ASIA-PACIFIC REGIONAL AVIATION SAFETY PLAN

2023-2025

Approved by and published under the authority of the Regional Director

**INTERNATIONAL CIVIL AVIATION ORGANIZATION
ASIA AND PACIFIC REGIONAL OFFICE**

RECORD OF AMENDMENTS AND CORRIGENDA

AMENDMENTS		
No.	Date	Entered by

AMENDMENTS		
No.	Date	Entered by

CONTENTS

FOREWORD

Air transport is a key enabler for sustainable economic and social development of the Asia-Pacific (APAC) region. Furthermore, the APAC Region has become the world's largest aviation market and continues to grow rapidly in tandem with business and operating models. Despite the devastating impact of the COVID-19 pandemic on international air travel in the last three years, the APAC Region is expected to continue to see in the mid- to long-term rapid growth in air traffic, and corresponding increased airspace and airport congestion. Against this background it should be noted that not all of the States have always been experiencing increased air traffic and capacity issues. For example the Pacific Islands States have been receiving relatively low levels of traffic and are particularly vulnerable to economic downturns.

A safe aviation system contributes to the economic development of the States/ Administrations and industries of the APAC region. To ensure the safe and sustainable growth of aviation activities, there needs to be adequate air navigationservices and airport infrastructure, and sufficiently trained workforce and resources to strengthen safety oversight capabilities in compliance with International Civil Aviation Organization (ICAO) requirements. To address these issues, the APAC regionhas taken steps to put in place several regional building blocks, including Safety Enhancement Initiatives (SEIs) and tools, since the creation of the Regional Aviation Safety Group (RASG-APAC) and the Asia Pacific Regional Aviation Safety Team (APRAST) in 2011 and 2012 respectively. Efforts need to be continued to refine and integrate the regional building blocks, and focus on implementing the initiatives.

In 2020 ICAO APAC published its first edition of its Regional Aviation Safety Plan for the triennium 2020-2022 (hereinafter referred to as 'AP-RASP'). It charted the region's strategy to strengthen the management of aviation safety in the APAC region to continually reduce aviation fatalities and the risk thereof. This edition is the first update since then.

To facilitate communication with and understanding by all regional and external stakeholders, the AP-RASP has been organizedin a simple, systematic and practical manner to cater to various levels of stakeholders: The Executive Summary provides a top-level narrative of the AP-RASP, while the Chapters and Appendices provide more details on implementation at the working-level.

By means of this AP-RASP, aviation stakeholders of the APAC region including States/ Administrations, Industry Partners, International Organizations and regional groupings, reaffirm their commitment to aviation safety and to the resourcing of activities and to increasing collaboration at the regional level to enhance safety, and contribute to the continuous improvement of aviation at the global, regional and State levels.

The AP-RASP 2023-2025 is also aligned with the current version of Safety Strategy explained in the Global Aviation Safety Plan (Doc 10004) including the Indicator Development as narrated in the Manual on Monitoring Implementation of Regional and National Aviation Safety Plans (Doc 10162) and guidance on the Action Plan under the Global Aviation Safety Roadmap (Doc 10161). The AP-RASP also considered the current contents as guided under the Manual on the Development of Regional and National Aviation Safety Plans (Doc 10131) published in 2022.

GLOSSARY

DEFINITIONS

Adequate. The state of fulfilling minimal requirements; satisfactory; acceptable; sufficient.

Audit. A systematic, independent and documented process for obtaining evidence and evaluating it objectively to determine the extent to which requirements and audit criteria are fulfilled.

Audit area. One of eight audit areas pertaining to the Universal Safety Oversight Audit Programme (USOAP), i.e. primary aviation legislation and civil aviation regulations (LEG), civil aviation organization (ORG); personnel licensing and training (PEL); aircraft operations (OPS); airworthiness of aircraft (AIR); aircraft accident and incident investigation (AIG); air navigation services (ANS); and aerodromes and ground aids (AGA).

Contributing factors. Actions, omissions, events, conditions, or a combination thereof, which, if eliminated, avoided or absent, would have reduced the probability of the accident or incident occurring, or mitigated the severity of the consequences of the accident or incident. The identification of contributing factors does not imply the assignment of fault or the determination of administrative, civil or criminal liability.

Critical elements (CEs). The critical elements of a safety oversight system encompass the whole spectrum of civil aviation activities. They are the building blocks upon which an effective safety oversight system is based. The level of effective implementation of the CEs is an indication of a State's capability for safety oversight.

Effective implementation (EI). A measure of the State's safety oversight capability, calculated for each critical element, each audit area or as an overall measure. The EI is expressed as a percentage.

Operator. The person, organization or enterprise engaged in or offering to engage in an aircraft operation.

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

Safety audit. A USOAP CMA audit that a State requests and pays for (on a cost recovery basis). The State determines the scope and date of a safety audit. Also see definition of *audit*.

Safety data. A defined set of facts or set of safety values collected from various aviation related sources, which is used to maintain or improve safety.

   Note.— Such safety data is collected from proactive or reactive safety-related activities, including but not limited to:

   a)   *accident or incident investigations;*

   b)   *safety reporting;*

  c) continuing airworthiness reporting;

  d) operational performance monitoring;

  e) inspections, audits, surveys; or

  f) safety studies and reviews.

Safety enhancement: initiative (SEI). One or more actions to eliminate or mitigate risks associated with contributing factors to a safety occurrence or to address an identified safety deficiency. There are two main types of SEIs to address safety risks and issues at the regional level. The first are SEIs developed by RASG-APAC/ APRAST in response to specific regional risks (the Regional High Risk Categories R-HRC) which are typically of an operational/ technical nature; the second are SEIs applicable to Regions containedin the GASR, which are more focused on the five global High Risk Categories (G-HRCs) and generic organizational issues.

Safety information. Safety data processed, organized or analysed in a given context so as to make it useful for safety management purposes.

