

# Democratic Socialist Republic of Sri Lanka



Civil Aviation Authority of Sri Lanka

## **Implementing Standards**

(Issued under Sec. 120, Civil Aviation Act No. 14 of 2010)

### **Title : Compliance to Annex-12 – Search & Rescue Service**

**Reference No. :** CA-IS-2014-ANS-004    **S.N. :** 029    **Date:** 15<sup>th</sup> August 2014

Pursuant to Sec. 120 of the Civil Aviation Act No.14 of 2010, Director General of Civil Aviation shall have the power to issue, whenever he considers it necessary or appropriate to do so, such Implementing Standards as are required for the purpose of giving effect to any of the provisions of the Civil Aviation Act, any regulations or rules made thereunder including the Articles of the Convention on International Civil Aviation which are specified in the Schedule to the Act.

Accordingly, the undersigned being the Director General of Civil Aviation do hereby issue the Implementing Standards as mentioned in the Attachment hereto (Ref: CA-IS-2014-ANS -004-Att-01], for the purpose of giving effect to the provisions in the aforementioned Act and Standards & Procedures described under Article 37 of the Convention, which are specified in the Attachment.

These Implementing Standards shall come into force with immediate effect and remain in force unless revoked.

Attention is also drawn to sec. 103 of the Act, which states inter alia that failure to comply with Implementing Standard is an offence.

H.M.C. Nimalsiri  
Director General of Civil Aviation and  
Chief Executive Officer

Civil Aviation Authority of Sri Lanka  
04, Hunupitiya Road  
Colombo 02.

Enclosure: Attachment No. CA-IS-2014-ANS-004-Att-01



## Implementing Standards

### **Title: Compliance to Annex-12 –Search & Rescue Service**

#### **CHAPTER 1**

##### **1.1. GENERAL**

- i. Requirements contained in this document are based on the amendment 18 of ICAO Annex12 – “Search & Rescue Service”.
- ii. The requirements contained in this document are applicable to the organizations responsible for the coordination and provision of Search & Rescue operations.
- iii. Requirements published in this document shall be strictly complied by the Rescue Coordination Centre, Maritime Rescue Coordination Centre and organizations responsible for the Search and Rescue Services in Sri Lanka.
- iv. This document supersedes the Aviation Safety Notice (ASN) 124 issued by the DGCA and ASN 124 shall be treated as null and void.
- v. This document may be amended from time to time and the amendments will be issued in the form of new pages to replace the relevant pages of this document.

##### **1.2. DEFINITIONS**

When the following terms are used in this document they have the following meanings;

**Alerting post:** Any facility intended to serve as an intermediary between a person reporting an emergency and a rescue coordination centre or rescue sub centre.

**Alert phase:** A situation wherein apprehension exists as to the safety of an aircraft and its occupants.

**Distress phase:** 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:** The forced landing of an aircraft on water.

**Emergency phase:** A generic term meaning, as the case may be, uncertainty phase, alert phase or distress phase.

**Joint rescue coordination centre (JRCC):** A rescue coordination centre responsible for both aeronautical and maritime search and rescue operations.

**Operator:** A person, organization or enterprise engaged in or offering to engage in an aircraft operation.



**Pilot-in-command:** The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

**Rescue:** 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):** 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 sub-centre (RSC):** A unit subordinate to a rescue coordination centre, established to complement the latter according to particular provisions of the responsible authorities.

**Search:** An operation normally coordinated by a rescue coordination centre or rescue sub-centre using available personnel and facilities to locate persons in distress.

**Search and rescue aircraft:** An aircraft provided with specialized equipment suitable for the efficient conduct of search and rescue missions.

**Search and rescue facility:** Any mobile resource, including designated search and rescue units, used to conduct search and rescue operations.

**Search and rescue service:** 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 region (SRR):** An area of defined dimensions, associated with a rescue coordination centre, within which search and rescue services are provided.

**Search and rescue unit:** A mobile resource composed of trained personnel and provided with equipment suitable for the expeditious conduct of search and rescue operations.

