



International Civil Aviation Organization
Asia and Pacific Office

Thirteenth Meeting of the Asia Pacific Accident Investigation Group (APAC-AIG/13)

(New Dehi, India, 30-31 October 2025)

Agenda Item 7: Any Other business

STRATEGIES FOR HASTENING OF INVESTIGATIONS

(Presented by India to the AIG Panel)

SUMMARY

All the Occurrences are classified as per the guidelines of ICAO Annexure 13 and the investigations are ordered by the Accident Investigation Bureaus of respective member states. Timely completion of accident investigations is very important for accident prevention. The investigation bureaus may issue interim recommendations based on the analysis with the immediate inputs available. However, the final investigation reports are very important for implementation of recommendations.

This working paper analysed the bottlenecks in the process of investigation and recommended the suggested action plan for consideration of all the stakeholders. The states should enable the investigators to complete the investigations optimally without compromising on the quality.

Action by the APAC-AIG is in paragraph 3.

1. INTRODUCTION

1.1 All the Occurrences are classified as per the guidelines of ICAO Annexure 13 and the investigations are ordered by the Accident Investigation Bureaus of respective member states. Timely completion of accident investigations is very important for accident prevention. The investigation bureaus may issue interim recommendations based on the analysis with the immediate inputs available. However, the final investigation reports are very important for implementation of recommendations.

1.2 AAIB, India has analysed all the steps of investigation process given in Annexure 13 and Standards and Recommended Practices given in Manual of Aircraft Accident and Incident Investigation (Doc 9756). Strategies for hastening the investigation are presented in this working paper.

2. DISCUSSION

2.1 The delays in investigation process are found in the Collection and Transportation of Physical Evidences, Data Recovery from Flight and Voice recorders, Defect Investigation, Analysis, Report Writing and in getting the Draft Final Report cleared.

- a) **Collection and Transportation of Physical Evidences.** Collection, segregation, securing at site and final transportation of physical evidences to designated location will be a challenging process depending on the geographic condition and nature of accident. Arranging the wreckage to re-create the accident site at a nearby location will also be challenging before relocating the wreckage. Re-creation of accident site by using software from manufacturers by using 3-D images of wreckage, Photo/Video recording of accident site with terrain mapping super imposed on grid map through Drone will hasten work at site. Then the physical evidences can be shifted quickly to designated location by using suitable transportation.
- b) **Data Recovery from Flight and Voice recorders.** Locating and recovery of recorders physically from the site before they get damaged is the top priority. The data recovery in a suitable laboratory is a challenge if the recorder is found in a damaged condition. The member state may have apprehensions in sending the recorders to State of Manufacture for recovery of data. Hence, the State of Manufacture should provide the required golden chassis and software to the member state. The member states should have to establish a standard recorder laboratory for repairs of recorder and recovery of data from the repaired recorders. The Accredited Representative (ACCREP) and his Technical Advisers can supervise the process at member state.
- c) **Defect Investigation.** Defect investigation at the Original Equipment Manufacturer (OEM) sometimes take more than six months' time due to scheduling of slots at OEM for testing, obsolescence of the equipment, transfer of the testing facilities to another company by the OEM and receipt of final test report from OEM after completion of testing.
- d) **Analysis by the Investigation Team.** The investigators can collaborate with Subject Matter Experts and Accredited Representative for faster analysis without compromising on the confidentiality. Artificial Intelligence (AI) can be used a tool for analysis by the investigators instead of purely depending on AI.
- e) **Report Writing.** The investigators get overwhelmed with the amount of data collected, multiple analysis made through various sources. Sometimes the investigator may be undertaking multiple investigations simultaneously. To overcome these challenges a software tool for report writing may be utilised. The inputs are to be fed from time to time by the investigator and the software toll should fill the data in the respective sections of the report without the requirement of manual formatting. The software toll will reduce the time of report writing and compilation.
- f) **Feedback on Draft Final Report.** The feedback should be sent within thirty days and any objections should be deliberated with the investigator without waiting for thirty days of time so that the final report can be published quickly.

2.2 Will it be prudent to sub-classify the investigations into the extent of investigation based the nature of accident? The AAIB of should think of it. The AIG can deliberate and guide the states on sub-classification into Field Investigations, Correspondence Investigations, Oversees Investigations, Fatal Accidents, Full Reports and Short Reports.

3. ACTION BY THE AIGP

3.1 The APAC-AIG is requested to consider development or suggesting suitable software toll, sensitise the OEMs to hasten Defect Investigations.

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