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

Safety oversight. A function performed by a State to ensure that individuals and organizations performing an aviation activity comply with safety-related national laws and regulations.

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

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

Safety performance target. The State or service provider's planned or intended target for a safety performance indicator overa given period that aligns with the safety objectives.

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

Significant safety concern (SSC). Occurs when the State allows the holder of an authorization or approval to exercise the privileges attached to it, although the minimum requirements established by the State and by the Standards set forth in the Annexes to the Convention are not met, resulting in an immediate safety risk to international civil aviation.

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

ABBREVIATIONS AND ACRONYMS

AAIIA	Accident and Incident Investigation Authority
AAPA	Association of Asia-Pacific Airlines
ACI	Airports Council International
ADRM	Aerodrome
AGA	Aerodrome and Ground Aids
AIG	Aircraft Accident and Incident Investigation
ALAR	Approach and Landing Reduction
ANS	Air Navigation Services
ANSP	Air Navigation Service Provider
AOPSG	Aerodromes Operations and Planning Working Sub-Group
APAC	Asia-Pacific Region
APAC-AIG	Asia Pacific – Accident Investigation Working Group
APANPIRG	Asia-Pacific Air Navigation Planning and Implementation Regional Group
APEC	Asia-Pacific Economic Cooperation
APEX in Safety	Airport Excellence in Safety Peer Assessment
APRAST	Asia-Pacific Regional Aviation Safety Team
AP-RASP	Asia-Pacific Regional Aviation Safety Plan
AP-RASPAT	Asia-Pacific Regional Aviation Safety Priorities and Targets
AP-SHARE	Asia-Pacific Regional Data Collection, Analysis and Information Sharing
APV	Approaches with Vertical Guidance
ARC	Abnormal Runway Contact
ASBU	Aviation System Block Upgrade
ASEAN	Association of South East Asian Nations
ASIAP	Aviation Safety Implementation Assistance Partnership
ASIAS	Aviation Safety Information Analysis and Sharing program
ASR	Annual Safety Report
ATM	Air Traffic Management
ATS	Air Traffic Services
BIRD	Bird Strike

CAA	Civil Aviation Authority
CASI	Civil Aviation Safety Inspectors
CAST	Commercial Aviation Safety Team
CAT	Combined Action Team
CBTA	Asia-Pacific Competency-based Training and Assessment Task Force
CE	Critical Element
CFIT	Controlled Flight Into Terrain
CICTT	CAST/ICAO Common Taxonomy Team
CMA	Continuous Monitoring Approach
COSCAP	Cooperative Development of Operational Safety and Continuing Airworthiness Programme
CRM	Crew Resource Management
CAST	US Commercial Aviation Safety Team
CST	Collaborative Safety Team
CTA	Chief Technical Advisor
DG	Drafting Group (sub-group of Asia-Pacific Regional Aviation Safety Plan ad-hoc Working Group)
DGCA	Conference of Directors General of Civil Aviation
e-CCBM	electronic COSCAPs Capacity Building Matrix (e-CCBM)
EI	Effective implementation
EU ARISE+	ASEAN Regional Integration Support by the European Union Plus Programme
EU-SA APP	European Union-South Asia Aviation Partnership Programme
EU-SEA APP	European Union-South East Asia Aviation Partnership Programme
FDAP	Flight Data Analysis Programme
FDX	Flight Data Exchange
FIR	Flight Information Region
F-NI	Fire/ Smoke (Non-Impact)
G2B	Government-to-Business
GADSS	Global Aeronautical Distress and Safety System
GANP	Global Air Navigation Plan
GASOS	Global Aviation Safety Oversight System
GASP	Global Aviation Safety Plan
GASP-SG	Global Aviation Safety Plan Study Group
GDP	Gross Domestic Product

GEN	General aspects
G-HRC	Global High Risk Categories of Occurrences
GPWS	Ground Proximity Warning System
HRC	High Risk Categories of Occurrences
IAOPA	International Council of Aircraft Owner and Pilot Associations
IAT	Information Analysis Team
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IDX	Incident Data Exchange
IFALPA	International Federation of Airline Pilots' Associations
IOSA	IATA Operational Safety Audit
ISAGO	IATA Safety Audit for Ground Operations
iSTARS	integrated Safety Trend Analysis and Reporting System
LOC-I	Loss of Control In-flight
MAC	AIRPROX/ TCAS alert/ loss of separation/ near miss collisions/ mid-air collisions
MTOW	Maximum Take-Off Weight
NASP	National Aviation Safety Plan
NCLB	No Country Left Behind
NDP	National development plan
OAG	Official Airline Guide
OPS	Flight Operations (USOAP Audit Area)
Ops	Operational (Safety)
ORG	Civil aviation organization (USOAP Audit Area)
Org	Organizational/ Systemic
PASO	Pacific Aviation Safety Office
PC	Project Coordinator
PDCA	Plan-Do-Check-Act methodology
RAMP	Ground Handling
RASG	Regional Aviation Safety Group
RASMAG	Regional Airspace Safety Monitoring Advisory Group
RASP	Regional Aviation Safety Plan
RAST	Regional Aviation Safety Team

