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9 December 2008

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

1 The Maritime Safety Committee (MSC), at its eighty-fifth session (26 November to 5 December 2008), having been informed that the International Civil Aviation Organization (ICAO) had approved the amendments to the IAMSAR Manual prepared by the Joint ICAO/IMO Working Group on Harmonization of Aeronautical and Maritime Search and Rescue, and that they had been endorsed by the Sub-Committee on Radiocommunications and Search and Rescue (COMSAR) at its twelfth session (7 to 11 April 2008), adopted the annexed amendments in accordance with the procedure laid down in resolution A.894(21).

2 The Committee decided that the amendments should enter into force on 1 June 2009.

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## ANNEX

## SECTION 1

## AMENDMENTS TO IAMSAR MANUAL – VOLUME I

**1 Abbreviations and Acronyms**

- Add the following text on page viii:

“**TMAS**... Telemedical Assistance Service”

**2 Glossary**

- Add the following text on page xi:

“**Telemedical Assistance Service (TMAS)** A medical service permanently staffed by doctors qualified in conducting remote consultations and well versed in the particular nature of treatment on board ship.”

**3 Chapter 1**

- Replace the existing paragraph 1.4.1 with the following:

“1.4.1 Any SAR system should be structured to provide all SAR services:

- Receive, acknowledge, and relay notifications of distress from alerting posts;
- Coordinate search response;
- Coordinate rescue response and delivery of survivors to a place of safety; and
- Provide medical advice, initial medical assistance or medical evacuation.”

- Delete paragraph 1.4.3.

**4 Chapter 2**

- Add the following text in paragraph 2.1.2 after “– SAR facilities, including SRUs with specialized equipment and trained personnel, as well as other resources which can be used to conduct SAR operations;”:

“- medical advice and medical assistance and evacuation services;”

- Add the following text in paragraph 2.3.7 to **Required** column as the last two items:

“ability to coordinate provision of medical advice  
ability to coordinate provision of medical assistance or evacuation”

- Add a new paragraph 2.5.6:

Add new heading **Medical Advice and Medical Assistance**

“2.5.6 The International Convention on Maritime Search and Rescue provides for parties to the Convention to provide, on request from Masters of ships, medical advice and initial medical assistance and, as required, to make arrangements for medical evacuations for patients. An RCC should establish a relationship with a maritime Telemedical Assistance Service (TMAS) to ensure that medical advice can be provided to Masters at sea within its SRR 24 hours a day. The RCC should have the means to coordinate medical assistance and evacuation in consultation with a TMAS. It is desirable to have a doctor or paramedic who has been briefed by the TMAS on board the evacuation craft. The RCC may establish contractual arrangements with a suitably recognized medical authority to provide this Telemedical Assistance Service. A sample text of a contractual arrangement between an RCC and a TMAS is at Appendix N.”

- Amend in paragraph 2.7.1 “Medical assistance” to read “Medical facilities”

## 5 Chapter 4

- Replace the existing paragraph 4.2.3 with the following:

“4.2.3 Publications which can be used to assist in overcoming language barriers and communication difficulties between vessel and aircraft crews, survivors and SAR personnel include the International Code of Signals, the IMO Standard Marine Communication Phrases (Assembly resolution A.918(22)), Annex 10 to the Convention on International Civil Aviation, and PANS ATM (ICAO Document 4444). These documents should be included in RCC libraries and be understood by the staff who should be able to comprehend and transmit messages using these phrases. Ships should carry these documents. SRUs should carry the International Code of Signals.”

- Add at the end of paragraph 4.7.1 the following:

“RCCs should be able to communicate 24 hours a day with a designated Telemedical Assistance Service (TMAS) to coordinate the provision of medical advice and medical assistance and to arrange for medical evacuations from vessels at sea.”

## 6 Chapter 6

- Replace existing paragraph 6.4.3 from the title “Using SAR Committees to Improve SAR Services” to “...by efforts such as the following:” with the following:

“6.4.3 An effective process for SAR coordination is the establishment and use of SAR Coordinating Committees (SCCs) comprising SAR system stakeholders. These can be established at SAR agency, national, or regional level and, ideally, at all three levels. SAR agency SCCs should deal with local operational SAR issues and have the ability to refer matters higher if

required. Committees established at a national level may consider strategic SAR policy matters and should have the ability to take matters to their respective governments for consideration. Regional SCCs should be able to refer SAR matters of a regional nature to their incorporated national committees for consideration. The establishment of these SAR committees can improve and support the SAR system in a number of ways, including:

- develop and recommend national strategic policy to their respective governments;”

## 7 Appendix C

- Amend C.1.1 (g) to read: *Health Departments*. Hospital and first aid facilities, ambulances and medical stations in remote areas, Telemedical Assistance Services (TMAS).

## 8 Appendix G

- replace existing paragraph G.7.1 in section G.7 with:  
“G 7.1 The primary systems now used for SOLAS compliance are Cospas-Sarsat and Inmarsat.”
- add new paragraph G.7.5 after G 7.4, as follows:  
“G.7.5 New satellite systems are emerging which can relay distress alerts. Many vessels are equipped with systems that provide comprehensive online connections to Internet, voice, facsimile and data communications for such functions as online E-mail, Short Message System (SMS), video conferencing and medical examination and reporting. These commercial satellite systems are not primarily designed for alerting but may be used for subsequent SAR communications between ships or aircraft and RCCs or RSCs, or as a link to the On Scene Coordinator.”

