



WORKING PAPER

ASSEMBLY — 40TH SESSION

TECHNICAL COMMISSION

Agenda Item 29: Aviation Safety and Air Navigation Regional Implementation Coordination Mechanisms

REGIONAL COOPERATION IN AIG FUNCTIONS

(Presented by the United Arab Emirates)

EXECUTIVE SUMMARY

This working paper presents a proposal to make the establishment of *Regional Accident and Incident Investigation Organization (RAIO)* more practicable by developing a roadmap for the implementation by creating three Levels of cooperation beginning with the regular investigation agreements, going through organized Aircraft Accident and Incident Investigation Regional Cooperation Mechanism, and ending with the formal shape of RAIO. Advancing from one Level to the next is the decision of the State, and criteria should be established for State self-assessment to assist in the determination of advancement.

Action: The Assembly is invited to:

1. note the contents of this working paper; and
2. request ICAO in the next edition of Doc 9946 – *Manual on Regional Accident and Incident Investigation Organization*, to:
 - a) consider inclusion of structured Levels of cooperation;
 - b) include sufficient guidance material to assist a Regional State in its decision-making related to advancing from one Level of investigation cooperation to another; and
 - c) give more attention to the basic RAIO. This may be presented by taking, as an example, the Strategy of the MID-Region States and the practical model of the AIG Regional Cooperation Mechanism (ARCM) of the South American Region.

Strategic Objectives:

This working paper relates to the Safety Strategic Objective.

Financial implications:

Not applicable

References:

MID-Safety Support Team (SST) reports and working papers
Doc 9946 – *Manual on Regional Accident and Incident Investigation Organization*

1. INTRODUCTION

1.1 Assembly Resolution A36-10, *Improving accident prevention in civil aviation*, urged 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.

1.2 The institution of an investigation into an aircraft accident or incident is the responsibility of the State according to the roles mentioned in Annex 13 — *Aircraft Accident and Incident Investigation*. However, the conduct of the whole or any part of an investigation may be delegated to another State, or to a Regional Accident and Incident Investigation Organization (RAIO) by mutual arrangement and consent.

1.3 Shortcomings in investigation capabilities were observed in the findings of the ICAO Universal Safety Oversight Audit Programme (USOAP) which indicate that a number of States have not been able to implement an effective accident and incident investigation system for their aviation activities. That is associated, in general, with a lack of resources (both human and financial), legislation and regulations, organization for the investigation, a training system, equipment and a lack of policies, procedures and guidelines for investigations. The growing sophistication and complexity of modern aircraft add more to the investigation burdens.

1.4 To enhance investigation capabilities, Assembly Resolution A37-15 recommended that Contracting States cooperate in the investigation of major aircraft accidents or accidents in which the investigation requires highly specialized experts and facilities. This was in response to the AIG Divisional Meeting (2008) where several States highlighted that RAIO would help in regions where individual States do not have investigation capability. This solution would assist the States to conduct effective investigations, reinforce conformance with the provisions of Annex 13, and contribute to the enhancement of aviation safety.

1.5 The idea of establishing a RAIO was considered by the MID-Region States, and several workshops and seminars have been held to discuss the way forward. A Strategy and Roadmap were initially prepared for this project and were included for discussion by the MID-Region Safety Support Team (SST), and later by the MID Regional Aviation Safety Group (MID-RASG). Because of similarities in the aviation operational atmosphere, and the proximity of geographical location, the SST included some North Africa-Region States in the preparation for the project. Consequently, the work of the SST in the RAIO initiative was extended to cover the Middle East and North Africa (MENA) States. The end result was the DGCA-MID endorsement of the Strategy.

2. DISCUSSION

2.1 One of the main references for the SST work was Document 9946 – *Manual on Regional Accident and Incident Investigation Organization*, which presents guidance for States to facilitate the establishment of Regional cooperation in accident investigation. The manual contains an example organisational structure and description of States' roles in the organisation. However, the guidance suggested a very significant change in emphasis from investigations which are the responsibility of a single State with assistance from other States and industry organizations into a multi-State comprehensive investigation organisation supported by a financial contribution from each Member State.

2.2 As part of the RAIO Strategy, the SST established an implementation Roadmap which consisted of three Stages as a phased-approach:

Stage A. In this stage, Step 1 required MENA States to notify the SST, through a questionnaire, about their investigation capabilities in the premises, investigators' competencies, equipment, and support from State-level organizations.

Step 2 in that stage was to establish a list of investigators, equipment, and support from other organizations. Step 3 was to organize meetings, seminars, and workshops to address issues associated with AIG activities aiming, among others, to improve Regional coordination. Finally Step 4 was to consider establishing a common training programme for the member States' investigators, taking into consideration the ICAO Cir 298 – *Training Guidelines for Aircraft Accident Investigators*.

