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MSC.1/Circ.1415
25 May 2012

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

1 The Maritime Safety Committee (MSC), at its ninetieth session (16 to 25 May 2012), having been informed that the International Civil Aviation Organization (ICAO) had approved the amendments to the IAMSAR Manual prepared by the ICAO/IMO Joint 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 fifteenth and sixteenth sessions, approved the annexed amendments in accordance with the procedure laid down in resolution A.894(21).

2 The Committee decided that the amendments should become applicable on 1 July 2013.

PROPOSED AMENDMENTS TO IAMSAR MANUAL – VOLUME III

1 Foreword

- Replace the original text with the following text:

"The primary purpose of this volume, the "Mobile Facilities (volume III)" is to assist vessels and aircraft in the performance of a search, rescue, or on-scene coordinator function and with aspects of SAR that pertain to their own emergencies. It is intended to be carried aboard rescue units, aircraft and vessels.

A new edition is published every three years. The 2013 edition includes the 2010 amendments (adopted by ICAO and approved by IMO's Maritime Safety Committee at its eighty-seventh session in May 2010 that became applicable on 1 June 2011) and the 2011 and 2012 amendments (adopted by ICAO and approved by IMO's Maritime Safety Committee at its ninetieth session in May 2012 that became applicable on 1 June 2013). The amendments were prepared by the ICAO/IMO Joint Working Group on Harmonization of Aeronautical and Maritime Search and Rescue at its sixteenth session, in September 2009, seventeenth session, in September 2010, and eighteenth session, in October 2011, respectively, and were endorsed by the IMO Sub-Committee on Radiocommunications and Search and Rescue (COMSAR) at its fourteenth session, in March 2010, fifteenth session, in March 2011, and sixteenth session, in March 2012, respectively.

The Manual is published jointly by the International Civil Aviation Organization and the International Maritime Organization.

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Each IAMSAR Manual volume is written with specific SAR system duties in mind, and can be used as a stand-alone document, or, in conjunction with the other two volumes, as a means to attain a full view of the SAR system. Depending on the duties assigned, it may be necessary to hold only one, or two or all three volumes.

- The *Organization and Management* volume (volume I) discusses the global SAR system concept, establishment and improvement of national and regional SAR systems, and cooperation with neighbouring States to provide effective and economical SAR services;
- The *Mission Coordination* volume (volume II) assists personnel who plan and coordinate SAR operations and exercises;

The primary purpose of the three volumes of the *International Aeronautical and Maritime Search and Rescue Manual* is to assist States in meeting their own search and rescue (SAR) needs and the obligations they accepted under the Convention on International Civil Aviation, the International Convention on Maritime Search and Rescue, and the International Convention for the Safety of Life at Sea (SOLAS). These volumes provide guidelines for a common aviation and maritime approach to organizing and providing SAR services. States are encouraged to develop and improve their SAR services, to cooperate with neighbouring States and to consider their SAR services to be part of a global SAR system."

2 Abbreviation and acronyms

- Add the following text:

AFTN	aeronautical fixed telecommunication network
AIP	aeronautical Information publication
AIS	automatic identification system (radio navigation)
AIS	aeronautical Information services
AIS-SART	automatic identification system – search and rescue transmitter
ARCC	aeronautical rescue coordination centre
CS	coast station
GNSS	Global Navigation Satellite System
IBRD	International 406 MHz Beacon Registration Database
LRIT	Long-range Identification and Tracking
MMSI	maritime mobile service identity
MOB	man overboard
MRCC	maritime rescue coordination centre
POC	probability of containment
POD	probability of detection
POS	probability of success
SMCP	(IMO) Standard Marine Communication Phrases
SPOC	search and rescue point of contact
SURPIC	surface picture

- Delete the following text:

CIRM	Centra Internazionale Radio Medico
RSC	rescue sub-centre
RTG	radio telegraphy

3 Glossary

- Update the glossary with the following text:

Cospas-Sarsat System	A satellite system designed to detect and locate activated distress beacons transmitting in the frequency band of 406.0-406.1 MHz.
Direction finding (DF)	Radiodetermination using the reception of radio waves for the purpose of determining the direction of a station or object.
Homing	The procedure of using the direction-finding equipment of one radio station with the emission of another radio station, where at least one of the stations is mobile, and whereby the mobile station proceeds continuously towards the other station.

MAYDAY METAREA	The international radio telephony distress signal. A geographical sea area ³ established for the purpose of coordinating the broadcast of marine meteorological information. The term METAREA followed by a roman numeral may be used to identify a particular sea area. The delimitation of such areas is not related to and shall not prejudice the delimitation of any boundaries between States.
NAVAREA	A geographical sea area ³ established for the purpose of coordinating the broadcast of navigational warnings. The term NAVAREA followed by a roman numeral may be used to identify a particular sea area. The delimitation of such areas is not related to and shall not prejudice the delimitation of any boundaries between States.
On-scene endurance	The amount of time a facility is capable of spending at the scene, engaged in search and rescue activities.
PAN-PAN	The international radio telephony urgency signal.
Personal Locator Beacon (PLB)	A portable device, manually activated, which transmits a distress signal on 406 MHz, and may have an additional homing signal on a separate frequency.
-	Add the following text:
Area Control Centre (ACC)	An air traffic control facility primarily responsible for providing ATC services to IFR aircraft in controlled areas under its jurisdiction.
Automatic Identification System (AIS)	A system used by ships and vessel traffic services (VTS), principally for identifying and locating vessels.
Automatic identification System –SAR transmitter (AIS-SART)	A survival craft transmitter that sends out an AIS position report based on a built-in GNSS receiver.
Aeronautical Information Services (AIS)	A service established within the defined area of coverage responsible for the provision of aeronautical information/data necessary for the safety, regularity and efficiency of air navigation.
Coast Station (CS)	A land station in the maritime mobile service.
Distress alert	The reporting of a distress incident to a unit which can provide or coordinate assistance.

³ Which may include inland seas, lakes and waterways navigable by seagoing ships

Emergency Locator Transmitter (ELT)	A generic term (related to aircraft) describing equipment which broadcast distinctive signals on designated frequencies and, depending on application, may be automatically activated by impact or be manually activated.
Emergency position-indicating radio beacon (EPIRB)	A device, usually carried aboard maritime craft, that transmits a distress signal that alerts search and rescue authorities and enables rescue units to locate the scene of the distress.
Flight information centre (FIC)	A unit established to provide information and alerting services.
Geographic information system (GIS)	A system which captures, stores, analyses, manages and presents data that is linked to a location.
Heave	The vertical rise and fall due to the entire ship being lifted by the force of the sea.
Long-range Identification and Tracking (LRIT)	A system which requires certain vessels to automatically transmit their identity, position and date/time at six-hour intervals in accordance with SOLAS regulation V/19-1.
Maritime Domain Awareness (MDA)	The effective understanding of any activity associated with the maritime environment that could impact upon the security, safety, economy or environment.
Personal Locator Beacon (PLB)	A portable device, manually activated, which transmits a distress signal on 406 MHz, and may have an additional homing signal on a separate frequency.
Place of safety	A location where rescue operations are considered to terminate; where the survivors' safety of life is no longer threatened and where their basic human needs (such as food, shelter and medical needs) can be met; and, a place from which transportation arrangements can be made for the survivors' next or final destination. A place of safety may be on land, or it may be aboard a rescue unit or other suitable vessel or facility at sea that can serve as a place of safety until the survivors are disembarked to their next destination.
Ship reporting system (SRS)	Reporting system which contributes to safety of life at sea, safety and efficiency of navigation and/or protection of the marine environment. They are established under SOLAS regulation V/11 or for SAR purposes under chapter 5 of the International Convention on Maritime Search and Rescue, 1979.

