



Regional and Inter-regional Workshop on the Provision and Improvement of Search and Rescue Services in the AFI Region

SAR Development and Challenges in the MID Region

presented by

Elie El Khoury

Regional Officer, ATM/SAR
ICAO MID Regional; Office, Cairo

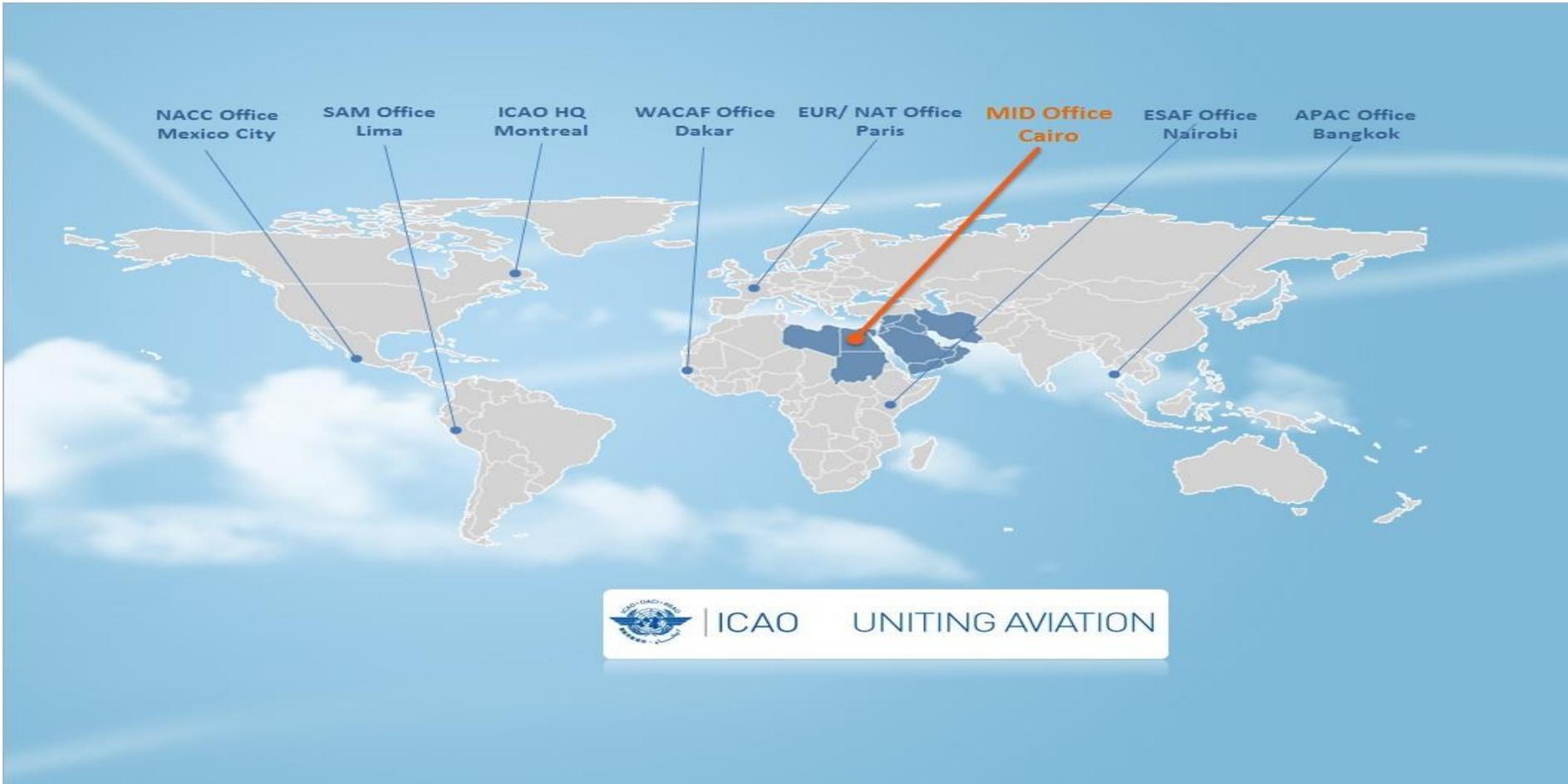


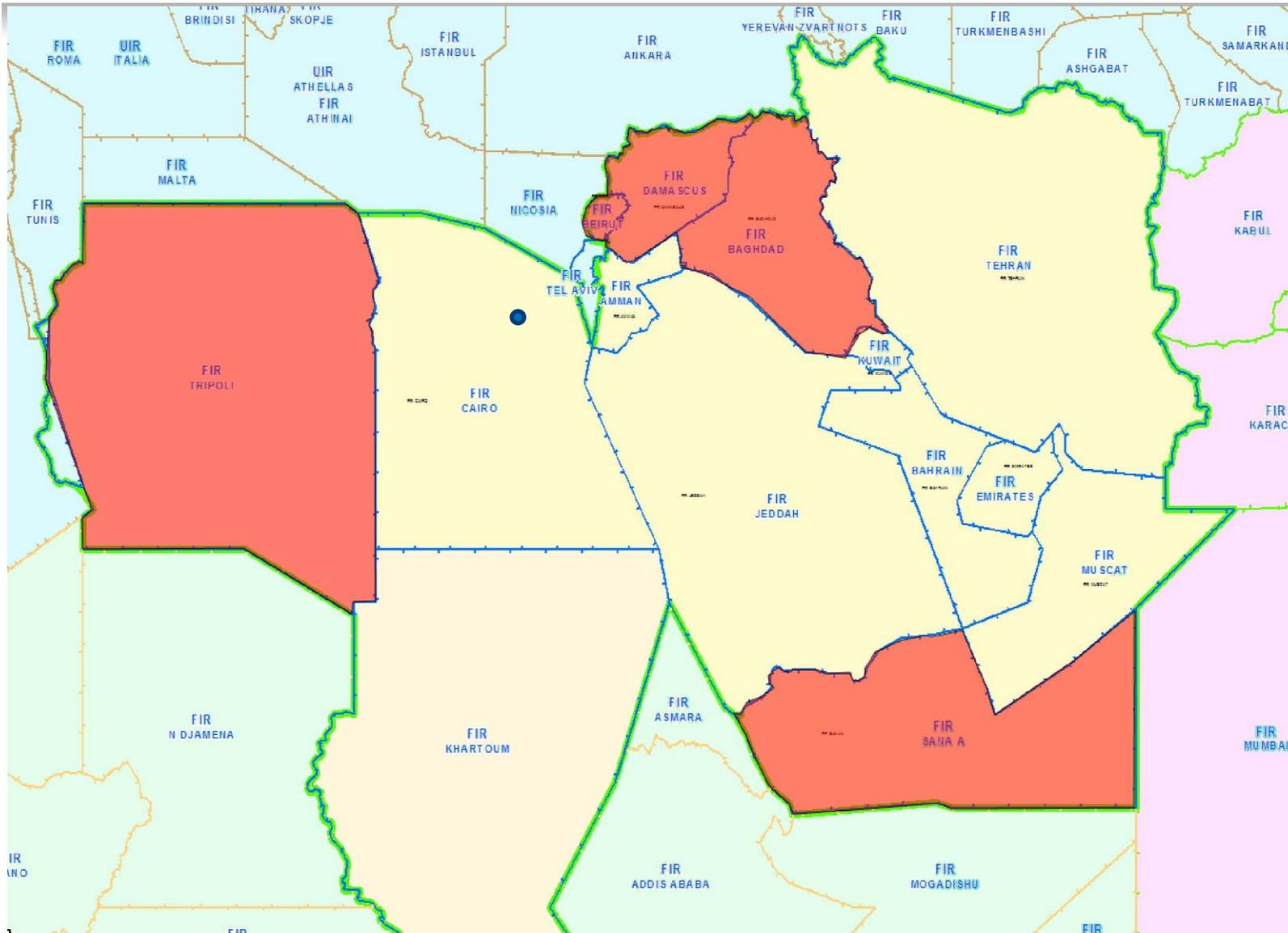
Outline

- ✓ **Brief on the MID Office**
- ✓ **Few Statistics**
- ✓ **Regional Working Arrangements**
- ✓ **MID Region AN Priorities**
- ✓ **MID NCLB Strategy/Plan**
- ✓ **EI of the MID States**
- ✓ **SAR main challenges**
