



**JORDAN CIVIL AVIATION REGULATORY COMMISSION**

# **JORDAN STATE SAFETY PROGRAM**

**ORIGINAL**

**August , 2012**

**AUTHORIZATION FROM MINSTER OF TRANSPORT**

This is to authorize the Civil Aviation Regulatory Commission Chief Commissioner / CEO, in his capacity as the State Safety Program Accountable Executive, to implement the Jordan State Safety Program as of \_\_\_\_\_, in cooperation with all concerned entities, in compliance with the requirements of the International Civil Aviation Organization and in accordance with the herewith approved Civil Aviation Regulatory Commission Safety Policy.

*Dr. Hashem R. Al-Masaeid*  
*Hashem*

Minister of Transport

Date: 01/08/2012 .

## CARC Safety Policy

CARC is committed to implementing, developing and improving strategies, management systems and processes to ensure that aviation operations uphold the highest level of safety performance and meet national and international requirements. This policy is communicated with visible endorsement throughout CARC.

### **Our Commitment is to:**









1. Promote and support a safety culture across all aviation industries that recognizes the importance and value of effective aviation safety management and acknowledges at all times that safety is paramount;
2. Ensure that CARC's financial and human resources are sufficient for implementation, establishment and maintenance of the Jordan State's Safety Program;
3. Clearly define for all regulatory personnel their responsibilities and accountabilities for the implementation, establishment and maintenance of the Jordan State's Safety Program and its performance;
4. Ensure that all regulatory personnel are provided with adequate and appropriate aviation safety information and training, they are specialists in their functional areas and competent in safety regulation of service providers;
5. Establish a risk-based resource allocation strategy for all regulatory functions (proactively targeting regulatory attention on known areas of high risk) in CARC;
6. Establish acceptable levels of safety for aviation operations within Jordan;
7. Ensure that acceptable levels of safety performance for aviation service providers within Jordan expressed in terms of safety performance indicators and safety performance targets are being achieved;

8. Continually improve the Jordan State Safety Program to achieve higher safety performance targets;
9. Ensure that all service providers establish and maintain the safety management system in their operation;
10. Achieve the highest levels of safety standards and performance in aviation operations; and
11. To review performance levels of aviation safety and ensure continuous improvement.

Accountable Executive,  
Chief Commissioner / CEO  
Capt. "Moh'd Amin" Al-Quran



## APPROVAL SHEET

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## AMENDMENT RECORD SHEET

Amendment		Number of pages	Date Entered	Date Effective	Entered By
Number	Date				

Please refer to checklist of pages on page iv for detailed information of each amendment.

**CHECKLIST OF AMENDED PAGES**

Amendment Number	Page Number	Date	Amendment Number	Page Number	Date



## FOREWORD

ICAO Standards place a responsibility on ICAO contracting States to have a State Safety Program (SSP). The program is an integrated set of Regulations and activities aimed at improving safety. Since Jordan Civil Aviation Regulatory Commission (CARC) has regulatory responsibilities for aviation safety, it is need to examine legislations, policies and processes from the view point of SSP. Although it may have been assumed that all is in order, the SSP may still reveal issues that should be resolved to improve the way in which aviation safety is managed in Jordan.

The SSP is based on comprehensive analysis of the State's aviation system; state safety policies (based on hazard identification) and safety risk management. Also, safety oversight is focused on the areas of significant safety concerns or higher safety risks. Thus, the SSP provides the means to combine prescriptive and performance-based approaches to safety rulemaking, policy development and oversight by Jordan. The Chief Commissioner / CEO of CARC in his capacity as the Accountable Executive shall ensure the implementation of the Jordan State Safety Program.

The Director of Airports Safety and Standards in his capacity as Principal Director of the SSP in Jordan shall coordinate to undertake the State Safety Program documentations and help other departments to implement this Program. CARC's Quality Assurance and Internal Audit Department shall carry out internal audits to ensure that all relevant ICAO requirements and Jordan's obligations for ensuring aviation safety are met. Although most essential elements of the safety framework are well established, a number of items have been identified for improvement and need concentrated efforts to work upon in related areas. Various tasks outlined in the program need to be completed by concerned officials to make SSP a wholesome subject under CARC. It is for this reason that it is planed to keep this document up-to-date on CARC website and CARC shall work with its service providers to help them develop their Safety Management System Program (SMS).



**Capt. "Moh'd Amin" Al-Quran**  
**Chief Commissioner / CEO**  
**Civil Aviation Regulatory Commission**



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## DISTRIBUTION LIST

<b>Internal Entity</b>	<b>Copy number</b>
Minister of Transport	CC# 1
Chief Commissioner / CEO / CARC	CC# 2
Airports Safety and Standards Director / Principal SSP Director / CARC	CC# 3
Deputy Commissioner / Safety and Security Commissioner / CARC	CC# 4
Air Navigation Services Commissioner / CARC	CC# 5
Administrative and Technical Affairs Commissioner	CC# 6
Air Transport Economic Regulatory Commissioner / CARC	CC# 7
Quality Assurance and Internal Audit Director / CARC	CC# 8
Airworthiness Safety and Standards Director / CARC	CC# 9
Flight Operations Standards Director / CARC	CC# 10
Air Navigation Safety and Standards Director / CARC	CC# 11
Licensing Unit Manager / CARC	CC# 12
Accidents Investigation Director / CARC	CC#13

<b>External Entity</b>	<b>Copy number</b>
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Minister of Health	CC#14
Joint Chiefs of Staff Chairman	CC#15
Royal Airforce Commander	CC#16
Public Security Director	CC#17
General Intelligence Department Director	CC#18
Civil Defense Director	CC#19
Gendarmerie Forces Director	CC#20
Royal Medical Services Director	CC#21
National Center for Security and Crisis Management Vice Chairman	CC#22

Note: All entities listed above shall acknowledge that this Jordan State Safety Program is a national controlled document.

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## DEFINITIONS

**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:

\* being in the aircraft, or

\* direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or

\* direct exposure to jet blast, except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when injuries are to stowaways hiding outside the areas normally available to passengers and crew; or

**b)** The aircraft sustains damage or structural failure which:

\* adversely affects the structural strength, performance or flight characteristics of the aircraft and

\* 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.

**Acceptable Levels of Safety (ALoS):** The reference against which the oversight authority can determine the safety performance of the aviation system. It is the minimum degree of safety that must be assured by a system in actual practice; and upon which the service providers can establish their level of safety performance and safety targets.

**Annex:** Annexes to the International Civil Aviation Convention signed in Chicago and published by the International Civil Aviation Organization (ICAO).

**Hazard:** a condition or an object with the potential to cause injuries to personnel, damage to equipment or structures, loss to material, or reduction of ability to perform a prescribed function.

**Incident:** an occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

**Level of Safety:** is the degree of safety of a system. It is an emerging property of the system, which represents the quality of the system in terms of safety. It is expressed through safety indicators.

**Risk:** as in safety risk is the assessment, expressed in terms of predicted probability and severity, of the consequences of a hazard, taking as reference the worst foreseeable situation.

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

**Safety Indicators:** are the parameters that characterize and/or typify the level of safety of a system.

**Safety Indicator Value:** is the quantification of a safety indicator.

**Safety Targets:** are the concrete objectives of the level of safety.

**Safety Target Value:** is the quantification of a safety target.

**Safety Measurement:** refers to the quantification of the outcomes of selected high-level, high-consequence events, such as accident and serious incident rates.

**Safety Performance Measurement** refers to the quantification of the outcomes of selected low-level, low-consequence processes, such as the number of Foreign Object Damages (FOD) events per specified number of ramp operations.

**Safety Management System (SMS):** an organized approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.

**State Safety Program (SSP):** an integrated set of regulations and activities aimed at improving safety. It includes specific safety activities that must be performed by the State, and regulations and directives promulgated by the State to support fulfillment of its responsibilities concerning safe and efficient delivery of aviation activities in the State.



**Service Provider:** refers to any organization providing aviation services. The term includes approved training organizations, organization responsible for type design and/or manufacture of aircraft, air traffic service providers and certified aerodromes, as applicable.

**Standard and Recommended Practice:** Any specification for physical characteristics, configuration, material, performance, personnel or procedure, the uniform application of which is recognized as necessary for the safety or regularity of international air navigation and to which Contracting States shall conform in accordance with the Convention; in the event of impossibility of compliance, notification to the Council is compulsory under Article 38. **Recommended Practice:** Any specification for physical characteristics, configuration, material, performance, personnel or procedure, the uniform application of which is recognized as desirable in the interest of safety, regularity or efficiency of international air navigation, and to which Contracting States shall endeavor to conform in accordance with the Chicago Convention.