Vessel	A maritime craft.
Vessel Monitoring System (VMS)	A tracking system which provides for safety and environmental regulatory organizations to monitor the position, time at a position, course and speed of vessels.
Vessel tracking	A generic term applied to all forms of vessel track data derived from multiple sources such as ship reporting systems, AIS, LRIT, SAR aircraft, VMS and VTS.
Vessel Traffic Services (VTS)	A marine traffic monitoring system established by harbour port authorities to keep track of vessel movements and provide navigational safety in a limited geographical area.

- Delete the following text:

Locating	The finding of ships, aircraft, units or persons in distress.
SarNet	A broadcast system between RCCs within the footprint of an individual satellite.

4 Section 1

- Replace the **Contents** segment text with the following text:

"Purpose.....	1-1
<u>Responsibilities and Obligations to Assist.....</u>	1-1
<u>SAR Coordination</u>	
<u>On-Scene Coordinator.....</u>	
<u>SAR Mission Coordinator.....</u>	
<u>SAR Coordinators.....</u>	
<u>National and Regional SAR System Organization.....</u>	
<u>Ship Reporting Systems and vessel tracking</u>	
<u>Amver.....</u>	
<u>Aircraft Reporting System.....</u>	
<u>Underwater search and rescue".....</u>	

- Move segment on **National and Regional SAR System Organization** to before segment on **Ship Reporting System and Vessel Tracking**.

- Replace the **SAR Coordination** segment text with the following text:

"The SAR system has three general levels of coordination:

- On-scene coordinators (OSCs).
- SAR mission coordinators (SMCs) (Rescue coordination centre)
- SAR coordinators (SCs) (National level)

- **On-Scene Coordinator**

- When two or more SAR facilities are working together on the same mission, one person on-scene may be needed to coordinate the activities of all participating facilities.

- The SMC designates an OSC, who may be the person in charge of a:
 - search and rescue unit (SRU), ship, or aircraft participating in a search, or
 - nearby facility in a position to handle OSC duties.
 - The person in charge of the first facility to arrive at the scene will normally assume the OSC function until the SMC arranges for that person to be relieved.
- **SAR Mission Coordinator**
- Each SAR operation is carried out under the guidance of an SMC. This function exists only for the duration of a specific SAR incident and is normally performed by the RCC chief or a designee. The SMC may have assisting staff.
 - The SMC guides a SAR operation until a rescue has been achieved or it becomes apparent that further efforts would be of no avail.
 - The SMC should be well trained in all SAR processes, be thoroughly familiar with the applicable SAR plans, and:
 - gather information about distress situations
 - develop accurate and workable SAR action plans
 - dispatch and coordinate the resources to carry out SAR missions.
 - SMC duties include:
 - obtain and evaluate all data on the emergency
 - ascertain the type of emergency equipment carried by the missing or distressed craft
 - remain informed of prevailing environmental conditions
 - if necessary, ascertain movements and locations of vessels and alert shipping in likely search areas for rescue, lookout and/or radio watch
 - plot the areas to search and decide on methods and facilities to be used
 - develop the search action plan and rescue action plan as appropriate
 - coordinate the operation with adjacent RCCs when appropriate
 - arrange briefing and debriefing of SAR personnel
 - evaluate all reports and modify search action plan as necessary
 - arrange for refuelling of aircraft and, for prolonged search, make arrangements for the accommodation of SAR personnel
 - arrange for delivery of supplies to sustain survivors
 - maintain in chronological order an accurate and up-to-date record
 - issue progress reports
 - determine when to suspend or terminate the search
 - release SAR facilities when assistance is no longer required
 - notify accident investigation authorities
 - if applicable, notify the State of registry of the aircraft
 - prepare a final report.
- **SAR Coordinators**
- SCs are the top level SAR managers; each State normally will have one or more persons or agencies for whom this designation may be appropriate.

- SCs have the overall responsibility for:
 - establishing, staffing, equipping and managing the SAR system
 - establishing RCCs and rescue sub-centres (RSCs)
 - providing or arranging for SAR facilities
 - coordinating SAR training
 - developing SAR policies.
- Add text "and Vessel Tracking" to the **Ship Reporting Systems** segment.
- Amend the following text in the **Ship Reporting Systems and Vessel Tracking** segment on page 1-4:

Insert new last bullet before segment on **Amver** and include the following text:

"Automatic Identification System (AIS) and Long-range Identification and Tracking (LRIT) transmissions are also important for providing shore authorities with real or near real time vessel tracking data to support search and rescue."

5 Section 2

- Amend the following text in **Contents** segment:

Replace text "rescue litter" with "rescue stretcher".
- Amend the following text in sub-section **Initial Action by Assisting Craft**, segment on **Vessels Assisting**, sub-segment on **Methods of Distress Notification**, page 2-1:

Replace text of first three bullets with the following text:

 - A distress call or other emergency information from another vessel at sea, either directly or by relay.
 - A distress call or message from aircraft. This will normally occur by relay from an aircraft, RCC or CRS.
 - Alert from a vessel.
- Amend the following text in sub-section **Initial Action by Assisting Craft**, segment on **Vessels Assisting**, sub-segment on **Immediate Action**, page 2-1:

Add text "(for DSC acknowledgement see flow charts)" at the end of first sub-bullet under bullet starting with "The following immediate ...".
- Amend the following text in sub-section **Initial Action by Assisting Craft**, segment on **Vessels Assisting**, sub-segment on **Immediate Action**, page 2-2:

Delete text "500 kHz (radiotelegraphy)" under sub-bullet starting with "maintain a continuous ...".

Add text "or beacon distress signals" at the end of text "121.5 MHz AM (radiotelephony) for aircraft distress" under sub-bullet starting with "maintain a continuous ...".

Delete text "after 1 February 1999 at beginning of sub-bullet.

Add text "AIS-search and rescue transmitters (AIS-SARTs)" at the end of text of sub-bullet starting with "SOLAS communications equipment ...".

Replace text "Global Positioning System (GPS)" with "Automatic Identification System (AIS) and Global Navigation Satellite System (GNSS)" in sub-bullet starting with "Use all available ...".

- Amend the following text in sub-section **Initial Action by Assisting Craft**, segment on **Vessels Assisting**, sub-segment on **Proceeding to the Area of Distress**, page 2-5:

Insert text "if possible AIS data and" between "Maintain" and "active" in second bullet.

- Amend the following text in sub-section **Initial Action by Assisting Craft**, segment on **Vessels Assisting**, sub-segment on **On-Board Preparation**, page 2-5:

Insert two new bullets at the beginning of sub-segment and include the following text:

- A vessel *en route* to assist a distressed craft should prepare for possible SAR action on scene, including the possible need to recover people from survival craft or from the water. See "Recovery of survivors by assisting vessels" later in this section.
- Masters of vessels proceeding to assist should assess the risks they may encounter on scene, including the risks such as those associated with leaking cargo, etc. Information should be sought as necessary from the distressed craft and/or from the RCC.

Replace text "litter" with "stretcher" in **Life-saving and rescue equipment** list.

Replace text "SMC" with "RCC" in **Life-saving and rescue equipment** list.

- Amend the following text in sub-section **Initial Action by Assisting Craft**, segment on **Aircraft Assisting**, sub-segment on **Distress Call and Message Received**, page 2-7:

Replace text "an alarm signal or a distress call" with "a distress call or other emergency information" in first sentence of second bullet.

