# FORO2.4 SECTOR AÉREO ESPACIO PARA TITULO

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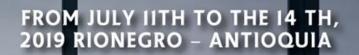
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# Agenda

- 1. Amendment 17 to Annex 13
- 2. Amendment proposals SRGC and ground-based recordings
- 3. Developments in flight recorder provisions













# Agenda

## 1. Amendment 17 to Annex 13

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

**5.1.2** The <u>State of Occurrence shall institute an investigation</u> into the circumstances of a <u>serious incident</u> when the aircraft is of a maximum mass of over 2 250 kg. Such a State <u>may delegate</u> the whole or any part of the conducting of such investigation to <u>another State or a regional accident and incident investigation</u> <u>organization</u> by mutual arrangement and consent. In any event the State of Occurrence shall use every means to facilitate the investigation.

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FORO2.4 SECTOR AÉREO





#### <u>1990 to 2016</u>

#### **1.157** FATAL ACCIDENTS

worldwide involving aircraft with MCTOM over 5700 kg

# 42% **PUBLISHED FINAL REPORTS**

#### 58% **UNPUBLISHED REPORTS**

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# TIMELY INVESTIGATIONS

**5.1.3 Recommendation.**— If the State of Occurrence <u>does not institute and</u> <u>conduct</u> an investigation, <u>and does not delegate</u> the investigation to another State or a regional accident and incident investigation organization, as set out in 5.1 and 5.1.2, the State of Registry or, in the following order, the State of the Operator, the State of Design or the State of Manufacture is entitled to <u>request in writing the State</u> <u>of Occurrence to delegate the conducting of such investigation</u>. If the State of Occurrence gives express consent or does not reply to such a request within 30 days, the State making the request should institute and conduct the investigation with such information as is available.

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# ACCIDENTS OR INCIDENTS OUTSIDE THE TERRITORY OF ANY STATE

5.3.2 **Recommendation**.— If the <u>State of Registry does not institute and conduct</u> an investigation, and <u>does not delegate</u> the investigation to another State or a regional accident and incident investigation organization, as set out in 5.3, the State of the Operator or, in the following order, the State of Design, or the State of Manufacture is entitled to <u>request in writing the State of Registry to delegate the</u> <u>conducting of such investigation</u>. If the State of Registry gives express consent or does not reply to such a request within 30 days, the State making the request should institute and conduct the investigation with such information as is available.











6.6.1 Recommendation.— If the <u>State conducting the investigation does not make</u> <u>the Final Report or an interim statement publicly available within a reasonable</u> <u>timeframe</u>, other States participating in the investigation are entitled to request in writing from the State conducting the investigation <u>express consent to release a</u> <u>statement containing safety issues raised with such information as is available</u>. If the State conducting the investigation gives express consent or does not reply to such a request within 30 days, the State making the request should release such a statement after coordinating with participating States.

Note.— Guidance on what may constitute a "reasonable timeframe" for a State to make a Final Report and/or an interim statement publicly available is contained in the Manual of Aircraft Accident and Incident Investigation (Doc 9756), Part IV — Reporting.









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#### Top Killers in aviation CFIT; LOC-I; Runway Excursions

## Should we investigate the "precursors" to the top killers?

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Problem statement: AIAs face problems with the assessment of incidents/serious incidents.

#### ATTACHMENT C. LIST OF EXAMPLES OF SERIOUS INCIDENTS

#### SIMPLIFIED VERSION OF THE AVIATION RISK MANAGEMENT SOLUTIONS (ARMS) EVENT RISK CLASSIFICATION (ERC) MATRIX

There may be a <u>high probability of an accident</u> if there are <u>few or no</u> <u>safety defences remaining</u> to prevent the incident from progressing to an accident. To determine this, an event risk-based analysis, that takes into account the most credible scenario had the incident escalated, and the effectiveness of the remaining defences between the incident and the potential accident, should be performed as follows:









#### **ARMS/ERC MATRIX**

#### Two assessments to help determining which incidents are serious

#### incidents:

- 1) Effective: if several defences remained and needed to coincidently fail; and
- 2) Limited: if few or no defences remained, or when the accident was only avoided due to providence.

		b) Remaining defences between the incident and the potential accident	
		Effective	Limited
a) Most credible scenario	Accident	Incident	Serious Incident
Section	No accident	Incident	













