INTERNATIONAL MARITIME ORGANIZATION

IMO

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Agenda item 14

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REPORT TO THE MARITIME SAFETY COMMITTEE

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LIST OF ANNEXES

1 GENERAL

1.1 The Sub-Committee on Radiocommunications and Search and Rescue held its fourth session from 12 to 16 July 1999 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:

ALGERIA
ANGOLA
ARGENTINA
AUSTRALIA
BAHAMAS
BANGLADESH
BELGIUM
BRAZIL
CANADA
CHILE
CHINA
COLOMBIA
CROATIA
CUBA
CYPRUS
DENMARK
DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA
ECUADOR
EGYPT
ESTONIA
FINLAND
FRANCE
GABON
GERMANY
GREECE
ICELAND
INDONESIA
IRELAND
ISRAEL
ITALY
JAPAN
LATVIA
LIBERIA
MALTA
MARSHALL ISLANDS
MEXICO
NETHERLANDS
NIGERIA
NORWAY
PANAMA
PERU
PHILIPPINES
POLAND
PORTUGAL
REPUBLIC OF KOREA
ROMANIA
RUSSIAN FEDERATION
SAUDI ARABIA
SINGAPORE
SPAIN
SWEDEN
SYRIA
TURKEY
UKRAINE
UNITED ARAB EMIRATES
UNITED KINGDOM
UNITED STATES
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:

INTERNATIONAL TELECOMMUNICATION UNION (ITU)
INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO)
WORLD METEOROLOGICAL ORGANIZATION (WMO)
INTERNATIONAL HYDROGRAPHIC ORGANIZATION (IHO)
EUROPEAN COMMISSION (EC)
LEAGUE OF ARAB STATES

INTERNATIONAL MOBILE SATELLITE ORGANIZATION (IMSO)
COSPAS-SARSAT
INTERNATIONAL COMMITTEE OF THE RED CROSS (ICRC)
INTERNATIONAL CHAMBER OF SHIPPING (ICS)
INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)
INTERNATIONAL CONFEDERATION OF FREE TRADE UNIONS (ICFTU)
INTERNATIONAL ASSOCIATION OF LIGHTHOUSE AUTHORITIES (IALA)
INTERNATIONAL RADIO-MARITIME COMMITTEE (CIRM)
THE BALTIC AND INTERNATIONAL MARITIME COUNCIL (BIMCO)
INTERNATIONAL ASSOCIATION OF CLASSIFICATION SOCIETIES (IACS)
OIL COMPANIES INTERNATIONAL MARINE FORUM (OCIMF)
INTERNATIONAL FEDERATION OF SHIPMASTERS' ASSOCIATIONS (IFSMA)
INTERNATIONAL LIFE-SAVING APPLIANCES MANUFACTURERS' ASSOCIATION (ILAMA)
INTERNATIONAL LIFEBOAT FEDERATION (ILF)
INTERNATIONAL COUNCIL OF CRUISE LINES (ICCL)
INTERNATIONAL ASSOCIATION OF DRY CARGO SHIPOWNERS (INTERCARGO)
WORLD NUCLEAR TRANSPORT INSTITUTE (WNTI)
INTERNATIONAL SAILING FEDERATION ISAF)

1.4 In welcoming the participants on behalf of the Secretary-General, Mr. E.E. Mitropoulos, Director, Maritime Safety Division, referred to important decisions taken by the Maritime Safety Committee at its sixty-ninth, seventieth and seventy-first sessions pertinent to the Sub-Committee's work programme.

He then mentioned the two milestones in IMO's history of achievements which had taken place since the Sub-Committee last session, namely: the completion of the global SAR plan and the full implementation of the GMDSS on 1 February 1999. With regard to the global SAR plan, he stated that, while IMO had done everything necessary to complete the necessary administrative arrangements to ensure that no sea space had been left uncovered by Governments accepting responsibility for the co-ordination of SAR operations, it was now up to them to ensure that an adequate SAR infrastructure, including radiocommunication facilities as required by the GMDSS, was in place along their coastline to guarantee the provision of efficient and effective SAR services.

In the context of the outcome of the 1998 Fremantle SAR/GMDSS Conference, Mr. Mitropoulos singled out resolution 5 inviting IMO to consider establishing an International SAR Fund for the specific purposes identified therein (annex to document COMSAR 4/8/9) and expressed the hope that the Sub-Committee would be able to identify whether there were specific needs relating to shore-based GMDSS and associated SAR facilities at various parts of the world, and recommend what action should be taken, at the technical level, to address them.

He conveyed the MSC's request that the Sub-Committee elaborate further and finalize the draft Assembly resolution on criteria for the provision of mobile-satellite communications for the GMDSS; and emphasized that the problem of false distress alerts continued to cause concern and that, although guidance had been issued to Governments and industry on how such false alerts, which had caused people to question the efficiency and effectiveness of the GMDSS as a whole, should be avoided, the Sub-Committee should consider if further action was needed by IMO.

One very important issue before the Sub-Committee being the preparation of the IMO position on maritime mobile service matters to be addressed by next year's ITU World Radiocommunication Conference, he recalled that MSC 69 had authorized the Sub-Committee to prepare such a position and submit it directly to the WRC.

Mr. Mitropoulos then referred to two recent major rescue operations which had been given wide publicity and stressed that their successful outcome should satisfy the Sub-Committee more than most for the good job it had done over decades to ensure that people in distress at sea were rendered prompt and effective assistance. Both concerned passenger ships, which had caught fire in the engine room. One was the Bahamian-registered passenger ship "Sun Vista" in the Malacca Strait on 21 May 1999; the other was the Norwegian-registered passenger ship "**Prinsesse Ragnhild**" on 8 July 1999.

He informed the Sub-Committee of the Council's decision to award the International Maritime Prize for 1998 to the International Lifeboat Federation mentioning that this was the first time that the prize had been awarded to an organization rather than to an individual.

Lastly, he repeated the policy statement made by the Secretary-General to the eightieth session of the Council and subsequently endorsed by the MSC, namely that the areas where Governments and industry should focus their attention in the years to come should be those of shifting emphasis onto people, ensuring the effective implementation of the STCW Convention and the ISM Code, enhancing the safety of bulk carriers, developing a safety culture and environmental conscience in all maritime activities, avoiding unnecessary over-regulation and, instead, strengthening the Organization's technical co-operation programmes and delivery. He expressed the hope that the Sub-Committee would play an important part in fulfilling the policies mentioned.

1.5 The Chairman, responding to Mr. Mitropoulos' opening remarks, associated himself with the comments he had made concerning the Sub-Committee's work programme.

Adoption of the agenda

1.6 The Sub-Committee adopted the agenda, as approved by MSC 71 (COMSAR 4/2/3, annex 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 contained in document COMSAR 4/1/1.

2 DECISIONS OF OTHER IMO BODIES

The Sub-Committee noted, in general, decisions and comments (COMSAR 4/2, COMSAR 4/2/1, COMSAR 4/2/2 and COMSAR 4/2/3) pertaining to its work made by NAV 44, DE 41 and DE 42, FSI 6 and FSI 7, MSC 69, MSC 70 and MSC 71 and took them into account in its deliberations when dealing with relevant agenda items.

3 GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS)

Matters relating to the GMDSS Master Plan

3.1 The Sub-Committee noted that since COMSAR 3 the Secretariat issued in loose-leaf format and circulated Corr.5 to amend GMDSS/Circ.7 (Master Plan) in July 1998. It was also noted that, taking into account that GMDSS/Circ.7 had been amended by five corrigenda and that most of original pages had been replaced, the Secretariat issued the new edition as GMDSS/Circ.8 on 2 February 1999, superseding GMDSS/Circ.7.

3.2 In considering the data contained in the GMDSS Master Plan published after 1 February 1999, the Sub-Committee noted with regret that a part of the information, particularly that on planned shore-based facilities, had never been updated since the Member States concerned had submitted their initial replies to the questionnaire (MSC/Circ.468 and revisions).

3.3 The Sub-Committee was informed by the Secretariat that since issuing GMDSS/Circ.8 it had received some updated information regarding sea areas A1/A2 and NAVTEX services. Corr.1 to GMDSS/Circ.8 would be issued in September 1999.

3.4 The delegation of Greece expressed concern over the absence of MF DSC coverage (i.e. declared sea area A2) in some areas of the Mediterranean as shown in annex 3 of GMDSS/Circ.8 and was of the opinion that ships sailing in these areas should be fitted for sea area A3.

3.5 Noting the need to have a realistic picture of GMDSS shore-based facilities established and operational over the world, the Sub-Committee urged Member States to check their national data in GMDSS/Circ.8 and the corrigenda issued, for accuracy and to provide the Secretariat with any necessary amendments, as soon as possible, and to respond to MSC/Circ.684, if they have not already done so.

3.6 The Sub-Committee noted and endorsed the latest information provided by the Chairman of the International SafetyNET Co-ordinating Panel (COMSAR 4/INF.3) on status of Maritime Safety Information broadcasts in the International SafetyNET Service on 6 April 1999 and instructed the Secretariat to take into account this information when issuing a corrigenda for updating the GMDSS Master Plan.

3.7 The Sub-Committee was informed by the Chairman of the NAVTEX Co-ordinating Panel on the status of the NAVTEX Services and instructed the Secretariat to use the information provided for updating the GMDSS Master Plan.

3.8 The Sub-Committee also was informed that in 1997, the NAVTEX Co-ordinating Panel, in conjunction with the International Chamber of Shipping, issued a questionnaire in order to elicit customer feedback on the effectiveness of the NAVTEX system world-wide. It was distributed widely amongst ships engaged in international trade. The Panel received over 800 responses, which generally praised the system. However, they also raised a number of issues of major concern, as follows:

.1 meteorological information – excessive quantities in each broadcast slot and inconsistent formats;

.2 stations over-running their allotted 10-minute slot, often as a direct result of (.1) above. This may lead to occasional serious safety consequences as broadcast from stations in subsequent time slots may be masked;

.3 dual language output on 518 kHz, often in alternate time slots leading, in effect, to 8 hour gaps between usable data;

.4 interference with stations in other NAVAREAs with the same B1 character/time slot, often due to excessive transmitter power output, particularly at night; and

.5 lack of user understanding of the system and the equipment fitted in ships.

3.9 The Sub-Committee, noting the above information, agreed on the actions to be taken by the Panel to address the issues of concern given in annex 2. The Committee was invited to endorse this action.

3.10 The Sub-Committee noted document COMSAR 4/3/9 (IHO) informing on the development of National Master Plans on maritime radiocommunication services by some countries in the Caribbean Sea region and inviting the Organization to add funding to that development. The

delegation of Venezuela supported by other delegations, expressed concern for the fact that this project did not take account of the real situation in the region.

3.11 It was pointed out that there was some activity concerning the implementation of the GMDSS in French speaking countries of the region. The delegations of France and the United Kingdom, relinquishing and undertaking, respectively, the chairmanship of the Caribbean Sea and Gulf of Mexico Hydrographic Commission, invited Spanish speaking countries, members of the Commission, to inform the Commission of their needs.

3.12 The Sub-Committee was informed that ITU Development Sector has been providing technical assistance on developing Master Plans for Caribbean countries by conducting seminars and workshops since 1995.

3.13 Having been informed by the Secretariat, that the Technical Co-operation Division of the Organization had arranged for the provision of technical advice on implementation of the GMDSS to some Caribbean countries, the Sub-Committee, with a view to avoid duplication and to co-ordinate the same activity between IMO and the ITU, instructed the Secretariat to contact the ITU-D sector and take appropriate action.

3.14 Australia (COMSAR 4/3/11) pointed out that Annex 12 to GMDSS/Circ.8 and the COSPAS-SARSAT data distribution plan (DDP) (document C/SA.001) do not provide satellite EPIRB registration information including the agency maintaining the database for all countries and suggested that ships should be required to have such information on-board.

3.15 In this respect, the Sub-Committee recalled that MSC 69, by its resolution MSC.69(69), adopted amendments to Chapter IV of the 1974 SOLAS Convention adding new regulation S-1 on the Global Maritime Distress and Safety System identities, requiring Contracting Governments to ensure that suitable arrangements are made for registering such identities and for making information on them available to search and rescue co-ordination centres on a 24-hour basis. Those amendments shall enter into force on 1 July 2002 upon their acceptance in accordance with existing procedures.

3.16 The Sub-Committee also recalled that MSC 70 approved a draft Assembly resolution on Establishment, updating and retrieval of the information contained in the registration databases for the GMDSS, developed by COMSAR 3, for submission to the twenty-first Assembly for adoption (MSC 70/23, paragraph 7.3 and annex 4 to MSC 70/23/Add.1).

3.17 The Sub-Committee agreed with the proposal by Australia, but pointed out that it would only have practical effect if such requirements for ships became mandatory under the appropriate part of the SOLAS Convention.

3.18 The Sub-Committee noted information by Sweden on the outcome of the Ninth Baltic/Barents Sea Regional Co-operation meeting on the GMDSS held in Göthenburg, Sweden, from 14 to 16 October 1998 (COMSAR 4/INF.4) and the information provided by the Netherlands on the outcome of the Ninth North Sea Regional Co-ordination Conference under the GMDSS which was held in Amsterdam, the Netherlands, from 3 to 5 June 1998 (COMSAR 4/INF.8). In this context, the Sub-Committee, having noted the 100% implementation of GMDSS facilities in those areas, invited other Member Governments to follow these examples of regional co-operation.

Review of SOLAS regulation IV/15.7 and resolution A.702(17) on Radio maintenance guidelines for the GMDSS related to sea areas A3 and A4

3.19 The Sub-Committee recalled that SOLAS regulation IV/15.7 required:

"On ships engaged on voyages in sea areas A3 and A4, the availability shall be ensured by using a combination of at least two methods such as duplication of equipment, shore-based maintenance or at-sea electronic maintenance capability, as may be approved by the Administration, taking into account the recommendations of the Organization"

No documents on review of regulation IV/15.7 were submitted.

3.20 The Sub-Committee also recalled that:

.1 COM 40, taking account of suggestions by CIRM (COM 40/4/15), prepared the preliminary draft COM circular on Guidelines for shore-based maintenance (SBM) providers, given in COM 40/WP.2/Add.1, annex 1, for further consideration at COMSAR 1. It was pointed out that significant changes would be needed to this document;

.2 COMSAR 1 considered COM 40/WP.2/Add.1, annex 1, concerning guidance for shore-based maintenance. No contributions were received concerning this item. The Sub-Committee agreed that the guidance should be a draft new Assembly resolution and invited Members to submit comments and proposals on this matter to COMSAR 2 for consideration; and

.3 this agenda item was not included in the provisional agendas for COMSAR 2 and COMSAR 3.

3.21 The Sub-Committee, having noted that no documents had been received on finalizing the draft Guidelines for SBM providers, discussed the need for such guidelines and, taking into account that the annex to resolution A.702(17) already recommends that some arrangements acceptable to the Administration should be established, if a shore-based maintenance for ensuring availability was selected, came to the conclusion that there was no need for developing new guidelines. The Sub-Committee also agreed that no changes should be considered to SOLAS regulation IV/15.7.

3.22 Taking into account the above discussion, the Sub-Committee considered COMSAR 4/3/14 (CIRM) proposing to amend the annex to resolution A.702(17) and, after further discussion, decided not to amend that resolution. The Committee was invited to delete this agenda item from the Sub-Committee's work programme as the work had been completed.

Operational and technical co-ordination provisions of Maritime Safety Information (MSI) services

3.23 The Sub-Committee noted that MSC 69 (MSC 69/22, paragraph 10.5) endorsed its action in issuing circulars prepared by COMSAR 3, as follows:

.1 COMSAR/Circ.14 - List of NAVAREA Co-ordinators; and

.2 COMSAR/Circ.15 - Joint IMO/IHO/WMO Manual on Maritime Safety Information (MSI).

3.24 The Sub-Committee considered COMSAR 4/3/2 (IHO) providing the updated information on the list of NAVAREA Co-ordinators and, taking into account corrections proposed, instructed the Secretariat to issue COMSAR/Circ.20 – List of NAVAREA Co-ordinators superseding COMSAR/Circ.14 and invited the Committee to endorse this action.

3.25 The Sub-Committee noted COMSAR 4/3/4 (United States) announcing the availability of a new Marine Navigation and Safety Information website hosted by the National Imagery and Mapping

Agency of the United States. Access to this new website can be made directly, at no charge. The address is http://pollux.nss.nima.mil.

3.26 The Sub-Committee considered COMSAR 4/3/6 (France) concerning the activity of NAVAREA II co-ordinator on promoting technical co-operation in hydrographic surveys, marine cartography and nautical information in the area which includes the countries bordering the eastern Atlantic, from Ouessant to the month of the Zaire River.

3.27 Having agreed that the broadcasting of coastal navigational warnings should be established and improved in the area, the Sub-Committee noted that a Conference on regional co-operation in hydrography, navigational aids and other services necessary to safety of navigation in West Africa was to be held in October 1999 in Douala, Cameroon, where this issue will be addressed.

3.28 The Sub-Committee considered document COMSAR 4/3/8 (France) proposing amendments to resolution A.525(13) on Performance standards for narrow-band direct printing telegraphy equipment for the reception of navigational and meteorological warnings and urgent information to ships with respect to displaying MSI without printing and, having noted that such dilution of performance standards might create confusion to Administrations, manufacturers and users as well as that for non-SOLAS ships permission to use a simplified version of equipment should be granted on a national level, agreed that it was premature to consider any amendments to resolution A.525(13).

3.29 After considerable discussion, the Sub-Committee agreed that this issue should be further considered at its next session and, realizing that the subject of developing and amending performance standards was not on its work programme, invited interested Member Governments to submit proposals to the Committee for the inclusion of such an item in the Sub-Committee's work programme.

3.30 The Sub-Committee considered document COMSAR 4/3/10 (Australia) proposing amendments to the International SafetyNET Manual in order to allow the use of the ITA2-5 bit Code for SafetyNET messages.

3.31 The observer of the International Mobile Satellite Organization (IMSO), supported by the IHO and WMO observers, stated that, having checked technical and operational requirements on 5 bit and 7 bit presentation codes for the SafetyNET service, IMSO had come to the conclusion that using ITA2-5 bit presentation code was technically possible but not operationally feasible. There are two main reasons dependant upon SES and CES sites.

CESs

The Inmarsat-C System Definition Manual (SDM) requires:

> When an MSI provider sends an EGC SafetyNET message via telex (ITA2 code) the CES converts 5 bit telex code into 7 bit ASCII (ITA5) format, which is a mandatory requirement for all Inmarsat-C CESs. If MSI is sent using 7 bit code, no conversion is carried out. An EGC message is broadcast to SESs via the space segment using 7 bit format only.
>
> Some CESs can support ITA2 format but not for the EGC SafetyNET broadcast. IA5 is the mandatory default code for this service.
>
> It is unimportant in which format (5 or 7 bit) an EGC SafetyNET message is submitted for broadcast, it will always be broadcast as a 7 bit coded message and there is no saving in transmission costs for MSI providers if a message is submitted in 5 bit telex.

Technically it is possible to implement 5 bit code for broadcasting EGC SafetyNET messages but it would require a CES software upgrade that may cost thousands of dollars. This would probably negate any saving on transmission costs.

SESs

To support 5 bit (ITA2) presentation code, would require modification not only for CESs, but also for some SESs. All SESs support 7 bit code as a mandatory requirement, while support of 5 bit coding is optional. For a CESs upgrade it is mainly a matter of time and money. However, to upgrade all the SESs which do not support 5-bit code, it could prove to be an impossible task. Even allowing for say a 5-year period when the SafetyNET service may be broadcast using both 5 and 7 bit codes, when the time came to revert to a single code (5-bit code) there would be many terminals unable to receive MSI via the International SafetyNET service, which would have a severe impact on the ability of all Convention vessels to comply with SOLAS Chapter 4. Cost saving by using 5-bit (ITA2) code can only be achieved in the ship-to-shore direction providing both the CES and SES support the service. This is not the case for the International SafetyNET Service.

3.32 Taking into account the above information, the Sub-Committee did not agree with the proposal by Australia.

3.33 The Sub-Committee considered document COMSAR 4/8/3 and Corr.1 (France) proposing clarification of the relationship between search and rescue (SAR), and maritime safety information (MSI), which was supported in general by a number of delegations, and agreed that no amendments should be made to resolution A.705(17) on Promulgation of Maritime Safety Information unless authorized to do so by the Committee.

3.34 With respect to proposed amendments to COMSAR/Circ.15 (Joint IMO/IHO/WMO Manual on Maritime Safety Information), the Sub-Committee pointed out that the agenda item "Review of the Joint IMO/IHO/WMO MSI Manual" is in its work programme but had not been included into agenda for this session.

3.35 The Committee was invited to include the above-mentioned item in the provisional agenda for COMSAR 5.

3.36 The Sub-Committee considered COMSAR 4/3/3 (IHO) concerning the IHO/IMO World-Wide Navigation Warning Service and agreed the proposed amendments to resolution A.706(17) and prepared the draft MSC circular, given at annex 3 which the Committee was invited to adopt.

3.37 The Working Group considered COMSAR 4/3/13 (Chairman, International NAVTEX Co-ordinating Panel) concerning amendments to the NAVTEX Manual, agreed the proposed amendments and prepared the draft MSC circular, given at annex 4 which the Committee was invited to adopt.

Exemptions from the radio requirements

3.38 The Sub-Committee noted a table prepared by the Secretariat (COMSAR 4/3/12) providing information on the number of exemptions granted by SOLAS Contracting Governments under regulation IV/3 during the period from 1996 to 1998. The Sub-Committee also noted that some information provided by Contracting Governments to the Secretariat contained information on exemptions granted in accordance with old SOLAS regulation IV/5 in force prior to the entry into force of the 1988 SOLAS amendments, which is not applicable to the format approved by COM 40.

3.39 The Sub-Committee, noting that paragraph 2.3 of SOLAS regulation IV/3 was not applicable any more after 1 February 1999, invited the Committee to authorize it to prepare necessary amendments.

3.40 The Sub-Committee also noted that SLS.14/Circ.115 on issue of Exemption Certificates under the 1974 SOLAS Convention and Amendments thereto containing reference to regulation IV/3 should be amended.

3.41 The Sub-Committee instructed the Secretariat to prepare draft amendments to SLS.14/Circ.115 with a view for submission to MSC 72 for consideration and approval and invited the Committee to endorse this action.

OTHER MATTERS

Procedure for responding to DSC alerts

3.42 The Sub-Committee recalled that COMSAR 3 prepared a liaison statement on the appropriate modifications to Recommendations ITU-R M.493 and ITU-R M.541 with respect to DSC alerts relays by ships and instructed the Secretariat to submit it to ITU Working Party 8B for consideration and action, as appropriate.

3.43 The Sub-Committee recalled also that COMSAR 3 prepared flow charts describing procedures for ships on receipt of DSC alerts which were attached to the liaison statement to WP 8B. These flow charts should be circulated as a COMSAR circular after consideration by WP 8B.

3.44 At COMSAR 3 the delegation of the Russian Federation did not agree with proposed procedures to transmit DSC distress relays from ships to coast stations only, considering the procedures should also include relays to all ships, and expressed reservation on the issue. The Russian Federation proposed to invite Administrations to submit their comments and proposals on the draft COMSAR circular to COMSAR 4 after reviewing any amendments proposed by WP 8B.

3.45 The Sub-Committee considered COMSAR 4/3/16 and COMSAR 4/3/17 (Norway), COMSAR 4/5/2 (Secretariat) and, noting COMSAR 4/INF.10 (Norway), prepared COMSAR/Circ.21 on Procedure for responding to DSC distress alerts by ships. The Secretariat was instructed to disseminate the circular to Member Governments. The Committee was invited to endorse this action.

3.46 The Sub-Committee agreed that the VHF, MF and HF flowcharts attached to COMSAR/Circ.21, while not strictly in compliance with the current revision of Recommendation ITU-R M.541-8 in each and every aspect, did not substantially deviate from these procedures.

3.47 The Sub-Committee considered the feasibility to allow change of the default value in order to allow addressing relay alerts to “a specific coast station”, or to “all ships” under certain conditions. If so allowed the DSC equipment should have additional safeguards related to change of the default value.

3.48 The Sub-Committee was of the opinion that Administrations and equipment manufacturers be advised to design equipment in such a way, that composition and transmission of distress relay calls are not readily available to the user. Compliance with operational and technical provisions outlined above would prevent transmission of inappropriate distress relay alerts.

3.49 The Sub-Committee also agreed that this matter needed further study and invited the Committee to include, in the Sub-Committee’s work programme, a high priority, item on Procedure for responding to DSC alerts with two session needed for completion.

3.50 The Sub-Committee instructed the Secretariat to convey COMSAR/Circ.21 and this section of the report to ITU WP 8B for information and possible action and invited the Committee to endorse this action. The Sub-Committee invited Member Governments to participate in meetings of WP 8B.

Criteria for the provision of mobile-satellite communications for the GMDSS

3.51 The Sub-Committee recalled that COMSAR 3:

.1 considered the proposed draft revised Annex 5 to resolution A.801(19) on Provision of Radio Services for the Global Maritime Distress and Safety System and decided to make this as a separate new Assembly resolution; and

.2 agreed that the text proposed by Denmark concerning priority levels in the GMDSS mobile-satellite systems with some modifications should be included in a new draft Assembly resolution on Criteria for provision of mobile-satellite communications for the GMDSS. The Committee was invited to approve the draft Assembly resolution for submission to the twenty-first session of the Assembly for adoption.

The United Kingdom, while agreeing in principle to the criteria developed in the proposed new Annex 5 to resolution A.801(19), expressed reservation pending an assessment of the potential additional obligations its adoption might place upon Member Governments.

3.52 The Sub-Committee noted that MSC 70 considered the proposed draft Assembly resolution on Criteria for the provision of mobile-satellite communications for the Global Maritime Distress and Safety System (GMDSS) developed by COMSAR 3 and, agreeing that it needed further elaboration, referred it back to the Sub-Committee authorizing COMSAR 4, after finalization, to submit it directly to the twenty-first session of the Assembly for adoption.

3.53 The Sub-Committee considered COMSAR 4/3/5 (Denmark) suggesting changes to the draft Assembly resolution and COMSAR 4/3/18 (United States) providing comments on the proposals by Denmark and, after considerable discussion, agreed a revised text of the draft Assembly resolution on Criteria for provision of mobile-satellite communication systems for the Global Maritime Distress and Safety System (GMDSS), as set out in annex 5.

3.54 The Sub-Committee instructed the Secretariat to submit annex 5 to the twenty-first session of the Assembly for adoption.

General communications in sea areas A1 and A2

3.55 The Sub-Committee recalled that:

.1 COMSAR 3 considered COMSAR 3/3/11 (Sweden) regarding general radiocommunications in A1 and A2 sea areas, in light of the intention of a number of Administrations to close their facilities for VHF and MF radiotelephony. Sweden pointed out that:

.1 vessels without satellite equipment would have no capabilities for general radiocommunication in A1 and A2 sea areas without shore-based facilities for radiotelephony on VHF and MF;

.2 it might have an impact on the prevention of distress situations as well as making medical and other urgent and important calls impossible; and

.3 if other means than those foreseen in SOLAS for general communications should be used in A1 and A2 sea areas, these systems should be considered as a part of the GMDSS;

.2 COMSAR 3 agreed if facilities for general communications are not provided in sea areas A1 and A2 in the MF and VHF bands, this may have an impact on the prevention of distress situations as well as making medical and other important calls impossible including calls from shore to vessels in the vicinity during search and rescue operations. It was noted that in such areas, coast stations maintaining distress watches should be encouraged to offer radio checks; and

.3 COMSAR 3 was of the opinion that the Committee should add to its work programme an item "Development of Criteria for General Communications" in such well defined areas. This could be considered either as an exemption under Regulation IV/3 or an equivalent arrangement under Regulation I/5 of the SOLAS Convention. This Criteria could be used by Administrations particularly concerned with the lack of general communications facilities for ships in sea areas A1 and A2.

3.56 The Sub-Committee also recalled that COMSAR 3 issued COMSAR/Circ.17 - Recommendation on use of GMDSS equipment for non-safety communications.

COMSAR 3 taking into account reports that some shipmasters had instructed watchkeepers not to use GMDSS radiocommunication equipment except for safety and distress communications, decided to publish this circular as a recommendation to Member Governments and ship operators that GMDSS equipment should be utilized for routine communications or testing in order to ensure equipment availability and operator competency and also to reduce the false alerts which are often transmitted inadvertently by inexperienced operators.

Use of GMDSS equipment for transmission of general radiocommunications is one of the functional requirements specified in SOLAS chapter IV, regulation 4. Regular use of GMDSS equipment helps to develop operator competency and ensure equipment availability. If ships use other radiocommunication systems for the bulk of their business communications, they should adopt a regular programme of sending selected traffic or test messages via GMDSS equipment to ensure operator competency and equipment availability and to help reduce the incidence of false alerts. This policy extends to all GMDSS equipment suites including Digital Selective Calling (DSC) on VHF, MF and HF, to the Inmarsat-A, B and C systems, and to any duplicated VHF and long-range communication facilities.

Member Governments were invited to bring this guidance to the attention of telecommunication authorities, shipowners, ship operators, shipmasters, GMDSS training institutions and other interested parties.

3.57 The Sub-Committee noted that:

.1 MSC 69 agreed to the proposal by COMSAR 3 to include, in the Sub-Committee's work programme, a low priority item on "Development of criteria for general communications", with 2 sessions needed to complete the item; and

.2 MSC 71 approved the revised provisional agenda for COMSAR 4, and agreed that document MSC 71/22/5 (Denmark) should be considered by COMSAR 4 under its agenda item on "Global Maritime Distress and Safety System (GMDSS).

3.58 The Sub-Committee recalled that general radiocommunications were addressed in chapter IV of SOLAS as follows:

.1 definition of general radiocommunications (regulation 2.1.5);

.2 a functional requirement that ships, while at sea, shall be capable of transmitting and receiving general radiocommunications (regulation 4.1.8);

.3 requirements for specific radio installations to be capable of transmitting and receiving general radiocommunications (regulations 8.2, 9.3, 10.1.1.4 and 10.2.4); and

.4 a provision that malfunction of the equipment for providing general radiocommunications shall not be considered as making a ship unseaworthy or as a reason for delaying the ship in ports where repair facilities are not readily available, provided the ship is capable of performing all distress and safety functions (regulation 15.8).

3.59 Having considered documents MSC 71/22/5 and COMSAR 4/3/ (Denmark) and COMSAR 4/3/1 and Corr.1 (France), the Sub-Committee agreed to:

.1 invite the Committee to include in the provisional agenda for COMSAR 5, the work programme item “Development of criteria for general communications” and to make this a high priority item; and

.2 invite Members to submit their comments and proposals on the matter to COMSAR 5 for consideration.

3.60 The Sub-Committee, having considered document COMSAR 4/3/15 (ICS), proposing clarification of SOLAS regulation IV/4.1.8, decided to further consider this matter at its next session and invited Members to submit comments and proposals to COMSAR 5.

4 RO-RO FERRY SAFETY: LOW-POWERED RADIO HOMING DEVICES FOR LIFERAFTS

4.1 The Sub-Committee recalled that:

.1 at COMSAR 3 several delegations had supported the view of the United Kingdom that the use of the frequency 121.5 MHz could cause confusion to rescue services, because of the simultaneous reception of multiple signals and, therefore, the fitting of SARTs to liferafts was an acceptable solution for the time being. Several other delegations had not agreed with this view and were of the opinion that 121.5 MHz homing systems would have advantages over the SART homing system; and

.2 after intensive discussion COMSAR 3 had come to the conclusion that more time was needed to study the question of which technique and/or device should be used for homing in case of multiple devices operating in close proximity and the simultaneous reception of multiple signals by a SAR unit and had invited the Committee to extend the target completion date of "Low-powered radio homing devices for liferafts on ro-ro passenger ships" to 1999.

