



| ICAO

# INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY

**AFI- Plan SSP Project Launching Meeting and Workshop**

**16 – 17 January 2024**

# AFI PLAN – STATE SAFETY PROGRAM PROJECT

## LAUNCHING MEETING & WORKSHOP

### Agenda item 4: State Safety Programme Implementation

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## Module Objective

The objective of this Module is to provide an overview of State Safety Programme Implementation

# Contents

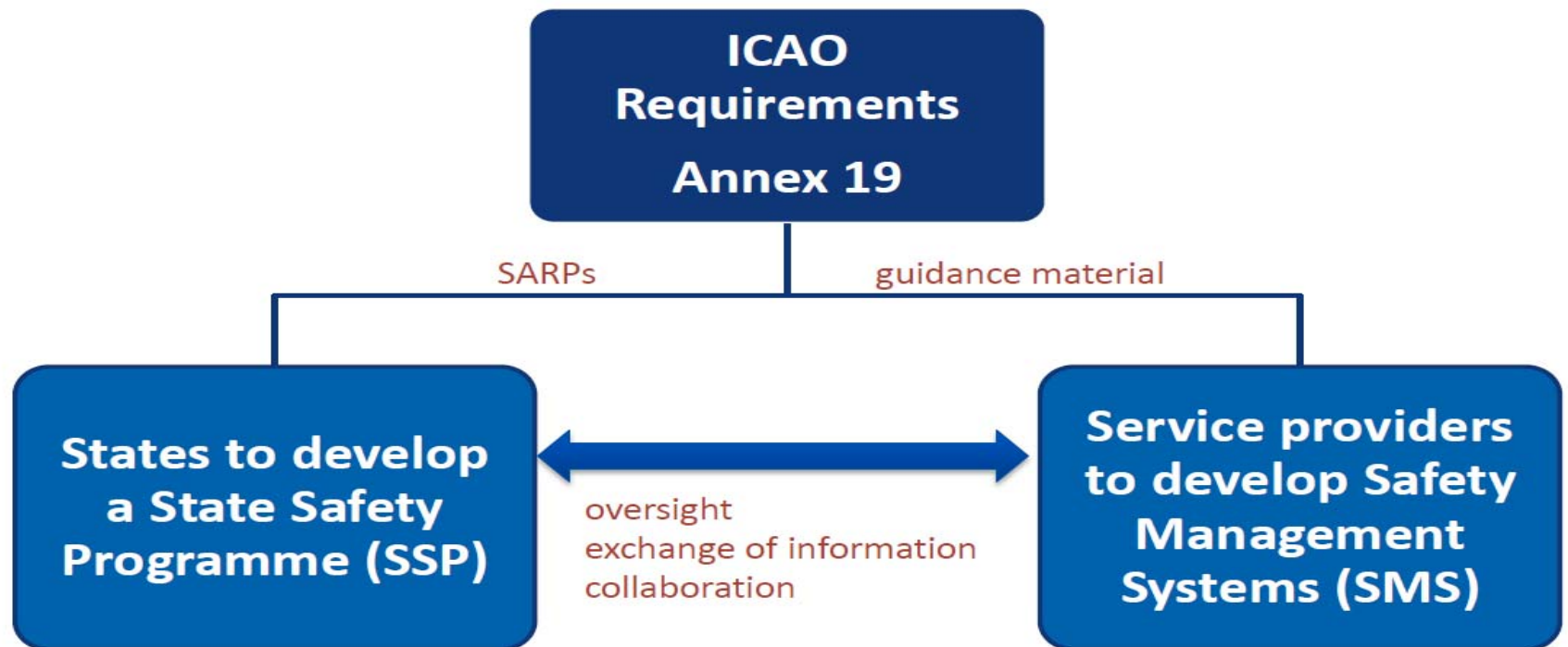
- State Safety Programme Definition
- State Safety Programme Implementation requirements(Annex 19)
- Coordinating the State Safety Programme
- SSP Foundation PQs
- SSP Gap Analysis
- SSP implementation plan
- GASP and AFI- RASP SSP Goal and Targets
- RASG -AFI SSP implementation status
- State Safety Programme Implementation Assessment (SSPIA)
- ICAO Safety Management Training Programme
- Challenges associated with managing SSP Implementation

## Sate Safety Programme(SSP)

- ➔ SSP is an integrated set of laws, regulations, policies, objectives, processes and activities aimed at proactively managing safety.
- ➔ The existence of:
  - Primary Aviation Legislation in the State
  - Authorities or agencies supported by sufficient and qualified personnel, financial resources
  - Regulations on Flight Operations, Airworthiness, ATC and Airports
  - Licensing, certification, authorization and approval
  - Surveillance to assure that approval holders continue to meet requirements
  - Accident Investigation function
  - Hazard Identification, Risk Assessment, and Resolution of safety issues