RE	Runway excursion (departure or landing)
RG	Review Group (sub-group of Asia-Pacific Regional Aviation Safety Plan ad-hoc Working Group)
R-HRC	Regional High Risk Categories of Occurrences
RI	Runway Incursion
RS	Runway Safety
RSOO	Regional Safety Oversight Organization
RST	Runway Safety Team
RTC	ICAO Regional Training Centre of Excellence
SAFE	ICAO Safety Fund
SARI	South Asian Regional Initiative
SARPs	Standards and Recommended Practices
SCBP	APAC Standardized Capacity Building Programme
SCF-NP	System/Component Failure or Malfunction – Non-powerplant
SCF-PP	System/Component Failure or Malfunction – Powerplant
SDCPS	Safety Data Collection and Processing System
SEA	South East Asia region
SEI	Safety enhancement initiatives
SISG	ICAO's Safety Indicator Study Group
SMS	Safety Management Systems
SPI	Safety Performance Indicator
SSC	Significant Safety Concern
SSO	State Safety Oversight
SSP	State Safety Programme
SRP	Safety Reporting and Programme
TCAS	Traffic Collision and Avoidance System
TOR	Terms of Reference
UAS	Unmanned Aircraft Systems
UNK	Unknown or Undetermined
UPRT	Upset Prevention and Recovery Training
USD	US Dollar
USOAP	Universal Safety Oversight Audit Programme
USOS	Undershoot/ Overshoot
WG	Working Group
XBT	Cross-Border Transferability

0. EXECUTIVE SUMMARY

0.1   The Asia-Pacific Regional Aviation Safety Plan 2023-2025 Edition (hereinafter referred to as 'AP-RASP') is an update to the first edition of the plan written for the previous triennium 2020 – 2022. It provides a three-year plan for States/ Administrations in the Asia-Pacific (APAC) region to improve its safety oversight and management capability. This relates to the continuous reduction of regional operational risks and improvement in States'/ Administrations' safety oversight and management capabilities. It adopts a risk-based approach to managing safety at the regional-level through collaboration between regional aviation stakeholders in a coordinated manner. The plan also supports APAC States/ Administrations and Industry in implementing the Global Aviation Safety Plan (GASP) 2023-2025 Edition along with Global Aviation Safety Roadmap 2023-2025 and the safety-related air navigation services (ANS) initiatives in the APAC Seamless ANS Plan, and in meeting respective targets of the GASP (with adaptations to the APAC regional context), and the Declaration of the Asia Pacific Ministerial Conference on Civil Aviation made in 2018 (aka Beijing Declaration). For more information on these documents, refer to Chapter 1.4.

0.2   The APAC region's strategic approach to managing safety at the regional level is to address the region's diverse regulatory and operational landscape in a timely manner. The strategic approach is based on two pillars: identifying five Regional Goals, under which a number of Actions address the top APAC regional Operational and Organizational/ systemic risks and challenges. Its forecast of risks for the triennium of 2023-2025 is based on available data on regional operational safety risks up to 2022 and guidelines provided by the GASP. For more details, see Chapters 2.2-2.3.

a)   First Pillar: Enhance the existing regional platforms/ mechanisms and establish effective safety oversight and management capabilities.

This involves Actions to integrate and refine existing Regional Aviation Safety Group (RASG-APAC)/ Asia- Pacific Regional Aviation Safety Team (APRAST) building blocks and enhancing their links, coordination and communication with other regional mechanisms especially Cooperative Development of Operational Safety and Continuing Airworthiness Programme (COSCAPs), and their respective RASTs, Regional Safety Oversight Organizations (RSOOs) such as the Pacific Aviation Safety Office (PASO) and the Asia/Pacific Air Navigation Planning and Implementation Regional Work Group (APANPIRG) and its Subgroups, which should be leveraged to drive AP-RASP implementation at sub-regional level.

Making training expertise and resources across COSCAPs/RSOOs more readily available to States/ Administrations will also facilitate their establishment of effective safety oversight capabilities.

b)   Second Pillar: Continue to address operational safety risks effectively and establish effective safety risk management.

Actions to improve aviation safety, namely the existing 17 RASG-APAC/ APRAST Safety Enhancement Initiative (SEI) outcomes/ tools and Standardized Capacity Building Programme (SCBP), and the safety-related initiatives of the APAC Seamless ANS Plan, if not yet implemented, are to be implemented by APAC States/ Administrations and their industry in a targeted and customized manner.

0.3   Taking into consideration of the GASP global high risk categories of occurrence (G-HRCs) of loss of control – inflight (LOC-I), controlled flight into terrain (CFIT), mid-air collision (MAC), runway excursion (RE) and runway incursion (RI), the top Regional HRCs for the APAC region were identified from the RASG-APAC Annual Safety Report (ASR) 2022, which reflects safety data up to end-2021: These are similar to those identified in the GASP, namely CFIT, LOC-I and Runway Safety. These categories are the primary contributors to fatality risk in the region and account for a high proportion of accidents. Runway excursion (landing) was also a significant contributor to accidents in the region   The details are at Chapter 3.1 and Appendix H.

0.4   The following top regional organizational issues were identified from the APAC ASR 2022, the ICAO APAC Regional Report as well as documents and presentations at aviation safety-related meetings and forums including RASG-APAC and APRAST. The details are provided in Chapter 4.1.

a)   Slow pace of implementation of RASG-APAC/ APRAST SEIs and tools to mitigate operational risks;

b)   Lower EI scores for all categories as compared to global average. The weakest areas in terms of ICAO Universal Safety Oversight Audit Programme (USOAP) Effective Implementation (EI) score were critical elements CE-8: Resolution of safety issues, CE-4: Technical personnel qualifications, and CE-7: Surveillance Obligations; and technical areas of aircraft and incident investigation (AIG), aerodrome and ground aids (AGA) and Civil aviation organization (CAO);

c) Slow pace of State Safety Programme (SSP) implementation, as well as understanding of newer safety management and performance-based concepts;

d) Lack of resources and expertise to manage and collect data on a State level, and no formal mechanisms in place that allow for the sharing and benchmarking of information at the regional level;

e) Increasing risks associated with airspace congestion once traffic returns to pre-COVID-19 levels, and the lack of appropriate infrastructure to support safe operations at these traffic levels; lack of capacity of regulatory authorities.

