



International Civil Aviation Organization

ICAO South American Regional Office

Eleventh Meeting of the Civil Aviation Authorities of the SAM Region (RAAC/11)

(Santiago, Chile, 6 – 8 May 2009)

RAAC/11-WP/09

20/03/09

Agenda Item 4: Review of the level of safety oversight attained in the Region

c) Status of implementation of safety management systems in the States of the Region

(Presented by the Secretariat)

SUMMARY

This working paper presents a summary of the Safety Management System (SMS) implementation activities carried out in the Region. Also included is updated information about ICAO SMS courses already taught and those scheduled up until the end of 2009.

References:

- ICAO Annexes 6, 11 and 14.
- ICAO Safety Management Manual, Doc 9859, 2006.
- ICAO 2005-2010 Strategic Action Plan/Strategic Objective A: Safety/Key Activity A8, SMS.
- State Letter AN 12/52.1-08/70 - Implementation of the State Safety Programme (SSP) in States (13 November 2008)

1. Introduction

1.1 In 2004, the ICAO Council approved the ICAO Strategic Objectives for the 2005-2010 period. Objective “A” deals with safety. One of its key activities is A8, whose purpose is to “support the implementation of safety management systems (SMSs) across all safety-related disciplines in all States”.

1.2 The ICAO South American Regional Office has adopted ICAO Strategic Action Plan Key Activity A8 as one of its priorities for 2005-2010. Insofar as Key Activity 8 is concerned, the ICAO programme expects to see results in the following three areas:

- a) harmonised SARPS, preparation of guidelines on State security programmes (SSP) and safety management systems (SMS);
- b) training in SSP and SMS implementation; and
- c) Development of performance-based safety management regulations.

2. Discussion

SSP Course on state security programmes (SSP)/ ICAO Course on safety data management (ECCAIRS)

2.1 ICAO Annexes 6, 11 and 14 require, through their regulations, that States implement SMS as of 24 November 2005, for air traffic services providers and certified aerodromes, respectively. Annex 6, at the same time, and as a rule, establishes that aircraft operators and maintenance and repairing organizations should have their SMS implemented as of 31 January 2009. Further, ICAO introduced requirements for a State safety programme (SSP) in Annex 6 — *Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes*, and Part III — *International Operations — Helicopters*, Annex 11 — *Air Traffic Services*, and Annex 14 — *Aerodromes, Volume I — Aerodrome Design and Operations* in November 2006. ICAO will extend this concept and the requirements in Annex 1 — *Personnel licensing*, in Annex 8 — *Airworthiness of aircraft*, and in Annex 13 — *Aircraft Accident and Incident Investigation*, to become effective as of November 2010.

2.2 The introduction of requirements regarding an SSP is a consequence of the growing awareness that safety management principles affect most activities of a civil aviation authority, including safety rulemaking, policy development and oversight. Under an SSP, safety rulemaking is based on comprehensive analyses of the State's aviation system. An SSP thus provides the means to combine prescriptive and performance-based approaches to safety rulemaking, policy development and oversight by States.

2.3 In order to assist States in the development and implementation of an SSP, ICAO has developed an SSP training course. The course is aimed at State officials with responsibilities regarding the implementation of the State Safety Programme, including the implementation and/or oversight of safety management systems. To this end, the South American Regional Office, with assistance of experts from ICAO Headquarters, has foreseen the holding of an SSP course, in Lima, from 8 to 12 June 2009.

2.4 The objectives of the SSP training course are to develop participants' knowledge on the Standards and Recommended Practices (SARPs) related to the State Safety Programme, the ICAO SSP framework and its components, and related guidance material; and to provide practical guidance on key elements of an SSP, including a State's regulation for an SSP, the establishment of acceptable level of safety, and an SSP implementation plan, in compliance with ICAO requirements.

2.5 In a similar manner as to the training given on SMS and with the aim of permitting the development of a further amount of resources than what could be obtained with regional SSP training courses, the ICAO South American Office will be able to provide training to officials from an individual State, or to a group of States who so request this, up to a maximum of 30 participants per course. The requesting State or group of States should bear the all travel and daily subsistence expenses related with the training, for two ICAO instructors.