## SSP Implementation

### ICAO Safety Management Requirements



## SSP Implementation

7

- States are required to establish and manage an SSP in accordance with the four SSP components supported by a system description.
- As part of implementing SSP, States shall require that the following service providers implement an SMS:
  1. Approved training organizations in accordance with Annex 1 that are exposed to safety risks related to aircraft operations during the provision of their services;
  2. Operators of aeroplanes or helicopters authorized to conduct international commercial air transport;
  3. Operators holding a remotely piloted aircraft system (RPAS) operator certificate and authorized to conduct international operations in accordance with Annex 6, Part IV
  4. Approved maintenance organizations providing services to operators of aeroplanes or helicopters authorized to conduct international commercial air transport;
  5. Approved maintenance organizations providing services to operators authorized to conduct international RPAS operations in accordance with Annex 6, Part IV;
  6. Organizations responsible for the type design or manufacture of aircraft, engines or propellers in accordance with Annex 8;
  7. Operators of certified aerodromes or certified heliports in accordance with Annex 14, Volume I and Volume II, respectively.
  8. Air traffic services (ATS) providers in accordance with Annex 11

## SSP Structure

State Safety Policy Objectives  
and Resources

State Safety Risk Management

SSP

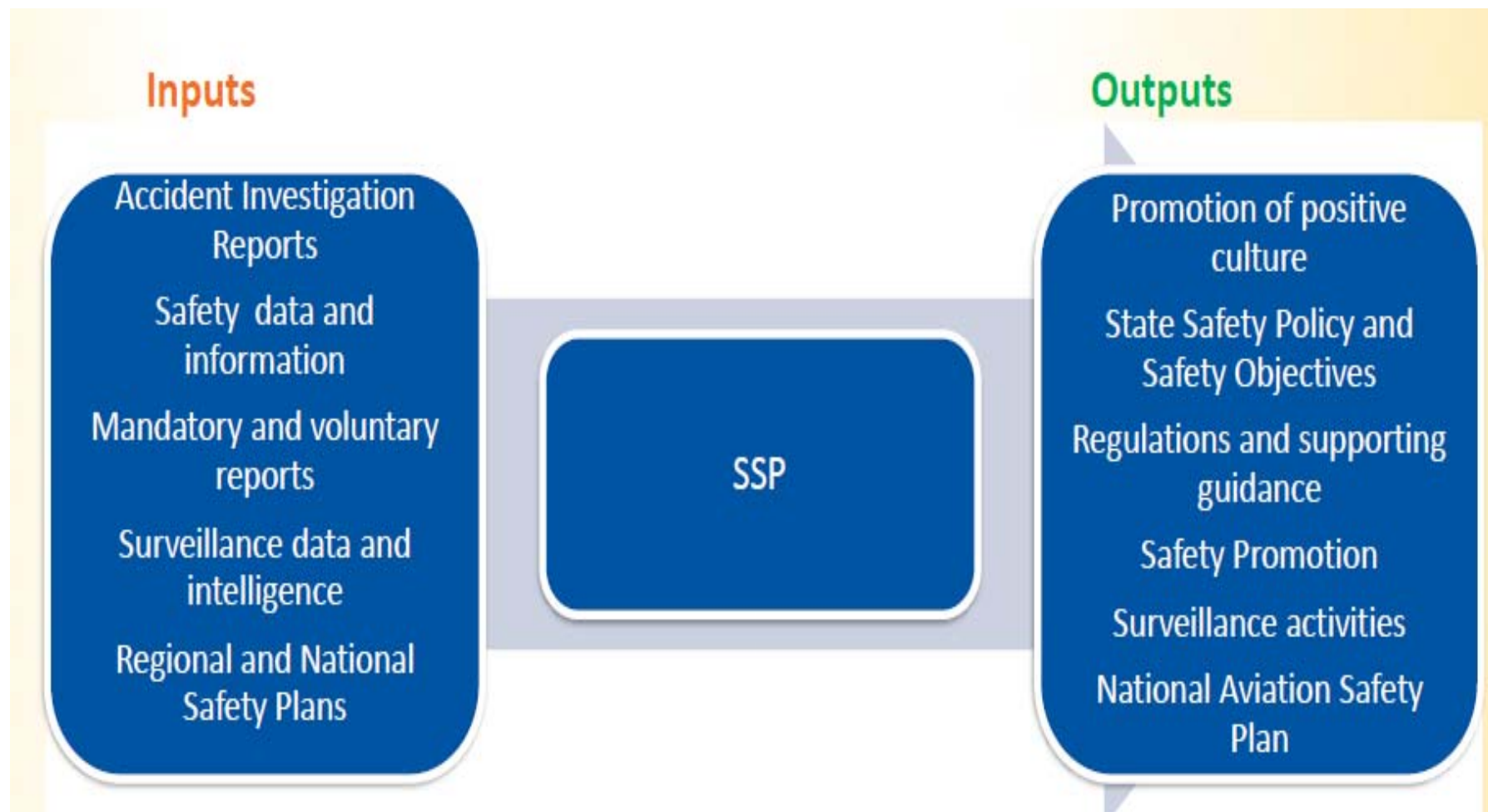
State Safety Assurance

State Safety Promotion



## Functions of State Safety Programme

9



## SSP Implementation

- ➔ When implementing an SSP, States should address the safety oversight aspects as the foundation for effective implementation.
- ➔ As with any major project implementation exercise, SSP implementation involves many tasks and subtasks to be completed within a set of timeframe.
- ➔ The number, scope and time taken to implement each task, is dependent upon the complexity of the State air transport system and the maturity of the State's safety oversight capabilities.
- ➔ When putting in place processes and activities related to SSP, States should keep in mind their **system description**(SMM Sec.1.3.2) and **interfaces**(SMM Sec. 1.3.3) as well as **scalability**(SMM 1.3.5) issues.

## What is system description?

- ➔ It is a summary of the organization's (State or service provider) processes, activities and interfaces.
- ➔ It describes the aviation system, within which the organization functions, and the various entities and authorities involved.
