

## **PART 21**

### **SAFETY MANAGEMENT SYSTEMS**

#### **DIVISION 1 – PREAMBLE**

#### **DIVISION 2 – REFERENCED DOCUMENTS**

#### **DIVISION 3 – DEFINITIONS**

#### **DIVISION 4 – APPLICABILITY**

#### **DIVISION 5 – SAFETY POLICY AND OBJECTIVES**

- 21.5.1 Management Commitment and Responsibility
- 21.5.2 Safety Accountability of Managers
- 21.5.3 Appointment of Key Safety Personnel
- 21.5.4 SMS Implementation Plan
- 21.5.5 Documentation

#### **DIVISION 6 – SAFETY HAZARD IDENTIFICATION AND RISK MANAGEMENT**

- 21.6.1 Hazard Identification Process
- 21.6.2 Risk Assessment and Mitigation Processes
- 21.6.3 Internal Safety Investigations

#### **DIVISION 7 – SAFETY ASSURANCE**

- 21.7.1 Safety Performance Monitoring and Measurement
- 21.7.2 Audits and Surveys
- 21.7.3 The Management of Change
- 21.7.4 Continuous Improvement of the Safety System

#### **DIVISION 8 – SAFETY PROMOTION**

- 21.8.1 Training and Education
- 21.8.2 Safety Communication
- 21.8.3 Safety Assurance

#### **DIVISION 9 – EMERGENCY RESPONSE PLANNING**

- 21.9.1 Development of the Emergency Response Plan (ERP)

#### **DIVISION 10 – IMPLEMENTATION**

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## **DIVISION 1 – PREAMBLE**

**21.1.1** This regulation is issued by the DIRECTOR of the Civil Aviation Department, in pursuance of the Civil Aviation Act No. 2/2001 and the Maldivian Civil Aviation Regulations (CARs).

## **DIVISION 2 – REFERENCED DOCUMENTS**

**21.2.1** This Regulation includes references to the following documentation:

21.2.1.1 Civil Aviation Act No. 2/2001.

21.2.1.2 Civil Aviation Regulations (CAR) of the Maldives.

21.2.1.3 ICAO SARPS Annex 6 – Aircraft Operations, Volume 1, Annex 11- Air Traffic Services, Annex 14, Volume 1 – Aerodrome Design and Operations.

21.2.1.4 ICAO Doc 9859 Safety Management Manual (SMM).

21.2.1.5 Air Safety Circular (ASC) OPS 25

**21.2.2** In case of discrepancies between the referenced documentation, the Civil Aviation Department shall be consulted to determine which requirements are valid.

## **DIVISION 3 – DEFINITIONS**

**21.3.1** This section includes relevant definitions or meanings in this document and reference to other documentation including such definitions.

**Accountable Manager** Means General Manager (GM), Managing Director (MD) or Chief Executive Officer (CEO), who has corporate authority for ensuring that all work required by the customer can be financed and carried out to the standard required.

**Active failures** are generally the result of equipment faults or errors committed by personnel.

**Corporate Safety Culture** Is the atmosphere created by management that shapes workers' attitude towards safety.

**Errors** Actions or inactions by persons that have an adverse effect.

**Hazard** Condition, object or activity with the potential of causing injuries to personnel, damage to equipment or structures loss of material, or reduction of ability to perform a prescribed function.

**Mitigation** Measures to eliminate the potential hazard or to reduce the risk probability or severity.

**Probability** The feasibility that a situation of danger might occur.

**Risk** The chance of loss or injury, measured in terms of severity and probability. The chance that something is going to happen and the consequences if it does.

**Risk Management** The identification, analysis and elimination (and/or mitigation to an acceptable or tolerable level) of those hazards, as well as the subsequent risks, that threaten the viability of an organization.

**Safety** Is the state in which the risk of harm to persons or property damage is reduced to, and maintained at or below, an acceptable level through a continuing process of hazard identification and risk management.

