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Международная  
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**Subject:** Implementation of the State Safety  
Programme (SSP) in States

**Action required:** Note the information and reply as  
appropriate

Sir/Madam,

1. I wish to refer to the requirements for implementation of the State Safety Programme (SSP). ICAO introduced the requirements for an 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. 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; safety policies are developed based on hazard identification and safety risk management; and safety oversight is focused towards the areas of significant safety concerns or higher safety risks. An SSP thus provides the means to combine prescriptive and performance-based approaches to safety rulemaking, policy development and oversight by States.

2. 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. 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. The outline of the ICAO SSP training course is included in Attachment A to this State letter.

3. The collection, analysis and exchange of safety information is essential to implement an SSP combining prescriptive and performance-based approaches to safety rulemaking, policy development

and oversight by States. As a complement to the SSP training course discussed in paragraph 2 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. 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. The outline of the ICAO safety data management training course is included in Attachment B to this State letter.

4. The SSP training course and the safety data management training course have been designed to be delivered as back-to-back courses, although they can be delivered independently, each one as a stand-alone course.

5. Based upon all the above considerations, I am pleased to inform you that ICAO will start, in March 2009, a training programme of SSP/safety data management courses to allow the development of resources within States to implement their respective SSPs and to develop safety data management capabilities. The objective of this training is to enable States to become self-sufficient both in SSP implementation as well as in safety data collection, analysis and exchange. It is further envisioned that States developing internal resources will cooperate to assist other States in the implementation of their SSPs and the development of safety data management capabilities, thus achieving the synergistic partnership recognized as necessary for the global implementation of safety management practices. The SSP/safety data management training courses will be delivered upon specific request from individual States or group of States, and under the following conditions:

- a) ICAO will provide training to officials from requesting States up to a maximum of 36 participants for the SSP portion of the course, and 20 officials for the safety data management portion of the course. This will include free delivery of the ICAO SSP course materials in electronic format to States, as well as of the ECCAIRS software;
- b) the custodian of the ICAO courses material must be the civil aviation authority, or a designated official institution of the requesting State;
- c) the requesting State or group of States must provide all travel and living expenses associated with training delivery for the ICAO instructors;
- d) once the training is completed States may utilise the ICAO training courses and their material without restrictions;
- e) ICAO will provide States, in electronic format, with updated versions of the training courses and course material as appropriate; and
- f) when resource limitations so dictate, priority will be given to requests by groups of States over requests by individual States.

6. To enable the timely development of a plan of action for the training programme of courses, and to effect proper coordination through the ICAO Regional Offices, it would be appreciated if States interested in the SSP/safety data management courses could provide an indication of intent at their

earliest convenience. Requests for courses, for information about the training, and for any additional information should be sent to [ism@icao.int](mailto:ism@icao.int).

Accept, Sir/Madam, the assurances of my highest consideration.

Taïeb Chérif  
Secretary General

**Enclosures:**

- A – ICAO SSP course outline and information
- B – ICAO safety data management course outline and information
- C – ICAO safety data management training course schedule
  - *ECCAIRS End-user training modules*
- D – ICAO safety data management training course schedule
  - *ECCAIRS technical training modules*

## 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

#### **Contact**

- Captain Miguel Ramos, Technical Officer, Integrated Safety Management (ISM) Section – mramos@icao.int

#### **Training material**

The instructional strategy will involve presentations and group work.

**Course time table**

Time	(Day 1 and date)	(Day 2 and date)	(Day 3 and date)
08:30 – 09:30	<b>Module 1</b> <i>Introduction to the SSP Course</i>	<b>Module 4</b> <i>Acceptable level of safety (ALoS) performance</i>	<b>Module 7</b> <i>SSP implementation plan</i>
09:30 – 10:30	<b>Module 2</b> <i>ICAO SARPs related to the SSP</i>	<b>Module 5</b> <i>Performance-based regulations</i>	<b>Exercise N° 3</b> <i>Development of an SSP implementation plan</i>
10:30 – 11:00	Coffee/Tea Break		
11:00 – 12:30	<b>Module 3</b> <i>ICAO SSP framework</i>	<b>Module 6</b> <i>SSP training programme</i>	<b>Plenary session</b> <i>Review of results and discussion of Exercise N° 3</i>
12:30 – 13:30	Lunch Break		
13:30 – 15:30	<b>Exercise N° 1</b> <i>Development of guidance on a State's regulation for the SSP</i>	<b>Exercise N° 2</b> <i>Development of guidance on acceptable levels of safety (ALoS) and performance-based regulations</i>	<i>Review of results and discussion of Exercise N° 3</i>
			<b>Final examination</b>
15:30 – 15:45	Coffee/Tea Break		
15:45 – 17:00	<b>Plenary session</b> <i>Review of results and discussion of Exercise N° 1</i>	<b>Plenary session</b> <i>Review of results and discussion of Exercise N° 2</i>	<b>Plenary session</b> <i>Final review and closure of the SSP Course</i>

