



OVERSEAS TERRITORIES AVIATION REQUIREMENTS (OTARs)

Part 170

SEARCH AND RESCUE ORGANISATION AND FACILITIES

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Subpart A – General

170.1 Purpose

- (a) This Part details the requirements governing the organisation and facilities of providers of search and rescue services designated under the Order.
- (b) These Requirements are not in themselves Law. Failure to comply may not constitute an offence. However, the Requirements repeat or reproduce many of the provisions of the Air Navigation (Overseas Territories) Order 2025 (as amended) (“the Order”), including the Rules of the Air set out in Schedule 8 to the Order. Therefore, failure to comply with these requirements may:
 - (1) constitute a breach of the Order; and
 - (2) result in proceedings for breaches of the Order; or
 - (3) result in the refusal of an application for renewal of a certificate or licence; or
 - (4) result in action to suspend or revoke a certificate or licence.
- (c) The Order details the legal obligations governing the facilitation and organisation of providers of search and rescue services. The Order specifies these obligations in rather general terms, therefore there is a provision in article 152 to the Order which requires the Governor to publish Requirements to augment, amplify and detail more precisely the manner in which these obligations shall be met. The Requirements are the means by which the entity charged with being responsible for providing Search and Rescue service will be able to satisfy the Governor as to the fulfilment of the obligations in respect of the Governor issued direction.
- (e) Other OTAR Parts may impinge upon activities conducted under this Part. In particular, OTAR Part 1 contains definitions which apply, unless otherwise stated, to all Parts. A full list of OTAR Parts, a description of the legislative structure and the place of OTARs and Overseas Territory Aviation Circulars (OTACs) within it can be viewed on the ASSI website www.airsafety.aero.
- (f) References to the Governor in this OTAR Part mean the regulator designated by the Governor of the Territory to exercise his functions under the Order.

170.3 Use of English

All documentation, written communications and data (electronic or otherwise) shall be provided in English.

170.5 Laws, requirements and procedures

The provider of a search and rescue service shall take reasonable care to ensure that all persons employed, engaged, or contracted, are familiar with the appropriate sections of legislation, the Overseas Territories Aviation Requirements, any applicable conditions imposed by the designated regulator and the procedures specified search and rescue service plans and other documentation.

170.7 Procedure compliance

Each person performing duties in relation to the search and rescue service shall conform to the applicable procedures specified in the Manual of the holder which authorises the operation.

170.9 Power to inspect

- (a) Any person authorised by the Governor shall be allowed access to the search and rescue service provider's facilities (as appropriate).
- (b) The provider of search and rescue services shall ensure that any person authorised by the Governor shall have access to any documentation relating to activities associated with the provision of search and rescue. The service provider shall be responsible for ensuring that, if requested to do so by an authorised person, documentation is produced within a reasonable period of time.

170.11 Definitions

The definitions used throughout this Part are in accordance with OTAR Part 1 and ICAO Doc 9731. Additionally, in this Part:

Alert Phase means a situation wherein apprehension exists as to the safety of an aircraft and its occupants.

Alerting Post means any facility intended to serve as an intermediary between a person reporting an emergency and a rescue coordination centre or rescue subcentre.

Central Alerting Post (CAP) is the sole point of contact for SAR matters between all authorities and SAR facilities of this State or Territory and the foreign Rescue Coordination Centre of the Search and Rescue Region (SRR) in which the State or Territory of the CAP is included.

Distress Phase means a situation wherein there is a reasonable certainty that an aircraft and its occupants are threatened by grave and imminent danger and require immediate assistance.

Ditching means the forced landing of an aircraft on water.

Emergency Phase means a generic term meaning, as the case may be, uncertainty phase, alert phase or distress phase.

Joint Rescue Coordination Centre (JRCC) means a rescue coordination centre responsible for both aeronautical and maritime search and rescue operations.

Operator means a person, organisation or enterprise engaged in or offering to engage in an aircraft operation.

Pilot-in-Command means in relation to an aircraft means the pilot designated by the operator as being in command and charged with the safe conduct of a flight, or, if no such designation has been made, the person who for the time being is in charge of piloting the aircraft without being under the direction of any other pilot in the aircraft.

Rescue means an operation to retrieve persons in distress, provide for their initial medical or other needs, and deliver them to a place of safety.

Rescue Coordination Centre (RCC) means a unit responsible for promoting efficient organization of search and rescue services and for coordinating the conduct of search and rescue operations within a search and rescue region.

Rescue Subcentre (RSC) means a unit subordinate to a rescue coordination centre, established to complement the latter according to particular provisions of the responsible authorities.

Search means an operation normally coordinated by a rescue coordination centre or rescue subcentre using available personnel and facilities to locate persons in distress.

Search and Rescue Aircraft means an aircraft provided with specialized equipment suitable for the efficient conduct of search and rescue missions.

Search and Rescue Facility means any mobile resource, including designated search and rescue units, used to conduct search and rescue operations.

Search and Rescue Region (SRR) means an area of defined dimensions, associated with a rescue coordination centre, within which search and rescue services are provided.

Search and Rescue Service means the performance of distress monitoring, communication, coordination and search and rescue functions, initial medical assistance or medical evacuation, through the use of public and private resources, including cooperating aircraft, vessels and other craft and installations.

Search and Rescue Unit means a mobile resource composed of trained personnel and provided with equipment suitable for the expeditious conduct of search and rescue operations.

State of Registry means the Contracting State in which an aircraft is registered.

Uncertainty Phase means a situation wherein uncertainty exists as to the safety of an aircraft and its occupants.

170.13 Applicability

The requirements of the OTAR Part shall apply to an individual or organisation designated by the Governor to be responsible for the provision of Search and Rescue.