**State of Registry:** The State on whose register the aircraft is entered.

**Uncertainty phase:** A situation wherein uncertainty exists as to the safety of an aircraft and its occupants.

#### Abbreviations:

DGCA – Director General of Civil Aviation  
ELT -- Electronic Locator Beacon  
ICAO – International Civil Aviation Organization  
JRCC -- Joint Rescue Coordination Centre  
NOTAM Notice to Airman  
RCC -- Rescue Coordination Centre  
RSC -- Rescue Sub Centre  
SAR -- Search & Rescue  
SRR -- Search & Rescue Region  
UTC -- Coordinated Universal Time  
SL Navy –Sri Lanka Navy  
AASL - Airport & Aviation Services (SL) Ltd



## CHAPTER 2 - ORGANIZATION

### 2.1 Search and Rescue services

2.1.1 Civil Aviation Authority of Sri Lanka shall make necessary arrangements for the establishment and prompt provision of Aeronautical Search and Rescue (SAR) services to ensure that assistance is rendered to aircraft in distress and to survivors of aircraft accidents. Such services shall be provided on a 24-hour basis.

2.1.1.1 Such services shall be provided within the Search & Rescue Region (SRR) of Sri Lanka defined under the Regional Air Navigation Agreement of Asia Pacific Region, including the territory of Sri Lanka.

2.1.1.2 SAR services shall include organized available resources, communication facilities and a workforce skilled in coordination and operational functions.

2.1.1.3 SAR services shall establish processes to improve service provision, including the aspects of planning, domestic and international cooperative arrangements and training.

2.1.2 SAR Units shall provide assistance to aircraft in distress and to survivors of aircraft accidents regardless of the nationality or status of such persons or the circumstances in which such persons are found.

2.1.3 Organizations involved with Search and Rescue operations shall use Search and Rescue units and other available facilities to assist any aircraft or its occupants that are or appear to be in a state of emergency.

2.1.4 Aeronautical and Maritime Rescue Coordination Centre's serving the SRR of Sri Lanka, maintained by Airport & Aviation Services and Sri Lanka Navy shall ensure the closest practicable coordination between the centres.

2.1.5 Consistency and cooperation between Aeronautical and Maritime Search and Rescue services shall be maintained by Airport & Aviation Services and Sri Lanka Navy responsible for the provision of those services.

2.1.6 A joint Rescue Coordination Centre (JRCC) should be established to coordinate aeronautical and maritime Search and Rescue operations, where practical.

### 2.2 Search and Rescue Regions

2.2.1 Aeronautical Search & Rescue Service shall be provided within the Search and Rescue Region of Sri Lanka.

2.2.1.1 Search and Rescue Region of Sri Lanka shall, be coincident with the Flight Information Region of Sri Lanka.



## 2.3 Rescue Coordination Centers and Rescue sub Centers

2.3.1 A Rescue Coordinating Centre (RCC) and Rescue Sub Centers (RSC) if required, shall be established in the Search & Rescue Region of Sri Lanka.

2.3.2 The Rescue Coordination Centre and, as appropriate, rescue sub centre, shall be staffed 24 hours a day by trained personnel.

2.3.3 RCC personnel involved in the conduct of radiotelephony communications shall be proficient in the use of the English language.

2.3.4 In areas where public telecommunications facilities does not permit persons observing an aircraft in emergency to notify the rescue coordination centre concerned directly and promptly, the police stations in those areas shall act as alerting posts.

## 2.4 Search and Rescue Communications

2.4.1 The Rescue Coordination Centers shall have means of rapid and reliable two-way communication with;

- a) associated air traffic services units;
- b) associated rescue sub centers;
- c) coastal radio stations capable of alerting and communicating with surface vessels in the region;
- d) the headquarters of search and rescue units in the region;
- e) Maritime Rescue Coordination Center and the Aeronautical, Maritime or Joint Rescue Coordination Centers in adjacent regions;
- f) designated meteorological office or meteorological watch office;
- g) search and rescue units;
- h) alerting posts; and
- j) Cospas-Sarsat Mission Control Centre servicing the Search and Rescue region.

2.4.2 A RSC, where provided shall have means of rapid and reliable two-way communication with:

- a) adjacent rescue sub centres;
- b) meteorological office or meteorological watch office;
- c) search and rescue units; and
- d) alerting posts.



