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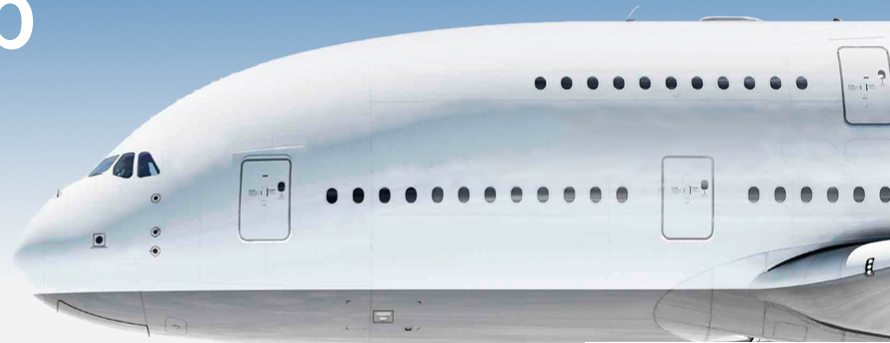
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AFI/APAC/MID Inter-regional Search and Rescue (SAR) Workshop

Salalah, Oman

26 - 29 August 2019





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The Need for Search and Rescue Cooperation

Albert Aidoo Taylor (RO-ATM & SAR)



Presentation Outline

- Definitions
- Why Search and Rescue
- Relevant ICAO Documents
- Relevant Agencies involved in SAR
- Functions and Roles of SAR Stakeholders
- What, Why, How, When, Who?
- Communication, Coordination, Collaboration, Coopetition
- SAR Structures and Processes for Cooperation
- Recommendations





Cooperation

- the action or process of working together to the same end
- collaboration, working together, joint action, combined effort, teamwork, mutual support, partnership, coopetition, coordination, liaison, association, synergy, unity,
- coopetition: collaboration between business competitors, in the hope of mutually beneficial results.

Create it





Search and Rescue

- **Search.** 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 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.



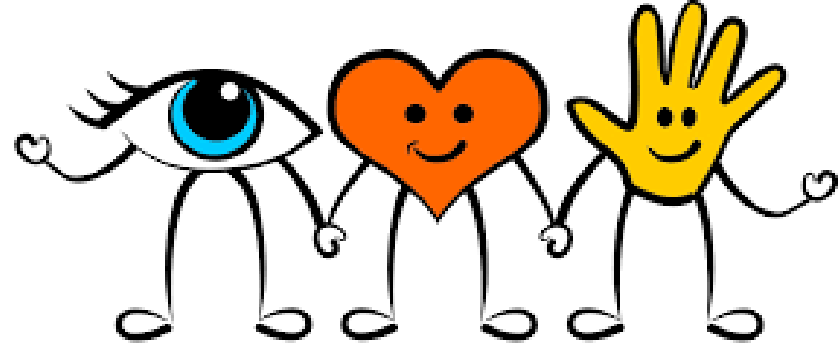
SAR Definitions

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



Why the need for Search and Rescue?

- Humanitarian Service
- Moral Obligation and Responsibility
- Sustainability of industry
- Non-political Service
- Non-Commercial