170.15 ICAO compliance

The provider of search and rescue services shall, where applicable, comply with this OTAR Part and with the relevant parts of the ICAO Annex 12 Standards and Recommended Practises and ICAO Doc 9731 – International Aeronautical and Maritime Search and Rescue Manual.

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Subpart B – General

170.17 Organisation and Responsibilities for Territories with responsibility for a Search and Rescue Region

- (a) The search and rescue service shall be arranged to ensure prompt assistance is rendered on a 24-hour basis to persons in distress within the territory. Public and private services designated by the Governor shall be suitably located and equipped for search and rescue operations.
- (b) The policies and procedures related to the overall management of the search and rescue organisation shall be documented and comply with Appendix B.
- (c) The Governor shall delineate the SRRs within which the Territory will provide search and rescue services, which regions shall not overlap those of contiguous neighbouring States or Territories.
- (d) The search and rescue service shall establish processes to improve the service, including the elements of planning, domestic and international cooperative arrangements and training.
- (e) Where separate aeronautical and maritime rescue coordination centres serve the same area, States shall ensure the closest practicable coordination between the centres.
- (f) The RCC and RSC shall be staffed 24 hours a day by trained personnel.
- (g) The RCC personnel involved in the conduct of radiotelephony communications shall be proficient in the use of the English language.
- (h) An alerting post shall be designated when public telecommunications facilities do not permit the observation of an aircraft in an emergency to notify the RCC directly and promptly.
- (i) The RCC and RSC shall maintain up-to-date contact details in the Ops control directory.
- (j) The RCC and RSC shall subscribe and maintain access to the location of an aircraft in distress repository (LADR).

Note: Guidance on the use of Ops control directory and LADR can be found in ICAO Doc 10165 Manual on Global Aeronautical Distress and Safety System.

- (k) The RCC shall have means of rapid and reliable two-way communications with:
 - (1) associated Air Traffic Service Units; and
 - (2) associated RSCs; and
 - (3) direction finding and position fixing stations; and

- (4) coastal radio stations capable of alerting and communicating with surface vessels in the region, where applicable; and
 - (5) search and rescue unit headquarters in the region; and
 - (6) all maritime RCCs in the region, maritime or joint rescue coordination centres in adjacent regions; and
 - (7) the designated meteorological office or meteorological watch office; and
 - (8) search and rescue units; and
 - (9) alerting posts; and
 - (10) COSPAS-SARSAT Mission Control Centre servicing the search and rescue region.
- (I) The RSC shall have means of rapid and reliable two-way communications with:
- (1) adjacent RSCs; and
 - (2) a meteorological office or meteorological watch office; and
 - (3) search and rescue units; and
 - (4) alerting posts;

170.18 Organisation and Responsibilities for Territories located within the Search and Rescue Region of another State or Territory

- (a) The search and rescue service shall be arranged to ensure prompt assistance is rendered on a 24-hour basis to persons in distress within the territory. Public and private services designated by the Governor shall be suitably located and equipped for search and rescue operations.
- (b) The policies and procedures related to the overall management of the search and rescue organisation shall be documented and comply with Appendix B.
- (c) The Governor shall delineate the Search and Rescue Area of responsibility within which the Territory will provide search and rescue services, which regions shall not overlap those of contiguous neighbouring States or Territories.
- (d) The search and rescue service shall establish processes to improve the service, including the elements of planning, domestic and international cooperative arrangements and training.
- (e) States shall ensure the closest practicable coordination between the Central Alerting Post (CAP) and Rescue Coordination Centres responsible for the SRR.

- (f) The CAP shall be staffed 24 hours a day by trained personnel.
- (g) The CAP personnel involved in the conduct of radiotelephony communications shall be proficient in the use of the English language.
- (h) An alerting post shall be designated when public telecommunications facilities do not permit the observation of an aircraft in an emergency to notify the RCC directly and promptly.
- (i) The CAP shall have means of rapid and reliable two-way communications with:
 - (1) adjacent RCCs and RSCs; and
 - (2) associated Air Traffic Service Units; and
 - (3) search and rescue units; and
 - (4) alerting posts.

Note: Guidance on Central Alerting Posts can be found IMO COMSAR/Circ.23 (June 2020).

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Subpart C – Equipment

170.19 Search and Rescue Units

- (a) Search and rescue units shall be provided with equipment for promptly locating and providing adequate assistance at the scene of an accident.
- (b) Search and rescue units shall have a means of rapid and reliable two-way communication with other search and rescue facilities engaged in the same search and rescue operation.
- (c) Search and rescue aircraft shall be equipped to communicate on aeronautical distress and on-scene frequencies and on other frequencies prescribed by regional or national search and rescue plans or procedures.
- (d) Search and rescue aircraft shall be equipped with homing equipment for use on distress frequencies.

Note: Further information related to the requirements for Emergency Location Transmitters (ELT) can be found in OTAR Parts 91, 135 and 121.

Note: Specifications for ELTs are provided in ICAO Annex 10, Volume III.

- (e) Search and rescue aircraft shall be equipped to communicate with maritime vessels when being used for search and rescue over maritime areas.
- (f) Search and rescue aircraft shall carry a copy of the International Code of Signals when used for search and rescue over maritime areas to mitigate against language difficulties that may be experienced when communicating with maritime vessels.

Note: Many vessels can communicate with aircraft on 2182 kHz, 4125 kHz, 121.5 MHz and 123.1 MHz. However, these frequencies, and in particular 121.5 MHz and 123.1 MHz, may not be routinely monitored by vessels. Rather, vessels monitor Channel 16 (156.8 MHz), the international maritime distress, safety and calling frequency.