4.2 The Sub-Committee noted that by resolution MSC.48(66) MSC 66 adopted the International Life-Saving Appliance (LSA) Code containing international standards for life-saving appliances required by Chapter III, SOLAS, 1974, as amended.

This Code became mandatory from 1 July 1998.

Paragraph 4.1.1.5.7 of the Code states:

> "The canopy of the liferaft shall be provided with means to mount a survival craft radar transponder at a height of at least 1 m above the sea; and …."

Paragraph 4.1.5.1.14 states:

> "The normal equipment of every liferaft shall consist of:
>
> .14 an efficient radar reflector, unless a survival craft radar transponder is stowed in the liferaft;"

This text is identical to the text of existing SOLAS regulation III/38.5.1.14.

4.3 The Sub-Committee also recalled that the Performance standards for survival craft radar transponders for use in SAR operations were amended by adding paragraph 2.1.15 to the Annex (resolution A.802(19)):

> "The SART should be provided with a pole or other arrangement compatible with the antenna pocket in a survival craft in order to comply with requirements referred to in paragraph 2.4, together with illustrated instructions."

Paragraph 2.4 states:

> "The height of the installed SART antenna should be at least 1 m above sea-level."

The above Performance standards are in the force since 1996.

4.4 In document COMSAR 4/4 Germany informed the Sub-Committee on the results of field trials on the use of multiple signals from SARTs in close proximity to each other for homing purposes. Based on those results Germany shared the view held by the United Kingdom at COMSAR 3 that the fitting of SARTs to liferafts is an acceptable technical solution for locating multiple survival units being in close vicinity to each other. Such locating can be made by SAR units, dedicated aircraft and by most SOLAS ships. A solution could be implemented in a short time scale.

4.5 Sweden (COMSAR 4/4/1), supported by some delegations, expressed the view that the work should continue for at least one session to give the industry more time to find light-weight and cost-effective solutions.

4.6 In document COMSAR 4/4/2 the Netherlands presented results of trials on homing on the frequency 121.5 MHz and SART. Trials proved a great advantage of the SART performance over of 121.5 MHz beacons, because the number of SARTs could be continuously identified, as well as their individual bearing and distance. The Netherlands were of the opinion that the SART is the most suitable radio homing device for liferafts on ro-ro passenger ships.

4.7 In considering this issue, some delegations expressed the opinion that there were advantages and disadvantages with regard to both 121.5 MHz and SARTs and suggested that a combined device should be developed.

4.8 Taking into account the opinions expressed in documents submitted, the above background and deliberations made, the Sub-Committee agreed that SARTs, being the most suitable equipment, should be used as the low-powered radio homing devices in short ranges for liferafts on ro-ro ferries. There was no need to amend resolution A.802(19).

4.9 The Secretariat was instructed to convey the decision made and this section of the report to DE 43 for consideration and action, as appropriate.

4.10 The Sub-Committee invited the Committee to delete the agenda item "Ro-ro ferry safety: low-powered radio homing devices for liferafts" from its work programme, as the work had been completed.

5 ITU MARITIME RADIOCOMMUNICATION MATTERS

Radiocommunication ITU-R Study Group 8

5.1 The Sub-Committee noted that MSC 69 had endorsed the Sub-Committee's action in instructing the Secretariat to submit to ITU-R Working Parties 8B and 8D liaison statements on:

.1 efficiency in the use of the band 156 – 174 MHz (Document 8B/25-E);

.2 the appropriate modifications to Recommendations ITU-R M.493 and ITU-R M.541 regarding DSC distress relays by ships (Document 8B/26-E); and

.3 interference to COSPAS-SARSAT system (Documents 8B/27-E and 8D/24-E),

prepared at COMSAR 3.

5.2 The Sub-Committee also noted a liaison statement from ITU-R Working party 8B (COMSAR 4/5/2) and considered it under section 3 of this report (see paragraphs 3.42 to 3.50).

ITU World Radiocommunication Conference

5.3 The Sub-Committee recalled that COMSAR 3:

.1 considered the outcome of WRC-97 and noted that WRC-97 took account of most IMO positions except relating to the generic use of the bands 1.5/1.6 GHz and was concerned that a generic allocation of frequencies was made without prior study of the effects on the GMDSS and the Aeronautical Mobile-Satellite (en-route) service (AMS(R)S); and

.2 developed a statement commenting on the outcome of WRC-97, in particular with regard to the generic allocation of the satellite bands 1525-1559 MHz and 1626.5-1660.5 MHz, and invited the Committee to approve it for submission to the ITU Plenipotentiary Conference (PP-98) held in October-November 1998.

5.4 The Sub-Committee noted that MSC 69 approved the IMO statement commenting on the outcome of WRC-97 and instructed the Secretariat to convey it to the Secretary-General of ITU with a request that the IMO statement be brought to the attention of PP-98 for consideration (MSC 69/22, paragraphs 10.10 and 10.11).

5.5 The Sub-Committee also recalled that, with a view to developing more detailed actions on the outcome of WRC-97 and prepare draft IMO positions to the next ITU Conference to be held in May-June 2000 (WRC-2000) for consideration by COMSAR 4, COMSAR 3 established a correspondence group under the co-ordination of the United Kingdom.

5.6 The Sub-Committee noted that MSC 69 endorsed the Sub-Committee's action in establishing the correspondence group to consider in detail the outcome of WRC-97 for consideration by COMSAR 4 and, taking into account the close proximity between COMSAR 4 (July 1999) and WRC-99 (was planned in October 1999) and that there will be no an MSC meeting in between, authorized the Sub-Committee to prepare an IMO position on maritime mobile service matters included in the agenda for the Conference and submit it directly to WRC-99 for consideration.

5.7 The Sub-Committee also noted that MSC 70 was informed that, in pursuance of MSC 69 instructions (MSC 69/22, paragraph 10.11), the approved IMO statement commenting on the outcome of WRC-97 had been conveyed to the Secretary-General of ITU with a request that it be brought to the attention of the 1998 Plenipotentiary Conference for consideration.

5.8 The Sub-Committee further noted that no contributions had been submitted by the correspondence group. The delegation of the United Kingdom, with very much regret, informed the Sub-Committee that it had not been possible to submit a report of the correspondence group.

5.9 However, being informed that the Secretariat, with a view to facilitating the development of IMO positions, having used information from various sources, had prepared document COMSAR 4/J/3 providing the background and development information on the maritime mobile matters to be considered at WRC-2000, the Sub-Committee agreed to use this document as a guide in developing IMO positions to WRC-2000.

5.10 Having considered COMSAR 4/5 and Corr.1 (France, Canada and COSPAS-SARSAT), COMSAR 4/5/1 (United States) and using information provided in COMSAR 4/J/3, the Sub-Committee prepared IMO positions on some WRC-2000 agenda items as set out in annex 6:

5.11 The Sub-Committee instructed the Secretariat to convey the IMO position to the second ITU Conference Preparatory Meeting (CPM-99) to be held from 15 to 26 November 1999 in Geneva, Switzerland, for consideration.

5.12 Being of the opinion, that the IMO position should reflect the latest developments and information, the Sub-Committee authorized the Chairman, taking into account the outcome of the second meeting of CPM-99, to adjust the IMO position, if necessary, in consultation with the Secretariat.

5.13 The Secretariat was instructed to convey the IMO position, as adjusted, to the Secretary-General of ITU with the request that it be submitted to the Conference for consideration.

5.14 The Sub-Committee, taking into account the importance of this issue, urged Members to ensure that the maritime community is well represented on their delegations to WRC-2000 in order to support the IMO position and, in this context, recommended Member Governments to co-ordinate their action with their respective national representatives to WRC-2000 with a view to adopting the proposed limits on previous transmissions in the frequency band 406-406.1 MHz to protect the COSPAS-SARSAT system and to support the incorporation of that protective measure in the Radio Regulations.

5.15 The Sub-Committee invited ICAO to co-operate with IMO in addressing how the changes made to both the Maritime Mobile-Satellite and Aeronautical Mobile-Satellite (R) Services at WRC 97 might be amended at a future WRC in a manner advantageous to both services and

instructed the Secretariat to take appropriate action. The Committee was invited to endorse this action.

6 SATELLITE SERVICES (INMARSAT AND COSPAS-SARSAT)

COSPAS-SARSAT Services

6.1 The Sub-Committee noted that:

.1 MSC 70 endorsed the COMSAR 3's action in inviting COSPAS-SARSAT to consider improvement of the 406 MHz distress alerting system, in particular the registration and coding of 406 MHz satellite EPIRBs; and

.2 MSC 70 approved MSC/Circ.882 on Guidelines on annual testing of 406 MHz satellite EPIRBs, developed at COMSAR 3.

6.2 The Sub-Committee noted document COMSAR 4/6/3 (COSPAS-SARSAT) providing information on the latest developments in COSPAS-SARSAT with respect to improving type approval procedures and control and registration of 406 MHz EPIRBs. However, COSPAS-SARSAT pointed out that enforcing proper beacon coding and registration procedures was the responsibility of national Administrations.

COSPAS-SARSAT stated that further possible actions would be considered by its Participants to enhance 406 MHz EPIRB coding and registration and facilitate their control by national Administration.

6.3 The observer from COSPAS-SARSAT informed the Sub-Committee that at the 13th meeting of the COSPAS-SARSAT Joint Committee in June 1999 it was agreed to request the COSPAS-SARSAT Secretariat to inform IMO of the discrepancies between the COSPAS-SARSAT documentation and the GMDSS Master Plan (Annex 12) on beacon matters and co-ordinate with IMO future possible actions to resolve this issue. The observer also noted that there might be a need to clarify whether the IMO GMDSS Master Plan should include operational points of contact for access to beacon register information by SAR services, or administrative contacts on beacon matters.

6.4 The Sub-Committee considered document COMSAR 4/6/1 and Corr.1 (Canada, France and COSPAS-SARSAT) proposing the dissemination of functional information on the COSPAS-SARSAT System to all IMO Members by a special series of IMO circulars.

6.5 The Sub-Committee was informed by the Secretariat, that the International COSPAS-SARSAT Programme Agreement confers on the Secretaries-General of IMO and ICAO with only *depositary* functions consisting of information to *"all the Parties to this Agreement of the date of each signature, of the date of deposit of each instrument of ratification, acceptance, approval or accession, of the date of entry into force of this Agreement , and of the receipt of other notifications"* (article 19.2). This provision should be interpreted restrictively, namely, as indicating that IMO's functions cannot exceed the depositary duties therein indicated. Otherwise a further article specifying functions other than the depositary ones would have been included in the text, as is the case of some IMO conventions.

This restrictive interpretation seemed even more valid here if it was borne in mind that the Programme Agreement established a Secretariat with a view to perform *inter-alia, "administrative services concerning general correspondence, system documentation and promotional materials"* (article 10.3 (b)). This provision was not restricted to the rendering of administrative services to Parties to the Agreement, but could be applied in connection with the provision of information to the maritime community in general.

Furthermore, the IMO observer status granted to COSPAS-SARSAT means that communications through IMO could be made within the framework established by the Sub-Committee. These communications would be restricted to the subject matters within the agenda of the Sub-Committee.

Bearing in mind the preceding paragraphs, the COSPAS-SARSAT Secretariat was entitled to disseminate information on the functioning of the system to all States whether they are IMO Members or Parties to the SAR Convention or not. Circulars containing this information should be prepared and distributed by the COSPAS-SARSAT Secretariat.

6.6 The Sub-Committee noted COMSAR 4/INF.9 (COSPAS-SARSAT) providing information on the status of the COSPAS-SARSAT Programme per May 1999 and additional information provided by the COSPAS-SARSAT observer, in particular:

.1 space segment: 7 LEOSAR satellites in operation;

.2 ground segment: 21 MCCs and 36 LEOLUTs in operation;

.3 demonstration and evaluation of 406 MHz GEOSAR systems completed. It was concluded that the COSPAS-SARSAT System would be enhanced by integrating GEOSAR system components;

.4 number of 406 MHz beacons in use: about 185,000;

.5 by the end of 1998 the total number of persons rescued using COSPAS-SARSAT alert data reached 10,000;

.6 phasing-out 121.5/243 MHz satellite processing: at COSPAS-SARSAT Joint Committee (JC-13) in June 1999 it was recommended that:

a) subject to the COSPAS-SARSAT Council decision to phase-out 121.5/243 MHz satellite services from 2008, the Council approves the draft Phase-Out Plan; and

b) this plan should be reviewed and updated on an annual basis, as appropriate, to reflect the status of Council decisions and COSPAS-SARSAT actions in respect of the preparation for phasing-out 121.5/243 MHz satellite services;

.7 COSPAS-SARSAT Programme on Y2K compliance; and

.8 information on a three day seminar in year 2000 in Montreal.

Inmarsat Services

6.7 The Sub-Committee recalled that COMSAR 3 considered the need for providing priority for shore originated distress communications to ships whose SESs are busy with on-going traffic and, taking into account the information provided by Norway at COMSAR 2 and information provided by Inmarsat concerning existing capabilities, prepared COMSAR/Circ.13 - Shore-to-ship communications during a distress.

6.8 The Sub-Committee noted that in accordance with the Sub-Committee's instructions the Secretariat, after receiving the updated information from Inmarsat, issued COMSAR/Circ.19 – Distress priority communications for RCC from shore-to-ship via Inmarsat.

6.9 The Sub-Committee, taking into account the position of the United States (COMSAR 4/6/2) that the procedure described in COMSAR/Circ.13 was currently the best solution available, pointed out that a requirement on prioritization of shore-to-ship communications had been discussed and included in the draft Assembly resolution on Criteria for provision of mobile-satellite communications for the GMDSS (see annex 5). It was also pointed out that such requirement would apply to new satellite systems.

6.10 The Sub-Committee instructed the Secretariat to bring the draft Assembly resolution given in annex 5 to the attention of IMSO and invited the Committee to endorse this action.

6.11 The Sub-Committee recalled that at COMSAR 3 information was provided by Australia (COMSAR 3/9/15) on its experience in the use of Inmarsat-C transponders fitted on ships for monitoring shipping activity in Australia waters and in the Pacific area. COMSAR 3 noted the difficulties posed when vessels equipped with Inmarsat-C transponders are not fitted with terminal equipment (printer and display). Commenting on the paper, the observer from Inmarsat informed the Sub-Committee that Inmarsat defines different types of Inmarsat-C Ship Earth Stations (SESs), with Distress Facilities and without Distress Facilities. For those SESs with Distress Facilities Inmarsat requires that Data Terminating Equipment (DTE) should be provided and should include visual display unit, keyboard and printer to display messages, enter signalling information and control SES functions. In view of the number of false distress alerts which have been generated by Inmarsat-C terminals fitted in fishing vessels without fully functional DTE as above, Inmarsat does not allow such terminals with Distress Facilities to be used for data acquisition (black box). Inmarsat recommended that a terminal without Distress Facilities be used in this application. COMSAR 3 strongly urged that Inmarsat no longer allow terminals without a full user interface and with Distress Facilities to be used for data acquisition.

6.12 The Sub-Committee noted COMSAR 4/6 (Australia) informing that prompt action by Inmarsat and others had largely resolved the vessel monitoring system (VMS) distress alert problem in Australia. Attention is now focused upon the potential to improve the surface picture by adding VMS data to data of other Ship Reporting Systems.

6.13 The Sub-Committee was informed by the IMSO observer about the latest events relating to the Inmarsat restructuring, *inter alia*, that, pending the entry into force of the amended Convention on the International Mobile Satellite Organization, the restructuring into an intergovernmental organization (IMSO) and two private companies (Inmarsat Holdings plc and Inmarsat Ltd.) took effect from 15 July 1999.

6.14 The IMSO observer stated that Inmarsat remained fully committed to the ongoing provision and protection of maritime safety services, including navigation services. As a result of WRC-97, Inmarsat had not, and would no longer, further pursue the concept of sharing the L-band radionavigation spectrum with mobile-satellite services.

6.15 The IMSO observer provided information on the status of the Inmarsat system for the period from 1 January 1998 to 15 April 1999, in particular that there had been no problems for the services pertaining to maritime satellite communications (Inmarsat-A, B, C and E). The number of maritime terminals on 15 April 1999 were given as 16,784 Inmarsat-A SESs, 5,865 Inmarsat-B SESs, 42,234 Inmarsat-C SESs and 322 Inmarsat-E EPIRBs.

6.16 The Sub-Committee recalled that at MSC 70 the MSC Chairman, having wished Inmarsat success in its life's new phase, reminded the Committee of IMO's interest in Inmarsat, an organization established by IMO; emphasized IMO's continuous interest in Inmarsat's delivery of the important responsibilities concerning maritime safety, in general, and the GMDSS, in particular, which IMO had entrusted it with; and stressed that fulfilment of Inmarsat's obligations under

SOLAS, in that organization's new form, would be closely monitored by the Committee and the maritime community at large.

7 EMERGENCY RADIOCOMMUNICATIONS: FALSE ALERTS AND INTERFERENCE

7.1 The Sub-Committee recalled that COMSAR 3 prepared and MSC 69 approved circulars, as follows:

.1 MSC/Circ.861 - Measures to reduce the number of false distress alerts;

.2 MSC/Circ.862 - Clarifications of certain requirements in IMO performance standards for GMDSS equipment; and

.3 MSC/Circ.863 - Recommendation on prevention of harmful interference to 406 MHz EPIRBs operating with the COSPAS-SARSAT system.

7.2 The Sub-Committee noted that:

.1 the Secretariat, as instructed by COMSAR 3 and endorsed by MSC 69, brought MSC/Circ.863 to the attention of the Director of the ITU Radiocommunication Bureau and requested ITU-R to develop emission standards such that emissions in the 406.0-406.1 MHz band are consistent with, and do not exceed, the requirements set out in Recommendation ITU-R.SM.1051;

.2 FSI 6 considered the draft amendments to resolution A.746(18) on Survey Guidelines proposed by the COMSAR 3 on testing and servicing of 406 MHz EPIRBs and agreed to the text as set out in annex 3 to FSI 6/12; and

.3 MSC 70 approved MSC/Circ.882 on Guidelines on annual testing of 406 MHz satellite EPIRBs and, noting that the Sub-Committee was of the opinion that similar guidelines should also be prepared for L-band satellite EPIRBs at its next session, instructed COMSAR 4 to consider this matter under its agenda item on "Emergency radiocommunications: false alerts and interference".

7.3 The Sub-Committee, having been informed by CIRM that they were in the process of developing a proposal for guidelines on annual testing of L-band EPIRBs, agreed to give further consideration to the issue at its next session and invited the Committee to instruct COMSAR 5 to further consider this matter under its agenda item on Emergency radiocommunications: false alerts and interference. The Sub-Committee invited CIRM to submit their proposal to COMSAR 5.

7.4 The Sub-Committee considered document COMSAR 4/7/1 (United States) proposing to change the date in paragraph 1 of MSC/Circ.862 – Clarifications of certain requirements in IMO performance standards from "1 February 1999" to "1 February 2000".

7.5 Being informed by the CIRM observer that most manufacturers have already met the deadline 1 February 1999 and taking into account that proposed amendments to MSC/Circ.862 should be approved by MSC 72, scheduled to be held in May 2000, the Sub-Committee came to the conclusion that there was no reason to amend that circular.

Operational performance of the MF/HF DSC system

7.6 The Sub-Committee considered COMSAR 4/7 (Australia) drawing attention to the disproportional effort involved in responding to DSC false alerts. Australia was of the opinion that some positive action at sea was necessary to reduce this problem. Vessels required the flow diagram on actions by ships upon reception of VHF, VHF/MF and HF DSC alerts to help educate ship personnel to the correct procedures. The recommendation to restrict relays to the relevant coast station was also desired. The Sub-Committee took action on the matter under section 3 of this report (see paragraphs 3.42 to 3.50).

Prevention of false alerts and unnecessary relays in order to eliminate the unnecessary sounding of alarms on ship and coast radio stations

7.7 The Sub-Committee considered COMSAR 4/7/2 (United States) and agreed that Administrations should be invited to conduct operational tests of DSC equipment and submit results to COMSAR 5. This would facilitate discussions with manufacturers, government agencies and standards committees when attempting to find solutions to any new problems discovered.

Measures to reduce the number of false distress alerts for practical use of the GMDSS

7.8 The Sub-Committee considered COMSAR 4/7/3 (Japan) on the consideration of measures to reduce false distress alerts under the GMDSS. Japan proposed various forms for use by Member Governments on reporting results to IMO and desired to circulate these as a COMSAR circular at this session because analysing data obtained from false alerts and relays was an urgent matter in order to reduce false distress alerts. The Sub-Committee agreed in principle with the Japanese proposal that additional information was needed to better understand causes of false alerts. The Sub-Committee agreed that Administrations should be invited to consider COMSAR 4/7/3 as an example with a view to completing a COMSAR circular on the subject at COMSAR 5. The Sub-Committee also invited Member Governments to collect sufficient data from false alerts and relays for analysis and contribute their results to COMSAR 5 to reduce false alerts and also to prepare relevant circulars and resolutions regarding the measures to reduce false distress alerts.

7.9 The Sub-Committee, recognizing that COSPAS-SARSAT Monitoring and Reporting System developed by COSPAS-SARSAT included many useful statistics regarding 406 MHz false distress alerts, invited COSPAS-SARSAT to provide pertinent information to COMSAR 5.

7.10 The delegation of Argentina expressed concern with the high number of false alerts and the impact they have on SAR organizations, and believed that general statistics compiled by the Organization would, as suggested by Japan (COMSAR 4/7/3), help Administrations to understand the reasons for such false alerts and to take appropriate action.

Interference in the 406-406.1 MHz frequency band

7.11 The Sub-Committee considered COMSAR 4/7/4 (COSPAS-SARSAT) summarizing information on interference sources detected by COSPAS-SARSAT Participants in the 406-406.1 MHz frequency band.

7.12 The observer from COSPAS-SARSAT invited Administrations to use COMSAR 4/7/4, annex - Summary Report on Interference in the 406-406.1 MHz Frequency Band to assist in the resolution of interference to the COSPAS-SARSAT 406 MHz system.

406 MHz Non-Distress Alerts and Beacons Malfunctions

7.13 The observer from COSPAS-SARSAT informed the Sub-Committee that the level of non-distress activations of 406 MHz beacons continued to be a matter of concern to COSPAS-SARSAT, consequently, COSPAS-SARSAT convened a task group meeting during January 1999 to investigate this issue. The task group analysed the causes of non-distress beacon activations, proposed actions to minimise their occurrence, and identified the lead organisation responsible for implementing these actions. Additionally, enhancements to COSPAS-SARSAT monitoring and reporting requirements were proposed to provide information on the causes of non-distress beacon activations. The findings of the task group were reviewed at the 13th meeting of the COSPAS-SARSAT Joint Committee in June 1999, and the resulting recommendations will be submitted to the COSPAS-SARSAT Council for consideration at the CSC 23rd session in October 1999.

7.14 Taking into account that false distress alerts are still a serious problem for the GMDSS and that further work needs to be done, the Sub-Committee invited the Committee to extend the target completion date for the item "Emergency radiocommunications: false alerts and interference" to 2000.

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

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

8.1 The Sub-Committee noted that MSC 69 authorized it to carry out a review study of the composition and terms of reference of the Joint ICAO/IMO Working Group and advise the Committee accordingly.

8.2 The Sub-Committee also noted that MSC 70 agreed that future circulars on training facilities should include information on the availability of SAR training facilities both for aeronautical and maritime purposes and invited Member Governments to provide such information to the Secretariat.

8.3 The Sub-Committee further noted that MSC approved the Joint ICAO/IMO Working Group on Harmonization of Aeronautical and Maritime SAR Procedures to meet, at its seventh session, in Singapore in January 2000 (MSC 71/23, paragraph 20.62).

8.4 Taking into account that the seventh meeting of the Joint Working Group is scheduled to be held in January 2000, the Sub-Committee invited the Committee to extend the target completion date for this item to 2000.

8.5 The Sub-Committee recalled that the Joint ICAO/IMO Working Group (IWG) on Harmonization Of Maritime And Aeronautical SAR held its sixth session in Victoria, B.C. (Canada) from 5 to 9 October 1998.

8.6 The Sub-Committee noted the decisions and recommendations of the Joint Working Group at its sixth session (COMSAR 4/8/4 and COMSAR 4/INF.2).

8.7 The delegation of the United Kingdom drew attention to Recommendation 6/17 in paragraph 8 of the annex to document COMSAR 4/8/4 about the Development of a Rescue Centre Operator's Certificate, noting the detailed course content and aims and objectives in appendix L, and informed the Sub-Committee that the United Kingdom's Maritime and Coastguard Agency had already implemented a course at its Training Centre leading to a GMDSS Coast Station Operator's Certificate for Rescue Personnel. The course mirrored what is set out in appendix L to this paper. To

date, 9 courses had been run, catering for some 95 students, 85 of whom had successfully passed the course.

8.8 In considering the decisions and recommendations 6/1 to 6/18 of the JWG at its sixth session as set out in COMSAR 4/8/4, the Sub-Committee took action as reflected in the ensuing paragraphs.

8.9 With regard to recommendation 6/2 - Expedited approval process for amendments to the IAMSAR Manual, the Sub-Committee did not agree with the recommendation to invite the Committee to delegate authority on approving amendments to the IAMSAR Manual to the Sub-Committee.

8.10 The Sub-Committee recalled in this context that the draft Assembly resolution on the IAMSAR Manual, adopted by MSC 71 for approval by the twenty-first session of the Assembly, did specify the Maritime Safety Committee as the appropriate body for adopting amendments to the IAMSAR Manual, outlining the appropriate amendment procedure, at annex, and taking also account of the need for the agreement of the amendments by ICAO.

8.11 The Sub-Committee agreed to recommend to the Committee that it be authorized to consider the implications of and, subsequently, prepare amendments to the SOLAS Convention for the purpose of making the carriage of IAMSAR Manual Volume III mandatory. When preparing such an amendment, if so authorized, the Sub-Committee will consider its implications and will advise the Committee accordingly.

8.12 With regard to recommendation 6/15 – SAR Database, the Sub-Committee agreed that Appendix H of COMSAR 4/8/4 should be disseminated as a COMSAR circular as a guidance document on how data could be collected and invited the Committee to approve the draft COMSAR circular given in annex 7.

8.13 The Sub-Committee, considering recommendation 6/16 – Alerting post for SAR, agreed that the procedure outlined in Appendix I of COMSAR 4/8/4 was a way to integrate States, which had not ratified the SAR Convention, in the global SAR plan, and provided appropriate interim measures for Heads of MRCCs to carry out an efficient co-operation in SAR matters for a transitional period until the global SAR plan was fully implemented.

8.14 The Sub-Committee therefore prepared the guidance for Central Alerting Posts (COMSAR 4/8/4, Appendix I) as a draft COMSAR Circular, given in annex 8, and invited the Committee to approve it for dissemination to Member Governments.

8.15 As regards recommendation 6/17 – Development of a Coast Station Operators Certificate, the Sub-Committee noted the GMDSS Coast Station Operators Course content and syllabus aims and objectives and, agreeing that a review of the course was needed before becoming a document for international use, instructed the Secretariat to recirculate the course for COMSAR 5, inviting Member Governments to comment thereon to that session.

8.16 Considering the terms of reference (TOR) (COMSAR 4/INF.2, annex, appendix C) and the composition of the JWG, the Sub-Committee agreed that the TOR adequately reflected the JWG tasks and its continuation was justified by the amount of work still to be done.

8.17 As to the composition of the JWG, the Sub-Committee noted that, according to the ICAO rules, a study group of experts would usually consist of approximately 5 to 6 experts with high expertise/experience and no additional observers were invited to these sessions. The number of eight members each for IMO and ICAO was already exceeding the usual practice and should not be increased.

8.18 Noting that observers of IMO Member Governments were already invited and did attend and participated in the work of the JWG and recognizing the danger of losing the required continuity in expertise and experience with a rotating membership, the Sub-Committee agreed to keep the composition of the JWG as it is. Participation of maritime observers should, however, be encouraged and their active participation in, and comments and proposals (where possible including their contact and/or e-mail addresses) to, the sessions of the JWG facilitated. Co-ordination meetings during the day preceding the JWG sessions should be held. The Committee was invited to note the Sub-Committee's view on this matter.

8.19 The Sub-Committee noted in this context that all documentation for the JWG meetings could be accessed on the RCC Website (http://WWW.rcc-net.org) and that ICAO was developing a separate web page for the JWG, which could equally be accessed freely by interested parties.

Plan for the provision of maritime SAR services, including procedures for routeing distress information in the GMDSS

General

8.20 The Sub-Committee noted that MSC 69 approved MSC/Circ.864 on Guidelines for preparing plans for co-operation between search and rescue services and passenger ships on fixed routes (in accordance with SOLAS regulation V/15(c)).

8.21 The Sub-Committee also noted that MSC 69 endorsed the Sub-Committee's action in issuing SAR.7/Circ.1 (1998) on the List of IMO documents and publications, which should be available for use by maritime rescue co-ordination centres.

8.22 The Sub-Committee further noted that MSC 70 approved MSC/Circ.892 on Alerting of search and rescue authorities, prepared by COMSAR 3 and agreed by NAV 44.

The Ankara Conference

8.23 The delegation of Turkey informed the Sub-Committee that, on 27 November 1998, a diplomatic conference was held in Ankara, Turkey, for the signature of an Agreement on co-operation regarding maritime search and rescue services between Black Sea coastal States and that Bulgaria, Georgia, Romania, the Russian Federation, Turkey and Ukraine had signed this agreement.

This Agreement was an important step towards the establishment of full co-operation between the Black Sea coastal States on SAR, and the Sub-Committee was also informed that national procedures for the ratification of this agreement was on track. Turkey, on its part, completed the ratification process on 3 March 1999 with a governmental decree.

Following this the limits of each SRR should be fixed and consequently an operational agreement between the concerned states should be prepared. Georgia had agreed with the limits of the Turkish SRR. A draft protocol on SAR co-operation had been received from the Russian Federation and the Turkish response would be ready in due time.

Outcome of the 1998 Fremantle Conference on SAR/GMDSS - Establishment of an International SAR Fund

8.24 The Sub-Committee noted (COMSAR 4/8/9 and COMSAR 4/INF.5) that, with financial support by the Governments of Australia, Canada, the Netherlands, Norway, the United Kingdom and the United States, the International Mobile Satellite Organization (IMSO) and the International Transport Workers' Federation (ITF), the Organization convened a SAR/GMDSS Conference in Fremantle (Australia) from 21 to 25 September 1998 for countries bordering the Indian Ocean.

8.25 The Sub-Committee, noting resolution No.3 (Global Maritime Distress and Safety System (GMDSS)), adopted by the Fremantle Conference, agreed to:

.1 encourage States operating MRCCs associated with Inmarsat coast earth stations to ensure that suitable arrangements are in place to relay Inmarsat distress alerts to all responsible MRCCs within the service area of the respective coast earth stations; and

.2 encourage States operating MRCCs to establish means of direct communication between all MRCCs in the region/area.

