



**ICAO EIGHTH MEETING OF THE ASIA PACIFIC ACCIDENT
INVESTIGATION GROUP (APAC-AIG/8)**

(Wednesday, 21 October 2020 on Virtual Platform)

Agenda Item 4: Enhancing accident investigation capabilities

**ICAO APAC REGIONAL WORKSHOP ON
RISK-BASED CLASSIFICATION OF SERIOUS INCIDENT**

(Presented by the Secretariat)

SUMMARY

This paper informs the meeting of an ICAO APAC Regional Accident Investigation Workshop on the theme “*Risk-based Classification of Serious Incident*” held on 20 October 2020 on a virtual platform, just prior to the APAC-AIG/8 Meeting.

1. INTRODUCTION

1.1 The ICAO APAC Office organises from time to time regional accident investigation workshops with a view to allowing accident investigators within the Asia and Pacific Regions to share their expertise, challenges, experience and best practices with one another.

1.2 The APAC-AIG coordinated with the ICAO APAC Office to offer an ICAO APAC Regional Accident Investigation Workshop on the theme “*Risk-based Classification of Serious Incident*”. The workshop is to be held on 20 October 2020 on a virtual platform, just prior to the Eighth Meeting of the APAC-AIG which is to be held on 21 October 2020, also on a virtual platform.

1.3 The workshop aims at familiarising investigators from the APAC States/Administrations with a risk-based analysis approach to the classification of serious incidents using a simplified version of the Aviation Risk Management Solution (ARMS) event risk classification (ERC) matrix, an approach introduced by Amendment 17 to Annex 13.

2. DISCUSSION

2.1 The term “serious incident” is defined in Annex 13 as follows:

Serious incident. An incident involving circumstances indicating that there was a high probability of an accident and associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down.

2.2 According to Annex 13, there may be a high probability of an accident if there are few or no safety defences¹ remaining to prevent the incident from progressing to an accident. To determine this, an event risk-based analysis can be performed as follows that takes into account the most credible scenario² had the incident escalated as well as the effectiveness of the remaining defences between the incident and the potential accident:

- a) Consider whether there is a credible scenario by which this incident could have escalated to an accident; and
- b) Assess the remaining defences between the incident and the potential accident as:
 - effective, if several defences remained and needed to coincidentally fail; or
 - limited, if few or no defences remained, or when the accident was only avoided due to providence.

2.3 The combination of these two assessments helps to determine which incidents are serious incidents:

		<i>Remaining defences between the incident and the potential accident³</i>	
		<i>Effective</i>	<i>Limited</i>
<i>Most credible scenario</i>	<i>Accident</i>	Incident	Serious Incident
	<i>Incident</i>	Incident	

2.4 The workshop presenters will address the following:

- (a) Insight into ICAO’s methodology for deciding whether an incident should be classified as a serious incident,
- (b) Difficulty in the past in deciding on a serious incident classification, and
- (c) How the ICAO methodology now helps, illustrating with case studies.

3. ACTION BY THE MEETING

3.1 The meeting is invited to provide feedback on the ICAO APAC Regional Accident Investigation Workshop on the theme “*Risk-based Classification of Serious Incident*”.

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¹ Defences include crew, their training and procedures, ATC, alerts (within and outside the aircraft), aircraft systems and redundancies, structural design of the aircraft and aerodrome infrastructure.
² The most credible scenario refers to the realistic assessment of injury and/or damage resulting from the potential accident.
³ Consider both the number and robustness of the remaining defences between the incident and the potential accident. Ignore defences that failed, and consider only those that worked and any subsequent defences still in place.