Note: The International Code of Signals is published in English, French and Spanish by the International Maritime Organization as documents 994E, 994F and 994S.

- (g) At least one aircraft participating in a search and rescue operation must carry droppable survival equipment unless it's known that it is unnecessary to be provided by air.
- (h) If applicable, survival equipment shall be located at appropriate aerodromes that is suitable for dropping by an aircraft.
- (i) The designated search and rescue aircraft shall carry a droppable device for measuring actual surface drift when used for search and rescue operations over maritime areas.

Subpart D – Cooperation

170.21 Cooperation between States

- (a) The designated search and rescue service shall coordinate their search and rescue organisations with those of neighbouring states and territories and when operations are proximate to adjacent search and rescue regions (SRR).
- (b) The designated search and rescue service shall develop common search and rescue plans and procedures to facilitate coordination of search and rescue operations with those of neighbouring states and territories.
- (c) The designated search and rescue services who wish their search and rescue units to enter the territory of another state or territory for the purposes of search and rescue shall send a request giving the full details of the mission and specify the need for the mission to the RCC or other responsible authority designated by the state.
- (d) If a request is received by the search and rescue service from another state requesting entry into the territory for the purposes of Search and Rescue then the service shall immediately acknowledge receipt of the request and respond as soon as possible and if applicable, indicate any conditions under which the mission may be undertaken.
- (e) The designated search and rescue service shall enter into agreements with neighbouring states to enhance coordination and cooperation. The agreements must enable expediting and efficient entry of search and rescue units.
- (f) The RCC / CAP shall be authorised to:
 - (1) request assistance from other RCCs including aircraft, vessels, persons or equipment as needed;
 - (2) grant permission for the entry of aircraft, vessels, persons or equipment into its territory;
 - (3) make the necessary arrangements with other authorities with a view to expediting entry;
 - (4) provide assistance to other RCCs including aircraft, vessels, persons or equipment.
- (g) The designated search and rescue services shall arrange for joint training exercises involving their search and rescue units and those of other states and operators to promote search and rescue efficiency.
- (h) The designated search and rescue services shall as far as reasonably practicable arrange for periodic liaison visits with their neighbouring states.

170.23 Coordination with other services

- (a) The designated search and rescue services shall arrange for all aircraft, vessels and other local services which do not form part of the designated search and rescue service to cooperate fully with the designated service in providing assistance to survivors of aircraft accidents.
- (b) The designated search and rescue service shall ensure that close and practicable coordination takes place between the relevant aeronautical and maritime authorities to assist with effective and efficient search and rescue response.
- (c) The designated search and rescue service shall cooperate with the organisation and personnel responsible for investigating accident and those responsible for the care of those who suffered from an accident.
- (d) To facilitate accident investigation and when practicable the search and rescue unit shall be accompanied by a suitability qualified person(s) in the conduct of accident investigation.
- (e) The designated search and rescue service shall assign a 24-hour search and rescue point of contact available for the receipt and acknowledgment of Cospas-Sarsat distress alert data that ensures timely notification to the responsible RCC for the initiation of search and rescue response.

170.25 Dissemination of information

- (a) The designated search and rescue service shall publish and disseminate information necessary for the entry of search and rescue unit of other states. Alternatively, the relevant information shall be included in search and rescue agreements.
- (b) The information described in 170.25(a) shall be made available to the RCC, RSC or other agencies to benefit the provision of search and rescue service.
- (c) If deemed practicable and desirable, information shall be disseminated to the general public and emergency authorities by the designated search and rescue service regarding actions to be taken when there is reason to believe that an aircraft's emergency situation may become a public concern or require a general emergency response.

Subpart F - SAR Plans and Training

170.27 Preparatory information

- (a) Each rescue coordination centre shall have readily available at all times up-to-date information concerning the following aspects of its SRR:
 - (1) search and rescue units, rescue subcentres and alerting posts;
 - (2) air traffic services units;
 - (3) means of communication that may be used in search and rescue operations;
 - (4) address and telephone numbers of all operators, or their designated representatives, engaged in operations in the region; and
 - (5) any other public and private resources including medical and transportation facilities that are likely to be useful in search and rescue.
- (b) Each rescue coordination centre shall have readily available all other information of interest to search and rescue, including information regarding:
 - (1) the locations, call signs, hours of watch, and frequencies of all radio stations likely to be employed in support of search and rescue operations;
 - (2) the locations and hours of watch of services keeping radio watch, and the frequencies guarded;
 - (3) locations where supplies of droppable emergency and survival equipment are stored;
 - (4) objects which it is known might be mistaken for unlocated or unreported wreckage, particularly if viewed from the air;
 - (5) where the SRR includes maritime areas, the position, course and speed of ships that may be able to provide assistance to aircraft in distress.
 - (6) overseas Territories shall, individually or in cooperation with other States, either establish ship reporting systems in cooperation with maritime authorities or arrange communication links with Amver or regional ship reporting systems to facilitate search and rescue operations at sea.
- (c) Each CAP shall have readily available all other information of interest to search and rescue, including information regarding:
 - (1) centralize information about any maritime incident. It should ensure its role of centralisation is clearly known, at least by other public bodies involved in emergency situations and in maritime activities.

- (2) keep a record of any facility able to intervene in a SAR case, with basic data (type, range, speed etc.), status of availability, as far as possible, and especially a way of alerting it for intervention.
- (3) keep and take into account any information and guidelines received from an RCC.