- ✓ **SAR Activities in the MID Region**
- ✓ **ICAO/IMO SAR GMDSS Conference**
- ✓ **Key points**



ICAO MID REGIONAL OFFICE





• Located in Cairo, Egypt

Established in 1953

Accredited to 15 States

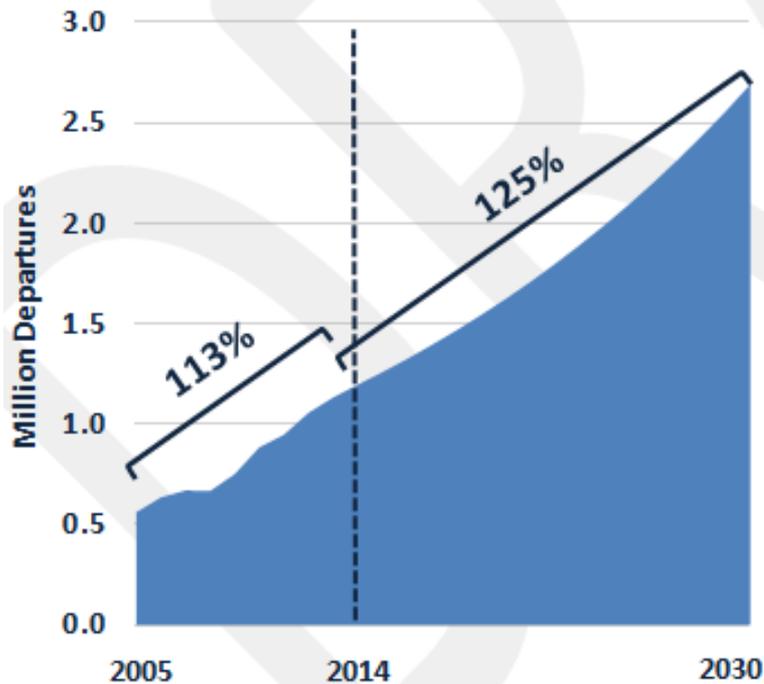
English is the working language, however some States correspond in Arabic

- | | | | | | | | |
|---------|-------|--------------|-------|--------|--------|---------|-------|
| Bahrain | Egypt | I.R. Iran | Iraq | Jordan | Kuwait | Lebanon | Libya |
| Oman | Qatar | Saudi Arabia | Sudan | Syria | UAE | Yemen | |