2.6 The outline of the ICAO SSP training course is included in **Appendix A** to this working paper.

2.7 As a complement to the SSP training course discussed above, and in order to assist States in developing safety data collection, analysis and exchange capabilities, ICAO has also developed a safety data management training course.

2.8 The course is based on the European Co-ordination Centre for Aviation Incident Reporting Systems (ECCAIRS) suite of applications, and is aimed at officials from civil aviation authorities with responsibilities regarding safety data analysis and exchange as well as the technical administration of ECCAIRS. The objectives of the safety data management training course are to provide hands-on experience with ECCAIRS as a tool to code, enter, analyse and extract safety data, as well as set up, configure and supply basic ECCAIRS user support.

2.9 The outline of the ICAO safety data management training course is included in **Appendix B** to this working paper.

Safety Management Manual (SMM)

2.10 This manual provides guidance to States to develop the rule framework and the supporting orientation material for the application of SMS by the services providers. It also provides guidance for the development of the State safety programme (SSP) in accordance with safety-related SARPs contained in Annexes 1, 6, 8, 11, 13 and 14.

2.11 It should be highlighted that the second edition of the ICAO Safety Management Manual (Doc 9859) substitutes all of the first edition, published in 2006. It also replaces the ICAO Accident Prevention manual (Doc 9422), published in 1984.

2.12 All information related with safety (SMS and SSP), such as a copy of the latest edition of the Safety Management Manual, can be obtained at web page: www.icao.int/anb/safetymanagement.

2008-2009 SMS Courses

2.13 From reading Table 01, it may be deducted that the SAM Region counts to date with 513 technicians trained in the field of safety management systems (SMS) at its respective States, pending for 2009 an SMS course in Guyana, which is being coordinated with ICAO Headquarters. In addition, some States in the Region have developed dissemination and training plans as regards safety.

2.14 The SAM States have made significant efforts towards the implementation of SMS, even though compliance with the SARPS appearing in Annexes 6, 11 and 14 have yet to be achieved.

Table 01 – Summary of ICAO SMS Courses taught in the SAM Region

State	Year		Number of participants	Remarks
	2006	2007		
Panamá	14-18 AUG	---	28	1° Course
Brazil	18-22 SEP	---	30	
Uruguay	DEC	---	33	
Colombia	---	19-23 FEB	30	1° Course
Argentina	---	05-09 MAR	29	
Chile	---	12-16 MAR	30	1° Course
Perú	---	26-30 MAR	33	
Panamá	---	23-27 APR	30	2° Course
Argentina	---	25-29 JUN	30	2° Course
Chile	---	16-20 JUL	35	2° Course
Paraguay	---	13-17 AUG	30	
Bolivia	---	20-24 AUG	30	
Venezuela	---	03-07 SEP	26	ICAO Course Reg.
Colombia	---	10-14 SEP	28	2° Course

State	Year		Number of participants	Remarks
	2006	2007		
Total number of persons trained in the official ICAO SMS Course I				422 (up to Sep. 2007)
State	2008	---	Number of participants	Remarks
Colombia	11 – 15 AGO	---	29	3° Course
Colombia	15 – 19 DEC	---	32	4° Course
Total number of persons trained in the official ICAO SMS Course				483 (up to Dec 2008)

3. Conclusions

3.1 Based on the above discussion, the following can be stated:

- a) ICAO introduced SSP requirements in Annex 6 — *Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes*, and Part III — *International Operations — Helicopters*, Annex 11 — *Air Traffic Services*, and Annex 14 — *Aerodromes, Volume I — Aerodrome Design and Operations* in November 2006. In addition, ICAO will extend this concept and the requirements in Annex 1 – *Personnel licensing*, in Annex 8 – *Airworthiness of aircraft*, and in Annex 13 - *Aircraft Accident and Incident Investigation*, to become effective as of November 2010.
- b) The ICAO Manual on Safety Management, Doc 9859, is at State disposal, as well as the official SMS Course and the SSP Course.
- c) ICAO has made available for the States' full information, documents and circulars related with SSP/SMS in the following website: <http://www.icao.int/anb/safetymanagement/Documents.html>
- d) The ICAO SAM Regional Office has placed considerable emphasis on the SMS training of State and industry technicians, and also on SMS Workshop for airports, and to prepare an airport SMS implementation guide;
- e) From 2006 to 2008, the ICAO Regional Office taught 17 SMS Courses in the SAM Region, training a total of 513 technicians; pending for 2009 is an SMS course in Guyana, being coordinated by ICAO Headquarters.