- ➔ It includes interfaces within the organization, as well as interfaces with external organizations that contribute to the safe delivery of services.



## System description

- ➔ Should define the scope of the SSP and the different agencies and organization involved
- ➔ Summarizes the processes and activities
- ➔ Should include internal and external interfaces
- ➔ Details the complexity of the SSP and the aviation system
- ➔ Should be a starting point for:
  - Hazard identification
  - Risk management

## Scalability

- ➔ Size and complexity of a State's aviation system
- ➔ Interactions between the entities involved in implementing SSP
- ➔ Number of service providers in each aviation domain (their size and complexity and regional environment)

## State Safety Programme Interfaces

- The State needs to identify all the entities impacting aviation safety, including other authorities responsible for accident investigation, military aviation, meteorology, etc.

### Internal

- Different inspectorates
- Safety Data Analysis Group
- Operations and finance
- Human resources
- Legal departments
- Regional Offices

### External

- Other State
- Service provider
- Contracted service
- Other Aviation Safety Agencies
- Regional Aviation Safety Groups
- ICAO

## SSP Interfaces With Industry

- Receiving Mandatory and Voluntary reports from industry
- Supporting industry
  - CAA led Industry seminars and conferences
  - Presenting at industry led seminars and conferences
  - National Aviation Safety Plan activities
- Access to safety information from industry
  - SPIs
  - Top risks
  - SMS and Compliance Performance
  - Disidentified safety information such as FDM reports
- During major aviation system structural changes



## Coordinating the SSP

- State's safety management responsibilities can be discharged by multiple aviation authorities within the State. (For example, the CAA and an independent AIA)
- States should clarify which authority within the State is responsible for coordinating the maintenance and implementation of the SSP.
- Many States assign this role to the CAA, given that the CAA is normally responsible for most of the SSP responsibilities.
- The roles and responsibilities of all the authorities involved, including Accident Investigation Authorities and Military Authorities, should be identified and documented.
- Appointment of a coordination group will facilitate good communication, avoid duplication of effort and conflicting policies and ensure effective and efficient SSP implementation.