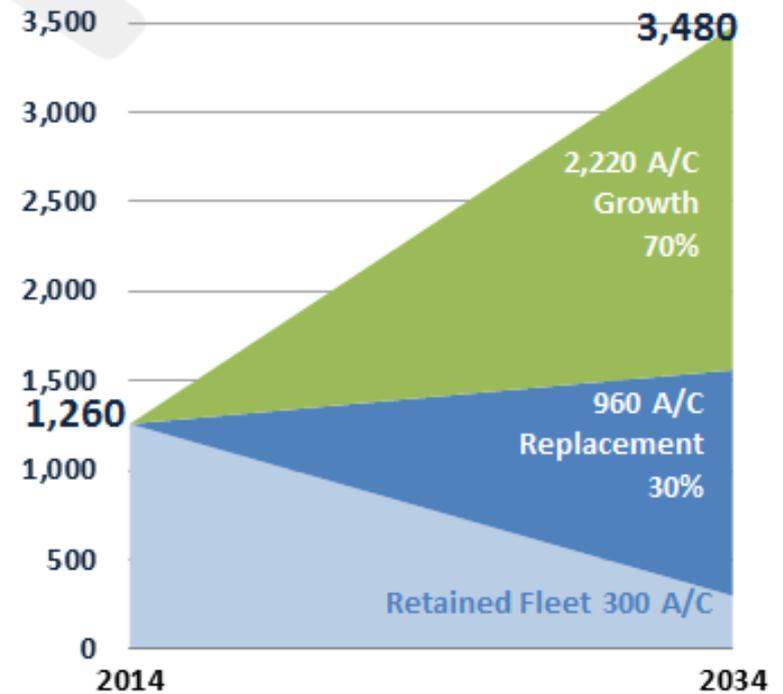
Growth in the MID Region

Middle East Aircraft Movements & Growth



Source: ICAO

Middle East Commercial Aircraft Deliveries

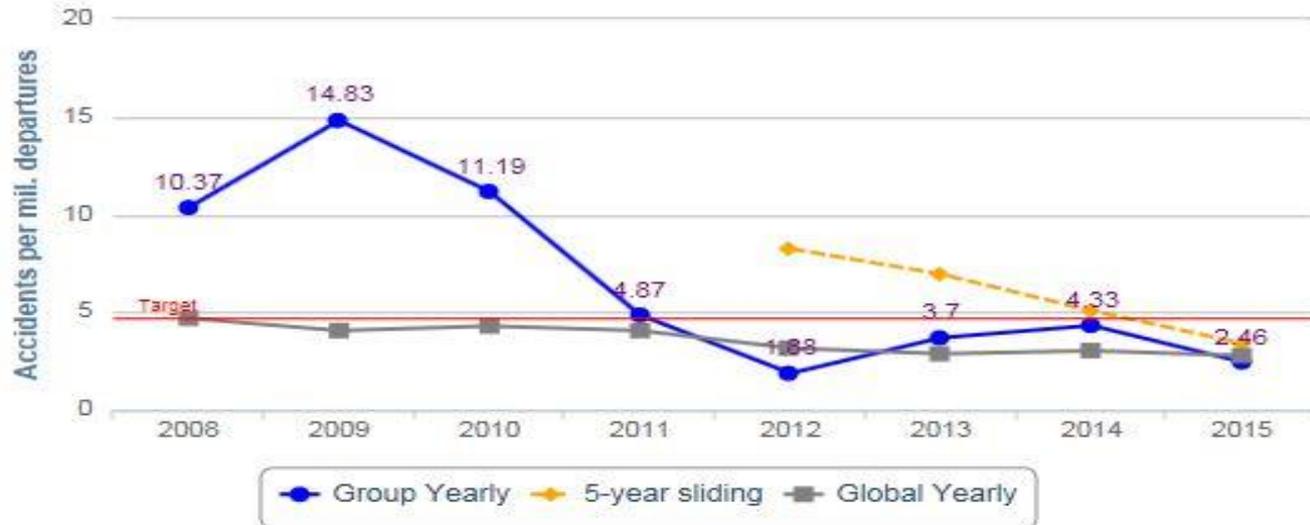


Source: Boeing Co.

The Middle East Region moved **14 per cent** of world Revenue Passenger-Kilometers (RPK) and recorded the highest annual growth of **12.1 per cent** in 2015

Accident Rate

Scheduled Commercial above 5700 kg



Accidents

Scheduled Commercial above 5700 kg



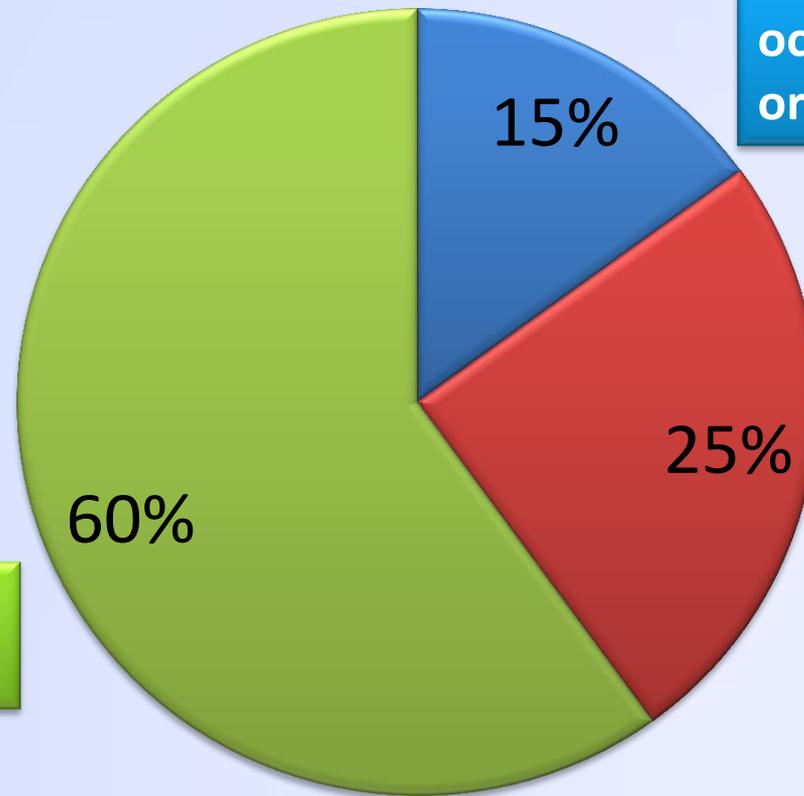
Fatalities

Scheduled Commercial above 5700 kg



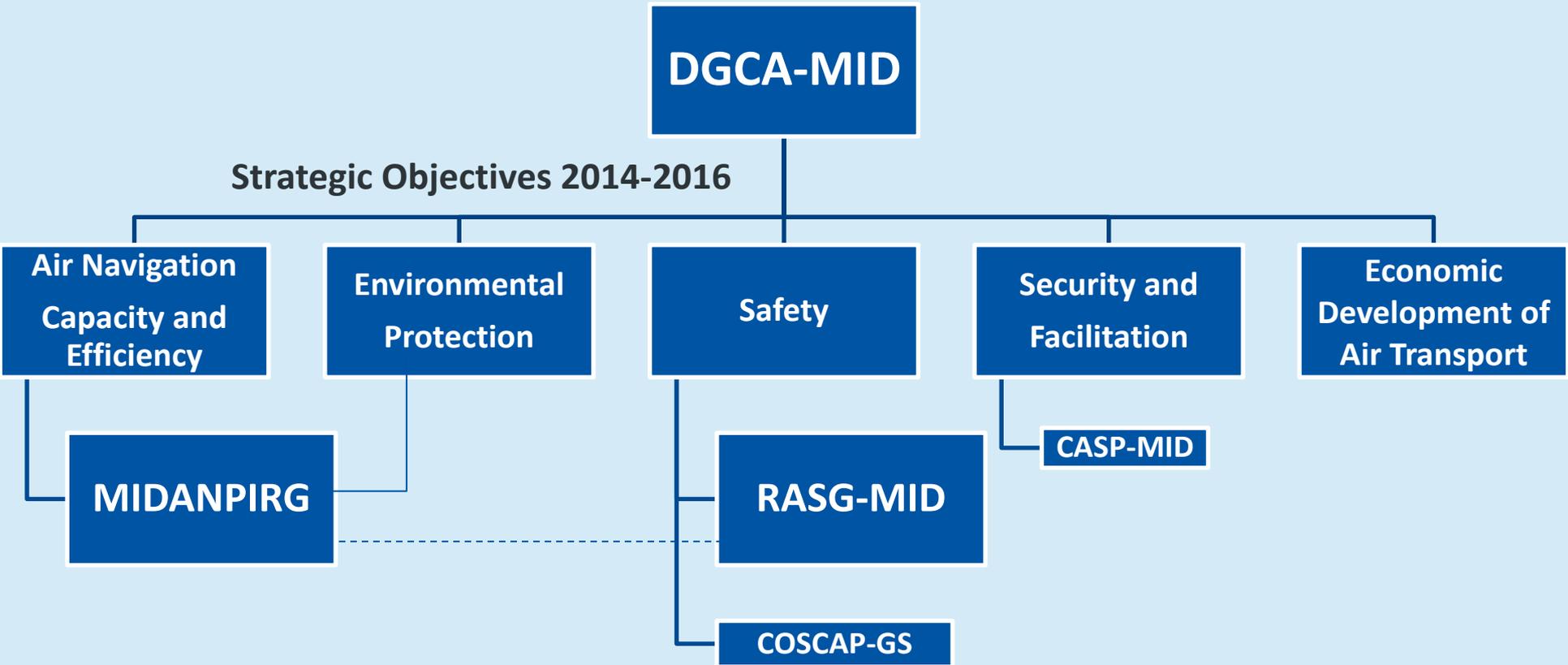
SAR Missions related to the Incidents location

