

EU-Africa Safety in Aviation (EU-ASA) project

ICAO thoughts behind the RAIO – ICM setup

Tuesday 7 May 2024

5th AIG workshop meeting

Dakar, Sénégal / Hybrid

Olivier Ferrante, AIGP chair

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Outline

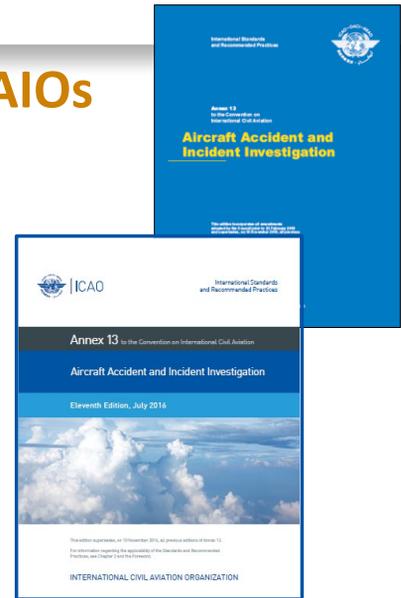
- Context of AIAs and RAIOs
- 2016 AIG Workshop/tutorial (Iceland)
- 2018 Survey on AIG Regional Cooperation in Africa
- 2019 – 40th Session of the Assembly
- The RAIO/ICM Cooperative Platform
- AIGP activities

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Context of AIAs and RAIOS

Annex 13 Amendment (November 2016)

- 3.2 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.

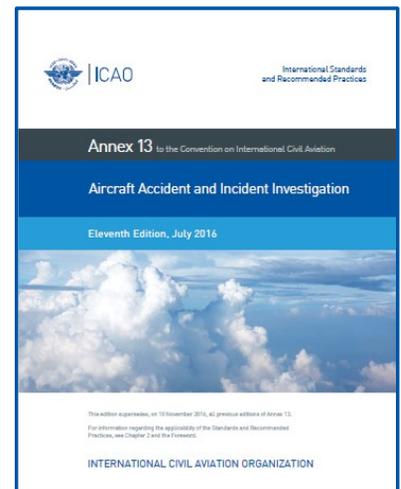


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Context of AIAs and RAIOS

The new standard 3.2 can be read in the context of standard 5.1

- 5.1 *The State of Occurrence shall institute an investigation into the circumstances of the accident and be responsible for the conduct of the investigation, but it may delegate the whole or any part of the conducting of such investigation to another State or a regional accident and incident investigation organization (RAIO) by mutual arrangement and consent. In any event, the State of Occurrence shall use every means to facilitate the investigation.*



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AiAs and RAIOS

Ad-hoc investigation commissions have shown their limits because they are disbanded at the end of the investigation:

- No capitalisation of experience
- Difficulties to follow up the safety recommendations
- AIAs provide an answer but need time and resources
- RAIOS should enable to pool resources and gain efficiency in sharing costs and experience
- However, it could have an impact on seamless coordinations with local authorities in the aftermath of the accident

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2016 Workshop/tutorial on Regional Cooperation

•Doc 9946 - Manual on Regional Accident and Incident Investigation Organization (RAIO)
[Marcus Costa, International Civil Aviation Organisation](#)

•The European Network of Civil Aviation Safety Investigation Authorities
 Olivier Ferrante, European Society of Air Safety Investigators

•The NORDIC Accident Investigation Group (NAIG)
 Thorkell Agustsson, Director of ITSB, Chair of ISASI 2016

•Banjul Accord Group Accident Investigation Agency (BAGAIA)
 A Regional Accident Investigation Organization (RAIO) in West Africa
 Caj Frostell, BAGAIA Commissioner

•Regional Cooperation in Asia and Pacific Regions
 Mr Chong Chow Wah, Air Accident Investigation Bureau of Singapore