**SSP IMPLEMENTATION COURSE MODULE CONTENTS****Module 1 – Introduction to the SSP implementation course**

- Objectives of the module:
  - ❖ *To introduce ICAO implementation course facilitators and participants. To introduce the course goals, concept, contents and structure.*
- Description of the module contents:
  - ❖ **Part I** – *Presentation of ICAO instructors and participants*
  - ❖ **Part II** – *Course goals, concepts, contents and structure*
  - ❖ **Part III** – *Administrative information*
  - ❖ **Part IV** – *Evaluation procedures*

**Module 2 – ICAO SARPs related to the SSP**

- Objectives of the module:
  - ❖ *Review ICAO SARPs and related guidance material concerning the State Safety Programme (SSP). Introduce the relationship between the SSP and the State's*

*safety oversight function. Consider the eight critical elements to be monitored by the safety oversight function within the overall SSP.*

- Description of the module contents:
  - ❖ The big picture
  - ❖ What is an SSP?
  - ❖ What is an SMS?
  - ❖ Safety accountabilities
  - ❖ SSP/SMS relationships
  - ❖ ICAO/States shared responsibilities
  - ❖ State's safety oversight function and responsibilities
  - ❖ Service providers responsibilities
  - ❖ Objectives of ICAO USOAP
  - ❖ The eight critical elements
  - ❖ Points to remember

### **Module 3 – ICAO SSP framework**

- Objectives of the module:
  - ❖ *Describe the ICAO SSP framework, its components and elements as the means to implement the SSP. Explain the role of the SSP in supporting the implementation of SMS by service providers.*
- Description of the module contents:
  - ❖ SSP – ICAO requirements
  - ❖ SSP development
  - ❖ SSP components
  - ❖ The bridge
  - ❖ SMS requirements for service providers
  - ❖ Safety management principles
  - ❖ ICAO SSP framework
  - ❖ Points to remember
- **Exercise N° 1 – Development of guidance on a State's regulation for the SSP**
- Exercise results and feedback

### **Module 4 – Acceptable level of safety (ALoS) performance**

- Objective of the module:
  - ❖ *Describe the concepts and metrics underlying the State's acceptable level of safety (ALoS) performance of an SSP and the safety performance of an SMS.*

- Description of the module contents:
  - ❖ Performance-based regulatory environment
  - ❖ Safety performance measurement
  - ❖ State acceptable level of safety (ALoS)
  - ❖ Definitions
  - ❖ Regulatory compliance
  - ❖ Legal considerations
  - ❖ Summary
  - ❖ Points to remember

### **Module 5 – Performance-based regulations**

- Objective of the module:
  - ❖ *Describe the concepts of prescriptive versus performance and the State's safety risk management and the State's safety assurance.*
- Description of the module contents:
  - ❖ Prescriptive versus performance
  - ❖ ICAO SSP framework
  - ❖ SSP – State safety risk management
  - ❖ SSP – State safety assurance
  - ❖ The bridge – again
  - ❖ Acceptable levels of safety performance – SMS and SSP
  - ❖ Solving the puzzle
  - ❖ Points to remember

### **Module 6 – SSP training programme**

- Objectives of the module:
  - ❖ *Describe the SSP training programme for the State safety oversight authority. Explain the SSP safety promotion component as the means to communicate SSP policies, objectives, processes and procedures, both internally and externally.*
- Description of the module contents:
  - ❖ ICAO SMS framework – Component N° 4
  - ❖ Rationale for the SSP training programme
  - ❖ Objective of the SSP training programme
  - ❖ SSP safety promotion
  - ❖ One of the eight critical elements
  - ❖ SSP training programme
  - ❖ Training documentation

- ❖ Safety communication
- ❖ Points to remember
- **Exercise N° 2** – *Development of guidance on acceptable levels of safety (ALoS) and performance-based regulations*
- Exercise results and feedback.