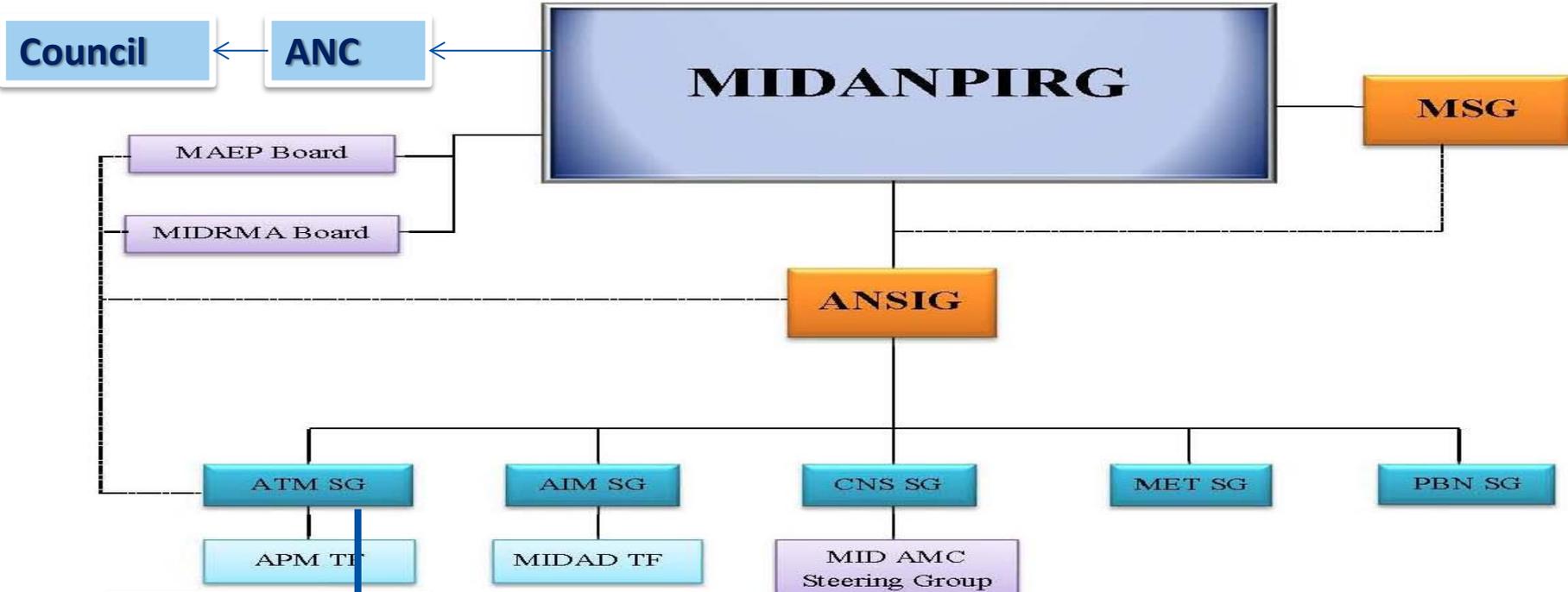
■ Air ■ Land ■ Maritime



Aircraft incidents occur over land or maritime

Maritime are much more experienced





SAR Issues

MSG	Message Management Group	PBN SG	Performance Based Navigation Sub-Group
ANSIG	Air Navigation Systems Implementation Group	APM TF	ATM Performance Measurement Task Force
AIM SG	Aeronautical Information Management Sub-Group	MIDAD TF	MID Region AIS Database Task-Force
ATM SG	Air Traffic Management Sub-Group	MAEP Board	MID Region ATM Enhancement Programme Board
CNS SG	Communication Navigation Surveillance Sub-Group	MIDRMA Board	Middle East Regional Monitoring Agency Board
MET SG	Meteorology Sub-Group	MID AMC Steering Group	MID Region ATS Message Management Centre Steering Group

MID electronic Air Navigation Plan (MID eANP) ICAO Doc 9708

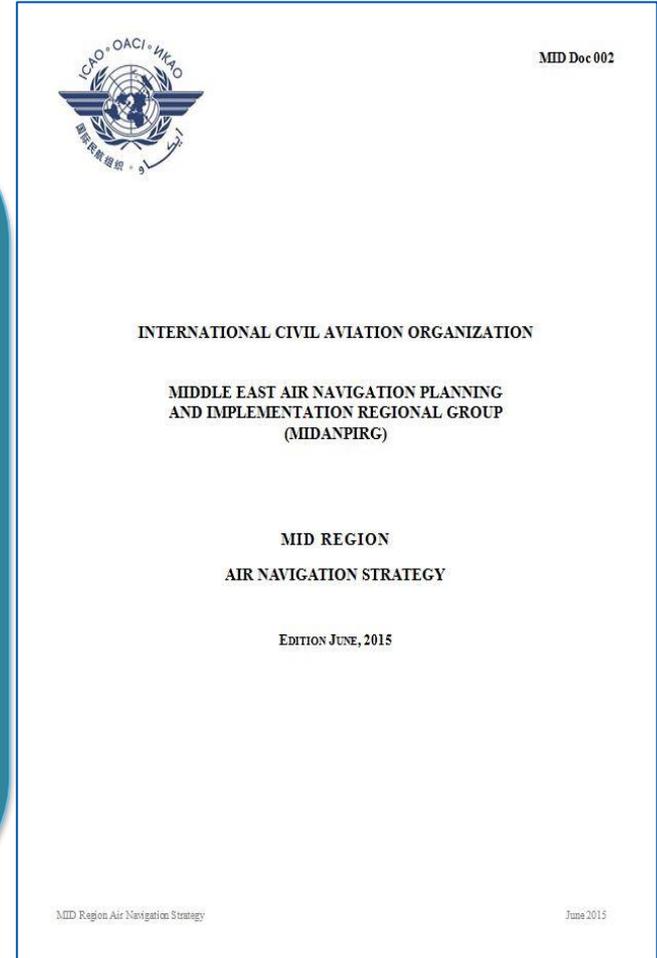
- The MID eANP (3 Volumes) approved and available on the MID Office website.
- SAR provisions are included in Volume I and II