•AIG Regional Cooperation Mechanism of South America
 Mr Daniel Barafani, Director of Investigations, JIAAC (Junta de Investigación de Accidentes de Aviación Civil)



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2016 Workshop Summary (1 / 3)

- Wide variety of regional networks (are there any RAIOS ?)
- Regional ISASI societies play a key role in Regional cooperation
- MENASI / AsiaSASI / ESASI / etc.
- **New provision in Annex 13 on delegating investigations to RAIOS**
- “Cooperation” does NOT mean that governments would give up their sovereignty or responsibilities
- Communication responsibilities in time of crisis
- Relation with judicial authorities
- Peer Reviews seems an effective approach to further improve cooperation and efficiency

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2016 Workshop Summary (2 / 3)

- Relative scarcity of major air accidents have made them more challenging to investigate
- Certain MS which until today have not faced a major accident on their territory may not be sufficiently prepared to face the challenges
- It is crucial to strengthen national accident investigation capability through formalized cooperation to ensure a consistent response to accidents
- Funding : there must be commitment from ICAO Contracting States

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2016 Workshop Summary (3 / 3)

- Investigators work in both ‘formal’ and ‘informal’ networks
Common points (Passion for aviation, noble cause, education, shared challenges)
=> Mutual confidence
- Challenge : to maintain the independence of the Safety Investigation Authority while maximizing the benefits of industry relationships
- SMS is another form of “internal” network for prevention purposes
- Need for new/more networks/connections
- Safety investigations require a high level of expertise in various domains
- Form the relationships with Universities and research organisations early
- Find out what Universities and research organisations can offer you
- BE PREPARED and NETWORK in “peace time”

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BEA Survey on AIAs/RAIOs in Africa (2018)

Scope of the questionnaire

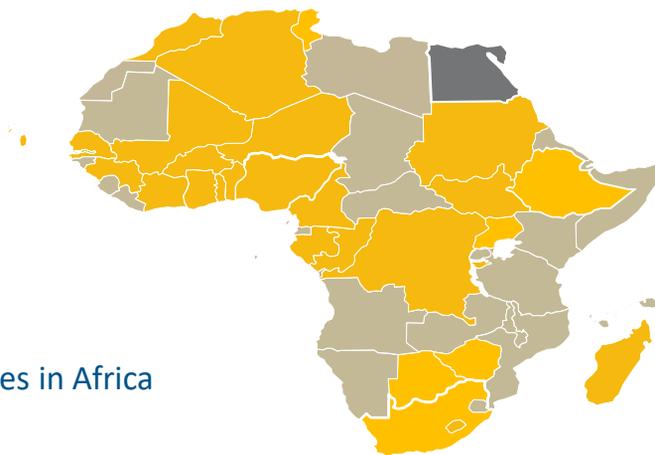
- Confirm AIG contact details
- Responses AIA / NAA
- Independence
- Resources
- Training
- Cooperation (RAIOs)

Note:

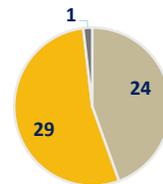
This survey/study was carried by a BEA trainee in 2018. He was supported by ICAO. The results provided an indicative picture of the situation at that time. They must be interpreted with care.

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2018 BEA Survey on AIAs/RAIOs in Africa



54 States in Africa



- Contact established, but no response received
- Responded
- Not contacted

Note:

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Provisional Results

- **Confirm AIG contact details**
 - ✓ 11 out of 29 will be updated
- **Responses AIA / NAA**
 - ✓ 21 out of 29 have an AIA (or equivalent)
- **Independence (Perception of independence)**
 - ✓ 20 out of 29 declare being independant
- **Resources / Training**
 - ✓ Variability to be further analyzed
- **Cooperation (RAIOs)**
 - ✓ Only BAGAIA

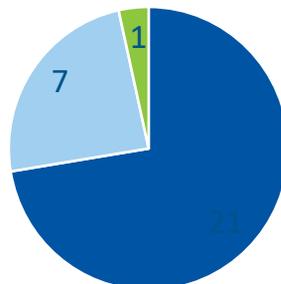
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Survey on AIAs on the African Continent

