



International Civil Aviation Organization

MIDANPIRG ATM Sub-Group

First Meeting (ATM SG/1)
(Cairo, Egypt, 9 – 12 June 2014)

Agenda Item 7: Search and Rescue Issues

STATUS OF SAR IN THE MID REGION

(Presented by the Secretariat)

SUMMARY

This paper presents the status of Search and Rescue (SAR) in the MID Region and the latest developments related to SAR.

Action by the meeting is at paragraph 3.

REFERENCES

– MIDANPIRG/14 Report

1. INTRODUCTION

1.1 The Standards, Recommended Practices and Procedures and guidance material related to the implementation of Search and Rescue (SAR) are contained in ICAO Annex 12, International Aeronautical and Maritime Search and Rescue Manual (IAMSAR - Doc 9731) and Regional Supplementary Procedures (Doc 7030), SAR (EUR and MID/ASIA Chapter 11).

2. DISCUSSION

2.1 The meeting may wish to recall that the main deficiencies related to the SAR in the MID Region are the following:

- a) lack of signature of SAR agreements;
- b) lack of plans of operations for the conduct of SAR operations and SAR exercises;
- c) lack of provision of required SAR services; and
- d) non-compliance with the carriage of Emergency Locator Transmitter (ELT) requirements.

2.2 The meeting may wish to recall that the requirements to carry ELTs are specified in Annex 6, Part I, paragraph 6.17 and Part II, paragraph 4.7 and they shall be operated in accordance with the provisions of Annex 10, Volume III, Part II, Chapter 5. It is to be highlighted that as of 1 January 2005 all aircraft shall be equipped with ELT capable of operating on 406 MHz and 121.5 MHz simultaneously.

2.3 The meeting may wish to recall that the main objectives of the SAR exercises are to test and improve operational plans, provide learning experience and improve liaison and coordination skills. Exercises, conducted on a realistic basis, help to demonstrate and assess the true effectiveness of training and the operational efficiency and competence of the SAR service. Exercises will reveal

deficiencies that may exist in SAR plans and enable them to be improved. It is safer to have shortcomings revealed by exercises rather than during actual operations.

2.4 Exercises can and should be conducted on three levels.

- a) the simplest type of exercise, a Communications Exercise, requires the least planning. It consists of periodic use of all means of communications between all potential users to ensure capability for actual emergencies;
- b) a Co-ordination Exercise involves simulated response to a crisis based on a series of scenarios. All levels of the SAR service are involved but do not deploy. This type of exercise requires considerable planning, and usually one to three days to execute.
- c) the third type, a Full-Scale Exercise or a Field Exercise, differs from the previous types in that actual SAR facilities are deployed. This increases the scope of SAR system-testing and adds realistic constraints due to times involved in launching, transit, and activities of the SRUs.

2.5 Successful exercises require planning, execution and evaluation. Exercises are carried out for training, to evaluate established plans and procedures and to test new concepts. Exercises also offer experience in the management of risks and safety for SAR operations.

2.6 The meeting may wish to note that MIDANPIRG/14 reviewed and updated the status of SAR agreements in the MID Region as at **Appendix A**. The meeting noted with appreciation that Iraq and Jordan signed the SAR agreement. Notwithstanding, the meeting noted the concerns raised by States related to the difficulties they are facing in the implementation of ICAO Annex 12 provisions related to search and rescue cooperation and coordination. The meeting agreed that a step-wise approach should be followed for the implementation of these provisions. However, it was highlighted that the Model of SAR Agreement available in the International Aeronautical and Maritime Search and Rescue Manual (IAMSAR Manual) (Doc 9731, Volume I, Appendix I) does not support this approach, since it covers all the Annex 12 Standards and Recommended Practices related to SAR cooperation. Accordingly, the meeting agreed that a simplified MID Region Model of SAR Agreement/Bilateral Arrangements should be developed to foster the implementation of Annex 12 provisions in a step-wise approach.

2.7 Notwithstanding, MIDANPIRG/14 urged States to include in the Letter of Agreements (LoA) between the Area Control Centres (ACCs) a Section related to SAR cooperation.