Replace text "EPIRB or ELT" with "EPIRB, ELT or PLB" in second sentence of third bullet.

- Amend the following text in sub-section **Initial Action by Assisting Craft**, segment on **Aircraft Assisting**, sub-segment on **Proceeding to Area of Distress**, page 2-8:

Replace text under **Navigation Equipment** header with the following text:

- aircraft designated for SAR operations should be equipped to receive and home in on:

- radio transmissions
- 406/121,5 MHz distress beacons (ELTs, EPIRBs and PLBs)
- SARTs
- AIS transmitters

- precise navigation equipment such as GNSS can be helpful in covering a search area carefully or locating a datum.

Replace text under **Communications Equipment** header with the following text:

- all aircraft should be equipped to maintain good communications with the RCC and involved aeronautical SAR facilities.
 - designated SAR aircraft engaged in SAR operations at sea should be equipped to communicate with vessels and survival craft.
 - designated SAR aircraft should be able to communicate with survivors on VHF-FM on Channel 16 (156.8 MHz) and VHF-AM on 121.5 MHz as a minimum.
 - carriage of droppable radios operating on 123.1 MHz and/or ch.16 can be used for communications with survivors.
 - carriage of portable radios may be appropriate for aircraft SAR units to communicate with maritime or land SAR facilities and OSCs.
- Amend the following text in sub-section **Search Function**, sub-segment on **search Action Plan and Message**, page 2-9:

Insert text "(if designated)" between "OSC" and "and" in second bullet.

Add text "and efforts achieved in previous searches" at the end of bullet starting with "The OSC may ...".

- Delete text "Developing" from sub-segment **Developing Own Search Planning** in sub-section **Search Function**, page 2-10:
- Amend the following text in sub-section **Search Function**, sub-segment on **Own Search Planning**, page 2-10:

Insert bullet at beginning of sub-segment, and include the following text:

- Normally the SMC will determine the search area by use of search planning tools at the RCC and in cooperation with the OSC.

- Amend the following text in sub-section **Search Function**, sub-segment on **on-Scene Radiocommunications**, page 2-11:

Replace text "shift" with "change" in second sub-bullet.

- Amend the following text in sub-section **Rescue Function**, segment on **Rescue Action Plan and Message**, page 2-16:

Add text "(if designated)" between "OSC" and "and" in the first bullet.

- Amend the following text in sub-section **Rescue Function**, segment on **Assistance by SAR Aircraft**, sub-segment on **Assistance by Helicopters**, page 2-19:

Replace text "litter" with "stretcher" in the sixth bullet.

Move last bullet of sub-segment to **Rescue Sling**.

Add text "if possible together with a helicopter crew member" at the end of first bullet of **Rescue Sling**.

Replace text "Some" with "Most" at the beginning of first bullet of **Double Lift Method**.

Replace text "litter" with "stretcher" in second bullet of **Double Lift Method**.

Replace text "litter" with "stretcher" in title **Recue Litter** and in following bullets and diagram.

- Amend the following text in sub-section **Rescue Function**, segment on **Helicopter Operations**, sub-segment on **General**, page 2-23:

Insert new bullet after first bullet and include the following text:

"Follow the instructions of the rescue facility and inform when unable to do so. In principle only act after instructions of the rescue facility."

Add text "The distressed vessel's captain is responsible for the safety of his vessel and personnel and may decide against the winching." at the end second-to-last bullet.

- Amend the following text in sub-section **Rescue Function**, segment on **Helicopter Operations**, sub-segment on **Communications between Ship and Helicopter for Winching Operations**, page 2-24:

Insert text "heave" between "roll" and "sea" in seventh bullet of **Helicopter to Ship**.

- Amend the following text in sub-section **Rescue Function**, segment on **Helicopter Operations**, sub-segment on **Sample Briefing to Vessel Prior to Winching**, page 2-26:

- Insert text "and instruct you about the winching procedures" at the end of sentence starting with "the helicopter will...".

- Add text "If a helicopter crewman is lowered down, follow his instructions. If this is not the case, act as follows:" at the end of paragraph and move text from paragraph into the following bullets:

- ***"Do not attach the loose hook or the trail line to your vessel!"***
- ***If you have to move the rescue device from the pick-up area to load the patient, unhook the cable and trail line from the rescue device and lay the loose hook on the deck so it can be retrieved by the helicopter.***
- ***The helicopter may move to the side while the patient is being loaded.***

- ***Have the patient wear a lifejacket, and attach any important records, along with a record of medications that have been administered.***
- ***When the patient is securely loaded, signal the helicopter to move into position and lower the hook.***
- ***After allowing the hook to ground on the vessel, re-attach the hook and the trail line to the rescue device.***
- ***Signal the winch operator with a "thumbs up" when you are ready for the winching to begin.***
- ***As the rescue device is being retrieved, tend the trail line to prevent the device from swinging.***
- ***When you reach the end of the trail line, gently toss it over the side."***

- Amend the following text in sub-section **Rescue Function**, segment on **Helicopter Operations**, sub-segment on **Positioning of Landing or Pick-up Areas**, page 2-29:

Add text "radar antenna" at the end last sub-bullet.

Replace text of second-to-last bullet with the following text:

"Loose objects should be cleared away or secured due to downwash from the helicopter."

Replace text "air-current" with "downwash" at the end of last bullet.

- Amend the following text in sub-section **Rescue Function**, segment on **Helicopter Operations**, sub-segment on **Safety Precautions**, page 2-30:

Add text "or the trail line" between "device" and "on" and replace text "rigging of fixtures" with "rigging or fixtures" in sixth bullet.

Insert new bullet after sixth bullet and include the following text:

"Never fix a trail line to a person".

Add text "relative" before "Wind direction" in diagram on page 2-31.

Add text "or stop operations" at the end of first sentence of **FINISHING OPERATIONS** diagram.

- Amend the following text in sub-section **Rescue Function**, segment on **Rescue by Maritime Facilities**, sub-segment on **General Maritime Considerations**, page 2-33:

Delete text "For survivors in the water" from first bullet

Replace text "rig scramble nets" with "use recovery equipment" in first sub-bullet of first bullet.

Replace text "lifeboats" with "rescue boats" in second sub-bullet of first bullet.

Add text "or other survival aid" at the end of third sub-bullet of first bullet.

Delete text "to enter the water" from fourth sub-bullet of first bullet.

Delete text "be prepared to" from fifth sub-bullet of first bullet.

Replace text "the use of oil for reducing the effect of the sea should be considered" with "an area of sea may significantly calmed by a large vessel circling at reduced speed" in third bullet.

Delete text "Experience has shown that" and replace text "are most suitable" with "may also be useful" in first sub-bullet of third bullet.

Delete second sub-bullet of third bullet.

Delete text "in heavy weather" in last sub-bullet of third bullet.

- Amend the following text in sub-section **Rescue Function**, segment on **Rescue by Maritime Facilities**, sub-segment on **Recovery of Survivors by Assisting Vessels**, page 2-37:

Add text "or loops" after "strops" and add text "However, especially for short lifts, do not delay if the survivor's airway (mouth/nose) is threatened by, for example, backwash from the rescuing vessel, but lift by the quickest method. If a rescue craft has been deployed to recover the survivor, he should, if possible, remain in the craft during its recovery on board the ship." at the end of third bullet.

- Amend the following text in sub-section **Rescue Function**, segment on **Rescue by Land Facilities**, page 2-38:

Insert two new sub-bullets immediately under first bullet and add the following text:

- Movement in the vicinity of crash sites can be extremely hazardous for ground parties on account of toxic fumes, dangerous substances (including radioactive substances) and explosives. Extreme care should be taken when approaching such a crash site and advice sought from RCC or expert authorities wherever possible before approaching crash site.
- Personnel should wear Personal Protective Equipment and all work should be carried out upwind of the wreckage wherever possible.