## SSP Coordination Group

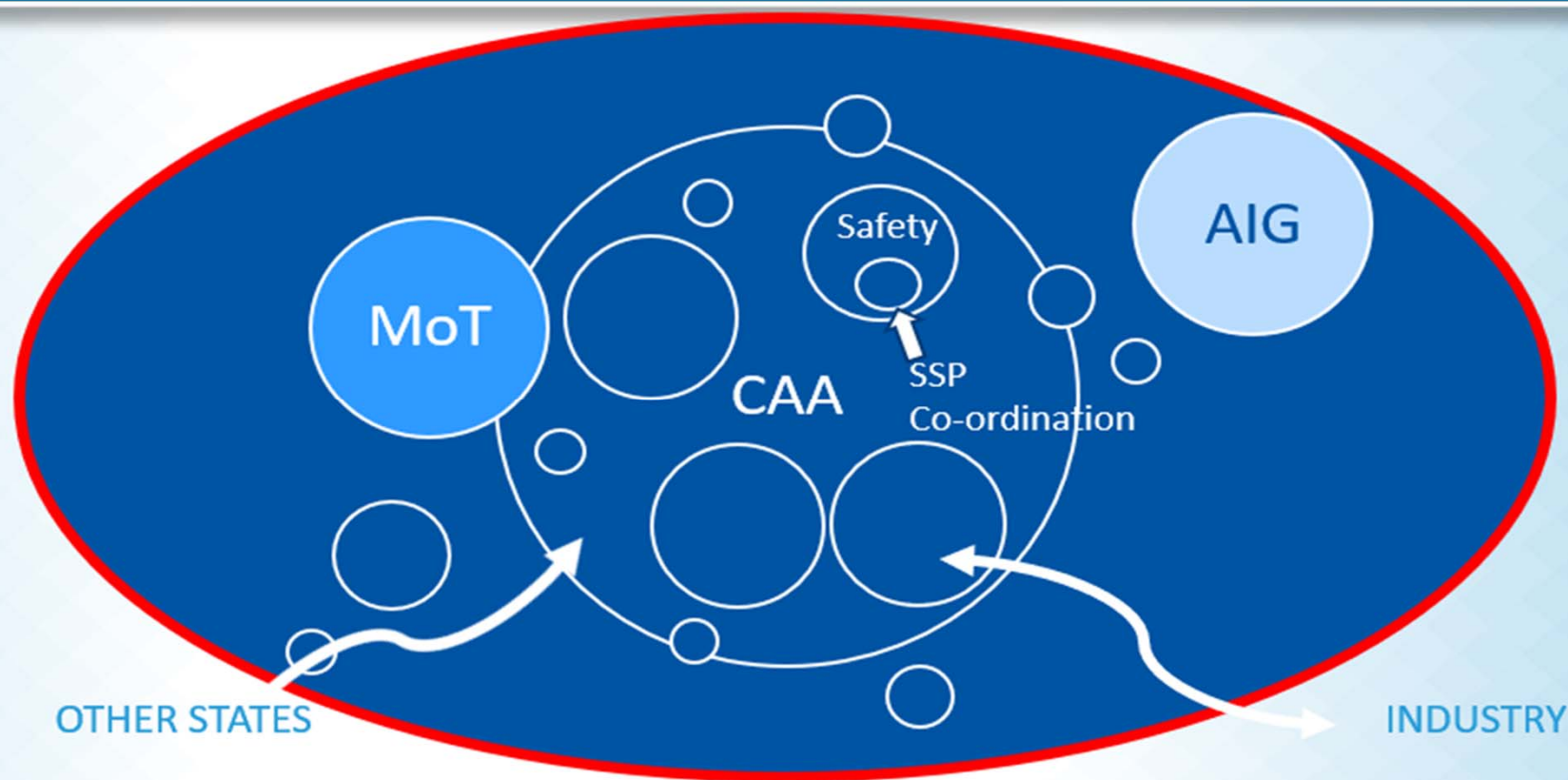
17



- Coordinates the aviation safety at State level
- Senior representatives of all major stakeholders
- Meeting e.g. once per year for monitoring and major decisions

- Discusses and prioritizes safety risks
- Identifies and proposes Action Plans
- Coordinates and monitors working level actions

## Coordinating the SSP



## SSP Foundation PQs

- The term “foundation of an SSP” refers to a subset of USOAP PQs that aim to assist States in building a solid safety oversight foundation for the implementation of an SSP. These are referred to as “SSP foundation PQs (277 out of 790 PQs)”.
- The concept of “foundation of an SSP” is intended to replace the 60 per cent EI score previously used in the GASP as a threshold to progress into implementation of the SSP.
- Link to SSP foundation tool: <https://portal.icao.int/space/Pages/SSP-Foundation.aspx>

## SSP Foundation PQs Conti..

- ➔ The SSP Foundation Tool is based on a subset of USOAP Protocol Questions (PQs), which have been identified as directly related to effective State Safety Programme (SSP) implementation.



- ➔ Status is shown as either validated by USOAP or considered as completed through the Corrective Action Plans (CAP) on the USOAP CMA Online Framework (OLF).
- ➔ In addition to the results of the SSP Gap Analysis, the SSP Foundation Tool will allow States to verify the status of these PQs the resolution of which should be included in the SSP implementation plan.
- ➔ The SSP Foundation Tool complements the SSP Gap Analysis.

## SSP Gap Analysis

- ➔ Performing an SSP gap analysis will allow the State to determine the difference between what they already have in place and what is required to have an effective SSP.
- ➔ The SSP Gap Analysis Tool developed by ICAO can be found on Integrated Safety trend Analysis and Reporting System(iSTARS) on the ICAO portal.
- ➔ The SSP gap analysis Tool supports States in developing a detailed understanding of the gap between the existing State structures and processes and those required for an effective SSP implementation in the State.