2.8 In connection with the above, MIDANPIRG/14 recalled that the national SAR Legislative and Regulatory framework should provide for the cooperation and coordination with neighboring States of the SAR operations, especially when these operations are proximate to adjacent Search and Rescue Regions (SRR).

2.9 Based on the above, MIDANPIRG/14 agreed to the following Decision:

DECISION 14/16: SEARCH AND RESCUE COOPERATION

That, the ATM Sub-Group develop a simplified MID Region Model of SAR Agreement/Bilateral Arrangements to foster the implementation of Annex 12 provisions related to SAR cooperation in a step-wise approach.

2.10 MIDANPIRG/14 noted with appreciation that all the MID States have designated a SAR Point of Contact (SPOC) for the reception of the COSPAS-SARSAT messages. The SPOC contact details are at **Appendix B**, and are also available at the COSPAS-SARSAT website: It was

highlighted that States are requested to update their SPOC details, as appropriate, by accessing the COSPAS-SARSAT website through the following link: <http://www.cospas-sarsat.org/en/component/cospasfrontend/>. Further, the meeting reviewed and updated the MID Region SAR Focal Points List as at **Appendix C**.

2.11 The meeting may wish to recall that further to the loss of the AFR flight 447 on 1 June 2009 over the Atlantic Ocean, a set of Safety Recommendations were issued related to different topics, below are the SRs related to SAR with the follow-up actions undertaken by ICAO:

<p>1.To ensure the implementation of SAR coordination plans or regional protocols covering all of the maritime or remote areas for which international coordination would be required in the application of SAR procedures, including in the South Atlantic area</p>	<ul style="list-style-type: none"> • Annex 12 — Search and Rescue, 3.1.2.1 Recommendation states that Contracting States should, in so far as practicable, develop common SAR plans and procedures to facilitate coordination with those of neighboring States. • This element is reviewed as part of the ICAO audit process, where findings are often reported on the lack of SAR legislation or SAR plans. • ICAO regional offices hold, from time to time, regional SAR workshops where this issue is progressed. • Also, in identifying the priority that needed to be placed on SAR in the APAC Region, APANPIRG established the Asia/Pacific Regional Search and Rescue Task Force in 2012. They will deliver a draft regional Search and Rescue Plan in 2015.
<p>2.To define the framework for the training of SAR operators in its Standards and Recommended practices</p>	<ul style="list-style-type: none"> • Annex 12, paragraph 2.1.1.3 refers to the need for States to establish processes to improve service provision, domestic and cooperative arrangements and training. • The International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual, Volume II — Mission Co-ordination (Doc 9731), Section 1.8, provides the guidance on training of SAR operators. • The extent that this section of the IAMSAR Manual needs to be enhanced is being reviewed during 2013 and 2014 by the ICAO/IMO Joint Working Group (JWG) on SAR.
<p>3.To ensure each Member State has a national point of contact and makes his/her contact information available</p>	<ul style="list-style-type: none"> • Annex 12, paragraph 3.2.5 requires States to designate a SAR point of contact for the receipt of COSPAS-SARSAT distress data. • COSPAS-SARSAT verifies, from time to time, the validity of the SAR point of contact details and reports back to the ICAO-IMO JWG on SAR on their findings. • COSPAS-SARSAT and the ICAO regional offices follow up with States accordingly. In addition, this aspect is reviewed during ICAO audits. Follow-up of this recommendation will take place at the next ICAO-IMO JWG on SAR. (October 2014)
<p>4. To amend Annex 12 on search and rescue operations so as to encourage Contracting States to equip their search aircraft with buoys to measure drift and to drop them, when these units are involved in the search for persons lost at sea.</p>	<p>This item is being discussed by the ICAO/IMO Joint Working Group (JWG) on SAR, and the concept is supported. The JWG will be proposing an amendment to the IAMSAR Manual in 2014 that is expected to be published in 2015/2016</p>

2.12 The meeting may wish to note that events such as the loss of AF447 and the disappearance of MH370 for a prolonged period of time have reiterated the need to improve global flight tracking capabilities in the near term. Accordingly, a Special Meeting on Global Flight Tracking was convened in Montreal, 12-13 May 2014 to address the flight tracking issues. The meeting recalled the Recommendations issued by the Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile (Accident Investigation Bureau of France, BEA) related to the disappearance of AF 447 investigations and by the ICAO High-level Safety Conference (HLSC) held in Montreal, Canada, 29 March – 1 April 2010.

