



SUB-COMMITTEE ON  
RADIOCOMMUNICATIONS AND SEARCH  
AND RESCUE  
3rd session  
Agenda item 14

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## REPORT TO THE MARITIME SAFETY COMMITTEE

### Table of contents

Section	Page No.
1 GENERAL	4
2 DECISIONS OF OTHER IMO BODIES	6
3 GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS)	6
4 PERFORMANCE STANDARDS FOR SHIPBORNE RADIO EQUIPMENT AND REVIEW OF GMDSS EQUIPMENT PERFORMANCE	12
5 RO-RO FERRY SAFETY: LOW-POWERED RADIO HOMING DEVICES FOR LIFERAFTS	15
6 ITU MARITIME RADIOCOMMUNICATION MATTERS	17
7 SATELLITE SERVICES (INMARSAT AND COSPAS-SARSAT)	20
8 EMERGENCY RADIOCOMMUNICATIONS: FALSE ALERTS AND INTERFERENCE	25
9 MATTERS CONCERNING SEARCH AND RESCUE, INCLUDING THOSE RELATED TO THE 1979 SAR CONFERENCE AND THE INTRODUCTION OF THE GMDSS	28
10 REVISION OF THE HIGH SPEED CRAFT (HSC) CODE	36
11 WORK PROGRAMME AND AGENDA FOR COMSAR 4	37
12 ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 1999	38
13 ANY OTHER BUSINESS	39
14 ACTION REQUESTED OF THE COMMITTEE	39

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**LIST OF ANNEXES**

- ANNEX 1            AGENDA OF THE THIRD SESSION INCLUDING A LIST OF DOCUMENTS
- ANNEX 2            DRAFT MSC RESOLUTION ON MAINTENANCE OF A CONTINUOUS LISTENING WATCH ON VHF CHANNEL 16 BY SHIPS WHILST AT SEA AFTER 1 FEBRUARY 1999 AND INSTALLATION OF VHF DSC FACILITIES ON NON-SOLAS SHIPS
- ANNEX 3            DRAFT MSC CIRCULAR ON MEASURES TO REDUCE THE NUMBER OF FALSE DISTRESS ALERTS
- ANNEX 4            DRAFT ASSEMBLY RESOLUTION ON CRITERIA FOR PROVISION OF MOBILE SATELLITE COMMUNICATIONS FOR THE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS)
- ANNEX 5            LIAISON STATEMENTS TO THE ITU-R WORKING PARTY 8B
- ANNEX 6            DRAFT COMSAR CIRCULAR ON PROCEDURE FOR RESPONDING TO DSC DISTRESS ALERTS
- ANNEX 7            DRAFT ASSEMBLY RESOLUTION ON ESTABLISHMENT, UPDATING AND RETRIEVAL OF THE INFORMATION CONTAINED IN THE REGISTRATION DATABASES OF THE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS)
- ANNEX 8            DRAFT RESOLUTION MSC.[...](70) ON ADOPTION OF NEW PERFORMANCE STANDARDS FOR RADIOCOMMUNICATION EQUIPMENT
- ANNEX 9            DRAFT MSC CIRCULAR ON CLARIFICATIONS OF CERTAIN REQUIREMENTS IN IMO PERFORMANCE STANDARDS FOR GMDSS EQUIPMENT
- ANNEX 10           DRAFT MSC CIRCULAR ON GUIDELINES ON TESTING OF 406 MHz SATELLITE EPIRBs
- ANNEX 11           DRAFT PROPOSED AMENDMENTS TO RESOLUTION A.746 (18)
- ANNEX 12           DRAFT STATEMENT ON THE OUTCOME OF ITU WRC-97 TO THE ITU PLENIPOTENTIARY CONFERENCE 1998
- ANNEX 13           DRAFT MSC CIRCULAR ON MARITIME SAFETY AND INMARSAT SHIP EARTH STATION BARRING PROCEDURES
- ANNEX 14           IMO POSITION ON INMARSAT'S RESTRUCTURING PROPOSALS
- ANNEX 15           DRAFT MSC CIRCULAR ON RECOMMENDATION ON PREVENTION OF HARMFUL INTERFERENCE TO 406 MHz EPIRBs OPERATING WITH THE COSPAS-SARSAT SYSTEM

ANNEX 16	PROPOSED AMENDMENTS TO THE DRAFT IAMSAR MANUAL
ANNEX 17	LIST OF ENGLISH LANGUAGE ELEMENTS TO BE RETAINED IN THE FRENCH, RUSSIAN AND SPANISH TRANSLATIONS OF THE IAMSAR MANUAL
ANNEX 18	DRAFT MSC CIRCULAR ON GUIDELINES FOR PREPARING PLANS FOR CO-OPERATION BETWEEN PASSENGER SHIPS AND SAR SERVICES
ANNEX 19	DRAFT MSC CIRCULAR ON ALERTING OF SEARCH AND RESCUE AUTHORITIES
ANNEX 20	DRAFT MSC RESOLUTION ON ADOPTION OF THE PROPOSED AMENDMENTS TO THE 1979 SAR CONVENTION
ANNEX 21	DRAFT TEXT OF PROPOSED MODIFICATIONS TO THE REVISED SAR CONVENTION
ANNEX 22	DRAFT REVISED WORK PROGRAMME OF THE SUB-COMMITTEE AND DRAFT PROVISIONAL AGENDA FOR COMSAR 4

## 1 GENERAL

1.1 The Sub-Committee on Radiocommunications and Search and Rescue held its third session from 23 to 27 February 1998 at the Headquarters of the Organization under the Chairmanship of Mr. V. Bogdanov (Russian Federation), who was unanimously elected for 1998 at the opening of the session. The Vice-Chairman, Mr. U. Hallberg (Sweden) was also present.

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

ANGOLA	ITALY
ARGENTINA	JAPAN
AUSTRALIA	LATVIA
BAHAMAS	LIBERIA
BAHRAIN	MALTA
BANGLADESH	MEXICO
BELGIUM	NETHERLANDS
BRAZIL	NORWAY
CANADA	PANAMA
CHILE	PERU
CHINA	PHILIPPINES
COLOMBIA	POLAND
CROATIA	PORTUGAL
CUBA	REPUBLIC OF KOREA
CYPRUS	ROMANIA
DENMARK	RUSSIAN FEDERATION
ECUADOR	SINGAPORE
EGYPT	SOUTH AFRICA
ESTONIA	SPAIN
FINLAND	SWEDEN
FRANCE	SYRIA
GABON	TUNISIA
GERMANY	TURKEY
GREECE	UKRAINE
ICELAND	UNITED ARAB EMIRATES
INDONESIA	UNITED KINGDOM
IRAN	UNITED STATES
IRELAND	VENEZUELA
ISRAEL	

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)  
 INTERNATIONAL HYDROGRAPHIC ORGANIZATION (IHO)  
 EUROPEAN COMMISSION (EC)  
 ARAB LEAGUE

ARAB FEDERATION OF SHIPPING (AFS)  
INTERNATIONAL MOBILE SATELLITE ORGANIZATION (Inmarsat)  
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)  
INTERNATIONAL ASSOCIATION OF CLASSIFICATION SOCIETIES (IACS)  
OIL COMPANIES INTERNATIONAL MARINE FORUM (OCIMF)  
INTERNATIONAL FEDERATION OF SHIPMASTERS' ASSOCIATIONS (IFSMA)  
INTERNATIONAL LIFEBOAT FEDERATION (ILF)  
INTERNATIONAL COUNCIL OF CRUISE LINES (ICCL)  
INTERNATIONAL ROAD TRANSPORT UNION (IRU)  
INTERNATIONAL ASSOCIATION OF DRY CARGO SHIPOWNERS (INTERCARGO)

1.4 In welcoming the participants, the Secretary-General referred to the important decisions taken by MSC 68 pertinent to the Sub-Committee's work programme. He mentioned in particular the Committee's request that the Sub-Committee recommends a final date for the cessation of mandatory watchkeeping on VHF channel 16 by GMDSS ships.

The Secretary-General referred to the two distinct but inter-related tasks of the Sub-Committee and stressed the opportunity this provides for co-ordination between radiocommunication and search and rescue matters in order to improve standards and procedures which will result in fewer false alerts and make a much greater contribution to safety of life at sea.

The Secretary-General informed the Sub-Committee of comments received expressing concern that there might be a delay in the implementation date of the GMDSS of 1 February 1999. He stated that a decision to extend the implementation date would be a blow to improving safety of life at sea and would seriously damage the credibility not only of the system but also of IMO.

The Secretary-General pointed out that many successful rescue operations would have been impossible without the work done by the Sub-Committee in establishing a technologically advanced alerting and locating systems for ships in distress, in putting in place adequate GMDSS and SAR facilities and the progress made in the development of the global SAR plan.

Informing the Sub-Committee that a final SAR/GMDSS Conference for Indian Ocean countries is scheduled to take place in Australia in September 1998, the Secretary-General stated that, with the conclusion of that Conference, all the necessary work to put in place a global SAR plan will have been completed four months before the final implementation date of the GMDSS. This would be a milestone in IMO's history of achievements and an important event in the celebrations of IMO's 50th anniversary.

The Secretary-General considered that one of the most important issues before the Sub-Committee was the outcome of the 1997 World Radiocommunication Conference and added that he regretted the fact that ITU had moved away from IMO and ICAO's position concerning the allocation for the mobile-satellite service of the frequency band which up to now had been allocated to the maritime mobile-satellite service.

The Secretary-General recalled that the twentieth Assembly had authorized the Sub-Committee to submit directly to Inmarsat the IMO position on the Inmarsat restructuring proposals.

On administrative issues the Secretary-General referred to the revised Guidelines on the organization and method of work of the MSC and MEPC and their subsidiary bodies and urged Members to apply them strictly.

1.5 The Chairman thanked the Secretary-General for his words of encouragement, stated that the Secretary-General's advice and requests would be given every consideration in the Sub-Committee's deliberations.

### **Adoption of the agenda**

1.6 The Sub-Committee adopted the agenda (COMSAR 3/1) 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 3/1/1.

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

The Sub-Committee noted, in general, decisions and comments (COMSAR 3/2, COMSAR 3/2/1 and COMSAR 3/2/2) pertaining to its work made by NAV 43, DE 40, FSI 5, MSC 68 and the twentieth session of the Assembly and took these 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 2 the Secretariat issued in loose-leaf format and circulated Corr.2, Corr.3 and Corr.4 to amend GMDSS/Circ.7 (Master Plan) in May, July and September 1997, respectively. The Secretariat informed the Sub-Committee that Corr.5 would be issued in May 1998.

3.2 In considering the data contained in the GMDSS Master Plan and taking into account that only eleven months are left before 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 urged Member States to check their national data in GMDSS/Circ.7 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.

3.4 The Sub-Committee also noted COMSAR 3/INF.6 (Finland) and COMSAR 3/INF.18 (France) informing on the outcome of the Eighth Baltic/Barents Sea Regional Co-operation meeting on the GMDSS held in Helsinki, Finland from 16 to 18 September 1997 and the Eighth North Sea Regional Conference on the GMDSS held in Paris, France from 11 to 13 June 1997, respectively.

3.5 The Sub-Committee noted information provided by Sweden on the ninth Baltic/Barents Sea Regional Co-operation meeting on the GMDSS, which is to be held in Göteborg, Sweden from 14 to 16 October 1998 and by the Netherlands on the ninth Nordic Sea Regional Conference on the GMDSS, which is to be held in Amsterdam, the Netherlands, from 3 to 9 June 1998.

## **Clarification of SOLAS GMDSS provisions**

### **Watchkeeping by GMDSS ships on VHF channel 16 after 1 February 1999**

3.6 The Sub-Committee recalled that COMSAR 2, noting that by SOLAS regulation IV/7.4 an Administration may exempt ships constructed after 1 February 1997 from the requirements of regulation IV/7.2 and 7.3, had agreed that mandatory requirements for watchkeeping by GMDSS ships on the frequency 2182 kHz should cease from 1 February 1999 and, recognizing the need for determining a date for the cessation of watchkeeping by GMDSS ships on VHF channel 16, had also agreed that such mandatory requirements for watchkeeping should cease from 1 February 1999. Some delegations reserved their positions on the decision to cease watchkeeping on VHF Channel 16 after 1 February 1999.

3.7 The Sub-Committee noted that MSC 68, had agreed that watchkeeping by GMDSS ships on the frequency 2182 kHz should cease from 1 February 1999 and considering that a large number of non-SOLAS ships may not have fitted GMDSS equipment by 1 February 1999 and if watchkeeping was discontinued on VHF channel 16 by SOLAS Convention ships, such non-SOLAS ships would, if in distress, be unable to alert GMDSS-fitted ships, had decided, in principle, that SOLAS ships should continue to maintain a continuous listening watch on VHF channel 16 after 1 February 1999 (MSC 68/23, paragraphs 8.2 to 8.7).

3.8 The Committee instructed COMSAR 3 to recommend a final date for the cessation of mandatory watchkeeping on VHF channel 16 by GMDSS ships and to prepare a draft MSC resolution to reflect this for consideration and adoption at MSC 69.

3.9 The Secretariat, as instructed by the Committee, conveyed the above decisions to the Secretary-General of the ITU together with a request that they be brought to the attention of WRC-97 for information and action, as appropriate.

3.10 The Sub-Committee considered proposals by Denmark (COMSAR 3/3/3), Norway (COMSAR 3/3/8), Canada (COMSAR 3/3/9) and Greece (COMSAR 3/3/10) suggesting that the final date for cessation of mandatory watchkeeping on VHF channel 16 should be between year 2002 and 2005 or even later and agreed that the date 1 February 2005 should be recommended to the Committee as a final one.

3.11 With respect to the view of ICFTU (COMSAR 3/3/1) that the mandatory listening watch on channel 16 should be maintained for "the foreseeable future" the Sub-Committee pointed out that such an approach would jeopardize, in principle, the effective use of a VHF DSC system.