## SSP Gap Analysis Conti....

- ➔ Once the gap analysis has been completed and documented, the **components/elements/ processes identified as missing or deficient**, together with any **unresolved USOAP SSP foundation protocol questions** identified by the SSP Foundation Tool (also found on iSTARS), will form the basis of the **SSP implementation plan**.
- ➔ Link to the SSP Gap Analysis Tool:  
<https://portal.icao.int/space/Pages/SSP-Gap-Analysis.aspx>

## SSP implementation plan

- ➔ The SSP implementation plan aims to progressively enhance the existing State safety oversight and safety management processes.
- ➔ The appropriate tasks / subtasks are prioritized and documented in an action plan.
- ➔ An **SSP implementation plan**, together with the **SSP top-level (exposition) document**, provide the 'blueprint' which guides the State's journey toward effective SSP, and **continuous improvement of safety performance**.
- ➔ These **two key documents** should be made readily accessible to all relevant personnel to ensure everyone involved is aware of the SSP and its plans for implementation.
- ➔ Link to Sample implementation plan:
  - [https://docs.google.com/viewer?url=https%3A%2F%2Fwww4.icao.int%2Fdemo%2FSMI%2FSSP\\_Implementation\\_Plan.docx](https://docs.google.com/viewer?url=https%3A%2F%2Fwww4.icao.int%2Fdemo%2FSMI%2FSSP_Implementation_Plan.docx)

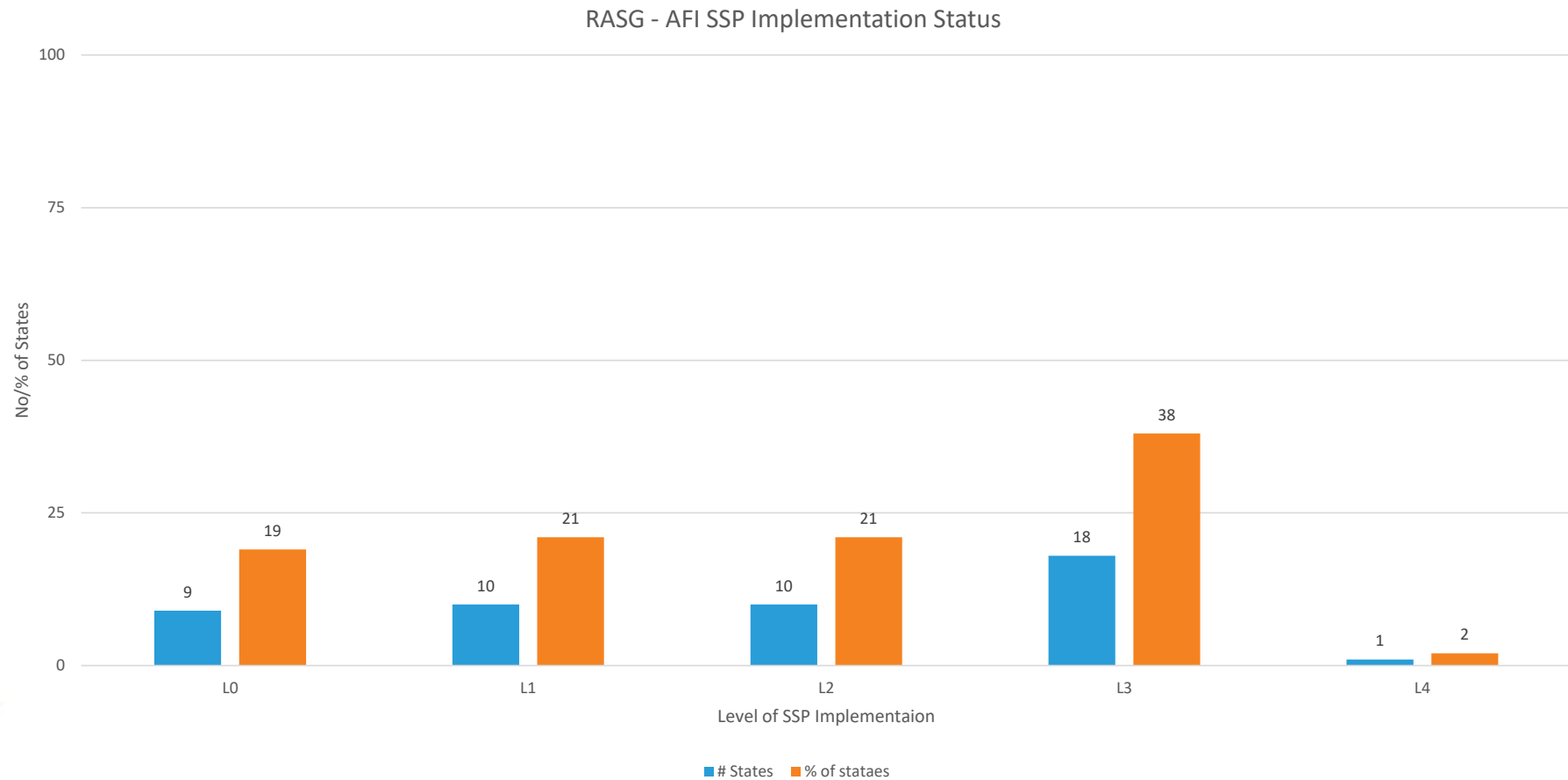
## **GASP and AFI -RASP (2023-2025) SSP Goal and Targets**