2.13 The Special Meeting on Global Flight Tracking noted that:

- ICAO Air Navigation Commission (ANC) tasked the Operational Data Link Panel (OPLINKP) with the review of ICAO SARPs and guidance material with the objective of improving safety for flights over oceanic and remote areas, based on the recommendations from the BEA report and the HLSC 2010.
- Changes to ICAO Annex 10 — *Aeronautical Telecommunications*, Volume II — *Communication Procedures including those with PANS status* and ICAO *Procedures for Air Navigation Services — Air Traffic Management* (PANS-ATM, Doc 4444) will become applicable in November 2014 to facilitate surveillance of aircraft, using existing equipage and technology. It will require operators and air navigation service providers to make better use of existing controller-pilot data link communications (CPDLC) and automatic dependent surveillance – contract (ADS-C) through the implementation of more stringent procedures to ensure successful logon between ground and airborne systems, as well as the introduction of mandatory warnings sent to air traffic control (ATC) by an aircraft whenever deviations from the cleared route of flight and level are detected. This was determined to be an initial step for the improvement of surveillance and communications over oceanic and remote areas. This was also identified as a low cost solution, using existing equipage and technology. It was not meant to mandate additional equipage.

2.14 The Conclusions and recommendations of the Special Meeting on Global Flight Tracking are at **Appendix D**.

3. ACTION BY THE MEETING

3.1 The meeting is invited to urge States to:

- a) take necessary measures to implement the provisions and the requirements related to SAR;
- b) update the status of SAR agreements in the MID Region, SAR Points of Contact (SPOCs) and SAR Focal Points contact details at **Appendices A, B and C**, respectively.
- c) develop a simplified MID Region Model of SAR Agreement/Bilateral Arrangements, taking into consideration the Samples provided in other WPs;
- d) encourage States and Users to support the implementation of the Special Meeting on Global Flight Tracking Recommendations at **Appendix D**; and
- e) encourage States to provide the ICAO MID Regional Office with a periodic update related to their SAR activities/status.