## ACRONYMS

ALoS	Acceptable level of safety
AIC	Aeronautical Information Circular
ANS	Air Navigation Services
ANSP	Air Navigation Services Provider
ARCC	Aeronautical Rescue Coordination Centre
ASC	Air Safety Circular
AWN	Airworthiness Notice
CARC	Civil Aviation Regulatory Commission
CHIRP	Confidential Human factor Incident Reporting Program
EMS	Environmental Management System
FOD	Foreign object damage
ICAO	International Civil Aviation Organization
OHSMS	Occupational Health Safety Management System
OJT	On-Job Training
ORO	Occurrence Reporting Order
QMS	Quality Management System
SMM	Safety Management Manual
SQMS	Safety Quality Management System
SMS	Safety Management System(s)
SRG	Safety Regulation Group
SRM	Safety Risk Management
SRMS	Safety Risk Management System
SRT	Safety Risk Team
SSP	State Safety Program

## REFERENCES

- Doc No 9859 ICAO State Safety Management Manual Second edition 2009.
- Annexes 1, 6, 8, 11, 13 and 14 to the Convention on International Civil Aviation.
- UKCAA CAP784 :( State Safety Program for the United Kingdom) February 2009 (recommended by ICAO as a model program).
- Generic State Safety Program for COSCAP-BAG States/ Under ICAO Technical Co-operation Program 2009.
- CARC Publication R19-1: (SMS- Guidance to Aviation Organizations).

## CHAPTER 1- INTRODUCTION

### 1.1 GENERAL

- a) ICAO standards now require States to establish a State Safety Program (SSP) in order to achieve an Acceptable Level of Safety (ALoS). They also explicitly require States to establish an ALoS, as a means to verify satisfactory performance of the service providers' Safety Management Systems (SMS). ICAO describes an SSP as 'an integrated set of regulations and activities aimed at improving Safety'.
- b) The requirement for an SSP recognizes that States as well as service providers to have safety responsibilities and provides a framework within which service providers are required to establish SMS.
- c) The early step in implementing an SSP is to develop a training program for the personnel with an objective of providing knowledge of SSP including the ICAO SARPs contained in Annexes 1, 6, 8 11, 13 & 14 to the Convention on International Civil Aviation. CARC shall develop the training program and as set out in the implementation plan detailed in chapter 7 of this SSP
- d) The first step in implementing an SSP specifically aimed at supporting SMS implementation is the development of SMS requirements for service providers, as well as guidance material for the development of a state's regulations on SMS included in Appendix 1 to chapter 10 of SMM. Such guidance uses as reference; the components and elements of ICAO SMS Frame work discussed in chapter 8.
- e) ICAO standards also require that the ALoS to be achieved is established by the State concerned. The concept of establishing an ALoS attempts to complement the current approach to safety management based on regulatory compliance with a performance-based approach.
- f) This document (Jordan SSP) is developed using the ICAO SSP framework and guidance material, including the ICAO SSP gap analysis document. As much as possible, the headings proposed by ICAO in its framework document are adopted in this Program.
- g) This SSP demonstrates the integration of the diverse, multidisciplinary safety regulatory activities into a coherent whole, as illustrated in the diagram in **Appendix – A**.

## 1.2 LEGISLATIVE BASIS

The requirements for the Jordan State Safety Program (SSP) are promulgated under the authority and provisions of the Jordanian Civil Aviation Law No. (41) of 2007.

## 1.3 SCOPE

The Jordan SSP shall apply to all concerned Departments of the Civil Aviation Regulatory Commission as well as the Accident Investigation entity over the entire air space of Jordan. Table 1 specifies the Annexes to the Convention on International Civil Aviation relevant to the implementation of SSP and the concerned CARC entities that are responsible for the implementation of this program.

**TABLE -1: CONCERNED CARC OFFICERS AND RELEVANT ANNEXES**

Annex No.	Annex Title	CARC Concerned Officer
1	Personnel Licensing	Licensing Unit Manager
6	Operations of Aircraft	Dir Flight Operation Standards
8	Airworthiness	Dir Airworthiness Safety & Standards
11	Air Traffic Services	Dir Air Navigation Services Safety & Standard
14	Aerodromes	Dir Airport Safety & Standards
13	Aircraft Accident and Incident Investigation	Aircraft Accidents Investigation Director

Note: Regardless of the administrative status of the Aircraft Accidents Investigation Entity, that entity shall be responsible for the implementation of the relevant provisions of this program, Annex 13 requirements as well as relevant JCAR requirements.

## 1.4 APPLICABILITY

This program is applicable to all relevant departments of CARC and the Aircraft Accident Investigation entity as well as service providers that are covered under Annexes 1, 6, 8, 11, 13 and 14 to the Convention on International Civil Aviation.

**1.5 REFERENCES**

Annexes 1, 6, 8, 11,13 and 14 to the Convention on International Civil Aviation.

ICAO Doc 9859, Second Edition 2009: (Safety Management Manual).

UKCAA CAP784 :( State Safety Program for the United Kingdom) February 2009.

JCAR19: (Establishment of Safety Management System).

CARC Publication R19-1: (SMS- Guidance to Aviation Organizations)

DASS Publication No. 11/2006-A: (Guidelines for Establishing a Safety Management System on Aerodromes).



## **CHAPTER 2- JORDAN AVIATION SAFETY OVERSIGHT ARRANGEMENTS**

### **2.1 GENERAL**

The purpose of this chapter is to describe the safety oversight arrangements in place in Jordan as an ICAO contracting State. It explains the relationships between Jordan Government, Jordan civil Aviation Regulatory Commission (CARC), Service Providers and ICAO. This section also references the aviation safety regulatory legal framework in place in Jordan.

### **2.2 JORDAN AS ICAO CONTRACTING STATE**

When Jordan ratified the Convention on International Civil Aviation (the Chicago Convention) on 18 March 1947, and joined the club of ICAO Contracting state, the state aviation regulations and other Program within regulatory framework and activities had to ensure the discharge of the State's obligations under the Chicago Convention.

Jordan as constitutional monarchy state has a three independent bodies: Executive body, Legislative body and Judicial body. The Parliament is the supreme legislative body of Jordan, which consists of the Senate, also called the House of Notables and the Chamber of Deputies, also called the House of Representatives. The parliament is to enact statute laws; when the parliament is not in session the Executive body of the Government has the power to make and promulgate temporary laws.

The Primary Civil Aviation Legislation is the Civil Aviation Law No. (41) of 2007. CARC under the provision of Civil Aviation Law issues Regulations (JCARs) , Air Navigation Orders, Airworthiness Notices, Air Safety Circulars, Aeronautical Information Publications and Aeronautical Information Circulars etc.

CARC provides air navigation services and aerodromes are operated by independent operators which are appropriately certified by CARC under JCAR Part 139.

CARC regulatory framework endeavors to provide consistency and compliance with the Annexes to the Convention on International Civil Aviation within its national legislation i.e. Civil Aviation Law No. 41 of 2007 and Jordan Civil Aviation Regulatory Commission's Regulations (JCARs). This framework ensures sound CARC regulations conformity to the ICAO Requirements.

## **2.3 RESPONSIBILITIES OF CARC**

CARC is responsible for the safety regulations of the civil aviation industry, development of policy on the sustainable use of Jordan airspace and for ensuring the provision of necessary supporting infrastructure for air navigation. The functions of CARC are defined in the Civil Aviation law No. 41 of 2007.

The Legislative system which governs Civil Aviation in Jordan comprises three tiers:

1. The first tier is primary aviation legislation: This is comprised of Civil Aviation Law (41) of 2007.
2. The Second tier includes Jordan Civil Aviation bylaws which are issued by the Cabinet.
3. The third tier is The Jordan Civil Aviation Regulations (JCARs) which are issued by the Council of Commissioners.

All rules and regulations are updated to implement international obligations, adjusted to ICAO amendments and adopt latest technological as well as knowledge based developments / improvements.

CARC is empowered under the Civil Aviation Law, to grant certificates, licenses and approvals for the safe operations of aircraft in accordance with Annexes to the Convention on International Civil Aviation as far permissible and supporting Jordan Civil Aviation Regulations (JCARs).

CARC's Organizational Structure related to safety regulatory functions is given in **Appendix – C** which shows all safety regulatory functions of CARC.

## **2.4 ACCIDENT INVESTIGATION**

The Accident Investigation Department of Jordan Civil Aviation Regulatory Commission, in its current status, is primarily responsible to conduct and participate in Aircraft Accident and Serious Incident investigation where civil commercial / general aviation aircraft is involved in Jordan and Jordanian Registered aircraft outside Jordan as per the enabling provisions of JCARs Part 2201 and Annex-13 to the Convention on International Civil Aviation (Aircraft Accident & Incident Investigation).

CARC with the necessary legal powers can conduct accident investigations and fulfill Jordan's obligations in relation to Annex 13 to the Convention on International Civil Aviation within the frame-work of JCARs.

CARC is also responsible to quickly react to air accidents /serious incidents and to lead & manage the investigation team, conduct thorough, independent, impartial and timely investigations into air accident / serious incidents including ATS (Operations) investigations, produce thorough and concise reports with well-founded analysis and conclusions without attributing blame or liability, and ensure compliance with JCAR Part 2201, Annex-13 to the Convention on International Civil Aviation and all other legislative and legal obligations in this regard.

On completion of the investigation, the Director of Accidents Investigation Department shall submit to CARC's Chief Commissioner/CEO a final report on the investigation, in a form conforming to that laid down in Annex 13 to the Convention on International Civil Aviation.

Chief Commissioner/CEO will send the report to all, or part of, the States listed in Annex 13 to the Convention on International Civil Aviation as appropriate.

CARC maintains close liaison with local military and foreign aviation agencies to improve aviation safety globally.

