



Part 19

ESTABLISHMENT OF SAFETY MANAGEMENT SYSTEM

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SUBPART A
General Provision

19.1 Applicability.

- (a) This Part prescribes the requirements for establishing a Safety Management System for operators and /or service providers operating in accordance with the following ECAR,
- (1) ECAR Part 141 " Pilot Schools " , and
 - (2) ECAR Part 142 "Aviation training centers" , and
 - (3) ECAR Part 143 "Certification and operation of organizations conducting air navigation services training" , and
 - (4) ECAR Part 147 "Aviation maintenance engineers schools" , and
 - (5) ECAR Part 171 Certification of AT/RN Equipment and Their Maintenance Facilities / AT/RN Maintenance Organizations .
 - (6) ECAR Part 121 "Certification and operations: air carries and air taxi operations " , and
 - (7) ECAR Part 145 "Approved Maintenance Organizations and repair Stations " , and
 - (8) ECAR Part 21 " Design Organization approval for products or changes to products " , Aircraft Manufacturer", and
 - (9) ECAR Part 172 " The certification and operation of organizations providing air traffic service in the Egyptian flight information region " , and
 - (10) ECAR Part 173 " Certification and operation of organizations providing aeronautical information service in Egypt " ,and
 - (11) ECAR Part 174 "Certification and operation of Egyptian organizations providing aeronautical telecommunication serviced " and
 - (12) ECAR Part 139 "Certification and Operations of Land Airport".
- (b) Within the context of this part the term “operator and/or service provider” must be understood to designate any organization providing aviation related services. The term encompasses :
- (1) Approved Training Organizations in accordance ECARs Part 141, Part 142, Part 143 , Part 147 and Part 171 that are exposed to safety risks related to aircraft operations during the provision of their services;
 - (2) Operators of aero planes or helicopters authorized to conduct international commercial air transport, in accordance with ECAR Part 121;
 - (3) Approved Maintenance Organizations providing services to operators of aero planes or helicopters engaged in international commercial air transport, in accordance with ECAR Part 145;
 - (4) Organizations responsible for the type design or manufacture of aircraft, in accordance with ECAR Part 21;
 - (5) Air traffic services (ATS) providers in accordance with ECAR Part 172; and
 - (6) Operators of certified aerodromes in accordance with ECAR Part 139.
 - (7) Organizations providing aeronautical information service in Egypt in accordance with ECAR Part 173.
 - (8) Organizations providing aeronautical telecommunication services in accordance with ECAR 174.
- (c) Operators and/or service providers shall establish, maintain and adhere to a safety management system (SMS) that is appropriate to the size, nature and complexity of the operations authorized to be conducted under its operations certificate and the safety hazards and risks related to the operations.
- (d) This part addresses the formal and systematic approach to aviation safety and its related processes and activities rather than occupational safety,
- (e) Environmental protection or customer service quality.
- (f) The operator and/or service provider is responsible for the safety of services,

subcontracted services, products contracted and purchased from other organizations.

- (g) This part establishes the minimum acceptable requirements; the operator and/or service provider can establish more stringent requirements.

19.3 Definitions.

When the following terms are used in the Standards and Recommended Practices for Safety Management, they have the following meanings:

Accident. An occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down, in which:

- (a) A person is fatally or seriously injured as a result of:
- (1) Being in the aircraft, or
 - (2) Direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or
 - (3) Direct exposure to jet blast,

Except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or

- (b) The aircraft sustains damage or structural failure which:
- (1) Adversely affects the structural strength, performance or flight characteristics of the aircraft, and
 - (2) Would normally require major repair or replacement of the affected component,

Except for engine failure or damage, when the damage is limited to a single engine, (including its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes), or for minor damages to main rotor blades, tail rotor blades, landing gear, and those resulting from hail or bird strike (including holes in the radome); or

- (c) The aircraft is missing or is completely inaccessible.

Note1. — For statistical uniformity only, an injury resulting in death within thirty days of the date of the accident is classified, by ICAO, as a fatal injury.

Note2. — An aircraft is considered to be missing when the official search has been terminated and the wreckage has not been located.

Note3. — The type of unmanned aircraft system to be investigated is addressed in 5.1 of Annex 13.

Note4. — Guidance for the determination of aircraft damage can be found in Attachment F of Annex 13.

Aero plane. A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

Aircraft. Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

Helicopter. A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes.

Note. — Some States use the term “rotorcraft” as an alternative to “helicopter”.

Incident. An occurrence, other than an accident, associated with the operation of an

aircraft which affects or could affect the safety of operation.