## 9 Appendix H

- Replace the existing text with the following:

### “National Self-Assessment on Search and Rescue

#### Chapter 1 – GENERAL SYSTEM CONCEPT

1. Is the Government party to the following Conventions:
  - (i) Convention on International Civil Aviation, 1944?
  - (ii) International Convention on Maritime Search and Rescue, 1979?
  - (iii) International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended?
  - (iv) Convention on the High Seas, 1958?
  - (v) United Nations Convention on the Law of the Sea (UNCLOS), 1982?

2. Has the State established an entity, which provides on a 24-hour basis, search and rescue (SAR) services within its territories to ensure that assistance is rendered to persons in distress?
  - (a) If no, has the State arranged with another State or group of States to provide SAR services?
3. Which government agencies have authority and responsibility for coordination of aeronautical SAR?
4. Where is this authority and responsibility described (law, regulation, agreement, etc.)?
5. Is the same agency responsible for coordinating aeronautical SAR over both land and sea?
6. Which government agencies have authority and responsibility for coordination of maritime SAR?
7. Where is this authority and responsibility described? (law, regulation, agreement, etc.)?
8. Has the State established a joint RCC to coordinate aeronautical and maritime SAR operations?
9. Does the State ensure the closest practicable coordination between the centres where separate aeronautical and maritime rescue coordination centres (RCCs) serve the same area?
10. Has the State ensured the closest practicable coordination between the relevant aeronautical and maritime authorities to provide for the most effective and efficient SAR services?
11. Does the State have a national SAR Plan, which describes the roles of all government and non-government organizations which have resources that can support SAR?
12. Have there been any problems encountered when working with RCCs outside your region?

If so, have steps been taken to solve these problems?
13. Have ICAO and IMO been provided with up-to-date information on your RCCs, RSCs, SAR resources and areas of responsibility?

## Chapter 2 – SYSTEM COMPONENTS

- 14.(i) Does your State have both aeronautical and maritime SAR regions (SRRs) or SAR subregions (SRSs) established?
- 14.(ii) Do the geographical limits of your State's aeronautical and maritime SRRs or SRSs coincide?
- 14.(iii) If your State has an aeronautical Flight Information Region (FIR), does your aeronautical SRR have the same limits?
15. Have the aeronautical SRR or SRS limits been formally agreed to by neighbouring countries or jurisdictions?
16. Have the maritime SRR or SRS limits been formally agreed to by neighbouring countries or jurisdictions?
17. Are there any gaps, overlaps, or size or shape problems with national SRRs or SRSs?
18. Has the State established a RCC in each search and rescue region (SRR)?
19. Do your RCCs regularly work with other RCCs outside your region?
20. Do provisions exist to keep maritime SAR authorities informed of aeronautical distress situations, and to coordinate SAR responsibility to them when an aircraft has an actual or potential ditching at sea?
21. Has the State made arrangements for the use of SAR units and other available facilities to assist any aircraft or vessels or their occupants that are, or appear to be, in a state of emergency?
22. Are RCC(s) or RSC(s) assigned to perform other tasks which might detract from their ability to handle SAR responsibilities?
23. Are emergency plans and recovery resources in place at all airports located near water for rescue of survivors in the water?
24. Do facilities that serve as alerting posts for receiving aeronautical and maritime distress information operate on a 24-hour basis?
25. Does each RCC and RSC have full information about the capabilities (range, number of persons they could rescue, alert status, launch authority point of contact, etc.) for all the primary rescue units in their area of responsibility?
26. Does each RCC or RSC have an operations manual which provides procedures and guidance material for handling all foreseeable SAR situations?

27. Do your RCC(s) and RSC(s) use international systems that assist SAR, e.g., AMVER, Cospas-Sarsat, computer assisted search planning?
28. Can your RCC(s) monitor progress of a SAR response and adjust search planning if necessary?
29. Can the RCC(s) or RSC(s) order the deployment of all primary SAR units?
  - (a) If not, does the coordination for use of SAR resources take place in a timely manner?
30. To what extent have voluntary SAR resources, including privately-owned aircraft and boats, fishing vessels, industry-owned helicopters and boats and professional organizations been organized?
31. Do the RCCs and RSCs operation manuals include guidance on use of voluntary SAR resources?
32. Do SAR units in your State have special equipment for medical evacuations?

### **Chapter 3 – TRAINING, QUALIFICATION, CERTIFICATION AND EXERCISES**

33. Has the State ensured that each RCC and RSC has a sufficient workforce skilled in SAR coordination and operational functions?
34. Have written job descriptions been developed for all staff?
35. Has the State ensured that each RCC and, if appropriate, RSC established a training policy and programme for its staff?
36. Is each RCC or RSC staff fully trained to do the following:
  - (i) Recognize the stages and phases of a SAR mission?
  - (ii) Determine search datum, search areas, and probability of success?
  - (iii) Account for aerospace and ocean drift?
  - (iv) Develop search action plans and rescue action plans?
  - (v) Allocate resources?
  - (vi) Arrange air escorts, ships and other assistance for aircraft situations involving potential ditching?
  - (vii) Carry out international SAR obligations?



37. Does the State provide for regular training of its SAR personnel and arrange appropriate SAR exercises?
38. Do crews of primary rescue units participate in regular SAR-related training or exercises?
39. Is there a formal planning and evaluation process for these exercises?
40. Do your RCCs or RSCs carry out exercises involving other RCCs and RSCs and rescue units on a regular basis?
41. Does each element in the SAR organization regularly evaluate its staff training status and take steps to correct all identified training needs?
42. Are training records or files maintained for the RCC staff?
43. Are complete records (sufficient to reconstruct the incident) maintained of all SAR events?
44. Are SAR case records used to analyse and improve the SAR system?
45. Do SAR case records satisfy legal requirements?