However, ICAO requirements mandate that the Accidents Investigation body shall be an independent entity, thus the Accidents Investigation body shall be an independent entity as stated in the action plan detailed in Chapter 7 of this SSP.

## **2.5 SEARCH AND RESCUE**

CARC's Commissioners Council is entrusted with establishing standards to be applied in the case of Search and Rescue as prescribed in Article (35) of Jordan Civil Aviation Law (41) of 2007. CARC is responsible to make arrangements for the establishment and prompt provision of search and rescue services within Jordan with all relevant entities for the purpose of assisting aircraft which may be in need of search and rescue assistance and in compliance with ICAO requirements and through close coordination with the Chairman of the Joint Chiefs of Staff / Jordan Armed Forces, major General Commander / Royal Jordanian Air Force and Medical services.

CARC CEO may requisite aircraft, land vehicle, or weather craft and may engage persons to operate those crafts or vehicles for the purpose of search and rescue operations in connection with search for missing aircraft or rescue of its crew and passengers in coordination with the National Crisis Center. Jordan will coordinate with neighboring countries where necessary and as per ICAO SARPs in this regard.

## CHAPTER 3 – JORDAN AVIATION SAFETY OBJECTIVES

### 3.1 JORDAN AVIATION SAFETY OBJECTIVES

In accordance with ICAO regulations CARC, within its regulatory framework (See Appendix B), has defined safety objectives to improve and reinforce safety. In order to achieve a high level of safety, CARC has developed the following strategic objectives for aviation safety:-

1. CARC regulates the safety of Jordan civil aviation, by approving and overseeing the organizations and individuals involved in Jordanian aviation.
2. CARC will continue to use and develop a risk-based approach to ensure that, Jordan aviation sector complies with ICAO and CARC legislation and requirements.
3. CARC will work collaboratively with industry to continuously improve aviation safety and address safety issues.
4. Where required, CARC will take any necessary actions to ensure safety is not compromised and will ensure that the high safety standards within Jordanian airspace and its supporting infrastructure is maintained with potential risks identified and appropriate mitigating actions taken.
5. CARC will draw upon worldwide and Jordanian data to identify safety trends applicable to Jordan Civil aviation, prioritizing this information to focus on the most significant safety issues; the resulting safety improvement initiatives will be captured in the CARC Safety Plan, which will be used as a means of monitoring progress and effectiveness.
6. In order to achieve these objectives, CARC will establish comprehensive safety monitoring and planning processes to identify safety initiatives and as set out in the implementation plan detailed in chapter 7 of this SSP. It is also committed to comply with all ICAO provisions for safety management systems.

## CHAPTER 4- JORDAN SSP RESPONSIBILITIES AND ACCOUNTABILITIES

### 4.1 RESPONSIBILITIES

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

### 4.2 REGULATORY RESPONSIBILITIES

The regulatory responsibilities of Jordan in civil aviation activities are as specified below:

1. **SARPs.** Jordan, as the signatory to the Chicago Convention, is responsible for implementation of ICAO SARPs within the airspace and at aerodromes, subject to its national legislation in this regard.
2. **Civil Aviation Regulatory Commission (CARC).** Jordan has established an appropriate body, referred to as the Civil Aviation Regulatory Commission (CARC), with the necessary powers to ensure compliance with the rules and regulations.
3. **Safety oversight.** Jordan has established appropriate safety oversight mechanisms to ensure that service providers maintain an acceptable level of safety in their operations.

In the discharge of regulatory responsibilities of Jordan CARC:

- Represents a well-balanced allocation of responsibility between CARC and the service providers for safety.
- Is capable of economic justification within the resources of CARC.



- Maintains continuing regulation and supervision of the activities of the service provider without unduly inhibiting their effective direction and control of the organization; and
- Endeavors for the cultivation and maintenance of harmonious relationships between CARC and service providers.

#### **4.3 ACCOUNTABILITIES**

To promote a system of checks and balances that ensures safety has top priority and a system of accountabilities are in place under jurisdiction of CARC. The regulations violators will be accountable for the act of violations or negligence. The system of accountability shall be enforced under the management of CARC in accordance with the legal framework of Jordan.

- To strengthen accountability system CARC ensures that the CARC financial and human resources are sufficient for implementation, establishment and maintenance of SSP.
- CARC, in accordance with ICAO SARPs defined in Annexes 1, 6, 8, 11, 13 and 14 to the Convention on International Civil Aviation, ensures management accountability vis-à-vis the accepted safety management system. CARC system clearly define the lines of safety accountability for the organizations that are exposed to safety risks during delivery of services, aircraft operators, approved maintenance organizations, organizations responsible for type design and/or manufacture of aircraft, air traffic service providers and certified aerodromes, including direct accountability for safety on the part of senior management.

#### **4.4 ENFORCEMENT POLICY**

CARC has promulgated an enforcement policy that allows Service Providers to deal with, and resolve, events involving safety deviations and minor violations internally, within the context of the service provider safety management system (SMS), to the satisfaction of CARC.

The aim of CARC Enforcement Policy is to lead the aviation community in Jordan by providing a world-class air safety environment which has public trust and confidence. To achieve trust and confidence of the aviation industry and the

traveling public, CARC shall react promptly and appropriately to breaches of CARC requirements to ensure the following objectives:

- A greater range of enforcement actions to better match the regulatory action to the seriousness of the breach.
- Greater accountability by CARC regarding its decisions.
- Greater impartiality and justifiability in decision making by having some of CARC powers subject to an order of a court.
- On one hand, facilitate the service providers in their objectives of safe and efficient flight operations with growth, service to the community whilst, on the other hand, give CARC a balanced but measured capacity to make the tough decisions when they have to be made to enforce aviation safety.

These objectives must be accompanied by explicit benchmarks and a capacity within aviation activities to demonstrate in a measurable and accountable way how and when these objectives will be met. CARC's enforcement policy determines the way CARC uses its powers to regulate. With limited resources CARC has to ensure that it gives proper focus to the exercise of these powers.

The enforcement procedure includes provisions for CARC to deal with events involving gross negligence and willful deviations through established enforcement procedures.

- The Civil Aviation Law No. 41 of 2007 confers on the CARC Chief Commissioner/CEO the power of enforcement and this power may be delegated to the subordinate CARC Officers.
- Chapter (10) of the Civil Aviation Law No. 41 of 2007 states certain acts against the safety and security of civil aviation, the breach of which is considered a criminal offence. CARC shall undertake all necessary measures against such breaches including prosecution.
- Non-compliance with the Civil Aviation Law, Bylaws and JCARs may result in CARC revoking a license, certificate or approval, refusing to grant a license, certificate or approval or granting a license, certificate or approval with conditions.

#### **4.5 ADMINISTRATIVE MEASURES**

1. Almost every aspect of aviation activity is subject to an authorization. Pilots, aircraft maintenance engineers and air traffic controllers shall have a license. Commercial aircraft operators and Air Navigation Service Providers shall have a license and certificate. Public aerodromes shall be licensed and certified. Organizations which design, produce or maintain aircraft shall be approved. Individual aircraft shall have a certificate of airworthiness or permit to fly.
2. All the permissions issued so far as individuals and organizations are concerned in Jordan by CARC are in accordance with legal requirements and standards defined by Annexes to the Convention on International Civil Aviation within provisions of JCARs.
3. CARC has powers to vary, suspend or revoke permission where it is no longer satisfied that the relevant criteria are met.

#### **4.6 CHAPTER (10) OF AVIATION LAW 41/2007 ENFORCEMENT**

Chapter (10) articles describe the circumstances in which the enforcement can or must be made to deal with an identified breach of the Rules and Regulations. The subject-specific articles of chapter (10) and the Rules / Regulations, which govern the enforcement tools, are based on the following principles:-

1. **Natural Justice and Accountability:** Enforcement decisions must be:
  - Based on fair observance of due process.
  - Transparent to those involved.
  - Consistent in the like circumstances so as to be nondiscriminatory.
  - Subject to appropriate internal and external review.
2. **Impartiality:** Enforcement decisions must not be influenced by:
  - Personal conflict.
  - Extraneous considerations (such as gender, race, religion, political views or affiliation); or
  - The personal, political or financial power of those involved.

**Proportionality:** Enforcement decisions must be proportional responses to the identified breaches and the safety risk they give rise to. In particular:

- CARC's first priority is to protect the safety and security of aviation;
- CARC will take strong action against those who consistently and deliberately operate outside / beyond the Civil Aviation Rules and Legislations;
- CARC will seek to educate and promote training or supervision of those who display a lack of proficiency, but have a willingness to comply with the Civil Aviation Rules and Regulations;
- CARC will issue a Show Cause Notice (SCN), instead of immediate suspension / cancellation of license when dealing with holders of license, certificate or authorization who breach the Rules / Legislations.

#### **4.7 PROSECUTION**

- Failure to comply with any of the requirements of the Civil Aviation Law No. 41 of 2007, by-laws, JCARs and related regulations or specified aviation safety regulations shall be considered a violation that shall be dealt with promptly. Chapter (10) of the Civil Aviation Law No. 41 of 2007 states certain acts against the safety and security of civil aviation, the breach of which is considered a criminal offence. CARC shall undertake all necessary measures against such breaches including prosecution.

