



ACCIDENT INVESTIGATION AND PREVENTION (AIG) DIVISIONAL MEETING (2008)

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Agenda Item 4: Management of safety data and representation

MANAGEMENT OF SAFETY DATA

(Presented by the Secretariat)

SUMMARY

This paper presents information on the development of common taxonomies by ICAO aiming at improving the analysis and sharing of safety information between States and between States and ICAO.

1. INTRODUCTION

1.1 There are provisions in Annex 13 – *Aircraft Accident and Incident Investigation*, Chapter 8. *Accident Prevention Measures*, to promote accident prevention by analysis of accident and incident data and by prompt exchange of information. Some States have indicated that there should be more guidance concerning the International Civil Aviation Organization (ICAO) Accident/Incident Data Reporting (ADREP) System. States have also expressed that ADREP 2000 taxonomy should be further promoted aiming at improving the exchange of safety information.

1.2 ICAO has fostered the harmonization of database systems through the use of common safety taxonomies thus removing impediments to reporting and sharing of safety information.

2. SAFETY TAXONOMIES

2.1 Actions by ICAO

2.1.1 Following the AIG Divisional Meeting in 1999, ICAO established a Safety Indicators Study Group (SISG) to provide the resources to support an annual review of the ADREP system data, in-depth analysis, consistency of the data and the dissemination of the results to States.

2.1.2 There have also been efforts between the industry and ICAO to develop standardized common taxonomy and definitions for aviation accident and incident reporting systems. The CAST/ICAO Common Taxonomy Team (CICTT) was established in 1999, with the objective to enhance aviation safety through the development and promotion of common terminology, definitions and a taxonomy used to describe aviation safety events. Consequently, the necessary changes were made in the ADREP 2000

taxonomy in order to form the core of international standards for worldwide aviation safety data and information exchange.

2.1.3 The ADREP 2000 Study Group was established in 1993 and was disbanded in late 1998 after reviewing taxonomies of human factors, event types and phase of operation. The taxonomy was modified to permit inclusion of incidents. In 2004 and beyond, as a conclusion for the implementation of the ADREP system in conjunction with the European Co-ordination Centre for Aviation Incident Reporting Systems (ECCAIRS) platform, ICAO continued to review and develop ADREP 2000 taxonomy as part of its tasks and work programmes, thus further facilitating the effective collection and sharing of aviation safety data and information.

2.1.4 As of May 2008, thirty-six Accident Investigation Boards (AIBs), fifty-two National Civil Aviation Authorities (NCAAs) and sixty-five other organizations (including Air Navigation Service Providers (ANSPs), manufacturers, operators, airports, military, research and international organizations) worldwide are registered users of the ECCAIRS software and some States have reported occurrences in the ECCAIRS format to ICAO. Therefore, these States are no longer forced to manually complete the ICAO ADREP reporting forms, as files are sent electronically instead.

2.2 Removing impediments to reporting

2.2.1 Paragraph 8.1 of Annex 13 reads “A State shall establish a mandatory incident reporting system to facilitate collection of information on actual or potential safety deficiencies.”

2.2.2 In addition to the collection, storage and exchange of occurrence data, ECCAIRS also provides users with the capability to exchange analysis tools. As a result, States establishing occurrence reporting systems in accordance with Standard 8.1 of Annex 13 can benefit from analysis tools developed elsewhere.

2.2.3 The ECCAIRS software is available free-of-charge to States. The system can be adapted to the size and needs of States, running on a laptop computer for those with limited operations or running on servers with numerous users distributed throughout a State. The system is relatively easy to install and maintain. Updates are distributed via the internet, and there is a website where system problems can be reported and proposals for enhancements made.

2.2.4 ICAO has deployed, in cooperation with the European Commission/Joint Research Centre, ADREP/ECCAIRS Training Courses for Non-European States. ICAO supports the conduct of these training courses in cooperation with Regional Offices of ICAO. Adoption and increased use of ICAO ADREP/ECCAIRS or a compatible system to capture safety data aiming at facilitating the exchange of safety information between States and between States and ICAO will enhance a common approach for safety analysis and, thereby, improve the quality of information and communication.

2.2.5 The initial deployment of ADREP/ECCAIRS in States has been a success, assisting in standardizing occurrence reporting worldwide and facilitating the exchange of aviation safety data through the common use of analysis tools. States have been encouraged to make use of the ECCAIRS software for national occurrence reporting systems.

2.2.6 As a result, ICAO has a mature and well established framework for common safety taxonomies. The effective use of the ICAO ADREP 2000 taxonomy by stakeholders will pave the way to universal and global sharing of safety data. This will encourage the use of reporting systems and the sharing of data for the purposes of improving aviation safety.