STATE SAFETY PROGRAMME

NEPAL

September 2011

Civil Aviation Authority of Nepal

Kathmandu, Nepal

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CONTENTS

FOREWORD

As a signatory of the Convention on International Civil Aviation, Nepal is committed to implement the provision made on Convention and its Annexes including related documents for the safe, regular and efficient air transport within its area of jurisdiction. Article 37 of the Convention states:

Each contracting State undertakes to collaborate in securing the highest practicable degree of uniformity in regulations, standards, procedures, and organization in relation to aircraft, personnel, airways and auxiliary services in all matters in which such uniformity will facilitate and improve air navigation.

ICAO Annexes 1, 6, 8, 11, 13 and 14 require Contracting States to establish a State Safety Programme (SSP), in order to achieve an Acceptable Level of Safety (ALoS) in civil aviation. An SSP is defined as an integrated set of regulations and activities in a State aimed at improving safety. The Safety Management Manual (SMM), Doc 9859 describes basic safety concepts, as the foundation upon which to understand the need for both a Safety Management System (SMS) and a State Safety Programme (SSP) as well as how these safety concepts are embodied into the ICAO SARPs.

The SSP plays an important role in identifying, monitoring and maintaining the effectiveness of the various elements our safety systems. The concept of establishing an ALoS attempted to complement the current approach to safety management based on regulatory compliance with a performance based approach.

The civil aviation acts and associated regulations confer on CAAN the obligation to issue necessary requirements, directives, manuals and documents for the systematic implementation of ICAO SARPs. As the regulatory authority of the civil aviation in the country, Civil Aviation Authority of Nepal (CAAN) is responsible to develop SSP and implement it in coordination with other agencies responsible for civil aviation safety.

This State Safety Programme (SSP) Nepal, 2011 has been promulgated by the authority vested in Civil Aviation Authority of Nepal under provision made on Rule 81 of Civil Aviation Rules, 2052 (1995).

The SSP Nepal identifies and describes current arrangements and outlines the steps we need to continue to take in order to respond to safety challenges in the future.

(Tri Ratna Manandhar)
Director General
Civil Aviation Authority of Nepal

ABBREVIATIONS

ADREP	**Accident/incident data reporting (ICAO)**
AEP	**Aerodrome emergency plan**
AIRPROX	**Aircraft proximity**
ALARP	**As low as reasonably practicable**
ALoS	**Acceptable level of safety**
AMO	**Approved maintenance organization**
AOC	**Air operator certificate**
ASR	**Air safety report**
ASRB	**Aviation Safety review board**
ATC	**Air traffic control**
ATM	**Air traffic management**
ATS	**Air traffic service(s)**
ATC	**Air Traffic Control**
CAAN	**Civil aviation authority of Nepal**
CAR	**Civil Aviation Requirements**
CDA	**Continuous Descend Arrival**
CFIT	**Controlled flight into terrain**
CRM	**Crew resource management**
Doc	**Document (ICAO)**
ERP	**Emergency response plan**
FDA	**Flight data analysis**
FDM	**Flight data monitoring**
FOD	**Foreign object (debris) damage**
GoN	**Government of Nepal**
ICAO	**International Civil Aviation Organisation**
LOA	**Letter of Agreement**
MOR	**Mandatory occurrence report**
MOTCA	**Ministry of Tourism and Civil Aviation**
NAST	**National Aviation Safety Team**
NCAR	**Nepalese Civil Airworthiness Requirements**
OJT	**On-the-job training**
QA	**Quality assurance**
QC	**Quality control**
SARPs	**Standards and Recommended Practices (ICAO)**
SDCPS	**Safety data collection and processing systems**
SMM	**Safety management manual (ICAO Doc 9859)**
SMS	**Safety management system(s)**
SOPs	**Standard operating procedures**
SRM	**Safety risk management**
SSP	**State safety programme**
STP	**Standard Training Package**
USOAP	**Universal Safety Oversight Audit Programme (ICAO)**

RECORD OF AMENDMENTS

Revision No.	Date	Entered by

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1. GENERAL

1.1 Introduction

International Standards and Recommended Practices (SARPs) into the ICAO Annex 1 – Personnel Licensing, Annex 6 — Operation of Aircraft, Annex 8 — Airworthiness of Aircraft, Annex 11 — Air Traffic Services, Annex 13 — Aircraft Accident and Incident Investigation and Annex 14 — Aerodromes require ICAO Contracting States to establish a State Safety Programme (SSP) in order to achieve an Acceptable Level of Safety (ALoS) .

For the implementation of the requirements of Safety Management System, the Civil Aviation Authority of Nepal (CAAN) has promulgated this State Safety Programme, Nepal (SSP Nepal), 2011 under the power conferred by Rule 81 of Civil Aviation Rules, 2052 (1995).

1.2 Purpose

The purpose of the State Safety Program, Nepal is to achieve an Acceptable Level of Safety (ALoS) in civil aviation operations.

1.3 Scope

The SSP Nepal provides an overview of civil aviation safety programme to the personnel involved in safety regulations as well as to all stakeholders with a responsibility of SMS implementation.

1.4 Definitions

Acceptable level of safety. Minimum degree of safety that must be assured by a system in actual practice.

Accident. An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, 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 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:

— 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 the engine, its cowlings or accessories; or for damage limited to propellers, wing tips, antennas, tires, brakes, fairings, small dents or puncture holes in the aircraft skin; or

c) the aircraft is missing or is completely inaccessible.

Note 1.— For statistical uniformity only, an injury resulting in death within thirty days of the date of the accident is classified as a fatal injury by ICAO.

Note 2.— An aircraft is considered to be missing when the official search has been terminated and the wreckage has not been located.

Aeronautical Information Publication (AIP). A publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation.

Air operator certificate (AOC). A certificate authorizing an operator to carry out specified commercial air transport operations.

Approved maintenance organization. An organization approved by a Contracting State, in accordance with the requirements of Annex 6, Part I, Chapter 8 — Aeroplane Maintenance, to perform maintenance of aircraft or parts thereof and operating under supervision approved by that State.

Note.— Nothing in this definition is intended to preclude that the organization and its supervision be approved by more than one State.

Approved training organization. An organization approved by a Contracting State in accordance with the requirements of Annex 1, 1.2.8.2 and Appendix 2 to perform flight crew training and operating under the supervision of that State.

Certification, A process performed by the appropriate authority in order to approve an established provider of Aviation related services.

Certified aerodrome. An aerodrome whose operator has been granted an aerodrome certificate.

Flight data analysis. A process of analysing recorded flight data in order to improve the safety of flight operations.

Hazard. A condition or an object with the potential to cause injuries to personnel, damage to equipment or structures, loss of 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.

Note.— The types of incidents which are of main interest to the International Civil Aviation Organization for accident prevention studies are listed in the Accident/Incident Reporting Manual (ADREP Manual) (Doc 9156).

Investigation. A process conducted for the purpose of accident prevention which includes the gathering and analysis of information, the drawing of conclusions, including the determination of causes and, when appropriate, the making of safety recommendations.

Level of safety. Degree of safety of a system, representing the quality of the system, safety-wise, expressed through safety indicators.

Operations specifications. The authorizations, conditions and limitations associated with the air operator certificate and subject to the conditions in the operations manual.

Safety. 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. Parameters that characterize and/or typify the level of safety of the system.

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

Safety measurement. The quantification of the outcomes of selected high-level, high consequences events, such as accident and serious incident.

Safety performance measurement. The quantification of the outcomes of selected low-level, low-consequence processes, such as the number of foreign object debris (FOD) events per specified number of ramp operations, or the number of unauthorized ground vehicle events on taxiways per a specific number of airport operations or during a specified period of time

Safety programme. An integrated set of regulations and activities aimed at improving safety.

Safety risk. Assessment, expressed in terms of predicted probability and severity, of the consequences of a hazard, taking as reference the worst foreseeable situation.
Note. — Typically, safety risks are designated through an alphanumeric convention that allows for their measurement.

Safety risk management. A generic term that encompasses the assessment and mitigation of the safety risks of the consequences of hazards that threaten the capabilities of an organization, to a level as low as reasonably practicable (ALARP).

Safety risk probability. The likelihood that an unsafe event or condition might occur.

Safety risk severity. The possible consequences of an unsafe event or condition, taking as reference the worst foreseeable situation.

Safety targets. Concrete safety objectives to be achieved.