Localisation of the AIG function



29 Responses

■ AIA ■ NAA ■ Undetermined

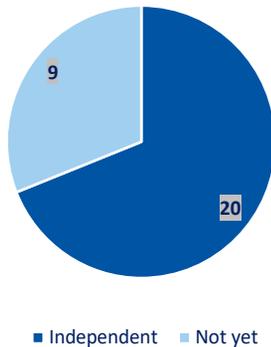
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Survey on AIAs on the African Continent

Independence (Perception of independence)



ICAO data (PQ 6.005)

26 States declared being independent

29 Responses

Note:

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Initial findings (2018)

- Sovereignty aspects
- RAIOs are normally linked to RSOOs (e.g. Banjul group)
- Challenges faced by BAGAIA
 - ✓ Operational
 - ✓ Financial (contributions from States)
 - ✓ Practical training/ teamwork between investigators

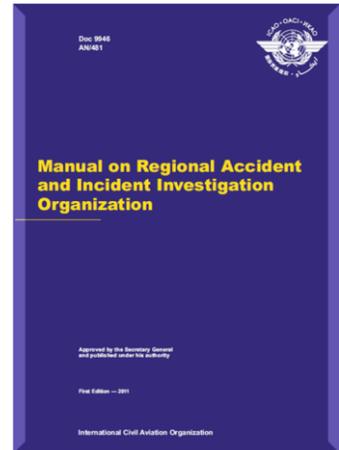
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Possible Way Forward

- Further study on the existing RAIOS
- Research examples of delegations of investigation to RAIOS
- Review the manual on RAIOS

Update?

ICAO manual Doc 9946 (Edition 2011) does not reflect the characteristics of the current list of RAIOS (Mechanism, Group, Network), except perhaps MAK/IAC that predated the manual



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40th Session of the Assembly

Topic of RAIOS and cooperative mechanism raised by a number of WPs

WP/74 REGIONAL ORGANIZATION TO IMPROVE THE AVIATION SAFETY - ESTABLISHMENT OF THE REGIONAL ORGANIZATION OF ACCIDENT INVESTIGATION OF CENTRAL AMERICA (GRIAA) by Members States of the Central American Corporation for Air Navigation Services (COCESNA)

WP/91 REGIONAL COOPERATION IN THE FIELD OF INDEPENDENT AIRCRAFT ACCIDENT INVESTIGATION AND AVIATION SAFETY ASSURANCE by The Interstate Aviation Committee

WP/95 REGIONAL COOPERATION IN AIG FUNCTIONS by The United Arab Emirates

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40th Session of the Assembly (cont'd)

WP/111 RESILIENCE TO A MAJOR ACCIDENT – COOPERATION, MUTUAL SUPPORT AND REGIONAL ACCIDENT AND INCIDENT INVESTIGATION ORGANISATIONS (RAIOS) by Finland on behalf of the Member States of the European Union, the European Civil Aviation Conference and EUROCONTROL

WP/155 PROPOSED CONTINENTAL STRATEGY AND ACTION FOR THE ESTABLISHMENT OF REGIONAL AIRCRAFT ACCIDENT AND INCIDENT INVESTIGATION ORGANIZATIONS by the 54 Contracting States, Members of the African Civil Aviation Commission (AFCAC)

WP/371 CONTRIBUTION OF AIG COOPERATION MECHANISMS TO AVIATION SAFETY by Argentina

→ All these states/regions are involved in the AIG Panel

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Outcome of 40th Session

The Council on the 40th Session of the Assembly agreed to:

- Promote mutual support and raise regional cooperation;
- Encourage States to consider establishing investigation cooperation mechanisms as an alternative to RAIOS; and
- Review and expand guidance in Doc 9946 to reflect other existing models of investigation cooperation mechanisms.

