



International Civil Aviation Organization

RASG-MID Steering Committee

Seventh Meeting (RSC/7)
(Cairo, Egypt, 3 – 5 March 2020)

Agenda Item 3: Regional Performance Framework for Safety

**ACCIDENT & INCIDENT INVESTIGATION REGIONAL COOPERATION MECHANISM
(ARCM) IMPLEMENTATION ACTION PLAN**

(Presented by the Secretariat)

SUMMARY

This paper proposes a Draft Accident & Incident Investigation Regional Cooperation Mechanism (ARCM) Implementation Action Plan.

Action by the meeting is at paragraph 3.

REFERENCES

- DGCA-MID/4, Muscat, Oman, 17-19 October 2017
- DGCA-MID/5, Kuwait, 4-6 November 2019
- RASG-MID/7, Cairo, Egypt, 15-18 April 2019

1. INTRODUCTION

1.1 The DGCA-MID/4 meeting (Muscat, Oman, 17-19 October 2017), through Conclusion 4/6, endorsed the Strategy for enhancement of cooperation among the MENA States in the provision of AIG functions at **Appendix A**.

2. DISCUSSION

2.1 A Roadmap for the implementation of the Strategy was developed, under the framework of RASG-MID, to provide the details and timelines related to the implementation of the different levels.

2.2 The RASG-MID/7 meeting, through Conclusion 7/9, endorsed the Roadmap for AIG Regional Cooperation at **Appendix B**.

2.3 In line with the Roadmap for regional cooperation, a Questionnaire on AIG Level 1 cooperation was sent to the MENA States through State Letter Ref.: ME 4/1.3-18/074 dated 4 March 2018. Eight (8) States, namely, Bahrain, Egypt, Iran, Morocco, Saudi Arabia, Sudan, UAE, and Yemen replied to the Questionnaire; six (6) of them (Bahrain, Iran, Morocco, Saudi Arabia, Sudan, and UAE) stated clearly that they are willing to move to the level 2 of cooperation.

2.4 Another Questionnaire on AIG level 2 of cooperation for the survey related to States' AIG capabilities, was sent to the MENA States through State Letter Ref: ME 4/-19/167 dated 26 May 2019 and a reminder State Letter Ref: ME:4-19/207 dated 4 July 2019. Replies were received from nine (9) States (Bahrain, Egypt, Iran, Jordan, Oman, Saudi Arabia, Sudan, UAE, and Yemen).

2.5 The DGCA-MID/5 meeting, through Conclusion 5/4, endorsed the AIG Regional Cooperation Mechanism (ARCM) at **Appendix C**.

2.6 The RSC/7 meeting is expected to agree on the way forward to move towards the implementation of an ARCM. Therefore, the Draft ARCM Implementation Action Plan at **Appendix D** is presented to the meeting for review and endorsement.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) review and endorse the the Draft ARCM Implementation Action Plan at **Appendix D**; and
- b) agree on the following Draft Conclusion:

WHY	to prepare for the effective establishment of ARCM
What	Draft ARCM Implementation Action Plan
Who	RSC/7
When	March 2020

DRAFT CONCLUSION 7/XX: AIG REGIONAL COOPERATION MECHANISM ACTION PLAN

That, the AIG Regional Cooperation Mechanism (ARCM) Action Plan at Appendix D is endorsed.

- c) task the AIIG/1 meeting to review and approve the MENA ARCM MOU.

APPENDIX A

STRATEGY FOR THE ENHANCEMENT OF COOPERATION AMONG THE MIDDLE EAST AND NORTH AFRICA (MENA) STATES IN THE PROVISION OF AIG FUNCTIONS

1- Background

Whereas it is incumbent on the State in which an accident occurs to institute an inquiry into the circumstances of the accident in conformity with Article 26 of the Convention;

Whereas Assembly Resolution A36-10, inter-alia:

- urges Contracting States to undertake every effort to enhance accident prevention measures, particularly in the areas of personnel training, information feedback and analysis and to implement voluntary and non-punitive reporting systems, so as to meet the new challenges in managing flight safety, posed by the anticipated growth and complexity of civil aviation;
- urges Contracting States to cooperate with ICAO and other States in a position to do so, in the development and implementation of accident prevention measures designed to integrate skills and resources to achieve a consistently high level of safety throughout civil aviation;