#### **Chapter 4 – COMMUNICATIONS**

46. Are there rapid, reliable means for communications between RCCs and between RCCs and RSCs?
47. Does your national landline communications system provide full coverage of your State and rapid, reliable service?
48. Do your RCC(s) and RSC(s) have reliable radio communications capabilities covering their entire area(s) of responsibility for working with ships, aircraft and SAR units?
49. Do your RCC(s) or RSC(s) use satellite communications?
50. Do the RCC(s) have continuous and capable English language capabilities?
51. Are RCC personnel involved in the conduct of radiotelephony communications proficient in the use of the English language?
52. Which categories of aircraft and ships registered in your State are required to carry 121.5 MHz radio distress beacons, 406 MHz beacons, or EPIRBs?
53. Are 406 MHz beacon registrations maintained in a database?
54. Is the database maintained for ELT, EPIRB and PLB 406 MHz distress beacons?

55. Is that database available on a 24-hour basis to SAR authorities?
56. Has the State designated an H24 SAR point of contact (SPOC) for the receipt of Cospas-Sarsat distress data?
57. Has the State made arrangements for further distribution from the SPOC to the proper authorities of the ELT, EPIRB and personal locator beacon (PLB) distress beacon alerts?
58. Is the Aeronautical Fixed Telecommunication Network (AFTN) or Aeronautical Fixed Network (AFN) co-located or readily accessible to your RCC(s) and RSC(s)?
59. Is your State implementing the provisions of the IMO Global Maritime Distress and Safety System (GMDSS)?
60. Do the RCC and RSC operations manuals include procedures for establishing communications with civil ships and aircraft?
61. Do ships and aircraft that are used for SAR have communications and electronic direction-finding capabilities covering all frequencies likely to be used?
62. Do ships and aircraft that are used for SAR have accurate navigation systems?
63. What means are most often used to notify your RCC(s) or RSC(s) of a distress?
64. What means are used to alert and inform rescue units of a distress, and to direct them?
65. Do all SAR units have mutually compatible communications?
66. Is your State planning to change communications or direction-finding capabilities in any of the following areas?
  - (i) Medium frequency (MF)
  - (ii) High frequency (HF)
  - (iii) VHF-FM
  - (iv) VHF-AM
  - (v) UHF
  - (vi) Telephone
  - (vii) Telex
  - (viii) Satellite communications
67. Do your RCC(s) and RSC(s) have procedures for providing timely and competent medical assistance and advice to ships?

## Chapter 5 – SYSTEM MANAGEMENT

68. Which national agencies or organizations are responsible for:
- (i) Aircraft registration and safety?
  - (ii) Air traffic safety?
  - (iii) Investigation of aviation accidents and incidents?
  - (iv) Maritime vessel registration and safety?
  - (v) Investigation of maritime accidents and incidents?
  - (vi) Regulation and enforcement of radio frequency usage?
  - (vii) Serving as the national SAR point of contact for receipt of Cospas-Sarsat alert data?
  - (viii) Personal Locator Beacon usage?
  - (ix) SAR on the ground?
  - (x) Managing national civil emergencies?
  - (xi) National defense?
  - (xii) Providing paid SAR resources?
  - (xiii) Providing volunteer SAR resources?
  - (xiv) State law enforcement?
  - (xv) Emergency medical advice and care?
  - (xvi) Medical evacuations?
  - (xvii) Supporting participation by ships in ship reporting systems, such as the Automated Mutual-assistance Vessel Rescue (AMVER) system?
69. Is there a formal national SAR Coordinating Committee to coordinate the actions of the organizations indicated in answers to question 70?
70. Has the State designated as SAR units elements of public or private services suitably located and equipped for SAR operations?
71. Does the State coordinate its SAR organization with those of neighbouring States?
72. Has each RCC in the State prepared detailed plans of operation for the conduct of SAR operations within its SRR?
73. Does your State have formal SAR agreements for inter-agency coordination and for co-operation with neighbouring countries?
74. Do the RCC(s) and RSC(s) coordinate with hospitals to receive all personnel evacuated due to medical emergencies?
75. Have formal procedures been developed for providing medical assistance and advice and for making medical evacuation decisions?
76. Does your State maintain a statistical database on SAR events?

## **Chapter 6 – IMPROVING SERVICES**

77. Does the State permit, subject to such conditions as may be prescribed by its own authorities, entry into its territory of SAR units of other States for the purpose of searching for, and the rescue of, survivors of aviation and maritime incidents and accidents?
78. Does the State authorize its RCCs to provide, when requested, assistance to other RCCs, including assistance in the form of aircraft, vessels, or equipment?
79. Has the State arranged for all aircraft, vessels and local services and facilities which do not form part of the SAR organization to co-operate fully with the latter in SAR and to extend any possible assistance to the survivors of aviation and maritime accidents?
80. Does your State send delegates to participate directly in meetings of IMO and ICAO that deal with SAR issues?
81. How do your SAR managers stay informed on decisions, and outcomes of meetings conducted by ICAO and IMO?"

## **10 Appendix J**

- Add new paragraph (a) in “**2. OBJECTIVES**” as follows:
  - “a) Provide a standing national forum that can develop and recommend national strategic SAR policy for government consideration.”
- Then renumber subsequent subparagraphs.