Service Provider. The term refers to any organization providing aviation services. The term includes approved training organizations that are exposed to safety risks during the provision of their services, aircraft operators, approved maintenance organizations, organizations responsible for type design and/or manufacture of aircraft, air traffic service providers and certified aerodromes, as applicable.

1.5 SSP Concept

An SSP is defined as an integrated set of regulations and activities aimed at improving Safety. It includes specified 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 of the State.

An SSP is a management system for the management of safety by the State. The implementation of an SSP must be commensurate with the size and complexity of the State's aviation system,

and may require coordination among multiple authorities responsible for individual elements of civil aviation functions in the State.

SSP framework

SSP Nepal has been developed in accordance with the ICAO SSP framework that consists of four components and eleven elements:

1. State safety policy and objectives
1.1 State safety legislative framework
1.2 State safety responsibilities and accountabilities
1.3 Accident and incident investigation
1.4 Enforcement policy

2. State's safety risk management
2.1 Safety requirements for service providers SMS
2.2 Agreement on service providers' safety performance

3. State's safety assurance
3.1 Safety oversight
3.2 Safety data collection, analysis and exchange
3.3 Safety-data-driven targeting of oversight of areas of greater concern or need

4. State's safety promotion
4.1 Internal training, communication and dissemination of safety information
4.2 External training, communication and dissemination of safety information.

The two core operational activities of an SSP are State safety risk management and State safety assurance. These two core operational activities take place under the umbrella provided by the State safety policy and objectives and are supported by the State safety promotion.

These four components constitute the basic building blocks of an SSP, in that they represent the four overarching safety management processes that underlie the actual management system (SSP).

Relationship between an SSP and an SMS

The safety management SARPs are aimed at two audience groups: States and service providers. States are responsible for developing and establishing an SSP, whereas service providers are responsible for developing and establishing an SMS. States are responsible, as part of the activities of their SSP, to accept and oversee the development, implementation and operational performance of the service provider's SMS.

The basic objective of a State, through its SSP, is to ensure, to the extent possible, public safety during service delivery by service providers. This objective is achieved by defining the ALoS for the SSP, and through the control of safety risks within the State by the two 'operational components' of the SSP: safety risk management and safety assurance.

1.6 Document Control

- **The copy of the SSP Nepal will be made available to all regulatory staff having safety oversight responsibilities.**

- **Changes to this document will be achieved by a re-issue of the entire document rather than by the amendment of individual pages.**

- **It is the function and responsibility of the National Aviation Safety Team (NAST) to review the document at least annually to ensure the relevance and currency of all Legislation, Regulations, CAA Requirements and Advisory Circulars etc.**

1.7 Distribution List and Record of Copies of the SSP Document

The total number of copies of this SSP document produced for use by the CAA officials is shown as below. One printed copy of the SSP has been designated as the "Master Copy". Some users are provided with a printed copy of the SSP document while others are given an electronic copy. This is also indicated in the table below.

Copy No.	SSP Document User Name	Print (P) Electronic (E)	Signature	Date Provided	Date Returned
1	Director General	P/E			
2	Dy. DG Regulatory	P/E			
3	Director Aviation Safety Department	P/E			
4	Director Aerodrome Safety and Standards Department	P/E			
5	Director ANS Standards	P/E			
9					
10					
11	Technical Library	P			

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2. STATE SAFETY POLICY AND OBJECTIVES

2.1. Civil Aviation Policy, 2007

The Civil Aviation Policy, issued by Government of Nepal (GoN) in 2007 incorporates specific provision for enhancing safety in Nepalese civil aviation.

The goal of this policy is the development of air transport system with a liberal sky policy ensuring private sector participation, so as to make air services in Nepal safe, reliable, standard, and easily accessible to the general public. In order to achieve this goal, the policy has laid down various objectives while ensuring the highest standards of flight safety and aviation security.

More specifically, Clause 4.3 of the policy clearly states that top priority will be accorded to the compliance of the Standards and Recommended Practices (SARPs) of the International Civil Aviation Organization (ICAO) for the enhancement of flight safety. It further states that the safety oversight capacity will be strengthened by developing required institutional and legal infrastructure.

Additionally, Clause 4.17 of the policy states that the Civil Aviation Authority of Nepal (CAAN) shall be strengthened as an efficient aeronautical regulatory authority to effectively carry out the activities of regulation, control and expansion of the civil aviation sector.

The Aviation Policy, 2063 can be accessed on Civil Aviation Authority of Nepal website: www.caanepal.org.np

2.2. Nepal's Aviation Legislative Framework

Legislative System in Nepal

Constitution is the fundamental law of Nepal. Nepal's Parliament has the power to promulgate other laws for the implementation of various provisions made in the Constitution. Laws promulgated under the power of legislative body are referred to as Acts. The government of Nepal can formulate various regulations under the powers given by the respective Acts. Additionally, government organizations (like CAAN) can issue and enforce necessary Requirements, Directives and Manuals exercising the authority of respective regulations.

Primary Aviation Legislation

The Civil Aviation Act, 1959 and Civil Aviation Authority of Nepal Act, 1996 constitute the primary legislative framework for the regulation of civil aviation in Nepal.

Civil Aviation Act,1959

The Civil Aviation Act of 1959 confers upon the GoN the power to formulate regulations on the establishment of aerodromes; prohibition of flight in a certain portion of Nepal's air space or conditions of its operation; provision relating to the protection of public life; compensation

issues relating to aerodrome construction; prohibition, control, restriction and regulation on transportation of certain goods by air; issuance of License to Airline Operators, Aerodrome Operators, Aircraft Maintenance Organizations, other Aviation Organizations; Aircraft Accident Investigation; Search and Rescue Service; noise control and environment protection.

Civil Aviation Authority of Nepal Act, 1996

The Civil Aviation Authority of Nepal Act of 1996 was promulgated to establish Civil Aviation Authority of Nepal (CAAN) as an autonomous regulatory body for civil aviation as well as the services provider for aerodrome and ANS services. The regulatory aspects incorporated in this Act are:

- **Issuance, suspension and revocation of operating certificate to airline operator, aerodrome operator, aviation training organization, aircraft and its parts production, maintenance and test organizations**
- **Issuance, suspension and cancellation of license to personnel Registration of civil aircrafts and issue Nationality Marks**
- **Issuance, suspension and revocation of Certificate of Airworthiness (C of A)**
- **Inspection of aircraft, hangar, aircraft operation activities and aircraft maintenance organization's functioning**
- **Coordinate Search and Rescue Operation**
- **Implementation of Standards and Recommended Practices (SARPs) of the Annexes to the Convention on International Civil Aviation**
- **Issuance of Order and Direction to any government or non-government personnel working in airports with regard to the passenger service, facility and security; aerodrome security; and security of aircraft, flight, and personnel involved in flight operation.**

Under the power conferred by the Act, Government of Nepal can promulgate various regulations to implement the provisions of the Act. The regulations relating to safety are as follows:

CAAN- Civil Aviation Regulation, 2002

Exercising the power given by the Clause 34 of Civil Aviation Authority of Nepal Act, 1996, CAAN-Civil Aviation Regulation, 2002 was issued amplifying the regulatory functions of CAAN to include inter-alia Personnel Licensing, Aircraft Registration, Certification, Airworthiness of Aircraft, Flight Operations, and Flight Permission. This Regulation also empowers CAAN to formulate necessary requirements, directives and manuals to implement the provisions of the Regulation.

Rule 80 of this Regulation empowers CAAN to issue orders and directions to concerned agencies or persons in the matters of Aircraft Registration; aircraft inspection and certification; aerodrome infrastructure and aircraft equipments; duty and responsibility of pilots, ATCs and Maintenance Personnel; Instrument and Visual Flight Rules; Air Traffic Services; Aircraft Accident Investigation; Provision of Meteorology Services for Aviation; Air Navigation Facilities and Equipments.

Civil Aviation Rules, 1995

Civil Aviation Regulation, 1995 promulgated under the Clause 3 of Civil Aviation Act, 1959, authorizes CAAN to enforce provisions of Annexes (or its parts) to the Convention on International Civil Aviation and also formulate necessary requirements, directives and manuals to implement its objectives. Rule 79 of the Regulation empowers CAAN to issue orders and directives to concerned agencies on the various matters relating to the civil aviation operations.

CAAN- Airport Certification Regulation, 2004

Airport Certification Regulation, 2004 was enforced under the Clause 34 of Civil Aviation Authority of Nepal Act, 1996. This regulation requires that the International Aerodrome for the operation of public air transport service shall obtain aerodrome certificate from CAAN. Application can also be made to obtain aerodrome certificate for the operation of domestic airport of the use of public air transport service. The Regulation has made detailed provisions regarding the certification of aerodrome used for public air transport service.

