



Agenda Item 8: Regional Flight Safety Initiatives

**ICAO STATE SAFETY PROGRAMME (SSP) AND
SAFETY MANAGEMENT SYSTEMS (SMS)**

(Presented by the Secretariat)

SUMMARY

This paper provides a perspective on the evolution, challenges and a few implementation issues that must be overcome as the migration process to the SMS/SSP environment is completed.

References:

- *Annexes 1, 6, 8, 11, 13 and 14*
- *Safety Management Manual (SMM)* (Doc 9859) Second Edition
- State Letter AN 12/52.1-08/70 dated 13/11/08 – *Implementation of States Safety Programme (SSP) in States*

*Strategic
Objectives*

*This working paper is related to Strategic Objective
A2.*

1. Background

1.1 The ICAO Safety Management Systems (SMS) Programme was launched in 2004 to support the implementation of a new approach to the management of safety. ICAO developed the SMS training course to assist States and their service providers with their implementation. Recently, the State Safety Programme (SSP) training course was developed. Also, the *Safety Management Manual (SMM)* (Doc 9859) first edition was published in 2006, and the second in March 2009. The manual includes a section for the SSP and is available at: www.icao.int/anb/safetymanagement

2. ICAO Safety Management Standards and Recommended Practices (SARPs)

2.1 The ICAO safety management SARPs address three distinct requirements:

- a) requirements regarding the SSP, including the acceptable level of safety (ALoS) related to an SSP;
- b) requirements regarding SMS, including the safety performance of an SMS; and
- c) requirements regarding management accountability.

2.2 ICAO safety management provisions require States to establish an SSP in order to achieve the ALoS in civil aviation. In addition, States shall require, as part of their SSP, the following service providers to implement a SMS:

- a) approved training organizations that are exposed to operational safety risks during their air training operations;
- b) aircraft operators;
- c) approved aircraft maintenance organizations;
- d) organizations responsible for type design and/or manufacture of aircraft;
- e) air traffic service providers; and
- f) certified aerodromes.

3. ICAO Safety Management Systems (SMS)

3.1 ICAO defines the SMS as a systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures. The ICAO Safety Management SARPs establishes that the SMS shall be accepted by the State and shall, as a minimum:

- a) identify safety hazards;
- b) ensure the implementation of remedial action necessary to maintain agreed safety performance;
- c) provide for continuous monitoring and regular assessment of the safety performance; and
- d) aim at continuous improvement of the overall performance of the safety management system.

3.2 The four processes listed above constitute the core activities aimed at making continuous improvements to the overall level of safety.

4. ICAO State Safety Programme (SSP)

4.1 Service providers by means of their SMS provide essential safety information for the State to develop their SSP and to apply safety management principles to the discharge of their safety responsibilities:

- a) safety risk management (SRM); and
- b) safety assurance (SA).

4.2 The SSP also provides the structural framework that allows the State safety oversight authority and service providers within the State to interact more effectively in the resolution of safety concerns.

4.3 A critical concept within the SSP is the ALoS as an essential ingredient for the effective operation of an SSP.

5. Data Collection and Management

5.1 The collection of safety information is key for the management of safety. The establishment of databases for analysis in order to effectively carry out the SMS/SSP functions is a critical step in the process of implementation.

6. Future Challenges

6.1 The implementation of an effective SSP on the part of States will require a concentrated, structured, specific plan in order to be effective. ICAO has developed an SSP framework made up of four components and eleven elements to assist States (see **Appendix**)

6.2 One of the challenges for States is to change their regulations that contain administrative controls to regulations based on risk analysis so that the regulations become mitigation barriers to those risks.

6.3 Traditionally, oversight authorities have performed inspections based on prescriptive elements and strict compliance with those requirements. Under the new SMS/SSP concept, the nature of regulations will be one where as prescriptive elements are maintained, the addition of performance-based compliance is fostered in order to meet ALoS goals supported by safety performance goals of the various service providers SMS.

6.4 This mind-shift on the part of how the oversight work of the authorities is carried out will require safety training programmes not only on the part of the State's staff but also for personnel from the various aviation organizations in each State.

6.5 The two key components in ensuring success in the establishment of effective SSP and SMS are:

- a) the requirements to establish the ALoS at the State level; and
- b) a safety performance at the individual service provider level.

7. Conclusion

7.1 Safety management is an evolving process. ICAO is a great enabler in the strategic approach to safety management implementation projects around the world. The ICAO support to Member States in their SSP implementation plans greatly facilitates their efforts.