### **Module 7 – SSP implementation plan**

- Objective of the module:
    - ❖ *Describe the contents of the SSP implementation plan, related deliverables and milestones.*
  - Description of the module contents:
    - ❖ SSP definition
    - ❖ SSP implementation plan
    - ❖ ICAO SSP framework
    - ❖ State safety policy and objectives
    - ❖ State safety risk management
    - ❖ State safety assurance
    - ❖ State safety promotion
    - ❖ SSP implementation – Summary
    - ❖ A vision of the future – Integration
    - ❖ Points to remember
  - **Exercise N° 3** – *Development of an SSP implementation plan.*
  - Exercise results and feedback.
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## 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

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## ICAO Safety Data Management Training Course ECCAIRS End-user training modules – Course schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
Period 1					
08:30 – 09:15	<i>Welcome, Objectives, Handout</i>	<i>Browser - Introduction, Explanation</i>	<i>Data entry session (part 3) – Explanatory factors (Human/Organizational Factors)</i>	<i>Grapher - Introduction, Explanation</i>	<i>Open book exam (MCQ)</i>
Period 2					
09:15 – 10:00	<i>Worldwide statistics and safety indicators</i>	<i>Data entry session (part 1) - Preliminary Views</i>	<i>Hands-on: Coding of Occurrences</i>	<i>Hands-on: Building graphs</i>	<i>Open book exam (MCQ)</i>
Coffee/Tea break – 10:00 to 10:30					
Period 3					
10:30 – 11:15	<i>Data-driven safety initiatives – Worldwide cooperative programs</i>	<i>Hands-on: Coding Of Occurrences</i>	<i>Review of data entered – Presentation of a Runway Incursion investigation</i>	<i>Exporter – Introduction, Building templates</i>	<i>Instructors evaluation</i>
Period 4					
11:15 – 12:30	<i>ADREP - History, background, architecture</i>	<i>Review of data entered – Presentation of a Loss of Control investigation</i>	<i>Query Builder - Introduction, Explanation</i>	<i>Web Search Engine - Introduction, Explanation</i>	<i>Summary of the course, Discussion on results</i>
Lunch – 12:30 to 13:30					
Period 5					
13:30 – 14:15	<i>ECCAIRS - History, background, architecture</i>	<i>Browser - Views, Repositories, Files, Database</i>	<i>Hands-on: Building Queries</i>	<i>Interconnecting Safety Information Systems</i>	<i>Summary of the course, Discussion on results</i>
Period 6					
14:15 – 15:00	<i>ICAO's central role in the flow of safety data and in taxonomies (CICTT)</i>	<i>Data entry session (part 2) - Full Views Hands-on: Coding Of Occurrences</i>	<i>Review – Presentation on Query Usages (data quality, exchanges, trends, etc.)</i>	<i>From a Historic to a Diagnostic/ Prognostic approach (Safety studies, incident analyses)</i>	<i>Conclusions and closing</i>
Coffee/Tea break – 15:00 to 15:30					
Period 7					
15:30 – 16:30	<i>Language aspects (background on taxonomy dictionaries)</i>	<i>Review of data entered – Presentation of a Runway Excursion investigation</i>	<i>Data consistency (EASA standardization workshop)</i>	<i>The ECCAIRS/ADREP worldwide users (feedback loops, Internet resources, etc.)</i>	

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## ICAO Safety Data Management Training Course

### ***ECCAIRS technical training modules – Course schedule***

	Monday	Tuesday	Wednesday	Thursday
Period 1	<i>Welcome, Objectives, Handout</i>	<i>Repository Manager (Users, Roles)</i>	<i>Query Builder: usage</i>	<i>ECCAIRS API: examples</i>
08:30				
09:15				
Period 2	<i>Introduction and presentations on ECCAIRS and its architecture</i>	<i>Repository Manager (Users, Roles)</i>	<i>Exercises</i>	<i>ECCAIRS API: examples</i>
09:15				
10:00				
Coffee/Tea break 10:00 – 10:30				
Period 3	<i>Introduction and presentations on ECCAIRS and its architecture</i>	<i>Profiles (Browser Application, Security, Views), Exercises</i>	<i>Grapher: usage</i>	<i>TARGA, Attachments API, Back-ups, Best Practises</i>
10:30				
11:15				
Period 4	<i>ECCAIRS client</i>	<i>Profiles (Browser Application, Security, Views), Exercises</i>	<i>Grapher: usage</i>	<i>Reload of the system</i>
11:15				
12:30				
Lunch 12:30 – 13:30				
Period 5	<i>ECCAIRS server based on MSDE</i>	<i>Profiles (Data Source)</i>	<i>Grapher: Graph libraries, Exporting, Exercises</i>	<i>Instructors evaluation</i>
13:30				
14:15				
Period 6	<i>Database connectivity, DCOM, Data sources</i>	<i>Exercises</i>	<i>Exporter: Formats, Templates</i>	<i>Summary of the course, Discussion on results</i>
14:15				
15:00				
Coffee/Tea break 15:00 – 15:30				
Period 7	<i>Utilities</i>	<i>Browser: usage</i>	<i>Exercises</i>	<i>Conclusions</i>
15:30				
16:30				