Air Navigation Strategy

MID Doc 002

- In line with the Global Air Navigation Plan (GANP)
- Regional Priorities identified (11 ASBU B0-Modules)
- Endorsed by MSG/4 (24-26 Nov. 2014) and revised by MIDANPIRG/15 (Bahrain, 8-11 June 2015)





Performance Improvement Areas (PIA)	Module	Priority	Module Name
PIA 1: Airport Operations	APTA	1	Optimization of Approach Procedures including vertical guidance
	WAKE	2	Increased Runway Throughput through Optimized Wake Turbulence Separation
	RSEQ	2	Improved Traffic Flow through Sequencing (AMAN/DMAN)
	SURF	1	Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)
	ACDM	1	Improved Airport Operations through Airport-CDM
PIA 2: Globally Interoperable Systems and Data - Through Globally Interoperable System Wide Information Management	FICE	1	Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration
	DATM	1	Service Improvement through Digital Aeronautical Information Management
	AMET	1	Meteorological information supporting enhanced operational efficiency and safety
PIA 3: Optimum Capacity and Flexible Flights – Through Global Collaborative ATM	FRTO	1	Improved Operations through Enhanced En-Route Trajectories
	NOPS	1	Improved Flow Performance through Planning based on a Network-Wide view
	ASUR	2	Initial Capability for Ground Surveillance
	ASEP	2	Air Traffic Situational Awareness (ATSA)
	OPFL	2	Improved access to Optimum Flight Levels through Climb/Descent Procedures using ADS-B
	ACAS	1	ACAS Improvements
	SNET	2	Increased Effectiveness of Ground-based Safety Nets
PIA 4: Efficient Flight Path – Through Trajectory-based Operations	CDO	1	Improved Flexibility and Efficiency in Descent Profiles (CDO)
	TBO	2	Improved Safety and Efficiency through the initial application of Data Link En-Route
	CCO	1	Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCO)

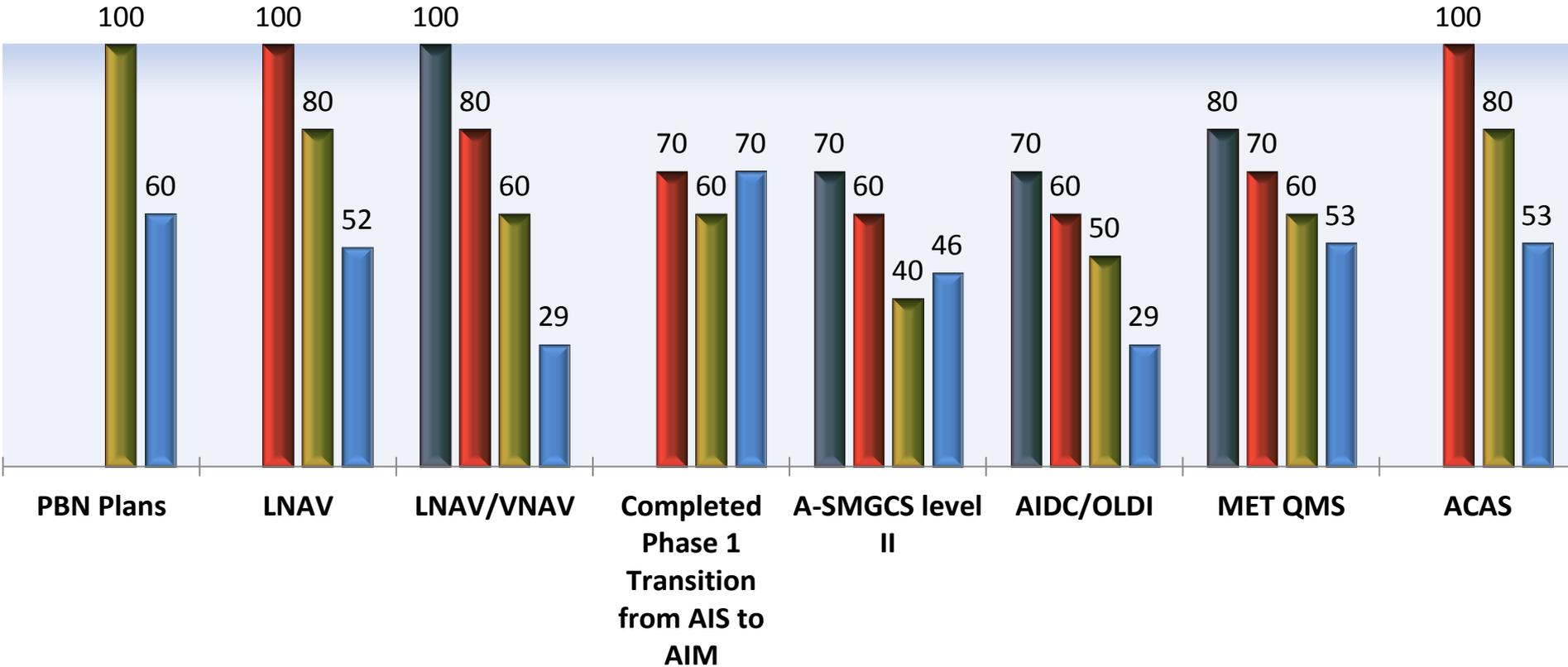


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Status of Implementation

Targets

■ 2017 ■ 2016 ■ 2015 ■ Current Status



NO Focus on SAR



MID Region NCLB Strategy/Plan

Aligned with the ICAO NCLB campaign and Regional priorities and specific to the MID States