Stage B. Consider signing agreements between States regarding support in investigations, and establish a task force to determine, among others, the legal, institutional and financial aspects, including the conduct of investigations as per ICAO Annex 13, in Regional investigation systems. The last step in that stage was the States determination to advance to the next Stage.

Stage C. Establish a Regional investigation system(s) taking in due account ICAO Doc 9946 – *Manual on Regional Accident and Incident Investigation Organization*.

2.3 It was agreed that the progress of implementation of the phased-approach should be reported to the appropriate RASG; and that timelines should be agreed for the implementation of the programme, including final decisions related to legal, institutional and financial aspects related to the establishment of RAIO(s). That phased-approach to RAIO would require the States to move en-bloc from one Stage to another, and no States would be left behind.

2.4 Later surveys and meetings indicated that attempting to move en-bloc from one Stage to another, and attempting to establish a full RAIO in the short-term, would present some difficulties due to diversity in the capabilities of the various States. Consequently, the Strategy was modified in order to restructure cooperation into three major Levels. With this new Strategy, advancing from one Level to another will require the State to be confident that the preceding Level has completely satisfied its expectations and that the State can now advance to a higher Level.

2.5 The new Strategy improved on the previous phased-approach Strategy in that the latter required States to move en-bloc from a Stage to the next, which may hinder progress as some less committed States may cause a delay in moving forward. The new Strategy provides options for a State to choose at which Level, and for how long, it wishes to stay, and this would not hinder other States in advancing to the next Level. The three Levels of cooperation are defined as follows:

Level 1. Cooperation among MENA States under the framework of Annex 13 and/or a standard bilateral agreement to facilitate sharing, on an ad-hoc basis, resources, training, knowledge, information, documentation, and capabilities.

Level 2. Cooperation among MENA States under the framework of an Accident Investigation Regional Cooperation Mechanism which is similar to the AIG Regional Cooperation Mechanism (ARCM) for the South American Region. The Mechanism consists of a well-defined scope and a set of coordinated, organized, and harmonized procedures and mechanisms for the conduct of accident and serious incident investigations, sharing investigation expertise, tools and equipment, databases, knowledge, and technical support of each State's institutions and laboratories. A repository hosted by a voluntary State will contain all the investigation

capabilities and activities as a pool for a State use. The cost of any utilized service or capability, including a delegation of conduct of investigation from one State to another, will be paid for by the State receiving the service.

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.

2.6 The new Strategy requires the MENA States to take measures in order to reach at least Level 2. Key Performance Indicators (KPIs) have been developed for the monitoring the implementation of the Roadmap to ensure that the agreed goals are achieved. The new Strategy presents the opportunity to decide whether to continue toward the establishment of a full MENA RAIO, or to be satisfied with Level 2 cooperation. The decision will be taken in due course, depending on the achievement of the expected targets of the KPIs. Surveys can be used as the foundation of measurement for the States to advance to Level 2.

2.7 With this new Strategy of cooperation, the State has the option to join the Level that best fits its capabilities, and can stay at that Level until the State becomes ready for multi-lateral cooperation. However, establishing a less-cost and more reliable cooperation mechanism, such as that in Level 2, is a feasible solution for States. This cooperation mechanism provides a robust common platform to the States, and will build a common experience among the MENA States before a decision is made by all, or some of, the States to establish a RAIO with its consequent legal and financial commitments.

2.8 From a more general perspective, ICAO Doc 9946 – *Manual on Regional Accident and Incident Investigation Organization*, gives the possibility that States may wish to start with a *basic RAIO* structure that can evolve into a more complex organization [from paragraph 3.10.1.3]: “The rate of evolution may depend on the success or failure of States’ efforts to comply with the defined objectives of the proposed regional system and on their interest in meeting the demand for an effective decision-making process required for the establishment and management of an effective and robust regional accident and incident investigation system. In a *basic RAIO*, the national accident and incident investigation authority retains full responsibility for investigation activities within a Member State, while the RAIO develops and provides standardized, common regulations, policies and procedures for accident and incident investigation, provides oversight of the implementation of such requirements, as well as advice, guidance and assistance to Member States.”

2.9 The document does not clearly mention the *basic RAIO* structure. In addition, the document does not present adequate guidance for the States on how to determine their readiness to establish a RAIO solution. It is important that a simple structure of cooperation, similar to the ARCM in Level 2 of the MID-Region new Strategy, be a step that precedes the formal RAIO structure. This Strategy, with its features of State freedom of advancement from one Level to the next, and the specific middle Level 2, will ascertain that a degree of experience and maturity is reached within a period of time, and this will be a robust preparation for an official structure of RAIO.

2.10 Therefore, it is recommended that Doc 9946 consider the MID-Region Strategy for Regional States cooperation, and that this document be amended for the purpose of adding sufficient guidance material for structured Levels of cooperation supported by examples of roadmaps and necessary key performance indicators that will assist the interested Regional States in their decision-making to advance from one Level to another, and whether a State or group of States within the Region become ready for a full RAIO establishment, or not.