Whereas, amendment 15 of Annex 13 (STD 3.2) stipulates that a State shall establish an accident investigation authority that is independent from State aviation authorities and other entities that could interfere with the conduct or objectivity of an investigation;

Whereas, owing to the growing sophistication and complexity of modern aircraft, the conduct of an accident or serious incident investigation requires participation by experts from many specialized technical and operational fields and access to specially equipped facilities for investigation;

Whereas many Contracting States do not have such specialized technical and operational expertise and appropriate facilities;

Whereas the costs of salvage and investigation of major aircraft accidents may place a heavy financial burden on the resources of the State where the accident occurred;

Whereas Assembly Resolution A37-15 (Appendix U), recommends that Contracting States cooperate in the investigation of major aircraft accidents or accidents in which the investigation requires highly specialized experts and facilities;

Whereas, the ICAO Universal Safety Oversight Audit Programme (USOAP) audit findings indicate that a number of States have not been able to implement an effective accident and incident investigation system for their aviation activities;

Recognizing that the USOAP findings have been associated, in general, with a lack of resources (both human and financial), lack of appropriate legislation and regulations, lack of an organization for the investigation of accidents and incidents, lack of a training system for investigators, lack of equipment to conduct investigations and lack of policies, procedures and guidelines for accident and incident investigations;

Recognizing that combined with the expected increase in air transport operations, the relatively unchanged trend in the accident rate over the past several years might lead to an increase in the number of accidents per year;

Recognizing that there are many challenges to effective accident prevention, and that more effective identification and correction of aviation hazards and system deficiencies are required in order to complement regulatory efforts in further reducing the number of worldwide accidents and to improve the accident rate;

Recognizing that a regional investigation system can provide economies of scale by allowing for the sharing of required resources, and that by working together, States of a region or sub-region can have a more persuasive voice on the world stage and can help secure a more favorable climate aimed at a safer international air transportation system;

Acknowledging that during the AIG Divisional Meeting (2008) several States highlighted that, in regions where individual States do not have investigation capability, implementing a regional accident and incident investigation organization (RAIO) would ensure the effectiveness of investigations, reinforce conformity with the provisions of Annex 13, and contribute to the enhancement of aviation safety;

Whereas, Annex 13 (STD 5.1 and 5.1.2) stipulates that the State of Occurrence shall institute an investigation into the circumstances of the accident and serious incident (maximum mass of over 2 250 kg) and be responsible for the conduct of the investigation, but it may delegate the whole or any part of conducting of such investigation to another State or a RAIO by mutual arrangement and consent. In any event, the State of Occurrence shall use every means to facilitate the investigation;

Considering that the DGCA-MID/2 meeting (Jeddah, Saudi Arabia, 20 - 22 May 2013) noted that it is widely considered that implementing a RAIO would ensure the effectiveness of investigations, reinforce conformity with the provisions of Annex 13, and contribute to the enhancement of aviation safety; and accordingly through Conclusion 2/11 endorsed the First version of the Strategy for the establishment of RAIO(s);

Considering the AIG needs and capabilities of the Middle East and North Africa (MENA) States; and the implementation of different levels of cooperation for the provision of AIG services/functions at the regional/sub-regional level; and

Considering the challenges related to the establishment of a RAIO;

A strategy is crucial for the enhancement of cooperation in the provision of AIG services/functions among the Middle East and North Africa (MENA) States.

2- Objective

Contribute to improvement of aviation safety in the MENA States by enabling States to conduct effective and independent investigations of aircraft accidents and incidents; and support States in fulfilling their investigation obligations in Annex 13.

3- Methodology

During the ACAC/ICAO AIG Workshop held in Jeddah, Saudi Arabia, 25-27 April 2017, three (3) levels of cooperation for the provision of AIG services/functions in the MENA States have been defined as follows:

Level 1:

Cooperation among MENA States under the framework of Annex 13 and/ or a standard bilateral MOU to share, on ad-hoc basis, resources, training, information, documentation and capabilities; and strengthen conformity with Annex 13.

Level 2:

Cooperation among MENA States under the framework of a regional cooperation mechanism (well-defined scope and set of coordinated, organized and harmonized procedures and mechanisms) for the conduct of accidents and serious incidents investigations.