3.2 SAM States have made significant efforts towards SMS implementation, even though compliance with the SARPS appearing in Annexes 6, 11 and 14 have yet to be achieved.

4. Suggested Action

4.1 The Meeting is invited to:

- a) take note of the information presented in this working paper in order to formulate any conclusions it deems relevant, using as points of reference the aspects discussed; and

- b) analyze the need for regional training on SSP and invite those States of group of States interested in receiving training, to request so to the ICAO South American Regional Office.

APPENDIX A

ATTACHMENT A to State letter AN 12/52.1-08/70

ICAO STATE SAFETY PROGRAMME (SSP) IMPLEMENTATION COURSE INFORMATION AND OUTLINE

SSP implementation course goals

The goals of the *ICAO State Safety Programme (SSP) Implementation Course* are to:

- a) develop participants **knowledge** on the Standards and Recommended Practices (SARPs) related to the State Safety Programme (SSP), the ICAO SSP framework and its components, elements, and related guidance material; and
- b) Provide **practical guidance** on key elements of an SSP, including a State's regulation for an SSP, the establishment of a State's acceptable level of safety, and an SSP implementation plan.

Target audience

Representatives from civil aviation authorities with responsibilities regarding the implementation of safety programmes, and the implementation and/or oversight of safety management systems, in the areas of aircraft operations, air traffic services, maintenance of aircraft and aerodrome operations.

Prerequisites

Participants must have basic technical aeronautical knowledge and a minimum of two years experience in flight operations (pilots, flight operation officers, cabin safety officers, etc.), air traffic control or aerodrome operations in a civil aviation administration or the aviation industry.

Class size

The maximum class size for this course is 36 persons.

Course duration

Three days for a total of 18 classroom hours, including workshop activities.

References

- ICAO Annexes to the Convention on International Civil Aviation
 - Annex 6 – *Aircraft operation*, Parts I and III
 - Annex 11 – *Air Traffic Services*
 - Annex 14 – *Aerodromes – Volume I – Aerodrome Design and Operations*
- ICAO Safety Management Manual (Doc 9859) – 2nd Edition 2008.

APPENDIX B

Attachment B to State letter AN 12/52.1-08/70 ICAO Safety Data Management Training Course

Course outline

The ICAO safety data management training course combines two inter-related yet complementary areas of need: user needs and technical support needs. Based on this, the course is divided into distinct yet inter-related modules, as follows:

- a) The **technical module** is aimed at those who will install and administer from a technical point of view the ECCAIRS system. This module covers the installation, setup and management of the ECCAIRS system. The scope of the module enables system administrators and/or IT personnel to get acquainted with the system, perform the setup and configuration of their ECCAIRS installation, as well as to supply basic user support.
- b) The **end-user module** is aimed at those who will input the safety data into the ECCAIRS system and/or interrogate the system for safety analysis purposes. It provides an overview of the ECCAIRS taxonomy, as well as hands on experience of ECCAIRS as a tool used to code/enter and extract/analyze safety data.

The two modules are delivered in parallel, but in different classrooms.

Target audience

- a) **Technical module:** IT administrators and/or officers, power users. Not suited for safety investigators and office clerks.
- b) **End-user module:** safety investigators, safety officers and office clerks who will be entering or extracting data from ECCAIRS.

Prerequisites

- a) **Technical module:** knowledge and understanding of IT, in particular in the field of software architecture, databases. Good knowledge of the Microsoft Windows operating system is required.
- b) **End-user module:** knowledge of occurrence reporting, safety management concepts and safety data analysis. Good knowledge of the Microsoft Windows operating system and Microsoft Office products is recommended.

Class size

Maximum 20 participants per course