170.29 SAR Operational Plans

- (a) Each RCC / CAP shall prepare detailed plans of operation for the conduct of search and rescue operations within the SRR.
- (b) Search and rescue plans shall be developed and maintained jointly with other public and private services that may assist in providing or benefit from search and rescue services. The plan should consider events that include a large number of survivors.
- (c) The plans shall specify arrangements for the servicing and refuelling, of all vessels and aircraft involved in search and rescue operations, including those vessels and aircraft made available by other States.
- (d) The search and rescue plans of operation shall contain details regarding actions by those persons engaged in search and rescue, including:
 - (1) the manner in which search and rescue operations are conducted in the SRR/SAR Area of Responsibility;
 - (2) the use and availability of communication systems and facilities;
 - (3) actions to be taken with other RCCs;
 - (4) methods of alerting en-route aircraft and ships at sea;
 - (5) the duties and authorities of persons assigned to search and rescue;
 - (6) means of redeployment of equipment that may be necessitated by meteorological or other conditions;
 - (7) the methods for obtaining essential information relevant to search and rescue operations, such as weather reports, weather forecasts and NOTAMs;
 - (8) the means for obtaining assistance including aircraft, vessels, persons, or equipment from other RCCs as needed;
 - (9) the means for obtaining approval to allow search and rescue units from assisting States to enter into the territory of the State of the RCC;
 - (10) methods of rendezvous assistance of surface craft to distressed aircraft being compelled to ditch;
 - (11) methods for assisting search and rescue or other aircraft to proceed to aircraft in distress;

- (12) actions to be taken in conjunction with ATS and other authorities concerned to assist aircraft known or believed to be subject to unlawful interference.
- (e) Search and rescue plans shall be integrated with airport emergency plans to ensure that search and rescue services are available in the vicinity of the aerodromes including areas of water.

170.31 Training and exercises

- (a) Search and rescue units shall be aware of all parts of the search and rescue plan required by Subpart F of this OTAR Part that are applicable to their role.
- (b) Search and rescue units shall notify the RCC/ CAP of relevant operational information and any changes in the operational status or availability of the search and rescue unit.
- (c) The designated search and rescue service shall maintain the required number of search and rescue units as defined in the relevant plan.
- (d) The designated search and rescue service shall maintain adequate supplies of rations, medical supplies, signalling devices and other survival and rescue equipment.
- (e) The designated search and rescue service shall conduct full-scale search and rescue exercise at intervals not exceeding two years and provide regular training and modular exercises for their search and rescue personnel which include both land and maritime environments.
- (f) The training and exercises shall aim to achieve and maintain maximum efficiency in search and rescue and include both search and rescue elements and be located away from an aerodrome.

Note: The need for regular training and exercises may be moderated commensurate with the frequency of real search and rescue responses which demonstrate satisfactory and effective search and rescue performance.

170.33 Accident sites and wreckage

- (a) The designated search and rescue service shall ensure that search and rescue personnel that may be required to respond to an aircraft accident are trained in the management of occupational health risks.
- (b) The designated search and rescue service shall ensure that wreckage resulting from aircraft accidents within its territory or in the case of accidents on the high seas or in areas of undetermined sovereignty within the search and rescue regions for which it is responsible is removed, obliterated or charted following completion of the accident investigation if its presence might constitute a hazard or confuse subsequent search and rescue operations.

Note: Guidance related to effective occupational health practices at aircraft accident sites is contained in the Manual of Aircraft Accident and Incident Investigation, Part I – Organization and Planning (Doc 9756) and Circular 315 – Hazards at Aircraft Accident Sites.

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Subpart G Search and Rescue Operations

170.35 Information and emergency phases

- (a) The designated search and rescue service or other authority shall give all available information to the concerned rescue coordination centre if they have reason to believe that an aircraft is in an emergency.
- (b) The RCC / CAP shall immediately upon receipt of information concerning an aircraft emergency, evaluate and assess the information to determine the level of search and rescue operation required.
- (c) The RCC / CAP shall determine which emergency phase the situation corresponds to when the information concerning an aircraft emergency is received from sources other than an air traffic service unit.
- (d) The RCC shall:
 - (1) upon the occurrence of an uncertainty phase, the rescue coordination centre shall cooperate to the utmost with air traffic services units and other appropriate agencies and services in order that incoming reports may be speedily evaluated.
 - (2) upon the occurrence of an alert phase the rescue coordination centre shall immediately alert search and rescue units and initiate any necessary action.
 - (3) upon the occurrence of a distress phase, the rescue coordination centre shall:
 - (i) immediately initiate action by search and rescue units in accordance with the appropriate plan of operation;
 - (ii) ascertain the position of the aircraft, estimate the degree of uncertainty of this position, and, on the basis of this information and the circumstances, determine the extent of the area to be searched;
 - (iii) notify the operator, where possible, and keep the operator informed of developments;
 - (iv) notify other rescue coordination centres, the help of which seems likely to be required, or which may be concerned in the operation;
 - (v) notify the associated air traffic services unit, when the information on the emergency has been received from another source;
 - (vi) request at an early stage such aircraft, vessels, coastal stations and other services not specifically included in the appropriate plan of operation and able to assist to maintain a listening watch for transmission from the aircraft in distress, survival radio equipment or an ELT;

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- (vii) request at an early stage such aircraft, vessels, coastal stations and other services not specifically included in the appropriate plan of operation and able to assist the aircraft in distress as far as practicable;
 - (viii) request at an early stage such aircraft, vessels, coastal stations and other services not specifically included in the appropriate plan of operation and able to assist to inform the RCC of any developments;
 - (ix) from the information available, draw up a detailed plan of action for the conduct of the search and/or rescue operation required and communicate such plan for the guidance of the authorities immediately directing the conduct of such an operation;
 - (x) amend as necessary, in the light of evolving circumstances, the detailed plan of action;
 - (xi) notify the appropriate accident investigation authorities and State of registry of the aircraft;
- (e) As soon as a SAR alert is received by the CAP, it shall:
- (1) pass this alert to the RCC with full gathered data about the incident;
 - (2) if necessary, receive a request from the RCC for gathering more information;
 - (3) receive a request from the RCC for operating local SAR facilities, following assessment of the situation by the RCC;
 - (4) pass immediately this request to the body which has power to operate these facilities with all useful information about the task: object of the task, area, radio frequencies etc;
 - (5) if the facilities have no direct communications link with the RCC act as communications relay between these facilities and the RCC;
 - (6) report any new element to the RCC;
 - (7) if necessary (for serious accidents for example), to act as communications relay between the RCC and any governmental or public authority involved in the Territory of the CAP; and
 - (8) notify the appropriate accident investigation authorities and State of registry of the aircraft.