Add text "ordnance, leaking fuel tanks, pyrotechnics" between "material" and "or" in third sub-bullet (previously first sub-bullet).

Add text "expert advice should be sought before approaching the crash site wherever possible" at the end of third sub bullet (previously first sub-bullet).

Insert new sub-bullet after third sub-bullet and include the following text:

- Some civil light aircraft are fitted with ballistic recovery parachute systems which eject a powerful rocket which pulls a parachute from a container attached to or in the airframe. Activation handles are normally coloured red and should not be touched or moved. The ejection hatch of the parachute rocket should be identified and personnel warned to keep clear.

Replace text "except to assist in" with "except to the minimum necessary to assist in the" in the second-to-last sub-bullet.

Delete text "from the SMC" in the last sub-bullet.

- Amend the following text in sub-section **Rescue Function**, segment on **Handling of Deceased Persons**, page 2-40:

Delete text "from the SMC" in the second bullet.

- Amend the following text in sub-section **Rescue Function**, segment on **Contact with the media**, page 2-42:

Replace text "land or marine search" with "search at sea or on land" in eight sub-bullet of fourth bullet.

- Amend the following text in sub-section **Other Assistance**, page 2-43:

Add text "or to prevent future, unnecessary reports or reactions" at the end of fourth sub-bullet of first bullet.

- Amend the following text in sub-section **Other Assistance**, segment on **Aircraft Ditching**, sub-segment on **Communication**, page 2-52:

Delete third bullet of topic **Radio**.

Replace text "advise" with "seek advice" in bullet starting with "If not able ..." in fourth bullet (previously fifth bullet).

Replace text "and ask them to establish a voice watch on 4125 kHz to assist in ditching and rescue" with "The appropriate RCC can assist the ATS unit." in fourth bullet (previously fifth bullet).

Delete text "500 kHz" in fifth bullet (previously sixth bullet).

- Amend the following text in sub-section **other Assistance**, segment on **Aircraft Ditching**, sub-segment on **Communications**, page 2-53:

Delete all text under topic **Prefix call sign**.

- Amend the following text in sub-section **Training**, segment on **Maritime Search and Rescue Facilities**, sub-segment on **First Aid**, page 2-60:

Add text "Regular" at the beginning of the first bullet.

Replace second bullet, and associated sub-bullets, with the following text:

- Appropriate training aids should be used and copies of a first aid manual should be issued. The syllabus should include, as appropriate, depending on equipment available:
 - Use of rescue lifting systems and other devices for removing survivors from water
 - fundamental first aid, with emphasis on revival of the partially drowned and treatment for shock, prolonged immersion, hypothermia, and burns

- cardiopulmonary resuscitation (CPR)
- use of automated external defibrillators (AEDs)
- administration of oxygen.

Attention is also drawn to the guidance on first aid given in the IMO *Pocket Guide to Cold Water Survival*.

- Amend the following text in sub-section **Training**, segment on **Land Search and Rescue Facilities**, page 2-61:

Insert a new sub-bullet after seventh sub-bullet of third bullet and include the following text:

- knowledge of safety requirements for working around and within aircraft wreck sites.

Delete last sub-bullet of fourth bullet.

6 Section 3

- Amend the following text in **Contents** segment:

Delete text "RSC".

Move text "Joining Entry Report" after "On-Scene Communications".
Delete text "Maritime Radio Telex".

Replace text "Radio Communication Frequencies for Distress Purposes" with "Radio Frequencies Available for Maritime Safety and SAR Communications".

- Amend the following text in sub-section **Coordination of Search and Rescue Operations**, sub-segment on **Requirements for Coordination**, page 3-1:

Delete text "or RSC" everywhere it is mentioned in sub-segment.

- Amend the following text in sub-section **Coordination of Search and Rescue Operations**, sub-segment on **Coordination by Land-Based Authorities**, page 3-2:

Add text "Rescue Sub Centres" before "RSC" in second bullet.

- Amend the following text in sub-section **Coordination of Search and Rescue Operations**, sub-segment on **On-Scene Coordination**, page 3-2:

Delete text "in the response" and add text "may" between "incident" and "effect" in first bullet.

- Amend the following text in sub-section **Coordination of Search and Rescue Operations**, sub-segment on **Designation of On-Scene Coordinator (OSC)**, page 3-2:

Replace text "should" with "may" in first two bullets.

Add text "if necessary" between "should" and "be" in the third bullet.

Replace text "within the search area" with "of facilities on scene" at the end of the third bullet.

Add text "endurance," between "the" and "communications" in the fifth bullet.
Add text "on scene with the RCC" after "communications" in sub-bullet of fifth bullet.

- Amend the following text in sub-section **Coordination of Search and Rescue Operations**, sub-segment on **OSC Duties**, page 3-3:

Replace text "Receive the" with "Carry out the received" at the beginning of the second bullet.

Insert new bullet after the fourth bullet and add the following text:

Provide relevant information to the other SAR facilities.

- Amend the following text in sub-section **Coordination of Search and Rescue Operations**, sub-segment on **Designation of Aircraft Coordinator (ACO)**, page 3-4:

Add text "Duties of" at the beginning of the sixth bullet.

Add text "carried out from" between "be" and "a" in the sixth bullet.

Add text "such as ATS unit or RCC" at the end of the sixth bullet.

- Amend the following text in sub-section **Coordination of Search and Rescue Operations**, sub-segment on **ACO Duties**, page 3-4:

Replace text "maintain" with "Assist in maintaining" in first bullet and first sub-bullet.

Move the sub-segment on **Joining Entry Report**, page 3-5 after sub-segment on **On-Scene Communications**.

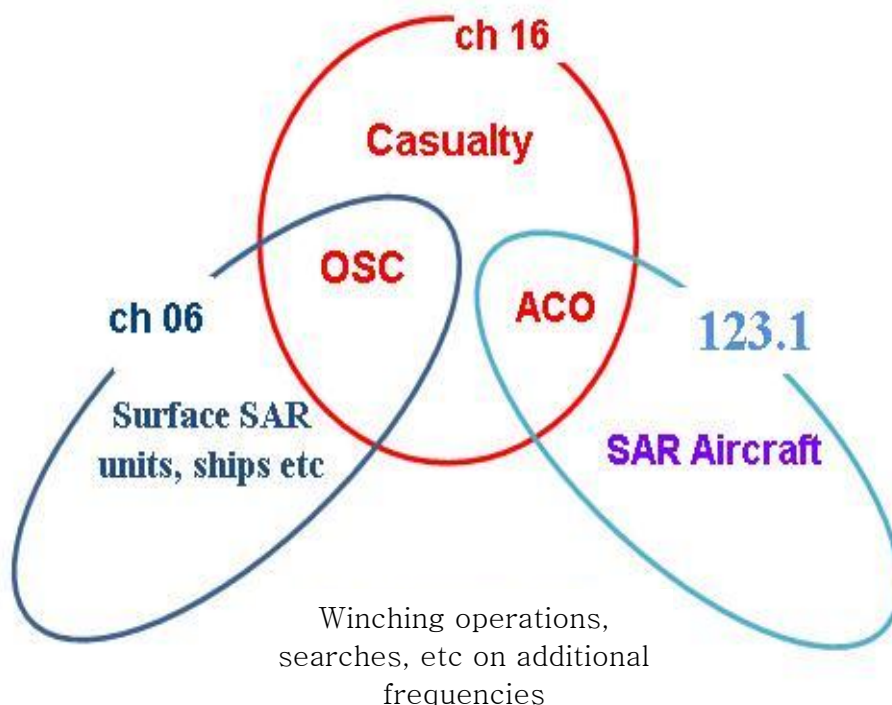
- Amend the following text in sub-section **Communications**, sub-segment on **On-Scene Communications**, page 3-7:

Insert bullets after the first bullet and add the following text:

- If there are several aircraft involved in the SAR operation and the OSC does not have specific aircraft coordination capability, an Aircraft Coordinator (ACO) should be appointed to assist in maintaining flight safety.
- If there are relatively few units responding communications may be kept on one coordinating frequency.
- In more complex cases communications should be divided for the sake of efficiency and avoidance of frequency congestion.
 - A ship casualty, the OSC and the ACO should work VHF Channel 16.
 - Other units on scene should use working frequencies for their own part of the operation. Surface units usually use VHF Channel 6, coordinated by the OSC. Aircraft coordinated by an ACO should use 123.1MHz.