## **11 Insert new Appendix N**

- Insert the following text:

### **Appendix N**

#### **“SAMPLE CONTRACT BETWEEN RCC AND TMAS FOR THE PROVISION OF MEDICAL ADVICE AND ASSISTANCE TO MASTERS OF SHIPS AT SEA**

### **1 Roles and functions of the Telemedical Assistance Service (TMAS) Provider and the Rescue Coordination Centre (RCC)**

#### **1.1 General**

- 1.1.1 The International Convention on Maritime Search and Rescue 1979 gives the ability for parties to the Convention to provide on request from Masters of ships, medical advice, initial medical assistance or arrange medical evacuations for patients.

- 1.1.2 The RCC is responsible for search and rescue services which include the organization of medical advice and assistance. The RCC has designated one or more providers of this service (*Organization*) at (*Location*) in one of the designated (*Country*) Telemedical Assistance Service (TMAS).
- 1.1.3 The procedures and practices defined in this document establish Procedures and Practices, including lines of responsibility for both the TMAS Provider and the Rescue Coordination Centre in the coordination and provision of medical advice and assistance to ships at sea and the provision of medical advice to the RCC in support of search and rescue.
- 1.1.4 Further guidance on Medical Assistance at Sea, Importance of the Role of Telemedical Assistance Services; and Medical Assistance at Sea and maritime radio communications can be found in IMO MSC/Circ.960.

## **1.2 Roles and responsibilities**

### **1.2.1 Masters of ships**

- 1.2.1.1 The Masters of ships are ultimately responsible for the health and safety of crew and passengers on board their ships.

### **1.2.2 Maritime Communications Station**

- 1.2.2.1 The maritime communications station is responsible for:

- a. responding to any request for medical advice or assistance;
- b. providing an effective communications interface between Masters of ships at sea and the TMAS; and
- c. in the event of a MEDEVAC being required, requesting and passing all necessary information to the RCC.

### **1.2.3 Telemedical Assistance Service (TMAS)**

- 1.2.3.1 The TMAS is responsible for the following functions:

- a. Be available 24 hours per day, 7 days a week to receive requests from vessels at sea and/or the RCC for the provision of medical advice;
- b. Making prompt medical assessments of remote patients and providing prompt advice to ships' Masters in relation to medical treatment to be administered to those patients, generally by non-medical personnel;
- c. Providing prompt medical specialist advice when required;
- d. Where it is essential for the safety of the patient, taking into account all circumstances, making recommendations to ship Masters and to the RCC for evacuation of patients to shore-based facilities or to another vessel;

- e. Advising the RCC of any special medical requirements or constraints that may affect the type and equipment fit of the proposed recovery platform for evacuation of patients to shore-based facilities or to another vessel;
- f. Providing briefing to the paramedic or doctor who may accompany the MEDEVAC vehicle, to provide continuity of medical attention and also consult on evacuation procedures and constraints;
- g. When a patient is to be evacuated to a shore-based medical facility or the Master of a ship has decided to divert to a port, consulting with the RCC and the evacuating craft and recommending a medical facility to which the patient should be evacuated. Make appropriate arrangements with the medical facility to receive the patient;
- h. Ensuring, through liaison as required, that the receiving hospital is briefed about the patient's condition and treatment;
- i. As necessary for the purpose of communicating with a ship's Master or crew, arranging access to interpreter services where possible. – Note that this interpreter service may be arranged by the RCC;
- j. Providing medical advice to the RCC with respect to the prospects for survival/injury of persons subject to search and rescue in both land and sea environments; and
- k. Providing statistical information, to the RCC, on an annual basis in relation to the services performed.

#### 1.2.4 Rescue Coordination Centre

##### 1.2.4.1 The RCC is responsible for the following functions:

- a. Ensuring that ships' Masters have the necessary information available to be able to contact the TMAS;
- b. Coordinating any MEDEVAC when requested, assisted by medical advice provided from the TMAS;
- c. Arranging of surface (water and land) or air assets necessary to conduct a MEDEVAC to achieve delivery to the medical facility recommended by the TMAS. As an integral part of the evacuation, the RCC will, where possible, organize to have paramedics on board the recovery platform;
- d. Where evacuation is required and requested, coordinating with the ships' Masters for meeting or receiving the rescue platform and patient transfer arrangements;
- e. Where the TMAS recommends the patient is landed urgently, and the Master requests assistance, the RCC will advise the ship's Master and the TMAS of suitable port(s) based on operational assessment only; and

- f. As necessary for the purpose of communicating with a ship's Master or crew, arranging access to interpreter services where possible.

## **2 Practices and Procedures**

### **2.1 General**

2.1.1 The TMAS can expect to receive requests for assistance from:

- a. any ships in surrounding waters; and
- b. Country-flag and foreign ships outside that country's designated Search and Rescue Region.

2.1.2 This section addresses procedures to be adopted in response to three main conditions:

- a. medical advice to ships;
- b. diversion of a ship to another port; and
- c. MEDEVAC.

2.1.3 When the TMAS receives a request for medical assistance it must:

- a. promptly undertake a remote medical assessment of the patient; and
- b. promptly provide appropriate medical advice to the ship's Master on the treatment to be administered (generally by non-medical personnel).

2.1.4 Where the condition of the patient is such as to warrant more urgent and specialized care, the TMAS may also decide to make a recommendation to a ship's Master that:

- a. the patient should be landed urgently/as soon as possible to enable more expert treatment of the patient; or
- b. the patient should be evacuated immediately/as soon as possible to a land-based medical facility.