0.5   To address these top Regional HRCs and organizational issues, approximately 40 Actions, most of which inherited from the previous edition of RASP, are proposed:

a) Operational (Ops) Actions are the outputs of the existing 17 RASG-APAC/ APRAST SEIs, which address the top Regional HRCs; and

b) Organizational (ORG) Actions help implement the AP-RASP and are aligned with and fulfil the existing 23 RASG-APAC/ APRAST SEIs and the Standardized Capacity Building Programme (SCBP), Actions in the GASP, Global Aviation Safety Roadmap, Beijing Declaration and APAC Seamless ANS Plan, as well as related key action items arising from Conferences of Directors General of Civil Aviation, Asia and Pacific Regions (DGCA-APAC) and RASG-APAC/ APRAST meetings.

0.6   These Actions are laid out in two Roadmaps, Operational (Ops) and Organizational (Org) respectively, and are further grouped into the following five Regional Goals,:

       I. Reduction in Operational Risks;

       II. Improvements in Safety Oversight and Compliance;

       III. Consistent and effective safety management system (SMS) and SSP;

       IV. Data-driven regulatory oversight; and

       V. Enhanced aviation infrastructure (physical and institutional).

0.7   The intended safety improvements and outcomes resulting from the implementation of the AP-RASP Actions as a whole, are expressed in the form of 18 Targets. Three of these targets are categorised and grouped under the Ops Roadmap and Regional Goal I, and 15 others are grouped under the ORG Roadmap and all five Regional Goals. The Targets were selected to ensure a focus on both organizational or systemic improvements and addressing operational safety risks, and to ensure alignment with Targets in the various key global and regional documents.

0.8   The two roadmaps are at **Appendix A**, and the timeline for the implementation of Actions and achievement of the Targets is summarised below.

2022	2023	2024	2025
	Actions: A.I.1-A.I.17 **Targets:** T1-T3		
Actions: A.IV.1 (completed)		**Actions:** A.III.3 A.V.3 **Targets:** T11, T12	**Actions:** A.I.18-A.I.21, A.II.4-A.II.5, A.IV.2, A.IV.3-A.IV.4 A.IV.5, A.V.2, A.V.4, A.V.6-A.V.7 **Targets:** T4-T6, T9, T11, T13-T18
	Actions: A.II.1-A.II.3, A.III.1-A.III.2. A.V.1 **Targets:** T5, T7-T8		

Table 1: Timeline for achievement of AP-RASP 2023-2025 Targets

0.9   The region's overall progress in implementing the AP-RASP Actions and achieving the Targets will be monitored and annually reported at RASG-APAC/ APRAST meetings, subject to the timely availability of the relevant data. APRAST will follow up to develop more detailed indicators to measure the progress of implementation of the Actions and progress towards achievement of the Targets. For more details, see Chapters 6.1-6.2.

0.10   The AP-RASP provides guidance on how States should identify which top risks and key issues mentioned in the GASP and AP-RASP apply to their national context – a guidance for developing National Aviation Safety Plan (NASP) is provided. States should also add others which are unique to their operational context. Several AP-RASP Actions and Targets which are intended for implementation by States at the national level are recommended for inclusion in NASP roadmaps. States should demonstrate the links of their NASPs to the GASP and AP-RASP, through a template which maps the key NASP contents against the GASP and AP-RASP guidelines.

0.11   States should view the AP-RASP as a recommended guideline to customise their NASPs: States which are ready todevelop their NASP should reference the AP-RASP, while States which are not ready are recommended to implement the relevant AP-RASP Actions that reflect their industry and operational context. For more details, see Chapter 5.2.

0.12   Any feedback and issues arising from the development and implementation of AP-RASP and NASPs, e.g. implementation of ICAO Standards and Recommended Practices (SARPs) for the APAC region, should be addressed to ICAO for its consideration to update the GASP and its other guidance materials.

SUMMARY OF AMENDMENTS

This table contains a summary of the amendments made to the 2023–2025 edition of the RASP and their rationale.

Amendment	Rationale
Goal 1 – Target 1 through 3 were updated to reflect a decreasing three-year rolling average.	A rolling average is used to better measure fluctuations in accident data over a given time period.
Goal 1 – Target 4 through 6 were extended to 2025.	Date of completion extended respectively by three to five years due to the impact of the coronavirus disease (COVID-19) pandemic.
Goal 1 – Action I.1 through I.21 were extended to 2025.	Date of completion extended by three years due to the impact of the coronavirus disease (COVID-19) pandemic.
Goal 2 – Target 7 through 9 were extended to 2025.	Date of completion extended by three years due to the impact of the coronavirus disease (COVID-19) pandemic.
Goal 2 – Target 10 (States to progressively enhance safety oversight capability to achieve at least 75% EI in USOAP CMA, and to achieve an APAC average overall USOAP EI score higher or equal to the global average) was extended to 2024.	Date of completion extended by two years due to the impact of the coronavirus disease (COVID-19) pandemic.
Goal 2 — Target 11 (States to reach a safety oversight index greater than one, in all categories, by 2022) was deleted. All subsequent Targets were renumbered accordingly.	The target was removed since various factors that could impact the results indicated concerns about its usability, including the changes in traffic volumes resulting from the COVID-19 pandemic, which may create a misperception on actual safety improvements.
Goal 2 – Action II.1 through II.4 were extended to 2025.	Date of completion extended by three years due to the impact of the coronavirus disease (COVID-19) pandemic.
Goal 2 – Action II.5 (Encourage use of APEX in Safety as tool to enhance AGA EI and aerodrome certification) was added.	Added as a new action item as per GASP Target 5 to "expand use of industry programmes" and as per DGCA Action Item 57/17 held in July 2022 to "urge States to include APEX in their NASPs."
Goal 3 – Target 11 (States should implement an SSP that is present) was extended to 2025 and the wording was changed to align with the GASP.	Date of completion extended by three years due to the impact of the coronavirus disease (COVID-19) pandemic. ICAO has various descriptions for SSP Implementation status and maturity. ICAO has updated the relevant target descriptor in the GASP 2023-2025 as "implement an SSP that is present."
Goal 3 — A new Target 12 (States to publish a national aviation safety plan (NASP) by 2024) was added under this goal. The previous goal within the AP-RASP was to *develop* a national aviation safety plan.	NASP is a tool in support of State safety management, including SSP implementation. Therefore, it is a logical step to bridge the gap between SSP foundation and effective SSP implementation.
Goal 3 – Action III.1 and III.2 were extended to 2025	Date of completion extended by three years due to the impact of the coronavirus disease (COVID-19) pandemic.
Goal 3 – Action III.3 (Support the development of NASPs) was extended to 2024.	Date of completion extended by two years due to the impact of the coronavirus disease (COVID-19) pandemic.
Goal 4 – Target 13 and 14 were extended to 2025.	Date of completion extended by five years due to the impact of the coronavirus disease (COVID-19) pandemic.
Goal 4 – Action IV.2 and Action IV.5 were extended to 2025.	Date of completion extended respectively by three to four years due to the impact of the coronavirus disease (COVID-19) pandemic.