- These units should also *monitor* the main coordination frequency if possible so as to maintain an overall understanding of the situation. SITREPs may be used by the OSC to keep all units fully informed.
- Other frequencies may be used, as directed by the OSC, for specific operations – for example a winching operation between helicopter and ship, or a surface search being conducted by some units as part of a wider operation.

A basic communications plan structure is shown below.



Add text "and/or ACO" after "OSC" in last bullet.

Replace text "shift" with "change" in first sub-bullet of last bullet.

- Amend the following text in sub-section **Communications**, sub-segment on **OSC Communications with RCC or RSC**, page 3-7:

Delete text "or RSC" in the sub-segment title.

Delete text "and RSCs" in first sub-bullet of first bullet.

Replace text "one or two word" with "short" in fourth sub-bullet under *Identification* of fourth bullet.

- Amend the following text in sub-section **Communications**, sub-segment on **RCC and RSC Communications**, page 3-9:

Delete text "and RSC" in the sub-segment title.

Delete header and related text under **Maritime Radio Telex**.

Insert new bullet at the beginning of the sub-segment and include the following text:

- RCC are normally contacted by:
 - dedicated phone number;
 - e-mail;
 - fax;
 - coastal radio station;
 - satellite Land Earth Station;
 - direct satellite communication; or
 - HF, MF or VHF radio.

For information on contact details for RCCs, refer to the Admiralty List of Radio Signals (ALRS) Volume V or the appropriate Aeronautical Information Publication.

Add text "initial distress and urgency alerts and" after "promulgate" in first bullet under header **Maritime Safety Information**.

Delete text "and may be used by SAR personnel for SAR-related broadcasts" at the end of the first bullet under header **Maritime Safety Information**.

Replace text "with" with "through" in first sub-bullet of second bullet under header **Maritime Safety Information**.

Replace text "personnel" with "authority" in second sub-bullet of second bullet under header **Maritime Safety Information**.

Delete last bullet under header **Maritime Safety Information**.

Delete text "For" at the beginning of second bullet under header **Phonetic Alphabet and Figure Code**.

Replace text "obtain a copy of" with "is found in" in the second bullet under header **Phonetic Alphabet and Figure Code**.

Add text "(INTERCO)" at the end of second bullet under header **Phonetic Alphabet and Figure Code**.

- Amend the following text in sub-section **Communications**, sub-segment on **Radio Communication Frequencies for Distress Purposes**, page 3-10:

Replace sub-segment title with "Radio Frequencies available for distress, maritime safety and SAR Communications."

Replace table on pages 3-11 and 3-12 with the following:

Function	System	Frequency
Alerting	406 MHz Distress beacon	406–406.1 MHz (earth-to-space)
	Inmarsat SES	1544–1545 MHz (space-to-earth) 1626.5–1646.5 MHz (earth-to-space) 1645.6–1645.8 MHz (earth-to-space)
	VHF DSC (Channel 70)	156.525 MHz ¹
	MF/HF DSC ²	2187.5 kHz ³ 4207.5 kHz 6312 kHz 8414.5 kHz 12577 kHz 16804.5 kHz
	VHF AM	121.5 MHz
	VHFFM (Channel 16)	156.8 MHz
On-scene communication	VHF Channel 16	156.8 MHz
	VHF Channel 06	156.3 MHz
	VHF AM	123.1 MHz
	MF Radiotelephony	2182 kHz
	MF NBDP	2174.5 kHz
Communications involving aircraft	On-scene, including SAR radiotelephony	156.8 MHz ⁴ 121.5 MHz ⁵
		123.1 MHz 156.3 MHz
		2182 kHz 3023 kHz
		4125 kHz 5680 kHz ⁶
Homing signals	406 MHz Distress beacons	121.5 MHz and the 406 MHz signal
	9 GHz radar transponders (SART)	9200–9500 MHz
Maritime safety information (MSI)	NAVTEX Warnings NBDP	518 kHz ⁷
		490 kHz ⁸ 4209.5 kHz ^{9,8}
		4210 kHz 6314 kHz
		8416.5 kHz 12579 kHz
		16806.5 kHz 19680.5 kHz
		22376 kHz 26100.5 kHz
	Satellite Safety NET	1530–1545 MHz (space-to-earth)
Safety of navigation	VHF Channel 13	156.650 MHz
Distress and safety traffic	Satellite	1530–1544 MHz (space-to-earth) & 1626.5–1646.5 MHz (earth-to-space)
	Radiotelephony	2182 kHz 4125 kHz
		6215 kHz 8291 kHz
		12290 kHz 16420 kHz
		156.8 MHz
NBDP	2174.5 kHz 4177.5 kHz	
	6268 kHz 8376.5 kHz	
	12520 kHz 16695 kHz	
Survival craft	VHF Radiotelephony	156.8 MHz & one other frequency in the 156-174 MHz band
	9 GHz radar transponders (SART)	9200-9500 MHz
	AIS-SART	161.975 MHz/162.025 MHz

Delete note 8 under table page 3-12 and re-number note 9.

Delete text "Cospas-Sarsat satellite location & aircraft" in table **Frequencies for use in the GMDSS**.

Replace text "406.025" with "406.0-406.1" at the end of table **Frequencies for use in the GMDSS**.

Delete text "**For use after full implementation of GMDSS (1 February 1999)" under **Frequencies for use in the GMDSS**.

Replace text "alarm signals before transmitting the message until contact has been established" with "procedures" in first bullet under header **Maritime**.

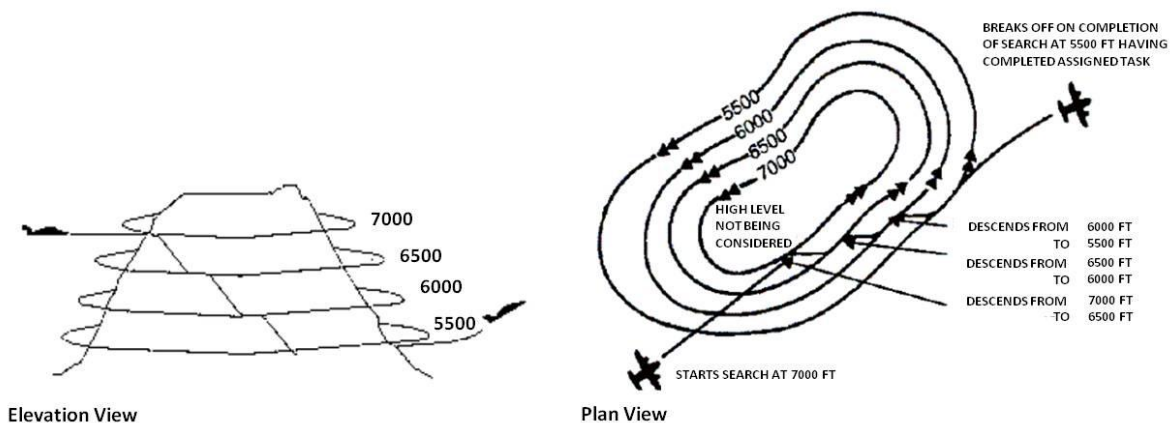
Add text "/RCCs" after "CRSs" in first bullet under **Aeronautical**.