## **CHAPTER 5- JORDAN CIVIL AVIATION SAFETY RISK MANAGEMENT PROCESS**

### **5.1 CARC SAFETY PLAN AND SAFETY RISK MANAGEMENT**

One of CARC's objectives is to sustain Jordan aviation safety performance through continuous improvements. CARC Safety Regulation Group (SRG) will be established, and as set out in the implementation plan detailed in chapter 7 of this SSP, to work under the guidance of the Principal Director of the SSP. A strategic agenda defined for safety is under consideration to be implemented through its Safety Plan and Safety Plan Updates. CARC is committed to engage with other stakeholders / partners to ensure that complementary safety goals are achieved.

The Safety Risk Management Process will be used by CARC to determine what action could be taken to help mitigate those risks. The combination of the two processes may result in a set of actions contained in Safety Plan. It will also serve to demonstrate CARC's commitment to continuously developing its processes to help improve safety.

CARC will produce a formal Safety Plan. The Safety Planning process will use expertise of organization's expert in the concerned area to identify potential risks, starting with the major risks as evidenced in the data, using Mandatory Occurrence Reports and other data sources.

As regard CARC Safety Risk Management Process, the risk management will be through analyses of safety data from the data bank and produce a safety analysis documents. The main significant document will be the Global Fatal Accident Review. This would contain a detailed study of worldwide fatal accidents to jet and turboprop airplanes above 5,700kg engaged in passenger, cargo and ferry/positioning flights for the ten year period.

To identify risk and define actions to reduce risk factors relevant to aviation industry of Jordan will be focus of CARC for the performance improvement of the industry.

The CARC regulatory framework in which it operates may change according to the rapid technological or any other change factors; will induce changes. However CARC will remain focused on safety improvement adopting the changes as per the requirement of change suitable to its environment.

## **5.2 CARC SAFETY RISK TEAM**

To oversee aviation safety risks and identify the hazards, CARC shall establish a Safety Risk Team (SRT) and as set out in the implementation plan detailed in chapter 7 of this SSP.

The SRT shall be headed by the Director of Airports Safety and Standards in his capacity as the responsible accountable officer for the implementation of this SSP. The SRT is tasked to seek and review safety information and identify risk issues that are of strategic importance, ensure appropriate action plans are identified to mitigate these risks, and propose documented safety plans to senior management for their approval. The SRT aims to assess the tolerability of aviation risks using both objective and subjective methods.

In particular the SRT is tasked to:

1. Identify risks.
2. Assess identified risks and supporting data.
3. Identify new and potential safety data sources and data handling methods.
4. Review and comment on the CARC SRG Safety Performance Indicators paper, sponsoring further work where required.
5. Assess mitigating actions.
6. Share and co-ordinate safety information amongst all CARC wings (regulatory, ANS and Airport Services).
7. Be briefed with the aim of exploring possible new approaches or actions that may be adopted.
8. Constitute cross-functional team to assess specific issues and recommend potential action plans to the SRT.
9. Agree and implement the methods to be used in preparing full Safety Plans and Safety Plan Updates.
10. Contribute to and where possible improve Jordan wide Safety Risk Management.

## **5.3 SAFETY REQUIREMENTS FOR SERVICE PROVIDERS' SMS**

1. The full impact of SMS on regulatory oversight has yet to be fully considered. It is, therefore, important that CARC management officials with oversight responsibilities for service providers' SMS have a common and clear understanding of the fundamental principles of SMS. In response, CARC shall arrange internal SMS training for CARC personnel.



2. To assist service providers on implementation of SMS and on methods to identify operational hazards, CARC published guidance document (CARC Publication R19-1: (SMS- Guidance to Aviation Organizations)).
3. In view of the developing nature of SMS, CARC shall regularly review the relevance of all guidance material. This work is overseen by the SRT.
4. For airline operators, service providers and approved maintenance organizations, the ICAO Standard requires SMS from 1 January 2009. In response to this CARC is promoting the implementation of SMS and is contributing towards the amendment of JCAR Part 19(Establishment of Safety Management System), which will provide the legal basis for mandating SMS across Jordan. The Air navigation service Providers, Aerodrome operators and Aircraft Maintenance organizations Aircraft Operators and other service providers shall have in place safety management system in their operation by 19th November 2010. The service provider shall also develop the SMS implementation plan considering a phased approach of its implementation and shall be approved by CARC.
5. All service providers shall implement hazard identification and safety risk management process to maintain their level of safety.
6. For ANSPs, CARC has established SMS requirements for ANSPs under Safety Regulatory Requirements. ANSP is now required to employ SMS.
7. For airport operators the requirements for the establishment of SMS is contained in CARC's aerodrome certification criteria.
8. For airline operators and approved maintenance organizations, the ICAO Standard requires implementation of SMS from 19th November 2010. In response to this, CARC is promoting the implementation of SMS by airline operators and maintenance organizations.
9. Aviation organization are often required to develop, implement and operate; a number of different management systems like QMS, SQMS, EMS, OHSMS, SRMS etc. to achieve their production and service goals. The stand-alone operations of these systems do add value to the organization. However, the integration of systems provides benefits; reduction of duplication, cost, organizational risk, and elimination of potential conflicts etc. In response to this the Aviation organizations are encouraged to integrate their management systems for quality, safety, security, occupational health and safety, and environmental protection management etc.

## CHAPTER 6- AGREEMENT ON ACCEPTABLE LEVELS OF SAFETY OF SERVICE PROVIDERS

### 6.1 ACCEPTABLE LEVEL OF SAFETY (ALoS)

Acceptable Levels of Safety (ALoS) relates to an SSP. To implement both SSP and SMS requires a fundamental regulatory change to complement the compliance-based approach with a performance-based approach.

It is no longer possible to assume that regulatory compliance alone will produce safety improvements. A more pro-active, performance based approach is necessary to achieve continuous safety improvement. To do this requires both the regulator and service provider to establish and monitor objective safety performance indicators, to establish safety performance targets and to take action, where necessary, to improve safety.

The following three elements shall be used by the service providers to define levels of safety performance and safety targets in their SMS to achieve the acceptable level of safety:

- **Safety performance indicators (SPI):** these are short term, tactical measurable safety performance outcomes of the safety performance of an aviation organization or a sector of the industry. They are expressed in numerical terms. These are the measures (or metrics) used to express the safety performance in a system. They should be uncomplicated, easy to measure and enable linkage between the Safety Plan and a service provider's SMS. They will therefore differ between segments of industry, such as aircraft operators, aerodrome operators or ATS providers.
- **Safety performance targets (SPT):** these are long term, strategic measurable safety performance outcomes of the safety performance of an aviation organization or a sector of the industry. They are expressed in numerical terms and represent the desired level of safety performance. A safety performance target comprises one or more safety performance indicators, together with desired outcomes expressed in terms of those indicators. These are necessarily determined by considering what safety performance levels are desirable and realistic for individual service providers. SPT should be measurable and acceptable to the parties involved.

- **Safety requirements:** these are the tools and means to achieve the acceptable level of safety of an SSP. They include operational procedures, technology, systems and programs to which measures of reliability, availability, performance and/or accuracy can be specified.

The acceptable level of safety to be achieved shall be established by CARC as set out in the implementation plan detailed in chapter 7 of this SSP. However, the establishment of an ALoS will involve close liaison between CARC and service providers so that both the SSP and service providers SMS have similar ALoS.

In determining an ALoS, it is necessary to consider various factors such as the level of safety risk that applies the cost/benefits of improvements to the system, and public expectations on the safety of the aviation industry.

The ALoS will also be commensurate with the complexity of individual service provider's specific operational contexts and their availability of resources to address safety risks.

The agreed ALoS will be expressed by multiple safety performance indicators and safety performance targets, never by a single one, as well as by safety requirements in the form of remedial actions.

The ALoS should be reviewed periodically to ensure they remain relevant and appropriate to the service providers.

The concept of acceptable level of safety responds to the need to complement the prevailing approach to the management of safety based upon regulatory compliance, with a performance-based approach.

Acceptable level of safety expresses the safety goals (or expectations) of CARC or a service provider.

From the perspective of the relationship between CARC and service providers, it provides an objective in terms of the safety performance service providers should achieve while conducting their core business functions, as a minimum acceptable to CARC. It is a reference against which CARC can measure safety performance.

In determining an acceptable level of safety, it is necessary to consider such factors as the level of risk that applies, the cost/benefits of improvements to the system, and public expectations on the safety of the aviation industry.

The acceptable level of safety is expressed by two measures/metrics (safety performance indicators and safety performance targets) and implemented through various safety requirements.

Generic acceptable level(s) of safety for different operators/service providers are shown in **Appendix – D** for illustration.

**CHAPTER 7- JORDAN IMPLEMENTATION OF SSP**

**7.1 ACTION PLAN**

Based on the manual published by ICAO, an action plan was developed and is presented in Table 3.

A time line for implementing the action plan was formulated and divided into three phases. Tasks were then allotted to each phase. The details of this time line are given in Table 2.

**TABLE - 2: PHASE DURATION**

Phase	Phase 1	Phase 2	Phase 3
Time	9 Months	9 Months	12 Months
Total Time	Two and a half years		

In developing this plan, many factors were brought into consideration.