Civil Aviation (Accident Investigation) Rules, 1967

This regulation was promulgated under the Clause 5 of Civil Aviation Act, 1959 and relates to aircraft accident investigation. It designates Ministry of Tourism and Civil Aviation (MOTCA) as the body for carrying out aircraft accident investigation. The Regulation authorizes MoTCA to constitute investigation commission in the aftermath of civil aircraft accidents. The nature of investigations carried out under this Regulation is purely technical in nature and does not intend to apportion blame or liability and the report thereof cannot be presented before the court as the evidence for civil or criminal proceedings.

Operating Regulations

In order to incorporate the Standards and Recommended Practices (SARPs) of ICAO in Nepal's national regulatory framework, the following Civil Aviation Requirements (CARs) have been issued by CAAN under the authority of Rule 84 of CAAN-Civil Aviation Regulation, 2002

- **Flight Operations Requirements (FOR)**
- **Nepalese Civil Airworthiness Requirements (NCAR)**
- **Civil Aviation Requirements (PELR)**
- **Civil Aviation Requirements (Rules of the Air)**
- **Civil Aviation Requirements (Maps and Charts)**
- **Civil Aviation Requirements (Units of Measurement)**
- **Civil Aviation Requirements (Aeronautical Telecommunication)**
- **Civil Aviation Requirements (Air Traffic Services)**
- **Civil Aviation Requirements (Search and Rescue)**
- **Civil Aviation Requirements (Aeronautical Information Services)**
- **Safety Management System Requirements**
- **Manual of Aerodrome Standards,Nepal**

- Exemption Procedures for Non-compliances at Aerodromes
- Procedures for Continuing Surveillance Inspection at Aerodromes
- Dangerous Goods Handling Requirements(DGHR)
- Nepalese Flying School Requirements (NFSR)

Civil Aviation Authority of Nepal also issues directives, advisory circulars and guidance materials for the effective implementation of the regulations. A number of procedural manuals are issued by the CAAN for providing guidance to its staff in order to perform their duties and responsibilities effectively.

Civil aviation regulations can be accessed on Civil Aviation Authority of Nepal website: www.caanepal.org.np

Organizations involved in Civil Aviation

Ministry of Tourism and Civil Aviation (MoTCA)

The MoTCA is the policy making body for matters relating to civil aviation in Nepal. The MoTCA, in consultation with CAAN and other ministries formulates rules and regulations necessary for safe, and regular civil aviation system in the country. The MoTCA is also responsible for inter-ministerial coordination in matters of civil aviation. MoTCA also constitutes accident investigation commission for the investigation of civil aircraft accident within Nepal's territory.

Civil Aviation Authority of Nepal (CAAN)

The CAAN, an autonomous regulatory body for civil aviation is responsible for the regulation of civil aviation in Nepal. Roles and responsibilities of the CAAN are stipulated in the CAAN Act and related regulations. While implementing the national aviation policy issued by the GoN, the CAAN also formulates the safety policy in civil aviation and is therefore responsible for the establishment, maintenance and continuous improvement of SSP.

Department of Hydrology and Meteorology (DoHM)

DoHM is responsible for providing Meteorological Services necessary for civil aviation in Nepal in accordance with Annex 3 to the Convention on International Civil Aviation. CAAN and DoHM have exchanged a 'Letter of Agreement' (LOA) detailing the modus of providing meteorological services. Presently, DoHM provides meteorological services at six airports in the country, including Tribhuvan International Airport, Kathmandu. At other airports, weather information is provided by local ATS personnel based on tower observation from automatic meteorological equipment operated by CAAN.

Civil-Military Co-operation

In Nepal, military aircraft operate from civil airports, use common airspace and share services and facilities meant for civil aviation. Nepali Sainik Biman Sewa (NSBS), the flying wing of Nepal Army, carries out search and rescue operations.

2.3. Safety Responsibilities and Accountabilities

Ratification of the Chicago Convention of 1944 places the obligation of implementing the SARPs to the Convention as per Article 37. As stated in Section 1.1 of this chapter, the civil aviation acts and associated regulations confer on CAAN the obligation to issue necessary requirements, directives, manuals and documents for the systematic implementation of ICAO SARPs.

As the regulatory body of civil aviation in Nepal, CAAN is also responsible for the establishment, maintenance and continuous improvement of the SSP. The holders of certificates issued by the CAAN are required to satisfactorily demonstrate that their management systems adequately reflect an SMS approach. The anticipated result from this approach is tangible improvement in safety management and practices. The CAAN shall endeavor to develop requirements and specific operational policies that build upon sound safety management principles in active consultation with all stakeholders. CAAN shall also endeavor to allocate sufficient resources for discharging its safety oversight responsibilities effectively. The Safety Policy Statement of CAAN is attached as "Appendix A".

The Director General of CAAN is designated as the accountable executive of SSP and is responsible for ensuring that all levels of management deliver the highest level of safety performance within CAAN. It shall be the duty of the director general to develop and implement requirements and specific operational policies that build upon safety management principles.

The director general of the CAAN is responsible for the implementation, operation and the supervision of the SSP and coordinate, the activities of the various state aviation organizations as necessary under the SSP.

2.4. Accident and Incident Investigation

Civil Aviation (Accident Investigation) Rules, 1967 mandates the Ministry of Tourism and Civil Aviation (MoTCA) to constitute accident investigation commissions in the aftermath of civil aircraft accidents. In the absence of a dedicated state agency to look after the compliance with Annex 13 SARPS, experts from different aviation disciplines usually are nominated as the member of such investigation commissions. As a practice, the CAAN investigates aircraft incidents.

Accident investigations carried out under The Civil Aviation (Accident Investigation) Rules, 1967 are pure technical in nature as specified in Annex 13 to the Convention on International Civil Aviation. Final Report of the accident investigation is made public and safety recommendations are usually implemented accordingly.

The functional organization structure of the State regulatory system of Nepal is attached in "Appendix B".

2.5. Enforcement Policy

Legal Provisions

Various provisions in the Civil Aviation Authority of Nepal Act, 1996 specifically in Section 5, 7, 25 and 31 of this Act authorize the CAAN to enforce its regulations.

CAAN-Civil Aviation Regulation, 2002 empowers Director General of CAAN for the certification of Airline Operator, Maintenance Organizations and Aviation Training Schools, Aerodromes; issuance of license, approval and authorization to aviation personnel; and permission of aircraft operation within Nepalese air space. Rule 6, 13, 20, 29, 40, 44, 48, 50, 52, 64, and 84 of this Regulation confers various enforcement authorities to the Director General of CAAN.

Breach of existing civil aviation rules and regulations is considered as a punishable offense and draw various administrative and monetary penalties depending on the nature and circumstances of breach. Director General of the CAAN in exercise of the authority may suspend, cancel or even revoke certificates, licenses, approvals, authorizations and permissions issued by him.

Enforcement Approach

As required by SMS, CAAN has developed a flexible enforcement approach based in following two general principles:

- **To develop enforcement procedures that allow service providers to deal with, and resolve, certain events involving safety deviations, internally, within the context of the service provider's SMS, and to the satisfaction of the authority.**
- **No information derived from safety data collection and processing systems (SDCPS) established under SMS shall be used as the basis for enforcement action.**

CAAN recognizes that voluntary compliance with the regulations is the most progressive and effective approach to aviation safety. CAAN remains committed to enforcing the regulations in a fair and firm manner. Concern about potential consequences is not taken in to consideration while determining the appropriate enforcement actions.

Enforcement Procedure

Non-compliance of aviation regulations may occur for many different reasons, from a genuine misunderstanding of the regulations, to disregard for aviation safety. CAAN's enforcement procedure recommends following actions in case of any violation of CAAN regulations:

- **Encouraging open communication between alleged offenders and enforcement authority, especially in cases where there are mitigating circumstances;**
- **Providing oral counseling for minor violations where there is no threat to aviation safety;**
- **Informing offenders their right to have penalties reviewed by the Director General of CAAN; and**

- **Ensuring that repeat offenders and those who willfully disregard aviation safety are dealt with firmly**

After the introduction of SMS, operators and service providers are required to take remedial, corrective and preventive action to address safety deficiencies internally. Some operational and technical matters of safety concern may be addressed and dealt with entirely through 'compliance base' processes.