MID REGION SAR AGREEMENT STATUS

June 2014

STATE	CORRESPONDING STATES			REMARKS
BAHRAIN	<input type="checkbox"/> IRAN <input type="checkbox"/> KUWAIT	<input type="checkbox"/> OMAN <input type="checkbox"/> QATAR	<input type="checkbox"/> SAUDI ARABIA <input type="checkbox"/> UAE	0/6
EGYPT	<input type="checkbox"/> GREECE <input type="checkbox"/> JORDAN	<input type="checkbox"/> LYBIA <input checked="" type="checkbox"/> CYPRUS	<input type="checkbox"/> SAUDI ARABIA <input type="checkbox"/> SUDAN	1/6
IRAN	<input type="checkbox"/> ARMENIA <input type="checkbox"/> AZERBAIJAN <input type="checkbox"/> TURKMANISTAN <input type="checkbox"/> AFGHANISTAN	<input type="checkbox"/> BAHRAIN <input type="checkbox"/> IRAQ <input type="checkbox"/> KUWAIT <input type="checkbox"/> OMAN	<input type="checkbox"/> PAKISTAN <input type="checkbox"/> TURKEY <input type="checkbox"/> UAE	0/11
IRAQ	<input type="checkbox"/> IRAN <input checked="" type="checkbox"/> JORDAN	<input type="checkbox"/> KUWAIT <input type="checkbox"/> SAUDI ARABIA	<input type="checkbox"/> SYRIA <input type="checkbox"/> TURKEY	1/6
JORDAN	<input type="checkbox"/> EGYPT <input checked="" type="checkbox"/> IRAQ	<input type="checkbox"/> ISRAEL <input type="checkbox"/> SAUDI ARABIA	<input type="checkbox"/> SYRIA	1/5
KUWAIT	<input type="checkbox"/> BAHRAIN <input type="checkbox"/> IRAN	<input type="checkbox"/> IRAQ	<input type="checkbox"/> SAUDI ARABIA	0/4
LEBANON	<input checked="" type="checkbox"/> CYPRUS	<input type="checkbox"/> SYRIA		1/2
LIBYA	<input type="checkbox"/> ALGERIA <input type="checkbox"/> CHAD <input type="checkbox"/> EGYPT	<input type="checkbox"/> MALTA <input type="checkbox"/> NIGER	<input type="checkbox"/> SUDAN <input type="checkbox"/> TUNIS	0/7
OMAN	<input type="checkbox"/> INDIA <input type="checkbox"/> IRAN	<input checked="" type="checkbox"/> SAUDI ARABIA <input type="checkbox"/> PAKISTAN	<input type="checkbox"/> UAE <input type="checkbox"/> YEMEN	1/6
QATAR	<input type="checkbox"/> BAHRAIN	<input type="checkbox"/> SAUDI ARABIA	<input type="checkbox"/> UAE	0/3
SAUDI ARABIA	<input type="checkbox"/> BAHRAIN <input type="checkbox"/> EGYPT <input type="checkbox"/> ERITREA	<input type="checkbox"/> IRAQ <input type="checkbox"/> JORDAN <input type="checkbox"/> KUWAIT	<input checked="" type="checkbox"/> OMAN <input type="checkbox"/> SUDAN <input type="checkbox"/> YEMEN	1/8
SUDAN	<input type="checkbox"/> CENTRAL AFRICAN <input type="checkbox"/> CHAD <input type="checkbox"/> EGYPT	<input type="checkbox"/> ERITREA <input type="checkbox"/> ETHIOPIA <input type="checkbox"/> LIBYA	<input type="checkbox"/> SAUDI ARABIA <input type="checkbox"/> SOUTH SUDAN	0/8
SYRIA	<input type="checkbox"/> IRAQ <input type="checkbox"/> JORDAN	<input type="checkbox"/> LEBANON <input checked="" type="checkbox"/> CYPRUS	<input checked="" type="checkbox"/> TURKEY	2/5
UAE	<input type="checkbox"/> BAHRAIN <input type="checkbox"/> IRAN	<input type="checkbox"/> OMAN	<input type="checkbox"/> QATAR	0/4
YEMEN	<input type="checkbox"/> DJIBOUTI <input type="checkbox"/> ERITREA <input type="checkbox"/> ETHIOPIA	<input type="checkbox"/> INDIA <input type="checkbox"/> OMAN <input type="checkbox"/> SAUDI ARABIA	<input type="checkbox"/> SOMALIA	0/7

Agreement Signed Agreement NOT Signed Signed Agreements / Total No. of required Agreements

MID REGION SAR POINT OF CONTACT (SPOC) – COSPAS-SARSAT

STATE	SPOC NAME	ADDRESS	EMAIL	TEL	FAX	AFTN	ASS. MCC/ STATE ¹	LAST REVISION	REMARK
Bahrain	RCC ATC Bahrain	Bahrain CAA, Air Navigation Directorate P.O. Box 586 Kingdom of Bahrain	Bahatc@caa.gov.bh	(973) 17321081 17321080	(973) 17321905	OBBISARX	SAMCC Saudi Arabia	16-April-2013	
Egypt	SAR Centre	SAR Centre Almaza Air Base Heliopolis, Cairo, Egypt	jrccl36@afmic.gov.eg mmc@saregypt.net nahedh@tra.gov.eg	(202) 24184537 24184531	(202) 24184537 24184531	HECCYCYX	ALMCC Algeria	22-OCT-2013	TELEX: (91) 21095 RCCC RUN
Iran	RCC Tehran	Civil Aviation Organization SAR Coordination Centre Mehrabad Airport Tehran, Iran	SAR@cao.ir IRAN-SAR@airport.ir rcc.IRAN@airport.ir	(9821) 44544107 44544116 44544060	(9821) 44544117 44544106	OIIZRZX	TRMCC Turkey	14-Jan-2013	
Iraq	CENTAF-AUAB CAOC JSRC			(974) 4503452 4364193	(974) 4327382		TRMCC Turkey	29-Sep-2009	
Jordan	RCC ATC Amman	RCC Civil Aviation Authority Amman Airport, Jordan		(9626) 4451672	(9626) 4451667	OJACZQZX	SAMCC Saudi Arabia	16-Apr-2013	
Kuwait	RCC ATC Kuwait	RCC DGCA Kuwait International Airport, P.O.Box 17, Kuwait		(965) 24760463 24762994	(965) 24346515 24346221	OKBKZQZX OKBKNSAR	SAMCC Saudi Arabia	16-Apr-2013	
Lebanon	RCC Beirut	RCC, DGCA Lebanon, Hariri Int'l Airport- Beirut, Lebanon		(961) 1628161	(961) 1628186 1629035	OLBIZQZX	SAMCC Saudi Arabia	16-Apr-2013	
Libya	CAA	CAA, Tripoli Int'l Airport, Libya	info@sar.caa.ly	(218.21) 5632332 4446799 3606868	(218.21) 563 0257 360 6868	HLLTYCYX	ALMCC Algeria	16-May-2013	TELEX (218.21) 5632332
Oman	RCC Muscat Air Force	RCC, HQ RAFO P.O.Box 730 Central Post Office Muscat Int'l		(968) 24519209	(968) 24334776	OOMSYAYX	SAMCC Saudi	16-Apr-2013	