Based on USOAP-CMA Effective Implementation (EI)

States in the MID Region **could** be classified into four groups:

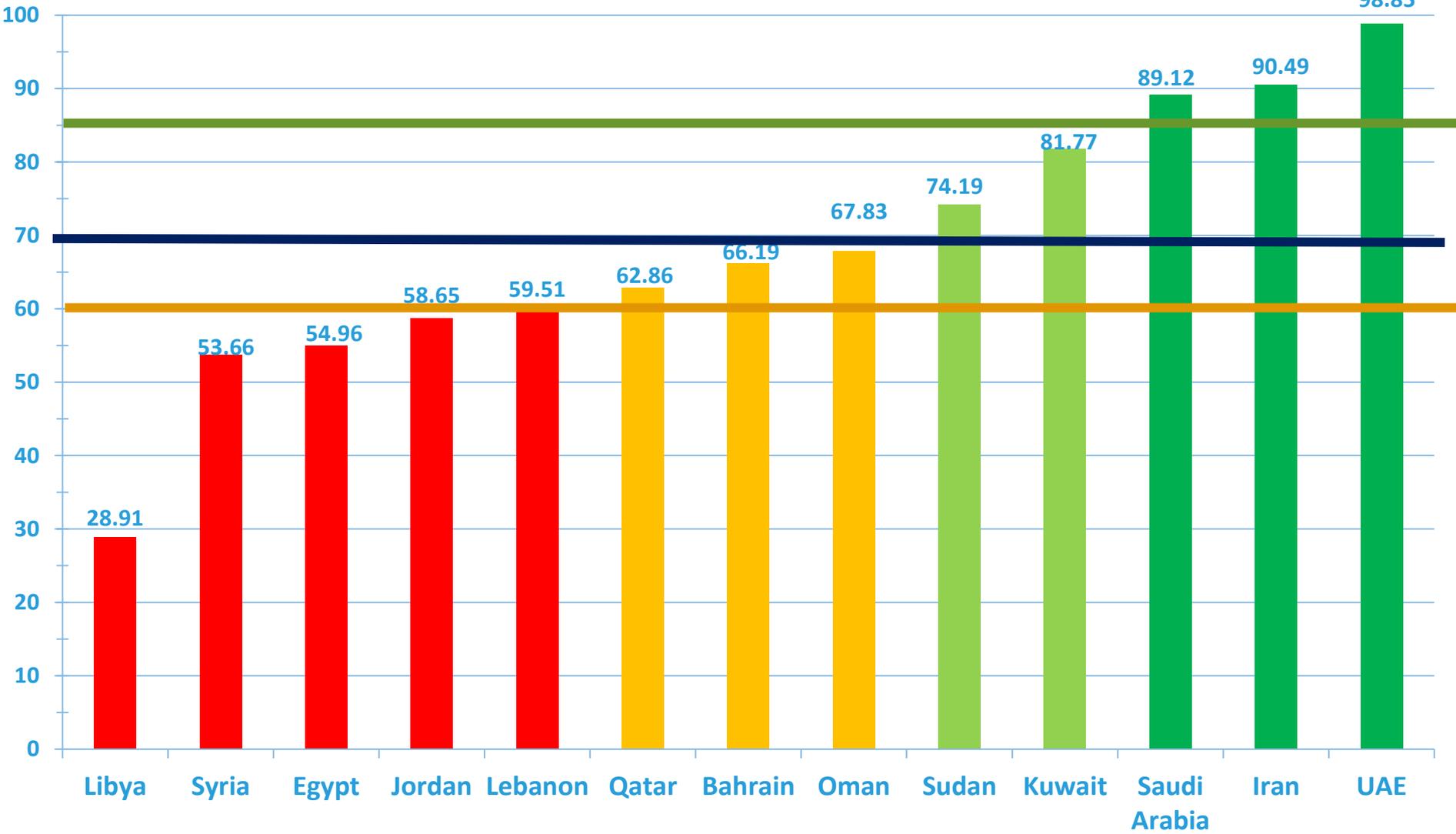
$0 \leq EI \leq 60$

$60 < EI \leq 70$

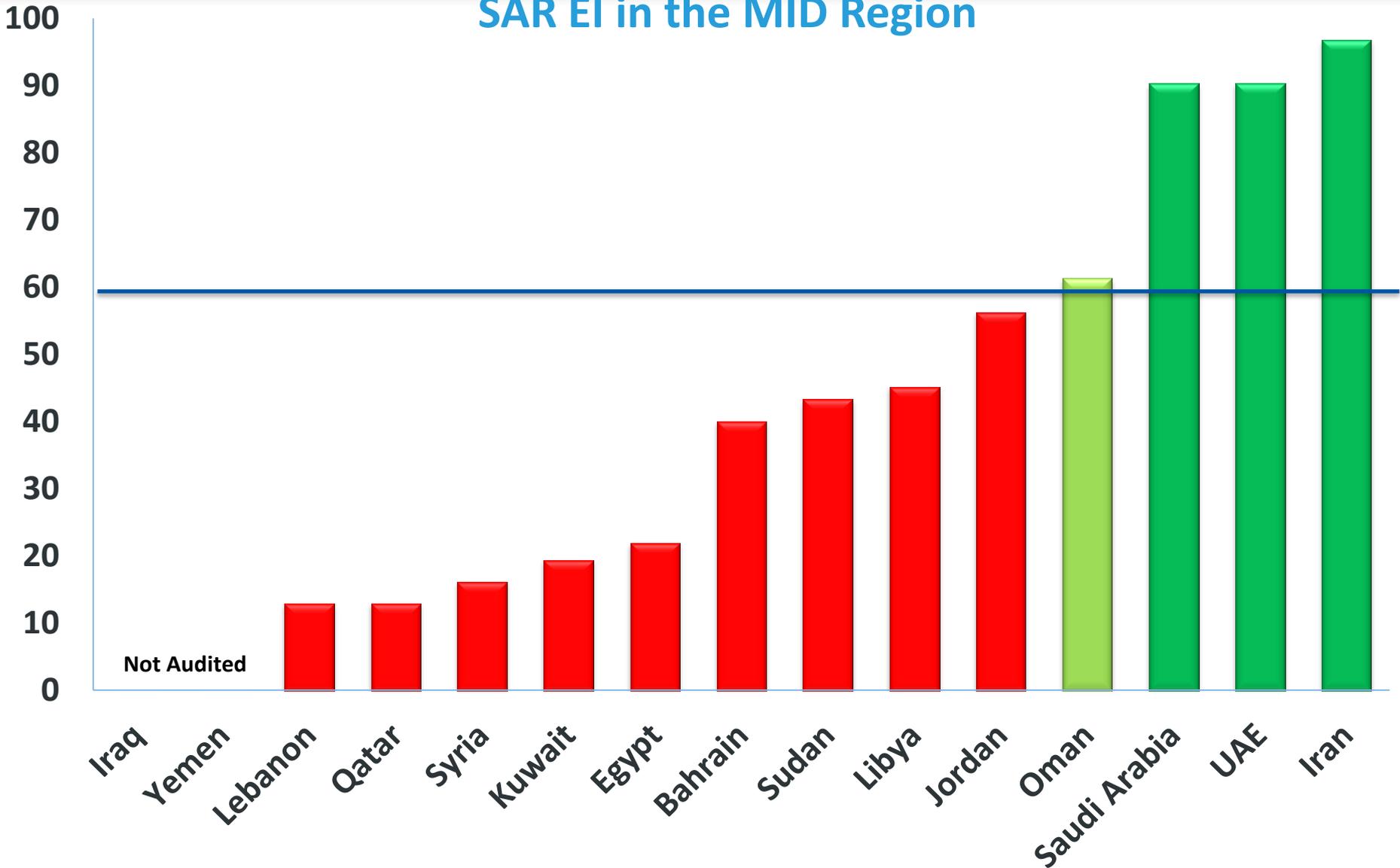
$70 < EI \leq 85$

$85 < EI \leq 100$

USOAP-CMA Effective Implementation (EI)



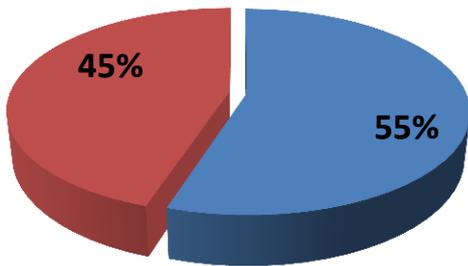
SAR EI in the MID Region



SAR deficiencies in the MID Region

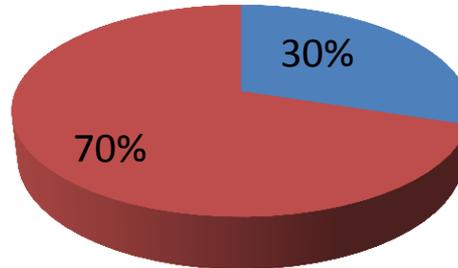
Lack of Provisions

■ Implemented ■ N/A



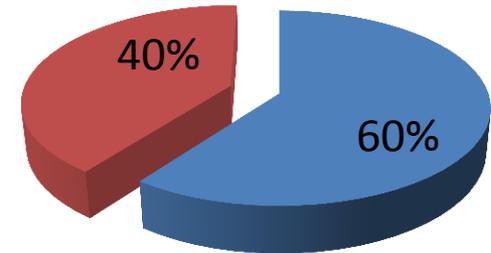
SAREX

■ Compliant ■ No SAREX

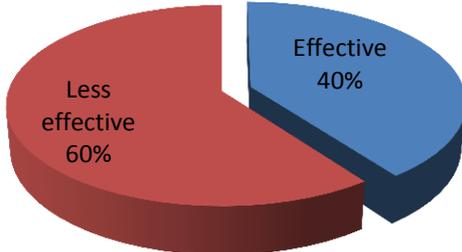


ELTs

■ Compliant ■ Non compliance

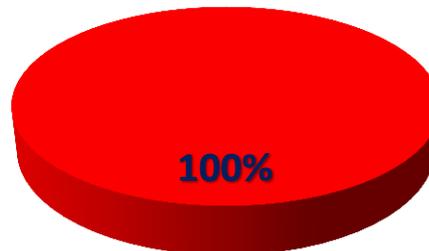


Effective SAR Oversight