Note. — The types of incidents which are of interest for safety-related studies include the incidents listed in Annex 13, Attachment C.

Industry codes of practice. Guidance material developed by an industry body, for a particular sector of the aviation industry to comply with the requirements of the International Civil Aviation Organization's Standards and Recommended Practices, other aviation safety requirements and the best practices deemed appropriate.

Note.— Some States accept and reference industry codes of practice in the development of regulations to meet the requirements of Annex 19, and make available, for the industry codes of practice, their sources and how they may be obtained.

Operational personnel. Personnel involved in aviation activities who are in a position to report safety information.

Note. — Such personnel include, but are not limited to: flight crews; air traffic controllers; aeronautical station operators; maintenance technicians; personnel of aircraft design and manufacturing organizations; cabin crews; flight dispatchers, apron personnel and ground handling personnel.

Safety. The state, in which risks associated with aviation activities, related to, or in direct support of the operation of aircraft, are reduced and controlled to an acceptable level.

Safety management system (SMS) . A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.

Safety performance. A State or a service provider's safety achievement as defined by its safety performance targets and safety performance indicators.

Safety performance indicator. A data-based parameter used for monitoring and assessing safety performance.

Safety performance target. The planned or intended objective for safety performance indicator(s) over a given period.

Safety risk. The predicted probability and severity of the consequences or outcomes of a hazard.

Serious injury. An injury which is sustained by a person in an accident and which:
Requires hospitalization for more than 48 hours, commencing within seven days from the date the injury was received; or
Results in a fracture of any bone (except simple fractures of fingers, toes or nose); or
Involves lacerations which cause severe hemorrhage, nerve, muscle or tendon damage;
or
Involves injury to any internal organ; or
Involves second or third degree burns, or any burns affecting more than 5 per cent of the body surface; or
Involves verified exposure to infectious substances or injurious radiation.

State of Design. The State having jurisdiction over the organization responsible for the type design.

State of Manufacture. The State having jurisdiction over the organization responsible for the final assembly of the aircraft.

State of the Operator. The State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.

State safety programme (SSP). An integrated set of regulations and activities aimed at improving safety.

19.5 Application for SMS Acceptance.

The applicant, for the acceptance of SMS shall supplement his formal application, in a form and manner established by the CAA and by at least, the following information.

- (a) Name of the Accountable Manager and the assigned Safety Management post holder.
- (b) A proposed Implementation Plan with emphasis on time-lines.
- (c) A draft of the SMS Manual.

19.7 SMS structure.

The structure of the SMS shall contain the requirements established in subpart B through subpart E.

19.9 Preparation of SMS.

Safety Management System Manual required by this part shall:

- (a) Be typewritten and signed by the operator and/or service provider;
- (b) Be in a form that is easy to revise;
- (c) Has the effective date and issuance status (original / amendment number on each page).
- (d) Has approval sheet showing issue number, amendment number and it is effective date ; and
- (e) Be organized in a manner helpful to the preparation, review, and approval processes.

19.11 Acceptance of SMS.

- (a) Each operator and/or service provider as defined in 19.1(b) shall have in place a safety management system (SMS) that is acceptable to Egyptian Civil Aviation Authority, that, as a minimum:
 - (1) Identifies safety hazards;
 - (2) Ensures that remedial action necessary to maintain an acceptable level of safety is implemented. The acceptable level of safety shall be subject to ECAR approvals.
 - (3) Provides for continuous monitoring and regular assessment of the safety level achieved; and
 - (4) Aims to make continuous improvement to the overall level of safety.
- (b) In order to be acceptable to ECAA, operator and /or service provider SMS shall meet the requirements set forth in this part, specifically, in subpart B through subpart E.

Thru 19.99 Reserved.

SUBPART B
Safety policy and objectives

19.101 General requirements.

- (a) An operator and/or service provider shall define the organization's safety policy.
- (b) The safety policy shall be signed by the Accountable Executive of the organization.
- (c) The safety policy shall be in accordance with national, international and organizational standards, and reflect organizational commitments regarding safety.
- (d) The safety policy shall be communicated, with visible endorsement, throughout the organization.
- (e) The safety policy shall include a clear statement about the provision of the necessary human and financial resources for its implementation.
- (f) The safety policy shall, inter alia, include the following objectives:
 - (1) Commitment to implement an SMS;
 - (2) Commitment to continual improvement in the level of safety;
 - (3) Commitment to the management of safety risks;
 - (4) Commitment to encourage employees to report safety issues;
 - (5) Establishment of clear standards for acceptable behavior; and
 - (6) Identification of responsibilities of management and employees with respect to safety performance.
- (g) The safety policy shall be reviewed periodically to ensure it remains relevant and appropriate to the organization.
- (h) An operator and/or service provider shall establish safety objectives for the SMS.
- (i) The safety objectives should be linked to the safety performance indicators, safety performance targets and safety requirements of the operator and/or service provider SMS.