The enforcement policy is not applicable in following conditions:

- **In cases where evidence indicates that there exists a deliberate effort to conceal non-compliance.**
- **If the service provider fails to provide confidence in its means of hazard identification and safety risk management.**
- **If the service provider is a recurrent violator. A recurrent violator is a violator who, in the past twelve months has had the same or closely related violation.**

In such circumstances, the penalty matrix of the enforcement procedures will be applicable.

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3. STATE SAFETY RISK MANAGEMENT

CAAN is performing its safety responsibility through existing regulatory mechanism of civil aviation in the country. As outlined in Chapter 2, there are various legislative frameworks to strengthen the safety oversight capacity of CAAN. Safety Management System is the new approach introduced by ICAO to improve the safety culture within aviation industry. CAAN is committed for the effective implementation of SMS within the jurisdiction of its regulatory responsibility.

3.1. Safety requirements for service provider's SMS

CAAN has enacted SMS requirements, 2010 which requires service provider to 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 is acceptable to CAAN.
A service provider SMS is required to include, as a minimum:

- **identifies safety hazards**
- **ensures the implementation of remedial action necessary to maintain agreed safety performance**
- **provides for continuous monitoring and regular assessment of the safety performance**
- **aims at a continuous improvement of the overall performance of the safety management system**

The implementation of SMS involves a progressive development. The following four phased approach to SMS implementation plan has been proposed to service provider subject to the approval of CAAN.

Phase 1: Planning SMS Implementation
Phase 2: Reactive Safety Management Processes
Phase 3: Proactive and predictive safety management processes
Phase 4: Operational Safety assurance

The sample of timeline for the implementation of each phase is given in Appendix I (i) of SMS Requirements, 2010.

A service provider is require to develop and maintain formal means for effectively collecting, recording, acting on and generating feedback about hazards in operations, which combine reactive, proactive and predictive methods of safety data collection. Formal means of safety data collection shall include mandatory, voluntary and confidential reporting systems.

The hazard identification process includes the following steps:

- reporting of hazards, events or safety concerns;
- collection and storing the safety data
- analysis of the safety data; and
- distribution of the safety information distilled from the safety data.

The CAAN requires a service provider to develop and maintain a formal risk management process that ensures the analysis, assessment and mitigation of risks of consequences of hazards to an acceptable level during the provision of its services.

The safety risks of the consequences of each hazard identified through the hazard identification processes are required to analyze in terms of probability and severity of occurrence, and assessed for their tolerability.

National Aviation Safety Team (NAST) Nepal

SMS implementation is a coordinated approach that requires the involvement of all safety related departments within CAAN. The departments responsible to oversight airline operation, ATS operation and Aerodrome operation are individually responsible for the monitoring of SMS implementation of concerned service provider.

To ensure the effective SSP implementation a high level National Aviation Safety team (NAST) Nepal is essential that comprises the representatives of all safety departments, including Aerodrome Operations, ANS Operations and aviation legal wing. The NAST Nepal is responsible for the overall evaluation of SSP implementation, review of safety risks, determine the acceptable level of safety, suggest respective oversight department on SMS matter and continuous improvement of SSP.

The NAST Nepal will 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 NAST Nepal will aim to assess the tolerability of aviation risks using both objective and subjective methods.

The composition of NAST Nepal and its duties and responsibilities is given in ‘Appendix-C’

3.2. Agreement on the service provider’s safety performance

The service providers holding CAAN certificates are required to demonstrate that their management systems adequately reflect SMS approach. The expected result of this approach is improved safety management, and safety practices, including safety reporting within the civil aviation industry. In order to achieve the highest level of the safety performance of the service providers, the CAAN has to agree with individual service providers on the safety performance of their SMS.

The safety performance of each SMS is required to agree separately between the CAAN and individual aviation organization. Agreed safety performance should be commensurate with the complexity of an individual aviation organization's specific operational contexts. The safety performance of an SMS is expressed by safety performance indicator values and safety performance target values and is implemented through action plans.

Safety Performance Indicator

The safety performance indicator values are short-term, measurable objectives reflecting the safety performance of an SMS. They are expressed in numerical terms and should be obvious, measurable and linked to the safety concern of an SMS. The safety performance indicator value will differ between segments of the aviation industry, such as aircraft operators, certified aerodrome operators and ATS providers. The examples of safety performance indicator for these different service providers are given here.

a) **An aircraft operator has identified the approach and landing phases of flight operations at non-precision approach aerodrome as one major safety concern to be addressed by its SMS. In this case, a safety performance indicator value might be: 10 unstable (or non-conforming) approaches per 1000 landing at aerodromes served by non-precision approaches.**
b) **A certified aerodrome operator has identified safety concerns regarding foreign object debris (FOD) in ramp operations to be addressed by its SMS. Here, a safety performance value might be: 15 FOD events in the apron per 10,000 operations.**
c) **An ATS provider has identified airport operations safety as one major safety concern to be addressed by its SMS. Here, a safety performance indicator valued can be: 0.8 Cat A and B (most serious) runway incursions per million operations.**

These safety performance indicator values fulfill the conditions: they are expressed in numerical terms; they are obvious, measurable and linked to the safety concerns of their respective SMS. These safety performance indicators reflect safety performance measurement.

Safety Performance Target

Safety performance target values are long-term, measurable objectives reflecting the safety performance of an SMS. Safety performance target values are expressed in numerical terms, and should be obvious, measurable, acceptable to stakeholders and linked to the safety performance indicator of an SMS. With reference to the safety performance indicators expressed above, the safety performance target values can be expressed as follows:

a) **The aircraft operator defines the safety performance target value as: within the next three years, reduce by fifty percent the number of unstable approaches per 1000 landings at aerodromes served by non-precision approaches.**
b) **The certified aerodrome defines the safety performance target value as: by 2010, reduce FOD events in the apron to 8 per 10,000 operations.**

c) **An ATS provider has defined safety target value as: 0.8 Cat A and B (most serious) runway incursions per million operations.**

These safety performance target values fulfill the conditions: they are expressed in numerical terms; they are obvious, measurable and linked to the safety concerns of their respective SMS. These safety performance target values reflect safety performance measurement.

Action Plans

Actions plans are the tools and means needed to achieve the safety performance indicator values and safety performance target values of an SMS. They include the operational procedure, technology, systems and programs to which measures of reliability, availability, performance and/or accuracy can be specified. Examples of action plans to achieve the safety performance indicator values and safety performance target values of an SMS given above would be as follows:

a) **Development and implementation of constant descent arrival (CDA) procedures at aerodromes of non-precision approaches.**
b) **Develop and implement RNP-AR Approach procedure in TIA.**
c) **Implement a thrice-daily walk-in ramp inspection program, develop and implement training course for drivers and install taxiway signage.**
d) **Installation of ASDE/X at aerodrome.**
e) **Implement a specific criteria for manning of ATC units and their leisure break procedure.**
f) **Introduce automation in ATC system.**

The safety performance indicator values and safety performance target values of the safety performance of an SMS may be different, or they may be the same. When assessing whether specific safety performance indicator values and safety performance target values of the safety performance of an SMS are different or the same, following aspects must be considered:

a) **The availability of resources within the service provider to turn the safety performance indicator value into a more demanding safety performance target value.**
b) **How expensive the action plans deemed necessary to change the value of the safety performance indicator into a more demanding value of the safety performance target are.**
c) **Whether the assessment of the safety risks of the consequences of the hazard addressed by the safety performance indicator and safety performance target falls in the tolerable region of the safety risk management process, should the safety performance indicator value and safety performance target value remain the same.**

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4. STATE SAFETY ASSURANCE

The long-term, strategic objective of an SSP is the improvement of safety in the State. To fulfill the long-term strategic objective, the organization of an SSP aims at two short-term, tactical objectives: efficient and effective delivery of safety responsibilities and accountabilities by the State, and efficient auditing of safety responsibilities and accountabilities by the State. The notion of SSP brought in a principled and structured manner one way of organizing the safety responsibilities and accountabilities of a State and measuring the effectiveness with which safety responsibilities are discharged and safety accountabilities are fulfilled by the State. Safety improvement is the long-term objective of SSP.

4.1 Safety oversight

The State's safety oversight function is the part of the SSP and a fundamental component of its safety assurance. Safety oversight is the primary responsibility of CAAN to ensure implementation of the safety-related requirements stipulated in different CARs promulgated by CAAN in line with Standards and Recommended Practices (SARPs) and associated documents of ICAO. Safety oversight function of CAAN is aimed to assess the safety level of service providers in comparison to that required by the CARs. CAAN is committed to perform its safety oversight responsibilities based on both compliance based safety environment and performance based safety environment.

