



/International Civil Aviation Organization
**Second Meeting of the Regional Aviation Safety Group –
Asia and Pacific Regions (RASG-APAC/2)**
(New Delhi, India, 08 – 09 October 2012)

Agenda Item 3: Member State / Industry Presentations

IMPLICATIONS OF ACCIDENT INVESTIGATION OF ASIANA AIRLINES FREIGHTER

(Presented by the Republic of Korea)

SUMMARY

This paper describes work by the Aviation and Railway Accident Investigation Board of the Republic of Korea (KARAIB) within the framework of the accident investigation into the Asiana Airlines 991 accident in July 2011.

The KARAIB would like to share experience of investigation with contracting States and propose to make a database of respectable salvage companies and investigators with relevant experience.

1. INTRODUCTION

1.1 On 28 July 2011, flight OZ991, a Boeing 747-400 freighter operated by Asiana Airlines, crashed into the sea about 130 km west of Jeju International Airport after the flight crew reported a cargo fire while flying from Incheon International Airport to Pudong International Airport.

1.2 Following the search and rescue operations, accident investigation was commenced. Several States, including the United States, Singapore, and Taiwan, along with salvage companies participated in investigation to identify the location of the aircraft and to detect the signal emitted by the Underwater Locator Beacon (ULB).

1.3 Despite an all-out investigation effort, the ROK encountered difficulties in recovering the accident aircraft due to lack of equipment and investigation specialists. As of August 2012, about 40% of the total fuselage skin was recovered.

1.4 This working paper is to share the experience and lessons gained from the marine accident investigation with Member States and to consider measures to enhance the investigation abilities of the Asia Pacific Region.

2. DISCUSSION

2.1 Through the most recent accident investigation, the KARAIB realized, despite its effort in preparing for investigation, that it is difficult for an investigation authority to be fully equipped with enough investigation equipment and manpower for all kinds and scales of accidents.

2.1.1 When the ULB signal detection operation started immediately after the Asiana Airlines flight 991 accident last year, the KARAIB asked for support from the US, Singapore and Taiwan in order to supplement lack of its resources. Accordingly, the US, Singapore and Taiwan provided relevant equipment and manpower.

2.1.2 After that, the KARAIB conducted recovery operations with the support of national salvage resources including the Korean Navy and the Korean salvage company.

2.1.3 The Korean salvage company designated as a secondary recovery operator recovered much wreckage by using one-boat trawling. Due to the bad weather and heavy sea waves, however, its equipment and recovery method failed to complete the mission before the winter season.

2.1.4 KARAIB restarted its recovery operation from March 2012. And finally, in May 2012, the KARAIB recovered the Flight Data Recorder (FDR) of the Asiana Airlines flight 991, but unfortunately, there was only the chassis of the FDR without a memory module. It is supposed that, due to the heavy sea waves, the module got separated from its chassis and flown away with the water.

2.1.5 The KARAIB could recover 40% of the aircraft wreckage including fuselage until August 2012 and moved them to a storage site. The investigation into such wreckage is still underway.

2.2 The ROK experienced that it is difficult to be prepared for or maintain the organization and the equipment to be ready for all kinds or scales of aircraft accidents. To prepare for them, however, at least all kinds of practical training should be carried out, and the system for mobilizing external support in case of an emergency should be established.

2.2.1 Further, it is considerably important to understand the factors of the marine environment in the wreckage recovery operation: current speed, depth of water, height of waves, tides, underwater visibility, etc., of which the most important environmental factor is underwater visibility.

2.3 A new database of respectable salvage companies and their capabilities should be newly established and maintained. In particular, the number of experienced aircraft wreckage salvage companies is not enough worldwide.

2.3.1 It is necessary to resource relevant accident investigators and equipment from the nations with wreckage recovery experience and regionally coordinates them to promote mutually supportive cooperation.

2.3.2 Training for preparing investigators for various kinds and scales of accidents has been given, but the KARAIB learned from the Asiana Airlines flight 991 accident that it is all the more necessary to provide a more specialized training.

2.3.3 In addition, the KARAIB has signed the MOU with its counterparts from 12 countries to enhance cooperation in accident investigation, but when the accident occurred, it encountered the difficulties in identifying investigation speciality of each investigation authority.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper and recognize the need for strengthening the regional cooperation in the area of accident investigation;
- b) consider establishing a new database, in cooperation with the regional office of ICAO, of respectable salvage companies and investigators with relevant experience to share with the Regional Member States.