Note: The actions shall be taken in the order that they have been described unless circumstances dictate otherwise.

Note: The frequencies contained in the specifications for ELTs given in Annex 10, Volume III, are 121.5 MHz and 406.0 to 406.1 MHz. The Cospas-Sarsat 406 MHz channel assignment plan is contained in Cospas-Sarsat Document C/S T.012.

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- (f) In the event that an emergency phase is declared in respect of an aircraft whose position is unknown and may be in one of two or more SRRs, the search and rescue response shall follow OTAR Part 170.35 (f)(g)(h).
- (g) A RCC shall assume responsibility for initiating suitable action in accordance with OTAR Part 170.35 when information regarding an aircraft in an emergency is received and it's unknown if other RCCs are taking appropriate action.
- (h) Unless otherwise decided by common agreement of the RCC concerned, the RCC to coordinate search and rescue action shall be the centre responsible for:
 - (1) the region in which the aircraft last reported its position; or
 - (2) the region to which the aircraft was proceeding when it last reported its position was on the line separating two SRRs; or
 - (3) the region to which the aircraft was destined when it was not equipped with suitable two-way radio communication or not under obligation to maintain radio communication; or
 - (4) the region in which the distress site is located as identified by the Cospas-Sarsat system.
- (i) The RCC with overall responsibility for coordination shall inform all RCCs that may become involved in the operation of all circumstances of the emergency and subsequent developments after a declaration of the distress phase.
- (j) All RCCs that become aware of any information pertaining to an emergency shall inform the RCC that has overall responsibility.
- (k) The RCC responsible for search and rescue action shall forward information of the search and rescue action initiated to the air traffic service unit serving the flight information region in which the aircraft is operating whenever applicable.
- (l) The designated search and rescue service shall take action in accordance with the relevant plan of operations when requested by the RCC of the region where the conduct of operations is the responsibility of more than one State.
- (m) Authorities immediately directing the conduct of any part of operations shall give instructions to the units under their direction and inform the RCC of such instructions and keep the RCC informed of any developments.
- (n) When applicable, the RCC responsible for search and rescue shall forward information of the initiated search and rescue action to the air traffic services unit serving the flight information region (FIR) in which the aircraft is operating, in order that such information can be passed to the aircraft.

170.37 Cross state responsibilities and field operations

- (a) Where the conduct of operations over the entire SRR is the responsibility of more than one State, each State shall take action in accordance with the relevant plan of operations when so requested by the responsible RCC.
- (b) The responsible authority directing search and rescue operations, or any part thereof shall give instructions to the search and rescue units under their direction and inform the responsible RCC of such instructions and any developments in the operation.

170.39 Termination and suspension of operations – RCC

- (a) The search and rescue operation shall continue, as far as practicable, until all survivors are delivered to a place of safety or until all reasonable hope of rescuing survivors has passed.
- (b) The responsible RCC shall normally determine when to discontinue search and rescue operations.
- (c) When a search and rescue mission has achieved its objective, or when an RCC determines—or is notified—that the emergency situation no longer exists, the emergency phase must be ended. The operation should be concluded, and all relevant authorities, facilities, or services that were alerted or involved must be promptly notified.
- (d) If a search and rescue operation becomes too difficult to continue, but there is still a chance that survivors exist, the RCC will temporarily stop on-site efforts. They will inform all involved authorities and services about the suspension. Any new information received will be carefully reviewed, and the operation will resume if it becomes reasonable and possible to do so.

Note: Overseas Territories may require input from other appropriate State authorities in the decision-making process leading to termination of SAR operations.

170.41 Distress scene procedures

- (a) When multiple facilities are engaged in search and rescue operations on-site, the RCC or RSC shall designate one or more units on-site to coordinate all actions, helping to ensure the safety and effectiveness of air and surface operations, taking into account facility capabilities and operational requirements.
- (b) When a pilot-in-command observes that either another aircraft or a surface craft is in distress, the pilot shall, if possible and unless considered unreasonable or unnecessary:
 - (1) keep the craft in distress in sight until compelled to leave the scene or advised by the rescue coordination centre that it is no longer necessary;
 - (2) determine the position of the craft in distress;