Level 3:

Establishment of a RAIO with well-defined mandate, roles and responsibilities, organization (human resources), funding mechanism, etc.; with a centralized decision-making process on RAIO activities.

The Table in **Attachment 1** provides more details about each level.

4- Strategic Plan

- (a) States are urged to develop and further strengthen regional/sub-regional cooperation for accidents and incidents investigation.
- (b) MENA States should take necessary measures to reach at least level 2.
- (c) An implementation Roadmap for MENA States should be developed, under the framework of RASG-MID, to provide the details and timelines related to the implementation of the different levels.
- (d) Key Performance Indicators (KPIs) should be developed for the monitoring of the implementation of the Roadmap to ensure that the agreed goals are achieved.
- (e) The decision on whether to continue towards the establishment of a full MENA RAIO, or to be satisfied with level 2 cooperation, will be taken in due course, depending on the achievement of the expected KPIs/goals.

	Level 1 (Bilateral Agreements)	Level 2 (Regional Cooperation Mechanism)	Level 3 (RAIO)
Human resources	Shared between the two States	List of MENA States' investigators available to support States in the conduct of investigations, as required. The State conducting the investigation will hold the cost	Investigators from RAIO will lead/participate in investigation conducted by a member State, The cost share is determined by RAIO
AIG training	Shared between the two States	List of planned training courses in all member States is maintained by a voluntary State. Member States may benefit from training conducted by other member States.	<ul style="list-style-type: none"> - The syllabus of the basic training is RAIO-centralized. - Advanced and specialized trainings are determined by RAIO
Equipment, tools, and technology	Shared between the two States	List of MENA States' special equipment is determined and maintained by a voluntary State for use by all member States, as required. The State conducting the investigation will hold the cost	RAIO-centralized tools and equipment are used by member States. Cost share is determined by RAIO
Accidents and incidents database	Access may be granted to the other State's accident/incident database	Database is shared voluntary and managed by a voluntary State	Database is obliged to be shared and is RAIO-centralized
Data repository	Access may be granted to the other State's data repository	Common data repository is managed by a voluntary State	Data repository is RAIO-centralized
Knowledge, safety information, and procedures	Shared between the two States	<ul style="list-style-type: none"> - Knowledge and information is stored in data repository managed by a voluntary State - Procedure is common 	<ul style="list-style-type: none"> - Knowledge and information is stored in RAIO-centralized data repository - Procedure is centralized
Services of State's National Centers of research, laboratories, institutions, experts, etc. (External to the AIG)	A State can utilize the other State's National Centers	List of MENA States' Centers that can be utilized by any member State. The State conducting the investigation will hold the cost	RAIO-centralized list of Centers. Cost share is determined by RAIO

	Level 1 (Bilateral Agreements)	Level 2 (Regional Cooperation Mechanism)	Level 3 (RAIO)
Investigation regulations	Individual, but a State can benchmark the other State	Harmonized and coordinated by a voluntary State	RAIO-centralized
Oversight of the State investigation authority	Individual, but a State may conduct a peer-review upon the other State request	Pooled peer-review group maintained by a voluntary State	RAIO oversight (either by a RAIO group or by outsourced organization)
Funding of conducting investigations	The State responsible for initiating the investigation holds the cost	The State responsible for initiating the investigation holds the cost	Investigations into certain category of accidents are conducted by RAIO based on published criteria. Cost share is determined by RAIO
Funding of regional investigation organization	-	-	Centralized fund by States' contributions