- ICAO requirements & recommendations.
- Domestic Culture & existing setup.
- Budget & Manpower constraints.
- Domestic Service provider.
- Modern Management techniques.
- Explicit and traceable documentation.

**TABLE - 3: SSP IMPLEMENTATION PLAN**

TASK	PHASE
Conduct Gap analysis as per chapter 11.6.2 of ICAO safety management manual	Phase 1
<b>1. STATE SAFETY POLICY AND OBJECTIVES</b>	
<b>1.1 State safety legislative framework</b>	
a) Review, develop and promulgate a national safety legislative framework and specific regulations, in compliance with international and national standards.	Phase 1
b) Establish a national-level group within the State in the form of a steering committee, to ensure the coordinated 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.	Phase 1
c) Establish a time frame to periodically review the safety legislation and specific operating regulations to ensure they remain relevant and appropriate to the State.	Phase 1
<b>1.2 State safety responsibilities and accountabilities</b>	
a) Identify, define and document the requirements, responsibilities and accountabilities regarding the establishment and maintenance of the SSP. This includes the directives to plan, organize, develop, maintain control of and continuously improve the SSP in a manner that meets the State’s safety objectives. Include a clear statement about the provision of the necessary resources for the implementation of the SSP.	Phase 1
b) Identify and appoint the Accountable Executive of the State SSP who shall have among other responsibilities: <ol style="list-style-type: none"> <li>1) Ultimate responsibility and accountability, on behalf of the State, for the implementation and maintenance of the SSP;</li> <li>2) Full authority on human resources issues related to the State aviation organization that has been designated as placeholder for the SSP;</li> <li>3) Full authority on major financial issues related to State aviation organization that has been designated as placeholder for the SSP;</li> <li>4) Final authority over service provider’s certificate management aspects.</li> <li>5) Final responsibility for the resolution of all aviation safety issues of the State.</li> </ol>	Phase 1

c) Establish the SSP implementation team.	Phase 1
d) Assign the time required for each task associated with the implementation of the SSP among the different management levels of the State aviation organizations.	Phase 1
e) Introduce all staff to SSP concepts at a level commensurate with their involvement in the SSP.	Phase 1
f) Revise the state safety policy as per SMM.	Phase 1
g) Establish the necessary means to ensure that the State safety policy is understood, implemented and observed at all levels within State aviation organizations.	Phase 2
<b>1.3 Accident and incident investigation</b>	
a) Develop and establish the mechanisms to ensure an independent accident and incident investigation process, the sole objective of which is the prevention of accidents and incidents, in support of the management of safety in the State, and not the apportioning of blame or liability.	Phase 1
b) Develop and establish the necessary arrangements to ensure the independence of the accident and incident investigation authority from other aviation organizations of the State.	Phase 1
<b>1.4 Enforcement policy</b>	
a) Develop and promulgate 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. The policy should also ensure that no information obtained from an internal hazard reporting system or a flight data monitoring system established under an SMS will be used for enforcement action.	Phase 1
<b>1.5 SSP documentation</b>	
a) Develop and establish a State safety library that documents the requirements, responsibilities and accountabilities regarding the establishment and maintenance of the SSP. The safety library will maintain and update, as necessary, the SSP documentation related to the national safety legislative framework, the State safety policy and	Phase 2

objectives, the SSP requirements, the SSP processes and procedures, the accountabilities, responsibilities and authorities for processes and procedures, and the state's acceptable level of safety (ALoS) related to the SSP.	
<b>2. STATE SAFETY RISK MANAGEMENT</b>	
<b>2.1 Safety requirements for the service provider's SMS</b>	
a) Establish the requirements, specific operating regulations and implementation policies for the service provider's SMS (SMS regulatory framework, advisory circulars, etc.) as the controls which govern how service providers will identify hazards and manage and control safety risks.	Phase 1
b) Establish a time frame for consultation with service providers on those requirements.	Phase 2
c) Establish a time frame to periodically review the requirements and specific operating regulations to ensure they remain relevant and appropriate to the service providers.	Phase 2
<b>2.2 Agreement on the service provider's safety performance</b>	
a) Develop and establish a procedure for agreement on the safety performance of an individual service provider's SMS based on: 1) Safety performance indicator values. 2) Safety performance target values. 3) Action plans.	Phase 1
b) Include within the agreed procedure that the service provider's safety performance should be commensurate with: 1) The complexity of the individual service provider's specific operational contexts. 2) The availability of the individual service provider's resources to address safety risks.	Phase 1
c) Measure the safety performance of the service provider's SMS through periodic reviews of the agreed safety performance of the SMS to ensure that safety performance indicators and safety performance targets remain relevant and appropriate to the service provider.	Phase 3
d) Develop a means to assess lower-level outcomes and most frequent processes among different service providers.	Phase 3
e) Determine measurable performance outcomes within different SMS	Phase 3



<b>3. STATE SAFETY ASSURANCE</b>	
<b>3.1 Safety oversight</b>	
a) Establish mechanisms to ensure an effective safety oversight function.	Phase 2
b) Establish mechanisms that guarantee that the identification of hazards and the management of safety risks by service providers follow established regulatory controls.	Phase 2
c) Establish mechanisms that guarantee that safety risk controls are integrated into the service provider’s SMS.	Phase 2
d) Develop an internal SSP audit.	Phase 3
<b>3.2 Safety data collection, analysis and exchange</b>	
a) Develop and establish a software for collecting, analyzing and storing data about hazards and safety risks at the State level: 1) Establish a mandatory hazard reporting system. 2) Establish a confidential hazard reporting system. 3) Develop a State hazard database. 4) Establish a mechanism to develop information from the stored data. 5) Establish a means to collect hazards at both the aggregate State level and at the individual service provider’s level. 6) Establish a means to implement corrective action plans.	Phase 2
b) Ensure that the service provider’s hazard identification and safety risk management processes follow established regulatory requirements and that safety risk controls are appropriately integrated into the service provider’s SMS, including, but not necessarily limited to: 1) Inspections; 2) Audits; and 3) Surveys.	Phase 2
c) Establish the acceptable level of safety (ALoS) related to the SSP, comprising of safety measurement: 1) Safety measurement includes the quantification of the outcomes of high-level, high consequence events or high-level State functions, such as accident rates, serious incident rates and regulatory compliance. 2) Identification of safety indicators. 3) Quantification of safety indicators.	Phase 2

<p>4) Determine current level of safety.                  5) Set values of safety targets.                  6) Determine acceptable level of safety.</p>	
<p>d) Establish the acceptable level of safety (ALoS) related to the SSP, comprising of safety performance measurement:                  1) Safety performance measurement includes the quantification of the outcomes of low-level, low-consequence processes that provides a measure of the realistic implementation of an individual SSP beyond accident rates and/or regulatory compliance.                  2) Identification of safety performance indicators.                  3) Quantification of safety performance indicators.                  4) Determine current level of safety.                  5) Set values of safety performance targets.                  6) Determine acceptable level of safety.</p>	Phase 3
<p>e) Develop the action plan to implement ALoS i.e. to develop the tools and means needed to achieve the safety target values of ALoS related to an SSP. It also includes the operational procedures, technology, systems and programs to which measures of reliability, availability, performance and/or accuracy can be specified</p>	Phase 3
<p><b>3.3 Safety-data-driven targeting of oversight of areas of greater concern or need</b></p>	
<p>a) Establish procedures to prioritize inspections, audits and surveys, based on analysis of hazards and safety risks.</p>	Phase 3
<p><b>4. STATE SAFETY PROMOTION</b></p>	
<p><b>4.1 Internal training, communication and dissemination of safety information</b></p>	
<p>a) Identify internal training requirements.</p>	Phase 1
<p>b) Develop and provide generic safety training to all staff.</p>	Phase 1
<p>c) Develop a training program on key components of an SSP and an SMS for staff that includes:                  1) Indoctrination/initial safety training;                  2) On-the-job (OJT) safety training;                  3) Recurrent safety training.</p>	Phase 1

d) Develop and implement a training program to appropriate staff on hazard identification and safety risk management, safety reporting procedures and database management.	Phase 1
e) Establish a means to measure the effectiveness of the training.	Phase 2
f) Develop a means to communicate safety-related issues internally, including: 1) Safety policies and procedures. 2) Newsletters. 3) Bulletins. 4) A website.	Phase 1
<b>4.2 External training, communication and dissemination of safety information</b>	
a) Establish the means to provide two-way communication of safety-relevant information to support SMS implementation among service providers, including small operators.	Phase 1
b) Develop training and guidance material on implementation of SMS for service providers	Phase 2
c) Establish the means to communicate safety-related issues externally with service providers and/or other states, as appropriate, including: 1) Safety policies and procedures; 2) Newsletters; 3) Bulletins; and 4) Website	Phase 3

**7.2 JORDAN IMPLEMENTATION OF SMS**

ICAO has outlined a phased implementation of a service providers SMS. This phased approach provides service providers with a manageable series of steps to follow when implementing SMS and helps to manage the workload associated with SMS implementation. The phased approach recommended by ICAO has the following four phases:

- Phase A - Planning SMS Implementation.
- Phase B - Reactive safety management processes.
- Phase C - Proactive and predictive safety.
- Phase D - Operational safety assurance.