### **2.2 Medical advice to ships**

2.2.1 On receipt of a request for medical advice from a ship's Master, the TMAS will consult with the ship's Master as necessary and provide the appropriate medical advice.

2.2.2 Requests for medical advice received directly by or on-passed to, the TMAS from ships do not require referring or reporting to the RCC unless evacuation is recommended.

2.2.3 In the event that the TMAS suspects that the medical problem may have border control implications:

a. **TMAS.** The TMAS must inform the RCC of the:

- .1 Name of the ship;
- .2 Name(s) of the affected person;
- .3 the medical condition; and
- .4 probable port of arrival.

b. **The RCC.** The RCC must inform the appropriate border control agencies.

### **2.3 Diversion of a ship to port**

2.3.1 In those cases where it is determined by the ship's Master, after medical consultation with the TMAS that diversion to a port other than the next port of call is or may be necessary:

2.3.2 The TMAS must inform the RCC that diversion is or may be undertaken.

2.3.3 The RCC must, on request from the Master of the ship, render necessary assistance to the Master of the ship. This may include advice as to available ports and advising the ship's agent, port, medical and border control authorities at the port of diversion.

### **2.4 MEDEVAC**

2.4.1 The decision to MEDEVAC a patient is a matter for the ship's Master to decide on the basis of medical advice that is provided by the TMAS. Consideration must be given to other factors, including the environmental conditions (weather, sea state, etc.) that may prevail at the time of possible extraction and the ship's geographical location. The availability and type of recovery platform(s) may also affect the strategy or decision to MEDEVAC. Accordingly, close and ongoing consultation may be required between the ship's Master, the ship's agent, the TMAS, the RCC, the operating agency/crew of the rescue platform and the receiving medical facility.

2.4.2 Medical evacuations are generally undertaken by helicopter, possibly supported by a fixed wing aircraft. The TMAS must take into account that such evacuations can be carried out only when the ship is within helicopter's flying range from land and only when a suitably equipped helicopter is available. It may be possible under conditions of extreme medical urgency for surface and air assets to be used (ship as a staging landing platform plus helicopter), however the availability of such assets cannot be assumed or guaranteed.

2.4.3 Where the ship's Master requires a MEDEVAC, and need of it is supported by the TMAS, the ship's Master may communicate with the RCC directly or through a Maritime Communications Station without further reference to the TMAS. In this event the Maritime Communications Station or the RCC will ascertain information which may include:



- .1 patient's name and nationality;
- .2 patient's condition;
- .3 Master's name and nationality;
- .4 vessel name, flag and IMO number;
- .5 call sign;
- .6 ship's position;
- .7 shipowner/operator and his country; and
- .8 nearest port and ETA.

2.4.4 The RCC must:

- a. Consult with the TMAS for medical advice that may affect:
  - (a) the type of rescue platform provided,
  - (b) any medical constraints or requirements that may affect the point and method of extraction,
  - (c) the recommended medical facility for delivery, and
  - (d) any other considerations that could affect the conduct of the MEDEVAC;
- b. Source and task the surface and/or air asset(s) to be used as a recovery platform;
- c. Advise the TMAS of the details of the recovery platform and the operating agency;
- d. Advise the ship's Master of arrangements for the MEDEVAC, including rendezvous and any pre-arrangements for the extraction;
- e. Advise the TMAS and the medical facility of the actual time of extraction and estimated time of delivery of the patient to the shore based medical facility;
- f. Facilitate the MEDEVAC as necessary and maintain a watch over the progress of the MEDEVAC until the patient is delivered to the medical facility; and
- g. Notify the TMAS and the maritime communications station of the outcome of the MEDEVAC on completion of the event.

2.4.5 The TMAS must:

- a. Provide the RCC with:
  - (a) medical advice on issues that may affect the type of rescue platform provided,

- (b) advice as to any medical constraints or requirements that may affect the point and method of extraction, and
  - (c) any other considerations that could affect the conduct of the MEDEVAC;
- b. If necessary advise on the most appropriate medical facility to which the MEDEVAC should deliver the patient and coordinate with the receiving medical facility for receipt of the patient;
  - c. Consult with the operating agency/recovery platform to advise on the patient's medical condition, any recommended constraints or requirements related to immediate treatment or processes of MEDEVAC and the proposed medical facility to receive the patient;
  - d. Continue to consult with the ship's Master regarding the patient's condition as necessary in the circumstances;
  - e. Advise the medical facility of the medical status of the patient at the commencement of the MEDEVAC; and
  - f. Inform the RCC of any circumstances that may cause a need for change in the recovery platform type or timing including where the MEDEVAC is no longer deemed necessary.

### **3 Communications arrangements**

#### **3.1 General**

3.1.1 The TMAS must maintain in operation at all times facilities for voice and data communications to enable communication with the RCC, ships at sea and rescue personnel. Those communications capabilities should include:

- a. Voice communication;
- b. Text messages;
- c. Facsimile; and
- d. Digital data transmission (photograph or electrocardiogram).

3.1.2 To support this communications capability, the TMAS must provide separate and dedicated phone and facsimile lines.

#### **3.2 Communication between the TMAS and ships at sea**

3.2.1 Ships seeking medical advice will normally be put in contact with one of the maritime communications stations. Calls will then either be transferred or relayed to the TMAS. Requests for advice may therefore come to the TMAS:

- a. directly from a ship via a transferred telephone call;
- b. via a maritime communications station which has received a request for assistance from a ship by:

- .1 Radiotelephony (RTF);
- .2 Radio telex;
- .3 Fax/phone;
- .4 Inmarsat;
- .5 E-mail; or
- .6 Via the RCC.

