



International Civil Aviation Organization

Regional Aviation Safety Group - Middle East

Sixth Meeting (RASG-MID/6)
(Bahrain, 26-28 September 2017)

Agenda Item 3: Regional Performance Framework for Safety

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

(Presented by AIG Ad Hoc Group Rapporteur)

SUMMARY

This paper presents the Draft Strategy and Roadmap for enhancement of cooperation among the Middle East and North Africa (MENA) States in the provision of AIG functions.

Action by the meeting is at paragraph 3.

REFERENCES

- ACAC/ICAO AIG Workshop Report
- ICAO Doc 9946 - *Manual on Regional Accident and Incident Investigation Organization*

1. INTRODUCTION

1.1 The ACAC/ICAO AIG Workshop was successfully held in Jeddah, Saudi Arabia, 25-27 April 2017. The event was organized jointly by the ICAO MID Regional Office and ACAC and hosted by AIB of Saudi Arabia. The Workshop was attended by 27 participants from 6 States and 1 Organization.

1.2 The main objective of the Workshop was to address issues related to Accident and Incident Investigation, with a special focus on Regional Cooperation in order to finalize the Strategy for the establishment of a Middle East RAIO, for final endorsement by the DGCA-MID and ACAC Executive Council. The Workshop materials are available at: www.icao.int/mid

1.3 A new Draft Strategy was developed by the Workshop. It was found that the earlier Strategy was difficult to be implemented because it required the States to collectively move from a phase to next without sufficient consideration to the variation among States' capabilities.

1.4 During the ACAC/ICAO AIG Workshop an AIG Ad Hoc Group was established to finalize the draft of the Strategy for the Enhancement of Cooperation in the Provision of AIG Services in the MENA Region and develop the related Roadmap in order to be presented to the RASG-MID/6 meeting.

2. DISCUSSION

2.1 The objective of the new Strategy is to contribute to the 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. The Draft Strategy is at **Appendix A**.

2.2 The new Strategy is based on three Levels (as shown below). States are required to determine first their current situation. MENA States are urged to develop and further strengthen regional/sub-regional cooperation for accidents and incidents investigation, and should take necessary measures to reach at least level 2.

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.

2.3 A Roadmap for the implementation of the Strategy is developed, under the framework of RASG-MID, to provide the details and timelines related to the implementation of the different levels. The Roadmap is a live document which includes Key Performance Indicators (KPIs) developed for monitoring the implementation to ensure that the Roadmap agreed goals are achieved. The Roadmap is at **Appendix B**.

2.4 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.

2.5 The Roadmap breaks down each Level to main action points leading to the fulfilment of the Level. The progress related to the achievement of each KPI will be continuously monitored, and then the possibility to move to the next action point will be considered.. taking into consideration each State's situation and its readiness to move to the next action point.

Note. - Tables are included in the Strategy and Roadmap documents to illustrate the three Levels of cooperation and the implementation plan including action points, goals, target dates, and dates of taskforce discussion for evaluating the goal achievement.

3. ACTION BY THE MEETING

3.1 The meeting is invited to review and endorse the draft Strategy and Roadmap at **Appendices A and B**, respectively.

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 **Appendix A** 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.

APPENDIX A

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

1- Background

A Strategy was developed by the ICAO AIG Workshop that took place in Jeddah, Saudi Arabia, during the period 24-27 April 2017, concerning the enhancement of cooperation in the provisions of AIG functions for the Middle East and North Africa States. The Strategy was further It was found that the earlier Strategy was difficult to be implemented because it required the States to collectively move from a phase to next without sufficient consideration to the variation among States' capabilities.

The new Strategy is based on three Levels. States are required to determine first their current situation and then to take the necessary actions to reach at least Level 2.

2- Objective

The objective of this Roadmap is to set certain key performance indicators (KPIs), within a specified target date, for each Level.

3- Methodology

This Roadmap requires participating States to discuss the achievement progress of each KPI on the due time, and then to determine the possibility of moving to the next action point.

Taking into consideration different levels of compliance with Annex 13 (amendment 15, STD 3.2), MENA States are encouraged to take necessary measures to reach at least Level 2.

The Roadmap breaks down each Level to main action points leading to the fulfillment of the Level. Some of these action points require sequential implementation, but others can be processed in parallel. Participating States are required to discuss, by the means they find suitable, the action point implementation and whether the KPI is achieved or not. The discussion should cover each State's situation and its readiness to move to the next action point.