3.12 Taking into account the above discussions, the Sub-Committee considered and agreed a draft MSC resolution prepared by the Secretariat (COMSAR 3/3/13) on Maintenance of a continuous listening watch on VHF channel 16 by ships whilst at sea after 1 February 1999 and installation of VHF DSC facilities on non-SOLAS ships, as amended. The Committee was invited to consider the draft MSC resolution, given in annex 2 with a view for adoption.

3.13 The proposal by the United States (COMSAR 3/3/5) to amend SOLAS regulation IV/12 regarding a continuous listening watch on VHF channel 13 was not supported by the Sub-Committee.

3.14 The Sub-Committee did not agree to a proposal by the ICFTU (COMSAR 3/3/2) to discuss the possibility of delaying the phase-out of the old equipment, while strictly enforcing the GMDSS carriage requirements and, thereby running the two systems in tandem for a further period, until the problems with the GMDSS, especially the high level of false distress alerts, were overcome.

**Proposed amendments to SOLAS regulation IV/16**

3.15 The Sub-Committee considered a proposal by Norway (COMSAR 3/3/6) to amend SOLAS regulation IV/16 with respect to minimum qualifications for officers in charge of a navigational watch in relation to the operation of GMDSS equipment, with a view to aligning the provisions of that regulation with those of the 1995 amendments to the STCW Convention. While some delegations supported in principle this proposal, the majority of the Sub-Committee did not agree with it, since existing provisions of the SOLAS regulation IV/16 and the 1995 amendments to the STCW Convention were the result of lengthy discussions and reflected a compromise solution and, therefore, it was not appropriate to amend those provisions at this stage. Some delegations also pointed out that before considering any amendments to conventions, authorization by the Committee should be sought by the proposing Government in accordance with the Guidelines for the organization and method of work of the Organization.

**Proposed amendments to resolution A.807(19)**

3.16 The Sub-Committee, considering a proposal by Germany (COMSAR 3/4/3) on modification to resolution A.807(19) - Performance Standards for Inmarsat-C ship earth stations capable of transmitting and receiving direct-printing communications, agreed to the proposed modification in principle but, bearing in mind the instruction by the Committee not to amend performance standards prior to 1 February 1999, deferred the formal recommendation on the modifications to the Committee until COMSAR 4.

3.17 The Sub-Committee noted in this respect that carriage requirements for the GMDSS are contained in SOLAS chapter IV and that performance standards are not carriage requirements; they state what equipment should be capable of.

3.18 The Sub-Committee noted information provided by Australia (COMSAR 3/INF.12) on the above subject.

**Measures to reduce the number of false distress alerts**

3.19 The Sub-Committee taking into account the discussion in the Plenary further considered COMSAR 3/3/2 (ICFTU). It noted with concern the continuing rate of false distress alerts and decided to develop a draft MSC circular on Measures to reduce the number of false distress alerts, given in annex 3, which the Committee was invited to approve.

**Shore-to -Ship Communication during Distress**

3.20 The Sub-Committee considered the need for providing priority for shore originated distress communication to ships whose SESs are busy with on-going traffic. The Sub-Committee noted the information provided by Norway at COMSAR 2 and information provided by Inmarsat concerning existing capabilities, and prepared COMSAR/Circ.13 which the Secretariat was instructed to issue. It was also agreed that this circular be kept under review. The Committee was invited to endorse this action.

3.21 The Sub-Committee noted that Resolution COM4 - 11 (WRC-97) anticipates a solution to providing this priority by the year 2001. In response to this resolution IMO should prepare operational requirements for shore-to-ship distress priorities. Administrations are invited to submit proposals on the matter to COMSAR 4.

### **General radiocommunications in A1 and A2 sea areas**

3.22 Sweden (COMSAR 3/3/11) 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.

3.23 The Sub-Committee 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.

3.24 The Sub-Committee 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.

3.25 The Sub-Committee was of the opinion that the Committee should add to its work programme the 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.

### **Priorities for maritime distress and safety communications**

3.26 The Sub-Committee recalled that COMSAR 2 had requested four levels of priority for automatic systems being needed for future use in the GMDSS, i.e. distress, urgency, safety, and other communications and had identified three access levels in communication links:

- .1 immediate access even if ongoing communication is interrupted;
- .2 access immediately after the link is free (placed as no. 1 in the queue); and
- .3 no priority access (first come, first served).

3.27 The Sub-Committee at its second session noted that the four priority levels are basically related to manual systems and that further operational clarification is needed before technical characteristics of the priority levels can be identified. It was further noted that the land-based public switched networks generally contain no priority arrangements and that generic use of radio frequency bands may make it difficult to establish such arrangements. Member Governments were invited to consider this matter and submit comments and proposals thereon for consideration at COMSAR 3.

3.28 The Sub-Committee considered the Danish proposal (COMSAR 3/3/4) related to levels of priorities in automated radio systems in the GMDSS for maritime distress and safety communications.

3.29 The Sub-Committee considered COMSAR 3/3, annex 1 (revision of annex 5 of A.801(19)) and decided to make this a separate new Assembly resolution.

3.30 The Sub-Committee 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 Criterion for provision of mobile satellite communications for the GMDSS. The Committee was invited to approve the draft Assembly resolution given in annex 4 for submission to the twenty-first Assembly with a view to adoption.

3.31 The Sub-Committee also added text to allow CESs on a voluntary basis to route distress alerts directly to the responsible RCC when the capability exists to do this automatically.

3.32 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 may place upon Member Governments.

### **DSC distress relay alert and acknowledgement procedures**

3.33 The Sub-Committee considered COMSAR 3/3/7 (Norway) regarding relays of DSC distress alerts and, taking into account the decisions of COMSAR 1 (COMSAR 1/30, paragraph 4.1) and COMSAR 2 (COMSAR 2/13, paragraph 3.2), decided that in addition to manual transmission - ships should be permitted to transmit semi-automatic relay alerts to "All Coast Stations", to avoid the disruption of the original distress alert from the ship in distress as well as reduce the number of false distress alerts as experienced today.

3.34 Australia, Germany, Greece, the Russian Federation and the United Kingdom could not agree to the proposal to further amend ITU-R Recommendations M.493 and/or M.541 being of the opinion further study was needed into the implications of the proposal, including maintaining backwards compatibility, that it would be contrary to the general policy of IMO to avoid further amendments to GMDSS performance standards, and would take many years to implement thus would not address the present difficulties.

3.35 The Sub-Committee was of the opinion that although in general ships should not relay distress alerts, there are some instances where it is desirable for ships to be able to relay distress alerts to coast stations. In these cases, relays may be addressed to coast stations. Changes to the Recommendations ITU-R M.493 and ITU-R M.541 may be needed to clarify that such relays by ships may be addressed to "All Coast Stations" or to a particular coast station.

3.36 A liaison statement was prepared to request ITU R Working Party 8B to consider appropriate modifications to the Recommendations ITU-R M.493 and ITU-R M. 541 taking into account the concerns raised in the Sub-Committee. The Sub-Committee approved the liaison statement given in annex 5 and instructed the Secretariat to forward it to the next meeting of ITU-R Working Party 8B. The Committee was invited to endorse this action.

3.37 The Sub-Committee also prepared the flow charts shown in Figures 1, 2 and 3 attached to the liaison statement, describing procedures for ships in receipt of DSC alerts. These were based on COMSAR 3/3/14 (Japan) and COMSAR 3/8/7 (Australia). These should be circulated as a COMSAR circular after consideration by WP 8B. Figures 1, 2 and 3 are contained in annex 6. Taking into account that a similar but simpler flow chart for MF have already been agreed and circulated as COMSAR/Circ.2, it was agreed that this document should also be included in the submission to WP-8B. The Sub-Committee instructed the Secretariat to forward these documents to the next meeting of the ITU-R Working Party 8B.

3.38 The delegation of the Russian Federation did not agree with the proposed procedures to transmit DSC distress relays from ships to coast stations only considering they should also include relays to all ships. That delegation, preferring to have these procedures carried out in accordance with COMSAR/Circ.2, expressed reservation on the issue. The Russian Federation also proposed to invite Administrations to submit their comments and proposals on this draft COMSAR circular to COMSAR 4 after reviewing any amendments provided by ITU-R WP 8B.

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

3.39 The Sub-Committee noted that, as instructed by COMSAR 2, the Secretariat had revised COMSAR/Circ.5 and issued COMSAR/Circ.8 - List of NAVAREA Co-ordinators and that this action had been endorsed by MSC 68.

3.40 The Sub-Committee noted and endorsed the latest information provided by the Chairman of the NAVTEX Co-ordinating Panel (COMSAR 3/INF.10) on the status of the NAVTEX services. The Sub-Committee also endorsed the recommendation that Administrations without their own facilities should give careful consideration to making arrangements with neighbouring stations to broadcast their coastal warnings.

3.41 The observer from IHO, commenting on COMSAR 3/INF.10, informed the Sub-Committee that a circular letter would be issued calling the attention to areas where MSI is neither provided by NAVTEX nor by safetyNET services.

3.42 The observer from Inmarsat informed the Sub-Committee that Inmarsat was ready to advise and assist any Administration that wishes to establish SafetyNET services.

3.43 The Sub-Committee noted the information provided by Australia (COMSAR 3/INF.13) on the improved provisions of MSI on the International SafetyNET services.

3.44 The Sub-Committee also noted the information provided by Japan (COMSAR 3/INF.15) on the status of NAVTEX services in NAVAREA XI and the progress made in this respect.

3.45 The Sub-Committee, having noted that no submissions had been received on the development of the search and rescue chapter for COMSAR/Circ.4 - the Joint IMO/IHO/WMO Manual on Maritime Safety Information (MSI), was informed by the observer from IHO that the IHO Commission on Promulgation of Radionavigational Warnings (CPRNW) had revised the joint manual at its meeting during the week preceding COMSAR 3.

3.46 The Sub-Committee noted and endorsed the latest information provided by the Chairman of the International SafetyNET Co-ordinating Panel on the status of Maritime Safety Information broadcasts in the International SafetyNET Service on 31 January 1998 and instructed the Secretariat to take into account this information when issuing a corrigenda for updating the GMDSS Master Plan.

3.47 The Sub-Committee noted with satisfaction that with the implementation of the SafetyNET service in NAVAREA/METAREA XIII (Russian Federation) in June 1998, all NAVAREAs/METAREAs would be covered by SafetyNET broadcasts. Considering this an important development in the Organization's efforts to put in place the necessary information for the smooth operation of the GMDSS, the Sub-Committee expressed appreciation to all entities and persons involved and invited the Committee to note this achievement.

3.48 The IHO observer advised the Working Group that there had been changes to the list of NAVAREA Co-ordinators (COMSAR/Circ.8). The Sub-Committee instructed the Secretariat to revise

the list and bring it to the attention of Governments by COMSAR/Circ.14. The Committee is invited to endorse this action.

3.49 The IHO observer further advised the appropriate section of the Joint IMO/IHO/WMO Manual on Maritime Safety Information (MSI), COMSAR/Circ.4 was reviewed at the last meeting of the IHO Commission on the Promulgation of Radio Navigational Warnings. The amended text was provided to the Secretariat.

3.50 The Sub-Committee noted this and instructed the Secretariat to bring the revised manual to the attention of Member Governments by COMSAR/Circ.15. The Committee was invited to endorse this action.

### **Registration databases (Review of resolution A.764(18) - establishment, updating and retrieval of the information contained in the registration databases of satellite EPIRBs)**

3.51 The Sub-Committee recalled that the Operational Working Group at COMSAR 2 had considered COMSAR 2/3/5 (United States), and prepared a draft modification to the annex to resolution A.764(18) for consideration by Members and submission of comments and proposals to COMSAR 3 so that the final modifications could be approved.

3.52 The Sub-Committee considered COMSAR 3/3/15 (Portugal) and COMSAR 3/3/17 (United States) and revised the Annex to resolution A.764(18).

3.53 Noting that it is not expected that any particular database would be required to include every data field among those listed, the Committee is invited to approve the draft resolution on Establishment, updating and retrieval of the information contained in the registration databases of the Global Maritime Distress and Safety System (GMDSS), given in annex 7, for submission to the twenty-first Assembly with a view to adoption.

### **Future implementation and the use of the GMDSS by non-Convention ships**

3.54 The Sub-Committee noted that MSC 68 had approved, for dissemination to Members, MSC/Circ.803 on Participation of non-Convention ships in the GMDSS, changing the words "non-Convention" to "non-SOLAS".

3.55 The Sub-Committee, realizing that some aspects of the participation of non-SOLAS ships in the GMDSS would continue to be considered under other agenda items, invited the Committee to delete this agenda item from its work programme.

## **4 PERFORMANCE STANDARDS FOR SHIPBORNE RADIO EQUIPMENT AND REVIEW OF GMDSS EQUIPMENT PERFORMANCE**

### **General**

4.1 The Sub-Committee noted that the Committee, at its sixty-eighth session (MSC 68/23, paragraph 8.15), noting that the amendments recommended by COMSAR 2 would only apply to new equipment and systems installed on or after 1 January 2000, had adopted resolution MSC.68(68) on Adoption of amendments to performance standards for shipborne radiocommunication equipment, as set out in annex 10 to MSC 68/23, and recommended that Governments ensure that equipment and systems listed in the resolution and installed on or after 1 January 2000 conform with the amended performance standards.

4.2 The Sub-Committee also noted that MSC 68 (MSC 68/23, paragraph 8.14) had instructed the Sub-Committee to, as far as practicable, avoid further amendments to performance standards for GMDSS equipment prior to 1 February 1999 unless there are clear and strong reasons for doing so, which should be explained to the Committee.

#### **Performance standards for aeronautical two-way communication equipment on 121.5/123 MHz**

4.3 The Sub-Committee recalled that COMSAR 2 had prepared draft performance standards for such equipment, covering both portable and fixed versions, given in annex 3 to COMSAR 2/WP.4/Add.1. The Sub-Committee was of the opinion that the performance standards should be the same as for equipment already available on the market. Member Governments were invited to consider the draft performance standards and to submit comments and proposals thereon for consideration at COMSAR 3.