Goal 4 – Action IV.1, IV.3 and IV.4 were noted as complete.	The action(s) were completed in the previous triennium and will be retained within the roadmap for historical context.
Goal 5 – Target 15 through 18 were extended to 2025.	Date of completion extended by three years due to the impact of the coronavirus disease (COVID-19) pandemic.
Goal 5 – Action V.1, V.2, V.4, V.6 and V.7 were extended to 2025.	Date of completion extended respectively by three to five years due to the impact of the coronavirus disease (COVID-19) pandemic.
Goal 5 – Action V.3 was extended to 2024.	Date of completion extended by four years due to the impact of the coronavirus disease (COVID-19) pandemic.
Goal 5 – Action V.5 was noted as complete.	The action(s) were completed in the previous triennium and will be retained within the roadmap for historical context.
Appendix C (Terms of Reference of the AP-RASP ad-hoc Working Group) removed.	The removal follows the RASG-APAC decision to form a standing working group within APRAST instead of an ad-hoc working group. All terms of reference are officially located in the APAC Procedural Handbook; therefore, the terms of reference are removed from the AP-RASP to reduce duplication.
Updated the wording regarding Midair Collision (MAC) risk as a possible regional high-risk category of occurrence (R-HRC).	MAC is listed as a global high-risk category of occurrence in the GASP 2023 – 2025 and yet the APRAST's Asia-Pacific Information Analysis Team (IAT) reported that the available data indicates that MAC does not rise to the level of a R-HRC for the region at this time. However, monitoring of proactive safety data related to MAC risk will continue pending the formal recommendations by the IAT to the APRAST's Safety Reporting and Programme WG. Although regional data did not support MAC risk as an R-HRC in the Asia-Pacific Region at the present, references are made for MAC as a risk to be continuously monitored so as to align with the GASP.
Deleted certain areas in which the AP-RASPAT document is mentioned.	The AP-RASPAT served as a foundational document and its contents were transferred into the AP-RASP 2020-2022, thus the AP-RASP supersedes the AP-RASPAT. Only mentions of the AP-RASPAT in its historical context remains in the AP-RASP 2023-2025.
Created a new section in Chapter 3 on disruption events.	Although the RASP does not address COVID-19 itself, it may serve as a mechanism for States to identify hazards and determine their level of preparedness to respond to such events and foresee future ones, as an integral part of State safety management.
Updated the mapping templates located in Appendices F and K	Substantial revisions were made to reference documents primarily ICAO Doc 10131 "Manual on the Development of Regional and National Aviation Safety Plans" and ICAO Doc 10161 "Global Aviation Safety Roadmap."

PART I – PLANNING

1.   INTRODUCTION

1.1   Purpose of the AP-RASP

1.1.1   The AP-RASP promotes the effective implementation of safety oversight systems of States/ Administrations in the APAC region, a risk-based approach to managing safety at the regional level, as well as a coordinated and collaborative approach between regional aviation stakeholders. The plan also supports APAC States/ Administrations and Industry in implementing the GASP and the safety-related ANS initiatives in the APAC Seamless ANS Plan version. All stakeholders are encouraged to support and implement the AP-RASP as the regional strategy for the continuous improvement of aviation safety.

1.1.2   This edition of the AP-RASP presents the regional strategy and roadmap of Actions for enhancing aviation safety in the APAC region for a period of three years, 2023 to 2025.

1.2   Structure of the AP-RASP

1.2.1   The key components of the AP-RASP are summarised in **Figure 1**.
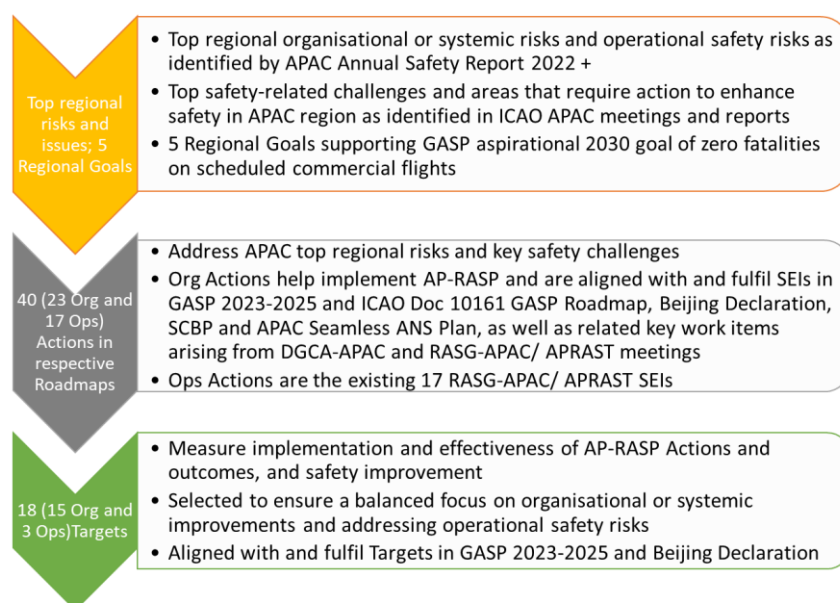

Top regional risks and issues; 5 Regional Goals
- Top regional organisational or systemic risks and operational safety risks as identified by APAC Annual Safety Report 2022 +
- Top safety-related challenges and areas that require action to enhance safety in APAC region as identified in ICAO APAC meetings and reports
- 5 Regional Goals supporting GASP aspirational 2030 goal of zero fatalities on scheduled commercial flights