7.2 States that have not already done so should develop an SSP implementation plan. ICAO is willing to provide technical cooperation upon a State's request. Member States desiring to obtain more information on this topic may contact the ICAO NACC/SAM Regional offices or visit the ISM website at: <http://www.icao.int/anb/safetymanagement>

Appendix 1 to Chapter 11 (2nd edition 2009)

FRAMEWORK FOR THE STATE SAFETY PROGRAMME (SSP)

Note. — Within the context of this appendix the term “service provider” refers to any organization providing aviation services. The term includes approved training organizations that are exposed to safety risks during the provision of their services, aircraft operators, approved maintenance organizations, organizations responsible for type design and/or manufacture of aircraft, air traffic service

This appendix introduces a framework for the implementation and maintenance of a State safety programme (SSP) by a State. The framework consists of the following four components and eleven elements:

1. State safety policy and objectives
 - 1.1 State safety legislative framework
 - 1.2 State safety responsibilities and accountabilities
 - 1.3 Accident and incident investigation
 - 1.4 Enforcement policy
2. State's safety risk management
 - 2.1 Safety requirements for service providers SMS
 - 2.2 Agreement on service providers' safety performance
3. State's safety assurance
 - 3.1 Safety oversight
 - 3.2 Safety data collection, analysis and exchange
 - 3.3 Safety-data-driven targeting of oversight of areas of greater concern or need
4. State's safety promotion
 - 4.1 Internal training, communication and dissemination of safety information
 - 4.2 External training, communication and dissemination of safety information.

A brief description of each element follows.

1. STATE SAFETY POLICY AND OBJECTIVES

1.1 State safety legislative framework

The State has promulgated a national safety legislative framework and specific regulations, in compliance with international and national standards, that define how the State will conduct the management of safety in the State. This includes the participation of State aviation organizations in specific activities related to the management of safety in the State, and the establishment of the roles, responsibilities and relationships of such organizations. The safety legislative framework and specific regulations are periodically reviewed to ensure they remain relevant and appropriate to the State.

1.2 State safety responsibilities and accountabilities

The State has identified, defined and documented the requirements, responsibilities and accountabilities regarding the establishment and maintenance of the SSP. This includes the directives to plan, organize, develop, maintain, control and continuously improve the SSP in a manner that meets the State's safety objectives. It also includes a clear statement about the provision of the necessary resources for the implementation of the SSP.

1.3 Accident and incident investigation

The State has established an independent accident and incident investigation process, the sole objective of which is the prevention of accidents and incidents, and not the apportioning of blame or liability. Such investigations are in support of the management of safety in the State. In the operation of the SSP, the State maintains the independence of the accident and incident investigation organization from other State aviation organizations.

1.4 Enforcement policy

The State has promulgated an enforcement policy that establishes the conditions and circumstances under which service providers are allowed to deal with, and resolve, events involving certain safety deviations, internally, within the context of the service provider's safety management system (SMS), and to the satisfaction of the appropriate State authority. The enforcement policy also establishes the conditions and circumstances under which to deal with safety deviations through established enforcement procedures.

2. STATE SAFETY RISK MANAGEMENT

2.1 Safety requirements for the service provider's SMS

The State has established the controls which govern how service providers will identify hazards and manage safety risks. These include the requirements, specific operating regulations and implementation policies for the service provider's SMS. The requirements, specific operating regulations and implementation policies are periodically reviewed to ensure they remain relevant and appropriate to the service providers.

2.2 Agreement on the service provider's safety performance

The State has agreed with individual service providers on the safety performance of their SMS. The agreed safety performance of an individual service provider's SMS is periodically reviewed to ensure it remains relevant and appropriate to the service providers.

3. STATE SAFETY ASSURANCE

3.1 Safety oversight

The State has established mechanisms to ensure effective monitoring of the eight critical elements of the safety oversight function. The State has also established mechanisms to ensure that the identification of hazards and the management of safety risks by service providers follow established regulatory controls (requirements, specific operating regulations and implementation policies). These mechanisms include inspections, audits and surveys to ensure that regulatory safety risk controls are appropriately integrated into the service provider's SMS, that they are being practised as designed, and that the regulatory controls have the intended effect on safety risks.

3.2 Safety data collection, analysis and exchange

The State has established mechanisms to ensure the capture and storage of data on hazards and safety risks at both an individual and aggregate State level. The State has also established mechanisms to develop information from the stored data, and to actively exchange safety information with service providers and/or other States as appropriate.

3.3 Safety-data-driven targeting of oversight of areas of greater concern or need

The State has established procedures to prioritize inspections, audits and surveys towards those areas of greater safety concern or need, as identified by the analysis of data on hazards, their consequences in operations, and the assessed safety risks.

4. STATE SAFETY PROMOTION

4.1 Internal training, communication and dissemination of safety information

The State provides training and fosters awareness and two-way communication of safety-relevant information to support, within the State aviation organizations, the development of an organizational culture that fosters an effective and efficient SSP.

4.2 External training, communication and dissemination of safety information

The State provides education and promotes awareness of safety risks and two-way communication of safety-relevant information to support, among services providers, the development of an organizational culture that fosters an effective and efficient SMS.