

KINGDOM OF BAHRAIN

Ministry of Transportation  
and Telecommunications



مَمْلَكَة الْبَحْرَيْن  
وَأَزَارَةُ الْمَوَاصِلَاتِ وَالْإِتْصَالَاتِ

# Bahrain Civil Aviation Affairs

## Search & Rescue





# Introduction

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- **The Search and Rescue function is a State obligation in accordance with:**
- **The International Convention on Maritime Search and Rescue (Hamburg, 27 April 1979),**
- **The Convention on International Civil Aviation (Chicago, 7 December 1944)**
- **ICAO Annex 12 to the convention, and**
- **The International Convention on Safety of Life at Sea (SOLAS) (London, 1 November 1974 as amended).**



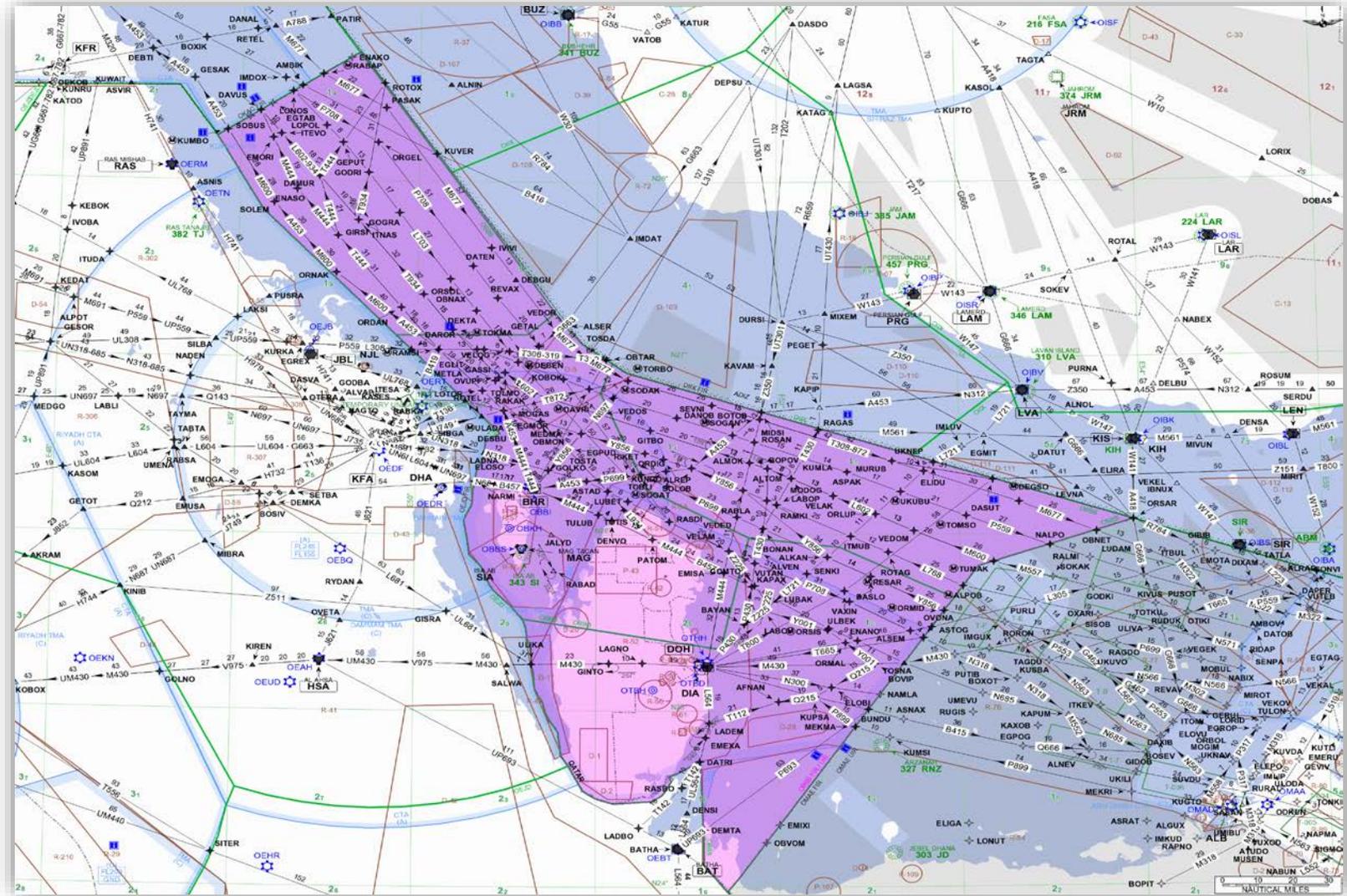
# Introduction

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- The Search and Rescue Services (SAR) in BAHRAIN FIR are organized in accordance with ICAO Annex 12 Standards/Recommended Practices and the IAMSAR Manual.
- Bahrain Air Traffic Services Centre is responsible for the notification, coordination and assistance to SAR units providing the services in the Bahrain Search and Rescue Region (SRR).
- The Bahrain SRR is coincident with Bahrain FIR excluding State of Qatar Territory (land area) and their respective territorial waters.