APPENDIX B

ROADMAP FOR AIG REGIONAL COOPERATION

Level of Cooperation	Action		Target date	Deliverable	Champion	KPI
	No.	Description				
Level 1 Cooperation among MENA States under the framework of Annex 13 and/ or a standard bilateral MoU to share, on ad-hoc basis, resources, training, information, documentation and capabilities; and strengthen conformity with Annex 13	1	Develop a questionnaire and disseminate to States through a State Letter for surveying the current status of the MENA States in bilateral cooperation, and their willingness to move to Level 2	30 Sep. 2018	Survey	AIG Core Team ICAO States	<ul style="list-style-type: none"> Number of States' responses
	2	Analyze the received responses including the assessment of the effective implementation of the cooperation elements as listed in the Strategy (Level 1)	31 Oct. 2018		AIG Core Team	<ul style="list-style-type: none"> Number of bilateral agreements per State Level of effective implementation of Level 1 elements Number of States willing to move to Level 2
Level 2 Cooperation among MENA States under the framework of a regional cooperation mechanism (well-defined scope and set of coordinated, organized and harmonized procedures and mechanisms) for the conduct of accidents and serious incidents investigation	3	Develop a Draft Questionnaire to survey States AIG capabilities	31 Dec. 2018	Draft Questionnaire	AIG Core Team	
	4	Develop a Draft AIG RCM	31 Dec. 2018	Draft AIG RCM	AIG Core Team	
	5	Endorsement of the Questionnaire by the RASG-MID/7 Meeting	Apr. 2019	RASG-MID/7 Report	ICAO/RASG-MID	Questionnaire endorsed
	6	Endorse the Draft AIG RCM by the DGCA-MID/5 Meeting and ACAO EC	Nov. 2019	DGCA-MID/5 Report and ACAO EC Report	ICAO/DGCA-MID/5 ACAO EC	AIG RCM endorsed
Remaining level 2 actions will be detailed in due course						

APPENDIX C

AIG Regional Cooperation Mechanism (ARCM)

Middle East and North Africa (MENA)

TABLE OF CONTENTS

	Page
1. Vision and Mission of the ARCM	3
2. Participants.....	3
3. ARCM Objectives.....	3
4. ARCM Organisational Structure.....	3

1. VISION AND MISSION OF THE ARCM

1.1 The MENA AIG Regional Cooperation Mechanism (ARCM) is a mechanism, which will foster the cooperation among MENA member States for the provision of AIG functions. The ARCM will create a platform to support States requesting assistance for fulfilling their investigation obligations. This will make investigation capabilities and outcomes of the investigation within the Region more effective.

1.2 The ARCM is NOT an entity with legal status, and its work will be with no financial implications. Any expenses for applying this ARCM provisions will be covered by the Member State requesting such services or as agreed by both parties (requestor and provider(s)).

2. PARTICIPANTS

2.1 Participation in the ARCM is open to all MENA member States interested to join the ARCM.

3. ARCM OBJECTIVES

3.1 The main objectives of the ARCM are to:

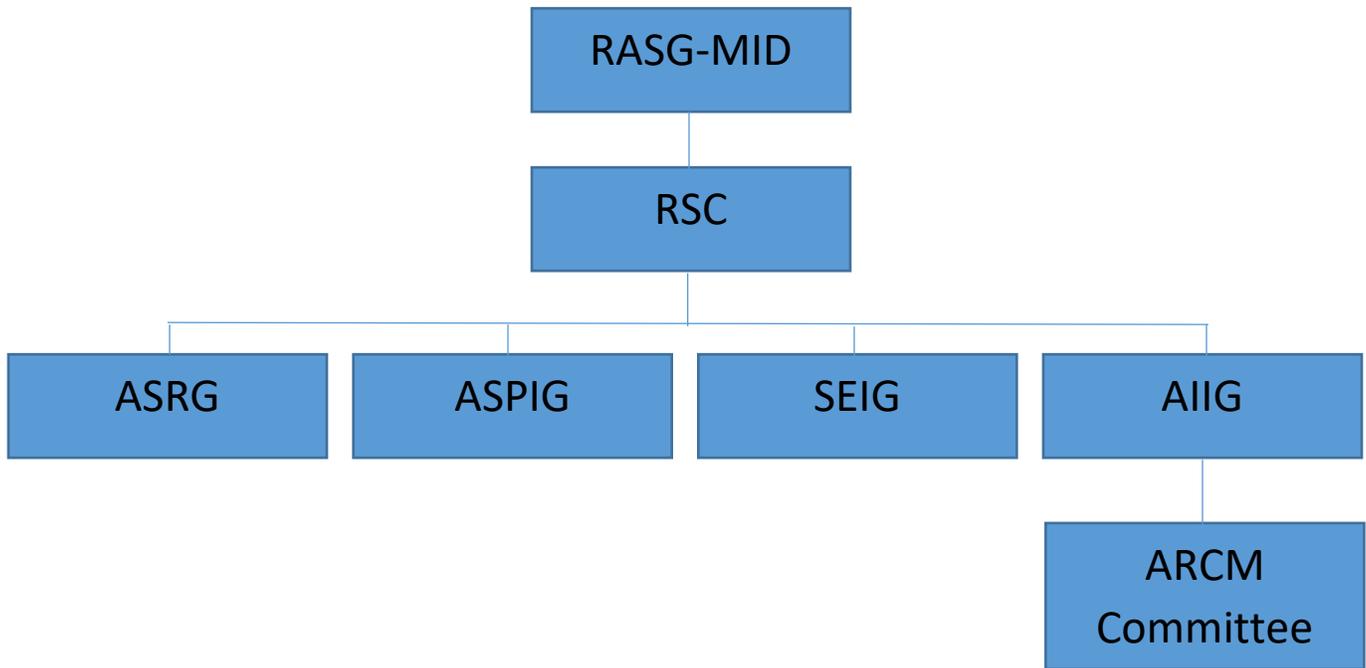
- a) increase and facilitate cooperation and collaboration among ARCM member States with respect to aircraft accident and incident investigation;
- b) make utmost use of AIG resources available in the MENA member States, including expertise, training capabilities, equipment, investigation know-how and information, standards and guidance, etc.;
- c) facilitate actions aiming at increasing the qualifications and experience of accident investigators in MENA member States;
- d) encourage the development of investigation common standards, rules and regulations consistent with the ICAO provisions. The MENA member States will also be encouraged to use a standard Template of investigation regulations for the development of their National Regulations; and
- e) encourage the development of a common accident and incident database for the MENA member States, and utilize this database for identifying operational safety risks and their corresponding controls.