4.4 Japan expressed the view that:

- .1 in general, there was no need for performance standards because the SOLAS amendments have already entered into force on 1 July 1997;
- .2 the performance standards should be applied only to new equipment, not to existing installations;
- .3 the application date of the performance standards should be one or two years later than the date of adoption; and
- .4 in principle, mandatory regulations such as those of the SOLAS Convention should be amended or adopted only after feasible technical performance standards are established.

4.5 Having agreed on the need for performance standards for two-way on-scene communication equipment using the aeronautical frequencies 121.5 MHz and 123.1 MHz and that the radio technical requirements of such performance standards should generally correspond to equipment already available on the market, the Sub-Committee was of the opinion that such performance standards should only be applicable for new equipment and should enter into force on 1 July 2001.

4.6 The Sub-Committee considered COMSAR 3/4/2 (Norway) and prepared draft performance standards and a draft MSC resolution on their adoption, given in annex 8. The Committee was invited to approve the draft MSC resolution on performance standards for on-scene (aeronautical) two-way VHF radiotelephone apparatus.

#### **Ship's reserve sources of energy**

4.7 Based on COMSAR 3/4 (Technical Working Group) and COMSAR 3/4/1 (Norway), the Sub-Committee considered further performance standards for ship's reserve source of energy. The Sub-Committee also took note of information provided in COMSAR 3/INF.3 (United States).

4.8 The majority of the Sub-Committee was of the opinion that for GMDSS equipped ships only one reserve source of energy is required.

4.9 The delegation of the Russian Federation was of the opinion that for ships engaged on voyages in sea areas A3 and A4, the availability of equipment, as one of the possible means, is ensured by using such method as duplication of equipment, supplying the basic and the duplicating equipment, is permitted from only one the reserve source of electrical energy using one automatic charging device. In this case the reserve source of electrical energy should provide the operation of equipment for at least one hour and the

emergency source of electrical energy should fully comply with all relevant requirements of regulation II-1/42 or 43 of the 1974 SOLAS Convention, as amended, including the requirements to supply the radio installations. If the emergency source of electrical energy is not provided or does not fully comply with all relevant requirements of regulation II-1/42 or 43 of the 1974 SOLAS Convention, as amended, including the requirements to supply the radio installations then the basic equipment and duplicating equipment should be supplied from two independent reserve sources of electrical energy with using their own automatic charges. In this case the basic equipment should be supplied from the reserve source of electrical energy during 6 hours, and the duplicating equipment - during one hour.

4.10 The Sub-Committee concluded that further work with reserve sources of energy should be based on the use of only one battery. However, since the subject is mainly related to installation, the Sub-Committee was of the opinion that a COMSAR circular giving installation guidelines, would be better suited than performance standards, and prepared COMSAR/Circ.16 - Guidelines on the configuration of the reserve source or sources of energy used to supply radio installations on GMDSS ships.

4.11 The Secretariat was instructed to disseminate COMSAR/Circ.16 to Members. The Committee was invited to endorse the action taken.

### **Distress alert initiation**

4.12 The Sub-Committee noted that, taking into account comments made by some delegations, MSC 68 (MSC 68/23, paragraph 8.9) referred the draft MSC circular on Clarifications of certain requirements in IMO performance standards for GMDSS equipment (COMSAR 2/13, annex 4) back to the Sub-Committee for further consideration. COMSAR 3 was instructed to consider and clarify the contents of the draft MSC circular in the light of any comments Member Governments may provide.

4.13 In reconsidering the draft MSC circular on Clarifications of certain requirements in IMO Performance Standards for GMDSS equipment the Sub-Committee concurred with the opinion expressed in COMSAR 3/4/4 (United Kingdom) that the procedure for initiating distress alerts should be a single, standardized method.

4.14 The Sub-Committee was of the opinion that the distress button should be kept pressed for at least 3 seconds before the distress signal is transmitted. During the 3 seconds there should be a clear indication that a distress call is in preparation.

4.15 The Sub-Committee realized that existing equipment may have different solutions for initiating a distress call and that only new equipment installed on or after 1 February 1999 may comply with the requirements in the MSC circular.

4.16 The Sub-Committee prepared a draft revised MSC circular, given in annex 9, and invited the Committee to adopt it for dissemination to Member Governments.

### **Intrinsically safe portable VHF equipment**

4.17 The Sub-Committee considered COMSAR 3/4 (Technical Working Group) regarding intrinsically safe portable VHF equipment, but noted that no comments or proposals have been submitted to this session. The majority of the Sub-Committee was of the opinion that there was no need for such intrinsically safe VHF equipment, which also fulfilled the performance standards for VHF equipment forming part of the GMDSS.

## **Testing and servicing of 406 MHz EPIRBs**

4.18 The Sub-Committee recalled that COMSAR 2 had noted information provided by Canada (COMSAR 2/INF.10) on the procedure followed by Canadian Coast Guard Radio Inspectors for the testing of 406 MHz EPIRBs and instructed the Technical Working Group, to prepare guidelines on the maintenance, servicing and testing requirements for satellite EPIRBs for further consideration at COMSAR 3.

4.19 Based on COMSAR 3/4 (Technical Working Group), COMSAR 3/3/12 (Sweden) COMSAR 3/3/16 (Portugal), and COMSAR 3/8/6 (Greece) the Sub-Committee continued considerations on guidelines for testing and servicing of satellite EPIRBs.

4.20 The Sub-Committee was of the opinion that guidelines concerning the yearly inspection on board ships as required by new SOLAS regulation IV/15.9 should be developed in the form of an MSC circular, as well as amendments to resolution A.746(18) on Survey guidelines under the harmonized system of survey and certification. Accordingly, the Sub-Committee prepared:

- .1 a draft MSC circular, given in annex 10, for approval by the Committee; and
- .2 draft amendments to resolution A.746(18), given in annex 11, for transmission to the FSI Sub-Committee for consideration.

4.21 Noting that resolution A.746(18), the annex, item 8a.1.2.17 concerns only 406 MHz satellite EPIRB, the Sub-Committee was of the opinion that similar guidelines should also be prepared for L-band satellite EPIRBs and invited Members to submit comments and proposals to the next session.

4.22 The Sub-Committee agreed that there was also an essential need for regular checking and maintenance of EPIRBs in approved shore-based servicing stations in accordance with the EPIRB manufacturer's instructions. The intervals of such maintenance should either be in accordance with the manufacturer's instruction at intervals not exceeding four years, or when the battery is due for replacement and a record of the date of the shore-based service and maintenance and the identity of the provider of the servicing should be kept on board for inspection.

4.23 Members were invited to submit comments and proposals concerning guidelines for the shore-based service and maintenance of satellite EPIRBs for consideration at the next session.

## **5 RO-RO FERRY SAFETY: LOW-POWERED RADIO HOMING DEVICES FOR LIFERAFTS**

5.1 The Sub-Committee recalled that MSC 66 had included in the work programmes of the COMSAR Sub-Committee (co-ordinator) and DE Sub-Committee a new item "**Low-powered radio homing devices for liferafts on ro-ro passenger ships**", with a target completion date of **1997** and instructed the sub-committees to deal with the issue in line with the 1995 SOLAS Conference resolution 6, by which the Conference:

- "1. **Invited** the Maritime Safety Committee of IMO to:
  - (a) develop, as a matter of urgency, operational requirements and performance standards for low-powered radio homing devices for liferafts; and
  - (b) consider adopting amendments to the SOLAS Convention requiring carriage of low-powered radio homing devices for liferafts on all ro-ro passenger ships, at the earliest opportunity;

2. **Invited** IMO, in co-operation with ITU, as a matter of priority, to:
  - (a) develop technical standards for low-powered radio homing devices for liferafts; and
  - (b) ensure the allocation of suitable radio frequencies for low-powered radio homing devices for liferafts."

5.2 The Sub-Committee also recalled that the Operational Working Group of COMSAR 2 was of the opinion that the use of the frequency 121.5 MHz could cause confusion to rescue aircraft as this homing equipment would not be able to operate properly because of the simultaneous reception of multiple signals and interference to the COSPAS-SARSAT system, and recommended that the standard GMDSS locating device, i.e. the 9 GHz Radar Transponder, should be used.

The SAR Working Group did not agree in principle with the above recommendation. There was general agreement that fitting a liferaft with 121.5 MHz beacons would enhance the use of aircraft for locating survivors at sea particularly in wide search areas or in rough seas where the aircraft has an advantage over surface craft. Concern was also expressed that there is at present no experience of the effect on 9 GHz radar of multiple SARTs being activated in close proximity. Many delegations expressed concern at the high cost of SARTs compared to the 121.5 MHz beacons and the difficulty of fitting the equipment in a liferaft.

The Sub-Committee, recognizing that this issue could not be resolved at COMSAR 2, invited Members to give careful consideration to the opinions of the two Working Groups and invited the Committee to extend the target completion date of "Low-powered radio homing devices for liferafts on ro-ro passenger ships" to 1998.

5.3 The Sub-Committee considered documents submitted and noted that:

- .1 COMSAR 3/5 (Norway) provided the results of a study on homing on 121.5 MHz and SART by a SAR helicopter.
- .2 The United Kingdom (COMSAR 3/5/1), reported on research undertaken and discussed alternative technologies which might be used for location during search and rescue operations.
- .3 COMSAR 3/INF.7 (Sweden) provided information regarding a technical study of the use of multiple SARTs operating in close proximity to each other.

5.4 Several delegations 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 is an acceptable solution for the time being. Several other delegations did not agree with this view and were of the opinion that 121.5 MHz homing systems would have advantages over the SART homing system.

5.5 After intensive discussion the Sub-Committee came to the conclusion that it needed more time 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.. The Committee was invited to extend the target completion date of "Low-powered radio homing devices for liferafts on ro-ro passenger ships" to 1999. Member Governments were invited to submit proposals to COMSAR 4 for consideration.

5.6 The Secretariat was instructed to submit this section of the report to the DE Sub-Committee for information.

## **6 ITU MARITIME RADIOCOMMUNICATION MATTERS**

### **Radiocommunication ITU-R Study Group 8**

6.1 The Sub-Committee noted that MSC 68 (MSC 68/23, paragraph 8.16) had endorsed the COMSAR 2 action in submitting to ITU-R Study Group 8 a liaison statement on Proposed amendments to Recommendation ITU-R M.493 with respect to equipment ability to cancel inadvertent distress alerts by initiating a Distress Acknowledgement Call by inserting the identification of the ship in both the called station field and the acknowledging station field. COMSAR 2 did not agree that any Class of DSC equipment should have such a distress alert cancellation capability.

6.2 The Sub-Committee considered COMSAR 3/6/1 (Secretariat) providing information on some Questions and a new Recommendation on issues of relevance to IMO which had been prepared by the Study Group 8 and adopted by the Radiocommunication Assembly, 1997 (RA-1997), and decided not to comment on Question ITU-R 92-1/8 - Study on general questions relating to the GMDSS (annex 1 to COMSAR 3/6/1) and Question ITU-R 202-1/8 - Spurious emissions of radar systems (annex 3 to COMSAR 3/6/1).

6.3 In considering Question ITU-R 96-1/8 - Improved efficiency in the use of the band 156 - 174 MHz by stations in the maritime mobile service and Recommendation ITU-R M.1312 - A long-term solution for improved efficiency in the use of the band 156 - 174 MHz by stations in the maritime mobile service the Sub-Committee supported in general the need for the efficient use of the band and was of the opinion that introduction of new technologies should take into account the global use of maritime VHF equipment and new equipment should be compatible with the existing one especially for distress and safety purposes.

6.4 Bearing in mind that the presently used communication technology in the maritime VHF band gives a system where different VHF equipment may communicate even under extreme conditions regardless of manufacture, the Sub-Committee was also of the opinion that any new technologies should also be robust and flexible in this respect.

6.5 Noting a growing requirement for data transmission, in particular, for surveillance and navigation of ships, the Sub-Committee was also of the opinion that any new technologies should take account of this requirement.

6.6 Taking into account the above discussions, the Sub-Committee prepared a liaison statement on the matter, given in annex 5, for submission to ITU-R Working Party 8B, which will have a meeting from 16 to 27 March 1998.

6.7 The Sub-Committee instructed the Secretariat to convey the liaison statement to WP 8B for consideration and action, as appropriate, and invited the Committee to endorse this action.

### **ITU World Radiocommunication Conference (WRC)**

6.8 The Sub-Committee recalled that COMSAR 2 prepared the draft IMO position on maritime matters included in the agenda of WRC-97, including the issue of generic use and allocation of the satellite bands 1525-1559 MHz and 1626.5-1660.5 MHz, but was most concerned to ensure that maritime interests were properly safeguarded and urged Administrations to ensure these interests were properly represented and carefully considered at WRC-97.

6.9 The Sub-Committee also recalled that MSC 68 amended and approved the IMO position and that NAV 43, as instructed by MSC 68, proposed additional IMO positions and submitted the consolidated position directly to WRC-97, where it was issued as document 53.

6.10 The Sub-Committee considered the information provided by the Secretariat (COMSAR 3/6) and the submission by ICS (COMSAR 3/6/2) on the outcome of WRC-97 and took action as indicated hereunder.

6.11 The Sub-Committee noted that WRC-97 took account of IMO positions except relating to the generic 1.5/1.6 GHz issue and was concerned that a generic allocation was made without prior study of the effects on the GMDSS or the Aeronautical Mobile-Satellite (en-route) service (AMS(R)S).