19.103 Organizational structure and responsibilities.

- (a) An operator and/or service provider shall identify an Accountable Executive to be responsible and accountable on behalf of the operator and/or service provider for meeting the requirements of this part, and shall notify the ECAA the name of the person.
- (b) The Accountable Executive shall be a single, identifiable person who, irrespective of other functions, shall have the ultimate responsibility for the implementation and maintenance of the SMS.
- (c) The Accountable Executive shall have:
 - (1) Full control of the human resources required for the operations authorized to be conducted under the operations certificate;
 - (2) Full control of the financial resources required for the operations authorized to be conducted under the operations certificate;
 - (3) Final authority over operations authorized to be conducted under the operations certificate;
 - (4) Direct responsibility for the conduct of the organization's affairs; and final responsibility for all safety issues.
- (d) An operator and or/a service provider shall establish the safety structure necessary for the implementation and maintenance of the organization's SMS.
- (e) An operator and or/a service provider shall identify the safety responsibilities of all members of senior management, irrespective of other responsibilities.
- (f) Safety-related positions, responsibilities and authorities shall be defined, documented and communicated throughout the organization.
- (g) An Operator and/or service provider shall identify a Safety Manager to be a member of management who shall be the responsible individual and focal point for the implementation and maintenance of an effective SMS.
- (h) The Safety Manager shall:

- (1) Ensure that processes needed for the SMS are established, implemented and maintained;
 - (2) Report to the Accountable Executive on the performance of the SMS and on any need for improvement; and
 - (3) Ensure safety promotion throughout the organization.
- (i) To serve as Safety Manager under this Part ,the following suggested attributes and qualification are required but not limited to :
- (1) Proven competence in the area of operation (technical area or specific job area e.g. flight dispatch) within any aviation organization (at least 10 years) to understand the systems that support operations.
 - (2) Operational management experience at supervisory level (at least 2 years).
 - (3) Sound knowledge of safety management principles and practices, through training, refresher training and experience.
 - (4) The completion of a recognized safety management course/s that meets the minimum requirements published by ECAA.
 - (5) Good written and verbal communication skills;
 - (6) Well-developed interpersonal skills;
 - (7) Computer literacy;
 - (8) The ability to relate to all levels, both inside and outside the organization;
 - (9) Organizational ability;
 - (10) Capable of working unsupervised;
 - (11) Good analytical skills;
 - (12) Leadership skills and an authoritative approach; and
 - (13) Worthy of respect among peers and management.

19.105 SMS implementation plan.

- (a) An Operator and/or service provider shall develop and maintain an SMS implementation plan as included in Subpart F of this Part and as detailed in EAC 00-13.
- (b) The SMS implementation plan shall be the definition of the approach the organization will adopt for managing safety in a manner that will meet the organization's safety needs.
- (c) The SMS implementation plan shall include the following:
 - (1) Safety policy and objectives;
 - (2) Safety roles and responsibilities;
 - (3) System description;
 - (4) Gap analysis;
 - (5) SMS components;
 - (6) Safety performance measurement;
 - (7) Safety reporting policy;
 - (8) Safety communication;
 - (9) Means of employee involvement; and
 - (10) Management review of safety performance.
- (d) The SMS implementation plan shall be endorsed by senior management of the organization.
- (e) A service provider shall, as part of the development of the SMS implementation plan, complete a system description.
- (f) The system description shall include the following:
 - (1) The system interactions with other systems in the air transportation system;
 - (2) The system functions;
 - (3) Required Human Factors considerations of the system operation;
 - (4) Hardware components of the system;
 - (5) Software components of the system;
 - (6) Related procedures that define guidance for the operation and use of the system;

- (7) Operational environment; and
- (8) Contracted and purchased products and services.
- (g) An operator and /or service provider shall, as part of the development of the SMS implementation plan, complete a gap analysis, in order to:
 - (1) Identify the safety arrangements existing within the organization; and
 - (2) Determine additional safety arrangements required to implement and maintain the organization's SMS.