- Safety Management System** A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.
- Safety Office** serves as a focal point for safety-related activities, acts as a repository for safety reports and information, and provides expertise on safety management to line managers.
- Safety Performance Indicators** are a measure (or metric) used to express the level of safety performance achieved in a system.
- Safety Performance Targets** the required level of safety performance for a system. A safety performance target comprises one or more safety performance indicators, together with desired outcomes expressed in terms of those indicators.
- Safety Programme** An integrated set of regulations and activities aimed at improving safety.
- Safety Requirements** are operational procedures, technology, systems and programmes to which measures of reliability, availability, performance and/or accuracy can be specified.
- Senior Management** A Team/Group of Managers/Directors including the Accountable Manager as determined by the Board of Directors.
- Severity** The possible consequences of a situation of danger, taking as reference the worst foreseeable situation.
- Violation** A deliberate act.

## **DIVISION 4 – APPLICABILITY**

- 21.4.1** This Regulation lays down regulatory requirements concerning the use of Safety Management Systems (SMS) by Operators/Service Providers.
- 21.4.2** The requirement shall apply to all Operators/Service Providers that fall within the Safety Oversight Function of the Civil Aviation Department.
- 21.4.3** Within the overall management of their services, Operators/Service Providers shall have in place a Safety Management System (SMS) in accordance with these requirements.

## **DIVISION 5 – SAFETY POLICY AND OBJECTIVES**

### **21.5.1 Management Commitment and Responsibility**

21.5.1.1 The SMS shall ensure that senior management:

- (i) Identify an Accountable Manager (AM) who, is a single identifiable person and, has:
- Full authority for human resources issues;
  - Authority for major financial issues;
  - Director responsibilities for the conduct of the organisation's affairs;
  - Final authority over operations under certificate;
  - Final responsibility for all safety issues; and
  - Full responsibility for the organisation's SMS.

- (ii) Develop the safety policy, signed by the Accountable Manager (AM);
- (iii) Establish the safety policy, objectives and performance standards in accordance to national, international standards and organizational priorities;
- (iv) Communicate with visible endorsement, the safety policy, objectives and performance standards to all staff; and
- (v) Provide the necessary human and financial resources.

### **21.5.2 Safety Accountability of Managers**

21.5.2.1 The SMS shall ensure that Line Managers:

- (i) Are responsible for the SMS in their organization; and
- (ii) Identify safety responsibilities of key personnel.

### **21.5.3 Appointment of Key Safety Personnel**

21.5.3.1 The SMS shall ensure that, senior management establish a Safety Office with corporate functions such as:

- (i) Advising senior management on safety matters;
- (ii) Assisting Line Managers on safety issues; and
- (iii) Oversee hazard identification systems.

21.5.3.2 The SMS shall ensure that, senior management appoint a Safety Manager/Director whose responsibilities will include:

- (i) Being the focal point for the development and maintenance of an effective SMS;
- (ii) Reports to the Accountable Manager;
- (iii) Sits on the Safety Committee (SC) of the Organization or Safety Review Board (SRB) as the case may be;
- (iv) Facilitates the Safety Action Group (SAG) if required;
- (v) Manages the SMS Implementation Plan;
- (vi) Facilitates hazard identification and risk analysis and management;
- (vii) Monitors the effectiveness of corrective actions;
- (viii) Provides periodic reports on safety performance to the Accountable Manager or line managers as the case may be;
- (ix) Maintains safety documentation;
- (x) Plans and organizes staff safety training; and
- (xi) Provides independent advice on safety measures.

21.5.3.3 The SMS shall ensure that, senior management appoint a Safety Review Board (SRB) or Safety Committee (SC) whose responsibilities will include monitoring:

- (i) Safety performance against safety policy and objectives;
- (ii) Effectiveness of the SMS Implementation Plan;
- (iii) Effectiveness of safety supervision of sub-contracted operations;
- (iv) That, appropriate resources are allocated to achieve the established safety performance; and
- (v) That, strategic direction is given to the Safety Action Group (SAG).

21.5.3.4 The SMS shall ensure that, senior management encourage line departments to form Safety Action Groups (SAG) whose responsibilities will include:

- (i) Overseeing operational safety within the functional area;
- (ii) Resolving identified risks;
- (iii) Assessing the impact on safety of operational changes;
- (iv) Implements corrective action plans;
- (v) Ensures that, corrective action is taken in a timely manner;
- (vi) Review the effectiveness of previous safety recommendations; and
- (vii) Effective safety promotion.