Signatures of SAR Agreements

■ Not Completed



SPOC



The main Challenges are related to lack of:

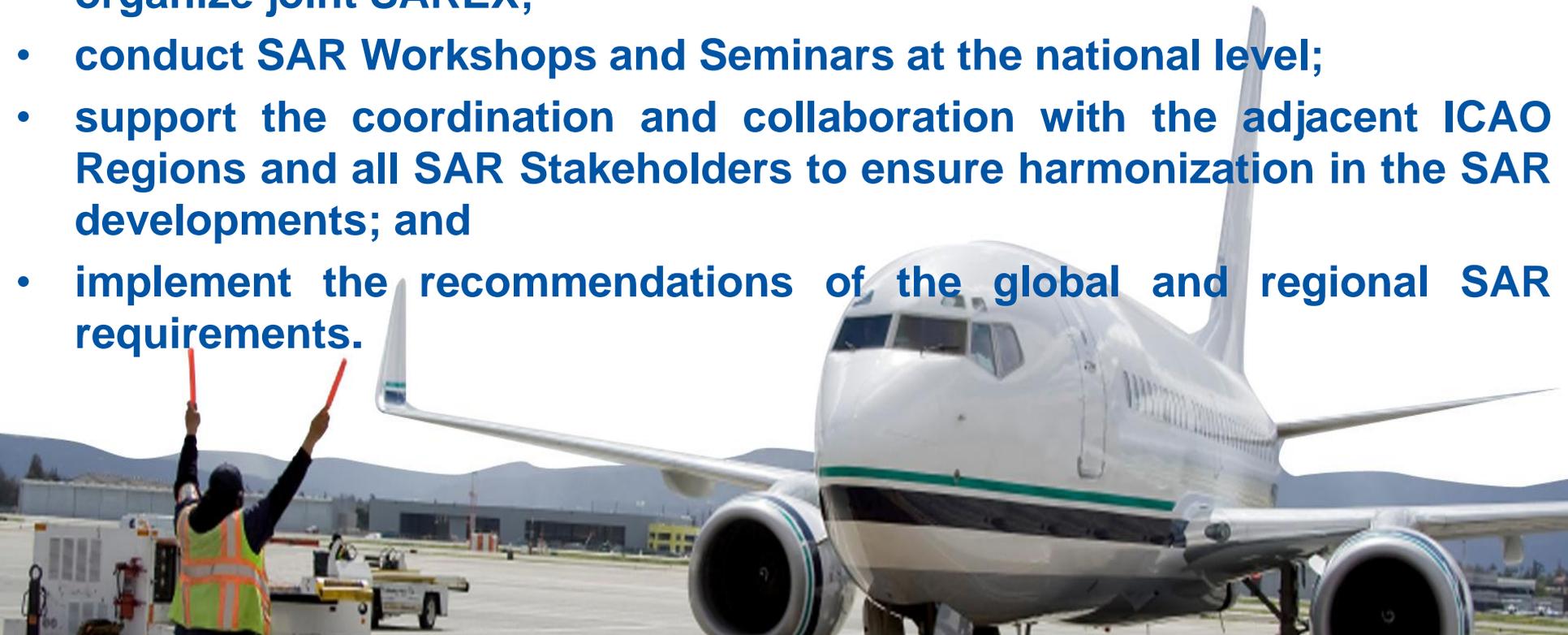
- **Regional SAR Plan and National SAR Plans**
- **Local cooperation among stakeholders involved in SAR**
- **SAR is more retro-active rather than pro-active approach**
- **English Language Proficiency for RCC radio operators;**
- **Appropriate training programmes/plans of SAR experts;**
- **lack of signature of SAR agreements;**
- **lack of plans of operations for the conduct of SAR operations and SAR exercises;**
- **lack of provision of required SAR services; and**
- **non-compliance with the carriage of Emergency Locator Transmitter (ELT) requirements.**



