



Overview on SAR Services and Saudi Arabian Mission Control Center (SAMCC)

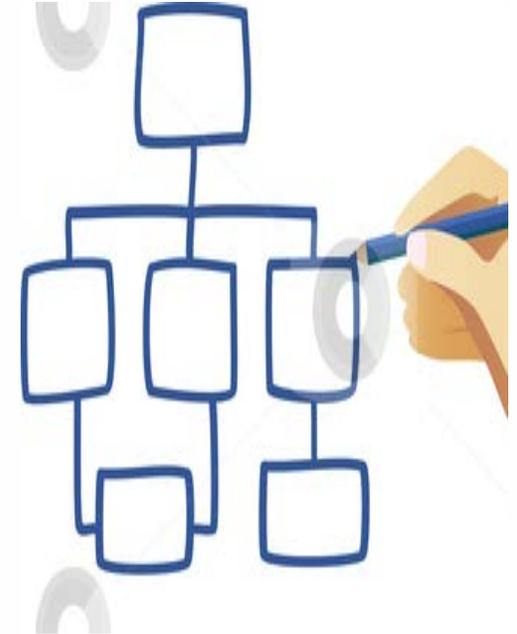
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SAR Organization

The search and rescue service in Saudi Arabia is organized in accordance with General Authority of Civil Aviation (GACA) Regulations and ICAO SARPs.

As per the basic law, GACA is managing all search and rescue arrangements with internal entities (bodies) and external neighboring States.

Saudi Air Navigation Services (The only certified ANS Provider in KSA) is managing the operation of the Saudi Arabian Mission Control Center (SAMCC) in addition to the **Aeronautical Rescue Coordination Centre (ARCC)** duties and responsibilities as service provider.



Main SAR responsibilities in KSA

General Authority of Civil Aviation is the designated authority for Search & Rescue (SAR). The main responsibilities are related to the development of SAR regulatory framework, the planning of SAR activities, and oversight of operational units including SAR exercises (Full scale)

All search and rescue activities are conducted and managed by SAR operation units depending either from Ministry of Interior or Ministry of Defense.

The coordination of SAR activities and arrangements are defined under letter of agreements and memorandum of understanding signed between SAR government agencies aiming to support the SAR operations within the KSA area of responsibility.

Saudi SAR authorities conducting search and rescue have the required resources and are equipped with adequate facilities.

SAR Resources

SAR Unit	Location	Facilities Available	Availability
Dhahran	Dhahran / King Abdulaziz Air Base	Aircraft and helicopters	H24
Dhahran	Security Aviation Eastern Region Base	Helicopters	H24
DMRCC	Border Guards base (Dammam)	Hover Craft + Patrol Boat + Rescue Boat	H24
Jeddah	Jeddah / King Abdulaziz International	Long range aircraft	H24
Jeddah	Security Aviation Makkah Region Base	Helicopters	H24
JMRCC	Border Guards base (Jeddah)	Hover Craft + Patrol Boat + Rescue Boat	H24
Riyadh	King Salman Air Base	Helicopters	H24
Riyadh	Security Aviation Riyadh Region Base	Helicopters	H24
Abha	Security Aviation Aseer Region Base	Helicopters	H24

Activation time: Immediate for Maritime SAR units, and 30 minutes for Aircraft and helicopters.

Saudi Arabian Mission Control Center (SAMCC)

Establishment:

Under COSPAS-SARSAT programme, Saudi Arabia joined is designated as one of mission control centers (SAMCC) covering Jeddah FIR and Seven MID States. This center is responsible for coordination of Search activities and dissemination of alerts within their locations to SAR Point of Contact (SPOC) designated by supported States. SAMCC has been established in 2000. Saudi Arabia is one of Service Providers within Cospas-Sarsat programme.