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AIGP/6: Regional cooperation in accident and incident investigation (IP/2 – WG/19)

- Emphasize the role and obligations of each State AIAs
- Encourage mutual support between national AIAs
- Propose to expand the concept of RAIOs to include the global experience of other models and best practices that have been developed

Objective:

- To review and enhance ICAO DOC 9946 on RAIOs

Proposal:

- AIGP to support the ICAO Secretariat in expanding DOC 9946 with the worldwide experience in investigation cooperation mechanisms
 - **Creation of AIG Working Group 23 [Twelve volunteers, chaired by UAE]**

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AIGP WG23

- The AIGP has a working group (WG23) on regional cooperation
- Large survey was sent out in 2023 and is being analysed
- Investigation Cooperation Mechanisms to be developed
- Work with RAIO/ICM CP

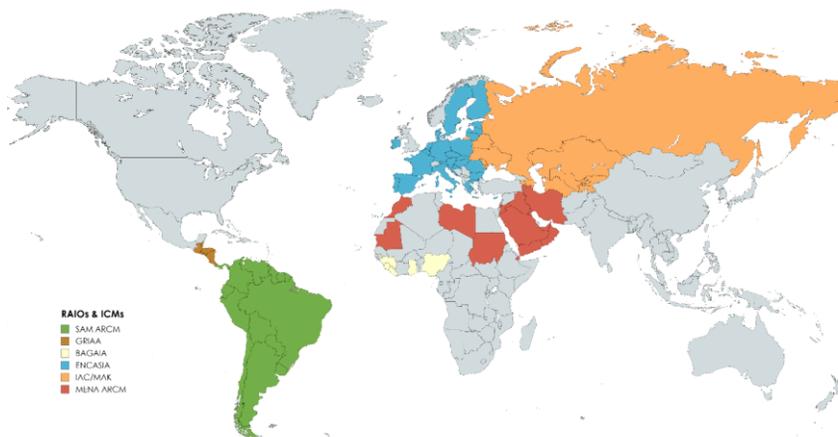
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RAIO Cooperative Platform

https://www.icao.int/safety/Implementation/Pages/RAIO-Cooperative-Platform.aspx

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RAIOs and ICMs around the world



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Currently

Two RAIOs:

- Interstate Aviation Committee (IAC) – 12 States
- Banjul Accord Group Accident Investigation Agency (BAGAIA) – 7 States

Four ICMs:

- South American AIG Regional Cooperation Mechanism (ARCM) – 13 States
- European Network of Civil Aviation Safety Investigation Authorities (ENCASIA) – 27 States
- Central American Regional Aviation Accident Group (GRIAA) – 6 States
- Middle East and North Africa (MENA) Regional Accident Investigation Cooperation Mechanism (ARCM) – 15 States

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WG-23 Survey

Take the views of the Contracting State individually and accordingly develop a new survey questionnaire to evaluate the aforementioned issues.

The purpose of the survey is to:

- Examine the States' involvement in any type of aircraft accident investigation cooperation;
- Identify the types of existing investigation cooperation mechanisms, their strengths, and challenges, and evaluate the implementation level; and
- Gather the States' opinions on how the ICAO guidance material can be improved to incorporate various investigation cooperation mechanisms.

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Survey Structure

WG-23 developed a questionnaire that evaluates the current status of the responding States on each of the following areas:

- Human resources
- Investigation expenses
- Training
- Equipment
- Tools and technology
- Sharing databases

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Survey Structure

A key question is left to the end of the questionnaire to evaluate the States' willingness and tendency toward establishing any type of regional investigation cooperation as well as the level of their satisfaction towards the current ICAO guidance material.