CAAN safety oversight organization

The three different departments within the CAAN that are responsible for carrying out safety oversight functions are:

- **Aviation safety department: responsible for the safety oversight of Air transport Industry**
- **Aerodrome standard and safety department: responsible for the safety oversight of the aerodrome operations**
- **ANS standard and safety department: responsible for the safety oversight of air navigation services**

Safety Audit

Safety audit focuses on the integrity of the organization's SMS and periodically assess the status of safety risk controls. As with other requirements, the auditing requirements are left at a functional level, allowing for a broad range of complexity, commensurate with the complexity of the organization. While audits are "external" to the units involved in activities directly related to the provision of services, they are still "internal" to the organization as a whole. Audits are not intended to be in-depth audits of the technical processes but rather they are intended to provide assurance of the safety management functions, activities and resources of line units. Audits are used to ensure that the structure of the SMS is sound in terms of staffing, compliance with approved procedures and instructions, levels of competency and training to operate equipment and facilities and maintain required levels of performance, etc.

CAAN carries out safety audit on periodic basis prior to the renewal of Operating Certificates of service providers. Safety audits verify the status of implementation of the elements and functions, on a compliance/noncompliance basis. Safety audit of airline operators is more effective than other service providers. Since CAAN itself is the service provider in the field of aerodrome operation and Air Traffic Services, internal oversight mechanism yet to be strengthened.

Random Inspections and Checks

For the assessment of implementation status of safety requirements, random inspections and checks are considered as effective tools. It is the policy of the CAAN to carry out random inspections and checks of national carriers to assess the safety compliance at actual operating scenario. The CAAN inspectors are actively involved in ramp inspection of domestic carriers at different airports of the country.

Foreign Airlines' Inspection

States are entitled, by Article 16 to the Convention on International Civil Aviation, to search aircraft from other States on landing and departure and to inspect the certificates and other documents prescribed by the Convention and its Annexes, provided there is not reasonable delay to operation.

Annex 6 – Operation of Aircraft, Part I – International Commercial Air Transport (Aeroplanes) and Part III – International Operations (Helicopter) requires States to establish a programme with procedures for the surveillance of operations in their territory by a foreign operator and for taking appropriate action when necessary to preserve safety.

The CAAN has provided required training to its inspector on foreign airlines' inspection. The procedure for the inspection of foreign carrier is given in Flight Operations Inspection Manual (FOIM) issued by the CAAN.

ICAO Universal Safety Oversight Audit Programme

At the present time, the ICAO Universal Safety Oversight Audit Programme (USOAP) audits States' safety responsibilities in a comprehensive manner following a basic architecture prescribed by the relevant Annexes to the Convention. Accordingly, each State must implement eight critical elements of safety oversight and USOAP audits verify the status of implementation of the elements and functions, on a compliance/noncompliance basis. Once the SSP concept is implemented throughout States, USOAP will audit the SSP through an approach based on a continuous monitoring concept, rather than on the elements and functions of the safety oversight.

Acceptable Level of Safety (ALoS)

The ICAO safety management SARPs introduces the notion of acceptable level of safety (ALoS) as the way of expressing the minimum degree of safety that has been established by the State and

must be assured by an SSP. The ALoS is expressed through the safety indicator values and safety target values.

The ALoS related to an SSP must be developed based upon judicious combination of safety measurement and safety performance measurement. Safety measurement represents high-level/high-consequence outcomes, whereas, safety performance measurement represents low-level/low-consequence outcomes.

The establishment of ALoS should involve close liaison between the regulator and service provider so that both the SSP and service provider's SMS have similar ALoS. While determining ALoS, it is necessary to consider various factors such as the level of safety risks that applies, the cost/benefit of improvements to the system, and public expectation on the safety of the aviation industry.

ALoS should also commensurate with the complexity of individual service provider's specific operational context and their availability of resources to address safety risks. Once the safety indicators and safety targets have been selected, the level of safety representing the state aviation system can be established. ALoS is delivered through action plans. They include operational procedure, systems and programmes to which measures of reliability, availability, performance and/or accuracy can be specified.

Since the safety data collection and analysis capabilities of service providers have not yet been fully developed in Nepal, it is very difficult to select quantitative safety indicators and safety targets. NAST Nepal will liaison with service providers to determine the ALoS in the context of Nepal. The guidelines for the establishment of ALoS are attached in 'Appendix-D'.

4.2. Safety data collection, analysis and exchange

Effective safety reporting is a cornerstone of the management of safety and the gate for safety data acquisition. CAAN Safety Management System Requirement, 2010 has made provision in the part of service provider to develop and maintain safety data collection and processing system (SDCPS) that provide for the identification of hazards and the analysis, assessment and mitigation of safety risks. A service provider's SDCPS should include reactive, proactive and predictive methods of safety data collection.

Mandatory Occurrence Reporting System

Annex 13 to the Convention requires contracting state to establish a mandatory incident reporting system to facilitate collection of information on actual or potential safety deficiencies. CAAN is committed to establish effective safety reporting based on MORS. Nepalese Civil Airworthiness Requirements (NCAR) issued by CAAN requires airline operators to report CAAN about the defects to aircraft and its components. The list of reportable defects is enlisted in NCAR C 7.

Mandatory Bird Strike Reports

Under mandatory bird strike reporting system, a pilot operating in Nepal's airspace is required to report the event of bird strike to the CAAN. The bird strike reports received are processed, analyzed and evaluated to assess the severity of bird activity at Nepal's airports.

Voluntary Incident Reporting System

Annex 13 to the Convention recommends that "a State should establish a voluntary incident reporting system to facilitate the collection of information that may not be captured by a mandatory incident reporting system."

One very important aspect of the recommended voluntary reporting system is covered in Annex 13, paragraph 8.3 by providing that "a voluntary incident reporting system shall be non-punitive and afford protection to the sources of the information."

SMS Requirements, 2010 requires service provider to encourage personnel to submit voluntary incidents which:

a) **Facilitate collection of information that may not be captured by a mandatory incident reporting system;**
b) **Is non-punitive; and**
c) **Afford protection to the sources of the information to encourage the reporting of such information.**

Confidential Reporting Systems

Confidential reporting systems aim to protect the identity of the reporter. This is one way of ensuring that voluntary reporting systems are non-punitive. Confidentiality is usually achieved by de-identification, and any identifying information about the reporter is known only to "gatekeepers" in order to allow for follow-up or "fill in voids" in the reported event(s). Confidential incident reporting systems facilitate the disclosure of hazards leading to human error, without fear of retribution or embarrassment, and enable broader acquisition of information on hazards.

Once acquired, safety data must be analysed to turn data into information and finally mitigation or response activities to hazards by the organization as a consequence of the safety information developed.

One of the most influential aspects of an organizational culture in terms of the management of safety is that it shapes safety reporting procedures and practices by operational personnel. Identification of hazards is a fundamental activity underlying the management of safety. An operational environment in which operational personnel have been trained and are constantly encouraged to report hazards is the prerequisite for effective safety reporting.

Just Culture

The safety policy should actively encourage effective safety reporting and, by defining the line between acceptable performance (often unintended errors) and unacceptable performance (such as gross negligence, recklessness, violations or sabotage), provide fair protection to reporters.

The CAAN and service providers within its responsibility should take into consideration the advantages and disadvantages of the adoption of safety and "just culture", and any cultural and legal implications. For purposes related to the management of safety, the process that needs to be promoted, nurtured and defended is effective safety reporting; the "criminalization of error" is of lesser relevance.

The protection of safety information from inappropriate use is essential to ensure its continued availability, since the use of safety information for other than safety-related purposes may inhibit the future availability of such information, with an adverse effect on safety. The CAAN's audits of SMSs should pay particular attention to this matter during providers' auditing.

The Safety Policy Statement of the Accountable Executive, the Director General of CAAN has made commitment to establish provisions for the protection of safety data, collection and processing systems (SDCPS), so that people are encouraged to provide essential safety-related information on hazards. It further states to promulgate an enforcement policy that ensures that no information derived from any SDCPS established under the SSP or the SMS will be used as the basis for enforcement action, except in the case of gross negligence or willful deviation."