6.12 The Sub-Committee was informed that there was considerable discussion at WRC-97 on the question of ensuring that distress and safety communications in any band shared with other users continue to be afforded adequate, effective and immediate access and protection. The maritime and aeronautical communities stressed that it was important to preserve dedicated spectrum for the aeronautical and maritime mobile-satellite services since there were no satisfactory alternatives for reliable, high quality, long-distance communications, and considered that more study was required before accepting that vital safety related services could be adequately safeguarded in the environment of a generic allocation to the mobile-satellite service. These views were put forward by the IMO, ICAO and ICS and supported by some administrations, but the overwhelming majority view was that early implementation of a generic allocation to the mobile-satellite service, coupled with appropriate protection of distress and safety functions, was achievable. However, a few administrations remained unconvinced that the agreed solution affords an adequate level of protection to the satellite component of the GMDSS. Filings have already been received by the Radiocommunication Bureau for generic satellite systems in these bands. Coordination agreements between operators will have the effect of segmenting the band between systems.

6.13 The Sub-Committee noted the dates of application for the provisions raised by the World Radiocommunication Conference (Geneva, 1995 and 1997) and contained in the revised Radio Regulations (COMSAR 3/6, annexes 1 and 2).

6.14 Taking note of the agenda items for future WRCs, and the specific study items identified in COMSAR 3/6, the Sub-Committee agreed that the following should be included in its work:

- .1 generic use of the bands 1530-1544 MHz and 1626.5-1645.5 MHz by the mobile-satellite service;
- .2 levels of priority in automated radiocommunication systems, particularly in the shore-to-ship direction;
- .3 watchkeeping on VHF channel 16;
- .4 the use of 2 182 kHz and channel 16 for general calling;
- .5 references to ITU-R and ITU-T Recommendations concerning operational and technical matters related to the maritime mobile and maritime mobile-satellite services in response to Resolution 27 (Rev.WRC-97);
- .6 the operation of co-ordination procedures among mobile-satellite systems in response to Resolution 215 (Rev.WRC-97), which aims to treat intra-service sharing more fully, and calls for a more flexible and efficient use of spectrum by the mobile-satellite service;

- .7 use of the HF bands by the maritime mobile and aeronautical mobile (R) services taking account of operational, distress and safety aspects, new technology and the changing needs of the services;
- .8 matters concerning the bands 1 215 - 1 269 MHz and 1 559 - 1 610 MHz allocated to the radionavigation-satellite service (GPS and GLONASS); and
- .9 use of new digital technology in the Appendix 18/S18 bands (156 - 174 MHz).

6.15 The Sub-Committee noted with satisfaction that the IMO positions on watchkeeping, NAVTEX co-ordination, HF distress and safety frequencies, the MMSI numbering resource, cancellation of false alerts were adopted, and protection of the GPS and GLONASS services was maintained. It was recognized that these results had been achieved with the co-operation of the national telecommunications and radiocommunications agencies in support of their maritime administrations. This is a good example of co-operation which should be developed further in the future.

6.16 The Sub-Committee 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, given in annex 12 and invited the Committee to approve it for submission to the ITU Plenipotentiary Conference (PP-98) to be held in October 1998. In addition, the Sub-Committee felt that another means of recording the need for close co-operation would be by means of a resolution from the Plenipotentiary Conference which would then be included in the Final Acts of that Conference. The purpose of such a resolution would be to ensure the active participation of the competent maritime authorities when considering changes to the Radio Regulations affecting the operational or technical provisions or the frequency allocations to the maritime mobile or maritime mobile-satellite services; and that adequate time is given to the competent IMO fora to discuss proposed changes to the Radio Regulations or other instruments of the ITU Sectors affecting the maritime mobile or maritime mobile-satellite services and, where necessary, to institute joint studies into the proposals. The Final Acts command much greater attention than the minutes of the Conference. Such a resolution would have to be proposed formally by ITU Members, so Administrations are requested to urge their national telecommunications and radio communications agencies to sponsor such a resolution. Administrations are invited to report progress in this regard to MSC 69.

6.17 IALA expressed its appreciation of the work carried out by IMO with regard to the use of the bands 285-325 KHz (283.5-325 KHz in Region 1), which was adopted by WRC-97 (COMSAR 3/6, annex 3).

6.18 Denmark informed the Sub-Committee that the European Telecom Administrations together with the European Commission will convene a Workshop on maritime radiocommunications in May this year.

6.19 The Sub-Committee agreed to establish a correspondence group under the co-ordination of the United Kingdom\* to develop more detailed actions on the annexes to COMSAR 3/6 for consideration by COMSAR 4, with the following terms of reference:

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- .1 consider annexes to COMSAR 3/6 and identify all areas where IMO action is needed;
- .2 prepare draft question and liaison statements to ITU, as appropriate;
- .3 prepare draft inputs to ITU on studies relevant to IMO;
- .4 prepare draft inputs to other international organizations, as appropriate; and
- .5 deliver its full report to COMSAR 4.

The Committee is invited to endorse this action.

6.20 The Sub-Committee, taking into account the short period of time between COMSAR 4 and WRC-99, invited Member Governments to also submit inputs on studies directly to WRC-99.

## **7 SATELLITE SERVICES (INMARSAT AND COSPAS-SARSAT)**

### **COSPAS-SARSAT services**

7.1 The Sub-Committee noted the status of the COSPAS-SARSAT Programme (COMSAR 3/7/3) and concluded that the COSPAS-SARSAT Participants and Secretariat are very active in evolving and improving the system. In particular, it was noted that:

- .1 during 1997, COSPAS-SARSAT Participants began the upgrade of their ground segment equipment to accommodate new 406 MHz beacons which can transmit encoded position data, in accordance with the detailed implementation plan for these new 406 MHz distress beacons agreed by the COSPAS-SARSAT Council in October 1996. The COSPAS-SARSAT Participants also continued their efforts in the demonstration and evaluation of 406 MHz geostationary systems;
- .2 the nominal COSPAS-SARSAT Space Segment consists of four satellites, although in December 1997, the Space Segment included six satellites (see detailed status at Table 1 of COMSAR 3/7/3). The SARSAT-7 payload is planned for launch in May 1998, and the COSPAS-8 payload planned for launch in mid-1998;
- .3 second generation 406 MHz instruments with enhanced performance will be carried on follow-on COSPAS and SARSAT satellites, starting with SARSAT-7 in 1998. The new 406 MHz instruments have improved performance in the areas of system capacity and protection from interference. The new instruments also process a larger bandwidth which will allow the use of additional beacon carrier frequencies in the 406 MHz band, if required by the growing number of 406 MHz beacons;
- .4 there are twenty-one MCCs (Mission Control Centres) in operation and one additional MCC under test. MCCs are responsible for the world-wide distribution of COSPAS-SARSAT alert data to search and rescue services. The MCC data distribution network was enhanced in 1997 with the commissioning in the System of the Japanese MCC as a new node in the network for the Northwest Pacific Data Distribution Region;
- .5 COSPAS-SARSAT alert data distribution to Rescue Co-ordination Centres (RCCs) and SAR points of Contact (SPOCs) was also enhanced in 1997 with the addition of new MCCs in South America (Brazil) and Asia (People's Republic of China);

- .6 a December 1996 survey of beacon manufacturers indicated that over 21,000 new beacons operating on 406 MHz had been produced and distributed during 1996. Assuming that a number of these are still in stock, and that some older beacons have been replaced, it is estimated that the number of 406 MHz beacons in service at the beginning of 1997 was about 135,000. Most of these beacons are maritime EPIRBs. However, a number of airlines have initiated the equipment of their fleets with 406 MHz Emergency Locator Transmitters (ELTs). Their number is expected to grow in coming years. There is also a small but steady increase in the number of 406 MHz Personal Locator Beacons (PLBs) in use. The projected total 406 MHz beacon population is expected to reach 200,000 by the year 2000;
- .7 at the Nineteenth Session of the COSPAS-SARSAT Council (CSC-19) in October 1997, Participants noted from experience that periodic audits were necessary to maintain the reliability of information in EPIRB registration databases. In addition to errors concerning owners' details or the identity of the vessel carrying a particular beacon, several instances of miscoded beacons have been noted. Several Participants indicated that they had already implemented the guidelines in IMO resolution A.764(18) in order to ensure that registration information remain current. However, continued effort by ICAO and IMO in stressing the importance of beacon registration is an essential contribution to further progress towards accurate registration of all 406 MHz distress beacons;
- .8 the level of non-distress activations of 406 MHz beacons continues to be a matter of concern to COSPAS-SARSAT, although at the recent meetings of the COSPAS-SARSAT Joint Committee, Participants noted that the introduction of 406 MHz EPIRBs with a two-step activation process seems to be reducing the number of inadvertent activations caused by simple mishandling and mounting failures. At its CSC-19 session, the COSPAS-SARSAT Council also noted the report of several Participants that their national administrations had undertaken measures to reduce the number of false alarms by implementing wide-ranging education programmes and field-based inspection policies;
- .9 406 MHz beacons encoded with the new 'location protocols' will become available in the near future. A number of prototypes of the new beacons with location protocols which include integral receivers for global navigation satellite systems are currently undergoing type approval testing, or are being used for trials with the 406 MHz low Earth-orbit (LEOSAR) and geostationary (GEOSAR) satellite systems. Results obtained from trials to-date appear promising, with accurate encoded position data provided soon after beacon activation. However, it should be emphasized that the adoption of new protocols does not affect the use of existing 406 MHz beacons, in particular the 406 MHz EPIRBs used in accordance with IMO's GMDSS requirements;
- .10 COSPAS-SARSAT Participants continue to actively monitor interference in the 406 MHz frequency band, and report detected interference sources to competent Administrations and the ITU. Positive results have been achieved in eliminating interference through cooperation with Administrations. However, the number of detected sources increased in 1997 and further efforts are required to eliminate harmful interference in the 406 MHz frequency band. In addition to monitoring and reporting interference sources, a number of actions have been undertaken by COSPAS-SARSAT Participants to reduce, and eliminate as far as possible, the impact of interference on alert data provided by the System;
- .11 COSPAS-SARSAT LUTs and MCCs were modified during 1997 to accommodate the new 406 MHz beacon location protocols. Further modifications to the COSPAS-SARSAT

MCCs will be necessary before implementing the new alert data distribution procedures designed to enhance the processing of both LEOSAR and GEOSAR alerts. These new procedures will be phased in the COSPAS-SARSAT MCC network from the beginning of 1998;

- .12 in 1997 the COSPAS-SARSAT Joint Committee began consideration of a new channel in the 406 MHz frequency band for the carrier frequency of new beacon models developed from year 2000. The introduction of a new frequency channel will provide some spreading of the beacon transmission frequencies in the available bandwidth, which will allow higher beacon processing capacity of the ground processors in the 406 MHz GEOSAR system. Existing 406 MHz beacons will continue to use the channel currently allocated in accordance with the COSPAS-SARSAT and ITU specifications (i.e. 406.025 MHz);
- .13 COSPAS-SARSAT is performing a thorough demonstration and evaluation (D&E) of 406 MHz GEOSAR systems to complement the COSPAS-SARSAT LEOSAR System. The majority of technical and operational issues to be addressed during the D&E were completed by the end of 1997. The focus of COSPAS-SARSAT Participants' activity in 1998 will be the compilation and analysis of the test data and the preparation of a final report on the 406 MHz GEOSAR D&E, for presentation to the COSPAS-SARSAT Council in October 1998. The preliminary results of the 406 MHz GEOSAR D&E strongly support the integration of 406 MHz GEOSAR systems as a complement to the existing 406 MHz polar orbiting system. The GEOSAR systems have the capability to provide near real-time distress alerts using existing 406 MHz beacons, although without the distress location. 406 MHz beacons with encoded position information will allow the GEOSAR systems to provide both rapid alerting and position data; and
- .14 more information on the COSPAS-SARSAT System is provided in the latest issue of the document "COSPAS-SARSAT System Data" available from the COSPAS-SARSAT Secretariat, or from the COSPAS-SARSAT web site at [www.cospas-sarsat.org/cospas-sarsat](http://www.cospas-sarsat.org/cospas-sarsat).

### **121.5 MHz satellite alerting system**

7.2 The Sub-Committee recalled that COMSAR 2 had noted information provided by the United States (COMSAR 2/INF.6) which indicated the adverse impacts of false alerts, particularly regarding the extreme unreliability of 121.5 MHz distress alerting system. Information received indicated that it has not only been difficult to respond to persons in distress who use 121.5 MHz EPIRBs, but it has also been costly to the SAR system (often to volunteers), has robbed the SAR system of resources it needs to assist others in distress and has been a burden to ships diverted to respond to what mostly are false alerts. Some delegations were of the opinion that 121.5 MHz beacons for distress alerting should be phased out because of their unreliability. Others considered it premature to consider this matter. The Sub-Committee invited Members to consider COMSAR 2/INF.6 and submit comments and proposals for consideration at COMSAR 3.

7.3 The Sub-Committee considered COMSAR 3/7/3 (COSPAS-SARSAT) describing the policy regarding the provision of 121.5 MHz services and noted that:

- .1 the COSPAS-SARSAT Parties underline that, in accordance with the terms of the International COSPAS-SARSAT Programme Agreement, their basic policy is to continue providing 121.5 MHz and 406 MHz satellite services as long as such services contribute to efficient search and rescue operations. In this regard, the Parties will take into account the views of ICAO, IMO and States concerned, as appropriate; and

- .2 however, COSPAS-SARSAT also wishes to emphasize the limitations of the 121.5 MHz system in terms of the identification of the user in distress, coverage, location accuracy and reliability.

7.4 Having considered COMSAR 3/7/1 (France), COMSAR 3/9/10 (United States) and a report of the fifth meeting of the Joint ICAO/IMO Working Group on Harmonization of Aeronautical and Maritime Search and Rescue (COMSAR 3/9/5, Recommendation 5/10 and Appendix E) regarding problems in the treatment of the 121.5 MHz satellite alerting system, the Sub-Committee agreed that satellite processing of 121.5 MHz distress alerts should be phased-out, and that a plan for such phasing-out should be developed by COSPAS-SARSAT, giving the approximate period of time needed. The Sub-Committee further agreed that the COSPAS-SARSAT Council should be informed of this decision and instructed the Secretariat to take the necessary action. The Committee was requested to endorse this action and to invite the Secretary-General to convey this decision to the Secretary-General of ICAO together with a request that it be brought to the attention of the relevant ICAO bodies.