Replace text "are not" with "may not be" in first bullet under "Aeronautical".

- Amend the following text in sub-section **Planning and Conducting the Search**, sub-segment on **Responsibilities of OSC**, page 3-14:

Delete text "or RSC" after "RCC" in first bullet.

Replace "Contour search (OS)" figure with the following one:



- Amend the following text in sub-section **Planning and Conducting the Search**, sub-segment on **Survival and Emergency Radio Equipment**, page 3-38:

Delete text "alerting" in first bullet.

Delete bullet starting with "L-Band is ...".

Delete text "500 kHz" in bullet starting with "The following frequencies".

Replace text of bullet starting with "Many civil aircraft ..." and the corresponding sub-bullets with the following:

- Many civil aircraft worldwide, especially operating on international flights and over ocean areas, carry the 406 MHz distress beacon for alerting and homing. Some national regulations may allow for 121.5 MHz distress beacons on domestic flights.
 - SAR aircraft should be able to home on the 121.5 MHz homing frequency on the 406 MHz distress beacon, and the capability exists to home on the 406 MHz signal itself.

Insert new bullet after bullet starting with "Many civil aircraft ..." and include the following text:

- EPIRBs and ELTs operate on the 406 MHz frequency and are required to be carried on board certain vessels and aircraft, respectively. The 406 MHz PLB is not required internationally but can be carried on a person.

Replace text "406 MHz ELTs and 406 MHz and Inmarsat-E satellite EPIRBs" with "406 MHz distress beacons (ELTs, EPIRBs and PLBs)" in bullet starting with "406 MHz ELTs ...".

Delete bullet "After January 1999:" and change following sub-bullets to bullets.

Insert bullet after bullet starting with "SOLAS ships should ..." and include the following text:

- AIS-SART (AIS Search and Rescue transmitter) is an alternative to survival craft radar transponders. AIS-SART is a transmitter which sends a signal to the AIS system. It is programmed with a unique ID code and receives its position via an internal GNSS. The AIS-SART is detected on both AIS Class A and B and AIS Receivers. The AIS target will be shown on ECDIS or chart plotters as a RED circle with a cross inside.

Replace text "500" with "300" in bullet starting with "Ships of 500 ...".

Replace text "will no longer be" with "are not" in bullet starting with "Ships of 500 ...".

Delete text "500 kHz (telegraphy)" in bullet starting with "Ships of 500 ...".

Replace text "these frequencies" with "this frequency" in bullet starting with "Ships of 500 ...".

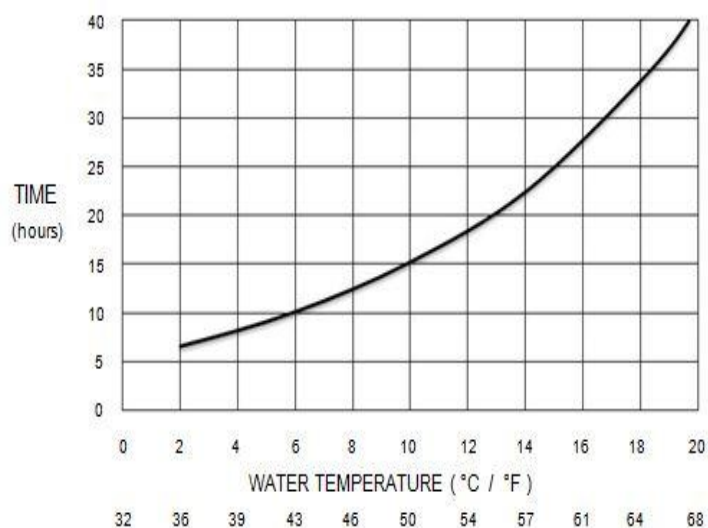
Replace text "EPIRB" with "Distress beacon (ELT and EPIRB)" in bullet starting with "EPIRB signals indicate ...".

- Amend the following text in sub-section **Conclusion of Search**, sub-segment on **Search Unsuccessful**, page 3-40:

Insert two new bullets and a diagram after bullet starting with "The OSC may..." and include the following text:

- The following diagram shows realistic survival times for people believed to be in water at various temperatures. If there is a possibility that survivors may have survival equipment or have been able to get out of the water, search times should be extended.
- Remember that the graph can only be indicative. Predicting survival times in immersion victims is not a precise science; there is no formula to determine exactly how long someone will survive, or how long a search should continue. In water temperatures above 20°C (68°F) search times exceeding 24 hours should be considered.

Graph on Realistic upper limit of survival time for people in the water wearing normal clothing, from time of entry into the water⁴



Delete the bullet starting with text "The following diagrams ..." and the corresponding diagrams.

Delete text starting with "Guide to survival ..." and associated diagram.

Add text "/RCC" after "authorities in the bullet starting with "The OSC, after ...".

7 Section 4

- Amend the following text in **Contents** segment:

Replace text "Person Overboard" with "Man Overboard".

Add item "Collision" under "Ship Emergencies at Sea".

- Amend the following text in sub-section **Distress Alert Notification**, sub-segment on **Distress Signals**, page 4-1:

Delete text "(pronounced M'AIDER)" in first sub-bullet of first bullet.

Replace text "person overboard" with "man overboard situation" in first sub-bullet of "Distress signal".

Delete text "(pronounced PAHN-PAHN)" in second sub-bullet of "Distress signal".

Replace text "SECURITY" with "SÉCURITÉ" and replace text "SECURITAY" with "SE-CURE-E-TAY" in third sub-bullet of "Distress signal".

- Amend the following text in sub-section **Distress Alert Notification**, sub-segment on **Methods of alert**, page 4-3:

Replace first bullet, and associated sub-bullets, of **Distress Alert from a Vessel** with the following text:

- Use any of the Global Maritime Distress and Safety System (GMDSS) equipment to transmit a distress alert:

- Inmarsat distress call
- VHF channel 16 (156.8 MHz FM)
- DSC on (VHF/MF or HF)
- EPIRB

- any distress transmissions on the frequency VHF channel 16, 2182 kHz could be preceded by a digital selective call.

- in remote oceans areas, the distress call should also be transmitted on a ship-to-shore HF circuit to a CRS, especially when distress calls on 2182 kHz, or channel 16 are not replied to by other stations.

- [If non-GMDSS satellite communication is available this could be also used ...]

Add text "/243.0" after "121.5" and add text "and no data link communication is available" at the end of second bullet under **Distress Alert from an Aircraft**.

Insert sub-bullet after sub-bullet starting with "set transponder to ..." and include the following text:

- set data link equipment to the appropriate emergency code, if so equipped.

Replace title "**EPIRBs and ELTs**" with "**EPIRBs, ELTs and Personal Locator Beacons (PLBs) Distress Beacons**".

Delete the first bullet point under "EPIRBs and ELTs": "EPIRBs and ELTs are another [...] of alerting are inadequate."