#### **21.5.4 SMS Implementation Plan**

21.5.4.1 The SMS shall ensure that, the senior management appoint a planning group whose responsibilities will include:

- (i) Development of a realistic strategy for the implementation of an SMS that will meet the organization's safety needs;
- (ii) Define an approach the organization will adopt for managing safety;
- (iii) Develop a safety policy;
- (iv) Develop objectives and goals;
- (v) System description;
- (vi) Conduct a Gap Analysis;
- (vii) Develop SMS components;
- (viii) Identify roles and responsibilities;
- (ix) Develop a non-punitive safety reporting policy;
- (x) Develop means of employee involvement;
- (xi) Develop safety communication; and
- (xii) Develop safety performance measurement.

21.5.4.2 The senior management shall endorse the SMS implementation plan and review the safety performance.

#### **21.5.5 Documentation**

21.5.5.1 The SMS shall ensure that, the senior management:

- (i) Define, document and endorse a safety policy confirming the objectives identified during planning phase. The safety policy shall include a commitment to:
  - Achieve the highest safety standards;
  - Observe all applicable legal requirements and international standards, and best effective practices;
  - Provide appropriate resources;
  - Enforce safety as one primary responsibility of all managers; and
  - Ensure that the policy is understood, implemented and maintained at all levels.
- (ii) Develop a Safety Management Manual (SMM) that documents all aspects of the SMS, including safety policy, objectives, procedures and individual safety accountabilities. SMM shall be the key instrument for communicating the organisation's approach on safety to the whole organisation;

21.5.5.2 The Safety Management Manual, at minimum, shall contain:

- Scope of the safety management system;

- The safety policy and objectives;
- Safety accountabilities;
- Key safety personnel;
- Documentation control procedures;
- Hazard identification and risk management schemes;
- Safety performance monitoring;
- Emergency response plan;
- Management change;
- Safety auditing; and
- Safety promotion

## **DIVISION 6 – SAFETY HAZARD AND RISK MANAGEMENT**

### **21.6.1 Hazard Identification Process**

21.6.1.1 The SMS shall ensure that, senior management develop a formal means of collecting, recording, acting on and generating feedback about hazards and risks in operation through reactive, proactive and predictive methods.

21.6.1.2 The SMS shall ensure that, senior management develop hazard identification processes which may include the following reporting systems:

- (i) Mandatory reporting systems;
- (ii) Voluntary reporting systems; and
- (iii) Confidential reporting systems.

21.6.1.3 The SMS shall ensure that, senior management develop hazard identification processes which may include the following steps for action:

- (i) Reporting hazards, events or safety concerns;
- (ii) Collecting and storing of data;
- (iii) Analyzing reports; and
- (iv) Distributing the information distilled from the analysis.

### **21.6.2 Risk Assessment and Mitigation Processes**

21.6.2.1 The SMS shall ensure that, senior management develop risk assessment and mitigation processes that include:

- (i) The analysis and elimination; and/or mitigation to an acceptable level of risks that threaten the capabilities of an organization; and
- (ii) The risk assessment matrix.

### 21.6.3 Internal Safety Investigations

21.6.3.1 The SMS shall ensure that, senior management develop Internal Safety Investigations to include occurrences that are not required to be investigated or reported to state such as, but not limited, to the following:

- (i) In-flight turbulence;
- (ii) Failure of Equipment;
- (iii) Ramp vehicle operations; and
- (iv) Frequency congestion.

## **DIVISION 7 – SAFETY ASSURANCE**

### 21.7.1 Safety Performance Monitoring and Measurement

21.7.1.1 The SMS shall ensure that, senior management develop the process by which the safety performance of the organization is verified in comparison to the approved safety policies and objectives that include:

- (i) Safety reporting;
- (ii) Safety Audits;
- (iii) Safety reviews; and
- (iv) Surveys.

### 21.7.2 Audits and Surveys

21.7.2.1 The SMS shall ensure that, senior management develop safety audits and surveys to ensure that the structure of SMS is sound in terms of:

- (i) Levels of staff;
- (ii) Compliance with approved procedures and instructions; and
- (iii) Level of competency and training to operate equipment, facilities and maintain their levels of performance.

21.7.2.2 The SMS shall ensure that, senior management develop safety audits and surveys to ensure that the safety audit team:

- (i) Safety audits may be undertaken by a single individual or a team, depending on the scale of the audit; and
- (ii) Depending on the size of the organization and the availability of resources, experienced and trained individuals within the organization may perform safety audits or they may assist external auditors.