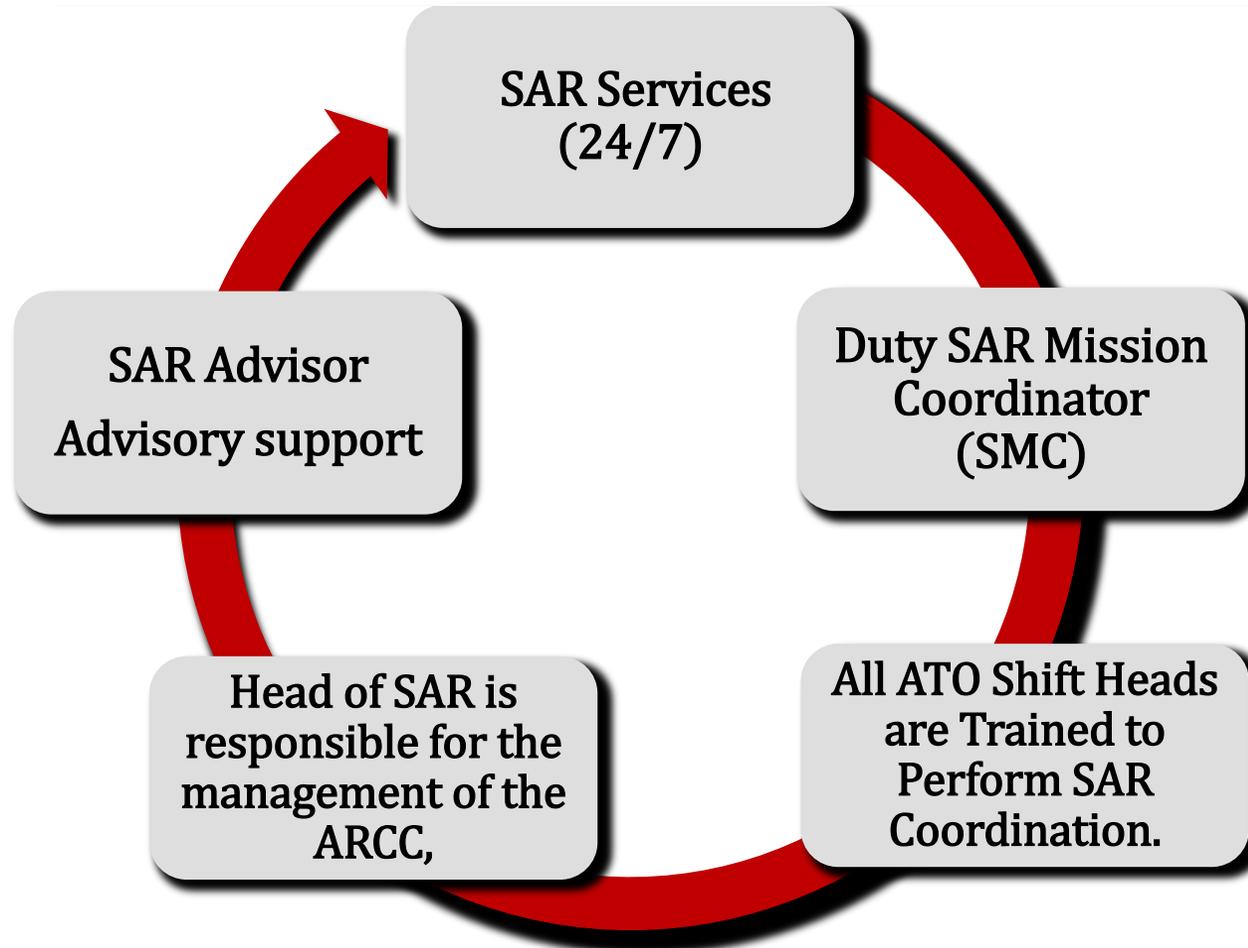


# Bahrain SRR





# SAR Organization

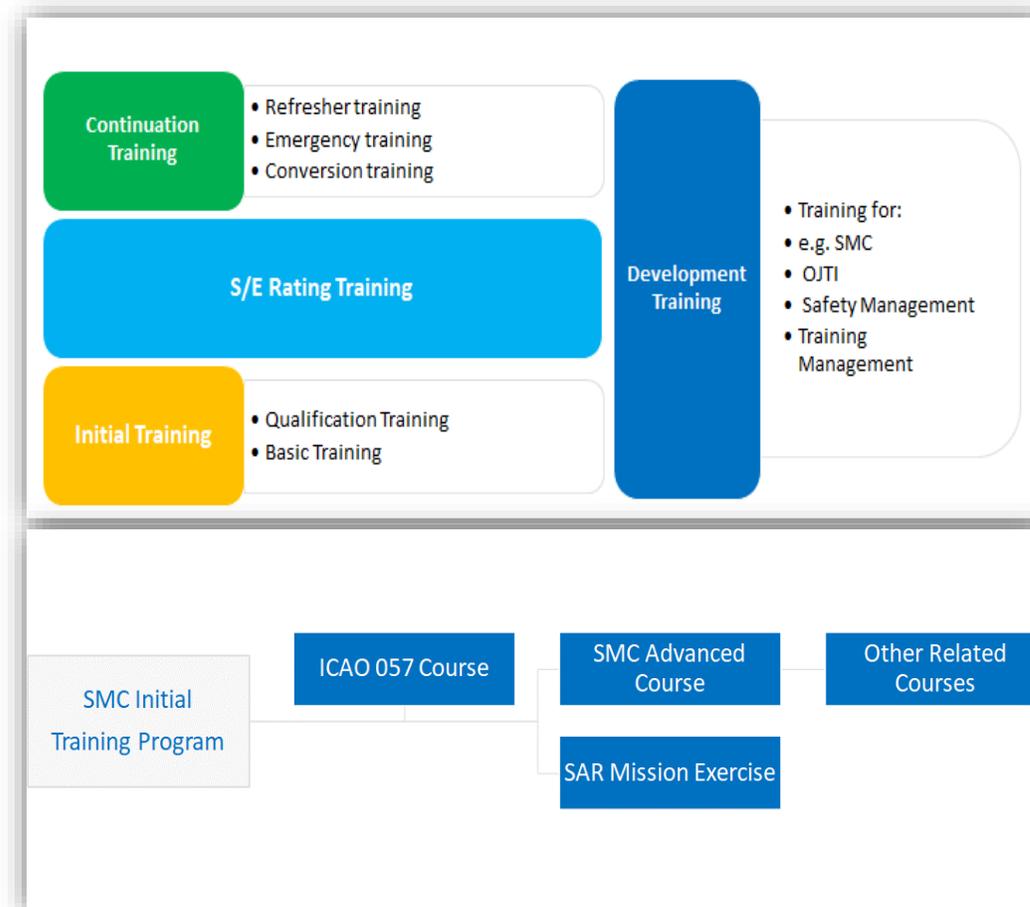


## Bahrain SAR Organization



# Training

- SAR Mission Coordinator Training (SMC) “based on International SARPs”.
- ARCC Training Manual and guidance materials.
- Training Coverage: system/equipment-related knowledge and skills leading to competence.
- SMC role/s, training progression is performed through the completion of Initial Training, Exercises and the series of actions described as S/E rating training (additional academy/macro manufacturer training/on-site training/mentoring and consolidation of experience).

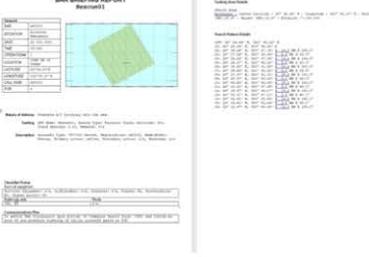


# SAR Tabletop Exercise



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## SAR Tabletop Exercise- Year 2021

<p>KINGDOM OF BAHRAIN Ministry of Transportation and Telecommunications</p> <p>مملكة البحرين وزارة المواصلات والاتصالات</p> <p>Bahrain RCC SAR Table Top Exercise for the year 2021 (Communication Exercise)</p>	<p>On the 22<sup>nd</sup> of June at 0540 UTC FIC supervisor call Bahrain RCC to report that:- A9C002 type is B762 from Bahrain to Muscat POB 4 routing BAH – SODAK – P559 – NALPO . Departed Bahrain at 0525 UTC climbing to flight level 170, aircraft transmitted MAYDAY and declared full emergency due to power failure at 0531UTC at position 30NM south west of SODAK. Aircraft last seen on radar at position 20NM south west of SODAK (263403N – 504837E) at time 0533UTC Mode C showing FL 152.