## 2.5 Search and Rescue Units

2.5.1 The following Agencies shall act as Search & Rescue Units to provide assistance to aircraft in distress and to survivors of aircraft accidents promptly;

- 1) Sri Lanka Army
- 2) Sri Lanka Navy
- 3) Sri Lanka Air Force
- 4) Sri Lanka Coast Guard
- 5) Sri Lanka Police

2.5.1.1 The units above shall be suitably located and equipped for search and rescue operations.

2.5.2 Private/Public Agencies that do not qualify as Search and Rescue units but are nevertheless able to participate in Search and Rescue operations shall be designated as parts of the Search and Rescue plan of operation.

## 2.6 Search and Rescue Equipment

2.6.1 Search and Rescue units shall be provided with equipment for locating promptly, and for providing adequate assistance at, the scene of an accident.

2.6.2 Each Search and Rescue unit shall have means of rapid and reliable two-way communication with other Search and Rescue facilities engaged in the same operation.


2.6.3 Each Search and Rescue aircraft shall be equipped to be able to communicate on the aeronautical distress and on scene frequencies and on such other frequencies as may be prescribed.

2.6.4 Each Search and Rescue aircraft shall be equipped with a device for homing on distress frequencies.

2.6.5 Each Search and Rescue aircraft, when used for search and rescue over maritime areas, shall be equipped to be able to communicate with vessels.

*Note – Many vessels can communicate with aircraft on 2182 kHz, 4125 kHz and 121.5 MHz However, these frequencies, and in particular 121.5 MHz, may not be routinely monitored by vessels.*

2.6.6 Each Search and Rescue aircraft, when used for Search and Rescue over maritime areas shall carry a copy of the *International Code of Signals* to enable it to overcome language difficulties that may be experienced in communicating with ships.

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*Note – The International Code of Signals is published in English by the International Maritime Organization as documents I994E.*

2.6.7 Unless it is known that there is no need to provide supplies to survivors by air, at least one of the aircraft participating in a Search and Rescue operation shall carry droppable survival equipment.

2.6.8 Sri Lanka Air Force should locate, at appropriate aerodromes, survival equipment suitably packed for dropping by aircraft.



## CHAPTER 3 – CO-OPERATION

### 3.1 Co-operation between States

3.1.1 Search and Rescue organizations of Sri Lanka shall coordinate with those of neighbouring States.

3.1.2 RCC's should, whenever necessary, coordinate its SAR operations with those of neighboring States especially when these operations are proximate to adjacent Search and Rescue regions.

3.1.2.1 RCC's should, in so far as practicable, develop common Search and Rescue plans and procedures to facilitate coordination of Search and Rescue operations with those of neighboring States.

3.1.3 Subject to such conditions as may be prescribed by DGCA, RCC shall permit immediate entry of Search and Rescue units of other States into the territory Sri Lanka for the purpose of searching for the site of aircraft accidents and rescuing survivors of such accidents.

3.1.4 The authorities of Sri Lanka who wish their Search and Rescue units to enter the territory of another Contracting State for Search and Rescue purposes shall transmit a request, giving full details of the projected mission and the need for it, to the RCC of the State concerned or to such other authority as has been designated by that State.

3.1.4.1 When a request is received from the authorities of another Contracting State who wish their Search & Rescue Units to enter the territory of Sri Lanka, the authorities of Sri Lanka Shall,

- immediately acknowledge the receipt of such a request, and
- indicate the conditions, if any, as soon as possible under which the projected mission may be undertaken.

3.1.5 Civil Aviation authority which is responsible for making arrangements for the provision of Search & Rescue Services shall enter into agreements with neighboring States to strengthen Search and Rescue cooperation and coordination, setting forth the conditions for entry of each other's Search and Rescue units into their respective territories. These agreements should also provide for expediting entry of such units with the least possible formalities.

3.1.6 Rescue coordination Centres shall:

- a) request from other RCC's such assistance, including aircraft, vessels, persons or equipment, as may be needed;
- b)





c) grant any necessary permission for the entry of such aircraft, vessels, persons or equipment into the territory of Sri Lanka subject to the conditions prescribed by the Director General of Civil Aviation; and

c) make the necessary arrangements with the appropriate customs, immigration or other authorities with a view to expediting such entry.