8.26 The Sub-Committee further noted that MSC 71, being informed that the full report of the Indian Ocean Conference on maritime SAR and the GMDSS had been submitted to COMSAR 4 for consideration, noted Conference resolution No.5 (Establishment of an International SAR Fund) inviting the Organization, in co-operation with the aviation and maritime communities and for the purpose of assisting countries, in particular developing countries, to fulfil their obligations under the SAR and SOLAS Conventions, to consider establishing an International SAR Fund for the purpose of:

.1 establishing and maintaining worldwide an adequate number of operational RCCs to cover the needs of international shipping;

.2 establishing and maintaining an efficient global communications network for the dissemination of distress alert data and SAR co-ordination communications;

.3 establishing and maintaining databases for the operational support of the GMDSS, if this is not done on a national basis; and

.4 supporting the provision of other necessary resources for the effective implementation of the global SAR plan.

Following discussion on the history of the aforementioned resolution and in view of the financial implications of the proposal, if endorsed, which were still unknown and which would merit serious and in-depth consideration, MSC 71, while agreeing that COMSAR 4 should fully analyse the technical aspects of the proposal, did not agree that COMSAR 4 should be authorized to submit its report on the outcome of the Conference directly to Committee 2 (Technical) of the Assembly at its twenty-first session, as it had been suggested in document MSC 71/22/3. Instead, it decided to consider the report of COMSAR 4 itself at MSC 72.

8.27 In this context, the Sub-Committee was briefed by the Secretariat on the activities leading up to the consideration and adoption by the Fremantle Conference of Resolution No.5, which had started with the establishment by the MSC of 13 SAR areas and were followed by the convening of a series of regional seminars and workshops followed by regional Conferences culminating in the successful completion of the Global SAR Plan by the Fremantle Conference.

The Sub-Committee was also informed of the inadequacies reported by a number of Member Governments to regional Conferences with respect to the provision of shore-based SAR and GMDSS facilities.

It was against the aforementioned reports that Resolution No.5 was unanimously adopted by the 1998 Fremantle Conference and the Sub-Committee recalled that a similar resolution has been adopted by the 1994 Lisbon Conference but that no action had been taken on that resolution because of the lack of funding. In pursuance of an invitation set out in the *ad hoc* Lisbon Conference resolution, ICAO had been approached and had expressed the opinion that establishment of the proposed SAR fund

might involve a duplication of effort on the part of aeronautical search and rescue, as the problem identified by the IMO conferences did not apparently exist in ICAO's area of responsibility.

8.28 At the proposal of the Secretariat, the Sub-Committee agreed that the issue should be addressed on a step-by-step basis and that the following five-step approach might provide the appropriate answers to the issue:

.1 Does the Sub-Committee share the view that there is a need for IMO to take action to address the problem of inadequate SAR/GMDSS facilities in various parts of the world;

.2 If the answer to this is to the affirmative, then action should be taken to identify the areas so lacking of SAR/GMDSS facilities;

.3 The next step would be that a study be carried out to advise countries in the regions concerned and IMO on what action should be taken at the regional level in a manner which, by pooling facilities and acting in a well co-ordinated fashion, efficiency in the delivery of SAR/GMDSS services was maximised and the corresponding cost minimized;

.4 In the light of such a study successfully conducted, that the cost of putting in place the necessary facilities and training the requisite personnel was assessed; and finally

.5 On the basis of such an assessment, that action should be taken to satisfy the financial needs of the scheme.

8.29 The Sub-Committee shared the view that there was a need for IMO to take action to address the problem of inadequate SAR/GMDSS facilities in various parts of the world and agreed that action should be taken to identify the areas lacking of SAR/GMDSS facilities.

8.30 The Sub-Committee, having requested the SAR Working Group to further consider the above 5-step approach relating to the proposal in Resolution No.5 of the Fremantle Conference and to advise it accordingly, having received the group's report (COMSAR 4/WP.3 and Add.1), took action as reflected in the ensuing paragraphs.

8.31 The Sub-Committee agreed that, in view of the reported and well known lack of contact points, SAR services and GMDSS facilities in certain regions of the globe, there was a need for IMO to take action to address the problem of inadequate SAR/GMDSS facilities in the various parts of the world.

8.32 The Sub-Committee noted the Working Group’s views as reflected in paragraphs 32 to 45 of its report (COMSAR 4/WP.3) and, in particular, endorsed the Working Group’s identification of East and West Africa and some parts of Asia and the Pacific, Central and South America and the Mediterranean region as being the areas mainly lacking such facilities. It furthermore agreed that, in considering any action to be taken, priority should be given to the African regions first and to the other regions later in accordance with the outcome of the assessments. The Sub-Committee invited the Committee to endorse this approach and take action as appropriate.

8.33 In this context, the Sub-Committee also noted that a technical co-operation project on the assessment of SAR/GMDSS facilities in Africa, funded by ITF, was currently implemented by IMO which could serve well as the next step in the process of provision of the appropriate facilities in this region and that two regional representation offices in Nairobi and Accra had been established, which could be used for any activities in East, Southern and Western Africa.

8.34 In the light of the above, the Sub-Committee agreed to invite the Committee, in endorsing the 5-step approach, to carry out a study/assessment/analysis and advise countries/regions concerned on what action should be taken at the regional level in a manner, which, by pooling facilities and acting in a well co-ordinated fashion, efficiency in delivery of SAR/GMDSS services is maximized and the corresponding cost minimized.

8.35 The Sub-Committee recommended that, in the light of such a study successfully conducted, that the cost of putting in place the necessary facilities and training the requisite personnel should be assessed; and that on the basis of such an assessment, consideration should be given to setting up a strictly controlled fund through the appropriate IMO bodies and within the existing framework of the Organization.

8.36 The delegation of Italy announced that, to give effect to the proposals of the Fremantle Conference, the Italian Government, recognizing and sharing the concerns related to the significant inadequacies of the SAR services in some areas of the world, in particular in developing countries, had proposed, during the 1997 Valencia SAR/GMDSS Conference, to host a Global SAR Conference in Italy in the coming year 2000, inclusive of a visit to Rome.

The delegation of Italy was pleased to renew, to the Sub-Committee, the proposal to host the above-mentioned Conference in Florence and that, in this respect, official contacts had already been established between the Italian Government and the Organization.

To this effect, the Italian delegation asked the Sub-Committee to support this initiative, which would provide an opportunity to deal in depth with the required enhancement of the SAR system, in particular to establish and maintain worldwide an adequate number of operational rescue co-ordination centres, to cover the needs of international shipping, especially in areas requiring such support.

The delegation of Italy was confident that the Secretariat would satisfactorily address the practical needs related to the Florence Conference, in close synergy with the Italian Government, and the Regional Administration of Tuscany, which was willing to cover part of the expenses and provide for the associated logistical facilities. To supplement the budget, contributions would be sought from other sources.

8.37 The Sub-Committee expressed appreciation to the Italian Government for their offer to hold the Conference and partly finance it and instructed the Secretariat to take appropriate action on condition that IMO's involvement would have no budgetary implications.

SAR co-operation plans for cruise ships

8.38 The Sub-Committee considered document COMSAR 4/8/2 (France) proposing the application of plans for co-operation with SAR services to cruise ships on certain itineraries.

8.39 The ICCL observer acknowledged the usefulness of a plan of co-operation between cruise ships and local SAR services for ships that operate frequently in a given geographical area. They emphasized their view that MSC/Circ.864 was developed for passenger ships on short sea routes, i.e. fixed routes and not for cruise ships transiting multiple SAR regions. They also noted that much of the detail has already been covered by the IAMSAR Manual and the ships' ISM Code documentation;. and proposed that any plan should contain basic information such as:

.1 SAR contact details for areas of operation;

.2 details of SAR services, including capabilities;

.3 information concerning the ship;

.4 contact details for the ships' shore management operational response centre; and

.5 outline of communication exercises for validation of the various components.

For information, examples of various cruise itineraries were highlighted comparing the operation of a short sea ferry which may only transit 2 or 3 different SRRs in any year with one leg of a cruise which could pass through as many as 12 SRRs. To fulfil the requirements of MSC/Circ.864 in respect of multiple approvals and depositing copies of SAR plans would be entirely impractical.

ICCL expressed concern that the arrangements developed for short sea trade are proposed for cruise ships by extension of the definition of fixed routes and suggested that any future requirements be associated with a circular developed specifically for the cruise industry and not by use of MSC/Circ.864.

ICCL also informed the Sub-Committee of the established co-operation between its member companies and the United States Coast Guard on an industry basis for the planning and exercising of SAR matters in United States waters.

8.40 The delegation of the United Kingdom drew the Sub-Committee's attention to document COMSAR 4/8/8 providing information on the use of the SAR Data Provider System and a SAR Co-operation Plans database in the United Kingdom. Under the SAR Data Provider System, MRCC Falmouth has been designated to hold the SAR service copy of the co-operation plan for United Kingdom ships trading through many SAR regions and for similar vessels while in United Kingdom waters. Any RCC (whether inside or outside the United Kingdom SAR region) may contact MRCC Falmouth for details of the ship involved. The United Kingdom database is simple, enabling the user to look up a ship by any of three means of identification (name, call sign and MMSI), and so identify the RCC(s) which hold copies of that ship's SAR Co-operation plan. This database serves as an index.

8.41 During the considerable discussion which ensued, further points were raised, as follows:

.1 cruising in certain areas of the world may entail certain particular risks;

.2 the average age of cruise passengers is higher than that of ro-ro ferry passengers;

.3 search and rescue authorities need to be informed of cruise activities within their regions;

.4 any requirement for SAR co-operation plans should be tailored to the needs of the industry;

.5 it is the responsibility of SAR authorities to devise and of Administrations to approve any SAR co-ordination plans;

.6 the 1995 SOLAS Conference intentionally extended the application of SOLAS regulation V/15(c) to include passenger ships to which chapter I applies:

.7 clarification of the intention of SOLAS regulation V/15(c) is needed; and

.8 careful thought should be given to the issue before any decision is made.

8.42 The Sub-Committee agreed that the SAR data provider system together with the SAR co-operation plans database was a good way to collect and provide information on SAR co-operation plans, which was indeed a problem, in particular for ships passing through many SAR regions. Having an international central database accessible to all MRCCs in the region or even worldwide would be the ideal solution.

8.43 The problem that MRCCs do not know whether passing ships have SAR plans on board, was a flag State implementation or Port State control issue, which should be covered by compliance with the appropriate SOLAS and ISM Code provisions and addressed by the competent authorities concerned.

8.44 The Sub-Committee, having endorsed in principle the French proposal, agreed that the issue related to the interpretation of SOLAS regulation V/15(c), invited the Committee to consider the need for a clarification and instruct the Sub-Committee accordingly. Member Governments and international organizations were invited, taking into account documents COMSAR 4/8/2 and COMSAR 4/8/8 and comments made in plenary, to submit comments and proposals for consideration at COMSAR 5.

8.45 ICCL noted the Sub-Committee's decision and stated that they would submit a proposal addressing the needs of the cruise industry and its involvement with SAR for consideration at COMSAR 5.

Revision of SAR.7/Circ.1 (1998)

8.46 The Sub-Committee considered document COMSAR 4/8/5 (France) and instructed the Secretariat, taking into account proposals made in plenary, to update the information provided therein, and issue it as SAR.7/Circ.2 (1999), revoking SAR.7/Circ.1 (1998). The Committee was invited to endorse this action.

Cellular phones

8.47 The Sub-Committee considered the proposal by France (COMSAR 4/8) on the use of cellular phones on pleasure crafts for SAR services.

8.48 A considerable number of delegations reported on their national approach to this matter and the different development stages of the use of cellular phones for distress/emergency situations. In some countries alert numbers had been agreed upon with the service providers which, in some cases, made even automatic identification and location possible and thereby the use of cellular phones for these SAR services. While accepting the use of cellular phones for these purposes, countries actively promoted the use of VHF for reasons of inadequate area coverage, interference, etc., of cellular phones.

8.49 The Sub-Committee, recognizing even possibilities for the use of mobile phones for the GMDSS, invited Member Governments to submit further comments on the use of cellular phones for SAR services to COMSAR 5.

Implementation of Provisional Global SAR Plan

8.50 The Sub-Committee, considered a proposal of the United States (COMSAR 4/8/1) on an optional tacit acceptance procedure to facilitate completion of the Provisional Global SAR Plan. This procedure, which would be an option to use formal SAR agreements, could facilitate acceptance by Member Governments of the provisional plan, and would make such acceptance, subject to non-objection by neighbouring countries concerned within six months. Pertinent provisions of the

SAR Convention (paragraphs 2.1.3 to 2.1.6) provide for such alternative means of completing the Provisional Global SAR Plan, and should be encouraged.

8.51 It was noted that ICAO followed a similar procedure when amending its regional plans, considering them to be accepted by countries concerned if no objection was received within 3 months of dissemination.

8.52 The Sub-Committee noted that, if MSC 72 would implement such a procedure, the planned SAR Conference in Florence, Italy, late in 2000 could have a good basis to identify gaps in the IMO SAR plan and consider means of what to do to close them.

8.53 The Sub-Committee, therefore, agreed to invite the Committee to reiterate its invitation to Parties to the SAR Convention to notify the Secretary-General of agreements they have concluded on the establishment of search and rescue regions, which would enable the Organization to better identify any action needed to complete an accepted IMO SAR Plan.

8.54 The Sub-Committee further agreed to invite the Committee, subject to its agreement to implement the above tacit acceptance procedure, to request the Secretary-General to circulate the provisional SAR plan to offer Member Governments the opportunity for tacit acceptance of the relevant provisional arrangements into the IMO SAR Plan.

8.55 The delegation of Turkey stated that it could go along with the views of the majority with the understanding that the proposal to implement a tacit acceptance procedure to facilitate the acceptance by States of the Provisional SAR Plans, shall in no way prejudice or circumvent the core articles of the Annex to Hamburg SAR Convention, namely Articles 2.1.4 and 2.1.5, in which it is stipulated that each search and rescue region shall be established by agreement among Parties concerned.

Interim procedures for MRCCs

8.56 In considering the proposal by Norway (COMSAR 4/8/11), the Sub-Committee agreed that this guidance could be used as interim procedures for MRCCs upon receipt of distress alerts until the right procedures were in place everywhere.

8.57 The Sub-Committee, therefore, prepared a draft MSC circular on Interim procedures for a MRCC on receipt of distress alerts, as set out in annex 9 for approval by MSC 72.

Revision of the IAMSAR Manual

8.58 The Sub-Committee noted that MSC 69, having noted document MSC 69/10/1 (ICS) providing a view on the use of the urgency signal (PAN PAN) for broadcasting "man overboard" messages, approved the IAMSAR Manual (COMSAR 3/9/6 and addenda), as amended by the Sub-Committee (COMSAR 3/14/Add.1, annex 16) and further modified in plenary; and instructed COMSAR 4 to consider document MSC 69/10/1 (ICS) and, if appropriate, to prepare amendments to ITU Simplified Radio Regulations and the International Code of Signals. The Committee also instructed COMSAR 4 to consider document MSC 69/3/2 (Greece) for possible inclusion of a proposal into the IAMSAR Manual.

8.59 The Sub-Committee also noted that MSC 70 approved MSC/Circ.895 on Recommendation on helicopter landing areas on ro-ro passenger ships, as prepared by DE 40 (annex 7 to DE 40/12/Add.1), referred to in the footnote to SOLAS regulation III/28.2, and further modified by the group to make it applicable exclusively to ro-ro passenger ships. MSC 70 further agreed that the COMSAR Sub-Committee should amend the IAMSAR Manual in the light of this circular to include HLAs, and instructed it accordingly.

8.60 Considering the contents of MSC/Circ.895, the Sub-Committee recognized that some provisions, on e.g. design and construction, did not belong in the IAMSAR Manual, and those which were appropriate, need to be incorporated in the right manner into the Manual.

8.61 The Sub-Committee agreed that it was either up to it or the JWG to consider, what parts and how and where they should be incorporated. For reasons of time and the need for co-operation with ICAO on aeronautical issues, it was agreed to invite the JWG to consider the appropriate amendments to the IAMSAR Manual at its next session for subsequent consideration by COMSAR 5. Co-ordination with ICAO on the adoption of MSC/Circ.895 was considered appropriate.

8.62 The Sub-Committee further noted that MSC 71, recalling that, at its sixty-ninth session, it had approved the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual, which would supersede the existing IMOSAR and MERSAR Manuals, approved, with a view to revoking the resolutions by which the existing manuals had been adopted or endorsed, a draft Assembly resolution on the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual, prepared by the Secretariat, given in MSC 71/23, annex 21, for submission to the twenty-first session of the Assembly for adoption (MSC 71/23, paragraph 22.45). The annex to the draft Assembly resolution contains procedures for amending and updating the IAMSAR Manual.

8.63 The Sub-Committee, recalling that with regard to the proposal by Greece (MSC 69/3/2) on amendments to the SAR Convention, the Committee had decided to instruct COMSAR 4 to consider the proposal for possible inclusion in the IAMSAR Manual, considered the draft amendments, as set out in paragraph 3 of that document, containing guidance criteria for bilateral SAR plan agreements.

8.64 The majority of the Sub-Committee held the view that inclusion of the proposed text would either:

.1 raise questions on which principles, rules and regulations are referred to;

.2 duplicate what is already in the Manual; or

.3 restrict the application of the median line.

8.65 The delegation of Greece, supported by the delegation of Cyprus, was of the view that the IAMSAR Manual was a technical tool which needed more guidance criteria for bilateral agreements and that the proposal was in consistency with the revised annex of the Hamburg Convention, as approved by MSC 69.

8.66 Concerning the application of the median line, the delegation of Greece underlined that this criterion for the delimitation of SAR regions is a principle generally accepted by the international customary law and by the 1958 Geneva Convention and the 1982 UN Convention on the Law of the Sea. Furthermore, the criterion of the median line was formally agreed to consider applying for the purposes of delimitation of the SAR regions by three major regional IMO Conferences on maritime search and rescue, namely the 1998 Indian Ocean Conference (paragraph 47 of its report), the 1996 Cape Town Conference (paragraph 45 of its report) and the 1997 Seoul Conference for the Pacific Ocean (paragraph 43 of its report).

8.67 The delegation of Turkey stated that, while approving the Hamburg Convention, Greece registered reservations on two core articles of the Annex to the SAR Convention, namely Article 2.1.4 and Article 2.1.5. Greece was the only State among the signatories of the Convention that had placed such a reservation, which in Turkey's view contradicts the letter and spirit of the Convention.

The proposal by Greece exceeds the purpose of the Manual. The Manual should not contain controversial elements which would further complicate it. In the view of Turkey, parties should be

free to finalize their SRR delimitation agreements on any criteria they see fit without any limitations. The SAR Convention provides sufficient guidance to parties in that respect.

The delegation of Turkey strongly believed that the proposal by Greece was of self-serving nature and that the criteria were obviously tabled taking into account a specific region, namely the South Eastern Mediterranean. They would only serve to delay the necessary agreement between the parties concerned in that Region leaving the present problem unresolved.

"Sovereignty" criteria are not compatible with Article 2.1.7 of the Annex of the Convention. Article 2.1.7 stipulates that the delimitation of search and rescue regions is not related to and shall not prejudice the delimitation of any boundary between States.

The "median line" does not apply in many cases. Some States assume SAR responsibilities beyond the median line while some prefer to have smaller SAR regions. Therefore the States concerned should get together and try to reach an agreement on the SAR boundaries in accordance with the SAR Convention.

Given the above, Turkey objected to the proposal by Greece to incorporate criteria in the IAMSAR Manual.

8.68 Following further discussion, and in view of the majority view, the Sub-Committee did not support the proposal in its present form and agreed that the proposed criteria were not appropriate for inclusion in the Manual.

Man overboard distress message

8.69 The Sub-Committee considered document MSC 69/10/1 (ICS), which had been referred to COMSAR 4 for consideration, proposing to revert to the urgency signal in case of man overboard incidents, since the ship was not in distress but only a person.

8.70 After detailed discussion, the Sub-Committee reiterated its previous position, that it should be at the master's discretion, which signal to use, subject to the situation at hand. With respect to the numerous distress signals listed in the International Code of Signals, the master was not obliged to use all possible signals, but would use only those he considered appropriate. In case of a MAYDAY signal, the message following should explain the situation clearly and assistance would be expected and given accordingly.

8.71 The Sub-Committee, noting also that, e.g. in cases of leisure craft, the loss overboard of one person might also bring the craft in distress, did not agree to delete the corresponding amendments to the IAMSAR Manual.

8.72 Draft amendments to the appropriate part of the ITU radio regulations should be developed and submitted to WRC-2002.

OTHER SAR MATTERS

8.73 The Sub-Committee noted that MSC 69 instructed the DE Sub-Committee to consider improvements of thermal protection in certain sea areas, having due regard to the efficiency of search and rescue and the effect of hypothermia.

Adoption of amendments to the SAR Convention

8.74 The Sub-Committee noted that the expanded MSC 69, including delegations of 46 SAR Parties, considered the final text of the proposed amendments to the Annex to the 1979 SAR Convention and adopted them unanimously by resolution MSC.70(69). In adopting resolution MSC.70(69), the expanded Committee determined, in accordance with article III(2)(f) of the SAR Convention, that the amendments referred to above should be deemed to have been accepted on 1 July 1999 (unless, prior to that date, more than one third of the Parties have notified their objections to the amendments) and should enter into force on 1 January 2000, in accordance with the provisions of article III(2)(h) thereof. The Sub-Committee was informed that the amendments referred to above was deemed to have been accepted on 1 July 1999 and would accordingly enter into force on 1 January 2000.

Medical assistance at sea

8.75 The Sub-Committee noted that MSC 70 noted proposals by Germany, France and Sweden (MSC 70/7/2) concerning medical assistance at sea and a recommendation on the carriage of a sealed medical first aid kit for utilization by medical doctors only on certain ro-ro passenger ships and instructed COMSAR 4 to consider document MSC 70/7/2 under its agenda item on "Matters concerning search and rescue, including those related to the 1979 SAR Conference and the introduction of the GMDSS".

The Committee was informed that ILO had adopted several conventions and recommendations on health care at sea; the most recent one being the Health Protection and Medical Care (Seafarers) Convention, 1987 (No. 164). Article 5 of that Convention requires that every ship should carry a medicine chest and that the content of this, as well as the medical equipment to be carried on board, should be prescribed by the competent authority, taking into account such factors as the type of ship, the number of persons on board and the nature, destination and duration of voyages. In doing this, the most recent edition of the International Medical Guide for Ships and the List of Essential Drugs published by WHO should be taken into account. Article 6 requires the ship to carry a ship's medical guide, developed by the national authorities, in order to enable persons, other than a doctor, to care for the sick or injured. Article 7 concerns medical advice by radio or satellite communications. Article 9 provides that ships, which do not carry a doctor on board, should train a person to be in charge of medical care on board. Article 11 requires separate hospital accommodation to be provided on ships with more than 15 seafarers on board, engaged on voyages of more than three days duration. Since medical assistance at sea is normally dealt with by ILO and WHO, ILO would also like to be consulted if further work is carried out on these issues by IMO.

8.76 Having considered the proposal by Germany (COMSAR 4/8/10) in detail and supporting it in principle, the Sub-Committee agreed that its contents needed further consideration, before becoming an instrument for international use. It also might be applicable for other passenger ships, not having a doctor as part of the crew and also according to national regulations to provide care under telemedical advice.

8.77 The Sub-Committee, therefore, instructed the Secretariat to convey COMSAR 4/8/10 to ILO and WHO inviting their comments and participation at COMSAR 5, as appropriate, when the proposal would be considered in depth. Member States were invited to include medical experts in their delegations to COMSAR 5, for that purpose.

8.78 After consulting medical experts in their country, the delegation of the Netherlands considered that there was no additional need for the proposed sealed medical first aid kit. In their view, the master and deck officers provide medical services on board. The addition to the medical supplies and equipment as suggested may lead to mistakes and false impressions of safety, as most general practitioners would not be able nor willing to use them in the case of emergencies.

Telemedical assistance

8.79 The Sub-Committee considered the proposal by France (COMSAR 4/8/6) for a draft MSC Circular on telemedical assistance services and maritime radiocommunications for medical assistance at sea and agreed that this was a most timely development in view of the extension of the SAR Convention to medical assistance at sea, which would enter into force on 1 January 2000. The draft MSC circular would highlight these changes in an appropriate manner.

8.80 The Sub-Committee, therefore, agreed the text of the draft MSC Circular on Medical assistance at sea, with minor editorial amendments, as set out in annex 10, for approval by MSC 72.

SAR and ocean yacht races

8.81 The Sub-Committee considered document COMSAR 4/8/7 (Australia) proposing that organizers of ocean yacht races should have a responsibility to closely liaise with the SAR authorities of the search and rescue regions through which their events would transit and that a number of safety precautions should be the responsibility of the organizers.

8.82 The ISAF observer expressed full support for the proposal by Australia and informed the Sub-Committee of their intention to submit information on actions taken on this matter to COMSAR 5.

8.83 During discussion, the ISAF observer was invited to consider advising certain restrictions on the routes of ocean yacht races.

8.84 The Sub-Committee, fully supporting the Australian proposal, welcomed the intention of the ISAF observer and invited Member Governments and international organizations to submit comments and proposals to COMSAR 5.

9 REVISION OF THE HIGH SPEED CRAFT (HSC) CODE

9.1 The Sub-Committee recalled that:

.1 MSC 66 in May-June 1996 agreed to include a new high priority item "Revision of the HSC Code" in the work programme of the DE (co-ordinator), FP, NAV, COMSAR and SLF Sub-Committees, as a high priority item requiring 3 sessions; and

.2 COMSAR 3, recalling that the International HSC Code was adopted by resolution MSC.36(63) in May 1994 and became mandatory from 1 January 1996, agreed that Chapter 14 of the HSC Code should only require the amendments adopted by the 1995 SOLAS Conference and which are already in force and draft amendments to SOLAS chapter IV approved by MSC 68 (MSC 68/23/Add.1, annex 9), since the Code was adopted at MSC 63.

9.2 The Sub-Committee noted that:

.1 pursuant to the Sub-Committee's instruction (COMSAR 3/14, paragraph 10.5), the Secretariat prepared the above agreed amendments and submitted them to the forty-first session of the DE Sub-Committee (DE 41/2/3, annex). DE 41 noted the proposed draft amendments to chapter 14 of the Code;

.2 DE 42 (8 to 12 March 1999), taking into account that the new HSC Code should be mandatory for craft constructed on and after 1 July 2002 and recognizing that the input needed from all the other participating Sub-Committees was not complete, invited MSC 71 to extend the target completion date for the item "Revision of the HSC Code" by one session, i.e. for finalization at DE 43 in April 2000;

.3 the Secretariat therefore, taking into account that the Sub-Committee will have an opportunity to review the appropriate part of the Code at the forthcoming session, prepared a preliminary draft revised chapter 14 - Radiocommunications, given at the annex to document COMSAR 4/9; and

.4 MSC 71 concurred with the views of FP 43, SLF 42 and DE 42 that the best way to introduce the HSC Code in its revised form would be by developing a new edition of the Code applicable to new high-speed craft and, at the same time, amending SOLAS Chapter X so as to refer to the new Code for new craft and to the existing Code for existing craft, with the verbal form "shall" replacing the recommendatory "should" in the new Code. The Committee also concurred with DE 42 opinion that, provided there was consistency, application provisions could be included in both SOLAS Chapter X and the HSC Code.

9.3 The Sub-Committee also noted that MSC 71 considered the proposed procedure for approval, adoption and entry into force of amendments to SOLAS Chapter X and the new HSC Code and decided as that DSC 5 in February 2000, DE 43 in April 2000 and the intersessional SLF working group meeting concurrently with DE 43 should propose final additions and adjustments to the draft of the new HSC Code. COMSAR 4 in July 1999 and NAV 45 in September 1999 should also contribute, as appropriate.

9.4 Taking into account the information given in paragraphs 9.1 to 9.3, the Sub-Committee considered the annex to COMSAR 4/9 and agreed on the draft chapter 14 of the HSC Code, as amended, given in annex 11.

9.5 The Sub-Committee instructed the Secretariat to convey annex 11 to DE 43 for consideration and action, as appropriate.

9.6 The Committee was invited to delete the item “Revision of the HSC Code” from the Sub-Committee’s work programme, as the work had been completed.

10 DEVELOPMENT OF GUIDELINES FOR SHIPS OPERATING IN ICE-COVERED WATERS

10.1 The Sub-Committee noted that MSC 68 agreed:

.1 to include in the work programmes of the BLG, FP, COMSAR, NAV, SLF and STW Sub-Committees a new low priority item on “Development of a code on polar navigation”, with two sessions needed to complete the item; and

.2 that this item should be included in the provisional agendas of the aforementioned Sub-Committees’ first session following preparation of the draft Polar Code by the DE Sub-Committee.

Further, MSC 68 decided not to proceed with making the Code mandatory at this stage.

10.2 The Sub-Committee also noted that:

.1 DE 41 agreed to establish a correspondence group under co-ordination of Canada to consider this matter and recommended the Committee to select this item for inclusion in the agenda of COMSAR 4;

.2 MSC 71 agreed to a new title of the item "Development of guidelines for ships operating in ice-covered waters" (MSC 71/23, paragraph 20.43). The Committee instructed the DE (co-ordinator), BLG, FP, COMSAR, NAV, SLF and STW Sub-Committees to conduct their work on this issue in accordance with the approved framework with immediate effect, and invited the MEPC to concur with this course of action. It also requested the Secretariat to convey its decisions on the issue to the aforementioned sub-committees and to the correspondence group established by DE 41 for appropriate action; and

.3 MSC 71 agreed to the following framework to be used by the correspondence group and the sub-committees involved as a basis for further work on this issue:

.1 recommendatory guidelines should be developed only for SOLAS 74 ships operating in ice-covered waters, for dissemination under cover of an MSC circular, unless the DE Sub-Committee agrees that a different format would be more appropriate and the Committee so agrees;

.2 the application of the guidelines in areas north of 60ºN should be resolved so that ice-free waters in those areas are not covered;

.3 Antarctic waters are to be excluded from the application of the guidelines, unless Antarctic Treaty members decide otherwise;

.4 each sub-committee involved should conduct a thorough review of the parts of the guidelines falling under its purview to determine what value is being added by establishing the various proposed requirements, whether the issues in the guidelines are addressed elsewhere, and the implications of such requirements;

.5 any provisions in the current guidelines, which are inconsistent with international law, including the provision for prior notification, should be removed;

.6 any clauses that appear to indicate that they are mandatory should be redrafted in such a way that their recommendatory nature is clearly demonstrated;

.7 only provisions additional to existing SOLAS requirements taking account of the climatic conditions of ice-covered waters should be included and the need for such additional provisions should be clearly demonstrated;

.8 whether or not barges should be included in the guidelines was a matter to be discussed; and

.9 any survey and certification provisions, which might be different to the corresponding SOLAS requirements, should also be discussed.

10.3 The Sub-Committee noted that no submission had been received under this agenda item and, recalling the framework agreed by MSC 71 (paragraph 10.2.3) for further work on this issue, agreed that the requirements on radiocommunication set out in SOLAS Chapter IV were sufficient for ships operating in ice-covered waters but that consideration might be given to operational aspects such as reception of maritime safety information, in particular information on ice. The Sub-Committee was also of the opinion that search and rescue matters should be considered in this context.

10.4 The Sub-Committee instructed the Secretariat to convey this section of the report to DE 43.

11 WORK PROGRAMME AND AGENDA FOR COMSAR 5

11.1 The Sub-Committee noted that MSC 69, recalling its discussion regarding the issuance of circulars by sub-committees first and their request to the Committee to subsequently endorse the action taken, agreed, in principle, that the Guidelines should be amended to the effect that the sub-committees should not, as a rule, issue circulars which are supposed to be issued only after approval by the Committees. However, this could be permitted in exceptional cases as may be prescribed in the guidelines.