40 (23 Org and 17 Ops) Actions in respective Roadmaps
- Address APAC top regional risks and key safety challenges
- Org Actions help implement AP-RASP and are aligned with and fulfil SEIs in GASP 2023-2025 and ICAO Doc 10161 GASP Roadmap, Beijing Declaration, SCBP and APAC Seamless ANS Plan, as well as related key work items arising from DGCA-APAC and RASG-APAC/ APRAST meetings
- Ops Actions are the existing 17 RASG-APAC/ APRAST SEIs

18 (15 Org and 3 Ops)Targets
- Measure implementation and effectiveness of AP-RASP Actions and outcomes, and safety improvement
- Selected to ensure a balanced focus on organisational or systemic improvements and addressing operational safety risks
- Aligned with and fulfil Targets in GASP 2023-2025 and Beijing Declaration

Figure 1. Summary of AP-RASP 2023-2025 Edition

1.2.2   The AP-RASP document is structured into an Executive Summary and two Parts, 'Planning' and 'Implementation', which comprise four and two Chapters respectively:

  a)   Chapter 0 'Executive Summary' is a broad but comprehensive narrative of the gist and key contents of the AP-RASP. It caters to high-level readers and regional stakeholders, and also serves as a quick recap for readers already familiar with AP-RASP contents;

Part I: Planning

  b)   Chapter 1 'Introduction' states the purpose and structure of the AP-RASP, particularly how its Actions and Targets are aligned with the key global and regional documents; existing key global and regional documents which form the basis upon which the AP-RASP was developed and to which it is aligned; and associated specific commitments of States/ Administrations and other stakeholders in the region towards improving safety;

c) Chapter 2 'APAC region's strategic approach to managing safety' explains the APAC region's diverse regulatory landscape and set of operating environments; the key approach and two-pillar strategy adopted by the region in managing aviation safety; and designing the AP-RASP for the 2023-2025 triennium; and achieving

an envisioned safety data collection and processing system (SDCPS) for the APAC region, through integrating and refining the existing foundational building blocks;

d) Chapter 3 'Addressing regional operational safety risks (Ops)' details the top operational safety risks and related contributing factors identified for the APAC region for the triennium; Actions under the Ops Roadmap developed to mitigate these risks for respective relevant stakeholders, and how these are aligned with existing key global and regional documents;

e) Chapter 4 'Addressing other regional safety issues (Org)' details the weakest areas of States' safety oversight capabilities and other safety issues and priorities identified for the region for the triennium; Actions under the Org Roadmap developed to address these deficiencies/ issues for respective relevant stakeholders, and how these are aligned with existing key global and regional documents;

Part 2: Implementation

f) Chapter 5 'Responsibilities' provides the assignment of roles and responsibilities to key stakeholders to govern, develop and implement the AP-RASP as well as monitor its implementation and outcomes in improving safety in the region; and guidance to APAC States to develop and implement NASP in alignment with GASP and AP-RASP; and

g) Chapter 6, 'Monitoring implementation' describes how the outcomes and effectiveness of AP-RASP Actions in improving operational safety risks and safety oversight capabilities in the region will be measured and monitored against a series of Targets; the respective stakeholders for the AP-RASP Targets, and how the Targets are aligned with existing key global and regional documents; how the progress of AP-RASP implementation will be communicated regularly to regional stakeholders; the process for amendment of the AP-RASP to ensure continued relevance to current context and effectiveness in addressing top regional operational safety risks, safety oversight capabilities and other safety issues; and suggested ways to mitigate project risks that may hinder AP-RASP implementation.

1.3 How the AP-RASP was developed and updated

1.3.1   APRAST/17 held in January 2022 decided to form a new ad hoc working group (WG) to update the RASP for the next triennium, i.e. years 2023 to 2025. States and Industry Partners responded to a call for nominations to the WG. An inaugural meeting of the WG was then held in May 2022 to discuss the drafting of the new edition of RASP. India, USA and ACI were appointed co-leads of the ad-hoc working group at the meeting.

1.3.2   The group decided that framework of the current edition should be maintained for the next edition but any updates to its foundation documents such as GASP, Global Aviation Safety Roadmap, Beijing Declaration as well as emerging safety issues identified in the latest annual safety reports should be taken into consideration and incorporated.

1.3.3   In developing the 2023 – 2025 edition of AP-RASP, the WG coordinated closely with APRAST (SEI and SRP) WGs and the APAC-AIG, with support and inputs from COSCAPs, PASO and the ICAO-APAC / APRAST Secretariat. APANPIRG was also consulted for the ANS-related portions. Tasks relating to the development of AP-RASP were assigned by the ad-hoc WG to these groups as relevant. The WG decided that no Review Group, as for the 2020-2022 edition of the RASP, was required and this was approved by APRAST/18 in June 2022.

