



International Civil Aviation Organization

**Third Meeting of the Asia Pacific Accident Investigation Group
(APAC-AIG/3)**

(Colombo, Sri Lanka, 23 - 24 June 2015)

Agenda Item 5: Investigator training

**SINGAPORE'S SECOND WORKSHOP ON UNDERWATER
SEARCH OF FLIGHT RECORDERS**

(Presented by Singapore)

SUMMARY

This paper reports on the Second Workshop on Underwater Search of Flight Recorders organised by the Air Accident Investigation Bureau of Singapore on 30 to 31 July 2014.

1. INTRODUCTION

1.1 Following a successful inaugural workshop in 2011, the Air Accident Investigation Bureau of Singapore (AAIB) organised a Second Workshop on Underwater Search of Flight Recorders on 30 to 31 July 2014. In the spirit of the APAC Code of Conduct on cooperation relating to civil aviation accident/incident investigation, which promotes sharing of expertise and experience relating to aircraft accident and incident investigation, the AAIB invited APAC States/Administrations to attend the workshop.

2. DISCUSSION

2.1 The workshop was attended by 35 participants and speakers from the APAC region as well as France and the United States. The first day of the workshop consisted of a sharing session among investigation agencies on sea crash case studies and experiences in underwater search and recovery of flight recorders or aircraft wreckage. There were discussions on upcoming technologies and innovative techniques of acoustic detection that may be useful for the investigators' search of the flight recorders.

2.2 On the second day, the workshop participants underwent a practical sea search exercise. A mock-up flight recorder affixed with an underwater locator beacon (ULB)¹ was lowered in the coastal water of Singapore (about 20 meters deep). The workshop participants then went on small boats to try to locate the simulated flight recorder by using a handheld ULB detector to listen out for the ULB acoustic signal.

2.3 Besides giving the workshop participants an opportunity to personally practise the skills needed to handle the ULB detectors and to experience the difficulties in trying to discern the

¹ Aircraft's flight recorders are affixed with a ULB each. The ULB will emit a 37.5 kHz acoustic signal when submerged in water.

direction of the ULB signal, the workshop also provided the participants with an insight of the challenges associated with the planning and execution of a sea search operation.

2.4 The Second Workshop on Underwater Search of Flight Recorders was also an opportunity for accident investigators to get to know the regional counterparts and to appreciate the resource (e.g. salvage and recovery companies) that is potentially useful for a sea search operation. With the help of Bangladesh, the ICAO APAC Office is hosting a database of accident investigation agencies in the Asia and Pacific regions. The database is being expanded to include information on underwater search resources in the Asia and Pacific regions². Such information will be very useful when the need for a sea search operation arises.

2.5 The AAIB is considering organising a Third Workshop on Underwater Search of Flight Recorders in 2016, which will involve a search operation in much deeper water. More information regarding the workshop will be provided when available. Again the AAIB will invite APAC States/Administrations to attend this workshop in the spirit of the APAC Code of Conduct on cooperation relating to civil aviation accident/incident investigation.

3. ACTION BY THE MEETING

3.1 The Meeting is invited to note that the AAIB will invite APAC States/Administrations to attend a Third Workshop on Underwater Search of Flight Recorders in 2016.

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² A separate Working Paper at the APAC-AIG/3 will report on the progress on the subject of the database.