Add text "**EPIRB:**" at the beginning of the bullet starting with "An EPIRB transmits ...".

Add text "It is activated automatically upon exposure to the sea, or manually. 406 MHz EPIRBs use Cospas-Sarsat satellites and are required on board certain vessels." at the end of bullet starting with "An EPIRB transmits ...".

Delete all sub-bullets under bullet starting with "An EPIRB transmits ...".

Add text "**ELT:**" at the beginning of bullet starting with "Most civil aircraft ...".

Replace text of two sub-bullets of bullet starting with "Most civil aircraft ..." with the following:

- 406 MHz ELT for use with Cospas-Sarsat satellites, required on aircraft on international flights.
- 121.5 MHz ELT might be allowed/required on domestic flights and is intended to be heard by other aircraft.

Insert new bullet after bullet starting with "Most civil aircraft ..." and include the following text:

PLB: The 406MHz PLB is not mandated by any international carriage requirement, but may be carried by a person and has similar characteristics to EPIRBs and ELTs.

Replace text "EPIRBs and ELTs" with "the 406 MHz distress beacons" in bullet starting with "Cospas-Sarsat calculates ...".

Add text "fixed" between "all" and "ELTs" in bullet starting with "Most EPIRBs and ...".

Delete bullets starting with "Inmarsat-E EPIRBs transmit ...", "Position information from..." and "Inmarsat-E EPIRB operates ...".

Replace text "EPIRB" with "distress beacon" in bullet starting with "It is recommended ...".

Add text "radar" between "The" and "SART" in second sub-bullet of bullet starting with "SOLAS ship requirements ...".

Insert sub-bullet and replace two sub-bullets of bullet starting with "SOLAS ship requirements ..." with the following text:

- two-way VHF radio-telephone apparatus and survival craft radar transponders to be placed on each side of the vessel, in a position ready to be taken on board a survival craft, and one of the following:
- a radar SART, which after being switched on manually, and triggered by radar(s) in its vicinity, automatically sends out a series of pulses which are displayed on a radar screen as a series of elongated pips, similar to a radar responder beacon (racon) pip; or
- an AIS-Search and Rescue Transmitter (AIS-SART), which after being switched on manually, automatically sends updated position reports using a standard AIS class A/B position report. An AIS-SART has a built in GNSS receiver.

Add text "(total/POB)" at the end of sixth sub-bullet under bullet starting with "Important components of ...".

Delete text "(POB)" at the end of seventh sub-bullet under bullet starting with "Important components of ...".

- Amend the following text in sub-section **Medical Assistance to Vessel**, sub-segment on **Satellite Communications**, page 4-8:

Replace text "two" with "three" in bullet starting with "Inmarsat systems offer ...".

Delete numbering of sub-bullets and add a sub-bullet at the end, under bullet starting with "Inmarsat systems offer ...". Add the following text:

- SAC 39 Maritime assistance. This code allows the call to be routed to the associated RCC.

- Amend the following text in sub-section **MEDICO**, page 4-8:

Delete bullet starting with "the messages should ...".

Delete two sub-bullets under bullet starting with "In addition to ...".

- Amend the following text in sub-section **Medical Evacuation (MEDEVAC)**, page 4-9:

Add text "The vessel's master is responsible for the safety of his vessel and personnel and may decide against the evacuation." at the end of bullet starting with "The final decision ...".

- Amend the following text in sub-section **Medical Evacuation (MEDEVAC)**, sub-segment on **Evacuation by Helicopter**, page 4-10:

Delete text "as close" and "area as the patient's condition permits" and add "if so required" at the end of first item of second bullet under bullet starting with "When arranging for ...".

- Amend the following text in sub-section **Medical Evacuation (MEDEVAC)**, sub-segment on **Vessel Preparation**, page 4-11:

Insert sub-bullet after sub-bullet starting with "how to identify..." under bullet starting with "The following information ..." and add the following text:

- Type and any special activity of the ship

- Amend the following text in sub-section **Medical Evacuation (MEDEVAC)**, sub-segment on **Shipboard Safety Checklist**, page 4-11:

Delete text "person overboard" in bullet starting with "Is a person ...".

Add item "Passenger Vessels: Additional Items" after "Gas Carriers: Additional Items" and include the following bullet:

- Portable radio communication 123,1 MHz /121,5 MHz

- Change title of sub-section "**Person Overboard**" to "**Man Overboard**".

- Amend the following text in sub-section **Person overboard**, sub-segment on **Initial Action**, page 4-14:

Insert new first bullet and include the following text:

- Mark and note position and time from GNSS.

Replace text "person" with "man" in bullet starting with "Sound three prolonged ...".

Delete text "position" and "time" in bullet starting with "Note position, time ...".

- Amend the following text in sub-section **Ship Emergencies at Sea**, page 4-16:

Add new sub-segment **Collision** and include the following text:

Collision

- Establish communication with the other vessel
- Evaluate the situation (including, but not limited to, hull damage, injured persons)
- If assistance is required, transmit distress or urgency message
- POB control (vessels involved)
- Inform RCC
- abandon vessel as a last resort

Replace the sub-bullets of sub-segment "**Abandoning Ship**" with the following text:

- abandon ship only as last resort
- transmit distress call and message
- wear adequate clothing and, if available, immersion suits
- wear lifejackets, tightly fastened
- take anti-seasickness medication
- have crew members stand by lifeboat or liferaft and prepare to launch
- make sure sea painter is attached to vessel
- take SART, AIS-SART and/or EPIRB with you if possible
- load crew and launch
- keep lifeboat or liferaft tethered to vessel as long as possible

- Amend the following text in sub-section **Aircraft Emergencies**, sub-segment on **Vessel-Aircraft Communications**, page 4-21:

Replace text "the radiotelephone alarm system" with "MF DSC alert" in paragraph starting with "Aircraft may have ..." under **2182 kHz**.

Replace text "designated SAR aircraft and most" with "most designated SAR aircraft and some" in item starting with "designated SAR aircraft ..." under **3023 and 5680 kHz**.

- Amend the following text in sub-section **Aircraft Emergencies**, page 4-28:

Insert new sub-segment **121.5 MHz Distress Beacon Alerts** at the end of sub-section (after "Emergency Equipment" sub-segment) and include the following text:

- **121.5 MHz Distress Beacon Alerts**

- 121.5 MHz distress beacons are still in use and send out distress alerts heard on the radio as a WOW WOW sound of two alternating tones.
- Aircraft in flight are the primary means of detecting these alerts. Pilots-in-command should advise ATS units when this distress alert is heard.
- When in flight and reporting an alert from a 121.5 MHz distress beacon, the pilot-in-command should expect the ATS unit to request the following information:
 - Your aircraft altitude above sea level, where and when the signal was first heard
 - Your aircraft altitude above sea level, where and when maximum signal was heard
 - Your aircraft altitude above sea level, where and when signal faded or was lost.


8 Appendices

- Insert a new appendix F "**Own Emergency**" and appendix G "**Rendering Assistance**" and add the following cards:

IAMSAR Manual, volume III, appendix F – Examples of Action Cards – Own emergency

Man overboard

MOB – Man overboard



Man overboard (MOB)

Additional info in IAMSAR Vol III, Section 4.

1. ON BOARD ACTION


- Mark the position (GNSS)
- Drop MOB buoy
- Sound general alarm
- Start Williamson turn (or similar)
- Post lookouts
 - Forward on both sides
 - Bridge wings (with binoculars)
 - If long lasting search, rotate and motivate.