- ➔ Goal 3: Implement effective State safety programmes (SSPs) -
- ➔ Three targets:
  - Target 3.1 - calls all States to implement the foundation of an SSP, by 2023
  - Target 3.2 - calls all States to publish a national aviation safety plan (NASP) by 2024.
  - Target 3.3 - calls all States to work towards an effective SSP as follows:
    - a) by 2025 – Present
    - b) by 2028 – Present and effective



## RASG –AFI Region Level of SSP Implementation

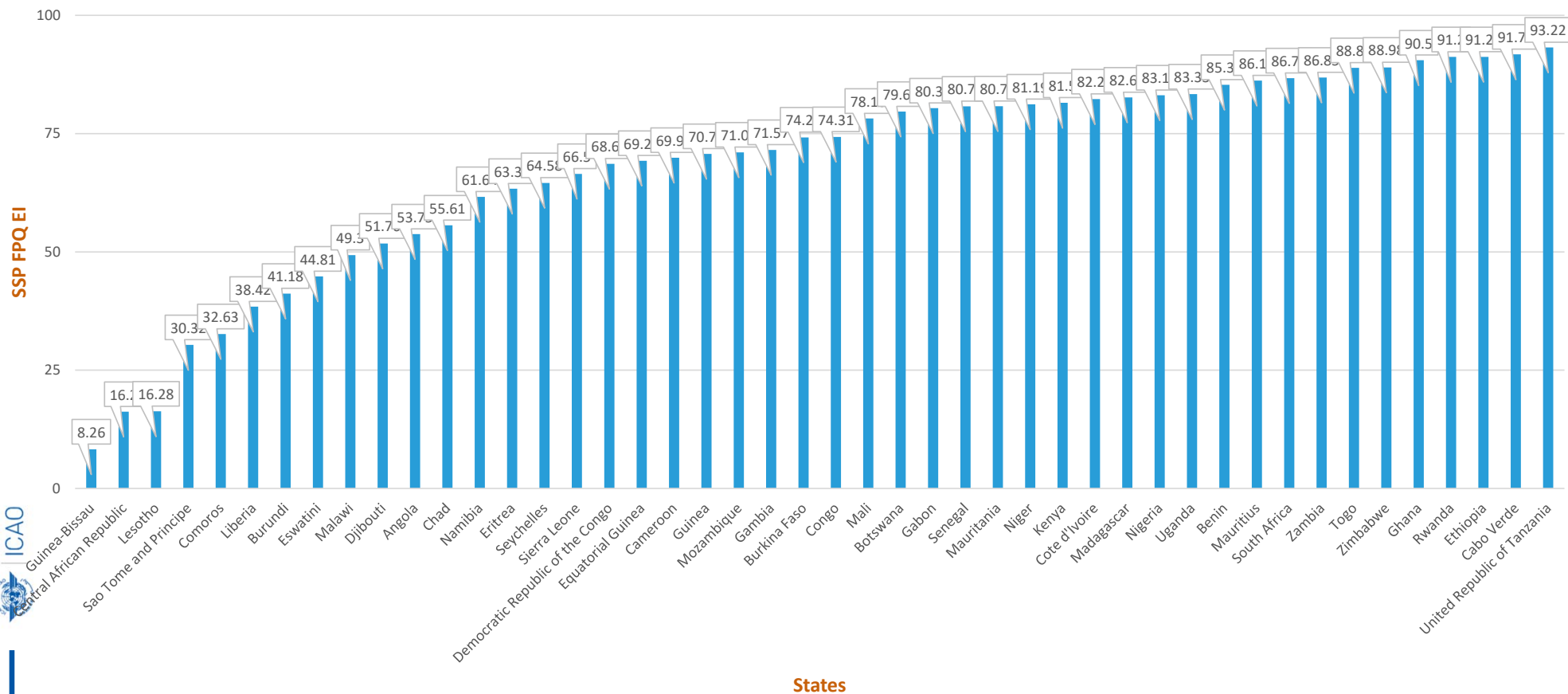
25



## RASG –AFI Overall SSP Foundation PQ Status

26

RASG -AFI Overall SSP Foundation PQ



## STATE SAFETY PROGRAMME IMPLEMENTATION ASSESSMENT (SSPIA)

- ➔ ICAO carries out State Safety Programme Implementation Assessments (SSPIAs), under the framework of the Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA), to support two of the six primary goals of the Global Aviation Safety Plan (GASP), namely, implementation of effective State Safety Programmes (SSPs) and strengthening of States' safety oversight capabilities.
- ➔ Reflect the maturity levels the State's has achieved in its SSP implementation and maintenance (PQ- SSP general aspects), SDA (safety data analysis – general aspects), PEL (ATO aspects only), OPS, AIR (AMO aspects only), ANS (ATS aspects only), AGA and AIG)  
(<https://www.icao.int/usoap>)