#### **ARMS/ERC MATRIX**

#### Two assessments to help determining which incidents are serious

#### incidents:

- 1) Effective: if several defences remained and needed to coincidently fail; and
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a) Most credible scenario	Accident	Incident	Serious Incident
	No accident	Incident	













#### **Regional Accident and Incident Investigation Organization**



Manual on Regional Accident and Incident Investigation Organization

Approved by the Secretary General and published under his authority

First Edition — 201

Doc 9946 AN/481

International Civil Aviation Organization

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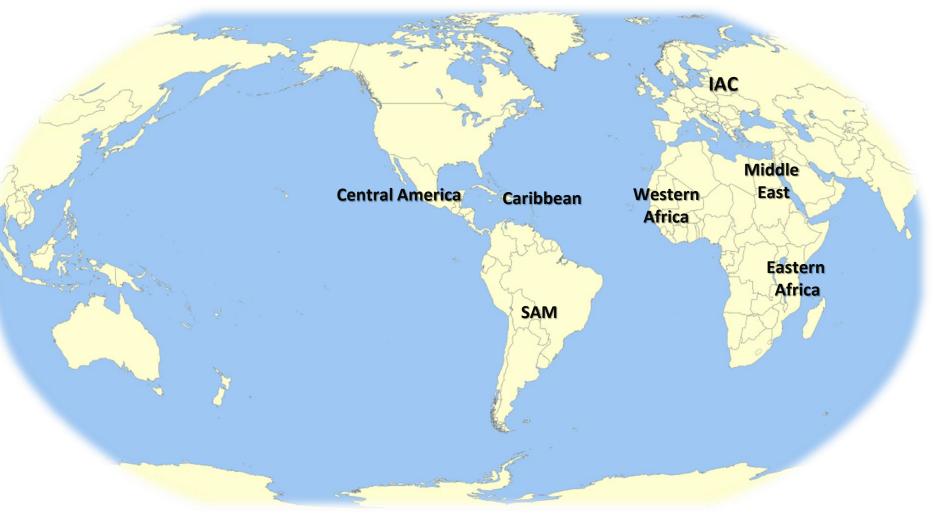






#### FORO2.4 2030

#### **Regional Investigation Systems**



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### SAFETY RECOMMENDATION OF GLOBAL CONCERN (SRGC)

**Safety recommendation of global concern (SRGC).** A safety recommendation regarding a systemic deficiency having a probability of recurrence, with significant consequences at a global level, and requiring timely action to improve safety.

*Note.*— *The* Manual of Aircraft Accident and Incident Investigation (Doc 9756), *Part IV* — Reporting *contains the criteria for a recommendation to be classified as an SRGC.* 

6.6.1 A State issuing a safety recommendation of global concern (SRGC) shall inform ICAO of the issuance of that recommendation and its responses in dated transmittal correspondence, even when the SRGC is not addressed to ICAO.









#### GROUND-BASED RECORDINGS

5.8 Effective use shall be made of available ground-based recordings in the investigation of an accident or an incident.

Note.— The requirements for the recording of surveillance data and ATS communications are contained in Annex 11 — Air Traffic Services, Chapter 6



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## Accident Investigation Panel - AIGP -















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# Annex 6 to the Come Operation of Aircrai

## FORO2.4 2030

6.3.4.1.1 All aeroplanes of a maximum take-off mass of over 27 000 kg for which the application for type certification is submitted to a Contracting State on or after 1 January 2023 shall be equipped with a crash-protected flight recorder which shall record the information displayed to the flight crew from electronic displays, as well as the operation of switches and selectors by the flight crew as defined in Appendix 8.

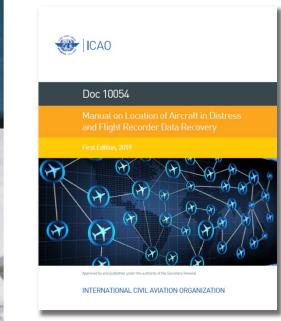
6.3.4.1.2 **Recommendation**.— All aeroplanes of a maximum take-off mass of over 5 700 kg, up to and including 27 000 kg, for which the application for type certification is submitted to a Contracting State on or after 1 January 2023 should be equipped with a crash-protected flight recorder which should record the information displayed to the flight crew from electronic displays, as well as the operation of switches and selectors by the flight crew, as defined in Appendix 8.











#### New

Manual on location of Aircraft in Distress and Flight Recorder Data Recovery, Doc 10054

## In development

Guidance material for the implementation of flight crew-machine interface recordings













## Flight Recorder Specific WG -FLIRECSWG-



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