3.1.7 RCC's shall make necessary arrangements to provide, when requested, assistance to other rescue coordination centres, including assistance in the form of aircraft, vessels, persons or equipment.

3.1.8 RCC's should make arrangements for joint training exercises involving their Search and Rescue units, those of other States and operators, in order to promote Search and Rescue efficiency.

3.1.9 Airport & Aviation Services (SL) Ltd. and Sri Lanka Navy should make arrangements for periodic liaison visits by personnel of their RCC's to the Centres of neighboring States whenever possible.

## 3.2 Co-operation with other services

3.2.1 All aircraft, vessels and local services and facilities which do not form part of the Search and Rescue organization shall cooperate fully with the latter in Search and Rescue and to extend any possible assistance to the survivors of aircraft accidents.

3.2.2 Closest practicable coordination between the relevant aeronautical and maritime authorities shall be maintained to provide for the most effective and efficient Search and Rescue services.

3.2.3 Search and Rescue Services shall cooperate with those responsible for investigating accidents and with those responsible for the care of those who suffered from the accident.

3.2.4 To facilitate accident investigation, rescue units should, when practicable, be accompanied by persons qualified in the conduct of aircraft accident investigations.

3.2.5 Aeronautical Rescue Coordination Centre is designated as the Search and Rescue point of contact for the receipt of COSPAS - SARSAT distress data.

## 3.3 Dissemination of information

3.3.1 Information necessary for the entry of Search and Rescue units of other States into the territory of Sri Lanka shall be published in the Aeronautical Information Publication (AIP) of Sri Lanka and in the Search and Rescue service arrangements.



3.3.2 When such information could benefit the provision of Search and Rescue services, the organizations responsible should make available, through the RCC's or other agencies, information regarding their search and rescue plans of operation.

3.3.3 The information regarding actions to be taken when there is reason to believe that an aircraft's emergency situation may become cause for public concern or require a general emergency response shall be disseminated to the general public and emergency response authorities, to the extent desirable and practicable.



## CHAPTER 4 - PREPARATORY MEASURES

### 4.1 Preparatory information

4.1.1 RCC's shall have readily available at all times up-to-date information concerning the following in respect of its Search and Rescue region:

- a) Search and Rescue units, and alerting posts;
- b) air traffic services units;
- c) means of communication that may be used in search and rescue operations;
- d) addresses and telephone numbers of all operators, or their designated representatives, engaged in operations in the region; and
- e) any other public and private resources including medical and transportation facilities that are likely to be useful in search and rescue.

4.1.2 Each RCC should have readily available all other information of interest to Search and Rescue, including information regarding:

- a) the locations, call signs, hours of watch, and frequencies of all radio stations likely to be employed in support of search and rescue operations;
- b) the locations and hours of watch of services keeping radio watch, and the frequencies guarded;
- c) locations where supplies of droppable emergency and survival equipment are stored; and
- d) objects which it is known might be mistaken for unlocated or unreported wreckage, particularly if viewed from the air.

4.1.3 Each RCC whose SRR includes maritime areas should have ready access to information regarding the position, course and speed of ships within its maritime areas that may be able to provide assistance to aircraft in distress and information on how to contact them.

4.1.4 The MRCC should, 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.

*Note – Amver is a cooperative international ship reporting system with worldwide coverage that is available for interrogation by all rescue coordination centres. A number of Contracting States also operate regional ship reporting systems.*



## 4.2 Plans of operation


4.2.1 Each RCC shall prepare detailed plans of operation for the conduct of Search and Rescue operations within Sri Lanka Search and Rescue Region.

4.2.2 SAR plans of operations should be developed jointly with representatives of the operators and other public and private agencies that may assist in providing Search and Rescue services or benefit from them, taking into account that the number of survivors could be large.

4.2.3 The plans of operation shall specify arrangements for the servicing and refueling, to the extent possible, of aircraft, vessels and vehicles employed in Search and Rescue operations, including those made available by other States.