11.2 The Sub-Committee also noted that MSC 71 and MEPC 43 had approved the draft revised Guidelines on the organization and method of work, as amended, for dissemination by means of MSC/Circ.932/MEPC/Circ.367. The Secretariat was authorized to restructure, if necessary, the Guidelines in a more logical and sequential manner, after they have also been approved by the MEPC (MSC 71/23, paragraph 19.11).

11.3 The Sub-Committee recalled that MSC 69, MSC 70 and MSC 71 had included in the Sub-Committee's work programme the following new items:

No.	Item	Target completion date/number of sessions needed for completion	Reference
8	Casualty analysis (co-ordinated by FSI)	Continuous	MSC 70/23, paragraph 9.17 and 20.4
L.3	Development of criteria for general communications	2 sessions	MSC 69/22, paragraph 20.36
L.4	Harmonization of GMDSS requirements for radio installation on board SOLAS ships	2 sessions	MSC 71/23, paragraph 20.23

11.4 The Sub-Committee also recalled that MSC 71 had agreed to a new title of the item "Development of guidelines for ships operating in ice-covered waters" in the Sub-Committee's work programme instead of the item "Development of a code on polar navigation"; and "Revision of the IAMSAR Manual" for item 6.3 of the Sub-Committee's work programme and also agreed that this should be a continuous item.

11.5 The Sub-Committee noted that MSC 71 instructed COMSAR 4 to include in the provisional agenda for COMSAR 5 an item on "IMO Standard Marine Communication Phrases".

11.6 The Sub-Committee also noted that in the course of the discussions of the Sub-Committee's work programme, MSC 71 was informed of arrangements to reduce the gap between the meetings of the Sub-Committee between 2000 and 2002, the Sub-Committee having been allocated one session during the forthcoming biennium 2000-2001. Any urgent work necessitated in the interim might be tasked to intersessional meeting(s) of *ad hoc* working group(s).

11.7 The Sub-Committee noted document COMSAR 4/11 and Corr.1 (France) proposing the inclusion in the Sub-Committee's work programme of a new item on "Developments in maritime radiocommunication systems and technology", which was supported in principle by a number of delegations, and invited France to submit their proposal to the Committee for consideration and action, as appropriate.

11.8 The Sub-Committee decided that items identified as continuous in its work programme would be included for two consecutive sessions. They would then be reconsidered by the Sub-Committee for revision. If the situation of any such item was then deemed to be necessary, it would be submitted to the Committee, with justification, by the Sub-Committee.

11.9 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 4/WP.5) based on that approved by MSC 71 (COMSAR 4/2/3, annex 1) and prepared a revised work programme and provisional agenda for COMSAR 5, as set out in annex 13, 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.1.1	-	review of SOLAS regulation IV/15.7 and resolution A.702(17) on Radio maintenance guidelines for the GMDSS related to sea areas A3 and A4;
.1.2	item H.4		Ro-ro ferry safety: low-powered radio homing devices for liferafts; and
.1.3	item H.6		Revision of HSC Code;

.2 extend the target completion date of the following work programme items:

2.1	item 6.1	Harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters; and
.2.2	item 7	Emergency radiocommunications: false alerts and interference;

.3 replace the number of sessions needed for completion by a target completion date, for the following work programme items:

.3.1	item H.3	IMO Standard Marine Communication Phrases - 2000;
.3.2	item H.4	Review of the joint IMO/IHO/WMO MSI Manual – 2000;

	Item H.5	Development of criteria for general communications – 2002; and
.3.3	item L.3	Harmonization of GMDSS requirements of radio installations on board SOLAS ships - 2002;

.4 include a new item:

.4.1	item H.6	Procedures for responding to DSC alerts - 2 sessions.

Arrangements for the next session

11.10 The Sub-Committee anticipated that working groups on the following subject may be established at COMSAR 5:

.1 GMDSS operational matters;

.2 SAR matters; and

.3 technical matters.

Date of the next session

11.11 The sub-Committee noted that its fifth session had been tentatively scheduled to take place from 11 to 15 December 2000.

12 ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 2000

In accordance with rule 16 of the Rules of Procedure of the Maritime Safety Committee, the Sub-Committee unanimously re-elected Mr. V. Bogdanov (Russian Federation), as Chairman and Mr. U. Hallberg (Sweden) as Vice-Chairman for 2000.

13 ANY OTHER BUSINESS

Improving ship/shore communications

13.1 The Sub-Committee noted that:

.1 MSC 70, as requested by the FAL Committee, agreed to give high priority to the ship/shore communications aspect and instructed the DSC Sub-Committee, in co-operation with other sub-committees, as appropriate, to do the same, including the development of checklists and manuals, where appropriate; and

.2 DSC 4 having noted MSC 70's instructions agreed to give high priority to the ship/shore communications aspect in its future work.

Performance standards for radiocommunication equipment

13.2 The Sub-Committee also noted that MSC 70 adopted resolution MSC.80(70) on Adoption of new performance standards for radiocommunication equipment, developed by COMSAR 3 with

respect to performance standards for On-Scene (Aeronautical) Two-Way VHF Radiotelephone Apparatus.

Safety of passenger submersible craft

13.3 The Sub-Committee recalled that COMSAR 1, taking into account that COMSAR 2 was tentatively scheduled to be held from 27 to 31 January 1997 and DE 40 from 10 to 14 February 1997, invited Member Governments to send their experts on submersible craft communications to DE 40, for consideration of the complicated text of the draft guidelines, and to submit comments and proposals thereon to COMSAR 2 in order to enable the Sub-Committee to provide advice to DE 40. The Committee was invited to extend the target completion date of the item to 1997.

13.4 The Sub-Committee noted that:

.1 COMSAR 2, COMSAR 3 and DE 40 did not consider the matter because the item "Safety of passenger submersible craft" had not been included in their provisional agenda. The report of the DE correspondence group (DE 40/11/4) was sent to DE 40 under the item "Any other business" for information;

.2 the DE Sub-Committee, at its forty-first session (9 to 13 March 1998), referred section 2.4.6 of the draft guidelines, as given in the annex to document DE 40/11/4, to the Sub-Committee for its comments to be considered at DE 43 scheduled for April 2000;

.3 DE 42 agreed to invite COMSAR 4 to deal with this matter, as its input is necessary in order to be able to finalize the item at DE 43; and

.4 taking into account the above and, in accordance with paragraph 27 of the Guidelines on the organization and method of work (MSC/Circ.816/MEPC/Circ.331), the Secretariat submitted paragraph 2.4.6 of the draft guidelines, for the Sub-Committee's consideration and comments.

13.5 The Sub-Committee considered document COMSAR 4/13/1 (Secretariat) and approved section 2.4.6 on communications of the draft Guidelines for the design, construction and operation of passenger submersible craft, given in annex 12.

13.6 The Sub-Committee instructed the Secretariat to convey the approved section 2.4.6 to DE 43.

Uniform wording for referencing IMO instruments

13.7 The Sub-Committee noted that:

.1 MSC 71, having recalled resolution A.825(19) - "Procedures for adoption and amendment of performance standards for radio and navigational equipment", agreed that a new Assembly resolution should be developed resolving that the function of adopting any performance standards, as well as amendments to such standards falling under the purview of the Committee, should be performed by the Maritime Safety Committee on behalf of the Organization. When adopting such a generally-worded resolution, the Assembly should be invited to revoke resolution A.825(19). The Committee also agreed to invite MEPC to consider preparing a similar Assembly resolution in respect of performance standards under that Committee's purview;

.2 having considered the proposed draft Assembly resolution (MSC 71/WP.16), the Committee, decided that the draft resolution should also deal with performance

standards and specifications concerning marine pollution prevention and control and, subsequently, approved, subject to MEPC's concurrent decision, the draft Assembly resolution on Procedure for adoption of, and amendment to, performance standards and technical specifications, set out in annex 15 to MSC 71/23/Add.1; and

.3 MSC 71 approved the draft Guidelines on methods for making reference to IMO and other instruments in IMO conventions and other mandatory instruments, as set out in annex 16 to MSC 71/23/Add.1, for dissemination by means of an appropriate circular. The MEPC was invited to consider the draft Guidelines and, if satisfied, approve them so that they may be issued as a joint MSC/MEPC circular.

Cross-reference of regulations in, and between, IMO instruments

13.8 The Sub-Committee noted MSC 71, with a view to improving, in the future, the situation regarding cross-reference of regulations in, and between, IMO instruments, agreed to:

.1 request the sub-committees, in the course of preparation of amendments to IMO instruments, to also check the references in the provisions of the instruments concerned which may not be within their purview; and

.2 invite Member Governments to inform the Secretariat, at an early stage, of any modifications to cross-references they would identify when introducing new amendments in their legislation, in order that necessary rectification could be made by the Secretariat (MSC 71/23, paragraph 16.10).

Satellite telecommunication companies

13.9 The Sub-Committee noted information on Iridium and other satellite telecommunication companies provided in document COMSAR 4/13 (Australia).

Avoiding loss of vital aural watch by ships participating in Vessel Traffic Services in controlled areas

13.10 The Sub-Committee noted information on avoiding loss of vital aural watches by ships participating in vessel traffic services in controlled areas provided in document COMSAR 4/INF.6 (United States) and invited the United States to submit it as a substantive paper to the Committee requesting that the issue be included in the Sub-Committee's work programme.

Safe boarding of ro-ro passenger ships

13.11 The Sub-Committee noted information on safe boarding of ro-ro passenger ships provided in document COMSAR 4/INF.7 (Germany) and was of the opinion that this matter was more relevant to the DE Sub-Committee to deal with.

Presentation of the 1998 AMVER awards

13.12 The Sub-Committee was informed of a presentation of the 1998 United States Coastguard AMVER awards to shipping companies in the United Kingdom, which took place at IMO Headquarters at the time of its present session.

Expression of condolences

13.13 The Sub-Committee, having been informed of the death of Colonel Reginald Billington, retired Head of the Wireless Telegraphy Section of the United Kingdom Post Office, who pioneered

the development of satellite communications for shipping by, *inter alia*, presiding over the International Conference on the Establishment of International Maritime Satellite system 1975-1976, expressed its sincere condolences to the family.

Appreciations

13.14 The Sub-Committee expressed appreciation to:

.1 Captain N. Giomelakis HCG, Technical Maritime Attaché, Greek Embassy (on return home);

.2 Mr. Lothar Göldner, Germany (on impending retirement);

.3 Mr. Mohamed Ahmed A. Amer, Director General, Navigational Warning Centre, Ismailia, Egypt (on retirement);

.4 Mr. Jorgen Rasmussen, Head, Navigation Section, Maritime Safety Division (on return home).

14 ACTION REQUESTED OF THE COMMITTEE

14.1 The Committee, at its seventy-second session, is invited to:

.1 endorse the Sub-Committee's agreement to the actions to be taken by the NAVTEX Co-ordinating Panel (Paragraph 3.9 and annex 2);

.2 endorse the Sub-Committee's action in issuing COMSAR/Circ.20 on List of NAVAREA Co-ordinators (paragraph 3.24)

.3 approve draft MSC Circular on Amendments to resolution A.706(17) on World Wide Navigation Warning Service (paragraph 3.36 and annex 3);

.4 approve draft MSC Circular on Amendments to NAVTEX Manual (paragraph 3.37 and annex 4);

.5 authorize the Sub-Committee to prepare necessary amendments to SOLAS regulation IV/3 (paragraph 3.39);

6. endorse the Sub-Committee's action in instructing the Secretariat to prepare draft amendments to SLS.14/Circ.115 for submission to MSC 72 (paragraph 3.41);

.7 endorse the Sub-Committee's action in issuing COMSAR/Circ.21 on Procedure for responding to DSC distress alerts by ships (paragraph 3.45);

.8 endorse the Sub-Committee's action in instructing the Secretariat to convey COMSAR/Circ.21 and paragraphs 3.42 to 3.50 of this report to ITU WP8B for information and possible action (paragraph 3.50);

.9 note that a draft Assembly resolution on Criteria for provision of mobile-satellite services for the Global Maritime Distress and Safety System was submitted directly to the twenty-first session of the Assembly for adoption, as authorized by MSC 70 (paragraph 3.53 and annex 5);

.10 endorse the action taken in inviting ICAO to co-operate with IMO in addressing how changes made at WRC-97 might be amended at a future WRC and in instructing the Secretariat to take appropriate action (paragraph 5.15);

.11 endorse the Sub-Committee's action in instructing the Secretariat to bring the draft Assembly resolution (see annex 5) to the attention of the International Mobile Satellite Organization (IMSO) (paragraph 6.10);

.12 authorize the Sub-Committee to consider the implications of and, subsequently, prepare amendments to the SOLAS Convention for the purpose of making the carriage on board ships of Volume III of the IAMSAR Manual mandatory (paragraph 8.11);

.13 approve draft COMSAR Circular on Guidance on data fields for SAR databases (paragraph 8.12 and annex 7);

.14 approve draft COMSAR Circular on Guidance for Central Alerting Posts (CAPs) (paragraph 8.14 and annex 8);

.15 note the Sub-Committee's view on the composition of the Joint IMO/ICAO Working Group on Harmonization of Aeronautical and Maritime SAR Procedures (paragraphs 8.16 to 8.18);

.16 endorse the Sub-Committee's identification of East and West Africa and some parts of Asia and the Pacific, Central and South America and the Mediterranean regions as being the areas mainly lacking SAR and GMDSS facilities and agree that, in considering any action to be taken, priority should be given to the African regions first and to the other regions later (paragraph 8.32);

.17 endorse the 5-step approach set out in paragraph 8.28, agree to carry out a study/assessment/analysis on the matter and advice countries/regions concerned and IMO on what action should be taken at the regional level (paragraphs 8.28 and 8.34);

.18 consider the need for clarification of SOLAS regulation IV/15(c) and instruct COMSAR 5 accordingly (paragraph 8.42);

.19 agree that an optional tacit acceptance procedure, similar to the procedure used by ICAO, to facilitate completion of the global SAR plan may be used by Parties to the SAR Convention (paragraphs 8.50 to 8.52);

.20 reiterate its invitation to Parties to the SAR Convention to notify the Secretary-General of agreements they have concluded on the establishment of search and rescue regions in accordance with paragraph 2.1.4 of Chapter 2 of the Annex to the Convention (paragraph 8.53);

.21 subject to agreement under sub-paragraph .16 above, request the Secretary-General to circulate the provisional SAR plan to offer Member Governments the opportunity for tacit acceptance of the relevant provisional arrangements into the global SAR plan (paragraph 8.54);

.22 approve draft MSC Circular on Interim procedures for a MRCC on receipt of distress alerts (paragraph 8.57 and annex 9);

.23 approve draft MSC Circular on Medical assistance at sea (paragraph 8.80 and annex 10); and

.24 approve the report in general.

14.2 In reviewing the work programme of the Sub-Committee, the Committee is invited to consider the revised work programme suggested by the Sub-Committee (annex 11), in general and, in particular, to:

.1 delete item "Review of SOLAS regulation IV/15.7 and resolution A.702(17) on Radio maintenance guidelines for the GMDSS related to sea areas A3 and A4", as the work had been completed (paragraph 3.22);

.2 include the work programme item "Review of the Joint IMO/IHO/WMO MSI Manual" in the provisional agenda for COMSAR 5 (paragraph 3.35);

.3 include, in the Sub-Committee's work programme, a high priority item "Procedure for responding to DSC alerts", with two sessions needed for completion (paragraph 3.49);

.4 include the work programme item "Development of criteria for general communications" in the provisional agenda for COMSAR 5 and make this a high priority item (paragraph 3.59.1);

.5 delete item "Ro-ro ferry safety: low-powered radio homing devices for liferafts", as the work has been completed (paragraph 4.10);

.6 instruct COMSAR 5 to consider the preparation of guidelines on annual testing of L-band satellite EPIRBs under agenda item "Emergency radiocommunications: false alerts and inteference" (paragraph 7.3);

.7 extend the target completion date for item "Emergency radiocommunications: false alerts and interference" to 2000 (paragraph 7.13);

.8 extend the target completion date for item "Harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters" to 2000 (paragraph 8.4);

.9 delete item "Revision of the HSC Code", as the work has been completed (paragraph 9.6);

.10 include, in the provisional agenda for COMSAR 5, item "IMO Standard Marine Communication Phrases", as instructed by MSC 71 (paragraph 11.5);

.11 replace the number of sessions needed for completion by a target completion date, for the following work programme items:

.1 "IMO Standard Marine Communication Phrases" – 2000;

.2 "Review of the Joint IMO/IHO/WMO MSI Manual" – 2000;

.3 "Development of criteria for general communications" – 2002; and

.4 "Harmonization of GMDSS requirements of radio installations on board SOLAS ships" – 2002.

14.3 The Committee is also invited to approve the proposed agenda for the Sub-Committee's fifth session (annex 11) which has been developed using the agenda management procedure.

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ANNEX 1

AGENDA FOR THE FOURTH SESSION INCLUDING A LIST OF DOCUMENTS

1 Adoption of the agenda

COMSAR 4/1	-	Secretariat	-	Provisional agenda for the fourth session
COMSAR 4/1/1	-	Secretariat	-	Annotations to the provisional agenda

2 Decisions of other IMO bodies

COMSAR 4/2	-	Secretariat	-	Decisions of the sixty-ninth session of the Maritime Safety Committee
COMSAR 4/2/1	-	Secretariat	-	Decisions of the seventieth session of the Maritime Safety Committee
COMSAR 4/2/2	-	Secretariat	-	Decisions of the sixth and seventh sessions of the Sub-Committee on Flag State Implementation, the forty-first and forty-second sessions of the Sub-Committee on Ship Design and Equipment, the forty-fourth session of the Sub-Committee on Safety of Navigation and the thirtieth session of the Sub-Committee on Standards of Training and Watchkeeping
COMSAR 4/2/3	-	Secretariat	-	Decisions of the seventy-first session of the Maritime Safety Committee

3 Global Maritime Distress and Safety System (GMDSS)

COMSAR 4/3	-	Denmark	-	Maritime general communications in A1/A2 sea areas where no coast stations are offering VHF/MF public correspondence services
COMSAR 4/3/1 and Corr.1	-	France	-	General GMDSS communications
COMSAR 4/3/2	-	IHO	-	List of NAVAREA Co-ordinators
COMSAR 4/3/3	-	IHO	-	IHO/IMO World-Wide Navigational Warning Service Guidance document
COMSAR 4/3/4	-	United States	-	Marine navigation information available on the Internet

COMSAR 4/3/5	-	Denmark	-	Draft Assembly resolution on Criteria for provision of mobile-satellite communications for the Global Maritime Distress and Safety System
COMSAR 4/3/6	-	France	-	Situation of hydrographic services in the NAVAREA II area (eastern Atlantic)
COMSAR 4/3/7	-	Secretariat	-	Matters relating to the GMDSS Master Plan
COMSAR 4/3/8	-	France	-	Proposed amendment to the performance standards for narrow-band direct printing telegraph equipment for the reception of navigational and meteorological warnings and urgent information
COMSAR 4/3/9	-	IHO	-	Report of Caribbean Sea - Gulf of Mexico Hydrographic Commission (CGMHC) Study Team
COMSAR 4/3/10	-	Australia	-	Operational and technical co-ordination provisions of Maritime Safety Information (MSI) services
COMSAR 4/3/11	-	Australia	-	Satellite EPIRB registration information
COMSAR 4/3/12	-	Secretariat	-	Exemptions from radio requirements
COMSAR 4/3/13	-	Chairman, International NAVTEX Co-ordinating Panel	-	Proposed amendments to the NAVTEX Manual
COMSAR 4/3/14	-	CIRM	-	Review of SOLAS regulation IV/15.7 and resolution A.702(17) on Radio maintenance guidelines for the GMDSS related to sea areas A3 and A4
COMSAR 4/3/15	-	ICS	-	General radiocommunications in A1 and A2 sea areas where no coast stations are offering VHF/MF public correspondence services
COMSAR 4/3/16	-	Norway	-	Flowcharts to be used by ships upon reception of DSC distress alerts
COMSAR 4/3/17	-	Norway	-	Transmission of DSC distress relay alerts

COMSAR 4/3/18	-	United States	-	Draft Assembly resolution on Criteria for provision of mobile-satellite communications for the Global Maritime Distress and Safety System
COMSAR 4/INF.3	-	Chairman, IMO International SafetyNET Co-ordinating Panel	-	Promulgation of Maritime Safety Information
COMSAR 4/INF.4	-	Sweden	-	Report of the 9th BBSRC/GMDSS
COMSAR 4/INF.8	-	Netherlands	-	Ninth North Sea Regional Co-ordination Conference under the GMDSS (9th NRC/GMDSS)
COMSAR 4/INF.10	-	Norway	-	Propagation of DSC signals in the MF and HF bands
MSC 71/22/5	-	Denmark	-	General communications in A1 and A2 sea areas where no coast radio stations offer VHF/MF public correspondence services

4 Ro-ro ferry safety: Low powered homing devices for liferafts

COMSAR 4/4	-	Germany	-	Ro-ro ferry safety: Low powered homing devices for liferafts
COMSAR 4/4/1	-	Sweden	-	Low powered radio homing devices - Continuation of the development process
COMSAR 4/4/2	-	Netherlands	-	Ro-ro ferry safety: Low powered homing devices for liferafts

5 ITU maritime radiocommunication matters

COMSAR 4/5 and Corr.1	-	France, Canada and COSPAS-SARSAT	-	Protection of frequency band 406 MHz at WRC-2000
COMSAR 4/5/1	-	United States	-	Generic use of the bands 1530-1544 MHz and 1625-1645.5 MHz by the mobile-satellite service
COMSAR 4/5/2	-	Secretariat	-	Liaison statement from Working Party 8B

6 Satellite services (Inmarsat and COSPAS-SARSAT)

COMSAR 4/6	-	Australia	-	Inmarsat-C Vessel Monitoring Systems (VMSs) and their impact upon SAR

COMSAR 4/6/1 and Corr.1	-	France, Canada and COSPAS-SARSAT	-	Special series of IMO circulars for COSPAS-SARSAT
COMSAR 4/6/2	-	United States	-	Shore-to-ship communications during distress
COMSAR 4/6/3	-	COSPAS-SARSAT	-	Registration and coding of 406 MHz EPIRBs
COMSAR 4/INF.9	-	COSPAS-SARSAT	-	Status of the COSPAS-SARSAT Programme

7 Emergency radiocommunications: false alerts and interference

COMSAR 4/7	-	Australia	-	Operational performance of the MF/HF DSC system
COMSAR 4/7/1	-	United States	-	Clarifications of certain requirements on IMO performance standards for GMDSS equipment
COMSAR 4/7/2	-	United States	-	Prevention of false alerts and unnecessary relays in order to eliminate the unnecessary sounding of alarms on ship and coast radio stations
COMSAR 4/7/3	-	Japan	-	Measures to reduce the number of false distress alerts for practical use of the GMDSS
COMSAR 4/7/4	-	COSPAS-SARSAT	-	Interference in the 406-406.1 MHz frequency band

8 Matters concerning search and rescue, including those related to the 1979 SAR Conference and the introduction of the GMDSS

COMSAR 4/8	-	France	-	Exchange of views between SAR services on the utilization of mobile telephones
COMSAR 4/8/1	-	United States	-	Routeing distress alerts
COMSAR 4/8/2 and Corr.1	-	France	-	Application of plans for co-operation with SAR services to certain cruise ships
COMSAR 4/8/3 and Corr.1	-	France	-	Clarification of the relationship between search and rescue (SAR) and maritime safety information (MSI)

COMSAR 4/8/4	-	Secretariat	-	Report of the sixth ICAO/IMO Joint Working Group on Harmonization of Aeronautical and Maritime Search and Rescue
COMSAR 4/8/5	-	France	-	Revision of SAR.7/Circ. - List of IMO documents and publications which should be held by a maritime rescue co-ordination centre (MRCC)
COMSAR 4/8/6	-	France	-	Medical assistance at sea and importance of the role of telemedical assistance service
COMSAR 4/8/7	-	Australia	-	Mutual responsibility and the International Convention on Maritime Search and Rescue, 1979
COMSAR 4/8/8	-	United Kingdom	-	SOLAS regulation V/15(c) and SAR Co-operation Plans
COMSAR 4/8/9	-	Secretariat	-	Indian Ocean Conference on Maritime Search and Rescue (SAR) and the Global Maritime Distress and Safety System (GMDSS)
COMSAR 4/8/10	-	Germany	-	Medical assistance at sea
COMSAR 4/8/11	-	Norway	-	Reception of a distress alert from outside own Search and Rescue Region
COMSAR 4/INF.2	-	Secretariat	-	Report of the sixth ICAO/IMO Joint Working Group on Harmonization of Aeronautical and Maritime Search and Rescue
COMSAR 4/INF.5	-	Secretariat	-	Indian Ocean Conference on Maritime Search and Rescue (SAR) and the Global Maritime Distress and Safety System (GMDSS)
MSC 69/3/2	-	Greece	-	Proposed amendments to the 1979 SAR Convention
MSC 69/10/1	-	ICS	-	Proposed amendments to the IAMSAR Manual
MSC 70/7/2	-	Germany, France and Sweden	-	Medical assistance at sea

9 Revision of the HSC Code

COMSAR 4/9	-	Secretariat	-	Revision of the HSC Code

10 Development of guidelines for ships operating in ice-covered waters

No documents submitted

11 Work programme and agenda for COMSAR 5

COMSAR 4/11 and Corr.1	-	France	-	Technological watch: development of maritime radiocommunications systems and technology

12 Election of Chairman and Vice-Chairman for 2000

No documents submitted

13 Any other business

COMSAR 4/13	-	Australia	-	Iridium and other Satellite Telecommunications Companies
COMSAR 4/13/1	-	Secretariat	-	Safety of passenger submersible craft. Communications
COMSAR 4/INF.6	-	United States	-	Avoiding loss of Vital Aural Watches by Ships Participating in Vessel Traffic Services in Controlled Areas
COMSAR 4/INF.7	-	Germany	-	Safe boarding of ro-ro passenger ships

14 Report to the Maritime Safety Committee

COMSAR 4/INF.1	-	List of participants
COMSAR 4/WP.5	-	Work programme

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ANNEX 2

Actions to be taken by the NAVTEX Co-ordinating Panel to address the issues of concern highlighted in the responses to the NAVTEX Panel/ International Chamber of Shipping questionnaire on NAVTEX effectiveness

1 Liaise with IHO to have the NAVAREA Co-ordinators assess whether there is likely to be a problem with over-running time slots in their areas and consider the need to change the B1 character/time slot of certain stations to give a better time separation between adjacent stations. The NAVTEX Panel will issue new characters where this problem is apparent. In future, new stations will not be issued with B1 characters which are consecutive with those of adjacent stations.

2 Work with Administrations to:

.2.1 consider introducing systems which optimize the content of broadcasts within the allowed 10 minute time slots, as a function of message priority, type, length, etc.;

.2.2 cease non-English language broadcasts on 518 kHz forthwith and set up national language broadcasts on 490 kHz or 4209.5 kHz as required;

.2.3 restrict the power output from their transmitters to that required to cover the designated area, particularly at night;

.2.4 have inspectors check the settings on NAVTEX and SafetyNET receivers and, where necessary, explain the optimum settings to users during Port State Inspections; and

.2.5 in areas where the initial trials of NAVTEX took place, and where the B1 characters are at variance with the time slots specified in the NAVTEX manual, liaise with the Panel to bring them into line. This should free up slots, which can then be re-allocated if necessary.

3 Continue to liaise with WMO regarding the promulgation, particularly the length and format, of meteorological information over NAVTEX.

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ANNEX 3

DRAFT MSC CIRCULAR

AMENDMENTS TO RESOLUTION A.706(17)

WORLD-WIDE NAVIGATIONAL WARNING SERVICE

The Maritime Safety Committee, [at its seventy-second session (17 to 26 May 2000)], adopted the annexed amendments to resolution A.706(17) - World-Wide Navigational Warning Service, in accordance with the amendment procedure prescribed in annex 2 thereto, and decided they should enter into force on 1 January 2002.

ANNEX

**AMENDMENTS TO RESOLUTION A.706(17) -
WORLD-WIDE NAVIGATIONAL WARNING SERVICE**

1 The amendments are:

.1 paragraph 1, Introduction, delete the words "HF Morse (A1A)";

.2 insert new paragraph 2.1.1 and renumber the remaining paragraphs. The new 2.1.1 will read "Inmarsat - Means the Organization established by the Convention on the International Maritime Satellite Organization (Inmarsat) adopted on 3 September 1976";

.3 delete paragraph 3.1.1.3 - HF Morse (A1A);

.4 delete paragraphs 3.2.2 and 3.2.2.1 - Manual System (HF A1A) and renumber 3.2.2.2 as 3.2.1.3 and 3.2.3 as 3.2.2;

.5 delete paragraph 4.2.1.3.7 and renumber remaining paragraphs;

.6 paragraph 4.2.2.1, in the penultimate line, change the word desirable to read "necessary";

.7 paragraph 6.1.1.1, amend to read ".... well established national hydrographic ....";

.8 paragraph 6.1.1.2, amend to read ".... communications links, e.g. telex, facsimile, e-mail, etc.,";

.9 paragraph 6.2.1.4, amend to read ".... in accordance with the Joint IMO/IHO/WMO Manual on Maritime Safety Information (MSI) for the standardization of texts ....";

.10 paragraph 6.2.1.8, amend to read ".... as described in paragraph 4.2.1.3.9, or other scheduled operations .... and 4.2.1.3.10, pass such information ....";

.11 paragraph 6.3.1.1, amend to read ".... well established national hydrographic ...".;

.12 add new paragraph 6.4.1.6, "monitor the broadcasts which they originated to ensure that the messages have been correctly transmitted."; and

.13 annex 2, paragraph 4, amend the last line to read ".... will entrust the Sub-Committee on Radiocommunications and Search and Rescue with ....".

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ANNEX 4

DRAFT MSC CIRCULAR

AMENDMENTS TO THE NAVTEX MANUAL

The Maritime Safety Committee, [at its seventy-second session (17 to 26 May 2000)], adopted the annexed amendments to the NAVTEX Manual, in accordance with the amendment procedure prescribd in annex 6 thereto, and decided they should enter into force on 1 January 2002.