See, Feel, Act

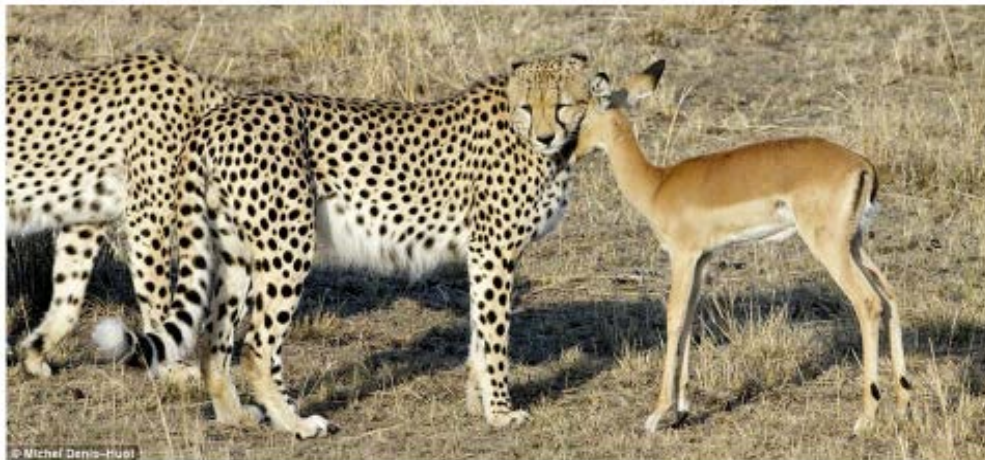


SAR IS NON-POLITICAL, NON-COMMERCIAL SERVICE



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EVEN ENEMIES CAN COOPERATE





Requirement by The Convention in Article 25

Article 25: Aircraft in distress

Each contracting State undertakes to provide such measures of assistance to aircraft in distress in its territory as it may find practicable, and to permit, subject to control by its own authorities, the owners of the aircraft or authorities of the State in which the aircraft is registered to provide such measures of assistance as may be necessitated by the circumstances. Each contracting State, when undertaking search for missing aircraft, will collaborate in coordinated measures which may be recommended from time to time pursuant to this Convention.



Annex 11: Air Traffic Service

The objectives of the air traffic services shall be to:

- e) notify appropriate organizations regarding aircraft in need of search and rescue aid, and assist such organizations as required.
- Flight Information Centres or Area Control Centres shall serve as the central point for collecting all information relevant to a state of emergency of an aircraft operating within the flight information region or control area concerned and for forwarding such information to the appropriate rescue coordination centre.



Annex 11: Air Traffic Service

- 5.1.3 In the event of a state of emergency arising to an aircraft while it is under the control of an aerodrome control tower or approach control unit, such unit shall notify immediately the flight information centre or area control centre responsible which shall in turn notify the rescue coordination centre, except that notification of the area control centre, flight information centre, or rescue coordination centre shall not be required when the nature of the emergency is such that the notification would be superfluous.
- 5.1.3.1 Nevertheless, whenever the urgency of the situation so requires, the aerodrome control tower or approach control unit responsible shall first alert and take other necessary steps to set in motion all appropriate local rescue and emergency organizations which can give the immediate assistance required.



Information to the operator

- When an area control or a flight information centre decides that an aircraft is in the uncertainty or the alert phase, it shall, **when practicable, advise the operator prior to notifying the rescue coordination centre.**
- *Note.— If an aircraft is in the distress phase, the rescue coordination centre has to be notified immediately in accordance with 5.2.1.*
- All information notified to the rescue coordination centre by an area control or flight information centre shall, whenever practicable, also be communicated, without delay, to the operator.



Coordination between ATS Unit and RCC

- information not available at the time notification is made to a rescue coordination centre, should be sought by an air traffic services unit prior to the declaration of a distress phase, if there is reasonable certainty that this phase will eventuate.
- Further to the notification, the rescue coordination centre shall, without delay, be furnished with:
 - a) any useful additional information, especially on the development of the state of emergency through subsequent phases; or
 - b) information that the emergency situation no longer exists.
- The **cancellation** of action initiated by the **rescue coordination centre** is the **responsibility of that centre**.



Communications between ATS units and other units

A flight information centre and an area control centre shall have facilities for communications with the following units:

- a) appropriate military units;
- b) meteorological office serving the centre;
- c) aeronautical telecommunications station serving the centre;
- d) appropriate operator's offices;
- e) the rescue coordination centre or, in the absence of such centre, any other appropriate emergency service;
- f) the international NOTAM office serving the centre.