1.3.4   The eight-step process recommended by the GASP 2023 – 2025 to develop RASPs and NASPs, outlined in the following was adopted in the drafting of the new edition of the RASP:

a) Step 1- Continuous collection of inputs by the AP-RASP WG
b) Step 2- Conduct self-evaluation
c) Step 3- Identifies hazards and safety deficiencies
d) Step 4- Develop list of prioritized national safety issues

e)   Step 5- Set goals, targets and indicators
f)   Step 6- Conduct gap analysis to identify SEIs
g)   Step 7- Develop list of prioritized SEIs
h)   Step 8- Measure safety performance
i)   Step 9- Monitor Implementation

1.3.5   APRAST/18 held in June 2022 reviewed and endorsed a number of proposed key updates to RASP and contents to be retained thereof that the ad Hoc WG proposed in WP9. These in summary included:

a)   Update references to relevant documents, such as GASP, ASR and SEI
b)   Make changes arising from emerging issues identified in ASR 2022 and as per implementation status of regional SEIs.
c)   Add paragraphs on resilience of aviation system to disruption events such as COVID-19 with reference to GASP
d)   Align Regional HRC with Global HRC;
e)   Update EI Scores
f)   Review relevancy of top regional organizational issues
g)   Remove reference to SOI
h)   Update list of action items
i)   Make reference to Doc 10131 for NASP development
j)   Maintain the current 5 Priority Areas, i.e.
   • Reduce Operational Risks
   • ORG
   • SMS and SSP
   • Data driven regulatory oversight
   • Infrastructure
k)   Add new targets if necessary
l)   Reflect any changes to Beijing Declaration

1.3.8   The draft AP RASP 2023-25 was presented during the RASG APAC/ 12 and in principle approval was obtained with the condition to review the document once the new/amended ICAO Doc 10131 & 10161 are made available. After incorporating the changes highlighted in said ICAO Docs, the final AP-RASP 2023-25 was presented in APRAST/19 meeting.

1.4   Alignment with the GASP, Global Aviation Safety Roadmap and Beijing Declaration

1.4.1   The AP-RASP was developed in close adherence to the latest key global and regional reference documents, as wellas those listed in **Figure 2**. For the full list of key reference sources, refer to **Appendix D**.
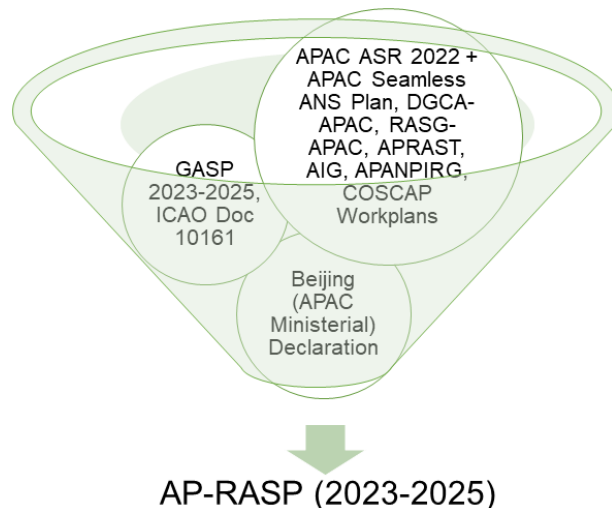
Figure 2. Key reference sources for the development of the AP-RASP 2023-2025 Edition

1.4.2   The AP-RASP was developed in congruence with the GASP, and supports the GASP aspirational goal of zero fatalities by 2030 and beyond and its objectives, goals, targets and indicators.

    a)   The AP-RASP and Roadmap structure adheres closely to GASP, Global Aviation Safety Roadmap and the 'RASP template' in ICAO's 'Guidancefor drafting the RASP ;

    b)   A comprehensive gap analysis was undertaken to identify the existing gaps between the existing work by RASG-APAC/ APRAST, and subsequently also compared with ICAO Manual: Doc 10131, 'Manual on the Development of Regional and National Aviation Safety Plans'. Action items were proposed to address the gaps,to ensure that all the GASP requirements for RASPs were fulfilled;

    c)   For continuity, the five Regional Goals & Targets as well as the safety-related targets in the Beijing Declaration, were retained and adapted for the purpose of materialising the two-pillar strategic approach of theAP-RASP and grouping the Actions and Targets; and

    d)   AP-RASP Actions and Targets were selected taking into consideration relevant SEIs for Regions and Industry(applicable to regions) in the GASP[1] (refer to **Appendix E**), goals, actions and targets of the Beijing Declaration, safety-related ANS initiatives in the APAC Seamless ANS Plan and relevant work plan items of DCGA-APAC, RASG-APAC, APRAST and APAC COSCAPs meetings. GASP SEIs for Statesand Industry (domestic) were not considered as these are more suitable to be included in the NASPs of the APAC States.

1.4.3   For better visualisation of alignment between the GASP and AP-RASP, the Org Actions of the AP-RASP are laid out in a Standardized "roadmap template" format as presented in **Figure 3** below, which is similar to the Org roadmap of the GASP. **Appendix F** contains a mapping of the key contents of the AP-RASP to the guidelines in ICAO Manual: Doc 10131.