19.107 Coordination of the emergency response plan.

- (a) An operator and /or service provider shall develop and maintain, or coordinate, as appropriate, an Emergency Response Plan (ERP) that shall ensure:
 - (1) Orderly and efficient transition from normal to emergency operations;
 - (2) Designation of emergency entities;
 - (3) Assignment of emergency responsibilities;
 - (4) Coordination of efforts to cope with the emergency; and
 - (5) Safe continuation of operations, or return to normal operations as soon as possible.

19.109 Documentation.

- (a) An operator and /or service provider shall develop and maintain SMS documentation, in paper or electronic form, to describe the following:
 - (1) Safety policy;
 - (2) Safety objectives;
 - (3) SMS requirements, procedures and processes;
 - (4) Responsibilities and authorities for procedures and processes; and
 - (5) SMS outputs.
- (b) An operator and /or service provider shall, as part of the SMS documentation, develop and maintain a safety management manual (SMM), to communicate the organization's approach to safety throughout the organization.
- (c) The SMM shall document all aspects of the SMS, and its contents shall include the following:
 - (1) Scope of the safety management system;
 - (2) Safety policy and objectives;
 - (3) Safety accountabilities;
 - (4) Key safety personnel;
 - (5) Documentation control procedures;
 - (6) Emergency response planning;
 - (7) Hazard identification and risk management schemes;
 - (8) Safety performance monitoring;
 - (9) Management of change;
 - (10) Safety auditing; and
 - (11) Safety promotion.

The certificate holder shall submit Safety Management System Manual to ECAA for acceptance according to the requirements of this part ,

19.111 Thru 19-199 Reserved.

SUBPART C
Safety risk management.

19.201 General.

- (a) An operator and/or service provider shall develop and maintain safety data collection and processing systems (SDCPS) that provide for the identification of hazards and the analysis and assessment of risks.
- (b) An operators and/or service providers SDCPS shall include reactive, proactive and predictive methods of hazard identification and safety data collection.

19.203 Hazard identification.

- (a) An Operator /and or service provider shall develop and maintain formal means of collecting, recording, acting on and generating feedback about hazards in operations, which combine reactive, proactive and predictive methods of safety data collection.
- (b) The hazard identification process shall include the following steps:
 - (1) Reporting of hazards, events or safety concerns;
 - (2) Collection and storing the safety data;
 - (3) Analysis of the safety data; and
 - (4) Distribution of the safety information distilled from the safety data.

19.205 Risk management.

- (a) An operator and/or service provider shall develop and maintain a formal risk assessment and mitigation process that ensures the elimination and/or mitigation of risks to an acceptable level.
- (b) The risks in each hazard identified through the hazard identification processes described in section 19.203 of this part shall be analyzed in terms of probability and severity of occurrence, and assessed for their tolerability.
- (c) The organization shall define the levels of management with authority to make safety risk tolerability decisions.
- (d) The organization shall define safety control for each risk assessed as intolerable.

19.207 Internal safety investigations.

- (a) An operator and/or service provider shall, as part of the SMS, develop and maintain formal processes for the internal investigation of occurrences that are not required to be investigated by the ECAA or reported to the oversight authority.

19.209 Thru 19.299 Reserved.

SUBPART D
Safety assurance

19.301 General.

- (a) An operator and/or service provider shall develop and maintain safety assurance processes to ensure that the safety risks controls developed as a consequence of the hazard identification and risk management activities under paragraph 19.205 achieve their intended objectives.
- (b) Safety assurance processes shall apply to an SMS whether the activities and/or operations are accomplished internally or outsourced.

19.303 Safety performance monitoring and measurement.

- (a) An operator and/or service provider shall, as part of the SMS safety assurance activities, develop and maintain the necessary means to verify safety performance of the organization in comparison with the approved safety policies and objectives, and to validate the effectiveness of implemented safety risk controls.
- (b) Safety performance monitoring and measurement means shall include the following:
 - (1) Safety reporting;
 - (2) Safety audits;
 - (3) Safety surveys.
 - (4) Safety reviews;
 - (5) Internal safety investigations.
- (c) The safety reporting procedure shall set out the conditions under which immunity from disciplinary action would be considered.

19.305 Management of change.

- (a) An operator and/or service provider shall, as part of the SMS safety assurance activities, develop and maintain a formal process for the management of change.
- (b) The formal process for the management of change shall:
 - (1) Identify changes within the organization which may affect established processes and services;
 - (2) Describe the arrangements to ensure safety performance before implementing changes; and
 - (3) Eliminate or modify safety risk controls that are no longer needed due to changes in the operational environment.