Communications between APP/ADC units and other units

An approach control unit and an aerodrome control tower shall have facilities for communications with the following units:

- a) appropriate military units;
- b) rescue and emergency services (ambulance, fire, etc.);
- c) the meteorological office serving the unit concerned;
- d) the aeronautical telecommunications station serving the unit concerned;
- e) the unit providing apron management service, when separately established.



Automatic recording of surveillance data

- **Surveillance data** from primary and secondary radar equipment or other systems (e.g. ADS-B, ADS-C), used as an aid to air traffic services, **shall be automatically recorded for use** in accident and incident investigations, **search and rescue**, air traffic control and surveillance systems evaluation and training.
- **Automatic recordings** shall be retained for a period of at least **thirty (30) days**.



Annex 12: Search and Rescue

- Annex 12 is applicable to the establishment, maintenance and operation of search and rescue services in the territories of Contracting States and over the high seas, and to the coordination of such services between States.
- Notification of differences. The attention of Contracting States is drawn to the obligation imposed by Article 38 of the Convention by which Contracting States are required to notify the Organization of any differences between their national regulations and practices and the International Standards contained in this Annex and any amendments thereto.
- Contracting States shall, individually or in cooperation with other States, arrange for the establishment and prompt provision of search and rescue services within their territories to ensure that assistance is rendered to persons in distress. Such services shall be provided on a 24-hour basis.



Harmonization of aeronautical and maritime SAR Docs

- Alignment of Annex 12 provisions with the IMO Convention to the extent practicable;
- Harmonization of definitions between aeronautical and maritime SAR documents;
- **Regional approach to SAR system establishment;**
- **Policy agreement between States and operational coordination between aeronautical and maritime SAR services;** ready availability of essential data to RCC.



Cooperation Between States

- Contracting States shall coordinate their search and rescue organizations with those of neighbouring States.
- Contracting States should, whenever necessary, coordinate their search and rescue operations with those of neighbouring States especially when these operations are proximate to adjacent search and rescue regions.
- Contracting States 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 neighbouring States.



Cooperation for Operational & Timely Effectiveness

- 3.1.3 Subject to such conditions as may be prescribed by its own authorities, a Contracting State shall permit immediate entry into its territory of search and rescue units of other States for the purpose of searching for the site of aircraft accidents and rescuing survivors of such accidents.
- States 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 rescue coordination centre of the State concerned or to such other authority as has been designated by that State.



Cooperation between States, other RCCs and Agencies

The authorities of Contracting States shall:

- a) request from other rescue coordination centres such assistance, including aircraft, vessels, persons or equipment, as may be needed;
- b) grant any necessary permission for the entry of such aircraft, vessels, persons or equipment into its territory; and
- c) make the necessary arrangements with the appropriate customs, immigration or other authorities with a view to expediting such entry.
- Each Contracting State should authorize its rescue coordination centres to provide, when requested, assistance to other rescue coordination centres, including assistance in the form of aircraft, vessels, persons or equipment.



Joint Training and Liaison Visits between RCC & RSC

- Contracting States 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.
- Contracting States should make arrangements for periodic liaison visits by personnel of their rescue coordination centres and subcentres to the centres of neighbouring States.



Cooperation with other services

- Contracting States shall arrange for all aircraft, vessels and local services and facilities which do not form part of the search and rescue organization to cooperate fully with the latter in search and rescue and to extend any possible assistance to the survivors of aircraft accidents.
- Contracting States should ensure the closest practicable coordination between the relevant aeronautical and maritime authorities to provide for the most effective and efficient search and rescue services.



Cooperation between aeronautical & maritime SAR

- Contracting States 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.





Cooperation between SAR, Provision of Care and Accident Investigation Services

- Contracting States shall ensure that their search and rescue services cooperate with those responsible for investigation accidents and with those responsible for the care of those who suffered from the accident.



Cooperating to improve services (IAMSAR)

- Need for SAR managers to involve others
- Managers should understand the importance of involving others in support of the SAR system and seek to create an environment where such involvement thrives.
- Failure to do this often makes managers their own worst enemy.
- The unique humanitarian and non-political nature of SAR is an inherent advantage in fostering cooperation and involvement of others.