A phased approach to the implementation of SMS is being promoted by CARC. Such an approach will recognize the timescale required to develop, implement and verify the effectiveness of an SMS taking account of the size and complexity of an organization. The timescale for Jordan legislation mandating SMS for air operators and maintenance organizations has yet to be established.

### **7.3 CHANGE MANAGEMENT**

Aviation is in a continuous state of change, with advances in technology and a changing business and regulatory context. Regulatory staff raises issues arising in their areas of specialization through management. This may result in measures such as:-

1. Research to provide objective evidence of the nature and extent of issues arising.
2. Specific promotion of occurrence reporting in areas of change or concern.
3. Monitoring of key safety data parameters.
4. Issues that CARC believes require regulatory change are introduced to CARC either directly or through the Advise of different directorates.

## CHAPTER 8- JORDAN AVIATION SAFETY ASSURANCE

### 8.1 SAFETY OVERSIGHT

CARC will focus on resources for ensuring service providers implement SMS requirements. This will be in the form of CARC Guidance Material, workshops, inspections and audits.

### 8.2 INTERNAL OVERSIGHT AUDIT OF CARC

1. CARC has a Regulatory and Quality Management System (RQMS) which combines regulatory and quality management policies and processes. Internal quality assurance audits and internal technical audits are carried out regularly by the Quality Assurance and Internal Audit Department to provide assurance on corporate governance to CARC CEO.
2. The Quality Assurance and Internal Audit Department shall audit aviation safety regulations of Jordan and advise CARC CEO on:
  - a. Whether CARC is complying with Jordan's obligations under the Chicago Convention and Jordan's aviation safety commitments under the Euro-Mediterranean Aviation Agreement between Jordan and the EU;
  - b. The Standard of Jordan's aviation safety regulation;
  - c. The degree of fulfillment of CARC's Safety Policy; and
  - d. The adequacy of the resources employed on safety regulation in CARC and any remedial measures that may be necessary.
3. The Quality Assurance and Internal Audit Department shall conduct assessments in relation to the ICAO 8 Critical Elements of a safety oversight system (Appendix E).

### 8.3 SAFETY DATA COLLECTION, ANALYSIS AND EXCHANGE

The main aviation safety occurrence reporting process in Jordan will be the Mandatory Occurrence Reporting Scheme (MORS). In addition to MORS, there are individual reporting arrangements for Aircraft Accident and Serious Incidents, Bird strikes, Wake Turbulence encounters, Airprox events and the Confidential Human Factors Incident Reporting Program (CHIRP). However, most air safety reports will be included in MORS through different directorates.

**8.4 MANDATORY OCCURRENCE REPORTING SCHEME (MORS)**

1. CARC's MORS is functioning under JCARs for mandatory reporting of accidents and incidents. Its objective is to contribute to the improvement of air safety by ensuring that relevant information on safety is reported, collected, stored, protected and disseminated. The sole objective of occurrence reporting is the prevention of accidents and incidents and not to attribute blame or liability. It is a requirement for specified service providers to provide mandatory occurrence reports (MORS).
2. The operation of MORS will be further clarified and elaborated in an Occurrence Reporting Order (ORO). This will contain a statement from the CARC Chief Commissioner/ CEO in which CARC gives an assurance that its primary concern is to secure free and uninhibited reporting. It will not be its policy to institute proceedings in respect of unpremeditated or inadvertent breaches of the law which come to its attention only because they have been reported under the scheme, except in cases involving dereliction of duty amounting to gross negligence.
3. Jordan MORS is in compliance with the Annex 13 to the Convention on International Civil Aviation, paragraph 8.1 and is fully compliant with the requirements of JCARs on occurrence reporting in civil aviation. Furthermore, CARC will publish guidance material in the form of an MORS Order in compliance with relevant JCARs and ICAO Annex 13, paragraph 8.1, and as set out in the implementation plan detailed in chapter 7 of this SSP.
4. In accordance with Annex 13 to the Convention on International Civil Aviation, paragraph 8.6, the CARC is developing a method for the analysis of data contained in MORS and to determine any preventative actions required. It has developed a process that assesses the actual and potential risk posed by each MORS. This risk-assessment process of MORS data provides essential information for the CARC's Safety Risk Management Process.
5. CARC will establish a specialist team for safety data analysis, as set out in the implementation plan detailed in chapter 7 of this SSP. The team will include members from the concerned safety departments and the Aircraft Accident Investigation entity. The team will carry out analysis of MORS data to identify significant trends and to advise higher management of

- CARC and the public about the safety performance by means of regular reports.
6. CARC will develop a method for the analysis of data contained in the MORS and for the determination of any preventative actions required, as set out in the implementation plan detailed in chapter 7 of this document; as well as developing a process that assesses the actual and potential risk posed by each MORS. This risk-assessment process of MORS data will provide essential information for CARC's Safety Risk Management Process.
  7. Every 6 months, data will be disseminated to Jordan aviation industry. The purpose is to provide feedback on occurrences submitted by Jordan service providers and industry and to inform them of other Jordanian occurrences. The MORS will become increasingly important to organizations when they implement SMS requirements.
  8. CARC receives numerous requests for safety data retrievals from many sources. This data shall only be provided when it is established that it will be used to promote and enhance aviation safety.
  9. Furthermore, plans are in place for CARC to provide safety occurrence information for the Co-ordination of Accident and Incident Reporting Systems. This initiative requires transferring 'all relevant safety-related information' to a central repository and for the information to be disseminated to interested parties.
  10. Finally, Jordan MORS will be Jordanian national aviation safety database. Hence, it should contain records on accidents, serious incidents as well as incidents.

## **8.5 MANDATORY BIRD STRIKE REPORTS**

1. In accordance with Annex 14 to the Convention on International Civil Aviation, paragraph 9.4.2, (that calls for the mandatory reporting of bird strikes), CARC has established a National Bird Strike Information System (NBIS) which specifies reporting system and a process to collect and assess bird strike reports. These reports will be forwarded to ICAO for inclusion in the ICAO Bird Strike Information System (IBIS) database.

2. The NBIS specifies that any aircraft commander flying in Jordanian airspace who believes his aircraft has collided with one or more birds shall inform CARC, unless it has already been reported as an accident or damage occurrence through the CARC's MORS. This reporting system is overseen by the CARC Airport Safety and Standards Department. A Jordan Bird strike Committee (JORBSC) will be established as specified in the NBIS to provide a forum for stakeholders to discuss bird/wildlife strike hazards and methods for reducing the associated risks (including the reporting of wildlife strikes).

## **8.6 JORDAN AIRPROX BOARD**

1. Jordan AB (Airprox Board) shall be established by August 2012, and as set out in the implementation plan detailed in chapter 7 of this SSP, with the sole objective of assessing Airprox events in the interests of enhancing flight safety. It is not the purpose of Jordan AB to apportion blame or liability.
2. An Airprox report should be made whenever a pilot or controller considers that the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved was or may have been compromised. These reports are assessed by Jordan AB and classified as either a Risk of Collision, Safety not assured, No risk of collision or Risk not determined.
3. Jordan AB only assesses Airproxes that have occurred in all Jordanian airspace and all airspace for which Jordan Government has undertaken, in pursuit of international arrangements, the provision of air navigation services. Jordan AB will publish compilations of its reports twice a year.

## **8.7 JORDAN CONFIDENTIAL HUMAN FACTORS INCIDENT REPORTING PROGRAM (JCHIRP)**

1. CHIRP will be established as set out in the implementation plan detailed in chapter 7 of this SSP and start its operation in 2012. The aim of JCHIRP will be to contribute to the enhancement of aviation safety in Jordan by providing a totally independent confidential (not anonymous) reporting system for all individuals employed in or associated with these industries. The Program will accept reports from pilots, cabin crew, air traffic



- controllers, maintenance engineers and those involved in General Aviation.
2. CHIRP will supplement other reporting systems, including MORS. The submission of a CHIRP report does not fulfill the legislative obligations under the JCARs for mandatory reporting. However, CHIRP is a voluntary reporting scheme as required by Annex 13 to the Convention on International Civil Aviation, paragraph 8.3.

## **8.8 SAFETY DATA DRIVEN TARGETING OF OVERSIGHT ON AREAS OF GREATER CONCERN OR NEED**

### **THE CARC'S OVERSIGHT OF JORDAN ENTITIES:**

1. The CARC's specialist Groups and Directorates will review their own established oversight procedures that will be described in detail in the relevant publications.
2. The CARC believes that these measures, together with the existing oversight system, provide the graduated system needed to ensure that service providers maintain the required standards.
3. CARC will identify 'key performance indicators', and as set out in the implementation plan detailed in chapter 7 of this SSP, to improve the effectiveness of the oversight of organizations. This risk-based approach also considers awards for good demonstrable performance, minimizing the need for regulatory intervention. This concept of awards could be extended to account for feedback from the organization's own internal audits or external audits by third parties, if the data is available.
4. Joint audits will also be planned for smaller companies holding more limited approvals. However, it is likely that there will be a lower limit as to the size and complexity of an organization that would benefit from this approach, necessitating continued consideration of individual audits.