</p> <p>ATC controller attempt to establish contact but no replay from the aircraft. Distress phase was declared at 0535UTC</p>  	<p><b>BAHRAIN R.C.C. ACTION</b></p> <p>On receipt of the information from the FIC supervisor at time 0540 UTC</p> <p><b>RCC activated at 0540UTC</b></p> <p>0542 UTC Bahrain Defense Force (BDF) was informed of the situation and request to conduct SAR operation.</p> <p>0545 UTC Coast Guard (CG) was informed , no action required.</p> <p>0547 UTC Port and Maritime Affairs (PMA) was informed , no action required.</p> <p>0550 Aircraft operator was informed.</p>	<p><b>BAHRAIN R.C.C. ACTION</b></p> <p>0610 UTC RCC sent a FAX to the MET department requesting weather information at the search area Between BAH &amp; SODAK</p>  <p>0615 UTC SITREP 1 sent to (USCA) (DAN) , (CATM) for the initial action taking.</p>	<p><b>BAHRAIN R.C.C. ACTION</b></p> <p>0640 UTC Bahrain RCC with the assistant of the (SARMASTER) system was able to identify the initial search area (20NM south of SODAK) and informed BDF.</p> <p>0647 UTC A FAX received from BDF acknowledging the initial search area and the SRUs availability, and request to reserve the airspace of the search area from MSL to 6000feet</p> <p>0653 UTC FAX sent to AIM requesting reservation of airspace A (262311N- 504514E) B ( 263108N-510054E) C (264494N- 505163E) D (263694N- 503621E) from MSL to 6000feet.</p> <p>0658UTC The required airspace reserved and NOTAMED and coordinated with ATC supervisor.</p> <p>0708 UTC SITREP 2 sent to (USCA) (DAN) and (CATM) for the initial search area</p> 