Working to overcome barriers

SAR manager should work to overcome organizational traits, if they exist, such as the following:

- limited communications between organizational elements;
- focus only on short-term planning and cost reductions;
- more concern about detecting than preventing problems;
- adversarial, blaming, and self-serving ways;
- rewarding heroes rather than successful teams.

ASO & UCI Show Teamwork on This Year's Tour de France





What SAR managers should do

- associate with others
- collaborate with and develop teamwork with other SAR personnel, suppliers and support agencies
- SAR personnel and organizations of other States;
- do both short- and long- term planning for SAR services;
- focus on continuous improvement and error prevention to provide the best SAR services possible;
- develop support of top management





Effective SAR coordination process

- Requires the establishment and use of **SAR coordinating committees** (SCCs) comprising SAR system stakeholders.
- **SCCs** should be established at three levels: **agency, national or regional**.
- **Agency SCCs** should deal with local **operational SAR issues** and have the ability to **refer matters higher** if required.



Effective SAR coordination process

- National SCC may consider strategic SAR policy matters and should have the ability to take matters to their respective governments for consideration.
- Regional SCCs should be able to refer SAR matters of a regional nature to their incorporated national committees for consideration.



Functions of SAR committees

- develop and recommend national strategic policy to their respective governments;
- provide a standing forum for coordination of administrative and operational SAR matters;
- develop plans, policies, positions, manuals, etc., to:
- resolve cross-agency jurisdictional issues;
- develop joint solutions for SAR matters of common concern;
- assign and coordinate SAR responsibilities; and
- develop and implement SAR requirements and standards.



Functions of SAR committees

- effectively use all available resources for SAR, including global, regional, national, private, commercial, and volunteer resources
- Sharing of databases, aircraft and ship reporting systems, training, SAR facilities, search planning expertise,
- interface with other national and international organizations involved with emergency services;
- promote close cooperation and coordination between civilian and military authorities and organizations for the provision of effective SAR services;



Functions of SAR committees

- serve as a cooperative forum to exchange information and develop positions and policies of interest to more than one-member agency;
- improve cooperation among aeronautical, maritime and land SAR communities;
- determine ways to enhance overall effectiveness and efficiency of SAR services;
- promote safety programmes to help citizens avoid or cope with distress situations; and
- develop contingency plans for use of SAR resources during disasters.



Role of SCC in National SAR Plan and Regional Agreements

- A national SAR plan or a regional SAR agreement should establish an SCC.
- This provides the process for SAR cooperation and coordination.
- Participating organizations would include those directly involved with SAR and those in a supporting role.



Multiagency SAR Platform

SAR managers may find it useful to establish **regular conferences** of representatives of departments, and those with **public and private concerns**.

This could **gain the cooperation** of those whose primary function is not SAR and would **reach agreement on the respective roles** to be performed by these facilities.



International cooperation to improve SAR services

Cooperation for: training and exercises;

- joint operational and long-range planning;
- SAR Coordination Committees;
- working relationships between SAR managers;
- liaison visits between SAR personnel;
- sharing lessons learned from actual SAR incidents and exercises;
- development of common SAR and communication procedures;
- combined public education efforts;



International cooperation to improve SAR services

- collection, integration, analysis and use of SAR statistics;
- establishment of JRCs and information databases;
- cooperation in research and development;
- making fuelling and medical facilities and medical advice available on an international basis for SAR support;
- cooperation in conducting safety inspections;
- participation in organizations or systems such as IMO, ICAO, Cospas-Sarsat, Inmarsat and Amver; and
- use and support of international SAR-related conventions, agreements and plans and manuals.