## STATE SAFETY PROGRAMME IMPLEMENTATION ASSESSMENT (SSPIA)

- ➔ Criteria to prioritize the scheduling of SSPIAs:
  1. Level of implementation of SSP Foundation PQs and evidence of:
    - a) A robust and sustainable safety oversight system and aircraft accident/serious incident investigation system; and
    - b) An effective mandatory safety reporting system, State aircraft accident and incident database and safety analyses; and
  2. Effective completion and updates of **PQ self-assessment** by the State (for all PQs, including SSP-related PQs).
- The SSPIA module is now available on the USOAP CMA online framework (<https://www.icao.int/usoap>)

## STATE SAFETY PROGRAMME IMPLEMENTATION ASSESSMENT (SSPIA)

PQ No.	Protocol Question	References in ICAO Guidance Material	SSP Component	Maturity Levels — Guidance for Review			
				Not Present and Not Planned	Not Present but Being Worked On	Present	Present and Effective
SSP.GEN.01	How has the State formally designated the authority in charge of coordinating the implementation and maintenance of the State Safety Programme (SSP)?	SMM 8.3.6	State Safety Policy, Objectives and Resources	Based on current situation in State	Based on State's work in progress	<p>1. The State authority in charge of coordinating the implementation and maintenance of the SSP is formally designated by an appropriate governing body.</p> <p>2. The responsibilities, governance and documented roles of the State authority in charge of coordinating the implementation and maintenance of the SSP are defined.</p>	<p>1. The designated authority that is responsible for coordinating the implementation and maintenance of the SSP, including a department or person responsible for day-to-day SSP-related functions, is able to make progress in institutionalizing the SSP within the State.</p> <p>2. The responsibilities entrusted to the State authority in charge of coordinating the implementation and maintenance of the SSP are clear to all entities involved in these activities, and there are no overlapping responsibilities and functions or gaps amongst these entities.</p>

# STATE SAFETY PROGRAMME IMPLEMENTATION ASSESSMENT (SSPIA)

CMA

State Dashboard

Self-Assessment

CAP

PQ Findings

MIR

Zewdu Teklay - (Standard ICAO User)

Language  
English

State/Organization  
Singapore

Ref. Data Language  
English

State Dashboard

Self-Assessment

Corrective Action Plan (CAP)

Mandatory Information Requests (MIR)

CMA Activity Management

User Management

Tools

Reports

Protocol Management

Quality Management

Feedback

Self-Assessment / Manage State Self-Assessment

Activity  
All

SSPIA Maturity Level  
All

Completed SA Maturity Level  
All

SSPIA Audit  
SSPIA.GEN

SSP Components  
All

Is Draft  
All

Is PPQ  
All

New Prot. Status  
All

Has Attachments  
All

PQ No.

Clear

Search

Switch to Compliance

Switch to SSP

PQ No.	Question	Language
Show/Hide Extended Columns		
SSP.GEN.01 SSP.GEN	How has the State formally designated the authority in charge of coordinating the implementation and maintenance of the State Safety Programme (SSP)?	English Español Français
SSP.GEN.02 SSP.GEN	How does the State ensure that the relevant State authorities are involved in the implementation and maintenance of the SSP?	English Español Français
SSP.GEN.03 SSP.GEN	What documentation has the State established for SSP implementation, including top-level documentation that describes the specific activities and responsibilities related to the management of safety that each State authority under the SSP is in charge of?	English Español Français
SSP.GEN.04 SSP.GEN	How does the State manage SSP-related documentation to ensure that appropriate and up-to-date information is provided to decision-makers and personnel involved in the implementation and maintenance of the SSP?	English Español Français
SSP.GEN.05 SSP.GEN	How has the State established and communicated its safety policy?	English Español Français
SSP.GEN.06 SSP.GEN	How does the State determine the SSP-related training needs at all levels of the organization to ensure that personnel of the State authorities involved in SSP implementation are qualified and competent to perform their functions and responsibilities?	English Español Français
SSP.GEN.07 SSP.GEN	How does the State ensure the availability of the necessary resources and competencies for SSP implementation?	English Español Français

Status of Assessment by ICAO

SSP 2018 Protocols as of June 2018

PQ No.  
SSP.GEN.01

SSPIA Maturity Level  
3: present and effective

Activity  
State Safety Programme Implementation Assessment

Start Date  
04/04/2022

End Date  
14/04/2022

Publish Date  
16/08/2022

End Date For State Comments

Description  
Translate Source Language English

Progress Documented  
Translate Source Language English

Evidence  
Translate Source Language English

MOT-CAAS MOU (2017)

NASC ToR

Notes of meeting of NASC 09-01 (2009)

## ICAO Safety Management Training Programme Course Matrix per State Safety Programme (SSP) Roles

ICAO Safety Management Training Programme Course Matrix per State Safety Programme (SSP) Roles