¹ Associated COSPAS-SARSAT Mission Control Center / State where it is located

STATE	SPOC NAME	ADDRESS	EMAIL	TEL	FAX	AFTN	ASS. MCC/ STATE ¹	LAST REVISION	REMARK
		Airport, Oman		24519332	24338692		Arabia		
Qatar	RCC ATC			(974) 44616332 44651001 44616429	(974) 44622078 44678512	OTBDZTZX	SAMCC Saudi Arabia	16-Apr-2013	
Saudi Arabia	SAMCC	KSA.GACA / Air Navigation services P.O.Box 929 Jeddah 21421 Saudi Arabia	samcc@gaca.gov.sa	(96602) 6150170 6855812 (96650) 4601445	(96602) 6150171 6402855	OEJNJSAR	SAMCC Saudi Arabia	28-Jun-2013	TEL 3 & FAX 2 for Head of SAMCC
Sudan	ACC Khartoum	Khartoum Airport, Sudan		(249.183) 788192 784925	(249.183) 528323	HSSSYCYX	ITMCC Italy	16-Apr-2013	Thuraya +8821655524 296
Syria	RCC ATC	General Civil Aviation Authority		(963.11) 5400540	(963.11) 5400312	OSDIZQZX	SAMCC Saudi Arabia	16-Apr-2013	
UAE	AEMCC	SAR Coordination Center P.O.Box 906 GHQ Armed Forces UAE	aemcc@uae-jrcc.ae	(971.2) 4056144 4496866	(971.2) 4496844	OMADYCYX	AEMCC UAE	23-Sep-2011	
Yemen	RCC Sanaa	RCC Department of Civil Aviation Sanaa, Yemen		(967) 1344673	(967) 1345916	OYSNYCYX	SAMCC Saudi Arabia	16-April-2013	

MID REGION SAR FOCAL POINTS CONTACT DETAILS

STATE	NAME	TITLE	ADDRESS	EMAIL/AFS	FAX	TEL	MOBILE
Bahrain	ACC Duty Supervisor	ACC Duty Supervisor	Bahrain CAA P.O.Box – 586 Kingdom Of Bahrain	bahatc@caa.gov.bh	+973 17321029	+97317321081 +97317321080	
Egypt	Mr. Ibrahim Khalifa Mahmoud	General Director of Operations Centers & Crisis Management	Ministry of Civil Aviation Cairo - EGYPT	crisar@civilaviation.gov.eg	202 22681371	202 22678548	20124469052
Iran							
Iraq	Ali Muhsin Hashim	Director ATS	ANS Building, BIAP	Atc_iraqcaa@yahoo.com		964 7815762525	964 7815762525
Jordan	Mr. Khalaf Al- Shawabka	Chief Amman TACC and SAR	Queen Alia Airport	kshowbki@yahoo.co.nz	+962 445132	+ 962 4451672	96) 77790 4724
Kuwait							
Lebanon							
Libya							
Oman	RCC HQ RAFO		P.O.Box 722 Muscat P.C. 111, Oman	Hq.rafo@rafo.gov.om AFS:- OOMSICYX	+968 24334776	+968 24334211 +968 24334212	
Qatar							