Improve SAR Communications

To improve SAR communications, SAR authorities should:

- ensure that **suitable national legislation and regulations are in place** and support international aeronautical and maritime mobile service developments;
- **reduce total communication facility shortfalls and costs by sharing facilities between organizations or States;**
- establish written communications maintenance plans, and written policies for communications procedures, reports, files and logs;



Improve SAR Communications

- provide compatible communications for civil and military facilities used for SAR to the maximum extent possible;
- provide equipment and personnel adequate to handle both operational communications and distress communications;
- ensure that communications can be carried out rapidly with operating facilities, and that high-priority messages routed quickly;
- ensure that commercial proprietary information, such as ship reports for SAR, remains proprietary and used only for SAR or safety purposes,
- where practicable, enable SAR personnel to communicate directly with potential craft in distress, including aircraft, ships, fishing vessels, recreation vessels and other types of marine craft;
- ensure that communications funding needs are included in SAR agency and SAR facility budget plans;



SAR is a highway for promoting cooperation

- SAR provides an excellent means for promoting cooperation and communication among States and between organizations at local, national, and international levels, because it is a relatively non-controversial and humanitarian mission.
- Cooperation in this area can lead to cooperation in other areas as well and can be used as a leadership tool for promoting good working relationships.
- Close cooperation between various civilian and military organizations is essential. Legislation could provide for use of military and other public resources to support SAR.



National Agencies Involved in Search and Rescue

- Ministry responsible for Transport
- Ministry responsible for Finance
- Ministry responsible for State Defense
- Ministry responsible for Foreign Affairs
- Attorney General/Ministry of Justice
- Ministry responsible for Health
- Ministry responsible for Local Government
- Chief of General Staff or Representative
- Air Force Commander or Representative
- Provincial Administration & Internal Security
- Representative responsible for Special Programs



National Agencies Involved in Search and Rescue

- Navy Commander or Representative
- Commissioner of Police or Representative
- Director General of Civil Aviation Authority
- Director General of the State Maritime Authority
- Director National Disaster/ Emergency Operation Centre
- Managing Director of the State Ports Authority
- Commissioner General of the State Revenue Authority
- Director of the State Wildlife Services
- International Organisations
- Private Agencies



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SAR INVOLVES TEAMWORK





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SAR INVOLVES TEAMWORK





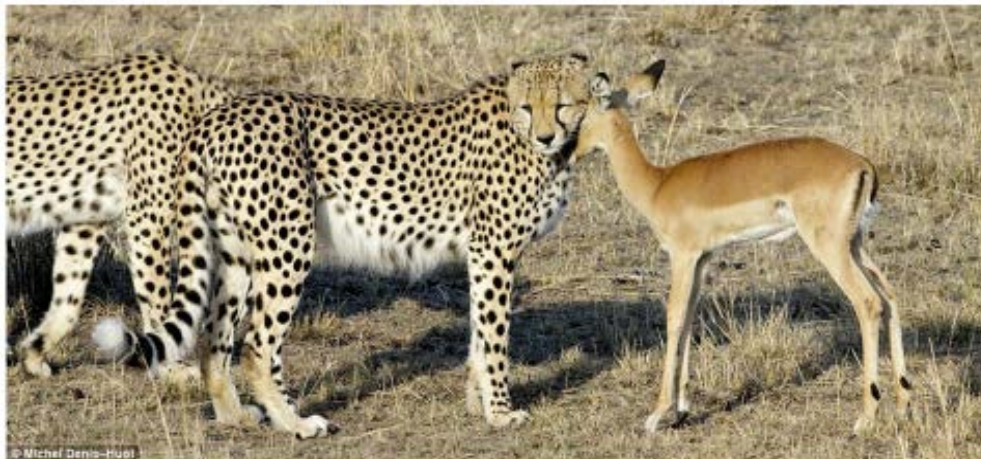
Humanitarian Service



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SUMMARY OF DISCUSSIONS



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ICAO

North American
Central American
and Caribbean
(NACC) Office
Mexico City

South American
(SAM) Office
Lima

ICAO
Headquarters
Montréal

Western and
Central African
(WACAF) Office
Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

Middle East
(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

Asia and Pacific
(APAC) Office
Bangkok



THANK YOU