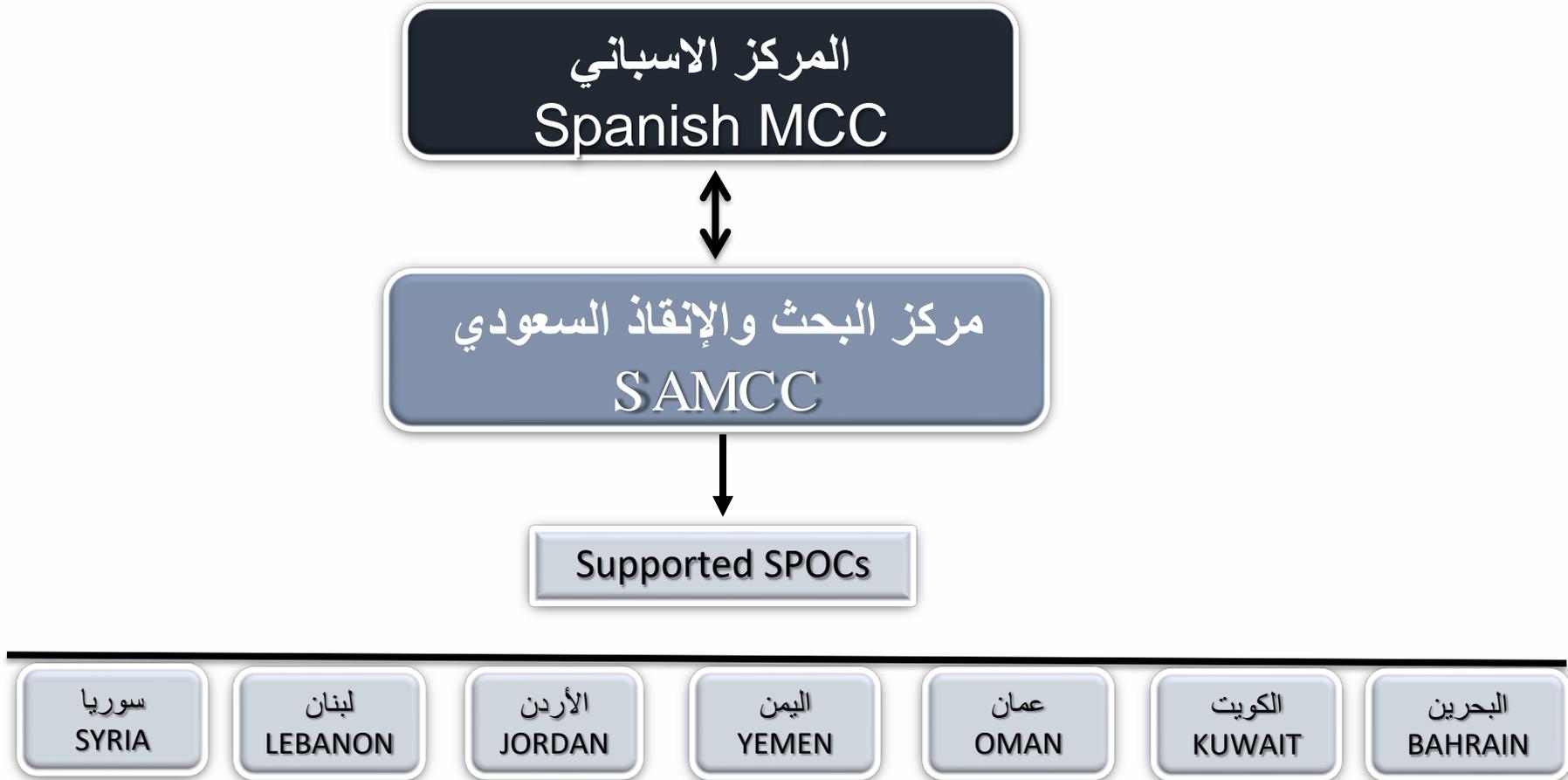
Location:

SAMCC is co-located with the ARCC at Jeddah Area Control Centre (ACC) which allows the centre to be fully aware of traffic positioning with immediate access to the traffic data, air situation picture supporting quick identification of aircraft in distress.

Service Area:

Saudi Arabian Mission Control Center (SAMCC) service area is covering the Kingdom of Saudi Arabia and (7) seven MID States through direct and close coordination with the designated SPOC for each State.

Saudi Arabian Mission Control Center (SAMCC)



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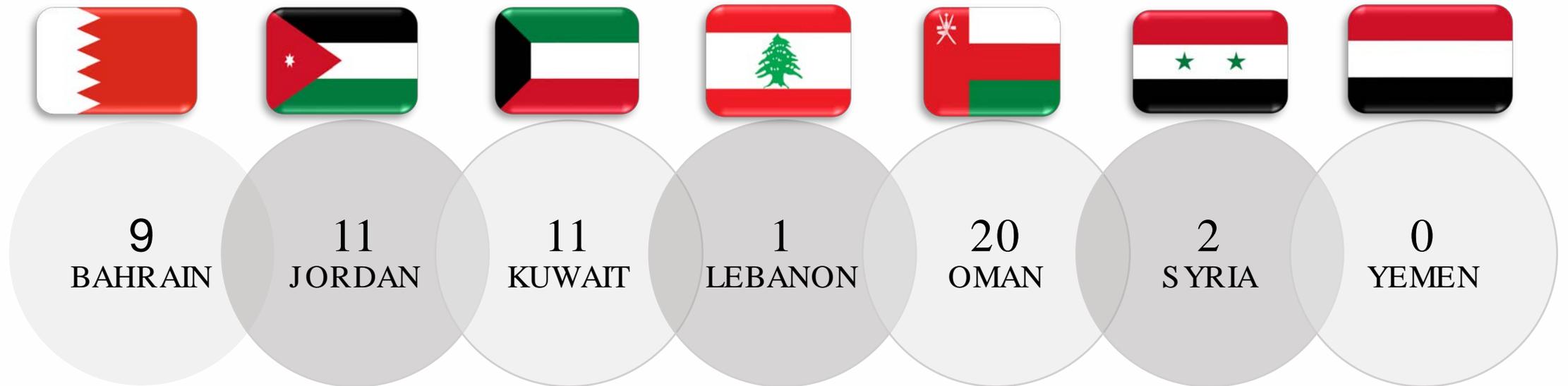
SAMCC is the first MCC established in the MID region in 2000.

