



## 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

#### SHARING SESSION ON CREW RESOURCE MANAGEMENT

(Presented by Singapore)

##### SUMMARY

The paper highlights a sharing session by two operational pilots on Crew Resource Management hosted by the Transport Safety Investigation Bureau of Singapore on 11 and 12 August 2020 via virtual platform amid the COVID-19 situation.

#### 1. INTRODUCTION

1.1 Crew Resource Management (CRM) is an important tool that is used by flight crew to manage a flight and is integral to flight safety in modern aircraft operation. CRM is also a part of human factors to be examined during an investigation. Hence, it is helpful for investigators to understand the issues pertaining to CRM, the training on CRM received by flight crew, and how flight crew applied what they learnt in their operations.

#### 2. DISCUSSION

2.1 Two very experienced operational pilots were invited to share the application of CRM skills and their experience in CRM training. They each has more than 30 years of flying experience on various Airbus and Boeing aircraft. Both pilots are line instructor pilots with command roles and are qualified Human Factors and CRM facilitators. One of the pilots holds a post graduate diploma in Aviation Human Factors and the other graduated with a Bachelor of Science degree in Safety in Human Factors.

2.2 The session was organised by the Transport Safety Investigation Bureau of Singapore and was held on 11 and 12 August 2020 through virtual platform. The sharing session was opened to colleagues from aircraft accident investigation authorities (AIAs) in the APAC region<sup>1</sup>.

2.3 During the sharing session, the pilots shared how interpersonal communication, leadership and decision making play important roles in CRM. For example, the participants learnt that a “well-balanced” cockpit environment should be one that maintained an authority gradient that is appropriately skewed towards the Captain without losing effective communication with the First Officer

<sup>1</sup> Brunei Ministry of Transport and Infocommunications, Cambodia Air Accident Investigation Unit, Indonesia National Transportation Safety Committee, Malaysia Air Accident Investigation Bureau, Myanmar Air Accident Investigation Bureau, and the Philippines Aircraft Accident Investigation and Inquiry Board.

(FO) who is performing the supporting role. The “Support Process”, where the Captain and FO communicate through a series of queries, responses and resolutions, is a practical example of how CRM can be applied in the cockpit. Case studies of past accidents were used to illustrate how the lack of effective CRM had affected the safety of the flights.

2.4 The sharing session was meant to be interactive and had garnered interesting discussions among the participants. Some of the participants who are human factors specialists or psychologists (volunteer Inspector of Accidents from the TSIB), shared from the professional aspects of human behaviours to complement the sharing session. The participants fed back that the sharing session was helpful to understand the various aspects of CRM which are useful in analysing issues pertaining to human factors in an investigation.

### **3. ACTION BY THE MEETING**

3.1 The meeting is invited to encourage States/Administrations to continue organising investigation training amid the COVID-19 situation through virtual platform and to invite foreign counterparts to take part in the training.

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