3.2.2 Requests for medical assistance passed to a maritime communications station will normally be relayed to the TMAS over the telephone and replies should be sent through the appropriate maritime communications station.

3.2.3 In some instances communications directly with a ship, for the provision of medical advice, may not be possible. In such circumstances, communications may need to be conducted through maritime communications stations.

### 3.2.4 Inmarsat Communications

3.2.4.1 The various Inmarsat systems offer two abridged codes (Special Access Codes – SAC) 32 and 38, which can be used for medical advice or medical assistance at sea through telephone, fax or telex using satellite communications.

- .1 **SAC 32** is used to obtain medical advice. The Land Earth Station will provide a direct link with the TMAC when this code is used.
- .2 **SAC 38** is used when the condition of an injured or sick person on board a ship justifies medical assistance (evacuation to shore or services of a doctor on board). This code allows the call to be routed to the associated RCC.

### 3.3 Communication between the TMAS and the RCC

3.3.1 Communications between the TMAS and the RCC must be conducted by telephone or facsimile or the most appropriate and reliable telecommunication system.

**TMAS contact details:** Telephone Medical line  
General line  
Facsimile  
(*Check with TMAS prior to transmission*)  
E-mail

**RCC contact details:** Telephone  
Alternate  
Facsimile  
E-mail

### 3.4 Communication between the State TMAS and a Remote TMAS

3.4.1 Given the international dimension of maritime navigation, a medical problem may occur on board a ship very far from its country of origin. In such a case the master, who is responsible for the care of those on board, normally calls his designated national TMAS, which can perform remote consultation in his language. Should

there be need, following the remote consultation, for an evacuation to the nearest shore, the master will contact the RCC responsible for SAR operations in the search and rescue region (SRR) concerned. In order to facilitate and enhance the planning of the medical aspects of the SAR operation involving medical assistance at sea, all available medical information collected by the TMAS that has carried out a remote consultation will be transferred to the TMAS attached to the responsible RCC. Everything must be done to avoid a second remote consultation by the second TMAS.

3.4.2 A common form for the exchange of medical information is available to facilitate the transfer of all available and relevant medical information between the two TMAS authorities. See attached MSC/Circ.1218.

3.4.3 On the basis of trans-national partnership agreements, the “medical information exchange form” is used for SAR operations involving medical assistance at sea, in the following manner:

- a. when, following a remote consultation, a TMAS has indicated its recommendation to carry out a medical evacuation, the physician will complete the “medical information exchange form”;
- b. once the RCC responsible for the SAR operation has been identified, the remote TMAS will transmit the form to the corresponding partner TMAS of the RCC concerned;
- c. the RCC will be advised appropriately by its designated national TMAS of the medical constraints affecting the SAR operation; and
- d. at the completion of the SAR operation, the operational TMAS will send any necessary information on medical follow-up to the TMAS that had performed the remote consultation.

### **3.5 Recording and reporting of communications**

3.5.1 Telemedical advice and assistance is subject to the confidentiality provision of the relevant Acts for the manner in which they are handled, stored and communicated.

3.5.2 In particular, telemedical advice must not be provided to third parties except for the delivery of the advice to:

- a. the target ship;
- b. the RCC; and
- c. paramedic organizations and medical institutions involved in the provision of the particular medical services to which the advice and assistance relates.

3.5.3 All TMAS communications must be identified by date and time and must be stored securely and so as to enable the records to be accessed promptly should they be required.

- 3.5.4 TMAS must fully document all communications including but not limited to:
- a. case notes;
  - b. time and date of contact and the name of the vessel;
  - c. the names of those with whom they deal (so far as a name can be ascertained); and
  - d. the means of communication (telephone, radio, fax, e-mail, etc., plus contact numbers).
- 3.5.5 The TMAS must make the records, with the exception of case notes, available to the RCC on request.”

## SECTION II

### AMENDMENTS TO THE IAMSAR MANUAL – VOLUME II

#### 1 Abbreviations and Acronyms

- Add the following text on page xiii:  
“TMAS... Telemedical Assistance Service”

#### 2 Glossary

- Add the following text on page xxiii:  
“**Telemedical Assistance Service (TMAS)** A medical service permanently staffed by doctors qualified in conducting remote consultations and well versed in the particular nature of treatment on board ship.”

#### 3 Chapter 1

- Replace in paragraph 1.4.2, second sentence “doctors outside the SAR organization” with “a Telemedical Assistance Service (TMAS)”.
- Replace in paragraph 1.4.2, fifth sentence, “medical advisory service” with “TMAS”.

#### 4 Chapter 2

- add new paragraph 2.7.7 after paragraph 2.7.6 as follows:  
“2.7.7 New satellite systems are emerging which can relay distress alerts. Many vessels are equipped with systems that provide comprehensive online such connections to Internet, voice, facsimile and data communications for functions as online E-mail, Short Message System (SMS), video conferencing

and medical examination and reporting. These commercial satellite systems are not primarily designed for alerting, but may be used for subsequent SAR communications between ships or aircraft and RCCs or RSCs, or as a link to the On Scene Coordinator.”