4.3. Safety data driven targeting of oversight by CAA on areas of greater concern or need

Once the mandatory, voluntary and confidential safety reporting systems are in place and operational, on the basis of collected data and their analysis with respect to hazards and potential safety risks on operations, NAST Nepal will review existing and, if necessary, define new procedures that will prioritize auditing of those identified areas of greater safety concern or need. Review of occurrences must be embedded and detailed into the processes of safety oversight management system.

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5. STATE SAFETY PROMOTION

The safety effort of a State cannot succeed by mandate or mere strict implementation of policies. Safety promotion nurtures individual and organizational behavior towards safety culture. An effective safety promotion mechanism plays a significant role in supporting the core operational objectives of an SSP.

5.1 Internal training, communication and dissemination of safety Information

Internal training

The CAAN is the regulator of civil aviation as well as the service provider of ANS and Aerodrome operations. The CAAN's training activity is intended to develop a detailed plan and programme of training for its both regulatory and service provider staffs. The CAAN has allocated enough budgets for the internal training to its staffs.

Civil Aviation Academy under the CAAN is responsible for the development of various training courses for the CAAN staffs. Civil Aviation Academy has developed training course on SMS for regulatory and service provider's staffs. CAAN has developed and delivered SSP/STP to its Safety Oversight Manager under the ICAO Train air programme as deemed necessary. CAAN has continuously endeavoring to develop trained and skilled inspector staffs of safety oversight responsibilities.

Besides training, the CAAN is regularly conducts safety related seminars and workshops. The main purpose of these activities is to develop a positive organizational culture in terms of safety and exchange of information and experience for the effective SMS implementation.

Internal communication and dissemination of safety information

Collected safety information through the established mandatory and confidential (voluntary) incidents and hazards reporting systems are communicated to the respective CAAN staff responsible for safety oversight of service providers. Communicated information may be used for investigation or for information only. When action was taken on the communicated information this should be documented and stored for traceability, history and should be reflected in the periodic reports.

Each safety oversight departments of the CAAN must inform all serious incidents to NAST Nepal. The concerned oversight department will communicate to NAST Nepal for any changes in the risk assessments that result from different evaluation processes. The concern department will also share and coordinate safety information among NAST Nepal and other Safety Inspectors. Additionally, the CAAN would promote two-way communication of safety-related information within organization and support development of an organizational culture that promotes an effective and efficient SSP.

5.2 External training, communication and dissemination of safety information

External training

The CAAN is regularly organizing training programmes to enhance SMS implementation capabilities of service providers. Through the Civil Aviation Academy, CAAN has developed SMS training courses targeting service providers. CAAN is also conducting orientation classes to the service providers to help in their SMS implementation.

External communication and dissemination of safety information

To foster effective SMSs among service providers under the CAAN responsibility, provide education and support development of an overall organizational culture, the CAAN in line with this SSP will promote awareness of safety risks and two-way communication of safety-relevant information. The responsible departments for safety regulation conducts regular meeting and interaction with service providers, in order to keep them advised about the regulatory developments and required course of action.

All the annual or periodic reports produced by the CAAN that address safety will be communicated to the service providers for their information and education. Any changes in the objectives or safety risk evaluation methods or any similar taken safety-related action or activity by the CAAN will also be communicated to service providers.

The CAAN communicates and disseminates critical safety-relevant information through Circulars, NOTAMs, AIC, confidential letters and electronic mailing system. Non-critical safety-relevant information are communicated through CAAN website, CAAN Newsletter and annual CAAN Report.

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Appendix A- Nepal's Safety Policy Statement

Civil Aviation Authority of Nepal (CAAN) is the regulatory body of civil aviation in Nepal. The management of civil aviation safety in Nepal is one of the major responsibilities of CAAN. CAAN is committed to developing, implementing, maintaining and constantly improving strategies and processes to ensure that all aviation activities that take place under its oversight will achieve the highest level of safety performance, while meeting both national and international standards.

Director General of CAAN is responsible for the implementation, operation and the supervision of the SSP and coordinate as appropriate, the activities of the various State aviation organizations encompasses under the SSP.

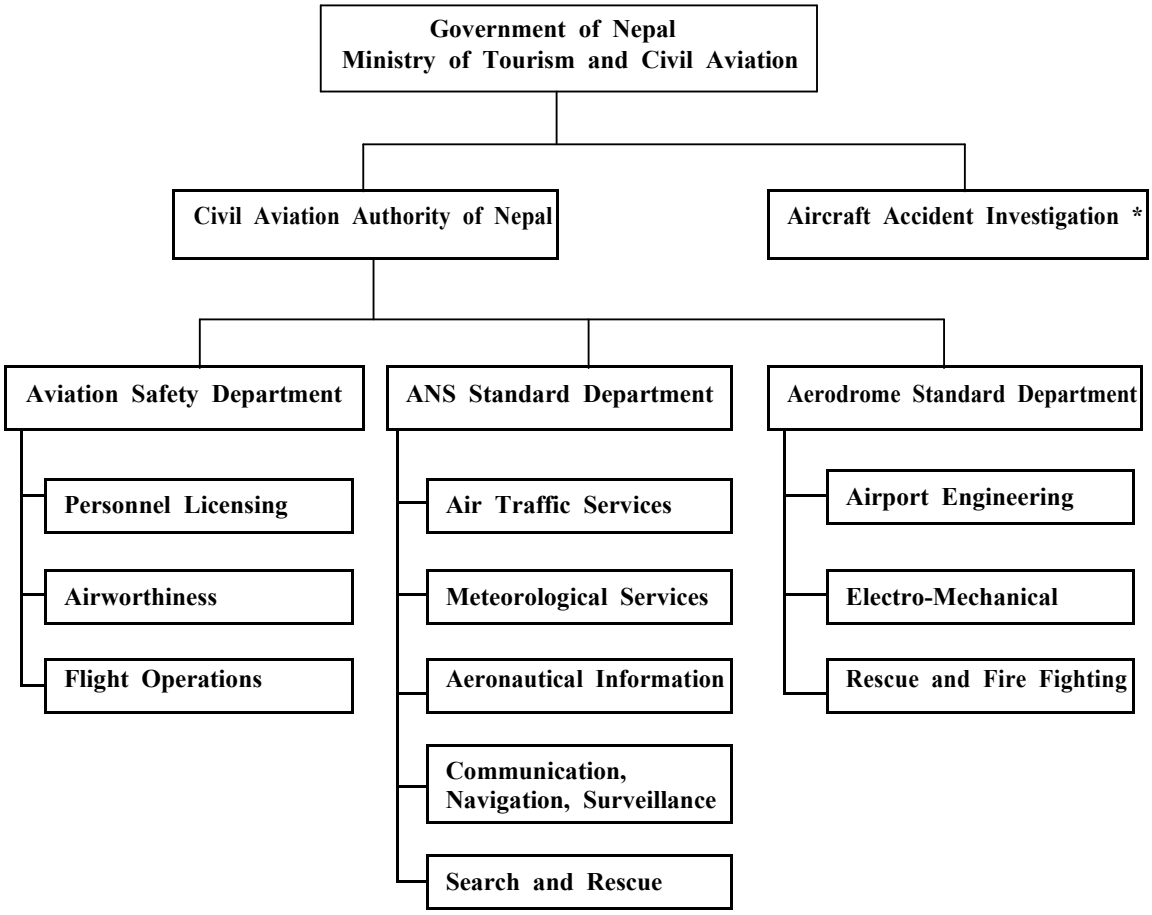
As the Accountable Executive of SSP, Director General of CAAN is committed to:

a) **ensure that all levels of management are accountable for the delivery of the highest level of safety performance within CAAN,**
b) **develop requirements and specific operational policies that build upon safety management**
c) **consult with all segments of the aviation industry on issues regarding regulatory development;**
d) **support the management of safety in the State through an effective safety reporting and communication system;**
e) **interact effectively with service providers in the resolution of safety concerns;**
f) **ensure that within the CAAN, sufficient resources are allocated and personnel have the proper skills and are trained for discharging their safety responsibilities;**
g) **conduct both performance-based and compliance-oriented oversight activities, supported by analyses and prioritized resource allocation based on safety risks;**
h) **promote and educate the aviation industry on safety management concepts and principles;**
i) **oversee the implementation of SMS within aviation organizations;**
j) **ensure that all activities under oversight achieve the highest safety standards;**
k) **establish provisions for the protection of safety data, collection and processing systems (SDCPS), so that people are encouraged to provide essential safety-related information on hazards, and there is a continuous flow and exchange of safety management data between the regulator and service providers;**
l) **establish and measure the realistic implementation of our SSP against safety indicators and safety targets which are clearly identified; and**
m) **promulgate an enforcement policy that ensures that no information derived from any SDCPS established under the SSP or the SMS will be used as the basis for enforcement action, except in the case of gross negligence or willful deviation.**

This policy must be understood, implemented and observed by all staff involved in regulatory activities of the CAAN.