19.307 Continuous improvement of the safety system.

- (a) An operator and/or service provider shall, as part of the SMS safety assurance activities, develop and maintain formal processes to identify the causes of under-performance of the SMS, determine the implications in its operation, and eliminate such causes, in order to ensure the continual improvement of the SMS.
- (b) Continuous improvement of the operator and/or service provider SMS shall include:
 - (1) Proactive and reactive evaluations of facilities, equipment, documentation and procedures, to verify the effectiveness of strategies for control of safety risks; and
 - (2) Proactive evaluation of the individuals' performance, to verify the fulfillment of safety responsibilities.

19.309 Thru 19.399 Reserved.

SUBPART E
Safety promotion**19.401 General.**

Operators and/or Service providers shall develop and maintain formal safety training and safety communication activities to create an environment where the safety objectives of the organization can be achieved.

19.403 Safety training.

- (a) An operator and/or service provider shall, as part of its safety promotion activities, develop and maintain a safety training programme that ensures that personnel are trained and competent to perform the SMS duties.
- (b) The scope of the safety training shall be appropriate to the individual's involvement in the SMS.
- (c) The Accountable Executive shall receive safety awareness training regarding:
 - (1) SMS roles and responsibilities;
 - (2) Safety policy;
 - (3) SMS objectives; and
 - (4) Safety assurance.

19.405 Safety communication.

- (a) An operator and/or service provider shall, as part of its safety promotion activities, develop and maintain formal means for safety communication, to:
 - (1) Ensure that all staff is fully aware of the SMS;
 - (2) Convey safety critical information;
 - (3) Explain why particular safety actions are taken; and
 - (4) Explain why safety procedures are introduced or changed.
- (b) Formal means of safety communication shall include:
 - (1) Safety policies and procedures;
 - (2) Newsletters; and
 - (3) Bulletins.

19.407 Quality policy.

An operator and/or service provider shall ensure that the organization quality policy is consistent with, and supports the fulfillment of the activities of the SMS.

19.409 Thru 19.499 Reserved.

SUBPART F
Implementation of the SMS

19.501 Phases of the SMS Implementation.

- (a) This part proposes, but does not mandate, a phased implementation of an operator and/or service provider SMS, which encompasses four phases as described in paragraph (b) through paragraph (e) hereunder.
- (b) Phase (1) provides a blueprint on how the SMS requirements will be met and integrated to the organization's work activities, and an accountability framework for the implementation of the SMS:
 - (1) Identify the accountable executive and the safety accountabilities of managers;
 - (2) Identify the person (or planning group) within the organization responsible for implementing the SMS;
 - (3) Describe the system (Air operator, ATC services provider, approved maintenance organization, certified aerodrome operator);
 - (4) Conduct a gap analysis of the organization's existing resources compared with the national and international requirements for establishing a SMS;
 - (5) Develop an SMS implementation plan that explains how the organization will implement the SMS on the basis of national requirements and international Standards and Recommended Practices (SARPs), the system description and the results of the gap analysis;
 - (6) Develop documentation relevant to safety policy and objectives; and
 - (7) Develop and establish means for safety communication.
- (c) Phase (2) puts into practice those elements of the SMS implementation plan that refer to the safety risk management reactive processes:
 - (1) Investigation and analysis;
 - (2) Hazard identification and risk management; and
 - (3) Training relevant to:
 - (i) SMS implementation plan components; and
 - (ii) Safety risk management (reactive processes).
 - (4) Documentation relevant to:
 - (i) SMS implementation plan components; and
 - (ii) Safety risk management (reactive processes).
- (d) Phase (3) puts into practice those elements of the SMS implementation plan that refer to safety risk management, proactive processes:
 - (1) Investigation and analysis;
 - (2) Hazard identification and risk management; and
 - (3) Training relevant to:
 - (i) SMS implementation plan components; and
 - (ii) Safety risk management (proactive processes).
 - (4) Documentation relevant to:
 - (i) SMS implementation plan components; and
 - (ii) Safety risk management (proactive processes).
- (e) Phase (4) puts into practice operational safety assurance:
 - (1) Development of acceptable level (s) of safety;
 - (2) Development of safety indicators and targets;
 - (3) SMS continuous improvement;
 - (4) Training relevant to operational safety assurance; and
 - (5) Documentation relevant to operational safety assurance.

SUBPART G
SMS CERTIFICATION

New Operators or/Service Providers shall be subject to SMS Certification.

The acceptance of a SMS is an important part of the overall certification process.

This will be done within the main certification process.