number of sessions needed for completion | Reference |
|---|---|--|---|
| 1 | Global Maritime Distress and Safety System (GMDSS) | | COMSAR 7/23, section 3 |
| | .1 matters relating to the GMDSS Master Plan | Continuous | COMSAR 7/23, paragraphs 3.1 to 3.4 |
| | .2 replies to questionnaire on casualties | Continuous | COMSAR 1/30, paragraphs 3.5 to 3.7 |
| | .3 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 7/23, paragraphs 3.5 to 3.13 |
| 3 | ITU World Radiocommunication Conference matters | Continuous | COMSAR 7/23, paragraphs 4.2 to 4.5 |

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- 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 8.

Strike through means delete text.

Grey shading means new text.

| | | Target completion date/number of sessions needed for completion | Reference |
|----|---|--|---|
| 4 | Radiocommunication ITU-R Study Group 8 matters | Continuous | COMSAR 7/23, paragraphs 4.1, 4.6 and 4.7 |
| 5 | Satellite services (Inmarsat and COSPAS-SARSAT) | Continuous | COMSAR 7/23, section 5 |
| 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 | 2003 4 | COMSAR 4/14, paragraphs 8.1 to 8.19; COMSAR 7/23, paragraphs 7.1 to 7.16 |
| .2 | plan for the provision of maritime SAR services, including procedures for routing distress information in the GMDSS | Continuous | COMSAR 7/23, paragraphs 7.17 to 7.25 |
| .3 | revision of the IAMSAR Manual | Continuous | MSC 71/23, paragraph 20.2; COMSAR 7/23, section 12 |
| .4 | medical assistance in SAR services | 2003 4 | MSC 75/24, paragraph 22.29 COMSAR 7/23, paragraphs 7.26 to 7.33 |
| 7 | Casualty analysis (co-ordinated by FSI) | Continuous | MSC 70/23, paragraphs 9.17 and 20.4 |

| | | Target completion date/number of sessions needed for completion | Reference |
|------------------|---|--|--|
| H.1 | Procedures for responding to DSC alerts | 2003 | COMSAR 4/14, paragraph 3.49; MSC 72/23, paragraph 21.32; COMSAR 6/22, paragraph 3.24 to 3.28 |
| H.2 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 |
| H.3 | Development of a procedure for recognition of mobile-satellite systems | 2003 | MSC 72/23, paragraph 21.33.1.3; COMSAR 6/22, section 16 |
| H.4 ² | Developments in maritime radiocommunication systems and technology | 2003 ⁵ | MSC 74/24; paragraph 21.25.1; COMSAR 7/23, section 11 |
| H.5 | Bridge-to-bridge radiocommunications | 2003 | MSC 74/24, paragraph 21.25.2; COMSAR 6/22, paragraphs 9.1 to 9.3 and 9.7 |
| H.6 ³ | Large passenger ship safety | 2003 ⁴ | MSC 74/24, paragraph 21.4; COMSAR 7/23, section 10 |
| H.7 | Revision of performance standards for NAVTEX equipment | 2003 | MSC 74/24, paragraph 21.26; COMSAR 6/22, section 17 |

| | | Target completion date/number of sessions needed for completion | Reference | |
|------|----------|---|-------------------------------|--|
| H.8 | 4 | Emergency radiocommunications, including false alerts and interference | 2003 6 | COMSAR 7/23, section 6 |
| H.9 | | Review of performance standards provisions (resolution A.809(19)) to require means of attachment of radiotelephone apparatus to its user | 2003 | MSC 75/24, paragraph 22.31 |
| H.10 | 5 | Review of the OSV Guidelines (co-ordinated by DE) | 3 sessions | MSC 75/24, paragraph 22.4 |
| H.11 | 6 | Review of the 2000 HSC Code and amendments to the DSC Code and the 1994 HSC Code (co-ordinated by DE) | 2 sessions 2005 | MSC 75/24, paragraph 22.8; MSC 76/23, paragraphs 8.19 and 20.4 |
| H.12 | 7 | Review of the SOLAS and SAR Convention provisions regarding the treatment of persons rescued at sea | 2004 | MSC 75/24, paragraphs 11.53 and 22.30.1 COMSAR 7/23, Paragraphs 8.1 to 8.33 |
| H.13 | 8 | Measures to enhance maritime security | 2004 | MSC 75/24, paragraph 22.9 COMSAR 7/23, section 16 |
| L.1 | | Harmonization of GMDSS requirements for radio installations on board SOLAS ships | 2003 | MSC 71/23, paragraph 20.23; COMSAR 6/22, paragraph 18.2 |
| L.2 | 1 | Revision of the forms of nuclear ship safety certificates (co-ordinated by DE) | 2 sessions 2005 | MSC 75/24, paragraph 22.6 COMSAR 7/23, paragraph 19.6.4.1 |

| | | Target completion date/number of sessions needed for completion | Reference |
|-------|---|--|--|
| L.3 2 | Review of the FAL and SALVAGE Convention provisions to address the treatment of persons rescued at sea | 2004 | MSC 75/24, paragraphs 11.53 and 22.30.2 COMSAR 7/23, section 18 |
| L.4 3 | Recommendations on high-risk oceanic crossings by adventure craft (co-ordinated by NAV) | 1 session | MSC 76/23, paragraph 20.24 |

PROPOSED PROVISIONAL AGENDA FOR COMSAR 8

Opening of the session and election of Chairman for 2004

- 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 Emergency radiocommunications, including false alerts and interference
- 7 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
- 8 Review of the Convention provisions regarding the treatment of persons rescued at sea
 - .1 SOLAS and SAR Conventions
 - .2 FAL and SALVAGE Conventions
- 9 Large passenger ship safety
- 10 Developments in maritime radiocommunication systems and technology
- 11 Revision of the IAMSAR Manual
- 12 Review of the 2000 HSC Code and amendments to the DSC Code and the 1994 HSC Code

- 13 Measures to enhance maritime security
 - 14 Revision of the forms of nuclear ship safety certificates
 - 15 Work programme and agenda for COMSAR 9
 - 16 Election of Chairman and Vice-Chairman for 2005
 - 17 Any other business
 - 18 Report to the Maritime Safety Committee
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