(Tri Ratna Manandhar)
Director General
Civil Aviation Authority of Nepal

Appendix B- Nepal's Safety Regulatory Functional Chart



*** Ministry of Tourism and Civil Aviation constitutes Aircraft Accident Investigation Commission for the investigation of civil aircraft.**

Appendix C- National Aviation Safety team (NAST)

The composition of National Aviation Safety team (NAST) as stated in 3.1 of Chapter-3 is as follows:

1. Civil Aviation Authority of Nepal (CAAN)

A. Regulator

Dy. Director General, Air Transportation and Regulation Directorate	Coordinator
National Coordinator (USOAP CMA)	Member
Director, Flight Safety Standard Department	Member
Director, ANS Safety and Standards Department	Member
Director, Aerodrome Safety and Standards Department	Member
Director, ICAO Int'l Affairs & Legal Department	Member
Dy. Director, Accident/Incident Investigation Division	Member Secretary

B. Service Provider

Director, Flight Operation Department	Member
Director, Airport Operation Department	Member

2. Airline Operator

A. Schedule Operator

Representative, Nepal Airlines Corporation (Quality Assurance)	Member
Representative, Nepal Airlines Corporation (Flight Operations)	Member
Representative, Buddha Air Pvt. Ltd. (Quality Assurance or Flight Operations)	Member
Representative, Yeti Airlines Pvt. Ltd. (Quality Assurance or Flight Operations)	Member
Representative, Guna Air Pvt. Ltd. (Quality Assurance or Flight Operations)	Member

B. Helicopter Operator

Representative, Mountain Helicopter Pvt. Ltd. (Quality Assurance or Flight Operations)	Member

3. AOAN

Representative, Airline Operator Association of Nepal (AOAN)	Member

Duty and Responsibility

- Determine the safety data to be collected and submitted by the various departments responsible for safety oversight in regular interval.
- Upon receipt of such data initiate action to determine for the establishment of the acceptable level of safety for SMS implementation and amend it for continuous improvement.
- Coordinate with departments responsible for safety oversight for the effective implementation of SSP
- Review the potential safety risks identified by the concerned safety oversight department with the help of available safety data
- Assess the mitigation actions established to reduce the potential risks
- Suggest respective oversight department on SMS matters
- Evaluate the existing mechanism of safety oversight and suggest for improvement if required
- Prepare plan and programme for the effective implementation of SSP.
- Advice Director General on the matter of SSP implementation.
- Act for the continuous improvement of SSP
- Implement the decision made by the regional and international safety groups/teams formed under International Civil Aviation Organization (ICAO).

It is the responsibility of individual departments to carry out safety oversight functions and effective implementation of SMS within their jurisdiction.

The NAST Nepal can invite other officials from CAAN as well as from stakeholders in the meeting if deemed necessary.

Meeting

The meeting of NAST Nepal shall be held at least once in every three months, and, as deemed necessary.

Appendix D- Acceptable Level of Safety

1. ALoS representing Safety Measurement

In initial stage of SSP implementation, the safety indicator values and safety target values relating to ALoS will likely to express through quantitative action statements on selected high-level/high-consequences outcomes like accidents and serious incidents rates. It can be also applied to represent high level state function such as the status of development/implementation of primary aviation safety legislation or absence thereof, the status of development/implementation of operating regulations or the absence thereof, and the level of regulatory compliance within the State.

Some examples of ALoS relating to safety measurement may include the following:

Safety target values	1. Reduce by [number] the number of / Maximum of [number] CFIT and approach and landing accidents per [number] departures. 2. Minimum of [number] high-severity events captured through the State MOR yearly. 3. Minimum of [number] inspections of operators completed quarterly. 4….
Action plans	1. CFIT training package distributed to industry and supported by training courses. 2. Effective implementation of SMS with SMS training to all staffs of service provider. 3. Revision and, if necessary, update of hiring policy. Inspection manual updated. 4….
Safety indicator values	1. [Number] CFIT and approach and landing accidents per [number] departures. 2. [Number] high-severity events captured through the State MOR yearly. 3. [Number] inspections of operators completed quarterly. 4….
State	Will comply with all applicable international Standards.

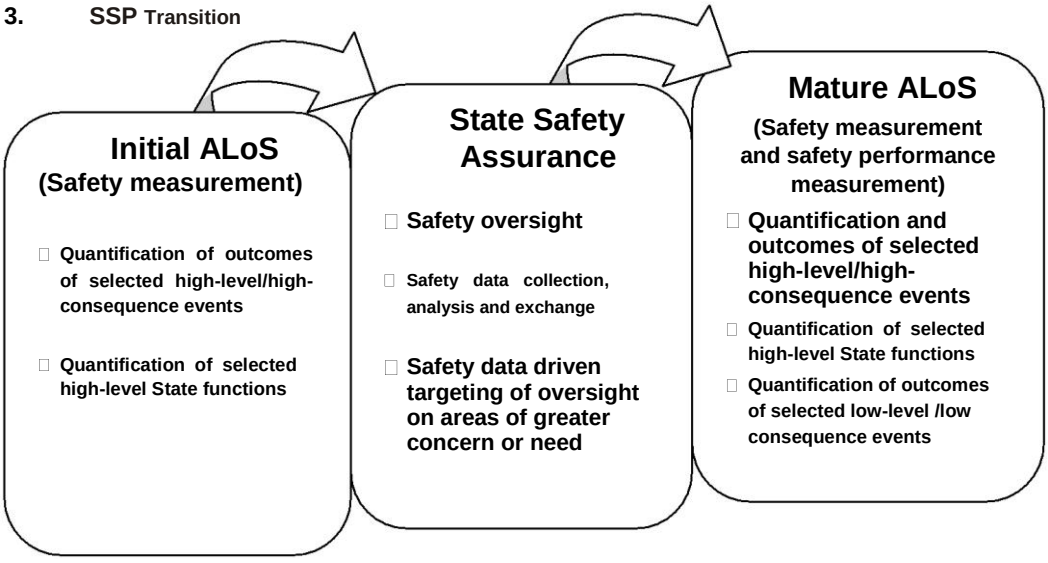
2. ALoS representing Safety Performance Measurement

When an SSP becomes mature, the safety indicator values and safety target values relating to ALoS will likely to express through quantitative action statements on selected low-level/low-consequences processes, such as the number of foreign object debris (FOD) events per specified number of ramp operations, or the number of unauthorized ground vehicle events on taxiway

per a specific number of airport operations or during a specified period of time. Some examples of ALoS relating to safety performance measurement may include the following:

Safety target values	**1. Reduce by [number] the number of / Maximum of [number] non-conforming approaches (NCA) at 5 international airports per [number] arrivals by [date].** **2. Reduce by [number] the number of / Maximum of [number] Cat B and C runway incursions at international airport per [number] operations by [date].** **3. Reduce by [number] the number of/ Maximum of [number] apron FOD events at international airport by [date].** **4….**
Action Plans	**1. Constant descent arrival (CDA) procedures implemented. Arrival procedures charts designed for stabilized approaches.** **2. Installation of ASDE/X at international airport.** **3. Increase the number of apron inspections, training to airline personnel on apron safety.** **4….**
Safety indicator values	**1. [Number] non-conforming approaches (NCA) at international airports per [number] arrivals.** **2. [Number] Cat B and C runway incursions at international airport per [number] operations.** **3. [Number] apron FOD events at international airport.** **4….**
State	**Will comply with all applicable international Standards.**

3. SSP Transition



Appendix E- State Safety Programme - GAP Analysis

The gap analysis checklist that follows can be used as a template to conduct a gap analysis. Each question is designed for a "Yes" or "No" response. A "Yes" answer indicates that the State already has the component or element of the ICAO SSP framework in question incorporated into its safety system and that it matches or exceeds the requirement. A "No" answer indicates that a gap exists between the component/element of the ICAO SSP framework and the safety system in the State.