7.5 The Sub-Committee concurred with a view expressed by Australia (COMSAR 3/8/8) that the 406 MHz distress alerting system, in particular, registration and coding of 406 MHz EPIRBs, should be improved and agreed that this should be brought to the attention of COSPAS-SARSAT. The Secretariat was instructed to take the necessary action. The Committee was invited to endorse this action.

## **Inmarsat**

### **General**

7.6 The Sub-Committee noted information provided by Inmarsat on GMDSS communication services operated via Inmarsat systems for the period from 1 October 1996 to 30 November 1997 (COMSAR 3/INF.20). In particular, it was noted that Inmarsat had established its Year 2000 Project in April 1997 to ensure correct operation of all critical systems after the change in century. Critical systems include all Land Earth Stations, Network Co-ordination Stations and Mobile Earth Stations, the Electronic Service Activation System (ESAS), Mobility Management, Tracking Telemetry and Control (TT&C) Services, Satellite and Network Control & Monitoring Systems and GPS receivers associated with any part of the network. Inmarsat is in contact with all relevant suppliers and applications developers to understand their plans and progress and is issuing mandatory Change Notices to the Inmarsat System Definition Manuals (SDMs) to ensure continuing correct operation of mobiles and land earth stations.

### **Global Data Network Identification for Inmarsat-C**

7.7 The Sub-Committee noted information provided by Australia (COMSAR 3/INF.7) on the desirability for global data network identifiers (DNIDs) or a similar mechanism for the use with wide area ship reporting systems outside the VHF coverage and the intention of Australia to conduct a trial into the polling of ships' Inmarsat-C terminals for position reports.

### **Barring procedures**

7.8 The Sub-Committee recalled that COMSAR 2 had noted that, by establishing a procedure for the quick unbarring of Inmarsat SES by RCC, Inmarsat had taken steps to ensure that lives will not thereby be put at risk. However, the Sub-Committee had stressed its concern at the principle of barring ships whilst at sea and had decided to monitor the application of these procedures.

7.9 Having noted information provided by Inmarsat on business issues relating to the use of Inmarsat services by ships in the GMDSS (COMSAR 3/INF.19), the Sub-Committee considered proposals by the Russian Federation (COMSAR 3/7/4) concerning barring and unbarring in connection with revised

chapter S VIII, Article S 31 of the Radio Regulations and developed the draft MSC circular given in annex 13 on Maritime safety and Inmarsat ship earth station barring procedures and invited the Committee to approve it for dissemination to Members.

7.10 The Sub-Committee noted that ICS had issued a circular to its members urging them to settle any debts and informing them of the possible consequences of barring of their Inmarsat SESs.

### **Restructuring of Inmarsat**

7.11 The Sub-Committee recalled that the Inmarsat Assembly, at its eleventh session, had decided:

- "1 to request the Inmarsat Council to take into account the IMO MSC's request in its work on the future structure so as to ensure that Inmarsat's distress and safety services are guaranteed;
- .2 that the continued provision of global maritime distress and safety services and support of the GMDSS are prerequisite basic principles and public service obligations that must be retained in any future structure of Inmarsat; and
- .3 that essential elements to be taken into consideration in any future structure include:
  - .1 that the intergovernmental character of the Organization should be preserved; and
  - .2 that the intergovernmental regulatory oversight of the Assembly should be continued for the basic principles and public service obligations.

7.12 The Sub-Committee also recalled that MSC 66 concurred in a statement by the Secretary-General that the Organization's prime concern was safety at sea and, in this particular case, that the radiocommunication services for distress and safety envisaged by chapter IV of the SOLAS Convention were guaranteed and provided in an efficient and effective manner. Any disruption of the present satellite services currently being phased-in, would cause serious problems for distress and safety radiocommunications, would have a possible negative impact on safety at sea and should be avoided at any cost. As long as these services continued to be provided and the obligations undertaken in SOLAS by the providers of such services continued to be fulfilled, the Organization should be prepared to consider any scheme which would emerge from current negotiations in Inmarsat and would take appropriate action.

7.13 The Sub-Committee further recalled that Inmarsat Intersessional Working Group (IWG), which met again at its nineteenth session (7 to 10 October 1997), was inconclusive; however, the IWG decided to meet again at its twentieth session (16 to 20 February 1998) and recommended that a meeting of legal experts be held from 19 to 23 January 1998. In addition, it recommended that the twelfth session of the Inmarsat Assembly be held from 20 to 24 April 1998.

7.14 The Assembly, at its twentieth session, authorized COMSAR 3 to consider any additional information it receives emanating from Inmarsat meetings and to finalize and submit, directly to the Inmarsat Assembly in April 1998, the IMO position on Inmarsat's restructuring proposals, based on the relevant IMO position agreed to by MSC 66, as reflected in paragraph 40 of document A 20/9.

7.15 The Sub-Committee, having considered a submission by the United States (COMSAR 3/7/2) and information provided by the Secretariat (COMSAR 3/j/4) on the outcome of the twentieth session of the Inmarsat IWG (16 to 19 February 1998), as authorized by the twentieth Assembly, developed the IMO

position on Inmarsat's restructuring proposals, based on the relevant IMO position agreed to by MSC 66, given in annex 14, for direct submission to the Inmarsat Assembly in April 1998. The Secretariat was instructed to take the appropriate action. The Committee was invited to endorse this action.

7.16 The delegation of Liberia pointed out that the Public Services Agreement contained a clause for the termination of GMDSS services by the Inmarsat Company, particularly if the SOLAS Convention was amended to allow other satellite service providers to participate in the GMDSS. In this regard, it was important for Member Governments to bear this in mind if any future proposals and deliberations relating to the provision of GMDSS services by other satellite service provider(s) were to occur at IMO.

7.17 ICS raised the possibility of Inmarsat - in its commercial role - being subject to takeover bids and insolvency. In the case of takeovers, the successful bidder should inherit all the responsibilities and obligations of Inmarsat pertaining to the provision of maritime satellite radiocommunication services and be subject to the relevant decisions of the IGO, and, as a precaution against insolvency, measures might be needed to ensure the continued operation of satellite communication services for vessels at sea.

7.18 Inmarsat informed the Sub-Committee that there is a number of basic commercial and legal reasons for the provisions relating to termination of the Public Services Agreement, including the new company's right of termination, which have been included in that agreement. In particular, these provisions are intended to take care of the concerns of potential investors in the new Inmarsat company as well as a general requirement under English law, to which the new company is expected to be subject, that contractual obligations of the kind covered by the draft agreement are not open ended and can be terminated when the purposes of the agreement have been fulfilled. The present draft makes such right of termination subject to stringent conditions and there is also provision for consultation with IMO. Commenting on the issue raised by ICS Inmarsat stated that any successful bidder for the Inmarsat company would inherit all the latter's contractual responsibilities and obligations pertaining to the supply of maritime satellite radiocommunications.

## **8 EMERGENCY RADIOCOMMUNICATIONS: FALSE ALERTS AND INTERFERENCE**

8.1 The Sub-Committee noted that, having been informed by the Inmarsat observer of the existence of scanning receivers capable of detecting a transmission on L-band, as well as other commonly used frequencies, MSC 68 (MSC 68/23, paragraphs 8.27 and 8.28) had amended a draft MSC circular on Special signals for use by ships under attack from pirates and armed robbers been prepared by NAV 41, amended by COMSAR 1 and reviewed by COMSAR 2 and issued it as MSC/Circ.805 on Guidance for the use of radio signals by ships under attack or threat of attack from pirates or armed robbers.

### **Prevention of harmful interference to 406 MHz EPIRBs and in the 406 MHz frequency band**

8.2 The Sub-Committee noted that WRC-97 by *resolves 4 in Resolution COM 5-25 (WRC-97)* on Studies relating to consideration of the allocation to the non-geostationary mobile-satellite service (MSS) in the meteorological aids band 405-406 MHz and impact on primary services allocated in the adjacent bands (annex 13 to COMSAR 3/6) had invited ITU-R, as a matter of urgency, to study, with the participation of IUCAF and other relevant entities, the impact of unwanted emissions on the COSPAS-SARSAT system in the band 406 - 406.1 MHz and the radio astronomy service in the band 406.1 - 410 MHz, and identify appropriate protection measures for these services.

8.3 The Sub-Committee considered the comprehensive COSPAS-SARSAT report on 406 MHz interference sources, COMSAR 3/8/4 (COSPAS-SARSAT) describing the effect of interference in the 406 MHz frequency band on the COSPAS-SARSAT System and providing information on 406 MHz interference sources detected by COSPAS-SARSAT participants.

8.4 The Sub-Committee took note of the information provided on the 406 MHz interference sources detected by COSPAS-SARSAT participants and invited Member Governments to urge their respective national authorities responsible for frequency management to take all necessary actions to eliminate harmful interference in the 406 MHz band, and further noted that COSPAS-SARSAT would submit such reports to IMO and ICAO on an annual basis.

8.5 The Sub-Committee considered COMSAR 3/8 (United States) regarding prevention of harmful interference to 406 MHz EPIRBs operating with the COSPAS-SARSAT system and instructed the Secretariat to request the ITU to develop emission standards such that emissions in the 406-406.1 MHz band are consistent with, and do not exceed the requirements set forth in ITU-R SM.1051. This Committee was invited to endorse this action.

8.6 The Sub-Committee also agreed the draft MSC Circular on Recommendation on prevention of harmful interference to 406 MHz EPIRBs operating with the COSPAS-SARSAT system, given in annex 15, which the Committee is invited to approve for dissemination to Member Governments. The Secretariat was instructed to bring this annex to the attention of the Director of the ITU Radiocommunication Bureau taking into account interference reports in the 406 MHz band. The Committee was invited to endorse this action.

#### **Origin of 406 MHz beacon false alerts**

8.7 The Sub-Committee considered COMSAR 3/8/5 (United States) regarding the primary causes of 406 MHz beacon false alerts. The Sub-Committee noted that the United States study had determined that although the ratio of false alerts compared to the ratio of real distress alerts remains the same, the ratio of false alerts to the beacon population is decreasing slightly. Secondly newer beacon models appear to have a lower false alert rate, and over 50% of non-distress beacon activations are due to user errors regardless of the type of beacon.

8.8 The Sub-Committee agreed that Assembly resolution A.814(19) - Guidelines for the Avoidance of False Distress Alerts should be continuously kept under review. Members were invited to provide comments and proposals for consideration at COMSAR 4.

8.9 The Sub-Committee also agreed:

- .1 to urge Member States to develop and share information on causes that can be used as a basis for prioritizing efforts to reduce false alerts and to implement effective provisions for Equipment registration to assist RCCs in handling alerts;
- .2 consider development of design standards for equipment controls, since variations in the designs of controls has often been named by users as a major contributor to user errors; and
- .3 to focus efforts to reduce false alerts especially on the design, installation, testing, and use of equipment which is automatically activated, since this equipment seems to account for the majority of false alerts.

#### **Prevention of harmful interference to navigational and radiocommunication equipment and systems**

8.10 The Sub-Committee considered COMSAR 3/8/1 (United States) regarding interference from electronic lighting devices to maritime radiocommunication and radionavigational equipment and was of the opinion that no equipment should interfere with GMDSS or radionavigation equipment and expressed concern that such bulbs were being used on ships. The Sub-Committee was also of the opinion that all equipment likely to cause electromagnetic interference on board ships should comply with relevant EMC

standards, but noted however that, at present, no relevant EMC standards seems to contain radiated emission limits above 1 GHz. The Sub-Committee agreed that IEC should be invited to consider to extend the upper limit for radiated emissions to at least 2 GHz in relevant EMC standards and instructed the Secretariat to take appropriate action. The Committee was invited to endorse this action.

#### **Use of shipboard GMDSS equipment for non-safety communications**

8.11 The Sub-Committee also considered COMSAR 3/8/2 (United States) relating to the use of shipboard GMDSS equipment for non-safety communications and agreed that GMDSS operators can and should utilize GMDSS equipment on a regular basis for routine traffic or testing in order to ensure operator competency and equipment availability and to minimize the probability of sending false GMDSS alerts.

8.12 The Sub-Committee prepared COMSAR/Circ.17 on Recommendation on use of GMDSS equipment for non-safety communications, which the Secretariat was instructed to disseminate to Member Governments. The Committee was invited to endorse this action.

#### **The performance of the COSPAS-SARSAT system during the DYSTOS SAR event**

8.13 The Sub-Committee noted that MSC 68 had considered document MSC 68/8/2 whereby Greece expressed concern over the adverse effects of GMDSS false alerts and proposed that action should be taken to remedy the situation, which might include the establishment of more specific operational procedures with regard to the use of satellite equipment and the better training of operators. The delegation of Greece asked that some substantial improvements of the COSPAS-SARSAT satellite system should be pursued.

The COSPAS-SARSAT observer stated that COSPAS-SARSAT Parties were fully aware of the adverse impact of false alarms in the GMDSS, as mentioned in document MSC 68/8/2 and shared the concern expressed by SAR organizations concerning the current situation. However, COSPAS-SARSAT has no control of the use of 406 MHz satellite EPIRBs, or of 121.5 MHz beacons at sea. A significant reduction of the number of EPIRB false alerts can only be achieved through a continuing effort by Administrations to enhance the control of EPIRBs and the training of maritime personnel in accordance with resolution A.814(19) - Guidelines for the avoidance of false distress alerts.

In respect of the accident referred to in document MSC 68/8/2 (Greece), COSPAS-SARSAT had emphasized that, at the time it occurred, although some Space Segment and Ground Segment components of the System were not in operation, the COSPAS-SARSAT satellite system was operating according to expected performance. From 27 December to 30 December 1996, SAR operations for five maritime distresses were assisted with COSPAS-SARSAT alert and position data in various parts of the world and resulted in the rescue of 77 persons in distress at sea. Alert data for three of the above SAR events were provided by 406 MHz satellite EPIRBs.