<p><b>BAHRAIN R.C.C. ACTION</b></p> <p>SAR BRIEFING REPORT (Rescue 1)</p>  	<p><b>BAHRAIN R.C.C. ACTION</b></p> <p>0842 UTC A call received from BDF that the missing aircraft found at position (263959N – 504349E)</p> <p>0850 UTC Full SITREP sent to (USCA) (DAN) and (CATM) of the search development.</p> <p>1012 UTC The Blackhawk (rescue 1) found all POB (no survivors).</p>  	<p><b>CONCLUSION STAGE</b></p> <p>1100 UTC BDF called to report that all the search facilities are back to base and accounted for.</p> <p>1105 UTC aircraft operator informed of the situation.</p> <p>1110 UTC Coast Guard informed of the situation.</p> <p>1115 UTC PMA informed of the situation.</p> <p>1118 UTC FIC supervisor informed, and cancelling the airspace reservation.</p> <p>1123 UTC FAX sent to AIM for airspace reservation cancellation.</p>	<p><b>CONCLUSION STAGE</b></p> <p>1135 UTC USCA, DAN and CATM informed, and request to terminate SAR operation.</p> <p><b>1140 UTC</b></p> <p><b>SAR MISSION TERMINATED</b></p>	<p><b>CONCLUSION STAGE</b></p> <p><b>Forms Used</b> One met request for weather at search area.</p> <p>Two short SITREPs.</p> <p>One full SITREP.</p> <p>One SRUs request for BDF.</p> <p>One NOTAM request form for airspace reservation</p>