ANNEX

AMENDMENTS TO NAVTEX MANUAL

1 The amendments are:

.1 Contents on page v, for Annex 4, change to read ……A.706(17), as amended, - World-Wide Navigational……..;

.2 paragraph 3 of the Introduction, change to read ……resolution A.706(17), as amended, and the WMO Manual on Marine Meteorological Services, Part 1*bis*, Provision of warnings and weather and sea bulletins (GMDSS application). It has also been included……;

.3 paragraphs 3.2.1, 4.2, 4.4, 5.3, change NAVAREA to NAVAREA/METAREA;

.4 paragraph 4.3, first line, change to read ……..designed MAXIMUM range of about 400 nautical miles;

.5 paragraph 6.2, delete (e.g. OMEGA messages might be rejected in a ship which is not fitted with an OMEGA receiver);

.6 paragraph 6.3, delete OMEGA messages for subject indicator character "I";

.7 paragraph 9.1, change to read "……resolution A.706(17), as amended, and the WMO Manual on Marine Meteorological Services, Part 1*bis*, Provision of warnings and weather and sea bulletins (GMDSS application)";

.8 delete paragraph 9.1.5.5.2 and renumber remaining pargaraph;

.9 delete paragraph 9.1.7.7.3 and renumber remaining pargaraph;

.10 insert new paragraph 10.1.1, "Member States seeking to establish NAVTEX services should co-ordinate preliminary discussions between the NAVAREA Co-ordinator and, neighbouring administrations prior to formal application" and re-number paragraphs;

.11 annex 1, paragraph 2, amend the contact telephone and telefax to read +44 (1) 71, etc.;

.12 annex 4, amend title to read IMO RESOLUTION A.706(17), as amended;

.13 annex 4, annex 1, paragraph 1, delete words "HF Morse (A1A)";

.14 annex 4, annex 1, paragraph 2.1, insert new paragraph 2.1.1 and renumber the remaining paragraphs. The new 2.1.1 will read "Inmarsat – Means the Organization established by the Convention on the International Maritime Satellite Organization (Inmarsat) adopted on 3 September 1976";

.15 delete paragraph 3.1.1.3, HF Morse (A1A);

.16 delete paragraphs 3.2.2.1 and 3.2.2.2 and renumber remaining paragraphs;

.17 delete paragraph 4.2.1.3.7 and renumber remaining paragraphs;

.18 change new paragraph 4.2.1.3.11 to read "significant malfunctioning of radio-navigation service and shore-based maritime safety information radio or satellite service";

.19 add new paragraph 4.2.1.3.13, "acts of piracy and armed robbery against ships";

.20 paragraph 4.2.2.1, in the last sentence, change to read "……not served by NAVTEX, it is necessary to include…….";

.21 paragraph 6.1.1.1, amend to read "….well established national hydrographic …..";

.22 paragraph 6.1.1.2, amend to read "….. communications links, e.g. telex, facsimile, e-mail, etc.";

.23 paragraph 6.2.1.4, amend to read "….in accordance with the Joint IMO/IHO/WMO Manual on Maritime Safety Information MSI for the standardization of texts…";

.24 paragraph 6.2.1.8, amend to read "….as described in paragraph 4.2.1.3.9, or other scheduled operations….and 4.2.1.3.10, pass such information…..";

.25 add new paragraphs 6.2.1.14, 6.2.1.15 and 6.2.1.16, as follows:

".14 when notified by the authority designated to act on reports of piracy and armed robbery against ships, arrange for the broadcast of a suitable NAVAREA warning. Additionally, keep the national or regional piracy control centre informed of long-term broadcast action(s);

.15 monitor the broadcasts originated to ensure that the messages have been correctly transmitted; and

.16 co-ordinate preliminary discussions between Member States seeking to establish NAVTEX services and neighbouring administrations, prior to formal application";

.26 paragraph 6.3.1.1, amend to read "….well established national hydrographic …..";

.27 add new paragraph 6.4.1.6, "monitor the broadcasts which they originated to ensure that the messages have been correctly transmitted.";

.28 add new paragraphs 6.6.1.12, and 6.2.1.13, as follows:

".12 when notified by the authority designated to act on reports of piracy and armed robbery against ships, arrange for the broadcast of a suitable NAVAREA warning. Additionally, keep the national or regional piracy control centre informed of long-term broadcast action(s); and

.13 monitor the broadcasts originated to ensure that the messages have been correctly transmitted"; and

.29 annex 2, paragraph 4, amend the last line to read "….will entrust the Sub-Committee on Radiocommunications and Search and Rescue with ….".

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ANNEX 5

DRAFT ASSEMBLY RESOLUTION

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

THE ASSEMBLY,

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

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

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

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

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

NOTING ALSO developments within the field of mobile satellite communications,

NOTING FURTHER that some future mobile-satellite systems might have the potential to offer maritime distress and safety communications,

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

RECOGNIZING that the Inmarsat system at present is the only mobile-satellite system recognized by SOLAS Contracting Governments for use in the GMDSS,

RECOGNIZING ALSO the need for the Organization to have in place criteria against which to evaluate the capabilities and performance of mobile-satellite systems, as may be notified to the Organization by Governments for possible recognition for use in the GMDSS,

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

2. INVITES Governments to apply the criteria set out in sections 2 to 5 of the annex when permitting regional satellite systems to be carried on board ships flying their countries' flag on a regional or national basis;

3. REQUESTS the Maritime Safety Committee to:

.1 apply the criteria set out in the Annex to the present 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 and to consider, in connection with decisions thereon, relevant regulations of chapter IV of the SOLAS Convention;

.2 ensure that, for mobile-satellite systems to be recognized by the Organization for use in the GMDSS, they should be compatible with 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; and

.3 keep this resolution under review and take appropriate action as necessary to secure the long term integrity of the GMDSS.

ANNEX

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

1 GENERAL

1.1 Mobile-satellite systems being offered to the Organization for evaluation and possible recognition as a radio system providing the maritime distress and safety satellite communication capabilities necessary for use in the GMDSS, should be notified to the Organization by Governments, either individually or in co-operation with other Governments. The Governments concerned should make available for the Organization all necessary information relevant to the criteria indicated below, including proof of availability obtained in the mobile-satellite system concerned.

1.2 Governments desiring, individually or in co-operation with other Governments within a specific SAR area, to provide coast earth station facilities for serving the GMDSS in particular areas as part of a recognized system, should notify the Organization as to the extent of continuous coverage and the extent of coverage from shore. This information should be determined by Governments in accordance with the criteria indicated below.

1.3 Governments proposing such mobile-satellite systems for possible recognition and use in the GMDSS should guarantee the integrity of any proposed system and should also ensure that:

.1 these mobile-satellite systems conform with the criteria specified in this annex;

.2 only those systems are notified to the Organization for evaluation and possible recognition for use in the GMDSS; and

.3 the provisions of resolution A.707(17) (Charges for distress, urgency and safety messages through the INMARSAT system) are complied with.

1.4 Notifications of mobile-satellite systems proposed for evaluation and possible recognition for use in the GMDSS should be evaluated by the Maritime Safety Committee relative to the criteria specified in this Annex. Based on the results of the detailed evaluation the Maritime Safety Committee will decide as appropriate, taking into account relevant regulations of chapter IV of the SOLAS Convention, as amended.

1.5 Governments providing mobile-satellite systems recognized by the Organization for use in the GMDSS should, either individually or in co-operation, ensure that these systems continue to conform to the criteria specified in this Annex, and should at least once a year make available to the Organization for evaluation a report on the availability and performance obtained during the period since the preceding report in accordance with section 3.5.2 of the criteria indicated below. The Maritime Safety Committee should evaluate such reports relative to the criteria specified in this Annex and take action as appropriate.

1.6 The Organization should include and maintain in the GMDSS Master Plan details of all areas covered by mobile-satellite systems recognized for use in the GMDSS and of all areas covered by individual coast earth stations operating in those systems recognized as serving the GMDSS. The Organization should periodically circulate an updated copy of the description of these systems and areas to Governments.

2 DEFINITIONS

2.1 Satellite System

The satellite system means the space segment, the arrangements for controlling the space segment and the network control facilities controlling the access to the space segment.

2.2 Coverage area

The coverage area of the satellite system is the geographical area within which the satellite system provides an availability in accordance with the criteria stated in section 3.5 in the ship-to-shore and shore-to-ship directions, and within which continuous alerting is available. This should be described in relation to any of the sea areas as defined in the SOLAS Convention, i.e. sea area A4 encompasses global coverage, Sea Area A3 is within the coverage of an Inmarsat geostationary satellite in which continuous alerting is available, excluding Sea Areas A1 and A2, Sea Area A2 is within the radiotelephone coverage of at least one MF coast station in which continuous DSC alerting is available, and Sea Area A1 is within the radiotelephone coverage of at least one VHF coast station in which continuous DSC alerting is available.

2.3 Availability

2.3.1 The availability of a communication system is defined as the percentage of time in which the system is available for access to and communication through the system, i.e.:

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

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

3 CRITERIA AND REQUIREMENTS FOR THE SATELLITE SYSTEM

3.1 Functional requirements*

3.1.1 Mobile-satellite systems for maritime distress and safety communications services and forming part of the GMDSS radio systems specified in chapter IV, regulation 5 of the SOLAS Convention, as amended, should be capable of processing at least the following maritime distress and safety communications:

.1 ship-to-shore distress alerts/calls;

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* - Resolution A.801(19) "Provision of Radio Services for the Global Maritime Distress and Safety System (GMDSS)", Annex 5 "Criteria for use when providing Inmarsat shore-based facilities for use in the GMDSS";
- Draft Assembly resolution (MSC 70/23/Add.1, annex 4) "Establishment, Updating and Retrieval of the Information Contained in the Registration Databases for the Global Maritime Distress and Safety System (GMDSS)";
- Resolution A.694(17) "General requirements for shipborne radio equipment forming part of the Global Maritime Distress and Safety System (GMDSS) and for electronic navigational aids";
- IMO International SafetyNET Manual;
- Resolution A.664(16) "Performance Standards for Enhanced Group Call Equipment"; and
- Appropriate IEC Standards and ITU Recommendations

.2 shore-to-ship distress relay alerts/ calls;

.3 ship-to-shore, shore-to-ship and ship-to-ship search and rescue co-ordinating communications;

.4 ship-to-shore transmissions of Maritime Safety Information and shore-to-ship broadcast of Maritime Safety Information; and

.5 ship-to-shore, shore-to-ship *and ship-to-ship* general communications.

3.2 Capacity

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

3.3 Priority access

3.3.1 Current systems can recognize more levels, however the capability is not implemented in all coast earth stations. In any case, Distress alerts and Distress calls are given priority treatment by providing immediate access to satellite channels and for store and forward systems, be placed ahead of all routine traffic. Any system currently being designed for use in GMDSS after 1 February 1999, should be able to recognize, the four levels of priority as described below:

.1 Mobile-satellite systems and coast earth stations used for other mobile satellite communications in addition to maritime communications should be capable of automatically recognizing requests for maritime communications

.1 from ship earth stations; and

.2 from recognized entities of importance for the safety at sea, such as MRCCs, hydrographic and meteorological offices, medical centres, etc., registered by the coast earth station.

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

.2 The satellite system and the coast earth stations should be capable of processing maritime distress, urgency, safety and routine communications in accordance with the message priority as defined by the ITU Radio Regulations. The order of processing these communications should be:

.1 distress;

.2 urgency;

.3 safety; and

.4 other communications.

.3 In processing maritime distress, urgency, safety and routine communications the satellite system and the coast earth stations should be capable of:

.1 automatically recognizing the message or access priority for ship-to-shore communications;

.2 automatically recognizing the message or access priority for shore-to-ship communication from, as a minimum, recognized entities of importance for the safety at sea, registered by the coast earth station;

.3 preserving and transferring the priority;

.4 giving distress alerts and distress messages immediate access, if necessary by pre-emption of ongoing communications of level 4;

.5 automatically recognizing maritime distress communications and of routing automatically maritime distress alerts/messages directly to the associated MRCC or responsible RCC if this capability exists; and

.6 processing maritime urgency and safety communications in the ship-to-shore and shore-to-ship directions with adequate priority, for example, by allocating the first vacant channel, if no channel is immediately available.

.4 Selection and use of message or access priority for urgency and safety transmissions by ship earth stations should preferably be automatic and should be restricted to calls to special, recognized entities such as medical centres, maritime assistance, hydrographic and meteorological offices, etc., as defined for the coast earth station. The coast earth station should automatically route such calls directly to the relevant entity.

3.4 Coverage area

3.4.1 Documentation on the coverage area of the satellite system, as defined in section 2.2, should be forwarded to the Organization.

3.4.2 Information on coverage areas for satellite systems accepted by the Organization, as forming part of the GMDSS, will be published by the Organization in the GMDSS Master Plan.

3.5 Availability

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

3.5.2 The availability of the space segment, provision of spare satellite capacity and the network control function (i.e., the network availability), as defined in section 2.3 above, should be continuously monitored, and reports on the recorded availability of the system be given to the Organization at least once every year. Service Providers should be obligated to advise the Organization and RCCs of planned outages and advise ships of scheduled downtime and known interruptions in service and any other relevant Network Information.

3.6 Network availability

The following minimum values of availability are recommended for the complete mobile-satellite communications network, including coast earth stations:

.1 for ship-to-shore distress priority alerts calls: 99.9%; and

.2 for other maritime communications ship-to-shore and shore-to-ship: 99%.

3.7 Restoration and spare satellites

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

3.7.2 Adequate information on the means and arrangements prepared for restoration of the maritime distress and safety communication services in the event of a satellite failure should be notified to the Organization.

3.8 Identification

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

3.9 Information to be made available to SAR authorities

For all distress urgency and safety communications the Mobile Earth Station Identification Number or Maritime Mobile-Service Identity should be an integral part of the distress alert and provided to the RCC with the alert and when available, all additional registration, commissioning or other data relevant to the search and rescue or prosecution of false alert shall be referenced to this number and made available to the proper SAR authority or RCC upon request.

3.10 Reception of distress alerts

The satellite system should allow for addressing a maritime distress alert to a specific coast earth station chosen by the ship's operator and covering the area concerned, but should also provide for automatic routeing of manually initiated response to maritime distress alerts even if no specific CES is selected.

3.11 Control of ship earth stations

Access control arrangements for controlling and giving or temporarily rejecting access for ship earth stations to the system should at any time allow ship earth stations access for transmission of maritime distress alerts/calls and distress messages.

3.12 Test facilities

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

4 CRITERIA AND REQUIREMENTS FOR COAST EARTH STATIONS

4.1 Functional requirements

4.1.1 Coast earth stations serving the GMDSS should:

.1 be in continuous operation;

.2 be connected to an associated RCC;

.3 keep continuous watch on appropriate satellite communication channels; and

.4 be capable of transmission and reception of at least the following maritime distress and safety communications:

.4.1 ship-to-shore distress alerts/calls;

.4.2 shore-to-ship distress relay alerts/calls;

.4.3 ship-to-shore, ship-to-ship and shore-to-ship search and rescue co-ordinating communications;

.4.4 ship-to-shore and shore-to-ship transmissions of Maritime Safety Information; and

.4.5 ship-to-shore, ship-to-ship and shore-to-ship general communications.

Note: Coast earth stations operating in the Inmarsat-C system should be capable of transmission of Maritime Safety Information in the shore-to-ship direction via the Inmarsat SafetyNET service.

4.2 Priority

4.2.1 The coast earth station should be capable of automatically recognizing the priority of ship-to-shore and shore-to-ship communications, preserve the priority and process maritime mobile communications for the following four levels of priority:

.1 distress;

.2 urgency;

.3 safety; and

.4 other communications.

4.2.2 The priority access should be given for distress alerts and calls in real time. Current system can recognize more than two levels of priority, however the capability is not implemented in all coast earth stations. In any case, distress alerting and calls shall be given priority treatment by providing immediate access to satellite channels and for store and forward systems, be placed ahead of all routine traffic. Any system currently being designed for use in the GMDSS after 1 February 1999,

should be able to recognize, the four levels of priority and give appropriate access for communications in the ship to shore direction and in the shore to ship direction for distress, urgency and safety traffic originated by RCCs or other Search and Rescue Authorities.

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

4.3 Routeing of maritime distress alerts

4.3.1 The coast earth station should have reliable communication links to an associated MRCC.

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

4.3.3 The coast earth station should be provided with an aural/visual alarm to alert a designated responsible person in the event that appropriate connection to the MRCC cannot be achieved within 60 s. In this case, take all necessary action to inform the MRCC on the details of the distress alert or call.

4.3.4 The coast earth station should be provided with reliable communication links to the MRCC for shore-to-ship distress relay alerts and distress traffic, preferably via dedicated communication links.

4.4 Identification

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

4.5 Voice communication systems

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

4.5.2 Coast earth stations using the public switched network for routing maritime distress alerts/calls and distress traffic to and from its associated MRCC should, upon receipt of ship-to-shore or shore-to-ship distress alerts/calls or distress traffic, immediately attempt to establish the connection necessary for transfer to the distress alert or distress message.

4.6 Data communication systems

4.6.1 The communication links for data communication mobile-satellite systems should be connectable to the public data communication network in accordance with relevant ITU-T Recommendations. The system should provide capability for transfer of the identity of the called

subscriber to the calling subscriber. Maritime distress alerts/calls and distress messages should include the ship identity and the coast earth station identity.

4.6.2 Coast earth stations using the public switched network for routing distress alerts/calls and distress traffic to and from its associated MRCC should in receipt of ship-to-shore or shore-to-ship distress alerts/calls or distress traffic, immediately attempt to establish the connection necessary for transfer of the distress alert or distress message.

4.7 Store and forward systems

Coast earth stations for store and forward communication systems should:

.1 make an initial attempt to deliver a ship-to-shore or shore-to-ship message within 60 seconds for any maritime distress alert or distress traffic, and 10 minutes for all other maritime messages, from the time the receiving station receives the message. The message should include the ship identity and the coast earth station identity; and

.2 generate notification of non-delivery immediately once the message is considered non-deliverable, for maritime distress alerts and distress messages not later than 4 minutes after the reception of the alert or message.

4.8 Facilities for broadcast of Maritime Safety Information

4.8.1 Maritime mobile-satellite systems forming part of the GMDSS radio systems should technically be capable of offering facilities for broadcast of Maritime Safety Information (MSI) by direct-printing from MRCC's and authorized providers of MSI such as Hydrographic Offices and Meteorological Offices to ships at sea.

4.8.2 Such facilities for broadcast of MSI should provide for automatic, continuous and reliable reception on board ships, and should as a minimum fulfil the requirements specified in section 4.8.3 to 4.8.7 below.

4.8.3 The facilities should provide for recognition of and processing the following four levels of priority:

.1 distress;

.2 urgency;

.3 safety; and

.4 other communications.

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

.1 the entire region covered by the satellite over which the transmission is made;

.2 the NAVAREAs/METAREAs as established by the International Maritime Organization (IMO), the International Hydrographic Organization (IHO), and the World Meteorological Organization (WMO); and

.3 a temporary area chosen and specified by the originator of the MSI message, including area specifications appropriate for broadcast of distress relay alerts and search and rescue co-ordinating communications.

4.8.5 The facilities should be provided for transmission of at least the following types of Maritime Safety Information:

.1 search and rescue co-ordination information, including distress relay alerts;

.2 navigational warnings; and

.3 meteorological warnings and forecasts.

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

.1 scheduling the broadcast at fixed times or as unscheduled broadcast transmissions; and

.2 automatic repetition of the broadcast with time intervals and number of broadcast transmissions as specified by the MSI provider, or until cancelled by the MSI provider.

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

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

5 ADDITIONAL RECOMMENDED CAPABILITIES

Mobile-satellite service providers should be encouraged to:

.1 route Automatic Location Identification (ALI) and Automatic Number Identification (ANI) in accordance with appropriate ITU-T Recommendations with distress calls originating from MSS terminals directly to responsible RCCs for voice and data calls;

.2 automatically route information contained in registration databases in accordance with draft Assembly resolution (MSC 70/23/Add.1, annex 4) in a recognizable format with the distress call to the responsible RCC, once means are established for doing so;

.3 be capable of retrieving maritime safety information in a timely manner from NAVAREA, METAREA, and other relevant co-ordinators, and the International Ice Patrol Service, in a standard format and process established by those co-ordinators; and

.4 broadcast maritime safety information (MSI) in accordance with the relevant provisions of the IMO International SafetyNET Manual.

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ANNEX 6

IMO POSITION ON WRC-2000 AGENDA ITEMS

CONCERNING MATTERS RELATED TO MARITIME USE

Agenda Item 1.6

issues related to IMT-2000:

1.6.1 review of spectrum and regulatory issues for advanced mobile applications in the context of IMT-2000, noting that there is an urgent need to provide more spectrum for the terrestrial component of such applications and that priority should be given to terrestrial mobile spectrum needs, and adjustments to the Table of Frequency Allocations as necessary

1.6.2 identification of a global radio control channel to facilitate multimode terminal operation and world-wide roaming of IMT-2000

Background

This agenda item is aimed at satisfying the demand for spectrum anticipated for third generation personal communication systems known generically as IMT-2000 (previously FPLMTS). A number of bands in the range 1 - 3.5 GHz allocated to existing mobile telephone systems or other services have been identified as possible candidates for IMT-2000 expansion.

The bands identified so far have no direct impact on maritime radiocommunications or radionavigation, however, there may be difficulties resulting from the relocation of displaced services. One such example is the proposed use of the aeronautical radionavigation band 2 700 - 2 900 MHz for IMT-2000 systems. Since the use of this band for aeronautical radar is both widespread and continuing for air traffic control purposes, there is the question of relocation of the existing services to consider. The obvious candidate band for relocation of aeronautical radars would be the maritime radionavigation band 2 900 - 3 100 MHz presently used by 10 cm marine radars and racons. However, this would not be acceptable because air traffic radars, and marine radars cannot normally operate in close proximity in the same band without causing harmful interference.

The analysis of candidate IMT-2000 expansion bands in the draft CPM Report notes that although sharing between IMT-2000 and radars is not generally feasible. There may be certain areas of the world where the 2 700 - 2 900 MHz band is not greatly used for aeronautical radionavigation purposes, thereby allowing use of the band for IMT-2000 on a localised basis. This conclusion seems rather premature because no definitive studies have yet been carried out. Interference effects may be expected in both directions: as well as the possibility of hundred of false signals caused by IMT-2000 terminals on radar displays, the personal terminals themselves will be designed for worldwide use which means that they will be sensitive to radar transmissions in areas where localised use of the 2 700 - 2 900 MHz band for IMT-2000 is not available. Receiver blocking or damage to IMT-2000 terminals may be expected in these circumstances. Also, since the terminals will be working over a very wide frequency range deleterious effects should be expected in the vicinity of radars operating in the adjacent maritime radionavigation band.

IMO Position

IMO opposes any allocations for IMT-2000 from existing spectrum allocated to maritime use. Further, allocations for IMT-2000 uses, both terrestrial and satellite, that are near a radionavigation band in widespread use by radars could degrade the usefulness of the radionavigation bands and cause deleterious effects on the IMT-2000 terminal units themselves. IMO opposes such allocations until compatibility studies are completed showing that these allocations are acceptable.

WRC-2000 Agenda Item 1.7

*review of the use of the HF bands by the aeronautical mobile (R) and maritime mobile services with a view to protecting the operational, distress and safety communications, taking into account Resolution **346 (WRC-97)***

Background

The purpose of this agenda item is to consider the use of the HF bands for high priority communications particularly as regards the protection of essential communications from harmful interference. HF channels are designated for various operational and distress and safety purposes by ships and cost stations in Article **S52** and appendices **S13**, **S15** and **S17** of the Radio Regulations.

Concern has been expressed in IMO for many years at the harmful interference being caused on the HF GMDSS radiotelephone distress and safety communication frequencies 12 290 and 16 420 kHz and after a number of attempts the problem has been brought to a WRC for action. The problem arises because of the anomaly whereby the ship transmit frequencies of international radio telephone channels 1221 (ship transmit 12 290 kHz, ship receive 13 137 kHz) and 1621 (ship transmit 16 420 kHz, ship receive 17 302 kHz) are also designated as GMDSS radiotelephony channels for distress and safety purposes. The peculiar circumstance that these frequencies may also be used legitimately as ship transmit frequencies for general calling has resulted in considerable disruption to distress and safety traffic. The existence of interference to 12 290 and 16 420 kHz, together with disruption to the radiotelephony distress and safety frequency 8 291 kHz was first noted at COM 40 and subsequently publicised in COM/Circ.119. A revised Circular COMSAR/Circ.6 was developed following further discussion at COMSAR 1.

The issue was examined during the 1997 World Radiocommunication Conference and Resolution **346 (WRC-97)** "*Protection of distress and safety communications on the frequencies 12 290 kHz and 16 420 kHz from harmful interference caused by these frequencies being used also for non-safety calling*" was developed, which repeated the call made in COMSAR/Circ.6 for administrations to move their coast station calling channels from the channels 1221 and 1621 to any other suitable HF channel.

More recently there have been a number of reports of more generalised interference to maritime and aeronautical communications in the HF bands. The problem is widespread in the Asia-Pacific region where interference on all channels between 3 and 16 MHz occurs daily at different times, varying in intensity and duration. Monitoring observations have been carried out in the region in the bands allocated exclusively to the maritime mobile service between 4063 and 27 500 kHz and these show that a number of frequencies in these bands are still being used by stations of other services. Many instances of interference are, however, caused by licensed stations of the maritime and aeronautical mobile services which are operating in contravention of Radio Regulations.

Interference to maritime HF communications may be reported under Article **S15** of the Radio Regulations, however, such action has not proved to be effective and, if anything, the interference has continued to increase.

IMO Position

IMO re-affirms its opinion that the frequencies 12 290 and 16 420 kHz should only be used for distress and safety communications and allocated solely for such purpose by means of modification to the relevant parts of the Radio Regulations. IMO also supports efforts to reduce inappropriate use of the HF bands through improved regulatory procedures to safeguard distress and safety communications.

WRC-2000 Agenda Item 1.8

to consider regulatory and technical provisions to enable earth stations located on board vessels to operate in the fixed-satellite service networks in the bands 3 700 - 4 200 MHz and 5 925 - 6 425 MHz, including their co-ordination with other services allocated in these bands;

Background

This agenda item seeks to permit the use of earth stations operating in the bands 3 700 - 4200 MHz (space-to-Earth) and 5 925 - 6 425 MHz (Earth-to-space) on board ships as part of the fixed satellite service rather than the maritime mobile-satellite service. This agenda item on 'C' Band earth stations, as they are commonly known, was introduced at WRC-97.

The advantage for the maritime community is that it is possible to gain access to relatively low cost broadband communication facilities using existing frequencies and space segments in the fixed-satellite service. Shipowners could benefit from the resulting possibilities for wideband communications which, moreover, can be operated with considerable cost savings over the current maritime satellite systems. The main uses are telephone links for passengers on cruise liners and ferries. There are also a number of applications for ships that need to transfer large amounts of data to shore. The offshore oil industry is a prime example, especially as regards survey ship operations where real-time analysis ashore of data collected on-board ship becomes possible without the cost of the satellite link being a major limitation.

Typically, these links make use of the Intelsat network of geostationary satellites which can provide a relatively cheap high-bandwidth path. There is however some loss in flexibility of use since there is no provision in such systems for on-demand service availability on connection. Instead use of a satellite transponder has to pre-arranged on a permanent or a regular timeslot basis from the ship via a particular ground station into the public or a private telecommunications network.

However, preliminary examination of this issue has revealed a number of operational and legal issues that must be addressed arising from potential for interference to other services allocated in these bands.

IMO Position

IMO supports the orderly introduction of these bands for maritime mobile use when regulatory and technical provisions are accommodated.

WRC-2000 Agenda Item 1.9

*to take into account the results of ITU-R studies in evaluating the feasibility of an allocation in the space-to-Earth direction to the mobile-satellite service in a portion of the 1 559 - 1 567 MHz frequency range, in response to Resolutions **213** and **220 (WRC-97)***

Background

The importance of this issue for maritime radiocommunications is that the band 1 559-1 567 MHz is heavily used for radionavigation purposes by the radionavigation-satellite service (GPS and GLONASS). The wider band 1 559 - 1 610 MHz is also used for important applications in the aeronautical radionavigation service.

The question of an additional allocation to the mobile-satellite service in the band 1 559-1 567 MHz was considered at WRC-97 with the conclusion that no immediate allocation could be made because of uncertainty as to whether the proposed criteria for new mobile-satellite systems in the band 1 559 - 1 567 could guarantee satisfactory sharing between the mobile-satellite and the radionavigation

services. The subject received great attention from both maritime and aeronautical interests because of the need to safeguard the operation of existing radionavigation services and to avoid constraints on the future development of radionavigation services in this band

WRC-97 did, however, adopt Resolution **220 (WRC-97)** in order to initiate further studies into the technical criteria and operational and safety requirements needed to assess the feasibility of sharing between the aeronautical radionavigation and radionavigation-satellite services operating, or planned to operate, in the band 1559 - 1 610 MHz, and the mobile-satellite service in a portion of the band 1 559-1 567 MHz. The intention was that the studies should be available in time for the next WRC to evaluate the feasibility of sharing a portion of the spectrum for new mobile-satellite communication systems.

The further studies have showed considerable doubt about the possibility of successful sharing in this band.

IMO Position

In view of the importance of preserving the integrity of existing radionavigation-satellite systems which are vital to the safe navigation of vessels and the need to avoid constraints on the introduction of new radionavigation systems, IMO is of the opinion that no additional allocation to the mobile-satellite service should be introduced into the band 1559 - 1567 MHz at WRC-2000, and sees no need to continue with further studies.

WRC-2000 Agenda Item 1.10

*to consider results of ITU-R studies carried out in accordance with Resolution **218 (WRC-97)** and take appropriate action on this subject*

Background

This agenda item is of prime importance for IMO since it addresses two issues arising from the generic use of satellite L-Band spectrum:

1. the future spectrum requirements for the provision of distress, safety and urgency communications in the GMDSS and aeronautical mobile-satellite (R) service communications with priority 1 to 6 of Article **S44**;
2. the feasibility of prioritisation, real time pre-emptive access and, if necessary, interoperability between different mobile satellite systems for GMDSS and aeronautical mobile-satellite (R) service communications.

Resolution **218 (WRC-97)** on the use of the bands 1525 - 1559 MHz and 1 626.5 - 1660.5 MHz by the mobile-satellite service was developed at WRC-97 as a result of the allocation of these bands for generic use by the mobile-satellite service, notwithstanding the previous predominate use of the bands 1 530 - 1544 MHz and 1626.5 - 1645.5 MHz by the maritime mobile-satellite service for satellite communications in the GMDSS. In addition the bands 1545 - 1 555 MHz and 1 646.5 - 1 656.5 MHz were allocated to the aeronautical mobile-satellite (R) service on a primary basis.

The stated purpose of the move to a generic allocation for the mobile-satellite service was to facilitate the assignment of spectrum to multiple mobile-satellite systems in a flexible and efficient manner. There was considerable concern that this course of action would prejudice the provision of satellite communications with aircraft and in the GMDSS, particularly in respect of distress and safety traffic.

The outcome at WRC-97 was that the bands 1525 - 1559 MHz and 1 626.5 - 1660.5 MHz were made generic to the mobile-satellite service. Additional provisions of the Radio Regulations,

Nos. **S5.353A**[1] and **S5.357A**[2], were added to protect GMDSS and aeronautical uses of these bands and the spectrum requirements for the maritime and aeronautical communities. In addition, the new Resolution **218 (WRC-97)** was adopted which includes a call for urgent studies on methods for determining the spectrum requirements for the GMDSS and aeronautical applications.

IMO Position

IMO expressed concern at WRC-97 and the 1998 ITU Plenipotentiary Conference that the unique requirements of the maritime community had not been recognized and expressed concern about the safeguards to be provided for the maritime satellite service. IMO believes that accommodating the spectrum requirements for maritime distress, urgency and safety communications of the GMDSS in the bands 1 525 - 1 559 MHz and 1 626.5 - 1 660.5 MHz shall be given absolute priority in multilateral co-operation agreements.

IMO notes however the studies that have taken place since WRC-97 on methods of ensuring priority access for distress, urgency and safety communications within a network and with other mobile satellite services. IMO does not consider that inter-system prioritization and pre-emption will be workable and prefers a capacity planning approach. Further action however is necessary within the ITU to demonstrate in a transparent manner that any resulting Spectrum Sharing Arrangements have been developed in compliance with footnote S5.353A.

IMO is therefore of the opinion that WRC-2000 should adopt procedures ensuring that the frequency coordination agreements for mobile satellite networks in the bands mentioned in S5.353A do demonstrably accommodate the spectrum requirements for all GMDSS distress, urgency and safety communications as defined in Articles S32 and S33.