STATE	NAME	TITLE	ADDRESS	EMAIL/AFS	FAX	TEL	MOBILE
Saudi Arabia	Mr. Ahmad B. Altunisi	Manager SAR Head of SAMCC	General Authority of Civil Aviation	jaf-2010@hotmail.com	966-2 671 9041	966-2 671 7717/1840	966-50 460 1445
Sudan							
Syria	Mr. Monif Abdulla	Head of S.A.R. Department Syrian Civil Aviation Authority	Damascus Airport	monif77@hotmail.com	963-11 540 0312	963-11 540 0312	963 932 710351
UAE	UAE ATC Duty Supervisor			atc@szc.gcaa.ae	971 2 599 6850	971 2 599 6969	
Yemen							

**CONCLUSIONS AND RECOMMENDATIONS
SPECIAL MEETING ON GLOBAL FLIGHT TRACKING
MONTRÉAL, 12-13 MAY 2014**

The International Civil Aviation Organization (ICAO), upon the completion of this Special Meeting on Global Flight Tracking of Aircraft, forged consensus among its Member States and the international air transport industry sector on the near-term priority to track airline flights, no matter their global location or destination. Furthermore, the meeting established a framework for future efforts in this regard for the medium and long term.

The meeting concluded that:

NEAR-TERM

- a) global tracking of airline flights will be pursued as a matter of priority to provide early notice of and response to abnormal flight behaviour;
- b) a DRAFT concept of operations on flight tracking will be developed that includes a clear definition of the objectives of flight tracking that ensures that information is provided in a timely fashion to the right people to support search and rescue, recovery and accident investigation activities, as well as, the roles and responsibilities of all stakeholders;
- c) under the ICAO framework, the contribution by the industry through an Aircraft Tracking Task Force (ATTF) will help address the near-term needs for flight tracking;
- d) ICAO will consider establishing a short term joint ICAO/IATA advisory group to support the global tracking initiative;
- e) airlines will be encouraged to use existing equipment and procedures to the extent possible to support flight tracking pending the outcome of the AATF;
- f) in partnership with the Task Force, ICAO will develop guidance material, based on available flight tracking best practices;
- g) a FINAL high level concept of operations should be delivered to the ICAO High Level Safety Conference (HLSC 2015, February, Montreal);
- h) ICAO should increase its resources allocated to the Search and Rescue in order to improve the effectiveness across national and regional boundaries;

- i) ICAO should, in collaboration with a pool of search and rescue experts, identify and address operational search and rescue challenges with implementation of existing Annex 12 provisions, and provide assistance to States, including aiding in the setting of priorities for the mid and long term;
- j) ICAO should facilitate the sharing of experience and lessons learned from States that were recently involved in accidents where flight tracking could have facilitated search and rescue efforts to all other States;
- k) ICAO should strongly encourage States to regularly run practice exercises involving airlines operation centres, air navigation service providers (ANSPs) and rescue coordination centres (RCCs) to test and verify their ability to respond and coordinate together in an integrated manner to abnormal flight behaviour scenarios;

MID-TERM

- l) ICAO performance based provisions should be developed, using a multidisciplinary approach, on flight tracking to support the location of an accident site in a timely manner for the purpose of search and rescue and accident investigation;
- m) ICAO performance based provisions addressing flight tracking requirements should be sufficiently flexible to accommodate regional needs and be commensurate to operational situations;
- n) ICAO should encourage States and International Telecommunication Union (ITU) to take action, at the earliest opportunity, to provide the necessary spectrum allocations as emerging aviation needs are identified. This includes spectrum for satellite and radio services used for safety of life aviation services. ICAO encourages ITU to place this on the Agenda for the upcoming ITU World Radio Conference 2015;
- o) COSPAS-SARSAT should be invited to continue to investigate, within its own program and in partnership with the industry, the means of improving the reliability and utility of emergency locator transmitter (ELTs), particularly in the context of flight tracking during a distress event; and

LONG-TERM

- p) ICAO should work in coordination with ITU to develop aviation requirements for network communications associated with remote storage of flight information.

- End -