# Bahrain ARCC

## Bahrain Aeronautical Rescue Coordination Centre (ARCC)

Fully equipped with SAR Coordination Facilities based on IAMSAR Standards (International Aeronautical and Maritime search & Rescue Manual) Vol.1 and ICAO Annex 12.

Table 2-1 – Fully capable RCC

Required	Desired	Required	Desired
24-hour availability		Wall chart depicting SRR, SRSs and	
Trained persons		neighbouring SRRs, SAR resources	
Persons with a working knowledge of the English language		Computer resources	
Charts which apply to the SRR (aeronautical, nautical, topographic and hydrographic)		Databases	
Means of plotting		Vessel tracking information including AIS, LRIT, VMS and SRS	
Ability to receive distress alerts, e.g. from MCCs, CESS, etc.			
Immediate communications with:			
associated ATS units			
associated RSCs			
DF and position-fixing stations			
associated CRSs			
Rapid and reliable communications with:			
parent agencies of SRUs			
adjacent RCCs			
designated meteorological offices			
employed SRUs			
alerting posts			
Plans of operation			
Ability to coordinate provision of medical advice			
Ability to coordinate provision of medical assistance or evacuation			

# Bahrain ARCC Facilities



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–Live traffic RADAR displays with recording and playback capabilities.

–Rapid and reliable Integrated Voice Communications System connected to direct speech circuits, Telephone Fixed lines and radio communication System.

–SAR-MASTER Incident Management System integrated with COSPAS-SARSAT (International Satellite System for Search and Rescue).

–Charts applicable to the SRR (Aeronautical, Nautical, Topographic and Hydrographic).

–Plotting Materials, Means and Aids

–Planning and Operational documentation, Operation Manual, Search Plan and other guidance materials.

–Wall chart depicting SRR, SRs and neighboring SRRs, SAR resources.

–Computer systems and general office support systems.