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Progress

- The questionnaire was circulated to the States by **ICAO (SL 22/112)** released in December 2022 and expected answers by Feb 2023
- Responses were received from 126 States
- Out of the 126 responses, 97 responses were validated
- The answers were transferred to a spreadsheet (end of April 2023)
- WG-23 decided to contact the States that did not respond and the States which responses were unvalidated (by utilizing the network of existing RAIOS/ICMs coordinators)

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Initial Analysis

For the validated 97 responses

Question 9: Is there a need for ICAO guidance material, and where to incorporate this material?

Question 10: Preferences of States on the type of cooperation

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Initial Analysis – Question 9

In your opinion, is there a need to develop ICAO guidance material to cover the various types of investigation cooperation mechanisms?

Yes: 78 States

No: 19 States

If “Yes”, where can this newly developed guidance material be incorporated?

- ICAO Doc 9946: 51 Answers
- New ICAO Document: 24 Answers
- Other: 22 No Answer

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Initial Analysis – Question 10(C)

For States which are already engaged in any type of investigation cooperation mechanism: Kindly give a brief description about the main challenges:

- A) That were faced during the establishment of the investigation cooperation mechanism
- B) That were faced during implementation
- C) For other States: Is your State willing to enter into any type of investigation cooperation mechanism?*

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Initial Analysis – Question 10(C)

Types of cooperation

Type 1. Cooperation among the regional States **under an agreement to share**, on an ad-hoc basis, resources, training, information, documentation and/or capabilities; and strengthen conformity with Annex 13.

Type 2. Cooperation among the regional States **under the framework of a regional investigation cooperation mechanism** (well-defined scope and set of coordinated, organized and harmonized procedures and mechanisms, and/or a set of resources that can be pooled).

Type 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.

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Initial Analysis – Question 10(C)

Types of cooperation

Type 1: 35 States

Type 2: 17 States

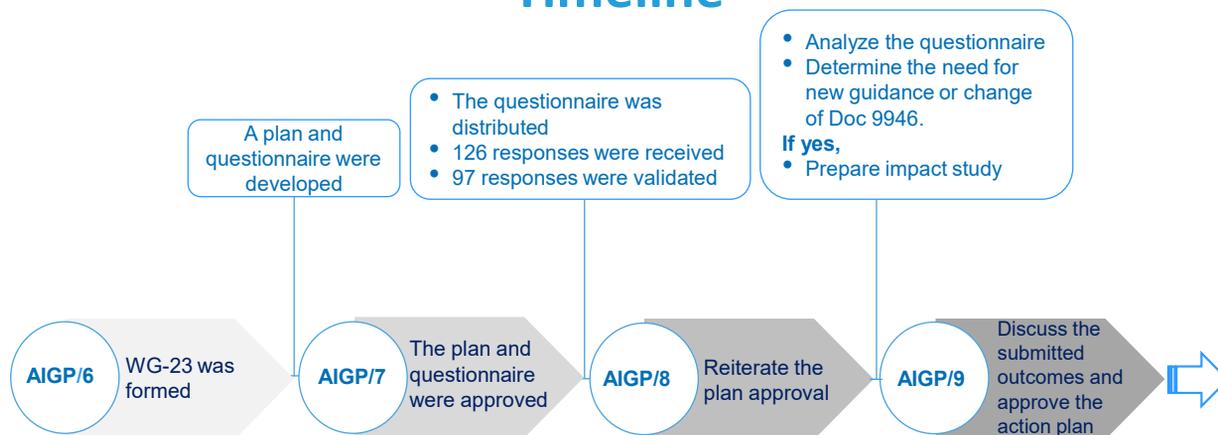
Type 3: 21 States

No Answer: 29 States

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Timeline



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Next Course of Action

- WG-23 will submit a working paper to AIGP/9 incorporating the survey analysis
- If the survey analysis conclude that a new guidance is required, WG-23 will submit to AIGP/9:
 - **Draft guidance material** (either in a new ICAO Document or a change of Document 9946)
 - **Impact analysis on Annex 13 and** relevant ICAO Documents, and draft of change text

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ICAO

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THANK YOU

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