WRC-2000 Agenda Item 1.11

*to consider constraints on existing allocations and to consider additional allocations on a worldwide basis for the non-geostationary MSS below 1 GHz, taking account the results of ITU-R studies conducted in response to Resolutions No. **214 (Rev.WRC-97)** and **219 (WRC-97)***

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[1] **S5.353A** In applying the procedures of No. **S9.11A** to the mobile-satellite service in the bands 1 530 - 1 544 MHz and 1 626.5 - 1645.5 MHz, priority shall be given to accommodating the spectrum requirements for distress, urgency and safety communications of the Global Maritime Distress and Safety System (GMDSS). Maritime mobile-satellite distress, urgency and safety communications shall have priority access and immediate availability over all other mobile satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to, or claim protection from, distress, urgency and safety communications of the GMDSS. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. (See Resolution **218 (WRC-97)**.)

[2] **S5.357A** In applying the procedures of No. **S9.11A** to the mobile-satellite service in the bands 1 545 - 1 555 MHz and 1 646.5 - 1 656.5 MHz, priority shall be given to accommodating the spectrum requirements of the aeronautical mobile-satellite (R) service providing transmission of messages with priority 1 to 6 in Article **S44**. Aeronautical mobile-satellite (R) communications with priority 1 to 6 in Article **S44** shall have priority access and immediate availability, by pre-emption if necessary, over all other mobile satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to, or claim protection from, aeronautical mobile-satellite (R) communications with priority 1 to 6 in Article **S44**. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. (See Resolution **218 (WRC-97)**.)

Background

Important maritime interests may be affected by the proposals under this agenda item to introduce non-geostationary mobile-satellite systems in the band 405 - 406 MHz, which is part of the band 401-406 MHz currently allocated to the meteorological aids service and adjacent to the band 406 - 406.1 MHz used by the COSPAS-SARSAT system.

The COSPAS-SARSAT system is essential to the operation of the GMDSS. The COSPAS and SARSAT networks of low-altitude polar-orbiting satellites are able to receive distress alerts transmitted from 406 MHz EPIRBs at any location at sea. The relevant information is then relayed to SAR authorities via local user terminals and mission control centres. Because the system operates with very low signal levels it is very sensitive to interference and must therefore be protected to the maximum extent possible. If an EPIRB transmission cannot be processed correctly at the first opportunity, it will be necessary to wait for another satellite pass thus delaying the activation of search and rescue services.

There is also a direct and immediate interest to the maritime community in the operation of meteorological aids in the frequency bands 400.15 - 406 MHz. These are essential to making upper air measurements for a number of important applications - weather forecasting and environmental monitoring, in particular. These vital measurements are made by radiosondes operating in the meteorological aids service. Many tens of thousands of radiosondes are launched every year now, which represents a considerable increases in use over the past decade.

At WRC-97 there were several proposals for an additional primary allocation for the mobile-satellite service in the band 405 - 406 MHz. These proposals were strongly opposed by the majority of countries throughout the world on account of the use of the entire frequency band 401 - 406 MHz for vital meteorological services. Since current radiosondes do not allow for spectrum use based on band segmentation, the conclusions were that it was premature to allocate even 1 MHz of spectrum to the mobile-satellite service and that the entire 5 MHz would still be needed for the use by the meteorological services.

Consequently, no spectrum was made available at WRC-97 and Resolution **219 (WRC-97)** was developed to cover further studies on the issue in collaboration with the WMO.

The main purpose of Resolution **219 (WRC-97)** was to cover studies into the possible transition of the meteorological aids service out of the band 405 - 406 MHz in favour of a new allocation to the mobile-satellite service in that band. Furthermore, the Resolution called for studies on the impact of unwanted emissions on the primary services, notably COSPAS-SARSAT, allocated in the adjacent bands.

Under the cover of Resolution **219 (WRC-97)** proposals to introduce non-geostationary mobile-satellite systems in the band 405-406 MHz will again be brought forward at WRC-2000. However, the results of technical analyses and studies carried out in respect of the Resolution do no justify a different conclusion from WRC-97 despite the case made for urgently needed spectrum for additional mobile-satellite services below 1 GHz.

All of the band 403 - 406 MHz is needed to secure the existing radiosonde operations, and there is actually an increase in the requirements for meteorological aids operations for weather forecasting, research, environmental and defence applications. In addition there are also increasing requirements for the earth exploration-satellite and meteorological services in the band 401 - 403 MHz. It does not therefore appear feasible to accommodate all these requirements if meteorological aids have to be transferred out of the band 405-406 MHz in favour of an allocation to the mobile-satellite service. Also, since the band is needed in the future for meteorological aids there is no further purpose in considering transition plans as envisaged in Resolution **219 (WRC-97)**.

More importantly for preserving the integrity of the GMDSS, the resulting studies have led to proposals to tighten the current limits for the protection of COSPAS-SARSAT receivers. The very stringent protection requirements that have been established for the COSPAS and SARSAT search and rescue signal processors would, in any event, reduce the spectrum available to the mobile-satellite service in the band 405 - 406 MHz by up to 14%.

IMO Position

Noting that there are maritime allocations (including distress and safety) existing below 1 GHz, IMO recommends that any new MSS allocations shall afford due protection to these maritime allocations.

IMO strongly opposes an additional allocation to the mobile-satellite service in the band 405 - 406 MHz and supports the maintenance of the current allocations in order to:

1. protect the proven life-saving capabilities of the COSPAS-SARSAT system in the adjacent band 406 - 406.1 MHz;
2. protect the meteorological aids service, in view of the importance of accurate weather forecasting for safety and commerce; and
3. enable the earth-exploration and meteorological-satellite services and the meteorological aids service to meet increasing service requirements, in particular for weather forecasting, environmental monitoring and pollution control.

WRC-2000 Agenda Item 1.15

issues related to the radionavigation-satellite service:

Background

This agenda item deals with various aspects of how the radionavigation-satellite service should develop in the future. The existing service has developed out of a need to provide position information for military purposes and was not planned to provide the numerous civil applications that have since been able to exploit certain elements of the military systems. This has resulted in demands to augment existing systems or introduce new systems that are specifically designed to respond to the growth in civil applications and needs.

1.15.1 *to consider new allocations to the radionavigation-satellite service in the range from 1 to 6 GHz required to support developments;*

Extensive work has been carried out in the ITU Study Groups. Attention is now focused on four bands where additional spectrum may be available to support future development of the radionavigation-satellite service, namely:

in the space-to-Earth direction

– 960 - 1 215 MHz

– parts of the band 5 000 - 5 150 MHz

in the space-to-Earth direction

– 1 300 - 1 350 MHz

– 5 000 - 5 030 MHz

Some sharing and compatibility problems remain to resolved; however, there should be no adverse effects on maritime services. With the exception of some frequencies used for landing and approach aids on aircraft carriers, none of these candidate bands affect existing maritime radiocommunications or radionavigation systems.

IMO Position

IMO supports the implementation of new allocations for use with radionavigation-satellite systems given the importance of reliable navigational aids for enhancing the economic and safety aspects of shipping.

1.15.2 *to consider the addition of the space-to-space direction to the radionavigation-satellite service allocations in the bands 1 215 - 1 260 MHz and 1 559 - 1 610 MHz;*

This agenda item deals with the addition of an allocation in the space-to-space direction to complement the present allocation in the bands 1 215 - 1260 MHz and 1559 - 1610 MHz to the radionavigation-satellite service in the space-to-Earth direction.

Two radionavigation satellite systems, GPS and GLONASS, currently use the bands 1 215 - 1 260 MHz and 1559 - 1 610 MHz. Several satellite networks (e.g. TOPEX/Poseidon, AMSAT-3D, Orbcomm, Globalstar and IKONOS-1) make use of GPS signals to establish position and time references essential to the proper functioning of these networks. There are also plans to use signals from the GPS and GLONASS satellites in the control of a range of space based applications.

The use of these radionavigation-satellite signals is presently protected only through a frequency allocation in the space-to-Earth direction, meaning that the reception of these signals on board other orbiting satellites has no normal protection. The addition of an allocation in the space-to-space direction would give protection to navigation systems on board scientific satellites, Earth-observation satellites, communications satellites and manned spacecraft.

It is necessary to provide the additional direction in both of the bands 1215 - 1 260 MHz and 1 559 - 1 610 MHz because of ionospheric scintillation effects.

IMO position

In view of the importance of many existing and planned satellite systems for maritime purposes, notably communications and weather forecasting, IMO supports a space-to-space allocation subject to the application of appropriate safeguards for existing radionavigation-satellite networks in the space-to-Earth direction.

IMO is of the opinion that the option A identified in the draft CPM Report would give the most freedom for the further development of radionavigation satellite applications. Option A involves the addition of the space-to-space direction to the radionavigation-satellite service (space-to-Earth) allocation in the bands 1 215 - 1 260 MHz and 1 559 - 1 610 MHz, coupled with a provision indicating that no protection should be given to spaceborne radionavigation-satellite receivers from radionavigation-satellite systems already operating in these bands or for which advance publication information is received by the ITU Radiocommunication Bureau, prior to the end of WRC-2000.

1.15.3 *to consider the status of allocations to services other than the radionavigation-satellite (**S5.355** and **S5.359**) in the band 1 559 - 1 610 MHz;*

The band 1 559 - 1 610 MHz is allocated on a primary basis to the radionavigation-satellite service and the aeronautical radionavigation service. In addition, allocations to the fixed service are made through two provisions of the Radio Regulations, Nos. **S5.355** and **S5.359,** which respectively provide for an allocation to the fixed service on a secondary basis in 27 countries and on a primary basis to 47 countries.

The importance of this issue is the possible degradation caused to radionavigation-satellite services operating in this band, notably GPS, from other services that are permitted to make use of these bands.

In the case of transmissions in the fixed service, however, experience has shown that harmful interference to GPS reception is a real danger. Analysis of the problem shows radionavigation-satellite receivers are unable to tolerate co-frequency interference from transmissions in the fixed service within radio line-of-sight. Typically, this means that land-based GPS receivers in the main beam of a fixed service transmitter's antenna will experience harmful interference out to a distance of 50 km and out to 400 km distance in the case of aircraft receivers. For the case of non co-frequency transmissions in the fixed service, there is evidence to show that fixed service transmissions in and to either side of the band 1559-1610 MHz will cause interference to radionavigation-satellite receivers operating in the band 1559-1610 MHz up to 100 m away from the fixed service transmitter.

IMO Position

IMO supports removing the fixed service use of the band l559 - 1610 MHz in order to protect present and future applications in the radionavigation-satellite service.

WRC-2000 Agenda Item 1.18

*to consider the use of new digital technology for the maritime mobile service in the band 156 - 174 MHz and consequential revision of Appendix **18/S18**, taking into account Resolution **342 (WRC-97)***

Background

A similar agenda item on the use of new digital technology in the maritime radiotelephony channels was considered at the 1997 World Radiocommunication Conference. This item was considered in recognition of the pressure on maritime radio spectrum to provide additional capacity to accommodate new services and to meet the changing demand for radiocommunications. Because there seemed little likelihood of any new spectrum being made available for maritime VHF use, especially since there are similar demands for additional spectrum to meet the demand in the land mobile sector, it was considered that a better alternative would be to adopt new technologies that could support new services and provide more efficient use of the spectrum.

Studies in ITU-R Study Group 8 have been in progress for a number of years, going back to Recommendation **318 (Mob-87)** which called for urgent studies into the most appropriate means of promoting a more efficient use of the frequency spectrum in the VHF maritime mobile band. The most likely solution to the problems of congestion identified in the present use of Appendix **S18** was seen to be the adoption of technologies already implemented in the land mobile service. However, in order not to disrupt the provision of distress and safety services in the VHF band there was general acceptance that the adoption of new technologies would require a lengthy phasing-in period.

However, in the absence of any proposals at WRC-97, there was no major substantive action in respect of the VHF bands. Changes were introduced into Appendix **S18** to provide administrations with the flexibility to address any immediate problems of local congestion. In particular a note was added to Appendix **S18** to allow the use of 12.5 kHz channel interleaving on a non-interference basis to the use of the standard 25 kHz channels by other administrations and international shipping. In the main though, further consideration of this aspect was effectively postponed until the next Conference (WRC-2000) by means of Resolution **342 (WRC-97)**. This Resolution advocated that ITU-R should undertake thorough research into the future utilisation of maritime VHF communications and the suitability of different technologies to meet future requirements.

IMO Position

IMO supports in general the need to make the most efficient use of the maritime VHF band, but stresses that;

1. the introduction of new technologies should take into account the global use of maritime VHF equipment; and

2. new equipment utilizing digital technology must, in addition, be able to handle the existing system, especially for distress and safety purposes.

WRC-2000 Agenda Item 2

*to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations which have been communicated by the 1999 Radiocommunication Assembly, in accordance with Resolution **28 (WRC-95)**; and decide whether or not to update the corresponding references in the Radio Regulations, in accordance with principles contained in the Annex to Resolution **27 (Rev.WRC-97)***

Background

The concept of incorporation by reference is also employed by IMO.

In accordance with the provisions of Resolution **28 (WRC-95)** and Resolution **27 (Rev.WRC-97)**, each WRC now has to devote time to ensuring that references are up to date because the various Study Groups of the ITU Sectors routinely propose revisions to ITU-R Recommendations that have already been incorporated by reference and, in response to WRC agenda items, generate new Recommendations for incorporation by reference. It was therefore envisaged at WRC-97 to have a standing agenda item for all future WRCs to carry out this essential work. Because of the number of ITU-R Recommendations dealing with the design and operation in the maritime mobile and maritime mobile-satellite service the task of ensuring that references are kept up to date is of direct interest to the IMO.

The concept has failed to provide the practical benefit originally envisaged of simplifying or reducing the volume of the Radio Regulations.

The status of incorporation by reference has been discussed during the VGE work and at WARC-92. However, there was no firm conclusion and, despite many requests, no definitive opinion emerged from the ITU legal service as to whether text incorporated by reference is an obligatory part of the Radio Regulations or not. The majority view at WRC-95 was that such texts are obligatory, but still many administrations cannot accept that they have to be treated as an obligatory part of the Radio Regulations.

The result is that the complexity of the Radio Regulations does not appear to have been reduced and in fact there is still no firm agreement on the status of provisions employing incorporation by reference are now more confused than before. Because of this ITU Special Committee considered a number of options on the future use of incorporation by reference.

The preliminary agenda for the WRC, now to be held in 2002 or 2003, includes an item 2.10 (see Resolution **722 (WRC-97)**),.for the radio regulatory procedures concerning the maritime mobile and mobile-satellite service, particularly in regard to the completion of the transition to the GMDSS. At this Conference it would be possible to remove references to a large number of ITU-R Recommendations on pre-GMDSS procedures and to review the references to the ITU-R Recommendations related to the GMDSS.

IMO Position

Incorporation by reference is of importance to the IMO because of the close relationship between many of the ITU-R Recommendations related to GMDSS equipment, and its operation, to IMO performance standards.
IMO requests early indication of any changes proposed by the ITU to the mechanism of incorporation by reference and to the list of incorporated recommendations.

IMO requests that the removal of references to ITU-R Recommendations on pre-GMDSS procedures and review of references to the ITU-R Recommendations related to the GMDSS should be undertaken at WRC-2002.

WRC-2000 Agenda Item 7.2
to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent Conference and on possible agenda items for future conferences.

Background

Items 8.3 and 8.4 dealing with maritime issues were originally placed by WRC-97 on the WRC-2000 agenda. These agenda items were subsequently removed from that agenda according to ITU COUNCIL RESOLUTION No 1130 during the 1998 session of the ITU Council

IMO Position

IMO notes with satisfaction that matters related to maritime distress and safety communications are placed on the preliminary agenda (items 2.4, 2.10, 2.11) for the next WRC (WRC-2002). IMO strongly recommends these agenda items be retained on the final agenda for WRC-2002 and to add agenda items postponed from WRC-2000 (items 8.3 and 8.4) to ensure the long term integrity of the GMDSS.

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ANNEX 7

DRAFT COMSAR CIRCULAR

GUIDANCE ON DATA FIELDS FOR SAR DATABASES

1 The Maritime Safety Committee, at its [seventy-second session (17 to 26 May 2000)], approved the annexed Guidance on data fields for SAR databases.

2 Member Governments are invited to use the annexes Guidance when collecting SAR data and bring it to the attention of all parties concerned.

ANNEX

GUIDANCE ON DATA FIELDS FOR SAR DATABASES

Part 1 - Basic Data Fields

The Incident division concerns the overview of the actions taken the elements in this division are:

SAR CASE (field is binary function, Y/N, default blank) This field exists because RCCs may be using this database to record emergency assistance other than SAR (IAMSAR Draft 4 volume 2, Chapter 7) or other work the RCC is tasked to handle. Generally, it is more efficient to build and use one database than to create a series of databases.

RCC (field is set to the RCC name) i.e. Victoria

INCIDENT NUMBER (field is numeric, 6 digits, system generated) Each incident must be uniquely identified to prevent the duplication of records. Ideally, it should be system generated. It is not recommended to include the year as part of the incident number as the year is recorded separately as part of the record.

START DATE (field is numeric, 8 digits, default current system date, format YYYYMMDD)
START TIME (field is numeric, 4 digits, default current system, format HHMM in UTC) The Start Date and Time is the date and time that the RCC was alerted.

INCIDENT DATE (format as per START DATE, default blank)
INCIDENT TIME (format as per START TIME, default blank) This shall be the earliest time for one of the following events, search object declared distress, the time an electronic beacon was activated or an observer noted the search object in distress.

SMC (field is binary function, Y/N, default blank) This designates that either the RCC was SMC at some point for the SAR incident or was assisting another RCC with the incident.
SMC START DATE (format as per START DATE, default blank)
SMC START TIME (format as per START TIME, default blank)
SMC END DATE (format as per START DATE, default blank)
SMC END TIME (format as per START TIME, default blank) These four fields are only recorded if the RCC assumed SMC or turned over SMC to another responsible authority.

SEARCH OBJECT LATITUDE (format DDMM.MX, default blank)
SEARCH OBJECT LONGITUDE (format DDDMM.MY, default blank) This is the datum point's geographical position where D is the degrees, M is minutes and decimal minutes, X is either N or S and Y is either E or W.

OBJECT FOUND LATITUDE (format DDMM.MX, default blank)
OBJECT FOUND LONGITUDE (format DDMM.MX, default blank) This is the geographical position where the search object was found, where D is the degrees, M is minutes and decimal minutes, X is either N or S and Y is either E or W. This is to remain blank if the search object was never found.

DISTANCE OFFSHORE (field is numeric, 4 digits, default blank) This field is only for maritime incidents expressed in nautical miles.

WHO ALERTED (field is numeric, 1 digit, default blank) This field uses a limited list to categorize who alerted the RCC.

1. Search Object
2. Relayed (when the Search Object cannot directly transmit to the RCC)
3. MCC (COSPAS-SARSAT MCCs are not included in "Relayed")
4. Observer
5. RCC

INCIDENT TYPE (field is numeric, 1 digit, default blank) This field uses a limited list to categorize the type of incident.

1. Distress
2. Precautionary Assistance
3. Hoax (a deliberate false activation of the system intended to misuse resources)
4. False Alert (a distress alert received when no distress situation resulted and no notification of distress should have resulted)
5. Not Found (a distress alert received but not resolved)
6. Medical (Medical evacuation and MEDICO)

Search Object is the division describing the object.

SEARCH OBJECT NAME (field is alphanumeric, 32 characters, default blank) This field combined with the next two fields offers a unique identity for the search object. Name should be either the name of the vessel, family name of the Captain or Commander if it is an aircraft or a vessel with no name or primary person's family name (in the case of a diver, swimmer or driver of a motor vehicle).

SEARCH OBJECT OFFICIAL NUMBER (field is alphanumeric, 16 characters, default blank) Filled if, if available.

SEARCH OBJECT RADIO CALLSIGN (field is alphanumeric, 16 characters, default blank) This is the callsign found on the ITU lists.

NATIONALITY OF SEARCH OBJECT (field is alphanumeric, 32 characters, default blank) Self explanatory.

TYPE OF SEARCH OBJECT (field is numeric, two digits, default blank) This field uses a limited list to generally describe the initial search object.

1. SOLAS Passenger
2. SOLAS Non-passenger
3. Non-SOLAS Passenger
4. Non-SOLAS Non-Passenger
5. Fishing Vessel
6. Pleasure Craft Motor with Accommodation
7. Pleasure Craft Motor without Accommodation
8. Pleasure Craft Sail with Accommodation
9. Pleasure Craft Sail without Accommodation
10. Pleasure Craft Recreation (Air beds, toys etc.)
11. Government Non-military Vessel
12. Military Vessel
13. Submarine
14. Non-powered Aircraft or Balloon
15. Rotary Wing Commercial
16. Rotary Wing General Aviation

17. Rotary Wing Government Non-military
18. Rotary Wing Military
19. Fixed Wing Commercial
20. Fixed Wing General Aviation
21. Fixed Wing Government Non-military
22. Fixed Wing Military
23. Automobile
24. Truck/Lorry
25. Person (diver, swimmer, parachutist, jumper/suicide)

POB (field is numeric, 4 digits, default value 1) The number of persons aboard the search object.

LIVES LOST BEFORE NOTIFICATION (field is numeric, 4 digits, default value blank)
LIVES LOST AFTER NOTIFICATION (field is numeric, 4 digits, default value blank)
LIVES SAVED (field is numeric, 4 digits, default value blank) This field is the number of lives delivered to a place of refuge (i.e., port, aerodrome, hospital, reception facility).

VALUE OF PROPERTY SAVED (field is numeric, 10 digits, default blank) This is the value that is referred to in IAMSAR Draft 4, Volume 1 Sections 5.6.7 and 5.6.10.

SAR Facilities is the division that describes in general terms the facilities used. Specifics would be found under the amplifying data category.

TYPE AND NUMBER (field is alphanumeric, nine characters, format ANNGNNMNN, default is A00G00M00) This is the collective type and number of SAR facilities used, where the letter A is for Aeronautical, M for Maritime, G for Ground. N is for the number of each unit. e.g., A04G00M03 refers to four aeronautical SAR facilities, three maritime and no ground

SORTIES (field is numeric, 4 digits, default is blank) This is the collective number of sorties during the incident.

DATE TASKED (format as per START DATE, default blank)
TIME TASKED (format as per START TIME, default blank) This group is for the date/time that the first SAR facility was tasked. If the SAR facility is on-scene when the incident began then this field is left blank.

DATE ON-SCENE (format as per START DATE, default blank)
TIME ON-SCENE (format as per START TIME, default blank) This group is for the date/time for the first SAR facility to arrive on-scene. If the SAR facility is on-scene when the incident began then this field is left blank.

DATE SEARCH OBJECT FOUND (format as per START DATE, default blank)
TIME SEARCH OBJECT FOUND (format as per START TIME, default blank) If the SAR Facility is on-scene when the incident began then this field is left blank.

DATE SEARCH ENDED (format as per START DATE, default blank)
TIME SEARCH ENDED (format as per START TIME, default blank) Self explanatory.

DATE NORMAL (format as per START DATE, default blank)
TIME NORMAL (format as per START TIME, default blank) The date/time that the last SAR facility returns to the function or location it was in before it was involved in the incident.

FORMAL SEARCH PLAN (field is binary function, Y/N, default blank)

AMOUNT OF AREA SEARCHED (field is numeric, 7 digits, default blank) The calculated total area searched without overlap expressed in square nautical miles.

Part 2 - Amplifying Data Fields - EXAMPLE

WEATHER is the division that describes the weather at the time of the alert. Codes that are used in this division are those published by the WMO, Publication 306, Volume 1.1 Part A. It is important to recognize that the database fields and the operator input screen may not contain identical views. For example, visibility may be observed at greater than 50 nautical miles and recorded in this database as code 99.

Weather does not form part of the basic data fields for two reasons. First, weather may not be a significant factor in every distress case and second, not every field would be recorded in every case.

For the elements of this division, only weather that has caused the incident or a significant deterioration in the weather should be recorded. This division should be repeated and tagged with the date/time when more than one observation is recorded.

DATE WEATHER (format as per START DATE, default blank)
TIME WEATHER (format as per START TIME, default blank)

WIND SPEED
WIND DIRECTION

AIR TEMPERATURE
SEA TEMPERATURE

SEA STATE
SWELL HEIGHT
SEA ICE CONDITIONS

CLOUD COVER
CLOUD CEILING

VISIBILITY
PRECIPITATION

SAR Facilities information that will amplify the basic data is recorded for each SAR Facility that was used in the incident. Each set of fields will be tagged to the type and name.

SAR FACILITY TYPE (field is alphanumeric, 1 character, format T, default blank) This is a generic description of type where T is A, G or M for Aeronautical, Ground or Maritime.
SAR FACILITY NAME (field is alphanumeric, 32 characters, default blank)
SAR FACILITY RADIO CALLSIGN (field is alphanumeric, 16 characters, default blank) This is the callsign found on the ITU lists.
SAR FACILITY NATIONALITY (field is alphanumeric, 32 characters, default blank)

SAR FACILITY DATE TASKED (format as per START DATE, default blank)
SAR FACILITY TIME TASKED (format as per START TIME, default blank)

SAR FACILITY DATE RESPONDED (format as per START DATE, default blank)
SAR FACILITY TIME RESPONDED (format as per START TIME, default blank)

SAR FACILITY DATE ON-SCENE (format as per START DATE, default blank)
SAR FACILITY TIME ON-SCENE (format as per START TIME, default blank)

SAR FACILITY SORTIES (field is numeric, 4 digits, default is blank) The number of sorties conducted by this SAR facility.

SAR FACILITY DOWN-TIME (field is numeric, 6 digits, format DDHHMM) This records time while assigned to a SAR incident where the SAR facility had to refuel, conduct repairs, trade fresh crew for fatigued crew, or any other reason that the SAR facility was not conducting SAR operations.

NUMBER LIVES RESCUED (field is numeric, 4 digits, default value 0)
NUMBER DECEASED RECOVERED (field is numeric, 4 digits, default value 0)

SAR FACILITY DATE RELEASED (format as per START DATE, default blank)
SAR FACILITY TIME RELEASED (format as per START TIME, default blank)

SAR FACILITY DATE NORMAL (format as per START DATE, default blank)
SAR FACILITY TIME NORMAL (format as per START TIME, default blank)

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ANNEX 8

DRAFT COMSAR CIRCULAR

GUIDANCE FOR CENTRAL ALERTING POSTS (CAPs)

1 The Maritime Safety Committee, at its [seventy-second session (17 to 26 May 2000)], recognizing the need for interim measures for Heads of MRCCs to carry out an efficient co-operation in SAR matters for a transitional period until the global SAR plan had been fully implemented, approved the annexed Guidance on Central Alerting Posts (CAPs).

2 Member Governments are invited to use the annexed Guidance, as appropriate, and bring it to the attention of all parties concerned.

ANNEX

GUIDANCE ON CENTRAL ALERTING POSTS (CAPs)

INTRODUCTION

Certain States have ratified the International Convention on Maritime Search and Rescue (SAR Convention). Others have not. However more general obligations in matter of SAR may be found in the United Nations Convention on the Law of the Sea (UNCLOS) and in the Safety Of Life At Sea (SOLAS) Convention (see Appendix A).

Furthermore, even if some States have ratified none of these Conventions, as Search and Rescue is an action to save human life, not a legal institution, there is a general obligation for every State to participate, among its possibilities, in the global SAR effort. But to be efficient, this participation must respect certain standards of the global SAR organization, particularly when co-operating with other States.

The Alerting Post

According to the SAR Convention principles (see Appendix B) some volunteer States only are responsible for a Search and rescue Region (SRR).

It follows that some SRRs include coasts and territorial sea of States different from the one that is responsible for this SRR and which hence operates the Maritime Rescue Co-ordination Centre (MRCC) of this SRR. In most cases, exchanges of information between the MRCC and this (these) foreign State(s) pass always through the same local body: police headquarters or harbourmaster for example. This body so operates as *alerting post* of a special kind as it is the sole correspondent of the MRCC in this foreign country.

Definition of the *alerting post* may be found in the IMOSAR Manual and with very slight differences in the IAMSAR Manual: “Any facility intended to serve as an intermediary between a person reporting an emergency and a rescue co-ordination or rescue sub-centre”. A lot of them carry out this function very occasionally. Some others are more sea-oriented. But in general, modes of co-operation between the alerting posts are entirely in the hands of the MRCC which has to give to any person or body which may become occasionally an alerting post some instructions such has phone numbers to call and list of data to gather in case of alert. The situation of alerting posts described in the previous indent is a bit different as having a more important general responsibility for SAR in their country. These have been given the name of "Central Alerting Post" (CAP).

Purpose of the circular

The purpose of the following circular about CAPs is:

- to give guidance to the competent body of the Governments involved, even if this State has not ratified the SAR Convention, because while ratification is strongly recommended, as far as human life is involved, a co-operation without ratification is far better than no co-operation at all;

- to give basic elements to the CAPs for them to carry out an efficient co-operation in SAR matters; and

- to give guidance to the MRCCs involved, for them to advise properly the CAPs in their SRRs.

General remarks

- This circular deals normally only with the maritime SAR organization. However principles are the same in both organizations and these are joint in certain States.

- It must be stressed that, if States involved organize their co-operation by signing an agreement or arrangement, they may adopt in this latter instrument other solutions than those provided in the present circular, as far as provisions jointly adopted respect SAR Convention principles and provisions.

- MRSC (Maritime Rescue Sub-Centre) can be read in place of MRCC when a MRSC exists and has been instructed to have link with a CAP.

Attachment A provides pertinent quotations of UNCLOS and SOLAS Convention.
Attachment B recalls the basic elements of the global SAR organization.

1 DEFINITION

A Central Alerting Post (CAP) in a given country* is the sole point of contact for SAR matters between all authorities and SAR facilities of this country and the foreign MRCC of the Search and rescue Region (SRR) in which is included the country of the CAP.

In most case the duties of CAP will be a part-time activity of a public body (police or coastguard headquarters or station, harbourmaster, etc.). But it may be carried out by a private body if instructed to do so by a governmental authority.

A CAP should be permanently manned at least by the way of a duty officer able to be called at home out of working hours.

2 DUTIES OF A *CAP*

2.1 Permanent preparatory duties

2.1.1 Regarding the other alerting posts of the country.

A CAP should be given task to centralize information about any maritime incident.

It should insure its role of centralisation is clearly known, at least by other public bodies involved in emergency situations and in maritime activities.

* This "country" may be either an independent State or a remote part of another State whose main coasts are included in another (or several other) SRR(s).

2.1.2 Regarding the SAR resources of the country.

The CAP should keep a record of any facility able to intervene in a SAR case, with basic data (type, range, speed etc.), status of availability as far as possible, and especially way of alerting it for intervention.

2.l.3 Regarding the MRCC

The CAP should keep and take in account any information and guidelines received from MRCC.

If there is not a sole phone number to be used out of working hours, it has to send to MRCC a list of duty officers' personal phone numbers.

2.2 Duties about a given SAR case

2.2.1 Normal situation

As soon as a SAR alert is received by the CAP, this body has:

- to pass this alert to the MRCC with full gathered data about the incident;
- if necessary to receive request from MRCC for gathering more information;
- to receive request from MRCC for operating local SAR facilities, following assessment of the situation by the MRCC;
- to pass immediately this request to the body which has power to operate these facilities with all useful information about the task: object of the task, area, radio frequencies etc..;
- if the facilities have not direct communications link with the MRCC (a direct link is the normal way, which has to be seeked), to act as communications relay between these facilities and MRCC;
- to report any new element to the MRCC;
- if necessary (for serious accidents for example) to act as communications relay between the MRCC and any governmental or public authority involved in the State of the CAP.