Preliminary investigations of the performance of the COSPAS-SARSAT System during the event referred to above have not shown evidence of anomalies in the 406 MHz system, except for the known limitations of the Space and Ground Segments noted above. These investigations have shown that the reported location errors were the result of conditions exterior to the satellite system, most likely interference in the 406 MHz frequency band and/or sub-standard 406 MHz beacon performance.

Following the analysis of the above event, a number of actions have been undertaken by the providers of the COSPAS-SARSAT System to reduce in future, and eliminate as far as possible, the impact of such external conditions on alert data provided by COSPAS-SARSAT. New alert data distribution procedures are planned for implementation in 1998 and future 406 MHz satellite equipment will have enhanced protection against interference. Finally, he informed the Committee that a detailed report on the performance of the COSPAS-SARSAT System during the above accident will be submitted to COMSAR 3 for consideration.

Taking into account the above information and discussion, MSC 68 decided that matters concerning false alerts should be considered by COMSAR 3 under its agenda item on "Emergency radiocommunications: false alerts and interference.

8.14 The Sub-Committee considered COMSAR 3/8/3 (COSPAS-SARSAT), COMSAR 3/8/6 (Greece) and noted COMSAR 3/INF.4 (COSPAS-SARSAT) regarding the performance of the COSPAS-SARSAT system during the DYSTOS SAR event.

8.15 Greece expressed its appreciation to COSPAS-SARSAT for its co-operation in responding to requests for information and in its efforts to analyze the casualty of the DYSTOS so that improvements could be made to prevent similar delays in responding to subsequent incidents.

8.16 The Sub-Committee noted that the issue of EPIRB maintenance had been considered under agenda item 4 (paragraphs 4.18 to 4.23).

## **9 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**

9.1 The Sub-Committee recalled that the Joint ICAO/IMO Working Group on harmonization of maritime and aeronautical (JWG) SAR held its fifth session in Colonial Williamsburg, (Virginia) from 6 to 10 October 1997 and prepared the draft Joint ICAO/IMO SAR (IAMSAR) manual given in COMSAR 3/9/6 and Addenda 1 and 2.

9.2 The Sub-Committee noted the decisions and recommendations of the Joint Working Group at its fifth session (COMSAR 3/9/5) in particular that it recommended that:

- .1 the French, Spanish and Russian versions of the International Aeronautical and Maritime SAR Manual should also contain the Glossary in English;
- .2 the colour of the pictogram indicating medical supplies be provided in ISO colour rather than "Red Cross" and "Red Crescent";
- .3 the term "aircraft co-ordinator (ACO)" rather than "air asset co-ordinator" be used to define the person who co-ordinates the involvement of multiple aircraft in SAR operations;
- .4 the revision of SAR.2 and SAR.3 circulars be deferred until COMSAR and MSC have decided on the proposed new format for a uniform publication incorporating both aeronautical and maritime SAR plans;
- .5 a new explanatory text be inserted as the foreword to Volume 3 of the IAMSAR in order to make it clear that the volume would be used by ship masters and would replace the MERSAR Manual;
- .6 SAR services should take an active part in any prevention programme or planning process intending to reduce the need for SAR missions;
- .7 ICAO and IMO make all efforts to jointly develop model courses for the training of all categories of SAR personnel for both aeronautical and maritime purposes and also update

the list of training institutions available world-wide for the training of such personnel including the terms and conditions for accepting candidates from foreign countries; and

- .8 there was an internet web-site which allowed linking to other SAR related items from around the world. The address to the web-site was: <http://www.rcc-net.org>.

9.3 The Sub-Committee reviewed the draft IAMSAR Manual prepared by Joint Working Group and on the basis of proposals by Greece (COMSAR 3/9/12) and suggestions by Turkey, prepared the amendments given at annex 1 of the document COMSAR 3/WP.3 which it instructed the Secretariat to incorporate into the draft Manual. The Committee was invited to approve the draft IAMSAR Manual (COMSAR 3/9/6 and addenda) together with the amendments given in annex 16. In order to ensure that the Manual reaches all the people who will need the information contained therein, the Sub-Committee instructed the IMO Secretariat to enter into discussions with the ICAO Secretariat on how to make the Manual affordable to as many people as possible. The Sub-Committee was informed by the Secretariat that the Manual is expected to be printed in the three official languages in September/October 1998 and that the expected costs would be £18 for volume 1 £45 for volume 2 and £20 for Volume 3. It is expected to be available on CD-ROM in September/October 1999 at an estimated cost of £140 each. Members were invited to estimate the demand for the publication in their countries to assist the Secretariat in making its production plan.

9.4 The Sub-Committee recalled that at its second session (COMSAR 2/13, paragraph 1.3) it decided that the translation into French and Spanish should retain some English language elements to assist non-English MRCC personnel improve their knowledge of English with regard to technical SAR terms and in this regard noted the recommendation of JWG 5 that the French, Spanish and Russian versions of the IAMSAR should contain the English version of the Glossary. Taking account of a proposal by France (COMSAR 3/9/7), the Sub-Committee approved the list given in annex 17 of English language elements to be retained in the French, Spanish and Russian translations of the IAMSAR Manual.

9.5 The Sub-Committee concurred with the recommendation of JWG 5 that when the draft Joint Manual is adopted, it would be necessary, to develop model training courses for SAR personnel in line with the provisions of the new Manual. The following categories should be targeted: SAR Administrators, SAR Duty Officers/SAR Mission Co-ordinators, On-Scene Co-ordinators, Aircraft Co-ordinators, Mobile SAR unit crews -professionals, Mobile SAR units - crews part-time/volunteers, Model courses should also be prepared for Ships Crew, Air Crew and Introduction courses to SAR for co-operating agencies, companies and organizations should be developed. An appeal was made to possible donors to contribute financially to the development of such model training courses.

9.6 The Sub-Committee recalled that IMO has a circular on training facilities available world-wide but noted that this circular has not been updated for several years and does not include current information on the terms on which the training is available to candidates from foreign countries. Recalling resolution 8 of the 1979 SAR Conference, which invites Parties to promote, in consultation with, and with the assistance of IMO, support for States which request technical assistance for the training of personnel necessary for SAR, the Sub-Committee invited countries with SAR training facilities which can accept candidates from foreign countries, to provide information on this to the Organization for circulation to its Members. Recalling also its earlier decision to encourage the establishment of Joint aeronautical and maritime RCCs and the progress made to harmonize aeronautical and maritime SAR procedures, the Sub-Committee invited the Committee to agree that future circulars should include SAR training facilities available both for aeronautical and maritime purposes.

9.7 The Sub-Committee noted the report of a study (COMSAR 3/9/17) carried out in the United Kingdom on the likelihood of survival in cold water. The study showed, *inter alia*, that longer duration of immersion, colder water, and the absence of a buoyancy device are all associated with falling

chances of survival; that survival times are considerably longer than those predicted by previous studies; and that significant numbers of death occur from initial responses and during and following rescue. The Sub-Committee invited Member Governments to undertake similar surveys and submit their findings to the Organization so that if appropriate the entries the IAMSAR Manual would be revised.

9.8 The Sub-Committee noted that Canada had offered to host the sixth session of the Joint ICAO/IMO Working Group meeting tentatively scheduled in Victoria, British Columbia, Canada, from 5 to 9 October 1998. The Committee was invited to consider and approve the meeting.

9.9 With reference to COMSAR 3/9/5, paragraphs 9.2 and 9.6, the delegation of Turkey requested the Sub-Committee to review the future role and functions of the Joint ICAO/IMO Working Group and to consider ways of increasing the participation of more Members from developing countries including possibly sponsoring their participation at future meetings of the JWG. This proposal was supported by other delegations.

9.10 The representative of ICAO informed the Sub-Committee that the Joint Working Group, within the ICAO framework, was considered to be an air navigation study group, which was a small group of experts, normally 6 to 8 persons, which participated as individual experts and not as State representatives. The Sub-Committee was also informed that ICAO participation in the Group has been approved by the ICAO Air Navigation Commission (ANC) on that understanding and that the ANC also had approved the ICAO membership of the Group.

9.11 Following some background information on the establishment of the Joint Working Group provided by the Secretariat, the Sub-Committee invited the Committee to authorize it to carry out a review study of the composition and terms of reference of the group and advise the Committee accordingly.

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

9.12 The Sub-Committee noted that the Assembly at its twentieth session adopted resolution A.856(20) - Guidance to Administrations on development of a shore-based SAR Telecommunication infrastructure.

9.13 The Sub-Committee recalled that at its second session it had agreed, in principle, with the proposal by France (COMSAR 2/9/1), to include in the next revision of the SAR.2 and SAR.3 circulars information on the availability of facilities for underwater rescue. Noting that other information useful for SAR purposes such as fire-fighting and towing capability could also be included, it had agreed to review the existing format of the circulars in order to accommodate these and other necessary information and had invited Members to consider this matter and submit comments and proposals for the development of a new format for the SAR.2 and SAR.3 circulars for consideration at JWG 5 and at COMSAR 3.

9.14 In this regard, the Sub-Committee noted the recommendation of JWG 5 that the IMO Secretariat should delay the revision of the SAR.2 and SAR.3 circulars until the Sub-Committee considers proposal referred to above and decides on the format and contents of future editions.

9.15 The Sub-Committee noted that the SAR Working Group had developed on the basis of a proposal by France (COMSAR 3/9/1) a preliminary draft new format given in annex 3 to COMSAR 3/WP.3 for use in future editions of the SAR.2 and SAR.3 circulars. Members were invited to consider the new format and content of the circular and submit comments and proposals for consideration at the Sub-Committee's fourth session.

9.16 The Sub-Committee concurred with the observation of France (COMSAR 3/9/2), that all existing IMO documentation on the GMDSS address only ships' requirements and provide no guidance for the

establishment and operation of MRCCs with regard to communications facilities. Noting that MRCCs are a vital link to a ship in distress, the Sub-Committee approved COMSAR/Circ.18 on the Minimum communication needs of Maritime Rescue Co-ordination Centres (MRCC) which it instructed the Secretariat to disseminate to Member Governments. The Committee was invited to endorse this action.

9.17 The Sub-Committee agreed with a proposal by France (COMSAR 3/9/3) that a list of IMO documents which are considered essential for MRCCs would be of assistance to personnel of MRCCs particular those who do not follow the work of IMO closely. The Sub-Committee approved SAR.7/Circ.1998 on the List of IMO documents and publications to be available for use by Maritime Rescue Co-ordination Centres, which it instructed the Secretariat to disseminate to Member Governments. The Committee was invited to endorse this action. The Sub-Committee agreed that the circular should be updated by the Secretariat annually and that following the approval of revised circulars by the Sub-Committee, they should be disseminated as a new series of SAR.7 circulars indicating the year in which they were updated (e.g. SAR.7/Circ.1998). The Sub-Committee further agreed that future lists should be augmented with other non-IMO documents and publications which are considered essential for use by MRCCs. The United Kingdom offered to provide more information on additional documents and publications to add to the list for further discussion at COMSAR 4.

### **Pacific Ocean Conference on Maritime SAR and the GMDSS**

9.18 The Sub-Committee noted (COMSAR 3/9/4 and COMSAR 3/INF.2), that with financial support from the Governments of Australia, Canada, Japan, the Netherlands, New Zealand, Norway, the Republic of Korea, the United Kingdom, the United States and Hong Kong (China), the Commission of the European Communities and the International Transport Workers Federation (ITF), the Organization convened a SAR/GMDSS Conference in Seoul (Republic of Korea) from 7 to 11 April 1997 for the countries bordering the Pacific Ocean.

9.19 The Sub-Committee noted resolution No. 4 adopted at the Seoul Conference, and:

- .1 noting that there are many countries which cannot, at present, maintain a registration database for GMDSS equipment as required for SAR purposes and being of the view that there is an advantage in having a limited number of information providers which can be easily accessed to support SAR, invited Members who are able to keep SAR data information for other countries to inform the Organization so that the information can be made available to other Member. The Sub-Committee noted that for such database to be useful the information it carries needs to be up to date and available 24 hours.
- .2 agreeing that there is a need for further action to eliminate false alerts invited Members to consider the matter and submit comments and proposals for consideration by COMSAR 4;
- .3 encouraged States operating MRCCs associated with Inmarsat 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 but reiterated its earlier opinion (COMSAR 2/13, paragraph 9.2.9.3) that such responsible MRCCs should also endeavour to reach an agreement with the associated MRCCs;
- .4 invited Inmarsat to help to ensure that all responsible MRCCs with associated search and rescue regions have the specific information they may need to contact ships and other craft via Inmarsat; and

- .5 recommended that providers of GMDSS services develop the capacity to distribute alert data as directly as practicable to responsible RCCs and to decode alert messages prior to delivery to the SAR system.

### **Mediterranean and Black Seas Conference on Maritime SAR and the GMDSS**

9.20 The Sub-Committee also noted (COMSAR 3/9/11 and COMSAR 3/INF.5) that with financial support from the Governments of Canada, France, Greece, Norway, Spain and the United Kingdom, the Commission of the European Communities, the International Mobile Satellite Organization (Inmarsat) and the International Transport Workers' Federation (ITF), the Organization convened a SAR/GMDSS Conference in Valencia, Spain from 8 to 12 September 1997 for all the countries bordering the Mediterranean and Black Seas.

9.21 The Sub-Committee noted resolution 3 adopted at the Valencia Conference and in addition to its decisions in paragraph 9.16 further:

- .1 encouraged States operating MRCCs to establish means of direct communication between all MRCCs in the region/area; and
- .2 urged all users to ensure that their GMDSS equipment is all times correctly coded and its identity are properly registered in a recognized national or international SAR database.