2. ON BOARD PREPARATION

- Lifebuoys, with light and smoke.
- Rescue-boat and equipment for pick up.
- ~~Prepare hospital for receiving injured and or hypothermal persons.~~
- ~~Hospital location and phone number to be obtained from RCC IMAS~~

3. TRANSMIT DISTRESS, VHF, MF/HF, INMARSAT.

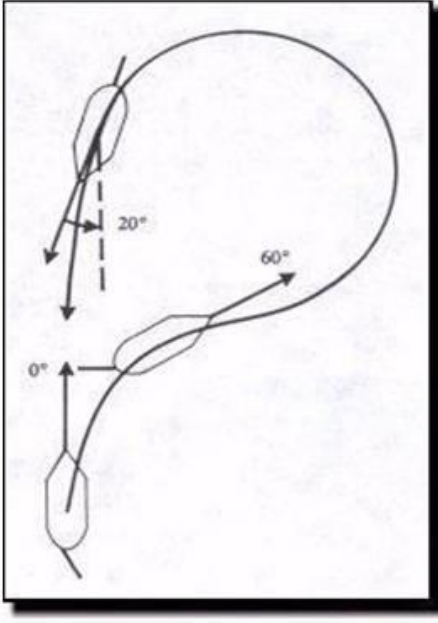
- Switch to voice.
- Transmit distress message
- 3*Mayday, 3* name of ship
- DTG (Date and time group)
- Type of distress, Position
- Assistance required and any additional information



- Light and smoke signal

Williamson turn

- 1 Rudder hard over (in an "immediate action" situation, only to the side of the casualty).
- 2 After deviation from the original course by 60°, rudder hard over to the opposite side.
- 3 When heading 20° short of opposite course, rudder to midship position and ship to be turned to opposite course.



The diagram illustrates the Williamson turn maneuver. It shows a ship's path starting from a 0° heading. The rudder is turned hard over to the right, resulting in a 60° heading. Then, the rudder is turned hard over to the left, resulting in a 20° heading. Finally, the ship is turned to the opposite course (180°).


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IAMSAR Manual, volume III, appendix F – Example of Action Cards – Own emergency

MEDEVAC by Helicopter

MEDEVAC by
Helicopter



MEDEVAC by Helicopter

Additional information in IAMSAR Vol III, section 4-

- **REQUESTING HELICOPTER ASSISTANCE**
 - Contact RCC, give vessel details, name, callsign, and contact numbers
 - Vessel position, speed and course.
 - Local weather conditions
 - Give as much medical information as possible, particularly about the patient's mobility.
 - Indicate landing or winching area.


- **PREPARATION OF PATIENT BEFORE THE HELICOPTER ARRIVES**
 - Move the patient, **in accordance to medical advice**, as close to the helicopter pick-up area as the patient's condition permits.
 - Update the information on medication given
 - Have the patient wear a lifejacket, and attach **all medical information and other important records**, and passport along with a record of medications that have been administered (No luggage)

- **VESSEL PREPARATION**
 - Update position to RCC and/or helicopter.
 - Course and speed to the rendezvous position.
 - Frequencies for communication with helicopter.
 - Secure or remove all loose objects in pick-up area. If necessary, remove antennas, (whip / wire).
 - **Switch radars off** during pick up/landing.
 - Take wind 30 deg. on port bow, and keep steering speed, during helicopter operation.
 - Have a portable radio ready for communication from deck to bridge and helicopter.
 - Direct available lighting to illuminate the pick-up area. Do not direct lights towards the helicopter as it will adversely affect the pilot's vision
 - If a helicopter crewman is lowered, follow his instructions.
 - If this is not the case act as follows. If you have to move the rescue device from the pick-up area to load the patient, unhook the cable and trail line from the rescue device and lay the loose hook on the deck so it can be retrieved by the helicopter. *Do not attach the loose hook or the cable trail line to your vessel.*
 - When the patient is securely loaded, signal the helicopter to move into position and lower the hook. After allowing the hook to ground on the vessel, re-attach the hook and the trail line to the rescue device. Signal the winch operator with a "thumbs up" when you are ready for the winching to begin. As the rescue device is being retrieved, tend the trail line to prevent the device from swinging. When you reach the end of the trail line, gently toss it over the side.
 - **Prepare for high-line operation**

IAMSAR Manual, volume III, appendix F – Example of Action Cards – Own emergency

MEDICO-MEDEVAC

MEDICO / MEDEVAC



MEDICO-MEDEVAC

Medical assistance- or evacuation

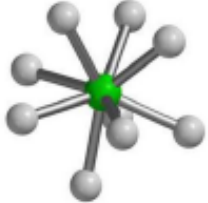
Additional information in IAMSAR Vol III, section 4

- **Medical assistance is available using telemedical assistance services (TMASs).**
- **Inmarsat systems offer two Special Access Codes (SACs) which can be used for medical advice or medical assistance at sea**
 - SAC32 is used to obtain medical advice.
 - SAC38 is used when the condition of an injured or sick person onboard a ship justifies medical assistance (evacuation to shore or services of a doctor onboard)
- **SAR services may also provide medical advice either from their own doctors or via arrangements with TMAS**
- **If medical evacuation is considered, benefits must be weighted against the inherent dangers of such operations, to both the person needing assistance and to the rescue personnel. Medical evacuation by boat may be challenging.**
- **When medical assistance is required, information as indicated below should be sent to the RCC.**
 - Vessels position, name, flag, IMO number, radio call sign and telephone number(s)
 - **shipowner/operator and contact details**
 - patient's name, age, gender, nationality, and language
 - patient's respiration, pulse rate, temperature, and blood pressure
 - location of pain
 - nature of illness or injury, including apparent cause and related history
 - symptoms
 - type, time, form, and amounts of all medications given
 - time of last food consumption
 - ability of patient to eat, drink, walk, or be moved
 - with accident cases, how the accident occurred
 - whether the vessel has a medicine chest, and whether a physician or other medically trained person is aboard
 - **Local weather conditions.**

IAMSAR Manual, volume III, appendix G – Example of Action Cards – Rendering assistance

Basic Communication Plan structure


Communication



Basic Communications Plan structure

Additional information in Volume-III Section 3, Communication

- **The OSC should ensure that reliable communications are maintained on-scene, and maintain communications with all SAR facilities and the RCC/SMC.**
 - a primary and secondary frequency should be assigned for on-scene communications.
 - If there are several aircraft involved in the SAR operation and the OSC does not have specific aircraft coordination capability, an Aircraft Coordinator (ACO) should be appointed to maintain flight safety .
 - If there are relatively few units responding communications may be kept on one coordinating frequency - usually VHF Channel 16 in distress cases.



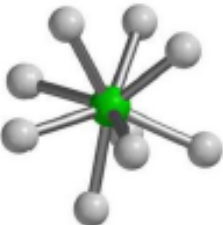
Winching operations,
searches etc on additional

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IAMSAR Manual, volume III, appendix G – Example of Action Cards – Rendering assistance

On scene coordination (OSC)

OSC



On scene co-ordination (OSC)

Additional info IAMSAR Vol III, section 3

- **Duties which the RCC may assign to the OSC, depending on needs and qualification.**
 - Co-ordinate operations of all SAR facilities on-scene
 - Receive the search action plan from RCC or plan the search or rescue operation, if no plan is otherwise available.
 - Co-ordinate on scene communications.
 - Monitor the performance of other participating facilities.
 - Ensure operations are conducting safely.
 - Make periodic SITREPS to the RCC
 - Maintain a detailed record of operation.
 - Advise the RCC to release facilities no longer required.
 - Report the number and names of survivors, and on which facility, to the RCC.
 - Request additional RCC assistance when necessary.

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