## CHAPTER 9- JORDAN AVIATION SAFETY PROMOTION

### 9.1 INTERNAL TRAINING, COMMUNICATION AND DISSEMINATION OF SAFETY INFORMATION

#### 1- INTERNAL TRAINING:

The CARC will establish appropriate development and training courses for all personnel concerned with the development and implementation of this SSP, and as set out in the implementation plan detailed in chapter 7 of this SSP. An individual's development and training needs will be assessed on arrival at the CARC and thereafter the specialist directorates will establish the training need as per the organizational requirements.

For SMS, the CARC will develop various SMS courses for its concerned regulatory personal.

#### 2. INTERNAL COMMUNICATION AND DISSEMINATION OF SAFETY INFORMATION:

Concerning the internal communication of safety-relevant information, a key element of this is the process used to handle MORs received by CARC. These will be communicated to CARC Departments for investigation or information and, in many cases, are required to provide feedback on action taken so that the MORS can be officially 'closed'. This process is an important part of the CARC SRMS.

In addition, senior management will be advised weekly on Jordan safety-significant events and quarterly on a set of 'high-level safety performance indicators.

### 9.2 EXTERNAL COMMUNICATION AND DISSEMINATION OF EXTERNAL COMMUNICATION AND DISSEMINATION OF SAFETY INFORMATION:

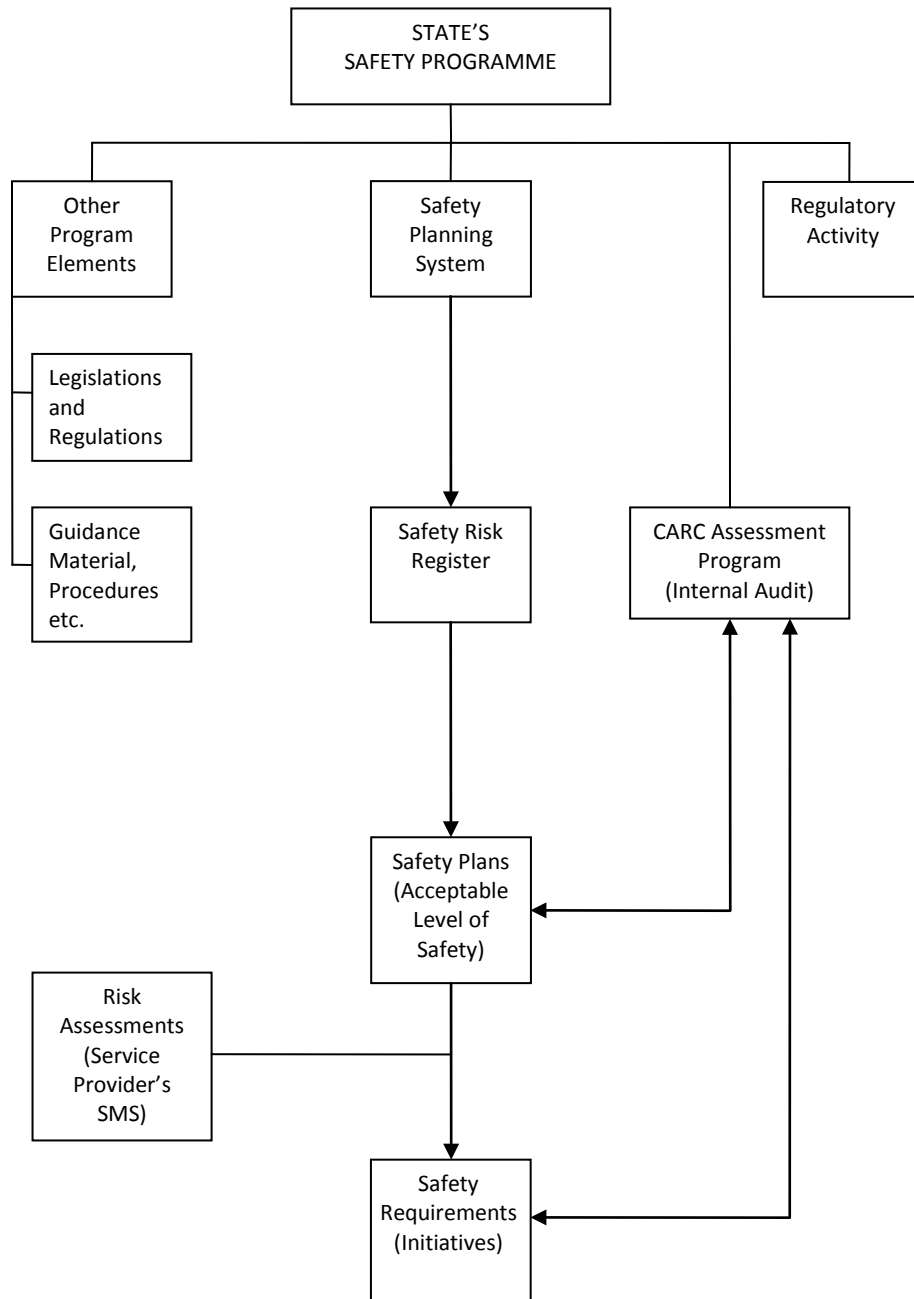
1. CARC will communicate with stakeholders in different ways. At a high-level; safety will be addressed in the CARC's Annual Report.
2. CARC will also publish guidance material to support regulatory action.
3. Under Annex 15 to the Convention on International Civil Aviation obligations and as required by relevant CARC JCARs, CARC publishes Jordan Aeronautical Information Publication (AIP). The AIP will be part of

an Integrated Aeronautical Information Package which consists of the AIP, AIP Supplements, Aeronautical Information Circulars, Notice to Airmen (NOTAMs), pre-flight Information Bulletins and Check Lists.

In addition, the CARC frequently publishes on its website, documents such as Flight Operations Division Communications, Air Traffic Services Information Notices, and many other information relevant to the safety and CARC requirement