- (3) when appropriate, provide the rescue coordination centre or air traffic services unit with as much of the following information as possible:
- (i) type of craft in distress, its identification and condition;
 - (ii) its position, expressed in geographical or grid coordinates or in distance and true bearing from a distinctive landmark or from a radio navigation aid;
 - (iii) time of observation expressed in hours and minutes Coordinated Universal Time (UTC);
 - (iv) number of persons observed;
 - (v) whether persons have been seen to abandon the craft in distress;
 - (vi) whether any distress signals, including distress beacon transmissions, have been received or observed;
 - (vii) on-scene weather conditions;
 - (viii) apparent physical condition of survivors;
 - (x) apparent best ground access route to the distress scene;
 - (xi) position and description of any other craft in the area that may assist.
- (4) act as instructed by the rescue coordination centre or the air traffic services unit.
- (c) If the first aircraft to arrive at the scene of distress is not a designated search and rescue aircraft, it must take charge of coordinating all arriving aircraft until a search and rescue aircraft arrives. If this aircraft cannot communicate with the rescue coordination centre or air traffic services, it should, by mutual agreement, hand over coordination duties to another aircraft that can maintain communication—until the search and rescue aircraft arrives.
- (d) When it is necessary for an aircraft to convey information to survivors or surface rescue units, and two-way communication is not available, it shall, if practicable, drop communication equipment that would enable direct contact to be established, or convey the information by dropping a hard copy message.
- (e) When a ground signal has been displayed, the aircraft shall indicate whether the signal has been understood or not by the means described in 170.41(d) or, if this is not practicable, by making the appropriate visual signal.
- (f) If an aircraft needs to guide a surface vessel to the location of another aircraft or vessel in distress, it must give clear and accurate directions using any available communication method. If radio contact isn't possible, the aircraft should use the correct visual signals instead.

Note: air-to-surface and surface-to-air visual signals are published in the Appendix and in ICAO Doc 9731 - International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual, Volume III – Mobile Facilities.

170.43 Intercepting a distress transmission – pilot-in-command

- (a) Whenever a distress transmission is intercepted by a pilot-in-command of an aircraft, the pilot shall, if feasible:
 - (1) acknowledge the distress transmission;
 - (2) record the position of the aircraft in distress, if provided;
 - (3) take a bearing on the transmission;
 - (4) inform the appropriate RCC or air traffic services unit of the distress transmission, providing all available and current information;
 - (5) proceed to the distress position, only if feasible and not provided with other instruction;
 - (6) attempt to establish communications with the person(s) in distress.
- (b) Whenever a pilot monitors 121.5 MHz and intercepts a transmission from a distress beacon, in addition to the requirements described in 170.43 (a), the pilot shall:
 - (1) record and report the position where the transmission was first received as soon as possible; and
 - (2) not alter any settings for squelch on the aircraft's radio; and
 - (3) only if feasible, continue to monitor the frequency until such a time as the signal ceases, and inform the appropriate RCC or air traffic services unit.

170.45 Search and rescue signals

- (a) The visual signals for air-to-surface and surface-to-air communication listed in the Appendix must be used strictly as defined. They are intended solely for their specified purposes, and no other signals that could be mistaken for them should be used.
- (b) When any of the signals listed in the Appendix A are observed, aircraft must respond in accordance with the meaning assigned to that signal in the Appendix A.

170.47 Maintenance of records

- (a) Each rescue coordination centre shall keep a record of the operational efficiency of the search and rescue organization in its region.

- (b) Each rescue coordination centre shall prepare reports of actual search and rescue operations in its region. These reports should comprise any pertinent remarks on the procedures used and, in the emergency, survival equipment, and any suggestions for improvement of those procedures and equipment. Those appraisals which are likely to be of interest to other States should be submitted to ICAO and the Governor for information and dissemination as appropriate.

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Appendix A – Search and Rescue Signals

- (a) The following manoeuvres performed in sequence by an aircraft mean that the aircraft wishes to direct a surface craft towards an aircraft or a surface craft in distress:
- (1) circling the surface craft at least once;
 - (2) crossing the projected course of the surface craft close ahead at low altitude and:
 - (i) rocking the wings; or
 - (ii) open and closing the throttle; or
 - (iii) changing the propeller pitch.
 - (3) heading in the direction in which the surface craft is to be directed.

Note: Repetition of such manoeuvres has the same meaning.

- (b) aircraft that execute the following manoeuvres signal that the assistance of the surface craft is no longer required by crossing the wake of the surface craft close astern at low altitude and:
- (1) rock the wings; or
 - (2) opening and closing the throttle; or
 - (3) changing the propeller pitch.
- (c) The following replies may be made by the surface craft to acknowledge the receipt of signals defined in Appendix B (a):
- (1) the hoisting of the “code pennant” (vertical red and white stripes) close up (meaning understood);
 - (2) the flashing of a succession of “T’s” by signal lamp in the Morse code;
 - (3) the changing of heading to follow the aircraft.
- (d) The following replies may be made by the surface craft to indicate inability to comply with signals defined in Appendix B (a):
- (1) the hoisting of the international flag “N” (a blue and white checkered square);
 - (2) the flashing of a succession of “N’s” in the Morse code.

Table 170-1 Ground-air visual signal codes

	Message	Code symbol
1	Require assistance	V
2	Require medical assistance	X
3	No or Negative	N
4	Yes or Affirmative	Y
5	Proceeding in this direction	↑

Table 170-2 Ground-air visual signal code for use by survivors

	Message	Code symbol
1	Operation completed	L L L
2	We have found all personnel	<u>L</u> L
3	We have found only some personnel	++
4	We are not able to continue. Returning to base	X X
5	Have divided into two groups. Each proceeding in direction indicated	
6	Information received that aircraft is in this direction.	→ →
7	Nothing found. Will continue to search.	N N

- (e) Symbols shall be at least 2.5 metres or 8 feet long and shall be as conspicuous as possible.

Note: Symbols may be formed by any means such as: strips of fabric, parachute material, pieces of wood, stones or such like material; marking the surface by tramping on or staining with oil.

- (f) Other means such as radio, flares, smoke and reflected light can be used to attract attention to signals.
- (g) The following signals mean that an aircraft has understood a ground signal:
- (1) rocking of aircraft wings (daylight hours);

- (2) flashing landing lights twice (hours of darkness);
- (3) flashing navigation lights if no landing lights are available (hours of darkness).