2.2.2 Special situation

When according to information received by the CAP:

- a SAR case clearly needs no search action but only a rescue intervention for few people at a precise point;
- this point is in the territorial sea of the CAP's State;
- the rescue intervention may be carried out by local facilities without help coming from another country or from ships at sea; and

- the CAP may request immediate intervention of local facilities while informing the MRCC.

It has to be stressed that the three above conditions have to be respected because:

- as soon as there is a search to carry out, it may be a long and difficult operation involving facilities coming from outside;

- a CAP has no power to co-ordinate foreign facilities and vessels at sea.

3 DUTIES OF A MRCC REGARDING A *CAP*

3.1 Permanent preparatory duties

The MRCC permanently has:

- to give the CAP any useful indications for organizing their co-operation, keeping in mind that this information must be kept very simple, as a CAP is only a part-time non-specialized (and sometimes non-maritime) SAR actor;

- to update all elements regarding transmission of alerts (phone or fax numbers, etc..);

- to advise the CAP as appropriate;

- to propose its participation in the training of staff manning the CAP, if practical.

3.2 Duties during a SAR operation

The MRCC has to keep the CAP informed of last information about the operation.

4 EQUIPMENT OF A *CAP*

A phone line and a fax line are sufficient as recommended basic equipment. According to local situation, VHF equipment may be considered.

5 DOCUMENTATION OF A *CAP*

5.1 IMO Documentation

This circular may be the sufficient IMO documentation for a CAP. However it may be useful for it to have a copy of the IMO MERSAR Manual or alternatively of the volume 3 of the IAMSAR Manual.

5.2 MRCC Documentation

The CAP has to keep and update documentation sent by the MRCC regarding their mutual co-operation.

5.3 Domestic documentation

The CAP has to maintain and update any documentation issued by any competent authority, especially instructions regarding ways of alerting local facilities.

6 SAR FACILITIES

According to IMO definitions:

- a SAR facility is “any mobile resource, including designated search and rescue units, used to conduct search and rescue operations”;

- a SAR unit is “a unit composed of trained personnel and provided with equipment suitable for the expeditious conduct of search and rescue operations”.

In many countries there are no dedicated SAR units, except small craft. Practically, the SAR resources that a CAP may call for intervention would be in most cases provided by patrol craft of the Navy or the Police or the Coast Guard and by aircraft of these bodies if any. However any other solution is acceptable if efficient.

7 FURTHER EVOLUTION

An advanced evolution of a CAP may be to be transformed into a Maritime Rescue Sub-Centre (MRSC). Such a transformation is subject to the following conditions:

- a certain number of SAR cases to be treated;

- the ratification of the SAR Convention by the CAP's State;

- a joint wish of the authority of the MRCC and of the authority of the CAP;

- a more important level of equipment, especially communications equipment (see IMO document COMSAR/Circ. 18);

- a more important documentation (see IMO document SAR.7/Circ. 1);

- a level of training of personnel similar to the MRCC training level; and

- a jointly decided delegation given by the MRCC to the new MRSC.

Appendix A

United Nations Convention on the Law of the Sea Article 98, paragraph 2:

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

Safety Of Life At Sea (SOLAS) Convention Regulation V/15

"(a) Each contracting Government undertakes to ensure that any necessary arrangements are made for coast watching and the rescue of persons in distress at sea round its coasts. These arrangements should include the establishment, operation and maintenance of such maritime safety facilities as are deemed practicable and necessary having regard to the density of the seagoing traffic and the navigational dangers and should, so far as possible, afford adequate means of locating and rescuing such persons.

(b) Each contracting Government undertakes to make available information concerning its existing rescue facilities and the plans for changes therein, if any.

Appendix B

BASIC ELEMENTS OF THE GLOBAL SAR ORGANIZATION

1 **International instruments**

Two international conventions give the framework of the global Search And Rescue organization in the world

- the International Civil Aviation Convention (Chicago, 1944) and especially its Annex XII about SAR (1952) for aircraft accidents over land and sea; and

- the International Search And Rescue Convention (Hamburg, 1979) for any "person in distress at sea".

2 **Principles of the SAR organization**

1st principle : the seas of the world are divided in "Search and Rescue Regions" (SRR). One volunteer State is responsible for this SRR which may include coast and territorial seas of other States, as far as they have accepted it. There is a strong need to avoid confusion in substance between boundaries of these SRRs (which are purely technical in the aim of rescue human life) and political and legal jurisdiction boundaries at sea.

2nd principle : the obligations of the responsible State are not to provide SAR facilities to intervene in any circumstance in any part of the SRR. These obligations are to operate permanently a Rescue

Co-ordination Centre (RCC) (and associated technical equipment as appropriate) in charge of reception and centralisation of all alerts in the SRR and then to co-ordinate SAR operations;

3rd principle : any State (hence including States not responsible of a SRR and even States that have not ratified the SAR Convention) has the obligation to participate to the SAR effort, according to its situation regarding length of coasts, maritime activities etc;

4th principle : operations co-ordinated by MRCCs are carried out by SAR units of its own State, SAR units of any other State able to participate and any ship at sea, which has a legal obligation to participate;

5th principle : States have the obligation to co-operate, particularly by providing SAR resources even when the operation is not co-ordinated by their own MRCC, as soon as it is technically possible; and

6th principle : any expense in SAR operations are sustained by the operator of the facility (government for public vessel and aircraft, shipowner for trade and fishing vessel, pleasure craft operator).

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ANNEX 9

DRAFT MSC Circular

INTERIM PROCEDURES FOR RCC ON RECEIPT OF DISTRESS ALERTS

1 The Maritime Safety Committee, at its [seventy-second session (17 to 26 May 2000)], recalling that the reception of distress alerts from distant areas is a common problem, noted that there was a need for interim procedures for RCCs and coast stations (CSs) to follow on receipt of DSC alerts.

2 Noting further that COMSAR 4 had addressed that problem and developed such interim procedures, approved the interim RCC/CS procedures upon reception of a DSC alert and Interim RCC/CS procedures upon reception of an Inmarsat alert, as set out in annexes 1 and 2.

3 Member Governments are invited to use the annexed Interim RCC/CS procedures and bring them to the attention of all parties concerned.

ANNEX 1

INTERIM PROCEDURES FOR RCC ON RECEIPT OF DISTRESS ALERTS

The procedure described below is a guideline, and shall under no circumstances restrict the effort necessary to confirm the safety of a vessel or persons onboard.

DISTRESS ALERT WHERE SHIP'S POSITION IS INCLUDED .

- The position is within own SRR
  - ➢ RCC/CS to acknowledge the alert by DSC and telephony.
- The position is outside own SRR.
  - ➢ Defer acknowledgement for a short period to allow appropriate RCC/CS to acknowledge.
  - ➢ If no acknowledgement, relay the alert to appropriate RCC. Request acknowledgment.

DISTRESS ALERT WHERE SHIP'S POSITION IS NOT INCLUDED .

- The alert received via VHF.
  - ➢ RCC/CS to acknowledge the alert by DSC and telephony. Assume co-ordination.
  - ➢ Attempt to ascertain the position.
- The alert received via MF or HF
  - ➢ Defer acknowledgement for a period.
  - ➢ Check the MMSI/MID, acknowledge and attempt to establish contact .
  - ➢ If response received, and in own SRR co-ordinate as appropriate. If in distress outside own SRR, co-ordinate until appropriate RCC assumes SMC.
  - ➢ If no response received, continue investigating, but also pass alert to the flag state /appropriate RCC/SAR data provider. Request acknowledgement.

DISTRESS RELAY ALERT.

- If transmitted by RCC/CS
  - ➢ The distress relay alert shall not be acknowledged.
- If transmitted by a ship within own SRR.
  - ➢ RCC/CS to acknowledge.
- If transmitted by a ship outside own SRR.
  - ➢ Pass alert to appropriate RCC. Request acknowledgement.
- If transmitted by a ship without distress position.
  - ➢ Attempt to ascertain position and continue investigating..

ALL SHIP URGENCY

- DSC urgency is an announcement of a call to be transmitted via a given frequency.
  - ➢ Do not acknowledge.
  - ➢ Monitor given frequency.

DSC DISTRESS ALERT ACKNOWLEDGEMENT

- Received from a ship station
  - ➢ If original distress is not received, request distress details from the acknowledging ship.
- Received from a RCC/CS
  - ➢ Acknowledging RCC/CS will be responsible for the co-ordination. If necessary seek additional information.

ANNEX 2

INTERIM RCC/CS PROCEDURES UPON RECEPTION OF AN INMARSAT ALERT

The procedure described below is a guideline, and shall under no circumstances restrict the effort necessary to confirm the safety of a vessel or persons onboard.

DISTRESS ALERT

• The position is within own SRR.	➢ Acknowledge the alert ➢ RCC to assume co-ordination.
• The position is outside own SRR.	➢ Acknowledge the alert. ➢ RCC to co-ordinate actions until appropriate RCC assumes SMC. ➢ Pass alert to appropriate RCC. Request acknowledgement.
• Missing or not updated position.	➢ Acknowledge the alert. ➢ RCC to assume co-ordination. ➢ Check ID/MID, and pass information to appropriate RCC/SAR data provider/Flag State. Request acknowledgement.

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ANNEX 10

DRAFT MSC CIRCULAR

MEDICAL ASSISTANCE AT SEA

1 The Maritime Safety Committee, at its [seventy-second session (17 to 26 May 2000)], noting that there is now a general tendency to regard medical assistance at sea as an integral part of rescue and that this approach is consistent with the SAR Convention which provides that the search and rescue service consists of the performance of distress monitoring, communication, co-ordination and search and rescue functions, including provisions of medical advice, initial medical assistance or medical evacuation, approved the attached guidance on Medical Assistance at Sea and importance of the Role of Telemedical Assistance Services and Medical assistance at sea and Maritime Radiocommunications, as set out in annexes 1 and 2.

2 Member Governments are invited to use the annexed guidance and bring it to the attention of all parties concerned.

ANNEX 1

MEDICAL ASSISTANCE AT SEA AND IMPORTANCE OF THE ROLE OF TELEMEDICAL ASSISTANCE SERVICES

1 Introduction

1.1 General

There is now a general tendency to regard medical assistance at sea as an integral part of rescue. This approach is consistent with the SAR Convention which provides (paragraph 1.3.3) that the "search and rescue service" consists of "the performance of distress monitoring, communication, co-ordination and search and rescue functions, including provision of medical advice, initial medical assistance or medical evacuation? ."

It seems important for the International Maritime Organization to take this fact into account and to work, as in its other fields of action, to put in place arrangements and procedures aimed at effective enhancement of the protection of human life at sea.

1.2 Purpose of the circular

An optimal arrangement for medical assistance at sea is based on the following five elements:

- one or more RCCs;
- a telemedical assistance service (TMAS);
- means of intervention at sea;
- shore-based arrangements;
- common operational procedures.

The purpose of this circular is to inform or remind States of the elements of a global system of medical assistance at sea and to encourage those which have not yet done so to set up such a system (which to a large extent uses existing elements), including an officially designated maritime telemedical assistance service.

1.3 General remarks

1.3.1 A system of medical assistance at sea applies in theory to ships that do not have a doctor on board. It may, however, be requested in certain circumstances by a ship's doctor.

1.3.2 In this circular, RCC should be understood to include MRCC (maritime rescue co-ordination centres) and JRCC (joint rescue coordination centres of aeronautical and maritime organizations) or even, if applicable, MRSC or JRSC (maritime or joint rescue secondary centres).

1.3.3 Although professional seafarers are the principal beneficiaries of the system of medical assistance at sea, it is also true that in some areas such a system may also benefit passengers on ships that do not satisfy the conditions because they have a doctor on board, as well as pleasure craft.

1.3.4 The system of medical assistance at sea, as described in this circular, does not apply to maritime accidents involving a large number of shipwrecked people or where the rescue proper involves the assistance of medical teams. However, the various elements of the system are normally involved in the case of a serious accident, subject to special procedures.

1.4 Sections 2 to 6 below cover the various elements that constitute a global system of medical assistance at sea.

2 RCCs

As medical assistance at sea is an integral part of rescue, RCCs are a key element in the system, because captains "naturally" call on the RCC when they have a problem that might jeopardize the lives of people on board.

That is why all RCCs should be able:

- to provide the captain with information to allow him to contact a TMAS;
- then, if medically necessary, to organize an evacuation, to the extent of its capacities;
- failing that, where the TMAS suggests diverting the voyage, to advise the captain of the most suitable port, bearing in mind the condition of the sick or injured person;
- lastly, to transmit the alert, together with any relevant information, to the shore-based reception facility.

RCCs should therefore be provided with the necessary instructions and documentation and, in particular, operational procedures for medical assistance at sea, setting out the roles and responsibilities of each partner.

3 The Maritime Telemedical Assistance Service (TMAS)

3.1 The existence of such a service in a system of medical assistance at sea is essential for the following reasons:

- to alleviate the isolation at sea of both the victim (the sick or injured person on board) and the captain responsible for giving treatment;
- to avoid, as far as possible, the need for evacuation, which, although sometimes essential, is by its nature dangerous and expensive;
- to assist RCCs, which are often the first contact with the captain in difficulty, to take an appropriate decision.

3.2 A TMAS should be officially designated as such by the competent authority in the State concerned so as to:

- appear in official documentation (especially that of the IMO);
- provide a guarantee of competence and quality to potential users.

The designation should also indicate effective links with one or more RCCs, so that the latter are quite clear as to which RCC they should turn in any particular instance. For the telemedical service, it involves taking medical responsibility for the advice given by its doctors.

Both for reasons of cost and acquisition of experience by doctors, it is preferable for the TMAS to be provided by as few bodies as possible.

There may be an advantage in the service being provided through a specialized centre, which could even cover several countries (e.g. those sharing a common language).

3.3 It does not matter much whether the designated medical institution is in the public or private sector. The important thing is that it is permanently staffed by doctors qualified in conducting remote consultations and well versed in the particular nature of treatment on board ship.

3.4 The annex to this circular contains further details of the benefits and effectiveness of a TMAS.

4 Means of intervention at sea

The means used for evacuation are generally the same maritime or aeronautical means used for rescue operations. It may be useful in certain circumstances to use a more specialized means of search (e.g. aircraft) to guide the rescue craft responsible for the evacuation.

The responsible authorities should regard it as desirable to have on board the rescue craft a team that includes either a doctor, or one or two people with appropriate training, when recommended by the TMAS doctor.

5 Shore-based arrangements

Unless the evacuation craft transports the evacuated person directly to a hospital (evacuation by helicopter), it is essential to provide for reception of the sick or injured person and transport from the point of disembarkation to the hospital, including specialized equipment (ambulance) and trained personnel and, if necessary, a doctor. There is nothing specifically maritime about this aspect, but being well prepared to admit the patient to the most suitable medical establishment is essential if the system is to be fully effective.

6 Operational procedures

It is desirable to have a national reference text that defines the procedures for joint operations by the various partners in medical assistance at sea, and their respective responsibilities:

- TMAS: medical advice[1], medical advice on evacuation (MEDEVAC) or diversion, liaison with shore-based medical partners in the case of evacuation or diversion;

- RCC: initiation of nautical or aeronautical means of evacuation, nautical advice to the captain when advised to divert on medical grounds, overall co-ordination of the operation, alerting and liaison with the shore-based reception facility;

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[1] Medical advice (acronym MEDICO) consists of diagnosis and prescription of treatment on board. It may in some cases be given by bodies other than those providing the TMAS, where such advice does not involve evacuation or diversion.

- means of intervention at sea: evacuation from the ship to the shore by nautical or aeronautical means with a medical or paramedical team where necessary;

- shore-based arrangements: provision of medical personnel, reception and transport of the patient to hospital by land or aeronautical means with a medical or paramedical team.

APPENDIX

Objectives, capacities and planning of a TMAS

A1 Objectives of a TMAS in a global system of medical assistance at sea.

A1.1 Aid for sick or injured seafarers; aid to captains.

The overall objective of a system of medical assistance at sea is to try to provide seafarers with medical care as nearly as possible equivalent to the care they would receive ashore, because:

- the seafarers' profession exposes them to a high risk of accident or sickness at sea;

- the position of isolation or remoteness is a potentially exacerbating factor in any on-board medical problem.

In the absence of a doctor on board (which is most often the case), the captain is responsible for medical care. However, any medical training he has received is not such as to allow him to treat a patient unaided. That is why telemedical advice (MEDICO) may enable him to provide a good standard of treatment and make the best use of the compulsory medicine chest.

In terms of responsibility, the TMAS doctor has full responsibility for the diagnosis and prescription of treatment, while the captain is responsible for examining the patient, administering treatment and the final decision.

A1.2 A way of avoiding evacuation

For a long time, while not forgetting the few well-established centres of medical advice by radio, *medical assistance at sea* has been synonymous with *evacuation*. Sometimes, however, evacuation is not possible. More often, it is dangerous both for the rescue team (due to the difficulty of the weather or technical conditions), or for the person being assisted (due to his condition). It often presents secondary, but not negligible, problems, linked to the psychological isolation of the patient and the difficulty of repatriating him to his country of origin.

In any case, evacuations are complex and onerous operations for the authorities, albeit essential in some circumstances, and should be reserved for medically justified cases.

A1.3 Aid to decisions by the RCC - need for a link between RCC and the TMAS

Although the ship may call the TMAS directly, RCCs are often the first contact for a captain faced with a medical emergency. They need immediate medical advice and a recommendation for action (which may simply be treatment on board): the TMAS doctor has full authority to recommend evacuation on medical grounds.

The optimal functioning of a global system of medical assistance at sea thus involves co-operation between RCCs and the TMAS, based on confidence in each other. That is why they need to know each other and there are advantages in linking one (or possibly more) RCCs to a single TMAS, and to give official status to the relations between medical and operational partners in the system.

A2 Capacities to be checked by the competent authority in designating a TMAS

A2.1 Continuous staffing

Telemedical advice must be instantly accessible 24 hours out of 24.

The doctor must be available : telemedical advice, even for relatively simple cases, takes the doctor between 15 and 30 minutes. The doctor must therefore be able to free himself from any other activity during that time.

Some cases involve successive consultations during the course of the same day, sometimes seeking advice from another specialist doctor collaborating in the TMAS and/or calls to different operational partners. It is preferable for the same doctor to remain in charge of the case; continuity of treatment must be assured by communication of information to staff between shifts.

A2.2 Medical staff trained in tele medical advice

The doctor must be able to direct the examination of the patient and treatment by his correspondent on board taking into account his level of training. He must be aware of the available treatment on board based on the type of medicine chest. He must adapt his vocabulary to allow him to communicate with the captain. He must be trained in the use of multimedia means to be developed.

A2.3 Medical staff trained in treatment in a maritime environment

There are few pathologies specific to the maritime environment. It is mainly the conditions under which treatment is given and the environment that must be familiar to the doctor. Treatment regimes must therefore take account of the medicines available on board.

Decisions to divert or evacuate must take geographical, meteorological and operational constraints into consideration, as well as the strictly medical justification for the intervention.

A2.4 Adequate documentation and means of communication

The non-medical documentation required by a TMAS relates mainly to the specifically maritime aspects of its work and contact addresses.

The means of communication must include at least one telephone line and easy access to a telex and fax.

A2.5 Development of a maritime medical network

Networking of different countries' TMAS would be useful because of the universal nature of maritime navigation. Real time communication between services are often essential at the operational level and permit harmonization of procedures and joint analysis of epidemiological data.

A3 Planning of a TMAS

A TMAS can be provided by various medical organizations subject to their recognition or designation as official partners of RCCs in the framework of a global system of medical assistance at

sea. In come cases, the TMAS may be organized as a national centre (or even one shared by several countries). Such an arrangement has the following advantages:

A3.1 Greater pooling of experience

Providing a larger amount of telemedical advice at sea increases the experience of the medical team in a particular centre. The centralization of information from advice records allows a single epidemiological monitoring of the seafarer population.

A3.2 Provision of a single medical contact for seafarers of a particular nationality or language.

The development of modern means of maritime communications allows exchange of data, images, etc. Nevertheless, the dialogue between the doctor and the person responsible for treatment (sometimes the patient himself) remains the essential basis of medical action and benefits from being in the language of the two parties.

The existence of a national reference centre for a given population of seafarers is likely to assist such a dialogue (same language, same cultural approach to the problem, adaptation to national training programmes) and to reinforce the essential relationship of trust between the person responsible for treatment on board, the patient and the doctor.

A3.3 Provision of a single point of contact for other bodies concerned with seafarers' health.

The experience gained in a maritime telemedical centre is useful to the national administrations concerned, in developing the content of official medical chests, national operational procedures, safety regulations, and training programmes for those responsible for providing treatment.

A3.4 Economies

The need for permanent operation, thus the continuous presence and availability of trained doctors, and specific logistics (documentation, means of telecommunication, computers) involves operating costs which a proliferation of centres would help to swell for no purpose. Wherever possible, sharing medical facilities with an existing structure can help to reduce costs.

It is thus desirable to create a centre providing TMAS within an existing medical establishment (e.g. emergency department in a large hospital), so as to have access to facilities already in place: staff, specialised medical services, logistical services.

Care should be taken to ensure the provision of the required facilities (see above), particularly training of the centre’s doctors in the special features of medical assistance at sea. Provided that they are available to give telemedical advice at sea, the doctors concerned can have other tasks in the medical establishment if the maritime activity does not occupy them full time.

Finally, it is recommended that a link-up with another State (for example, one with the same language) should be sought, to create a common centre.

ANNEX 2

MEDICAL ASSISTANCE AT SEA AND MARITIME RADIOCOMMUNICATIONS

1 COMMUNICATIONS ARE ESSENTIAL TO TELEMEDECINE AT SEA

The global system of medical assistance at sea relies heavily on the use of telemedical advice. The various systems of maritime communications must allow access which is:

- permanent
- priority
- free of charge

to the *TeleMedical Assistance Service* - TMAS

Telemedical advice is one of the emergency procedures in maritime radiocommunications, in the same way as a call to an MRCC.

The ship's captain, who is responsible for treatment on board, must be able to access the TMAS of his choice, based on his nationality, the ship's flag and especially the language spoken.

Communications used for telemedical advice must be subject to the strictest confidentiality and are subject to medical secrecy.

Recording of the date and time of all TMAS communications and archiving on secure tape will enable essential data to be preserved should they be required in the case of legal proceedings into responsibility. All recorded information is subject to medical secrecy in the same way as the content of a medical file.

2 MEANS OF COMMUNICATION

2.1 Voice communication is the basis of telemedical advice. It allows free dialogue between the doctor and the person responsible for treatment on board or between doctor and patient, and contribute to the human relationship which is crucial to any medical consultation.

2.2 Text messages exchanged between the ship and the TMAS by telex are a useful complement to the voice telemedical advice and add the reliability of writing. Capacity for dialogue, however, is limited, and the gain in precision is obtained at the expense of the human relationship which remains essential in an isolated environment.

Communication by telex is the only one available on some systems such as Inmarsat-C.

2.3 Fax allows the exchange of pictures or diagrams which can help to identify a symptom, describe a lesion or the method of treatment.

2.4 Digital data transmission (photograph or electrocardiogram) provides an objective and potentially critical addition to descriptive and subjective clinical data. This method should be developed in the future[1].

3 MARITIME RADIOCOMMUNICATIONS PROCEDURES FOR TELEMEDICAL ADVICE

3.1 Communications using metric waves (VHF) or hectometric waves (MF) by a contact radio station[2]:

The captain contacts the operator of an accessible radio station in the area where he is located and requests a telemedical advice from the TMAS, usually the reference service for the contact radio station, but may be the ships reference TMAS, particularly for reasons of language or monitoring the patient. The communication must be routed following the emergency procedure, as a priority and free of charge.

3.2 Communications using decametric waves (HF): decametric stations have a very long range which allows any ship to contact them regardless of their position at sea. Normally, there used to be a national maritime radiocommunication centre using decametric waves. Because of the development of new satellite telecommunications, this type of maritime radiocommunications, which was the basis for the first telemedical advice at sea, is less used. Some national centres have closed down. However, some ships are still only equipped with decametric SSB equipment for long distance communications.

In any event, under the GMDSS, global HF coverage is provided by a number of designated stations (see GMDSS master plan).

It is recommended that agreements between the competent national authorities and station operators should allow transmission of telemedical advice to the ship's reference TMAS following the free, priority, emergency procedures, recognized for medical consultations.

Maritime radiocommunications centres using decametric waves continue to provide a radio telex service used for telemedical advice, with both manual and automatic procedures.

3.3 Inmarsat communications: the various Inmarsat systems offer two abridged *codes*: 32 and 38, which can be used for medical assistance at sea by telephone or telex (telex only for Inmarsat-C):

- code 32 is used to obtain medical advice. Some coast earth stations (CES) provide a direct link with the reference TMAS for the station or a nearby hospital when this code is used;

- code 38 should be used when the condition of an injured or sick person on board a ship justifies medical assistance (evacuation to shore or services of a doctor on board). This code allows the call to be routed to the shore-based service or body competent to deal with the situation. Some coast earth stations provide a direct link to the associated rescue co-ordination centres (RCC) when this code is used.

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[1] Devices for recording and transmitting electrocardiograms, at a relatively low cost and for use by people who are not doctors are now available on the market and some ships are already equipped with them.

[2] Contact radio station means either a coastal station, in the normal meaning of the term, or another body such as an RCC.

It should, however, be emphasised, that the capacity to receive communications via these two codes is not compulsory for CES, although more and more of them are now becoming equipped to do so.

Most of the time, the service is free of charge for the ship, under an agreement between the CES operator and the relevant medical authority.

4 COMMUNICATIONS BETWEEN THE PARTNERS IN MEDICAL ASSISTANCE AT SEA

Although telemedical advice is primarily based on direct communication between the ship and the TMAS, to function well, the global system of medical assistance at sea involves exchange of information in real time between the various operational and medical partners (* = normal means; ** = content):

- between the TMAS and MRCC:

  * telephone, fax or telex by public network;
  ** operational data, confirmation or indication of the medical reasons for intervention;

- between the TMAS and the responsible medical centre (hospital) on shore:

  * telephone, fax or telex by public network;
  ** medical information about the patient to prepare the medical intervention team, hospital transport on shore and hospital admission. In return, the TMAS should receive the hospital report necessary to evaluate the telemedical advice;

- between the MRCC and the responsible medical centre on land:

  * telephone, fax or telex by public network;
  ** operational information essential for joint intervention by rescue and medical teams;

- between the aeronautical or nautical rescue team, the MRCC (operational contact) and the shore-based medical centre (preparation for admission of the patient):

  * maritime or specialized means of radiocommunications;
  ** operational information essential to medical reception on land;

- if applicable, between the TMAS and a body responsible for maintaining seafarers' medical records:

  * fax, telex, data transmission networks, etc.
  ** access by TMAS doctor to medical data contained in a computerized file of seafarers' health records, if available.

Exchange of medical information must be restricted to medical correspondents involved in medical assistance at sea, and must be subject to strict respect for medical secrecy.

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ANNEX 11

DRAFT REVISED CHAPTER 14 OF THE HSC CODE – RADIOCOMMUNICATIONS

14.1 Application

14.1.1 Unless expressly provided otherwise, this chapter applies to all craft specified in 1.3.1 and 1.3.2.

14.1.2 This chapter does not apply to craft to which this Code would otherwise apply while such craft are being navigated within the Great Lakes of North America and their connecting and tributary waters as far east as the lower exit of the St. Lambert Lock at Montreal in the Province of Quebec, Canada*.

14.1.3 No provision in this chapter shall prevent the use by any craft, survival craft or person in distress of any means at their disposal to attract attention, make known their position and obtain help.

14.2 Terms and definitions

14.2.1 For the purpose of this chapter, the following terms shall have the meanings defined below:

.1 "Bridge-to-bridge communications" means safety communications between craft and ships from the position from which the craft is normally navigated.

.2 "Continuous watch" means that the radio watch concerned shall not be interrupted other than for brief intervals when the craft's receiving capability is impaired or blocked by its own communications or when the facilities are under periodical maintenance or checks.

.3 "Digital selective calling (DSC)" means a technique using digital codes which enables a radio station to establish contact with, and transfer information to, another station or group of stations, and complying with the relevant recommendations of the International Telecommunication Union Radiocommunication Sector (ITU-R).

.4 "Direct-printing" telegraphy means automated telegraphy techniques which comply with the relevant recommendations of the International Telecommunication Union Radiocommunication Sector (ITU-R).

.5 "General radiocommunications" means operational and public correspondence traffic other than distress, urgency and safety messages, conducted by radio.

* Such craft are subject to special requirements relative to radio for safety purposes, as contained in the relevant agreement between Canada and the United States.

.6 "Global Maritime Distress and Safety System (GMDSS) Identities" means maritime mobile services identity, the craft's call sign, Inmarsat identities and serial number identity which may be transmitted by the craft's equipment and used to identify the craft.

.7 "Inmarsat" means the Organization established by the Convention on the International Maritime Satellite Organization (Inmarsat) adopted on 3 September 1976.

.8 "International NAVTEX" service means the co-ordinated broadcast and automatic reception on 518 kHz of maritime safety information by means of narrow-band direct-printing telegraphy using the English language.*

.9 "Locating" means the finding of the ships, craft, aircraft, units or persons in distress.

.10 "Maritime safety information" means navigational and meteorological warnings, meteorological forecasts and other urgent safety-related messages broadcast to ships and craft.

.11 "Polar orbiting satellite service" means a service which is based on polar orbiting satellites which receive and relay distress alerts from satellite EPIRBs and which provides their position.

.12 "Radio Regulations" mean the Radio Regulations annexed to, or regarded as being annexed to, the most recent International Telecommunication Convention which is in force at any time.

.13 "Sea area 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 to the Convention.**

.14 "Sea area A2" means an area, excluding sea area Al, 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 to the Convention.**

.15 "Sea area A3" means an area, excluding sea areas A1 and A2, within the coverage of an Inmarsat geostationary satellite in which continuous alerting is available.

.16 "Sea area A4" means an area outside sea areas Al, A2 and A3.

14.2.2 All other terms and abbreviations which are used in this chapter and which are defined in the Radio Regulations and in the International Convention on Maritime Search and Rescue (SAR), 1979, as it may be amended, shall have the meanings as defined in those Regulations and the SAR Convention.

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* Refer to the NAVTEX Manual approved by the Organization.

** Refer to resolution A.801(19) concerning provision of radio services for the global maritime distress and safety system (GMDSS), adopted by the Organization.

14.3 Exemptions

14.3.1 It is considered highly desirable not to deviate from the requirements of this chapter; nevertheless the Administration, in conjunction with the base port State, may grant partial or conditional exemptions to individual craft from the requirements of 14.7 to 14.11 provided:

.1 such craft comply with the functional requirements of 14.5; and

.2 the Administration has taken into account the effect such exemptions may have upon the general efficiency of the service for the safety of all ships and craft.

14.3.2 An exemption may be granted under 14.3.1 only:

.1 if the conditions affecting safety are such as to render the full application of 14.7 to 14.11 unreasonable or unnecessary; or

.2 in exceptional circumstances, for a single voyage outside the sea area or sea areas for which the craft is equipped.

14.3.3 Each Administration shall submit to the Organization, as soon as possible after the first of January in each year, a report showing all exemptions granted under 14.3.1 and 14.3.2 during the previous calendar year and giving the reasons for granting such exemptions.