SAMCC is responsible for storing, processing, and distributing the alert location data generated by the LUTs to the Rescue Coordination Centers (RCCs), and to SAR Points of Contact (SPOC) of supported MID States.

SAMCC is equipped with tracking stations and antennas to receive and process alerts transmitted by emergency radio 406 MHz beacons are relayed via COSPAS-SARSAT satellites located at different type of orbits: polar orbits (LEO, Low Earth Orbit), geostationary orbit (GEO, Geostationary Earth Orbit) and Medium orbits (MEO, Medium Earth Orbit)

SAMCC is committed to provide distress alert data to all supported SPOCs covering their FIR/SRR as described in their respective AIPs.

Sample of Distress Messages Distributed to SAMCC Supported SPOCs



3Cs between SAMCC & SPOCs

The communication between SAMCC and SPOCs is conducted in accordance with COSPAS-SARSAT Data Distribution Plan (DDP).

SAMCC is maintaining close coordination with SPOCs to:

- 1) ensure reliable communication links are available and operational. Monthly tests on the communication facilities are conducted. The test reports are submitted to Cospas-Sarsat;
- 2) share SAR information and developing awareness activities on Cospas-Sarsat System, its alert message formats and their contents.
- 3) collect feed-back on reported alerts (e.g. False, Real (incident), mishandling of distress beacons ...etc.)

The position of any distress occurring within the service area, and related information is forwarded by SAMCC to the appropriate SAR Point of Contact designated by supported MID States.

Saudi Arabian Mission Control Center (SAMCC) Capabilities

In 2018, SAMCC has been adapted to the new specifications required by the COSPAS-SARSAT Programme with the introduction of the MEOSAR System deployed in accordance with the specifications and requirements set out in the Cospas-Sarsat documentation approved by the International Cospas-Sarsat Programme Council. The new system consists of LGM-MCC (Mission Control Centre for LEOSAR, GEOSAR, and MEOSAR systems) and 6-channel MEOLUT.

In November 2019, COSPAS-SARSAT Council approved the commissioning of Saudi MEOLUT system as an integral part of the Cospas-Sarsat system with an early operational capability performance level for Declared Coverage Area (DCA) radius of 2600 Km.

On 27 July 2023, SAMCC has achieved the initial operational capability (IOC) Status as LGM capable MCC.

On 27 October 2023, SAMCC has achieved the full operational capability (FOC) Status as LGM capable MCC.

The deployment of MEOSAR system is considered as major enhancement of distress detection and processing capabilities in the MID region.

ARCC & Saudi Arabian Mission Control Center (SAMCC) Systems

ARCC & SAMCC are mainly equipped with:

- Low Earth Orbit LUTs (LEOLUTs) local User Terminals/workstations which consists of a tracking-enabled antenna, a processor, and communications equipment.
- Medium Earth Orbit LUTs (MEOLUTs) local User Terminals/ workstations which track, receive and process alerts from COSPAS-SARSAT.
- National Database of registered 406.000 MHZ beacons (ELTs, PLBs, EPIRBs) which identifies the users, operators, and Emergency contact details.
- Advanced Search and Rescue incident management system which support SAR planning and coordination, this system provides the aeronautical rescue coordination centres with a complete view of SAR data, including emergency beacon locations and information about local SAR resources and facilities (e.g. Vessels, helicopters and personnel).

ARCC/SAMCC are providing services and supporting dissemination of distress alerts and SAR operations 24/7 within the service area.

MEOLUTs Channels at Jeddah ACC



Conclusions

Saudi Mission Control Center (SAMCC) reaffirms its commitment to continue providing all SPOCs with distress alert data within their SRRs or FIRs as defined and agreed at Regional level and described in their Aeronautical Information Publications (AIPs).

SAMCC is committed to provide distress alerts data for maritime and aviation transport means within the service area and to maintain strong capabilities for detection and timely dissemination of any distress alerts to SPOCs.

SAMCC is willing for any exchange of SAR experience and improvements to enhance SAR capabilities and expedite the reporting of distress alerts within the service area.

SAMCC reaffirms its commitment to enhance the level of service within the assigned service area.

Thank You



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