

APPENDIX G

SAFETY MANAGEMENT SYSTEMS

General

A Safety Management System (SMS) is a management tool for the management of safety by a service provider¹, aimed to ensure that safety is managed systematically and consistently. In summary, safety management:

- Includes the entire operation;
- Focuses on processes, making a clear differentiation between processes and outcomes;
- Is data driven;
- Involves constant monitoring;
- Is strictly documented;
- Aims at gradual improvement as opposed to dramatic change; and
- Is based on strategic planning as opposed to piecemeal initiatives.

The International SMS framework

ICAO publishes SARPs on safety management across the Annexes, with those relating to air navigation service providers and aerodromes detailed in Annexes 11 and 14 respectively.

For the relevant discipline these SARPs require States to:

- a. Establish a safety programme in order to achieve an acceptable level of safety;
- b. Establish the acceptable level(s) of safety to be achieved.

Additionally, the SARPs require that States shall require aerodrome operators and air navigation service providers each to implement a safety management system acceptable to the State that, as a minimum:

- a. Identifies safety hazards;
- b. Ensures that remedial action necessary to maintain an acceptable level of safety is implemented;

- c. Provides for continuous monitoring and regular assessment of the safety level achieved; and
- d. Aims to make continuous improvement to the overall level of safety.
- e. Clearly defines lines of safety accountability throughout the organisation, including a direct accountability for safety on the part of senior management.

To support the SARPs ICAO has published ICAO Document 9859 – Safety Management Manual with the aim to harmonise safety management systems implemented in the aviation sector. ICAO recommends a framework for the implementation and maintenance of a SMS by an organisation. The implementation of the framework should be commensurate with the size of the organisation and the complexity of the services provided.

Within Europe requirements for safety management systems are contained in common Requirements and ESARRs (EUROCONTROL Safety Regulatory Requirements), notably:

- Commission Regulation (EC) No. 2096/2005 laying down common requirements for the provision of air navigation services;
- Commission Regulation (EC) No. 1315/2007 on safety oversight in air traffic management and amending Regulation (EC) No. 2096/2005;
- ESARR3 Safety Management Systems in ATM and its related guidance material;
- ESARR4 Risk Assessment and Mitigation in ATM and its related guidance material.

1 - The term "service provider" refers to any organisation providing aviation services. The term encompasses air traffic service providers and certified aerodromes as well as approved training organisations that are exposed to safety risks during the provision of their services, aircraft operators, approved maintenance organisations, organisations responsible for type design and/or manufacture of aircraft, as applicable.

Safety management systems

The ICAO framework includes the following four components and twelve elements, representing the minimum requirements for SMS implementation:

1. Safety policy and objectives
 - 1.1 Management commitment and responsibility;
 - 1.2 Safety accountabilities;
 - 1.3 Appointment of key safety personnel;
 - 1.4 Coordination of emergency response planning;
 - 1.5 SMS documentation.
2. Safety risk management
 - 2.1 Hazard identification;
 - 2.2 Safety risk assessment and mitigation.
3. Safety assurance
 - 3.1 Safety performance monitoring and measurement;
 - 3.2 The management of change;
 - 3.3 Continuous improvement of the SMS.
4. Safety promotion
 - 4.1 Training and education;
 - 4.2 Safety communication.

Note:

Refer to Appendix 1 to Chapter 8 of ICAO DOC 9859 for detailed information on the four components and twelve elements.

Implementation of a SMS at an aerodrome

Single Organisation

Where one operator is responsible for the aerodrome and its ATM services, the organisation will have to implement a Safety Management System compliant with ICAO Annex 11 and Common Requirements for its ANS services and compliant with ICAO Annex 14 for its aerodrome operations. A single SMS covering both aerodrome and ANS would be an advisable approach.

Two Organisations

When ATM services and aerodrome operations are provided by two different organisations, two separate SMS may be found, but not exclusively. In such circumstances effective interface arrangements must be in place unless a common SMS is established.

It should be noted that defining and allocating safety responsibilities is key in any SMS and may be complicated by working across two independent organisations. An appropriate definition and allocation of responsibilities requires a clearly established organisational framework. The same considerations apply to the definition, adoption and review of safety policies and safety objectives.

Reference material

ICAO Annex 1;
ICAO Annex 6, Parts I and III;
ICAO Annex 8;
ICAO Annex 11;
ICAO Annex 13;
ICAO Annex 14; and
ICAO DOC 9859 Safety Management Manual.

Commission Regulation (EC) No. 2096/2005 laying down common requirements for the provision of air navigation services.

Commission Regulation (EC) No. 1315/2007 on safety oversight in air traffic management and amending Regulation (EC) No. 2096/2005.

ESARR3 Safety Management Systems in ATM and its related guidance material.

ESARR4 Risk Assessment and Mitigation in ATM and its related guidance material.