- Replace the existing paragraph 2.24.1 with the following:

“2.24.1 Publications which can be used to assist in overcoming language barriers and communication difficulties between vessel and aircraft crews, survivors and SAR personnel include the International Code of Signals, International Regulations for Preventing Collisions at Sea, the IMO Standard Marine Communication Phrases (SMCP) (Assembly resolution A.918(22)), Annex 10 to the Convention on International Civil Aviation and PANS-ATM (ICAO Document 4444). These documents should be included in RCC libraries and be understood by the staff who should be able to comprehend and transmit messages using these phrases. Ships should carry these documents. SRUs should carry the International Code of Signals. The Code of Standard Phrases for Use between (Maritime) RCCs and RSCs is provided in Appendix I.)”
- Replace the existing paragraph 2.24.6 with the following:

“2.24.6 With the decreasing use of Morse Code, the International Code of Signals and the IMO Standard Marine Communication Phrases (SMCP) (Assembly resolution A.918(22)) will become increasingly important. It may be of assistance to refer to these documents in international SAR agreements as provisions for use during operations, training and exercises when SAR facilities of more than one country are co-operating in response to a distress incident.”
- Replace in paragraph 2.27.22, first sentence, “arrangements with doctors outside the SAR organization” with: “a TMAS”.
- Replace in paragraph 2.27.23, second sentence, “medical advisory service” with “TMAS”.
- Add new paragraphs after paragraph 2.27.23 as follows:

“**2.27.24** Good communications are essential for an effective telemedical assistance service. Telemedical communications are considered to be safety or urgency communications and as such should have priority over routine traffic and normally be free of charge to the mariner.

**2.27.25** The ship’s captain, who is responsible for treatment on board, must be able to access the TMAS of his choice. Choice may be based on his nationality, the ship’s flag and, especially, the language spoken.

- 2.27.26** Recording of the date and time of all TMAS communications and archiving of secure tape will enable essential data to be preserved should they be required in the event of legal proceedings. All recorded information is subject to medical privacy in the same way as the content of a medical file.
- 2.27.27** Voice communication is the basis of telemedical advice. It allows free dialogue and contributes to the human relationship, which is crucial to any medical consultation. Text messages are a useful complement to the voice telemedical advice and add the reliability of writing. Facsimile allows the exchange of pictures or diagrams, which help to identify a symptom, describe a lesion or the method of treatment. Digital data transmissions (photographs or electrocardiogram) provide an objective and potentially crucial addition to descriptive and subjective clinical data.
- 2.27.28** Given the international dimension of maritime navigation, a medical problem may occur on board a ship far from its country of origin. In such a case, the master will normally call his national TMAS, which can perform a telemedical consultation in his language. Should there be a need, following the consultation, for an evacuation to the nearest shore, the master will normally contact the MRCC responsible for the search and rescue region involved.
- 2.27.29** In order to facilitate and enhance planning of the medical aspects of the evacuation, all available medical information collected by the first-contacted TMAS should be transferred to the TMAS attached to the responsible MRCC. This is to avoid any additional tele-consultation by the second TMAS. A “Medical Assistance at Sea, TMAS – TMAS Medical Information Exchange Form” can be used for this purpose. See Appendix R.
- 2.27.30** Communication between the ship and TMAS can be established via coast radio stations using VHF, MF or HF radio. Inmarsat satellite communications can be accessed by use of special access codes (SAC) 32 for medical advice and 38 for medical assistance or MEDEVAC. Inmarsat Land Earth Stations (LES) normally route SAC 32 direct to a TMAS and SAC 38 to the associated RCC. Inmarsat can support voice and telex (telex only for Inmarsat-C).”

## **5 Chapter 3**

- Add the following text in paragraph 3.6.1 after “....., such as when the distress is in another SRR.”:

“When an RCC or RSC receives information indicating a distress outside of its SRR, it should immediately notify the appropriate RCC or RSC and take all necessary action to coordinate the response until the appropriate RCC or RSC has assumed responsibility.”

- Remove existing paragraph 3.6.5
- Renumber 3.6.6 to be 3.6.5 and 3.6.7 to be 3.6.6
- Insert new paragraph 3.6.7 as follows:

“New subtitle:

### **Transferring Responsibilities between RCCs and RSCs**

3.6.7 When transferring the coordination of a SAR operation to another RCC or RSC, the transfer should be documented in the RCC or RSC log. The initiating RCC may invite the other RCC to take over responsibility or the other RCC may offer to take over responsibility. The responsibility is retained by the initiating RCC until the other RCC formally accepts responsibility. All participating SAR units are to be advised of the transfer. Procedures to transfer SMC responsibility to another RCC should include:

Personal discussion between the SMCs of both RCCs concerned; and

Exchange of data using SITREP form including full details of action taken.

Details to be included in the process of transfer between RCCs should be as follows:

Date and time of transfer:

From (RCC):

To (RCC):

- .1 Identity of casualty
- .2 Position
- .3 Number of persons in distress
- .4 Description of casualty
- .5 Weather on scene
- .6 Initial actions taken
- .7 Areas already searched (including POD)
- .8 Alerted units
- .9 Current/present search in sub-areas
- .10 Endurance of existing SAR units on scene
- .11 Availability of SAR units on scene (hours/days)
- .12 Communication plan
- .13 Confirmation that all participating SAR units have been advised of the transfer of the responsibility.”



**6 Appendix D**

- Amend in the **MEDICO or MEDEVAC Checklist** number 10 to read:

“10 Assistance desired, or as recommended by a telemedical assistance service.  
Note: If required, refer to “TMAS – TMAS Medical Information Exchange Form”. See Appendix R.”

**7 Appendix R**

- Insert new **Appendix R** as follows:

**Appendix**

*IDENTIFICATION OF THE REQUIRING TMAS:*

Name: .....  
 Address: ..... Tel: .....  
 ..... Fax: .....  
 ..... E-mail: .....