9.22 The Sub-Committee noting that a number of IMO Conferences and seminars have adopted resolutions and recommendations aimed at improving communications and SAR services invited Members to evaluate the implementation of these resolutions and recommendations at the national level and to submit comments and proposals on their implementation to COMSAR 4 for consideration.

### **Medical assistance at sea**

9.23 The Sub-Committee noting that the proposed draft amendments to the 1979 SAR Convention which are due to be adopted by MSC 69, explicitly incorporate the provision of medical advice, first aid and medical evacuation as part of search and rescue services, agreed with the proposals in COMSAR 3/9/8 (France and Germany) and COMSAR 3/9/9 (France) that there is a need to prepare guidance for Administrations for putting in place arrangements and procedures for the effective delivery of such services. In this regard, the Sub-Committee noted that the SAR Working Group, using COMSAR 3/9/8 as a basis prepared the preliminary draft MSC circular given in annex 6 to COMSAR 3/WP.3 on Medical Assistance at Sea and the Importance of the Role of Telemedical Maritime Advice Centres within the framework of SAR services. As a complement to the preliminary draft MSC circular, the Working Group also prepared on the basis of the proposal by France COMSAR 3/9/9, the Preliminary draft COMSAR circular given in annex 7 to COMSAR 3/WP.3 on Medical Assistance at Sea and Marine Radiocommunications which is intended to provide further guidance on the establishment and use of radiocommunications for medical assistance at sea for further consideration by the JWG at its sixth session. Members were invited to consider the preliminary draft circulars in annexes 6 and 7 to COMSAR 3/WP.3 and submit comments and proposals thereon for consideration by the JWG at its sixth session and advise COMSAR 4 accordingly.

9.24 The Sub-Committee agreed with a proposal by the Netherlands (COMSAR 3/9/18) to include guidance on the use of Hi-Line Technique by helicopters in the IAMSAR Manual and decided to include the proposal in the first set of amendments to the Manual to be considered by Joint Working Group following its adoption by the Committee.

## **Other SAR matters**

9.25 The Sub-Committee recalled that at its second session (COMSAR 2/13, paragraph 12.9) it had agreed that there is a need to develop guidelines for preparing plans for co-operation between passenger ships trading on fixed routes and SAR services as required by the new SOLAS regulation V/15(c) which entered into force on 1 July 1997. The Sub-Committee approved the draft MSC circular prepared by the SAR Working Group on the basis of a proposal in COMSAR 3/9/14 (Denmark, Finland, France, Germany, Iceland, the Netherlands, Norway, the Russian Federation, Sweden and United Kingdom) prepared the draft MSC circular given in annex 18. The Committee, at its sixty-ninth session, is invited to approve the draft MSC circular on Guidelines for preparing plans for co-operation between passenger ships and SAR services in accordance with SOLAS regulation V/15(c).

9.26 Canada, France and the United Kingdom and other countries informed the Sub-Committee that they were also applying the SAR co-operation plans to all passenger-carrying vessels including those operating in their internal waters.

9.27 The Sub-Committee noted information 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. The Sub-Committee also 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 (SEs), with Distress Facilities and without Distress Facilities. For those SEs 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 SE 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 recommends that a terminal without Distress Facilities be used in this application. The Sub-Committee strongly urges that Inmarsat no longer allow terminals without a full user interface and with Distress Facilities to be used for data acquisition.

9.28 In considering COMSAR 3/9/16 (United Kingdom), the Sub-Committee recalled that at its second session it had expressed the view that it would be useful for SAR purposes to standardize the SARNET system for use by MRCCs. The Sub-Committee noted that a text describing the operating procedures of the SARNET system had been included in the draft Joint SAR Manuals (IAMSAR). The Sub-Committee invited RCCs world-wide to consider installing Inmarsat-C equipment and to implement the use of the SARNET for the purpose of exploring the further development and use of the system.

9.29 The Sub-Committee noted information provided by the United Kingdom (COMSAR 3/9/19) on a series of search and rescue awareness seminars it runs for masters, mates and key shore-based personnel who may become involved in an emergency at sea to train them in SAR procedures and encourage them, where possible, to give early notification of the situation. The Sub-Committee approved the draft MSC/Circular given in annex 19 on Alerting of Search and Rescue Authorities which it invites the Committee at its seventieth session to adopt for circulation to Member Governments. The Secretariat was instructed to bring the draft MSC circular to the attention of NAV 44 for comments to MSC 70. The Committee was invited to endorse this action.

9.30 The Sub-Committee noted:

- .1 COMSAR 3/INF.8 (Australia) containing information on the trials it carried out on Inmarsat-C polling in support of the Australian ship reporting system and its conclusion that polling offers a good management tool for agencies managing ship reporting systems;

- .2 with concern the finding of the Seventh North Atlantic MRCC's meeting held in Bermuda from 9 to 11 July 1997 (COMSAR 3/INF.9, United Kingdom) with regard to the carriage requirement of survival suits. Having due regard to the efficiency of search and rescue and the effect of hypothermia, the Sub-Committee felt it might be advisable that the DE Sub-Committee which is the competent body deals with the improvement of thermal protection in certain sea areas. The Committee was invited to instruct the DE Sub-Committee accordingly;
- .3 COMSAR 3/INF.11 (Australia), containing information on the use in Australia of X.400 technology as a standard for its global SAR communications;
- .4 COMSAR 3/INF.14 (Australia) containing information on the reorganization of Australian search and rescue services;
- .5 COMSAR 3/INF.16 (Republic of Korea, the Russian Federation and Japan containing information) on the outcome of the Operational Level Meeting held on 20 May 1997 at the Japanese Maritime Safety Agency among the relevant authorities of the Republic of Korea, the Russian Federation and Japan with the Peoples Republic of China being represented as an observer. The Sub-Committee noted that the meeting reconfirmed that there was little need to enter agreements at that time on search and rescue regions as distress cases in those sea areas were being responded to effectively and without delay; and
- .6 COMSAR 3/INF.21 (Inmarsat) containing information on how an authorized MRCC can initiate shore-to-ship communications via Inmarsat-A, Inmarsat-B or Inmarsat-C systems using the distress priority (Priority 3). The Sub-Committee instructed the Secretariat to disseminate the information as COMSAR/Circ.19 when it has been updated by Inmarsat. The Committee was invited to endorse this action.

9.31 The Sub-Committee noted that, the Committee, at its sixty-eighth session (MSC 68/23, paragraph 9.8) considered a proposal by ICCL (MSC 68/9/1) that the matter of helicopter landing areas should be further discussed by the DE and other Sub-Committees and that, pending their recommendations, implementation of the new regulation III/28.2 should be suspended. Noting that this requirement had originally been adopted by the 1995 SOLAS Conference as regulation III/24-3.3 and that, together with other amendments to SOLAS then adopted, was due to enter into force on 1 July 1997, the Committee could not agree with ICCL's proposal that the new regulation III/28.2 should be suspended. However, taking into account the concern expressed by ICCL, shared by several delegations, and the fact that the requirements concerning helicopter landing areas would apply to new ships constructed on or after 1 July 1999, the Committee instructed the DE and the Sub-Committee to reconsider, taking into account the draft MSC circular contained in DE 40/12, annex 7 and relevant comments in MSC 68/9/1, the implications of applying regulation III/28.2 to non ro-ro passenger ships and advise as appropriate.

9.32 Norway and the ICCL (COMSAR 3/9/13) submitted the conclusion of a Formal Safety Assessment carried out by them which supports their proposal to amend the new SOLAS regulation III/28 to require ro-ro passenger ships of 130 m in length and upwards, constructed on or after 1 July 1999 to be provided with a helicopter landing area and require passenger ships to be provided with a helicopter pick-up area only.

9.33 The delegation of Japan expressed the view that amending the regulation so soon after its entry into force would undermine the credibility of the SOLAS Convention.

9.34 The Sub-Committee did not agree with the proposal by Norway and ICCL and considered that the operational SAR case for having a helicopter landing area on all passenger ships (in accordance with SOLAS regulation III/28) remains convincing.

9.35 The submissions by Norway and ICCL, referred to in paragraph 9.31, were made in response to the instructions by MSC 68 to the Sub-Committee to reconsider the application of the new SOLAS requirements on helicopter landing areas with respect to non ro-ro passenger ships. These submissions include the results and conclusions of a comprehensive FSA study on this subject, having been conducted fully in accordance with the IMO interim guidelines on FSA, given in MSC/Circ.829. In the opinion of Norway these submissions merit more careful consideration than they received in the SAR Working Group. In view of this Norway considers that the results and conclusions of this study needs further consideration by an appropriate IMO body, prior to MSC making a decision on this issue.

9.36 The delegation of Liberia reserved its position on the decision taken by the Sub-Committee with respect to the requirement for helicopter landing area on non ro-ro passenger ships (SOLAS regulation III/28.2). The issue was not discussed in the Plenary of the meeting and therefore the recommendation of the SAR Working Group is biased and without justification as to what operational SAR case has been impaired in the past and foreseeable for which a helicopter landing area on non ro-ro passengers ships is imperative.

9.37 The delegation of Cyprus stated that it could not concur with the outcome of the SAR Working Group because in its opinion the submissions on this matter had not been examined in a proper way and the matter should be re-examined most probably by the Joint Working Group on FSA.

9.38 The Secretariat was instructed to convey the outcome of this discussion to the DE Sub-Committee. The Committee was invited to note the outcome of the discussion.

#### **Other matters**

9.39 The Sub-Committee noted (COMSAR 3/2/1, paragraph 1.2) that the NAV Sub-Committee concurred with the amendments to paragraphs 1 and 2 of the draft revised chapter V of the 1974 SOLAS Convention proposed by the Sub-Committee at its second session and noting that MSC 68 had authorized the Sub-Committee on a priority basis to develop guidelines for co-operation between passenger ships and SAR services the NAV Sub-Committee had included a footnote to paragraph 3 to this effect.

9.40 The NAV Sub-Committee also concurred with the amendment to regulation 8 proposed by the Sub-Committee but did not agree, for the time being, to transfer regulation 30 to become a new regulation 8(bis) as this in its opinion is a ship related requirement and would depend upon the format of the draft revised chapter V agreed at NAV 44.

9.41 The Sub-Committee noted that the Committee, at its sixty-eighth session (MSC 68/23, paragraph 8.32), approved a draft revised text of the annex to the 1979 SAR Convention, prepared by the Sub-Committee, and requested the Secretary-General to circulate the amendments so proposed, in accordance with article III(2)(a) of the Convention, with a view to adoption by MSC 69. In accordance with the instruction of the Committee the Sub-Committee prepared a draft MSC resolution on Adoption of the proposed amendments to the SAR Convention, given in annex 20. In accordance with the Committee's further instructions the Sub-Committee considered comments and proposals by Member Governments with respect to the proposed text of the revised SAR Convention and approved the amendments given in annex 20 which the Committee was invited to consider when adopting the amendments to the SAR Convention including the modifications in annex 21.

9.42 The delegation of Japan, noting that one of the purposes of the review of the Convention was supposed to be to obtain broad acceptance from non-Parties, expressed concern that there were still some requirements which even some of the present Parties may have some difficulties in implementing. In its view, such requirements might have been drafted not taking into consideration such Governments' legal and administrative practice.

The delegation of Japan, believing that the draft amendments should be reviewed to reflect the views of Member States as broadly as possible, appealed to Member Governments to carefully study the proposed amendments to the SAR Convention circulated by Circular letter No. 1993, together with the modifications thereto agreed by the Sub-Committee at this session (annex 21), in particular the legal and administrative implications of the amendments, and submit their comments and proposals in time for consideration by MSC 69.

9.43 The delegation of Greece referred to the procedure followed by the Sub-Committee to discuss proposals for amendments to the SAR Convention and Joint IMO/ICAO SAR Manual without any documentation. In the view of the delegation of Greece this was against Rule 32 of the Committee's Rules of Procedure, which specifies that proposals should be submitted in writing, and also violates the provisions of MSC/Circ.816 and MEPC/Circ.331. The delegation of Greece requested that these remarks be included in the Sub-Committee's report so that the Committee was given the opportunity to provide instructions and guidance for the future.

9.44 The delegations of Japan, Tunisia and Turkey did not agree with the aforementioned statement arguing that the discussion and its outcome were in line with the procedures and the instructions given by the MSC (paragraph 8.32 of MSC 68/23) to COMSAR 3.

## **10 REVISION OF THE HIGH SPEED CRAFT (HSC) CODE**

10.1 The Sub-Committee recalled that MSC 66, having considered documents MSC 66/2/2/Add.1 (Panel of Experts) (paragraphs 4.1 to 4.9), MSC 66/21/5 (Denmark, Finland, Norway, Sweden) and MSC 66/21/8 (New Zealand), had 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 an item requiring 3 sessions for completion.

10.2 The Sub-Committee noted that, having considered the report of the Working Group (DE 40/WP.8), DE 40 had noted the list of items to be considered by other sub-committees and the general comments made by the Working Group on proposals pertaining to the work of the SLF, FP, NAV and STW Sub-Committees as contained in annex 11 to DE 40/12.

10.3 The Sub-Committee also noted that MSC 68 (MSC 68/2, paragraph 22.2), recalling that the Sub-Committee in co-operation with the FP, DE, NAV and SLF Sub-Committees, should revise the HSC Code, included an item on "Revision of the HSC Code" in the provisional agenda for COMSAR 3.

10.4 The Sub-Committee, noting that no documents on the matter have been submitted to this session for consideration and 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.

10.5 The Sub-Committee instructed the Secretariat to prepare the above agreed amendments to chapter 14 of the HSC Code for submission to DE 41.