4.2.4 The SAR plans of operation shall contain details regarding actions to be taken by those persons engaged in search and rescue, including:

- a) the manner in which search and rescue operations are to be conducted in the Search and Rescue region;
- b) the use of available communication systems and facilities;
- c) the actions to be taken jointly with other rescue coordination centres;
- d) the methods of alerting en-route aircraft and ships at sea;
- e) the duties and prerogatives of persons assigned to search and rescue;
- f) the possible redeployment of equipment that may be necessitated by meteorological or other conditions;
- g) the methods for obtaining essential information relevant to search and rescue operations, such as weather reports and forecasts, appropriate NOTAM, etc.;
- h) the methods for obtaining, from other rescue coordination centres, such assistance, including aircraft, vessels, persons or equipment, as may be needed;
- i) the methods for assisting distressed aircraft being compelled to ditch to rendezvous with surface craft;
- j) the methods for assisting Search and Rescue or other aircraft to proceed to aircraft in distress; and
- k) cooperative actions to be taken in conjunction with air traffic services units and other authorities concerned to assist aircraft known or believed to be subject to unlawful interference.

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4.2.5 SAR plans of operation should be integrated with airport emergency plans to provide for rescue services in the vicinity of aerodromes including, for coastal aerodromes, areas of water.

### **4.3 Search and Rescue Units**

4.3.1 Each Search and Rescue Unit shall:

- a) be cognizant of all parts of the plans of operation prescribed in 4.2 that are necessary for the effective conduct of its duties; and
- b) keep the rescue coordination centre informed of its preparedness.

4.3.2 Each Search & Rescue Unit shall:

- a) maintain in readiness the required number of search and rescue facilities; and
- b) maintain adequate supplies of rations, medical stores, signaling devices and other survival and rescue equipment.

### **4.4 Training and exercises**

To achieve and maintain maximum efficiency in Search and Rescue, agencies involved with Search & Rescue functions shall provide regular training of their Search and Rescue personnel and arrange appropriate Search and Rescue exercises.

### **4.5 Wreckage**

Wreckage resulting from aircraft accidents within the territory of Sri Lanka or, in the case of accidents on the high seas, within the Search and Rescue region for which Sri Lanka is responsible, shall be removed, obliterated or charted following completion of the accident investigation, if its presence might constitute a hazard or confuse subsequent Search and Rescue operations.



## CHAPTER 5 - OPERATING PROCEDURES

### 5.1 Information concerning emergencies

5.1.1 Any authority or any element of the Search and rescue organization having reason to believe that an aircraft is in an emergency shall give immediately all available information to the RCC concerned.

5.1.2 RCC shall, immediately upon receipt of information concerning aircraft in emergency, evaluate such information and assess the extent of the operation required.

5.1.3 When information concerning aircraft in emergency is received from other sources than air traffic services units, the rescue coordination centre shall determine to which emergency phase the situation corresponds and shall apply the procedures applicable to that phase.

### 5.2 Procedures for Rescue Coordination Centres during emergency phases

#### 5.2.1 Uncertainty phase

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.


#### 5.2.2 Alert phase

Upon the occurrence of an alert phase the rescue coordination centre shall immediately alert SAR units and initiate any necessary action.

#### 5.2.3 Distress phase

Upon the occurrence of a distress phase, the rescue coordination centre shall:

- a) immediately initiate action by search and rescue units in accordance with the appropriate plan of operation;
- b) 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;
- c) notify the operator, where possible, and keep the operator informed of developments;
- d) notify other rescue coordination centres, the help of which seems likely to be required, or which may be concerned in the operation;

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- e) notify the associated air traffic services unit, when the information on the emergency has been received from another source;
- f) 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:
  - 1) maintain a listening watch for transmissions from the aircraft in distress, survival radio equipment or an ELT;
  - 2) assist the aircraft in distress as far as practicable; and
  - 3) inform the rescue coordination centre of any developments;
- g) 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;
- h) amend as necessary, in the light of evolving circumstances, the detailed plan of action;
- i) notify the appropriate accident investigation authorities; and
- j) notify the State of Registry of the aircraft.

The order in which these actions are described shall be followed unless circumstances dictate otherwise.