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Appendix B – Organisation and System Components

These requirements are the baseline for all designated search and rescue organisations. The requirements are based on the ICAO Doc 9731 IMSAR Volume I and are to be applied to RCCs, RSCs and where applicable Central Alerting Posts. The requirements outline the key components of the SAR system and how the designated SAR organisation is to manage each component.

The designated search and rescue organisation which has established an RCC shall:

- (a) Establish one or more SRRs with capabilities to receive alerts and provide SAR services as required by 170.17.
- (b) Consider the unique transportation methods, climate, topography, and physical characteristics of each SRR to determine the service, facilities, equipment, and staffing required.
- (c) Ensure the national SAR system is integrated with the global SAR system, allowing for cooperation and coordination with neighbouring States and other international SAR organisations.
- (d) Implement processes for continuous improvement of the SAR system, including regular assessments, training, and exercises.
- (e) Ensure RCCs have the necessary facilities, equipment, and trained personnel to perform their functions effectively.
- (f) Produce and maintain comprehensive plans for the conduct of SAR within its SRR and for the coordinated actions within adjacent SRRs as required by 170.29.
- (g) Provide adequate support facilities such as, training, communications, medical, and other applicable services to enable operational response resources to perform SAR services effectively.
- (h) Consider co-locating or combining maritime and aeronautical RCCs into a Joint RCC for efficiency.
- (i) Locate the RCC where it can effectively perform its functions within its SRR.
- (j) Ensure that if the RCC is collocated with other agencies, clear procedures are adopted to ensure the integrity of the SAR mission and that adequate equipment and resources are made available.
- (k) As a minimum, establish and maintain the following capabilities on a 24-hour basis:
 - (1) trained and competent personnel with a working knowledge and communication standard of the English language;
 - (2) aeronautical, nautical, topographic and hydrographic charts which apply to the SRR. The charts may be wall-mounted or arranged in a way that allows for broad visual viewing;
 - (3) means of plotting;

- (4) ability to receive distress alerts;
- (5) means of immediate communications with associated ATS units, associated RSCs, DF and position fixings stations;
- (6) means of rapid and reliable communications with parent agencies of search and rescue units, adjacent RCCs, designated and appropriate metrological offices, alerting posts;
- (7) means of planning a SAR operation;
- (8) ability to coordinate the provision of medical advice, medical assistance or evacuation;
- (9) computer and associated database capabilities, including vessel tracking information using Aeronautical Information Services (AIS), Long-range Identification and Tracking (LRIT), Vessel Monitoring System (VMS) and SAR services.

The designated search and rescue organisation shall:

- (a) Provide effective communications to relay distress alerts promptly to an RCC.
- (b) Ensure RCCs have the capability to receive alerts from various sources and maintain two-way communications with persons in distress.
- (c) Ensure that alerting posts relay distress alerts to RCCs or RSCs.
- (d) Ensure alerting posts include any facility involved in receiving information about an apparent distress situation and relaying it to an RCC or RSC.

Note: These facilities can include air traffic services (ATS) units, coast radio stations (CRSs), and other designated posts.

- (e) Ensure that communications between alerting posts and RCCs/RSCs are prompt and reliable and include direct or public telephone lines, radio, or other means.
- (f) Within reason, partner with alerting posts to ensure that personnel are qualified to carry out their responsibilities.
- (g) Where possible and practicable, ensure that data alerts are automatically routed to the responsible RCC or RSC via communication links which help preserve the distress priority.
- (h) Provide locating capabilities that enable the responding SAR facilities to minimise the search time and ensure rapid arrival at the actual position of distress for rescue.
- (i) Ensure any aircraft designated for SAR must be able to home onto an ELT used for locating a distress scene and survivors broadcasting on 121.5 MHz.
- (j) Explore other means of determining important position information for SAR operations. Other suitable methods may include direction finding stations and other surveillance systems for aircraft and vessels.

Note: Having precise search object position is useful, but does not eliminate the need for homing capabilities.

- (k) Establish and maintain local and international agreements which enable effective communications with mobile facilities, RCCs, RSCs and alerting posts, depending on the arrangement in the territory.
- (l) Ensure that communications are reliable and dedicated to preserving message priority or pre-emptive handling.
- (m) Ensure that any communications with or involving the SAR mission coordinator (SMC) handling a SAR incident use pre-planned communication channels for coordination, especially with the on-scene commander (OSC) and other facilities on scene.
- (n) The equipment and communication protocols in place at an RCC or RSC shall be sufficient to handle the volume and diversity needs for the worst-credible scenario. Appendix C provides further details on mission coordination.
- (o) Ensure all personnel are familiar with all of the facilities available for SAR within its SRR.

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Appendix C – Mission Coordination

- (a) Each state shall designate one or more Search and Rescue Coordinators (SCs) who shall have overall responsibility for the establishment, staffing, equipping, and management of the Search and Rescue system.
- (b) The SCs shall ensure the provision of:
 - (1) appropriate legal and funding support for SAR activities;
 - (2) the establishment and maintenance of RCCs, RSCs or CAPs;
 - (3) the provision or arrangement of SAR facilities;
 - (4) the coordination and oversight of SAR training programmes;
 - (5) the development and implementation of SAR policies and procedures.
- (c) SCs shall act as the top-level SAR managers within the SAR organisation. This designation may apply to one or more persons or agencies, depending on the structure and needs of the organisation.
- (d) SCs shall not normally be involved in the direct conduct of SAR operations.

Note: Further guidance on the roles and responsibilities of SAR Coordinators may be found in the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual, Volume I – Organization and Management.