ICAOreference (Doc 9859)	Aspect to be analysed or question to be answered	Answer	*Status of implementation*
Component 1 — STATE SAFETY POLICIES AND OBJECTIVES			
Element 1.1 — State safety legislative framework			
	Has [State] promulgated a national safety legislative framework and specific regulations that define the management of safety in the State?	Yes No	
	Has [State] defined the specific activities related to the management of safety in the State in which each [State] aviation organization must participate?	Yes No	
	Has [State] established requirements, responsibilities and accountabilities regarding the management of safety in [State] by its aviation organizations?	Yes No	
	Are the legislative framework and specific regulations periodically reviewed to ensure that they remain relevant and appropriate to the State?	Yes No	
	Are [State] legislative framework and specific regulations periodically reviewed to ensure that they are up to date with respect to international standards?	Yes No	
	Has [State] established a safety policy?	Yes No	
	Is [State] safety policy signed by the [State] SSP Accountable Executive or a high authority within [State]?	Yes No	
	Is [State] safety policy reviewed periodically?	Yes No	
	Is [State] safety policy communicated with visible endorsement to all employees in all [State] aviation organizations with the intent that they are made aware of their individual safety responsibilities?	Yes No	
	Has [State] developed documentation that describes the SSP, including the interrelationship between its components and elements?	Yes No	
	Does [State] have a record system that ensures the generation and retention of all records necessary to document and support the SSP activities?	Yes No	
	Does the record system provide the control processes necessary to ensure appropriate identification, legibility, storage, protection, archiving, retrieval, retention time, and disposition of records?	Yes No	
Element 1.2 — State safety responsibilities and accountabilities			
	Has [State] identified and defined the State requirements, responsibilities and accountabilities regarding the establishment and maintenance of the SSP?	Yes No	
	Do the requirements include directives and activities to plan, organize, develop, control and continuously improve the SSP in a manner that meets [State] safety objectives?	Yes No	

	Do the requirements include a clear statement about the provision of the necessary resources for the implementation and maintenance of the SSP?	Yes No	
	Has [State] identified and appointed an Accountable Executive as the qualified person having direct responsibility for the implementation, operation and supervision of the SSP?	Yes No	
	Does the [State] SSP Accountable Executive fulfil the required job functions and responsibilities?	Yes No	
	Does the [State] SSP Accountable Executive coordinate, as appropriate, the activities of the different State aviation organizations under the SSP?	Yes No	
	Does the [State] SSP Accountable Executive have control of the necessary resources required for the proper execution of the SSP?	Yes No	
	Does the [State] SSP Accountable Executive verify that all personnel of [State] aviation organizations understand their authorities, responsibilities and accountabilities with regard to the SSP and all safety management processes, decisions and actions?	Yes No	
	Are safety responsibilities and accountabilities, at all levels, defined and documented?	Yes No	
Element 1.3 — Accident and incident investigation			
	Has [State] established, as part of the management of safety, an independent accident and incident investigation process, the sole objective of which is the prevention of accidents and incidents, and not the apportioning of blame or liability?	Yes No	
	Does [State] maintain the independence of the accident and incident investigation organization from other State aviation organizations?	Yes No	
Element 1.4 — Enforcement policy			
	Has [State] promulgated an enforcement policy?	Yes No	
	Does the enforcement policy establish 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?	Yes No	
	Does the enforcement policy establish the conditions and circumstances under which to deal with safety deviations through established enforcement procedures?	Yes No	
	Has [State] established the controls which govern how service providers will identify hazards and manage safety risks?	Yes No	
	Do those controls include requirements, specific operating regulations and implementation policies for the service provider's SMS?	Yes No	
	Are requirements, specific operating regulations and implementation policies based on identified hazards and analysis of the safety risks of the consequences of the hazards?	Yes No	
	Are requirements, specific operating regulations and implementation policies periodically reviewed to ensure they remain relevant and appropriate to the service providers?	Yes No	
	Is there a structured process within [State] to assess how the service providers will manage the	Yes No	

	safety risks associated with identified hazards, expressed in terms of probability and severity of occurrence?		
	Is there a [State] policy in place that ensures effective safety reporting of safety deficiencies, hazards or occurrences?	Yes No	
	Does [State] policy on reporting of safety deficiencies, hazards or occurrences include the conditions under which protection from disciplinary and/or administrative action applies?	Yes No	
Element 2.2 — Agreement on the service provider's safety performance			
	Has [State] individually agreed with service providers on the safety performance of their SMS?	Yes No	
	Is the agreed safety performance commensurate with the complexity of the individual service provider's specific operational context?	Yes No	
	Does the agreed safety performance consider the individual service provider's resources to address safety risks?	Yes No	
	Is the agreed safety performance expressed by multiple safety indicators and safety targets, as opposed to a single one, as well as by action plans?	Yes No	
	Is the agreed safety performance periodically reviewed to ensure it remains relevant and appropriate to the service provider?	Yes No	
Component 3 — STATE SAFETY ASSURANCE			
	Has [State] established mechanisms to ensure an effective safety oversight function?	Yes No	
	Has [State] established mechanisms to ensure that the identification of hazards and the management of safety risks by service providers follow established regulatory controls?	Yes No	
	Do established mechanisms include inspections, audits and surveys to ensure that regulatory safety risk controls are appropriately integrated into the SMS of service providers?	Yes No	
	Do established mechanisms ensure that regulatory safety risk controls are practised as designed?	Yes No	
	Do established mechanisms ensure that regulatory safety risk controls have the intended effect on safety risks?	Yes No	
	Are regular and periodic reviews conducted regarding [State] ALoS?	Yes No	
	Do reviews consider changes that could affect [State] SSP and its ALoS, recommendations for improvement and sharing of best practices across the State?	Yes No	
	Are regular and periodic reviews conducted to assess if [State] SSP and its ALoS remain appropriate to the scope and complexity of the aviation operations in the State?	Yes No	
	Is there a process to evaluate the effectiveness of changes related to the SSP?	Yes No	
Element 3.2 — Safety data collection, analysis and exchange			
	Has [State] established mechanisms to ensure the capture and storage of data on hazards and safety risks at both the individual and aggregate State level?	Yes No	
	Has [State] established mechanisms to develop information from the stored data and to promote the exchange of safety information with service providers and/or other States as appropriate?	Yes No	
	Has [State] established an acceptable level of safety (ALoS) related to its SSP?	Yes No	
	Does [State] ALoS related to the SSP combine	Yes	

	elements of safety measurement and safety performance measurement?	No	
	Is [State] ALoS commensurate with the complexity of aviation activities within [State]?	Yes No	
	Is there a formal process within [State] to develop and maintain a set of parameters to measure the realistic implementation of the SSP?	Yes No	
Element 3.3 — Safety-data-driven targeting of oversight of areas of greater concern or need			
	Has [State] developed procedures to prioritize inspections, audits and surveys towards those areas of greater safety concern or need?	Yes No	
	Is the prioritization of inspections and audits the result of the analysis of data on hazards, their consequences in operations, and the assessed safety risks?	Yes No	
Component 4 — STATE SAFETY PROMOTION			
Element 4.1 — Internal training, communication and dissemination of safety information			
	Does [State] provide internal training, awareness and two-way communication of safety-relevant information within [State] aviation organizations?	Yes No	
	Are there communication processes in place within [State] to ensure that information about the SSP functions and products is made available to [State] aviation organizations in a timely manner?	Yes No	
	Is there a process for the dissemination of safety information throughout [State] aviation organizations and a means of monitoring the effectiveness of this process?	Yes No	
	Are communication processes (written, meetings, electronic, etc.) commensurate with the size and scope of the [State] aviation organizations?	Yes No	
	Are safety information and information about the SSP functions and products maintained in a suitable medium?	Yes No	
Element 4.2 — External training, communication and dissemination of safety information			
	Does the [State] provide external education, awareness of safety risks and two-way communication of safety-relevant information?	Yes No	
	Are there communication processes in place within [State] that allow the SSP to be promoted nationally and internationally?	Yes No	
	Is there a formal process for the external dissemination of safety information to [State] service providers and a means of monitoring the effectiveness of this process?	Yes No	
	Are there communication processes in place within [State] to ensure that information about the SSP functions and products is made available to [State] service providers in a timely manner?	Yes No	
	Are communication processes (written, meetings, electronic, etc.) commensurate with the size and scope of [State] service providers?	Yes No	
	Are safety information and information about the SSP functions and products established and maintained in a suitable medium?	Yes No	

Appendix F – Critical Elements of a Safety Oversight System
(EXTRACT FROM ICAO DOCUMENT 9734 SAFETY OVERSIGHT MANUAL PART-A)

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.