#### 5.2.4 Initiation of Search and Rescue action in respect of an aircraft whose position is unknown

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 Search and Rescue regions, the following shall apply:

- a) When a RCC is notified of the existence of an emergency phase and is unaware of other centres taking appropriate action, it shall assume responsibility for initiating suitable action in accordance with 5.2 and confer with neighbouring rescue coordination centres with the objective of designating one rescue coordination centre to assume responsibility forthwith.
- b) Unless otherwise decided by common agreement of the Rescue Coordination Centres concerned, the Rescue Coordination Centre to coordinate Search and Rescue action shall be the centre responsible for:
  - the region in which the aircraft last reported its position; or
  - the region to which the aircraft was proceeding when its last reported position was on the line separating two search and rescue regions; or



- 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
  - the region in which the distress site is located as identified by the Cospas-Sarsat system.
- c) After declaration of the distress phase, the RCC with overall coordination responsibility shall inform all RCC's that may become involved in the operation of all the circumstances of the emergency and subsequent developments. Likewise, all RCC's becoming aware of any information pertaining to the emergency shall inform the rescue RCC that has overall responsibility.

#### 5.2.5 Passing of information to aircraft in respect of which an emergency phase has been declared

Whenever applicable, the RCC responsible for search and rescue action shall forward to the air traffic services unit serving the flight information region in which the aircraft is operating, information of the search and rescue action initiated, in order that such information can be passed to the aircraft.

### 5.3 Procedures where responsibility for operations extends to two or more Contracting States

Where the conduct of operations over the entire Search and Rescue region is the responsibility of more than one Contracting State, each involved State shall take action in accordance with the relevant plan of operations when so requested by the RCC of the region.

### 5.4 Procedures for authorities in the field

The agencies immediately directing the conduct of operations or any part thereof shall:

- a) give instructions to the units under their direction and inform the RCC of such instructions; and
- b) keep the RCC informed of developments.

### 5.5 Procedures for Rescue Coordination Centre –Termination and suspension of operations

5.5.1 Search and Rescue operations shall continue, when practicable, until all survivors are delivered to a place of safety or until all reasonable hope of rescuing survivors has passed.

5.5.2 The responsible RCC shall normally be responsible for determining when to discontinue Search and Rescue operations.





*Note – Responsible RCC may require input from other participating agencies involved in the SAR operation in the decision-making process leading to termination of SAR operations.*

5.5.3 When a Search and Rescue operation has been successful or when a Rescue Coordination Centre considers, or is informed, that an emergency no longer exists, the emergency phase shall be cancelled, the search and rescue operation shall be terminated and any authority, facility or service that has been activated or notified shall be promptly informed.


5.5.4 If a Search and Rescue operation becomes impracticable and the RCC concludes that there might still be survivors, the centre shall temporarily suspend on-scene activities pending further developments and shall promptly inform any authority, facility or service which has been activated or notified. Relevant information subsequently received shall be evaluated and search and rescue operations resumed when justified and practicable.

## **5.6 Procedures at the scene of an accident**

5.6.1 When multiple facilities are engaged in Search and Rescue operations on-scene, the RCC shall designate one or more units on-scene to coordinate all actions to help ensure the safety and effectiveness of air and surface operations, taking into account facility capabilities and operational requirements.

5.6.2 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: of

- a) 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;
- b) determine the position the craft in distress;
- c) as appropriate, report to the RCC or air traffic services unit as much of the following information as possible:
  - type of craft in distress, its identification and condition;
  - its position, expressed in geographical or grid coordinates or in distance and true bearing from a distinctive landmark or from a radio navigation aid;
  - time of observation expressed in hours and minutes Coordinated Universal Time (UTC);
  - number of persons observed;
  - whether persons have been seen to abandon the craft in distress;
  - on-scene weather conditions;
  - apparent physical condition of survivors;
  - apparent best ground access route to the distress site; and
- d) act as instructed by the RCC or the air traffic services unit.

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5.6.2.1 If the first aircraft to reach the scene of an accident is not a SAR aircraft, it shall take charge of on-scene activities of all other aircraft subsequently arriving until the first SAR aircraft reaches the scene of the accident. If, in the meantime, such aircraft is

unable to establish communication with the appropriate RCC or air traffic services unit, it shall, by mutual agreement, hand over to an aircraft capable of establishing and maintaining such communications until the arrival of the first SAR aircraft.