SAR AG Activities (Cont'd)

MIDANPIRG and DGCA-MID have been encouraging MID States to:

- take necessary measures to foster their SAR services;
- enter into agreements with their adjacent States;
- organize joint SAREX;
- conduct SAR Workshops and Seminars at the national level;
- support the coordination and collaboration with the adjacent ICAO Regions and all SAR Stakeholders to ensure harmonization in the SAR developments; and
- implement the recommendations of the global and regional SAR requirements.



SAR AG Activities (Cont'd)

MIDANPIRG/14 tasked the ATM SG to develop a simplified template for SAR Bi-Lateral arrangements that addresses the CAA and ACCs responsibilities, such as the alerting and coordination tasks; and a MID Region SAR Plan.





SAR AG Activities Cont'd

The ATM SG established a SAR Action Group composed of volunteered SAR experts from Bahrain, Egypt, Iran, Saudi Arabia, UAE and supported by the ICAO MID Office :

- ✦ *to carry out a Gap Analysis related to the status of implementation of SAR services in the MID Region; and*
- ✦ *to develop:*
 - *a SAR Plan for the MID Region based on the Asia/Pacific experience;*
 - *an action plan for the conduct of regional/sub-regional SAR training exercises;*
 - **a Template for SAR Bi-lateral arrangements as an Appendix to the MID Region ACC LoA Template; and**
 - **a Matrix to monitor SAR status in the MID Region, based on Annex 12 and DOC 9731;**

SAR AG Activities (Cont'd)

- a Template for SAR Bi-lateral arrangements was developed and endorsed by MIDANPIRG/15 (Bahrain, 8-11 June 2015), which will ensure proper alerting and coordination procedures are in place between adjacent ACCs, awaiting for the signature of the States' SAR Agreement.
- a Matrix to monitor SAR status in the MID Region, was also developed.
- An initial draft MID Region SAR Plan has been prepared and will be reviewed by the SAR AG.
- States were urged to ensure that their SPOC sign the MCC/SPOC model agreement with their relevant MCC
- SAR issues will be addressed during the General Ministerial Aviation Summit, Riyadh, 29-31 August 2016.



ICAO/IMO SAR GMDSS Conference

- ICAO/IMO Search and Rescue-Global Maritime Distress and Safety System Conference (ICAO/IMO SAR GMDSS Conference), was successfully held in Bahrain 21-22 October 2014.
- The Conference was hosted by Bahrain and dedicated to the Gulf Cooperation Council (GCC) States.
- The Conference was attended by a total of sixty two (62) participants from five (5) States (Bahrain, Kuwait, Oman, Saudi Arabia, and UAE).
- The ICAO/IMO SAR GMDSS Conference provided a forum for sharing experiences and discussing relevant matters to SAR between Civil/Military Aeronautical and Maritime representatives.

ICAO/IMO SAR GMDSS Conference

Main Recommendations

- 1. Provide IMO and ICAO with information related to the availability of SAR services, including information on the areas of responsibility, taking into account IMO's and ICAO provisions, as soon as possible if not already done so, and keep the information up to date on a regular basis**
- 2. Noting that close cooperation between maritime and aeronautical SAR services is essential, establish a national SAR Coordinating Committee**
- 3. Develop a national SAR Plan, to the extent possible, ensuring harmonization with SAR Plans of the neighbouring States, for the benefit of effective and efficient SAR cooperation**



ICAO/IMO SAR GMDSS Conference Main Recommendations (Cont'd)

- 4. consider the development of a multilateral agreement on the cooperation of aeronautical and maritime SAR and the establishment of a Regional SAR Coordinating Committee, in the framework of the GCC**
- 5. sign the SAR Letters of Agreement (LoAs) to facilitate and expedite the efficient conduct of SAR operations**
- 6. evaluate SAR and GMDSS facilities and identify actions to be taken to improve the existing situation, including the establishment of Rescue Coordination Centres, as appropriate**
- 7. keep record of all SAR activities and as such built up statistics for national use as well to be used in communication with IMO and ICAO, as appropriate**

ICAO/IMO SAR GMDSS Conference Main Recommendations (Cont'd)

- 8. share lessons learned related to SAR activities;**
- 9. develop a short and long term programme for training of SAR personnel, including those involved in the oversight of SAR;**
- 10. conduct national, bilateral and multilateral SAR exercises and use lessons learned to identify capacity building needs; and**
- 11. request, as appropriate, either individually or in cooperation with other GCC States, IMO and/or ICAO to provide technical assistance, in particular to:**
 - a) assess the existing situation and provide recommendations for improvement; and**
 - b) support the training of personnel involved in SAR**

Key points

SAR main objective is saving lives and preventing future accidents through lessons learned for that it should be given high priority, which will require :

- a. effective and efficient cooperation between all concerned authorities within the State (SAR Plan); and with Adjacent and neighboring States;
- b. development of ICAO Regional SAR Plans ensuring harmonization with other adjacent ICAO Regions;
- c. dedicated, qualified and well trained SAR experts;
- d. effective SAR oversight functions; and
- e. sharing of resources through bilateral or multilateral agreements.



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Achieves
More

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(WACAF) Office
Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

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(MID) Office
Cairo

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Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

Asia and Pacific
(APAC) Office
Bangkok



THANK YOU