### 21.7.3 The Management of Change

21.7.3.1 The SMS shall ensure that, in the management of change due to introduction of new equipment or procedures, senior management to ensure that the following be addressed:

- (i) Inevitable introduction of new hazards;
- (ii) Impact on the appropriateness of risk mitigation; and
- (iii) Impact on the effectiveness of risk mitigation.

21.7.3.2 The SMS shall ensure that, in the management of change, senior management to ensure that the following external and internal changes be addressed:

- (i) Changes to regulatory requirements;

- (ii) Security;
- (iii) Re-ordering of air traffic control equipment;
- (iv) Management changes;
- (iii) New equipment; and
- (iv) New procedures.

21.7.3.3 The SMS shall ensure that, in the formal management of change the following process are addressed:

- (i) Identify changes within the organization which may effect established processes and services; and
- (ii) Prior to implementing changes describe the arrangements to ensure safety performance.

#### **21.7.4 Continuous Improvement of the Safety System**

21.7.4.1 The SMS shall ensure that, senior management identify continuing improvement and this is achieved through:

- (i) Determining the immediate the causes of areas which are under performing and their implications in the operation of the SMS;
- (ii) Rectifying situations involving situations under standard identified through other safety assurance activities;
- (iii) Proactive evaluation of facilities, equipment, documentation and procedures through audits and surveys;
- (iv) Proactive evaluation of individuals' performance, to verify the fulfilment of their safety responsibilities; and
- (v) Reactive evaluations in order to verify the effectiveness of the system for control and mitigation of risks.

### **DIVISION 8 – SAFETY PROMOTION**

#### **21.8.1 Training and Education**

21.8.1.1 The SMS shall ensure that, the Safety Manager/Director in conjunction with the Human Resources Department or Personnel Department, review the job descriptions of all staff, and identify those positions that have safety responsibilities.

21.8.1.2 The Safety Manager/Director shall ensure that the following management and staff are trained as follows:

- (i) Accountable Manager in the awareness of SMS roles and responsibilities, safety policy, SMS standards and safety assurance;
- (ii) Line Managers/Directors in organizational safety standards and national regulations, management commitment and responsibilities and safety assurance;
- (iii) Other Managers and Supervisors in the safety process, management commitment and responsibilities, hazard identification and risk management and the management of change; and
- (iv) Operational personnel in the SMS fundamentals, organizational safety policy, organizational SMS overview and management commitment and responsibilities.

#### **21.8.2 Safety Communication**

21.8.2.1 The SMS shall ensure that, safety communication aims to:

- (i) Ensure that all staff are fully aware of the SMS;
- (ii) Convey safety critical information;
- (iii) Explain why particular actions are taken;
- (iv) Explain why safety procedures are introduced or changed; and
- (v) Convey 'nice-to-know' information.

### **21.8.3 Safety Assurance**

21.8.3.1 The SMS shall ensure safety assurance is addressed through:

- (i) Analysis of data;
- (ii) Record keeping and records management;
- (iii) Management review; and
- (iv) Establishing own Target Levels of Safety & Performance Monitoring that satisfies the regulator.

## **DIVISION 9 – EMERGENCY RESPONSE PLANNING**

### **21.9.1 Development of the Emergency Response Plan (ERP)**

21.9.1.1 The SMS shall ensure that the purpose of the ERP is met as follows:

- (i) Orderly and efficient transition from normal to emergency operations;
- (ii) Designation of emergency authority;
- (iii) Assignment of emergency responsibilities;
- (iv) Authorization by key personnel for actions contained in the plan;
- (v) Coordination of efforts to cope with the emergency; and
- (vi) Safe continuation of operations, or return to normal operations as soon as possible.

## **DIVISION 10 – Implementation**

21.10.1 This Regulation will come into force on **January 01, 2007** for Air Navigation Service Providers (ANSPs) and Certified Aerodrome Operators (CAOs).

21.10.2 This Regulation will come into force on **January 01, 2009** for Air Operator Certificate (AOC) holders and Approved Maintenance Organizations (AMOs).

21.10.3 As indicated above Air Navigation Service Providers (ANSPs) / Certified Aerodrome Operators (CAOs) / Air Operator Certificate (AOC) holders and Approved Maintenance Organization (AMOs) shall comply with these regulations in the provision of services.