An AIG Taskforce (AIG TF), which consists of Focal Points designated by the constituent States of the Strategy, is required to follow up and monitor the implementation of the Strategy and keep sufficient records of minutes of meetings, all communication concerning the KPI implementation, and all related decisions.

The AIG TF mandate may continue for running the entire Roadmap and report to the States on the discussion/evaluation target dates. A progress report should be developed by the AIG TF.

4- Key Performance indicators (KPIs)

The table in Appendix B illustrates the action points, KPIs, target dates, and dates of KPI achievement evaluation for each main action point within each Level.

APPENDIX A. COOPERATION LEVELS

	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	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	- Knowledge and information is stored in data repository managed by a voluntary State - Procedure is common	- 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	RAIO-centralized list of Centers. Cost share is determined by RAIO

		cost	
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. RAI0 STRATEGY IMPLEMENTATION PLAN

Level	Action point	KPI	Goal	Target date	Date of AIG TF for evaluating the Goal achievement	
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	Issue a State Letter to the MENA States requesting their desire level of participation and to designate official focal point(s) to be part of the AIG TF.	Ratio of States responding by YES to the States receiving the State Letter	70%	End of January 2018	End of April 2018
	2	States sign mutual bi-lateral agreements	Ratio of States which sign agreements to the States responded to the State Letter mentioned in action point 1	70%	End of December 2018	End of April 2019
	3	States practice the agreements	Surveys of agreements' impact on the cooperation	At least satisfactory results of 80% of the States which entered into agreements	End of June 2019	End of Sept 2019
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	4	Issue a State Letter and forward it to the MENA States, that had completed Level 1, asking for their willingness to enter into a multilateral agreement	Ratio of States responding by YES to the States receiving the State Letter	90%	End of September 2019	End of October 2019
	5	the AIG TF logging the participating States, developing and managing repository of knowledge, information, equipment, tools, investigators, dataframe, list of national research laboratories and centers, etc.	Repository development	Repository is uploaded with updated information about investigation resources as per the mandate issued to the taskforce	End of February 2020	End of April 2020
	6	Form a taskforce and mandate it for developing joint requirements for aviation safety investigation and submit it for States' review, comments, and then concurrence	Joint requirements development	Joint requirements are developed and concurred by the States	End of September 2020	End of October 2020
	7	Form a cooperation mechanism. Seconded investigators from the participant States can manage the mechanism. The seconded investigators shall have access to published contacts and shall be empowered to manage the resources, receive service requests, process it, and make the necessary communications with the other States for a certain service requested under the cooperation mechanism	Mechanism is formalized	Mechanism is efficient and can support the participant States	End of November 2021	End of December 2021
	8	TF to carry out peer-review on the States at Level 2	Percentage of peer-reviewed States	100% of States are peer-reviewed	End of November 2022	End of December 2022
	9	Issue a State Letter to the MENA States, that are poisoned in Level 2, asking for their willingness to enter into a RAI0	Ratio of States decide to continue to the States receiving the State letter	60% of responding States decide to continue towards full RAI0	End of January 2023	End of February 2023

	10	The AIG TF to evaluate satisfaction with level 2 cooperation depending on the achievement of the KPIs/goals.	Achievement of the Level 2 KPIs/goals.	90% of the Level 2 KPIs/goals	End of April 2023	End of May 2023
The decision on whether to continue towards the establishment of a full MENA RAIO, or to be satisfied with level 2 cooperation depending on the achievement of the KPIs/goals.						
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	11	Formulate a charter for the States who decided to continue towards a full RAIO, and develop the internal management system including decision-making on the methods of staffing, funding, centralizing dataframe, etc.	Charter completion	Charter contains all the centralized functions	End of April 2023	End of June 2023
	12	Organize a Workshop for the participating States to develop the establishment process for the RAIO including timelines for having centralized regulations, board of directors, roles and responsibilities, staff, equipment, information, etc.	Establishment process	Establishment document is developed to contain the structure of RAIO, roles and responsibilities, and the management system	End of September 2023	End of October 2023
	13	High level meeting to agree on the establishment of the RAIO and sign a letter of intent or MOU.	LOI or MOU	Signed LOI or MOU	TBD	TBD
	14	Announce and run the RAIO and evaluate the effectiveness of operation, periodically, based on feedback system	Announcement	Full run of RAIO	TBD	TBD