4. ARCM ORGANIZATIONAL STRUCTURE

4.1 The ARCM Committee shall consist of focal points nominated by each Member State.

4.2 The ARCM Committee is responsible for the overall supervision, direction, and management of the ARCM.

4.3 The ARCM Committee will be reporting to the RASG-MID through the Accident and Incident Investigation Group (AIIG), as shown in the following Organization Structure:



APPENDIX D

DRAFT MENA ARCM IMPLEMENTATION ACTION PLAN

Objectives	Action		Timeframe	Deliverable	Champion
	No.	Description			
Development and signature of the MOU among the ARCM States	1	ARCM focal points meeting to develop an initial Draft MENA ARCM MOU	1-4 June 20	Initial Draft of the MENA ARCM MOU	ARCM States ICAO ACAO
	2	Circulate the Draft MENA ARCM MOU to focal points for review and comments /inputs indicating, inter-alia, their willingness to sign the MOU	7 June 20	Draft MENA ARCM MOU	ARCM States ICAO ACAO
	3	Presentation of the Draft MENA ARCM MOU for review and approval by the AIIG	21 June 20	Approval of the MENA ARCM MOU	ARCM States ICAO ACAO
	4	Circulate to the States the MENA ARCM MOU for Signature	1 July 20	Signed MENA ARCM MOU	ARCM States
	5	Progress report on MENA ARCM MOU to RASG-MID and ACAO EC	Mar 2021	Progress Report	ACAO/ICAO
Development of ARCM organization and functions manual	6	Draft proposal on ARCM organization and functions manual	1-4 June 20	Initial Draft	ARCM ICAO ACAO
	7	Review and Approval of the Initial Draft by AIIG	22 June 20	Approval of the manual	ARCM ICAO ACAO
	8	Progress report on ARCM organization and functions manual to RASG-MID and ACAO EC	Mar 2021	Progress Report	ACAO/ICAO
Establishment/launch of the ARCM	9	Establishment of the ARCM database (Investigators, Trainings, tools, equipment, etc)	Jun 2021	ARCM database	ARCM ICAO ACAO
	10	Sharing of Human Resources, training, tools, equipment, etc	TBD	Cooperation/ Sharing of resources	ARCM
	11	Development of ARCM Accidents & incidents investigation procedures Manual	TBD	Procedures Manual	ARCM
	12	Harmonization of MENA ARCM AIG Training	TBD	Harmonized AIG Training	ARCM

		Programmes		Programmes	
	13	Development of a common accident and serious incident database for identifying operational safety risks	TBD	Common accident and serious incident database	ARCM ICAO ACAO
Update the DGCA-MID and ACAO GA/EC on MENA AIG ARCM	14	Progress report to the DGCA-MID/6 and ACAO GA/EC	Nov 2021	TBD	ICAO ACAO

- END -