14.4 Global Maritime Distress and Safety System Identities

14.4.1 This section applies to all craft on all voyages.

14.4.2 Each Administration undertakes to ensure that suitable arrangements are made for registering Global Maritime Distress and Safety System (GMDSS) Identities and for making information on these identities available to Rescue Co-ordination Centres on a 24-hour basis. Where appropriate, international organizations maintaining a registry of these identities shall be notified by the Administration of these assignments.

14.5 Functional requirements

14.5.1 Every craft, while at sea, shall be capable:

.1 except as provided in 14.8.1.1 and 14.10.1.4.3, of transmitting ship-to-shore distress alerts by at least two separate and independent means, each using a different radiocommunication service;

.2 of receiving shore-to-ship distress alerts;

.3 of transmitting and receiving ship-to-ship distress alerts;

.4 of transmitting and receiving search and rescue co-ordinating communications;

.5 of transmitting and receiving on-scene communications;

.6 of transmitting and, as required by 13.5, receiving signals for locating*;

.7 of transmitting and receiving** maritime safety information;

.8 of transmitting and receiving general radiocommunications to and from shore-based radio systems or networks subject to 14.15.8; and

.9 of transmitting and receiving bridge-to-bridge communications.

14.6 Radio installations

14.6.1 Every craft shall be provided with radio installations capable of complying with the functional requirements prescribed by 14.5 throughout its intended voyage and, unless exempted under 14.3, complying with the requirements of 14.7 and, as appropriate for the sea area or areas through which it will pass during its intended voyage, the requirements of either 14.8, 14.9, 14.10 or 14.11.

14.6.2 Every radio installation shall:

.1 be so located that no harmful interference of mechanical, electrical or other origin affects its proper use, and so as to ensure electromagnetic compatibility and avoidance of harmful interaction with other equipment and systems;

.2 be so located as to ensure the greatest possible degree of safety and operational availability;

.3 be protected against harmful effects of water, extremes of temperature and other adverse environmental conditions;

.4 be provided with reliable, permanently arranged electrical lighting, independent of the main sources of electrical power, for the adequate illumination of the radio controls for operating the radio installation; and

.5 be clearly marked with the call sign, the ship station identity and other codes as applicable for the use of the radio installation.

14.6.3 Control of the VHF radiotelephone channels, required for navigational safety, shall be immediately available on the navigating bridge convenient to the conning position, and, where necessary, facilities shall be available to permit radiocommunications from the wings of the navigating bridge. Portable VHF equipment may be used to meet the latter provision.

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* Refer to resolution A.614(15) on carriage of radar operating in the frequency band 9,300 - 9,500 MHz, adopted by the Organization.

** It should be noted that craft may have a need for reception of certain maritime safety information while in port.

14.6.4 In passenger craft, a distress panel shall be installed at the conning position. This panel shall contain either one single button which, when pressed, initiates a distress alert using all radiocommunication installations required on board for that purpose or one button for each individual installation. The panel shall clearly and visually indicate whenever any button or buttons have been pressed. Means shall be provided to prevent inadvertent activation of the button or buttons. If the satellite EPIRB is used as the secondary means of distress alerting and is not remotely activated, it shall be acceptable to have an additional EPIRB installed in the wheelhouse near the conning position.

14.6.5 n passenger craft information on the craft's position shall 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.

14.6.6 In passenger craft, a distress alert panel shall be installed at the conning position. The distress alarm panel shall provide visual and aural indication of any distress alert or alerts received on board and shall also indicate through which radiocommunication service the distress alerts have been received.

14.7 Radio equipment: general

14.7.1 Every craft shall be provided with:

.1 a VHF radio installation capable of transmitting and receiving:

.1.1 DSC on the frequency 156.525 MHz (channel 70). It shall be possible to initiate the transmission of distress alerts on channel 70 from the position from which the craft is normally navigated; and

.1.2 radiotelephony on the frequencies 156.300 MHz (channel 6), 156.650 MHz (channel 13) and 156.800 MHz (channel 16);

.2 a radio installation capable of maintaining a continuous DSC watch on VHF channel 70 which may be separate from, or combined with, that required by 14.7.1.1.1;

.3 a radar transponder capable of operating in the 9 GHz band, which:

.3.1 shall be so stowed that it can be easily utilized; and

.3.2 may be one of those required by 8.2.1.2 for a survival craft;

.4 a receiver capable of receiving International NAVTEX service broadcasts if the craft is engaged on voyages in any area in which an International NAVTEX service is provided;

.5 a radio facility for reception of maritime safety information by the Inmarsat enhanced group calling system[*] if the craft is engaged on voyages in any area of Inmarsat coverage but in which an International NAVTEX service is not provided. However, craft engaged exclusively on voyages in areas where a HF direct printing telegraphy maritime safety information service is provided and fitted with equipment capable of receiving such service may be exempt from this requirements.[**]

.6 subject to the provisions of 14.8.3, a satellite emergency position indicating radio beacon (satellite EPIRB)[***] which shall be:

.6.1 capable of transmitting a distress alert either through the polar orbiting satellite service operating in the 406 MHz band or, if the craft is engaged only on voyages within Inmarsat coverage, through the Inmarsat geostationary satellite service operating in the 1.6 GHz band;

.6.2 installed in an easily accessible position;

.6.3 ready to be manually released and capable of being carried by one person into a survival craft;

.6.4 capable of floating free if the craft sinks and of being automatically activated when afloat; and

.6.5 capable of being activated manually.

14.7.2 Every passenger craft shall 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 position from which the craft is normally navigated.

14.8 Radio equipment: sea area A1

14.8.1 In addition to meeting the requirements of 14.7, every craft engaged on voyages exclusively in sea area A1 shall be provided with a radio installation capable of initiating the transmission of ship-to-shore distress alerts from the position from which the craft is normally navigated, operating either:

.1 on VHF using DSC; this requirement may be fulfilled by the EPIRB prescribed by 14.8.3, either by installing the EPIRB close to, or by remote activation from, the position from which the craft is normally navigated; or

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[*] Refer to resolution A.701(17) concerning carriage of Inmarsat enhanced group call SafetyNET receivers under the GMDSS, adopted by the Organization.

[**] Refer to the Recommendation on Promulgation of Maritime Safety Information, adopted by the Organization by resolution A.705(17).

[***] Refer to resolution A.616(15) concerning search and rescue homing capability, adopted by the Organization.

.2 through the polar orbiting satellite service on 406 MHz; this requirement may be fulfilled by the satellite EPIRB, required by 14.7.1.6, either by installing the satellite EPIRB close to, or by remote activation from, the position from which the craft is normally navigated; or

.3 if the craft is on voyages within coverage of MF coast stations equipped with DSC on MF using DSC; or

.4 on HF using DSC; or

.5 through the Inmarsat geostationary satellite service; this requirement may be fulfilled by:

.5.1 an Inmarsat ship earth station*; or

.5.2 the satellite EPIRB, required by 14.7.1.6, either by installing the satellite EPIRB close to, or by remote activation from, the position from which the craft is normally navigated.

14.8.2 The VHF radio installation, required by 14.71.1, shall also be capable of transmitting and receiving general radiocommunications using radiotelephony.

14.8.3 Craft engaged on voyages exclusively in sea area A1 may carry, in lieu of the satellite EPIRB required by 14.7.1.6, an EPIRB which shall be:

.1 capable of transmitting a distress alert using DSC on VHF channel 70 and providing for locating by means of a radar transponder operating in the 9 GHz band;

.2 installed in an easily accessible position;

.3 ready to be manually released and capable of being carried by one person into a survival craft;

.4 capable of floating free if the craft sinks and of being automatically activated when afloat; and

.5 capable of being activated manually.

* This requirement can be met by Inmarsat ship earth stations capable of two-way communications, such as Inmarsat-A and -B (resolutions A.808(19)) or Inmarsat-C (resolution A.807(19) and MSC.68(68), annex 4) ship earth stations. Unless otherwise specified, this footnote applies to all requirements for an Inmarsat ship earth station prescribed by this chapter.

14.9 Radio equipment: sea areas A1 and A2

14.9.1 In addition to meeting the requirements of 14.7, every craft engaged on voyages beyond sea area A1, but remaining within sea area A2, shall be provided with:

.1 an MF radio installation capable of transmitting and receiving, for distress and safety purposes, on the frequencies:

.1.1 2,187.5 kHz using DSC; and

.1.2 2,182 kHz using radiotelephony;

.2 a radio installation capable of maintaining a continuous DSC watch on the frequency 2,187.5 kHz which may be separate from, or combined with, that required by 14.9.1.1.1; and

.3 means of initiating the transmission of ship-to-shore distress alerts by a radio service other than MF, operating either:

.3.1 through the polar orbiting satellite service on 406 MHz; this requirement may be fulfilled by the satellite EPIRB, required by 14.7.1.6, either by installing the satellite EPIRB close to, or by remote activation from, the position from which the craft is normally navigated; or

.3.2 on HF using DSC; or

.3.3 through the Inmarsat geostationary satellite service; this requirement may be fulfilled by:

.3.3.1 the equipment specified in 14.9.3.2; or

.3.3.2 the satellite EPIRB, required by 14.7.1.6, either by installing the satellite EPIRB close to, or by remote activation from, the position from which the craft is normally navigated.

14.9.2 It shall be possible to initiate transmission of distress alerts by the radio installations specified in 14.9.1.1 and 14.9.1.3 from the position from which the craft is normally navigated.

14.9.3 The craft shall, in addition, be capable of transmitting and receiving general radiocommunications using radiotelephony or direct-printing telegraphy by either:

.1 a radio installation operating on working frequencies in the bands between 1,605 kHz and 4,000 kHz or between 4,000 kHz and 27,500 kHz; this requirement may be fulfilled by the addition of this capability in the equipment required by 14.9.1.1; or

.2 an Inmarsat ship earth station.

14.10 Radio equipment: sea areas A1, A2 and A3

14.10.1 In addition to meeting the requirements of 14.7, every craft engaged on voyages beyond sea areas A1 and A2, but remaining within sea area A3, shall, if it does not comply with the requirements of 14.10.2, be provided with:

.1 an Inmarsat ship earth station capable of:

.1.1 transmitting and receiving distress and safety communications using direct-printing telegraphy;

.1.2 initiating and receiving distress priority calls;

.1.3 maintaining watch for shore-to-ship distress alerts, including those directed to specifically defined geographical areas; and

.1.4 transmitting and receiving general radiocommunications, using either radiotelephony or direct-printing telegraphy;

.2 an MF radio installation capable of transmitting and receiving, for distress and safety purposes, on the frequencies:

.2.1 2,187.5 kHz using DSC; and

.2.2 2,182 kHz using radiotelephony;

.3 a radio installation capable of maintaining a continuous DSC watch on the frequency 2,187.5 kHz which may be separate from, or combined with, that required by 14.10.1.2.1; and

.4 means of initiating the transmission of ship-to-shore distress alerts by a radio service operating either:

.4.1 through the polar orbiting service on 406 MHz; this requirement may be fulfilled by the satellite EPIRB, required by 14.7.1.6, either by installing the satellite EPIRB close to, or by remote activation from, the position from which the craft is normally navigated; or

.4.2 on HF using DSC; or

.4.3 through the Inmarsat geostationary satellite service, by an additional ship earth station or by the satellite EPIRB required by 14.7.1.6, either by installing the satellite EPIRB close to, or by remote activation from, the position from which the craft is normally navigated.

14.10.2 In addition to meeting the requirements of 14.7, every craft engaged on voyages beyond sea areas A1 and A2, but remaining within sea area A3, shall, if it does not comply with the requirements of 14.10.1, be provided with:

.1 an MF/HF radio installation capable of transmitting and receiving, for distress and safety purposes, on all distress and safety frequencies in the bands between 1,605 kHz and 4,000 kHz and between 4,000 kHz and 27,500 kHz:

.1.1 using DSC;

.1.2 using radiotelephony; and

.1.3 using direct-printing telegraphy;

.2 equipment capable of maintaining a DSC watch on 2,187.5 kHz, 8,414.5 kHz and on at least one of the distress and safey DSC frequencies 4,207.5 kHz, 6,312 kHz, 12,577 kHz or 1 6,804.5 kHz at any time, it shall be possible to select any of these DSC distress and safety frequencies. This equipment may be separate from, or combined with, the equipment required by 14.10.2.1;

.3 means of initiating the transmission of ship-to-shore distress alerts by a radiocommunication service other than HF operating either:

.3.1 through the polar orbiting satellite service on 406 MHz; this requirement may be fulfilled by the satellite EPIRB required by 14.7.1.6, either by installing the satellite EPIRB close to, or by remote activation from, the position from which the craft is normally navigated; or

.3.2 through the Inmairsat geostationary satellite service, this requirement may be fulfilled by:

.3.2.1 an Inmarsat ship earth station; or

.3.2.2 the satellite EPIRB, required by 14.7.1.6, either by installing the satellite EPIRB close to, or by remote activation from, the position from which the craft is normally navigated; and

.4 in addition, the craft shall be capable of transmitting and receiving general radiocommunications using radiotelephony or direct-printing telegraphy by an MF/HF radio installation operating on working frequencies in the bands between 1,605 kHz and 4,000 kHz and between 4,000 kHz and 27,500 kHz. This requirement may be fulfilled by the addition of this capability in the equipment required by 14.10.2.1.

14.10.3 It shall be possible to initiate transmission of distress alerts by the radio installations specified in 14.10.1.1, 14.10.1.2, 14.10.1.4, 14.10.2.1 and 14.10.2.3 from the position from which the craft is normally navigated.

14.11 Radio equipment: sea areas Al, A2, A3 and A4

14.11.1 In addition to meeting the requirements of 14.7, craft engaged on voyagesin all sea areas shall be provided with the radio installations and equipment required by 14.10.2, except that the equipment required by 14.10.2.3.2 shall not be accepted as an alternative to that required by 14.10.2.3.1, which shall always be provided. In addition, craft engaged on voyages in all sea areas shall comply with the requirements of 14.10.3.

14.12 Watches

14.12.1 Every craft, while at sea, shall maintain a continuous watch:

.1 on VHF DSC channel 70, if the craft, in accordance with the requirements of 14.7.1.2, is fitted with a VHF radio installation;

.2 on the distress and safety DSC frequency 2,187.5 kHz, if the craft, in accordance with the requirements of 14.9.1.2 or 14.10.1.3, is fitted with an MF radio installation;

.3 on the distress and safety DSC frequencies 2,187.5 kHz and 8,414.5 kHz and also on at least one of the distress and safety DSC frequencies 4,207.5 kHz, 6,312 kHz, 12,577 kHz or 16,804.5 kHz, appropriate to the time of day and the geographical position of the craft, if the craft, in accordance with the requirements of 14.10.2.2 or 14.11.1, is fitted with an MF/HF radio installation. This watch may be kept by means of a scanning receiver; and

.4 for satellite shore-to-ship distress alerts, if the craft, in accordance with the requirements of 14.10.1.1, is fitted with an Inmarsat ship earth station.

14.12.2 Every craft, while at sea, shall maintain a radio watch for broadcasts of maritime safety information on the appropriate frequency or frequencies on which such information is broadcast for the area in which the craft is navigating.

14.12.3 Until 1 February 2005, every craft, while at sea shall continue to maintain, when practicable, a continuous listening watch on VHF channel 16. This watch shall be kept at the position from which the craft is normally navigated.

14.13 Sources of energy

14.13.1 There shall be available at all times, while the craft is at sea, a supply of electrical energy sufficient to operate the radio installations and to charge any batteries used as part of a reserve source of energy for the radio installations.

14.13.2 Reserve and emergency sources of energy shall be provided on every craft to supply radio installations, for the purpose of conducting distress and safety radiocommunications, in the event of failure of the craft's main and emergency sources of electrical power. The reserve source of energy shall be capable of simultaneously operating the VHF radio installation required by 14.7.1.1 and, as appropriate for the sea area or sea areas for which the craft is equipped, either the MF radio installation required by 14.9.1.1, the MIF/HIF radio installation required by 14.10.2.1 or 14.11.1 or the Inmarsat ship earth station required by 14.10.1.1 and any of the additional loads mentioned in 14.13.5 and 14.13.8 for a period of at least 1 h.

14.13.3 The reserve source of energy shall be independent of the propelling power of the craft and the craft's electrical system.

14.13.4 Where, in addition to the VHF radio installation, two or more of the other radio installations referred to in 14.13.2 can be connected to the reserve source or sources of energy, they shall be capable of simultaneously supplying, for the period specified in 14.13.2, the VHF radio installation and:

.1 all other radio installations which can be connected to the reserve source of energy at the same time; or

.2 whichever of the radio installations will consume the most power, if only one of the other radio installations can be connected to the reserve source of energy at the same time as the VHF radio installation.

14.13.5 The reserve source of energy may be used to supply the electrical lighting required by 14.6.2.4.

14.13.6 Where a reserve source of energy consists of a rechargeable accumulator battery or batteries:

.1 a means of automatically charging such batteries shall be provided which shall be capable of recharging them to minimum capacity requirements within 10 h; and

.2 the capacity of the battery or batteries shall be checked, using an appropriate method*, at intervals not exceeding 12 months, when the craft is not at sea.

14.13.7 The siting and installation of accumulator batteries which provide a reserve source of energy shall be such as to ensure:

.1 the highest degree of service;

.2 a reasonable lifetime;

.3 reasonable safety;

.4 that the battery temperatures remain within the manufacturer's specifications whether under charge or idle ; and

.5 that when fully charged, the batteries will provide at least the minimum required hours of operation under all weather conditions.

14.13.8 If an uninterrupted input of information from the craft's navigational or other equipment to a radio installation required by this chapter is needed to ensure its proper performance, including the navigation receiver referred to in 14.18, means shall be provided to ensure the continuous supply of such information in the event of failure of the craft's main or emergency source of electrical power.

* One method of checking the capacity of an accumulator battery is to fully discharge and recharge the battery, using normal operating current and period (e.g. 10 h). Assessment of the charge condition can be made at any time, but it should be done without significant discharge of the battery when the craft is at sea.

14.14 Performance standards

14.14.1 All equipment to which this chapter applies shall be of a type approved by the Administration. Such equipment shall conform to appropriate performance standards not inferior to those adopted by the Organization*.

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* Refer to the following resolutions adopted by the Assembly of the Organization:

.1 Resolution A.525(13): Performance Standards for Narrow-Band Direct-Printing Telegraph Equipment for the Reception of Navigational and Meteorological Warnings and Urgent Information to Ships.

.2 Resolution A.694(17): General Requirements for Shipborne Radio Equipment Forming Part of the Global Maritime Distress and Safety System (GMDSS) and for Electronic Navigational Aids.

.3 Resolution A.808(19): Performance Standards for Ship Earth Stations Capable of Two-Way Communications, and resolution A.570(14), Type Approval of Ship Earth Stations.

.4 Resolutions A.803(19) and MSC.68(68), annex 1: Performance Standards for Shipborne VHF Radio installations Capable of Voice Communication and Digital Selective Calling.

.5 Resolutions A.804(19) and MSC.68(68), annex 2: Performance Standards for Shipborne MF Radio Installations Capable of Voice Communication and Digital Selective Calling.

.6 Resolutions A.806(19) and MSC.68(68), annex 3: Performance Standards for Shipborne MF/HF Radio Installations Capable of Voice Communication, Narrow-Band Direct Printing and Digital Selective Calling.

.7 Resolutions A.810(19) and MSC.56(66): Performance Standards for Float-Free Satellite Emergency Position-Indicating Radio Beacons (EPIRBs) Operating on 406 MHz (see also Assembly resolution A.696(17): Type Approval of Satellite Emergency Position-Indicating Radio Beacons (EPIRBs) Operating in the COSPAS-SARSAT System).

.8 Resolution A.802(19): Performance Standards for Survival Craft Radar Transponders for Use in Search and Rescue Operations.

.9 Resolution A.805(19): Performance Standards for Float-Free VHF Emergency Position-Indicating Radio Beacons.

.10 Resolutions A. 807(19) and MSC.68(68), annex 4: Performance Standards for Inmarsat Standard-C Ship Earth Stations Capable of Transmitting and Receiving Direct-Printing Communications, and resolution A.570(14), Type Approval of Ship Earth Stations.

.11 Resolution A.664(16): Performance Standards for Enhanced Group Call Equipment.

.12 Resolution A.812(12): Performance Standards for Float-Free Satellite Emergency Position-indicating Radio Beacons Operating Through the Ceostationary Inmarsat Satellite System on 1.6 GHz.

.13 Resolution A.662(16): Performance Standards for Float-Free Release and Activation Arrangements for Emergency Radio Equipment.

.14 Resolution A.699(17): System Performance Standard for the Promulgation and Co-ordination of Maritime Safety Information Using High-Frequency Narrow-Band Direct Printing.

.15 Resolution A.700(17): Performance Standards for Narrow-Band Direct-Printing Telegraph Equipment for the Reception of Navigational and Meteorological Warnings and Urgent Information to Ships (MSI) by HF.

.16 Resolution MSC.80(70): Recommendation on Performance Standards for on-scene (Aeronautical) Portable Two-Way VHF Radiotelephone Apparatus.

14.15 Maintenance requirements

14.15.1 Equipment shall be so designed that the main units can be replaced readily without elaborate recalibration or readjustment.

14.15.2 Where applicable, equipment shall be so constructed and installed that it is readily accessible for inspection and on-board maintenance purposes.

14.15.3 Adequate information shall be provided to enable the equipment to be properly operated and maintained, taking into account the recommendations of the Organization.*

14.15.4 Adequate tools and spares shall be provided to enable equipment to be maintained.

14.15.5 The Administration shall ensure that radio equipment required by this chapter is maintained to provide the availability of the functional requirements specified in 14.5 and to meet the recommended performance standards of such equipment.

14.15.6 On craft engaged on voyages in sea areas Al and A2, the availability shall be ensured by using such methods as duplication of equipment, shore-based maintenance or at-sea electronic maintenance capability, or a combination of these, as may be approved by the Administration.

14.15.7 On craft engaged on voyages in sea areas A3 and A4, the availability shall be ensured by using a combination of at least two methods, such as duplication of equipment, shore-based maintenance or at-sea electronic maintenance capability, as may be approved by the Administration, taking into account the recommendations of the Organization.**

14.15.8 However, for craft operating solely between ports where adequate facilities for shore-based maintenance of the radio installations are available and provided no journey between two such ports exceeds six hours, then the Administration may exempt such craft from the requirement to use at least two maintenance methods. For such craft at least one maintenance method shall be used.

14.15.9 While all reasonable steps shall be taken to maintain the equipment in efficient working order to ensure compliance with all the functional requirements specified in 14.5, malfunction of the equipment for providing the general radiocommunications, required by 14.8, shall not be considered as making a craft unseaworthy or as a reason for delaying the craft in ports where repair facilities are not readily available, provided the craft is capable of performing all distress and safety functions.

14.15.10 Satellite EPIRBs shall be tested at intervals not exceeding 12 months for all aspects of operational efficiency with particular emphasis on frequency stability, signal strength and coding. However, in cases where it appears proper and reasonable, the Administration may extend this period to 17 months. The test may be conducted on board the ship or at an approved testing or servicing station.

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* Refer to the Recommendation on General Requirements for Shipborne Radio Equipment Forming Part of the Global Maritime Distress and Safety System (GMDSS) and for Electronic Navigational Aids, adopted by the Organization by resolution A.694(17).

** Administrations should take account of the Radio Maintenance Guidelines for the Global Maritime Distress and Safety System (GMDSS) related to Sea Areas A3 and A4, adopted by the Organization by resolution A.702(17).

14.16 Radio personnel

14.16.1 Every craft shall carry personnel qualified for distress and safety radiocommunication purposes to the satisfaction of the Administration. The personnel shall be holders of certificates specified in the Radio Regulations as appropriate, any one of whom shall be designated to have primary responsibility for radiocommunications during distress incidents.

14.16.2 In passenger craft, at least one person qualified in accordance with sub-paragraph .1 shall be assigned to perform only radiocommunication duties during distress incidents.

14.17 Radio records

A record shall be kept, to the satisfaction of the Administration and as required by the Radio Regulations, of all incidents connected with the radiocommunication service which appear to be of importance to safety of life at sea.

14.18 Position-updating

All two-way communication equipment carried on board craft to which this chapter applies which is capable of automatically including the craft's position in the distress alert shall be automatically provided with this information from an internal or external navigation receiver, if either is installed. If such a receiver is not installed, the craft's position and the time that position was correct shall be manually updated at intervals not exceeding four hours, while the craft is underway, so that it is always ready for transmission by the equipment.

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ANNEX 12

SECTION 2.4.6 OF THE DRAFT GUIDELINES FOR THE DESIGN, CONSTRUCTION AND OPERATION OF PASSENGER SUBMERSIBLE CRAFT

"**2.4.6 Communications**

.1 Passenger submersible craft should be provided with such equipment as is necessary for the craft to communicate with the support facility when on the surface and when submerged.

.2 Surface communications

Passenger submersible craft should be equipped with at least one two-channel transmitter/receiver, one of the channels of which must operate on safety channel 16-VHF, while the other is used as a "working channel" for communication between the passenger submersible craft and its support facility.

.3 Underwater communications

Passenger submersible craft should be equipped with at least one single channel side-band underwater telephone system. Such system should as a minimum requirement enable communication to be maintained with the support facility when it is at a distance equivalent to twice the nominal depth of passenger submersible craft.

.4 Provision should be made for easy and reliable communication between the crew members as well as for a public address system.

.5 Where craft have more than one compartment intercommunication should be provided.

.6 Passenger submersible craft should be fitted with a radar transponder if they are not clearly visible on a radar screen.

.7 Passenger submersible craft should be fitted with an emergency acoustic pinger compatible with surface support facilities or with sonar reflector. Buoys may be additionally provided."

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ANNEX 13

REVISED WORK PROGRAMME OF THE SUB-COMMITTEE AND DRAFT PROVISIONAL AGENDA FOR COMSAR 5

1 Proposed revised work programme of the Sub-Committee

			Target completion date/number of sessions needed for completion	**Reference**
1	**Global Maritime Distress and Safety System (GMDSS)**			COMSAR 4/14, section 3
	.1	**matters relating to the GMDSS Master Plan**	Continuous	COMSAR 4/14, paragraphs 3.1 to 3.18
	.2	replies to questionnaire on casualties	Continuous	COMSAR 1/30, paragraphs 3.15 to 3.16
	.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 Inmarsat)			
	.1	**operational and technical co-ordination provisions of Maritime Safety Information (MSI) services**	Continuous	COMSAR 4/14, paragraphs 3.23 to 3.37
3	**ITU World Radiocommunication Conference matters**		Continuous	COMSAR 4/14, section 5
4	**Radiocommunication ITU-R Study Group 8 matters**		Continuous	COMSAR 4/14, section 5

Note: 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 proposed provisional agendas of the forthcoming sessions of the Sub-Committees.

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Shaded text: proposed additions/changes
Strike-through text: proposed deletions

		Target completion date/number of sessions needed for completion	Reference
5	**Satellite services (Inmarsat and COSPAS-SARSAT)**	Continuous	COMSAR 4/14, section 6
6	**Matters concerning search and rescue, including those related to the 1979 SAR Conference and the introduction of the GMDSS**		
	.1 **harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters**	~~1999~~ [2000]	COMSAR 4/14, paragraphs 8.1 to 8.19
	.2 **plan for the provision of maritime SAR services, including procedures for routeing distress information in the GMDSS**	Continuous	COMSAR 4/14, paragraphs 8.20 to 8.55
	.3 **revision of the IAMSAR manual**	Continuous	COMSAR 4/14, paragraphs 8.58 to 8.68; MSC 71/23, paragraph 20.22
7	**Emergency radiocommunications: false alerts and interference**	~~1999~~ [2000]	COMSAR 4/14, section 7
8	Casualty analysis (co-ordinated by FSI)	Continuous	MSC 70/23, paragraphs 9.17 and 20.4
H.1	Work consequential to the 1988 GMDSS Conference		MSC 66/24, paragraphs 10.6 to 10.8 and 21.52; COMSAR 1/30, section 4

		Target completion date/number of sessions needed for completion	Reference
	~~.1 review of SOLAS regulation IV/15.7 and resolution A.702/(17) on Radio maintenance guidelines for the GMDSS related to sea areas A3 and A4~~	~~1999~~	~~COMSAR 1/30, paragraphs 4.32 to 4.36~~
	~~.2~~ 1 review of the locating functions in the GMDSS	1 session	COMSAR 1/30, paragraph 4.26
H.2	VTS and automatic ship identification transponder/transceiver systems (co-ordinated by NAV)	1 session	MSC 66/24, paragraph 21.24.2; COMSAR 1/30, paragraphs 8.6 to 8.8
H.3	**IMO Standard Marine Communication Phrases (co-ordinated by NAV)**	~~1 session~~ 2000	COMSAR 1/30, section 23; MSC 71/23, paragraph 20.26
~~H.4~~	~~**Ro-ro ferry safety: low-powered radio homing devices for liferafts** (in co-operation with DE)~~	~~1999~~	~~MSC 66/24, paragraph 21.24.1; COMSAR 3/14, paragraph 5.5~~
H.~~5~~ 4	**Review of the Joint IMO/IHO/WMO MSI Manual**	~~1 session~~ 2000	COMSAR 1/30, paragraph 5.9; COMSAR 3/14, paragraph 11.4.4.1
~~H.6~~	~~**Revision of the HSC Code** (co-ordinated by DE)~~	~~1999~~	~~MSC 66/24, paragraph 21.27; COMSAR 3/14, section 10~~
[H.6	Procedure for responding to DSC alerts	2 session	COMSAR 4/14 paragraph 3.49]
L.1	Safety of passenger submersible craft (co-ordinated by DE)	1 session	COMSAR 1/30, section 25

		Target completion date/number of sessions needed for completion	Reference
L.2	**Development of guidelines for ships operating in ice-covered waters** (co-ordinated by DE)	2000	MSC 68/23, paragraph 20.4; COMSAR 4/14, section 10; MSC 71/23, paragraph 20.43
~~L.3~~ H.5	**Development of criteria for general communications**	~~2 sessions~~ 2002	COMSAR 4/14, paragraphs 3.55 to 3.60; MSC 69/22, paragraph 20.36
L.~~4~~ 3	**Harmonization of GMDSS requirements for radio installations on board SOLAS ships**	~~2 sessions~~ 2002	MSC 71/23, paragraph 20.23

Draft provisional agenda for COMSAR 5

Opening of the session

1 Adoption of the agenda

2 Decisions of other IMO bodies

3 Global Maritime Distress and Safety System (GMDSS)

.1 matters relating to the GMDSS Master Plan

.2 operational and technical co-ordination provisions of Maritime Safety Information (MSI) services

.3 review of the Joint IMO/IHO/WMO MSI Manual

.4 harmonization for GMDSS requirements for radio installations on board SOLAS ships

4 Development of criteria for general communications

5 ITU maritime radiocommunication matters

.1 Radiocommunication ITU-R Study Group 8

.2 ITU World Radiocommunication Conference

6 Satellite services (Inmarsat and COSPAS-SARSAT)

7 Emergency radiocommunications: false alerts and interference

8 Matters concerning search and rescue, including those related to the 1979 SAR Conference and the introduction 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 routeing distress information in the GMDSS

.3 revision of the IAMSAR Manual

9 IMO Standard Maritime Communication Phrases

10 Development of guidelines for ships operating in ice-covered waters

11 Work programme and agenda for COMSAR 6

12 Election of Chairman and Vice-Chairman for 2001

13 Any other business

14 Report to the Maritime Safety Committee

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