# Bahrain SAR Assets

## Bahrain Coast Guard Search & Rescue Unit:

Craft Available	Activation Time	Availability
9 Rescue Boats (20 M)	Immediate	H 24
4 Open Boats (31 FT)	Immediate	H 24
4 Rubber Boats	Immediate	H 24

## Bahrain Police Flying Wing:

Aircraft Available	Activation Time	Availability
8 SAR HEL	30 Min	SR - SS



# Bahrain SAR Assets

## Bahrain Defense Force Helicopter Wing / Mobile Command and Control Center - (Air and Maritime Surveillance):

Crafts Available	Activation Time	Availability
(10) Helicopters for Search and Rescue (SAR) missions	Immediate	SR - SS
(3) Helicopters for Medical Evacuation (MEDVAC) missions with qualified medical crew	Immediate	SR - SS
(64) Boats for Search and Rescue (SAR) missions	Immediate	SR - SS
(14) Ships for Surveillance and Reconnaissance missions	Immediate	SR - SS
(535) Qualified and trained Rescue Divers / Medical crews	Immediate	SR - SS
(20) Jet ski for Search and Rescue (SAR) missions (shallow water purposes)	Immediate	SR - SS
(10) Military Officers for Humanitarian support missions	Immediate	SR - SS



# SAR Bilateral Agreements

According to IAMSAR Vol.1 and ICAO Annex 12, Bahrain has the following agreements in place with neighboring countries and agencies.

Work arrangement between  
KSA MCC & Bahrain ARCC.

Signed Bilateral of  
Agreements with  
neighboring States (KSA -  
UAE - Kuwait - Iran)

USA Diplomatic Note for  
Search & Rescue.



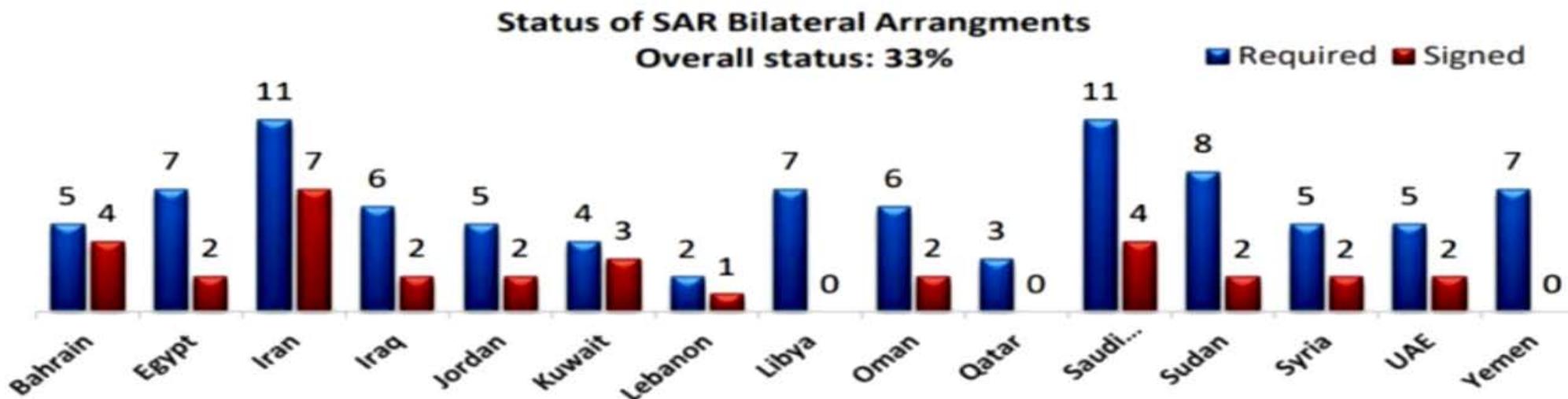
# SAR Implementation Status



ICAO MID

## SAR Implementations

- The status of reported SAR bilateral Arrangements, as at **Appendix A**, and reflected in Graph below, noting that no much improvements have been reported since 2018:



# Conclusion

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- **A track record in delivering uninterrupted SAR services in Bahrain SRR.**
- **A fully manned and equipped RCC to deliver SAR services H24/7.**
- **Qualified SAR personnel and extensive assets ready to provide a robust SAR services.**
- **Bilateral agreements with neighboring States and friendly navel forces to provide prompt and rapid SAR services.**
- **A well tested SAR plan through regular exercises and training.**

# Thank You