### ICAO Safety Management Training Programme

		Online (self-paced) courses					Instructor-led (in-person and virtual) courses						
		Safety Management [SM] *Prerequisite to (SSP) and (SMxP) courses	Safety Information Protection [SIP]	Aviation Data-driven Decision Making (AD3M) - Part I **Prerequisite to (AD3M) classroom course	Universal Safety Oversight Audit Programme Continuous Monitoring Approach Phase I (USOAP CMA)	Aviation Fundamentals (AVIFUN)	Safety Risk Management Fundamentals (SRMF)	Air Cargo Safety Management (ACSM)	State Safety Programme (SSP)*	Aviation Data-driven Decision Making (AD3M)**	Safety Management for Practitioners (SMxP)*	SORA - Safety Occurrence Reporting for Practitioners (SORxP)	SMS assessment and monitoring course (In development)
SSP Roles													
1	SSP – related legislation and regulations	✓	✓			✓		✓	✓				
2	SSP coordination group members	✓				✓			✓				
3	SSP management	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	
4	Safety Data collection and analysis	✓	✓	✓		✓		✓	✓	✓		✓	
5	State Safety performance	✓		✓		✓		✓	✓	✓	✓		
6	Safety Risk Management	✓				✓	✓	✓	✓		✓		
7	SMS assessment and monitoring	✓				✓			✓				✓
8	Safety promotion	✓				✓		✓	✓				
9	Heads of departments within the CAAs	✓				✓							

## Challenges associated with managing SSP Implementation

- SSP concept not well understood
- Time & resources inadequate / not allocated (budgeting issues)
- Mis-matched skills of team members
- Lack of clear goals and success criteria
- Lack of communication
- Inadequate risk management
- Unrealistic deadlines
- Limited engagement of stakeholders
- Lack of accountability
- Inadequate monitoring and control
- Scope Creep



## Useful References and Links

### ICAO Portal/iSTARS:

<https://portallogin.icao.int/>

Links to implementation support programmes and services- Safety Management Programme:

<https://www.icao.int/safety/SafetyManagement/Pages/default.aspx>

Links to the validated and approved practical examples and tools can be found on the SMI public website at:

[www.icao.int/SMI](http://www.icao.int/SMI)

An example of how a document detailing the roles and functions of a State Safety Programme may be structured. The link to Australia's Aviation State Safety Programme can be found in the link below:

[https://www4.icao.int/demo/SMI\\_COVID2/177%20Aviation State Safety Programme.pdf](https://www4.icao.int/demo/SMI_COVID2/177%20Aviation%20State%20Safety%20Programme.pdf)

The link for Plan Phase wise SSP implementation plan for Nepal can be found below:

[https://www4.icao.int/demo/SMI\\_COVID2/187%20SSP%20Implementaion%20Plan.pdf](https://www4.icao.int/demo/SMI_COVID2/187%20SSP%20Implementaion%20Plan.pdf)

## Useful References and Links

Links to Safety management international collaboration group:

<https://skybrary.aero/enhancing-safety/sm-icg-safety-management-products>

Links to Safety Management Training Programme (SMTP)

[https://www.icao.int/training/Pages/Safety-Management-Training-Programme-\(SMTP\).aspx](https://www.icao.int/training/Pages/Safety-Management-Training-Programme-(SMTP).aspx)

ICAO Safety Information Monitoring System and Safety performance Indicators

Virtual Workshop( Dec. 2020) Materials

<https://docs.google.com/spreadsheets/d/139vZ4RrZTyZnt4YMOes3j26ZMkWRcEU22dT XyesL8Q/edit#gid=1537326884>

ICAO Safety Information Monitoring System and Safety performance Indicators

Workshop, Lusaka, Zambia( Dec. 2022) Materials

<https://docs.google.com/spreadsheets/d/1560BgD26ghelbVIWv9Xw4FKlueQ38WNCg5aFA3aVrWA/edit#gid=839626009>

ICAO Safety Intelligence and Safety Performance Management Workshop, Addis

Ababa, Ethiopia( Sep. 2023) Materials

<https://docs.google.com/spreadsheets/d/136iHdC9xQK9srpQxx2sjC-CChkkPVS3T92SqOkUXSn8/edit#gid=0>

## Useful References and Links

Planning and Conducting Surveillance Based on Risk Profiling and Performance

Monitoring

<https://skybrary.aero/articles/ssp-factsheet-planning-and-conducting-surveillance-based-risk-profiling-and-performance>

Sector Safety Risk Profiling at the State Level

<https://skybrary.aero/articles/sector-safety-risk-profiling-state-level>

Risk-Based and Performance-Based Oversight Guidance

<https://skybrary.aero/articles/risk-based-and-performance-based-oversight-guidance>

Safety Oversight Following the Implementation of SMS

<https://skybrary.aero/articles/safety-oversight-following-implementation-sms-0>



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Thank You!