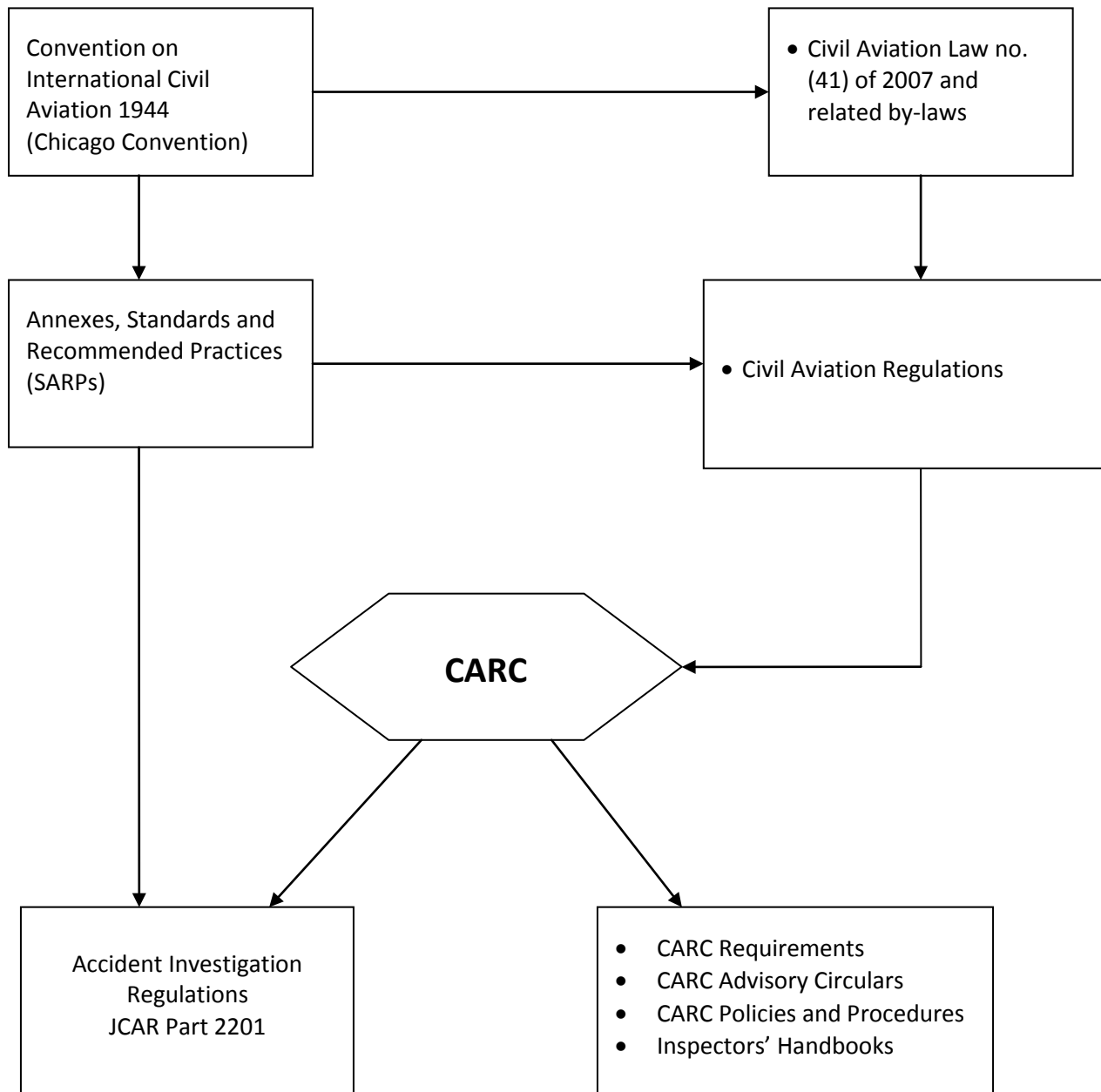
**Appendix A**

**STATE SAFETY PROGRAM STRUCTURE**



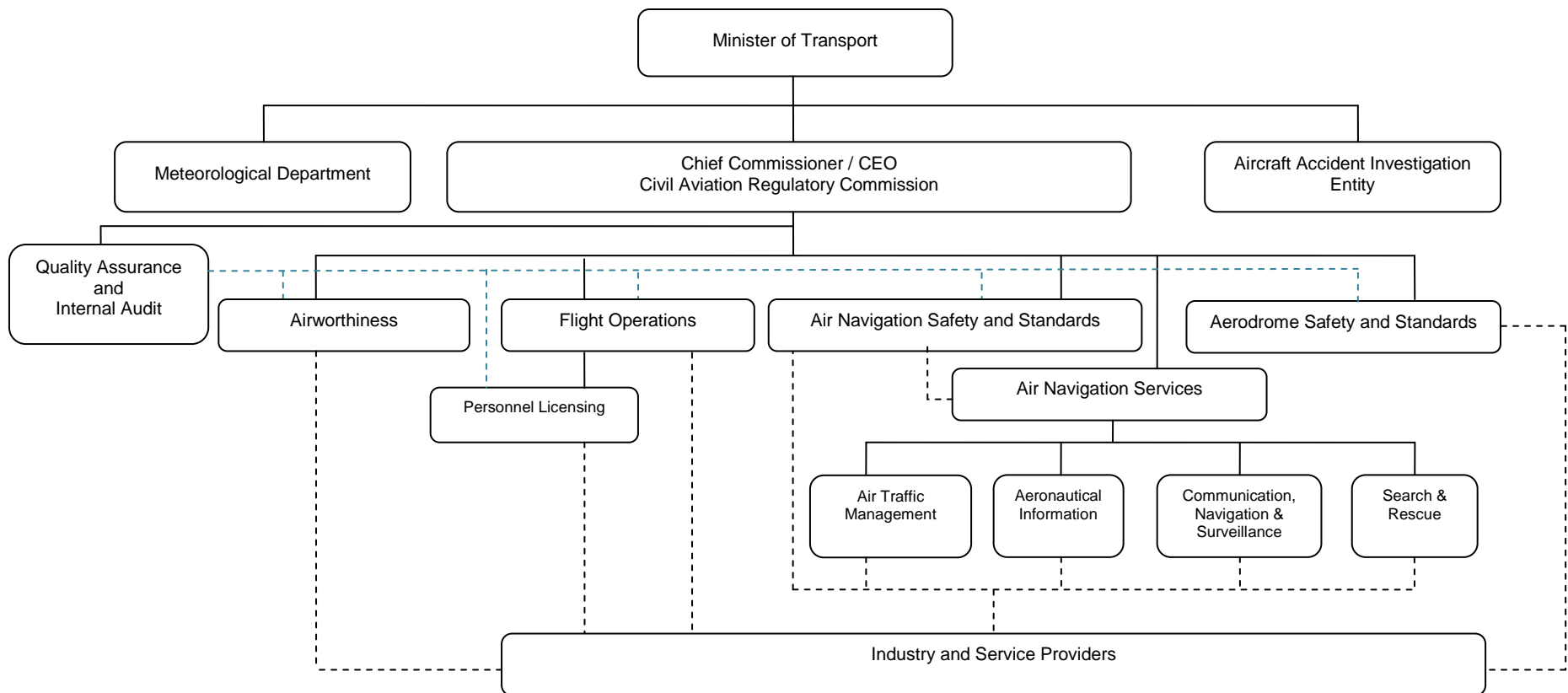
**Appendix B**

**REGULATORY FRAMEWORK**



**Appendix C**

**CARC Organizational Structure**  
(Related to Safety Regulatory Functions)



**Legend:**

- line of authority/responsibility
- line of licensing, certification, authorization and/or approval to perform an aviation-related activity
- .-.-.- line of internal audit and inspection

## Appendix D

### Generic Acceptable Level(s) of Safety (For Examples Only)

#### A. Aerodrome Operator

CARC and an aerodrome operator agree on an acceptable level of safety to be achieved by the operator SMS:

- (a) No more than one runway incursion per 40,000 aircraft movements (*safety indicator*); a 40 per cent reduction in a 12-month period (*safety target*);

The establishment of low visibility taxi procedures (*safety requirements*).

- (b) 1.0 bird strike per 1, 000 aircraft movements (*safety indicators*) with a 50 per cent reduction in five years (*safety target*);

The establishment of wildlife/bird strike hazard assessment and reduction program (*safety requirements*).

#### B. Aircraft Maintenance Organization

CARC and an aircraft maintenance organization (AMO) agree on an acceptable level of safety to be achieved by the AMO SMS:

- (a) 200 major aircraft defect incidents per 100, 000 hours flown (*safety indicators*) with a 25 per cent reduction over the last three-year average (*safety target*);

#### C. Airline Operator

CARC and an airline operator agree on an acceptable level of safety to be achieved by the operator SMS:

- (a) 0.5 fatal accidents per 100,000 departures (*safety indicator*); a 40

percent reduction in five years (*safety target*);

The development of GPS approaches for airfields without ILS approaches (*safety requirements*).

- (b) 50 aircraft incidents per 100, 000 hours flown (*safety indicators*) with a 25 per cent reduction in three years (*safety target*);

**D. Air Navigation Services provider**

CARC and the ANS provider agree on an acceptable level of safety to be achieved by the service provider SMS:

- (a) No more than one runway incursion per 40,000 aircraft movements (*safety indicator*); a 40 per cent reduction in a 12-month period (*safety target*);

The establishment of low visibility taxi procedures (*safety requirements*).

- (b) 40 airspace incidents per 100, 000 hours flown (*safety indicators*) with a 30 per cent reduction over the five-year moving average (*safety target*);



## Appendix E

### EXTRACT FROM ICAO DOCUMENT 9734 SAFETY OVERSIGHT MANUAL / PART A CRITICAL ELEMENTS OF A SAFETY OVERSIGHT SYSTEM

ICAO has identified and defined the following critical elements of a State's safety oversight system:

#### **CE-1 Primary aviation legislation**

The provision of a comprehensive and effective aviation law consistent with the environment and complexity of the State's aviation activity and compliant with the requirements contained in the Convention on International Civil Aviation.

#### **CE-2 Specific operating regulations**

The provision of adequate regulations to address, at a minimum, national requirements emanating from the primary aviation legislation and providing for standardized operational procedures, equipment and infrastructures (including safety management and training systems), in conformance with the Standards and Recommended Practices (SARPs) contained in the Annexes to the Convention on International Civil Aviation.

Note: The term "regulations" is used in a generic sense to include but is not limited to instructions, rules, edicts, directives, sets of laws, requirements, policies, and orders.

#### **CE-3 State civil aviation system and safety oversight functions**

The establishment of a Civil Aviation Authority (CAA) and/or other relevant authorities or government agencies, headed by a Chief Executive Officer, supported by the appropriate and adequate technical and non-technical staff and provided with adequate financial resources. The State authority must have stated safety regulatory functions, objectives and safety policies.

Note: The term "State civil aviation system" is used in a generic sense to include all authorities with aviation safety oversight responsibility which may be established by the State as separate entities, such as: CAA, Airport Authorities, Air Traffic Service Authorities, Accident Investigation Authority, and Meteorological Authority.

**CE-4 Technical personnel qualification and training**

The establishment of minimum knowledge and experience requirements for the technical personnel performing safety oversight functions and the provision of appropriate training to maintain and enhance their competence at the desired level. The training should include initial and recurrent (periodic) training.

**CE-5 Technical guidance, tools and the provision of safety-critical information**

The provision of technical guidance (including processes and procedures), tools (including facilities and equipment) and safety-critical information, as applicable, to the technical personnel to enable them to perform their safety oversight functions in accordance with established requirements and in a standardized manner. In addition, this includes the provision of technical guidance by the oversight authority to the aviation industry on the implementation of applicable regulations and instructions.

**CE-6 Licensing, certification, authorization and approval obligations**

The implementation of processes and procedures to ensure that personnel and organizations performing an aviation activity meet the established requirements before they are allowed to exercise the privileges of a licence, certificate, authorization and/or approval to conduct the relevant aviation activity.

**CE-7 Surveillance obligations**

The implementation of processes, such as inspections and audits, to proactively ensure that aviation licence, certificate, authorization and/or approval holders continue to meet the established requirements and function at the level of competency and safety required by the State to undertake an aviation-related activity for which they have been licensed, certified, authorized and/or approved to perform. This includes the surveillance of designated personnel who perform safety oversight functions on behalf of the CAA.

**CE-8 Resolution of safety concerns**

The implementation of processes and procedures to resolve identified deficiencies impacting aviation safety, which may have been residing in the aviation system and have been detected by the regulatory authority or other appropriate bodies.

Note: This would include the ability to analyse safety deficiencies, forward recommendations, support the resolution of identified deficiencies, as well as take enforcement action when appropriate.