- (e) SAR operations shall be conducted under the direction and supervision of a designated SAR Mission Coordinator (SMC).
- (f) The SMC shall normally be the supervisor of the RCC or RSC watch team on duty at the time of the incident.
- (g) In situations involving multiple simultaneous SAR incidents:
 - (1) a single SMC may oversee all incidents, or
 - (2) the SMC role may be delegated to another suitably qualified member of the RCC or RSC watch team for one or more of the incidents.
- (h) The SMC shall be supported by RCC or RSC watch team members who shall assist with:
 - (1) communications;
 - (2) plotting and tracking;
 - (3) logging of operational activities;
 - (4) search planning and coordination.
- (i) The SMC shall be capable of:
 - (1) competently gathering and assessing emergency information;

- (2) transforming incident data into accurate and actionable SAR plans;
 - (3) dispatching and coordinating SAR facilities to execute the mission effectively;
 - (4) responding to a request for medical advice at sea (MEDICO) and for medical evacuation.
- (j) The SMC shall retain operational control of a SAR mission:
- (1) until a successful rescue has been affected, or
 - (2) until it is determined that further efforts would be of no avail, or
 - (3) until responsibility for the operation is formally accepted by another RCC.
- (k) The SMC shall have the authority to:
- (1) utilise all readily available SAR facilities;
 - (2) request additional SAR resources as required to support the operation.
- (l) The SMC shall retain operational control of a SAR mission:
- (1) until a successful rescue has been affected; or
 - (2) until it is determined that further efforts would be of no avail; or
 - (3) until responsibility for the operation is formally accepted by another RCC.
- (m) The SMC shall retain operational control of a SAR mission:
- (1) until a successful rescue has been affected. or
 - (2) until it is determined that further efforts would be of no avail. or
 - (3) until responsibility for the operation is formally accepted by another RCC.
- (n) The RCC shall maintain up-to-date operational plans to support the SMC in the execution of these responsibilities.
- (o) The Aircraft Coordinator (ACO) function shall be established to support high flight safety and enhance the effectiveness of SAR operations. The ACO shall operate as a cooperating, supporting, and advisory service within the SAR framework. The ACO shall normally be designated by the SMC. If designation by the SMC is not practicable, the On-Scene Coordinator (OSC) shall designate the ACO.
- (p) The ACO shall:
- (1) coordinate airborne resources within a defined geographical area;

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- (2) assist in maintaining flight safety by issuing safety-related information;
 - (3) implement flow planning, including defining points of entry and exit;
 - (4) prioritise and allocate operational tasks among airborne assets;
 - (5) coordinate the coverage of designated search areas;
 - (6) forward radio messages, which may constitute their sole duty if required;
 - (7) prepare and transmit consolidated situation reports (SITREPs) to the SMC and OSC, as appropriate;
 - (8) maintain close operational collaboration with the OSC;
 - (9) ensure that participating airborne units minimise disturbance to others, including noise and rotor wash, whenever possible.
- (q) Rescue Coordination Centre (RCC) personnel shall be familiar with the provisions of the International Convention for the Safety of Life at Sea (SOLAS) relating to the Global Maritime Distress and Safety System (GMDSS), as well as associated International Maritime Organisation (IMO) documentation.
- (r) RCC personnel shall also be aware that vessels not subject to SOLAS may have varying levels of GMDSS capability, ranging from full compliance to none.

Appendix D – Mobile Facilities

- (a) The following visual means of communication should be used when appropriate:
 - (1) signalling lamp
 - (2) international code flags
 - (3) international distress signals
- (b) Life-saving signals described in V/29 of SOLAS 1974 shall be used.
- (c) The SMC shall normally select SAR-dedicated frequencies for use on scene, inform the OSC and SAR facilities of the selected frequencies, and establish communications with adjacent RCCs and parent agencies of SAR facilities as appropriate.
- (d) The OSC shall maintain communications with all SAR facilities and the SMC throughout the operation. A primary and secondary frequency shall be assigned for on-scene communications to ensure redundancy and operational continuity.
- (e) If multiple aircraft are involved in a SAR operation and the OSC does not have specific aircraft coordination capability, an ACO shall be appointed to assist in maintaining flight safety and managing communications with aircraft on scene. When relatively few units are responding, communications may be maintained on a single coordinating frequency. In more complex operations, communications shall be divided across multiple frequencies to improve efficiency and reduce frequency congestion.
- (f) In the event of a ship casualty, the OSC and the ACO shall use VHF Channel 16 for initial coordination. Other units on scene shall operate on designated
- (g) working frequencies relevant to their role in the operation.
- (h) Surface units shall normally use VHF Channel 6, coordinated by the OSC. Aircraft coordinated by the ACO shall use 123.1 MHz. All units shall, where possible, monitor the main coordination frequency to maintain situational awareness.
- (i) The OSC may issue Situation Reports (SITREPs) to keep all units informed. Additional frequencies may be assigned by the OSC for specific operational tasks, such as helicopter winching or surface searches conducted as part of a wider SAR effort.
- (j) The OSC shall obtain a search and/or rescue action plan from the SMC via the RCC as soon as possible.
- (k) The OSC shall provide SITREPs to keep the SMC informed on the on-scene mission progress and conditions.
- (l) Where pollution or threat to pollution exists from a vessel or aircraft, the agency responsible for environmental protection should be informed and included as an addressee on the SITREPs from the SMC.

- (m) SITREPs shall be provided as described by ICAO Doc 9731 Volume III Appendix D.
- (n) To ensure effective coordination between surface and aircraft facilities during search and rescue (SAR) operations, search patterns and procedures shall be pre-planned. This pre-planning shall enable ships and aircraft to operate cooperatively with minimal risk and delay.
- (o) Search planning, including the conducting of searches and search patterns, shall be conducted in accordance with ICAO Doc 9721 Volume III.

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