## 11 WORK PROGRAMME AND AGENDA FOR COMSAR 4

11.1 The Sub-Committee noted that MSC 68 (MSC 68/23, paragraph 19.9) had approved a revised text of the Guidelines on the organization and method of work of the committees and their subsidiary bodies (MSC/Circ.816), which included the Sub-Committee's agenda management procedure and some modifications relating to the submission of documents, i.e.:

- .1 documents commenting on basic documents, containing four pages or less, should be processed if received by the Secretariat not later than 6 weeks before the opening of any session of the Sub-Committee; and
- .2 documents relating to work programme items not selected for the provisional agenda will be issued as information documents under the agenda item "Any other business".

11.2 The Sub-Committee also noted that MSC 68 (MSC 68/23, paragraphs 20.4.1 and 20.38) had included in the Sub-Committee's work programme the following new items:

- L.3 Development of a code on polar navigation co-ordinated by DE, with two sessions needed for completion; and
- L.4 Co-operation between passenger ships and SAR services, with 2 sessions needed for completion.

11.3 With regard to the work programme item on "Development of a code on polar navigation", the Sub-Committee further noted that MSC 68 (MSC 68/23, paragraph 20.4.2) had decided that this item should be included in the provisional agenda of the first session following the preparation of the draft Polar Code by the DE Sub-Committee and that it was envisaged that DE 41 would consider the draft Code (DE 41/10) with a view to determining the parts of the draft Code which would be referred to the relevant sub-committees for detailed consideration at their next sessions.

11.4 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 3/WP.5) based on that approved by MSC 68 (COMSAR 3/2, annex 1) and prepared a revised work programme and provisional agenda for COMSAR 4 as set out, in annex 22, 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 - Clarification of SOLAS GMDSS provisions;
  - .1.2 item H.2 - Future implementation and the use of the GMDSS by non-SOLAS ships;
  - .1.3 item H.3 - Performance standards for shipborne radio equipment and review of GMDSS equipment performance;
  - .1.4 item H.6.1 - Ro-ro ferry safety - co-ordination of the MERSAR manual and the Guide to Helicopter/Ship Operations;
  - .1.5 item H.8 - Review of resolution A.764(18) on Establishment, updating and retrieval of the information contained in the registration databases of satellite EPIRBs; and

- .1.6 item L.3 - Co-operation between passenger ships and SAR services;
- .2 include the following new item in the work programme:
  - .2.1 item L.4 - Development of criteria for general communications;
- .3 extend the target completion date of the following work programme items:
  - .3.1 item H.6.2 - Low-powered radio homing devices for liferafts - 1999;
- .4 change the number of sessions needed for completion of the following work programme item:
  - .4.1 item H.7 - Review of the Joint IMO/IHO/WMO MSI Manual - 1 session;
- .5 replace the number of sessions needed for completion by a target completion date, for the following work programme items:
  - .5.1 item H.1.2 - 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;
  - .5.2 item L.2 - Development of code on polar navigation - 2000.

#### **Arrangements for the next session**

11.5 The Sub-Committee agreed to establish, at its next session, working groups on the subjects:

- .1 Communications; and
- .2 SAR.

A third working group may be established as need arises.

11.6 The Sub-Committee recalled its decision to establish an intersessional correspondence group on the consideration of the outcome of WRC-97 (paragraph 6.19).

#### **Date of the next session**

11.7 The Sub-Committee noted that its fourth session had been tentatively scheduled for the period 12 to 16 July 1999.

## **12 ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 1999**

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 its Chairman and Mr. U. Hallberg (Sweden) as its Vice-Chairman for 1999.

## **13 ANY OTHER BUSINESS**

### **Preliminary information on casualties from rescue co-ordination centres**

13.1 The Sub-Committee noted that FSI 5 (FSI 5/16, paragraph 10.34) had agreed that preliminary information on casualties could be provided to IMO either directly from RCCs or through the maritime administrations in standard "SITREP" form, no special reporting form being required. In this respect, FSI 5 invited delegations willing to provide IMO with such information to identify themselves and agreed that a circular letter be issued inviting Members to provide IMO with such information according to the most appropriate channel. FSI 5 had also agreed that the above information be conveyed to the COMSAR Sub-Committee. Australia, Sweden and Hong Kong offered to supply preliminary information on casualties to IMO.

13.2 The Sub-Committee also noted that MSC 68 had issued MSC/Circ.802 on Provision of preliminary information on serious and very serious casualties by rescue co-ordination centres.

13.3 The Sub-Committee was informed that a few preliminary reports had been received by the Secretariat in response to MSC/Circ.802 and that COMSAR 4 would be provided with further information on this matter.

13.4 The Sub-Committee urged Member Governments to provide information in response to MSC/Circ.802, as appropriate.

### **Expression of appreciation**

13.5 The Sub-Committee expressed appreciation to the head of the delegation of the Netherlands, Mr. G. H. van der Ent, who would retire in the near future and was attending the Sub-Committee for the last time. The Sub-Committee wished Mr. van der Ent a long and happy retirement.

## **14 ACTION REQUESTED OF THE COMMITTEE**

14.1 The Sub-Committee noted that, due to the close proximity between COMSAR 3 and MSC 69 and in accordance with the provisions of paragraph 44 of the revised Guidelines on the organization and method of work, the Committee should consider, at its sixty-ninth session, only urgent matters emanating from COMSAR 3, the MSC 68 had agreed that the following issues would be urgent matters for consideration by MSC 69:

- .1 clarification of SOLAS GMDSS provisions;
- .2 implementation and use of the GMDSS by non-SOLAS ships;
- .3 ITU maritime radiocommunication matters;
- .4 restructuring of Inmarsat; and
- .5 SAR matters.

14.2 Taking into account the above instruction, the Committee, at its sixty-ninth session is invited to:

- .1 consider the proposed draft MSC resolution on Maintenance of a continuous listening watch on VHF channel 16 by ships after 1 February 1999, with a view to adoption (paragraph 3.12 and annex 2);

- .2 approve the draft MSC circular on Measures to reduce the number of false alerts (paragraph 3.19 and annex 3);
- .3 endorse the Sub-Committee's action in issuing the following circulars:
  - .1 COMSAR/Circ.13 on Shore-to-ship communications during distress situations (paragraph 3.20);
  - .2 COMSAR/Circ.14 on List of NAVAREA Co-ordinators (paragraph 3.48);
  - .3 COMSAR/Circ.15 on the Revised Joint IMO/IHO/WMO Manual on Maritime Safety Information (MSI) (paragraph 3.50);
  - .4 COMSAR/Circ.16 on Guidelines on the configuration of the reserve source or sources of energy used to supply radio installations on GMDSS ships (paragraph 4.11);
  - .5 COMSAR/Circ.17 on Recommendation on the use of GMDSS equipment for non-safety communications (paragraph 8.12);
  - .6 COMSAR/Circ.18 on Minimum communication needs of maritime rescue co-ordination centres (MRCC) (paragraph 9.15); and
  - .7 COMSAR/Circ.19 on How an authorized MRCC can initiate shore-to-ship communications via Inmarsat-A, Inmarsat-B or Inmarsat-C systems using the distress priority (Priority 3) (paragraph 9.29.6);
- .4 endorse the Sub-Committee's action in instructing the Secretariat to submit a liaison statement to the ITU-R Working Party 8B (paragraphs 3.36, 3.37 and 6.6 and annex 5);
- .5 note that all NAVAREAs/METAREAs will be covered by SafetyNET broadcasts by June 1998 (paragraph 3.47);
- .6 approve the draft revised MSC circular on Clarification of certain requirements in IMO performance standards for GMDSS equipment (paragraph 4.16 and annex 9);
- .7 request the FSI Sub-Committee to consider the proposed draft amendments to resolution A.746(18) and report to MSC 70 accordingly (paragraph 4.20 and annex 11);
- .8 approve the 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, for submission to the 1998 ITU Plenipotentiary Conference (PP-98) (paragraph 6.16 and annex 12);
- .9 endorse the Sub-Committee's action in establishing an intersessional correspondence group to consider in detail the annexes to COMSAR 3/6 (Outcome of ITU WRC-97), for consideration by COMSAR 4 (paragraph 6.19);
- .10 note the Sub-Committee's action in developing the IMO position on Inmarsat's restructuring proposals, for submission to the April 1998 Inmarsat Assembly (paragraph 7.15 and annex 14);

- .11 endorse the Sub-Committee's action in requesting the ITU to develop emission standards such that emissions in the 406-406.1 MHz band are consistent with, and do not exceed, the requirements set forth in ITU-R SM.1051 (paragraph 8.5);
- .12 approve the draft MSC circular on Recommendation on prevention of harmful interference to COSPAS-SARSAT 406 MHz EPIRBs (paragraph 8.6 and annex 15);
- .13 endorse the Sub-Committee's action in instructing the Secretariat to bring the draft MSC circular referred to in .12 above (annex 14) to the attention of the Director of the ITU Radiocommunication Bureau (paragraph 8.6);
- .14 approve the draft IAMSAR Manual (COMSAR 3/9/6 and addenda), as amended by the Sub-Committee (paragraph 9.3 and annex 16);
- .15 approve the sixth meeting of the Joint ICAO/IMO Working Group on Harmonization of aeronautical and maritime SAR to tentatively take place in Victoria, British Columbia, Canada in October 1998 (paragraph 9.8);
- .16 authorize COMSAR 4 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 (paragraph 9.11);
- .17 endorse the Sub-Committee's action in issuing SAR.7/Circ.1998 on the List of IMO documents and publications which should be available for use by maritime rescue co-ordination centres (paragraph 9.16);
- .18 approve the draft MSC circular on Guidelines for preparing plans for co-operation between passenger ships and SAR services in accordance with SOLAS regulation V/15(c) (paragraph 9.24 and annex 18);
- .19 endorse the Sub-Committee's action in instructing the Secretariat to bring the draft MSC circular on Alerting of search and rescue authorities to the attention of NAV 44 (paragraph 9.28 and annex 19);
- .20 instruct 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 (paragraph 9.29.2);
- .21 note the outcome of the Sub-Committee's consideration of the operational SAR case for having a helicopter landing area on all passenger ships (paragraph 9.33);
- .22 consider the proposed draft MSC resolution on Adoption of the proposed draft amendments to the 1979 SAR Convention, with a view to adoption (paragraph 9.40 and annex 20); and
- .23 consider the proposed modifications to the proposed draft amendments to the 1979 SAR Convention, with a view to adoption (under agenda item 3) (paragraph 9.40 and annex 21).

14.3 The Committee, at its seventieth session, is invited to:

- .1 approve the draft Assembly resolution on Provision of mobile satellite communications for the GMDSS for submission to the twenty-first Assembly with a view to adoption (paragraph 3.30 and annex 4);
- .2 approve the draft revised annex to resolution A.764(18) for submission to the twenty-first Assembly with a view to adoption (paragraph 3.53 and annex 7);
- .3 consider draft resolution MSC[..](70) on Performance standards for on-scene (aeronautical) two-way VHF radiotelephone apparatus with a view to adoption (paragraph 4.6 and annex 8);
- .4 approve the draft MSC circular on Guidelines on annual testing of 406 MHz EPIRBs (paragraph 4.20 and annex 10);
- .5 invite the Secretary-General to convey to the Secretary-General of ICAO the decision that satellite processing of 121.5 MHz should be phased-out and that a plan for such phasing-out should be developed by COSPAS-SARSAT, giving the approximate period of time needed (paragraph 7.4);
- .6 endorse the Sub-Committee's action in instructing the Secretariat to inform the COSPAS-SARSAT Council of the decision given in .4 (paragraph 7.4);
- .7 endorse the Sub-Committee's action in instructing the Secretariat to bring to the attention of COSPAS-SARSAT that the 406 MHz distress alerting system, in particular registration and coding of 406 MHz EPIRBs, should be improved (paragraph 7.5);
- .8 approve the draft MSC circular on Maritime safety and Inmarsat ship earth station barring procedures (paragraph 7.9 and annex 13);
- .9 endorse the Sub-Committee's action in instructing the Secretariat to invite IEC to consider to extend the upper limit for radiated emissions to at least 2 GHz in relevant EMC standards (paragraph 8.10);
- .10 agree that future circulars on training facilities world-wide should include SAR training facilities available both for aeronautical and maritime purposes;
- .11 approve the draft MSC circular on Alerting of search and rescue authorities, taking into account any comments or proposals by NAV 44 (paragraph 9.28 and annex 19); and
- .12 approve the report in general.

14.4 In reviewing the work programme of the Sub-Committee, the Committee is invited to consider the revised work programme suggested by the Sub-Committee in annex 21 and, in particular, to:

- .1 delete the following items as work on them has been completed:
  - .1.1 Item H.1.1 - Clarification of SOLAS GMDSS provisions;
  - .1.2 Item H.2 - Future implementation and the use of the GMDSS by non-SOLAS ships;

- .1.3 Item H.3 - Performance standards for shipborne radio equipment and review of GMDSS equipment performance;
- .1.4 Item H.6.1 - Ro-ro ferry safety - co-ordination of the MERSAR manual and the Guide to Helicopter/Ship Operations;
- .1.5 Item H.8 - Review of resolution A.764(18) on Establishment, updating and retrieval of the information contained in the registration databases of satellite EPIRBs; and
- .1.6 Item L.3 - Co-operation between passenger ships and SAR services;
- .2 include the following new item in the work programme:
  - .2.1 Item L.4 - Development of criteria for general communications;
- .3 extend the target completion date of the following item to 1999:
  - .3.1 Item H.6.2 - Low-powered radio homing devices for liferafts;
- .4 amend the number of sessions needed for completion of the following item:
  - .4.1 Item H.7 - Review of the Joint IMO/IHO/WMO Manual to 1 session;
- .5 replace the number of sessions needed for completion by a target completion date for the following items:
  - .5.1 Item H.1.2 - 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 to 1999;
  - .5.2 Item L.2 - Development of Code on polar navigation to 2000; and
- .6 renumber the items accordingly.

14.5 The Committee is also invited to approve the draft provisional agenda for the fourth session of the Sub-Committee (annex 21), which has been prepared in accordance with the agenda management procedure.

(The annexes will be issued as an addendum to this document)

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