5.6.3 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.

5.6.4 When a ground signal has been displayed, the aircraft shall indicate whether the signal has been understood or not by the means described in 5.6.3 or, if this is not practicable, by making the appropriate visual signal.

5.6.5 When it is necessary for an aircraft to direct a surface craft to the place where an aircraft or surface craft is in distress, the aircraft shall do so by transmitting precise instructions by any means at its disposal. If no radio communication can be established, the aircraft shall make the appropriate visual signal.

*Note – Air-to-surface and surface-to-air visual signals are published in Volume III of ICAO Doc 9731.*


## **5.7 Procedures for a Pilot-in-Command intercepting a distress transmission**

Whenever a distress transmission is intercepted by a pilot-in-command of an aircraft, the pilot shall, if feasible: acknowledge the distress transmission:

- a) record the position of the craft in distress if given;
- b) take a bearing on the transmission;
- c) inform the appropriate rescue coordination centre or air traffic services unit of the distress transmission, giving all available information; and
- d) at the pilot's discretion, while awaiting instructions, proceed to the position given in the transmission.

## **5.8 Search and Rescue signals**

5.8.1 The air-to-surface and surface-to-air visual signals in the Appendix shall, when used, have the meaning indicated therein. They shall be used only for the purpose indicated and no other signals likely to be confused with them shall be used.

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5.8.2 Upon observing any of the signals in the Appendix, aircraft shall take such action as may be required by the interpretation of the signal given in the Appendix.

## 5.9 Maintenance of records

5.9.1 Each RCC shall keep a record of the operational efficiency of their Search and Rescue organization in its region.

5.9.2 Each RCC should prepare appraisals of actual Search and Rescue operations in its region. These appraisals should comprise any pertinent remarks on the procedures used and on the emergency and 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 for information and dissemination as appropriate.



## APPENDIX 1 - SEARCH AND RESCUE SIGNALS

### 1. Signals with surface craft

1.1 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:

- a) circling the surface craft at least once;
- b) crossing the projected course of the surface craft close ahead at low altitude and:
  1. rocking the wings; or
  2. opening and closing the throttle; or
  3. changing the propeller pitch.

*Note – Due to high noise level on board surface craft, the sound signals in 2) and 3) may be less effective than the visual signal in 1) and are regarded as alternative means of attracting attention.*

- c) heading in the direction in which the surface craft is to be directed. Repetition of such manoeuvres has the same meaning.

1.2 The following manoeuvres by an aircraft means that the assistance of the surface craft to which the signal is directed is no longer required:

- crossing the wake of the surface craft close astern at a low altitude and:
  1. rocking the wings; or
  2. opening and closing the throttle; or
  3. changing the propeller pitch.

*Note – The following replies may be made by surface craft to the signal in 6.1.1:*

- *for acknowledging receipt of signals:*
  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.*
- *for indicating inability to comply:*
  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.*




*Note - See Note following 1.1 b), 3)*

## 2. Ground-air visual signal code

### 2.1 Ground-air visual signal code for use by survivors


No	Message	Code Symbol
1	Require assistance	∨
2	Require medical assistance	×
3	No or Negative	N
4	Yes or Affirmative	Y
5	Proceeding in this direction	↑

### 2.2 Ground-air visual signal code for use by rescue units

No	Message	Code Symbol
1	Operation Completed	LLL
2	We have found all personnel	<u>LL</u>
3	We have found only some personnel	++
4	We are not able to continue. Returning to base	XX
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.	NN

2.3 Symbols shall be at least 2.5 metres (8 feet) long and shall be made as conspicuous as possible.

*Note 1 – 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, or staining with oil.*

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*Note 2 – Attention to the above signals may be attracted by other means such as radio, flares, smoke and reflected light.*

### **3. Air-to-Ground signals**

- The following signals by aircraft mean that the ground signals have been understood:
  - a) during the hours of daylight:
    - by rocking the aircraft's wings;
  - b) during the hours of darkness:
    - flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.
- Lack of the above signal indicates that the ground signal is not understood.

**— END —**