**CONFIDENTIAL MEDICAL INFORMATION**

**MEDICAL ASSISTANCE AT SEA  
 TMAS - TMAS Medical Information Exchange Form**

**To: TMAS:** .....  
 (via MRCC if necessary: .....) )

Date: ...../...../..... Time: .....h..... Physician: Dr.....

**PATIENT**

Surname: ..... First Name: .....

Date of Birth: ...../...../..... Age: ..... Sex: M  F

Nationality: ..... Occupation on board: .....

**MEDICAL CIRCUMSTANCES**

<input type="checkbox"/> Illness	.....
<input type="checkbox"/> Accident	.....
<input type="checkbox"/> Poisoning	.....
Since: .....	.....

<i>Previous Medical History</i>	Ongoing Treatments	Care on board before Teleconsultation
.....	.....	.....
.....	.....	.....

**MEDICAL OBSERVATION**

Pulse: ... .. / min	BP: ... .. mmHg	.....
BR: ... .. / min	T: ..... °C	.....
Weight: ..... Kg		.....
Height: ..... m		.....

Diagnosis(es) given: .....  
 .....  
 .....

**IDENTIFICATION OF THE REQUIRING TMAS:**

Name: .....  
Address: .....  
.....  
.....  
Tel: .....  
Fax: .....  
E-mail: .....

**MEDICAL INSTRUCTIONS**

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

**MEDICAL ASSISTANCE REQUIRED**

Medical Decision:  Ship diversion to (Port): .....

Ambulance  
Medical Team:  Doctor  Nurse  Paramedic

Medical Evacuation  
Medevac Time frame:  Immediate  Daylight hours

.....  
Medevac Method:  Land on  Winch/stretchers  Winch/Strop

.....  
Medical Team:  Doctor  Nurse  Paramedic

Air Drop of supplies:  
.....  
.....

Quarantine situation  
.....  
.....

**SHIP**

Ship Name: ..... Call Sign: .....

Type: ..... Flag: .....

Location: .....

Port of Origin: ..... Departure/DTG: .....

Destination: ..... ETA / DTG: .....

Contact: .....

**Please send back all the available follow-up information to :**

TMAS Name: .....  
Address: .....  
.....  
.....  
Tel: .....  
Fax: .....  
E-mail: .....

\* \* \*

## SECTION III

### AMENDMENTS TO THE IAMSAR MANUAL – VOLUME III

#### 1 Abbreviations and Acronyms

- Add the following text on page x:  
“**TMAS**... Telemedical Assistance Service”

#### 2 Glossary

- Add the following text on page xv:  
“**Telemedical Assistance Service (TMAS)** A medical service permanently staffed by doctors qualified in conducting remote consultations and well versed in the particular nature of treatment on board ship.”

#### 3 Section 3

- Replace on page 3-15 the existing second bullet paragraph with the following:  
“In case of language difficulties, the International Code of Signals, the IMO Standard Marine Communication Phrases (SMCP) and standard ICAO phraseology contained in Annex 10 to the Convention on International Civil Aviation and PANS-ATM (ICAO Document 4444) should be used.”

#### 4 Section 4

- Add new heading and text on pages 4-8 and 4-9 before **MEDICO** section as follows:

“**MEDICAL ASSISTANCE TO VESSELS**”

Medical assistance is available using Telemedical Assistance Services (TMAS). A TMAS is a medical service permanently staffed by doctors experienced in conducting remote consultations and aware of the particular nature of treatment on board ship. The system provides for direct communication between ships and the TMAS.

The ship will normally contact the TMAS associated with the RCC within whose SAR Region the ship is located.

Alternatively, the ship may contact another TMAS, usually to overcome language difficulties. All medical information collected by this TMAS should be transferred to the TMAS associated with the RCC responsible for coordinating any further action required, to avoid duplication.

## Satellite Communications

Inmarsat systems offer two Special Access Codes (SAC) which can be used for medical advice or medical assistance at sea:

- .1 **SAC 32** is used to obtain medical advice. The Land Earth Station will provide a link with the TMAS when this code is used.
  - .2 **SAC 38** is used when the condition of an injured or sick person on board a ship justifies medical assistance (evacuation to shore or services of a doctor on board). This code allows the call to be routed to the associated RCC.”
- Amend on page 4-8 in the **MEDICO** section:
    - the first bullet point to read as follows:
      - “MEDICO messages request or transmit medical advice between vessels at sea and a TMAS.”
    - the fourth bullet point to read as follows:
      - “These messages are normally delivered only to TMAS, hospitals, or other facilities with which SAR authorities or the communications facilities have made prior arrangements.”
    - the fifth bullet point to read as follows:
      - “SAR services may also provide medical advice either from their own doctors or via arrangements with TMAS.”
    - the sixth bullet point to read as follows:
      - “In addition to the many Telemedical Assistance Services provided free of charge, there are several commercial enterprises which provide international subscriptions and pay-per-use medical advice to vessels at sea.”
  - Add on page 4-8 in the **MEDICO** section a seventh bullet point as follows:
    - Vessels fitted with Broadband services, Fleet Broadband (F77) and VSAT (Very Small Aperture Terminal) will permit the easy transfer of photographs and videos.”
  - Amend on page 4-9 in the **Medical Evacuation (MEDEVAC)** section in the second bullet point the first three points of the required information as follows:
    - “ name of the vessel, flag, IMO number, radio call sign and telephone number
    - master’s name and nationality
    - shipowner/operator, nationality and contact details.”