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[1] The GASP supports the implementation of the Global Aviation Navigation Plan (GANP), by requiring appropriate infrastructure to support the provision of the essential services outlined in the basic building blocks (BBB).
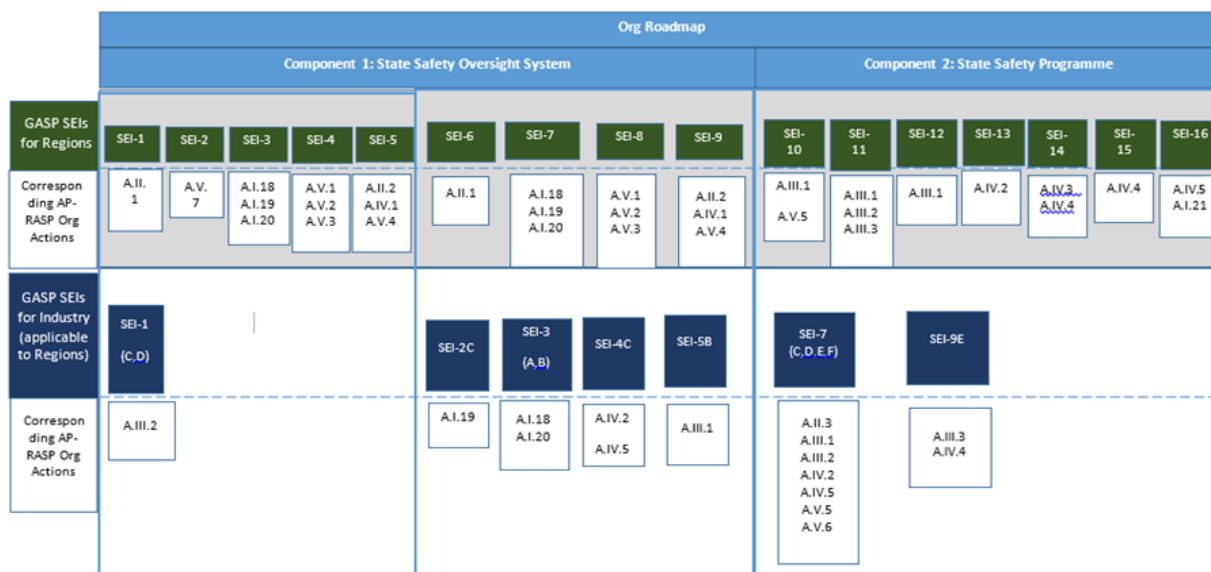
Org Roadmap																
	Component 1: State Safety Oversight System									Component 2: State Safety Programme						
GASP SEIs for Regions	SEI-1	SEI-2	SEI-3	SEI-4	SEI-5	SEI-6	SEI-7	SEI-8	SEI-9	SEI-10	SEI-11	SEI-12	SEI-13	SEI-14	SEI-15	SEI-16
Corresponding AP-RASP Org Actions	A.II.1	A.V.7	A.I.18 A.I.19 A.I.20	A.V.1 A.V.2 A.V.3	A.II.2 A.IV.1 A.V.4	A.II.1	A.I.18 A.I.19 A.I.20	A.V.1 A.V.2 A.V.3	A.II.2 A.IV.1 A.V.4	A.III.1 A.V.5	A.III.1 A.III.2 A.III.3	A.III.1	A.IV.2	A.IV.3 A.IV.4	A.IV.4	A.IV.5 A.I.21
GASP SEIs for Industry (applicable to Regions)	SEI-1 (C,D)					SEI-2C	SEI-3 (A,B)	SEI-4C	SEI-5B	SEI-7 (C,D.E.F)	SEI-9E					
Corresponding AP-RASP Org Actions	A.III.2					A.I.19	A.I.18 A.I.20	A.IV.2 A.IV.5	A.III.1	A.II.3 A.III.1 A.III.2 A.IV.2 A.IV.5 A.V.5 A.V.6	A.III.3 A.IV.4					

Figure 3. Mapping of AP-RASP Org roadmap against GASP Org roadmap .

1.4.4 The above figure 3 shows ORG Roadmap for SEIs with two components viz. Component 1- State safety oversight system, Component 2- State safety programme. Component 1 on SSO details the SEIs identified in GASP for monitoring by regions in Green, and their corresponding SEIs in ORG roadmap of AP-RASP. The SEIs identified in GASP pertaining to industry have been identified in blue and their corresponding SEIs in ORG roadmap of AP-RASP have also been mentioned. Similarly for Component 2. As stakeholders accomplish each Action, represented by a numbered box in the diagram, they advance through the roadmap thus achieving the different AP-RASP Regional Goals. Each AP-RASP Action is mapped onto a corresponding GASP SEI. For example, the AP-RASP Org Action 'A.II.I: Conduct workshops and courses to promote effective implementation of SARPs, especially in the technical areas of ANS, AIG, AGA' contributes towards fulfilling "SEI-1 — Consistent implementation of ICAO SARPs at regional-level" under the GASP Org Roadmap '2.1 Component 1 — State safety oversight (SSO) system, 2.1.1 Phase 1 — Establishment of a safety oversight framework (CE-1 to CE-5)'.

1.4.5 The contents of the AP-RASP are also closely aligned with the latest regional information pertaining to aviation safety in the APAC region, in particular the following two documents:

    a) The AP-RASPAT was developed at APRAST/5 (September 2014), taking into account the discussions at APRAST/3 and the then-newly adopted GASP (2014-2016), and approved at RASG-APAC/4. It serves to step up the APAC region's commitment to improve its aviation safety oversight capability, which relates to the reduction of regional operational risks and improvement in safety oversight capabilities of States. The latest revision, approved by RASG-APAC/8 (August 2018), also supports GASP aspirational 2030 goal of zero fatalities & beyond on scheduled commercial flights & beyond

    b) The Beijing Declaration was the main outcome of the first APAC Ministerial Conference on Civil Aviation held in Beijing, China on 31 January-1 February 2018, It is the first demonstration, to the public, industry and investors, of commitment by high-level State authorities to improve aviation safety and ANS in the APAC region. Its targets serve as a benchmark for States to assess their progress in improving these areas at a regional level.

1.4.6 The first edition of AP-RASP rides on the previous work of the AP-RASPAT 2018 and Beijing Declaration to elevate the commitment of the APAC region to improve its safety oversight capability, which relates to the continuous reduction of regional operational risks and improvement in safety oversight and management capabilities of States. Its high-level regional objectives support APAC States/ Administrations, and commit them to assist one another, in implementing and meeting respective targets of the GASP and Beijing Declaration. In particular, the AP-RASP serves to raise awareness of safety risks and consequences, to States/ Administrations, industry and relevant stakeholders to commit and provide resources including financial, staffing and technical expertise, to making improvements in safety management, oversight capability and operational safety performance. It also provides a basis to facilitate information sharing between relevant stakeholders who can take actions or provide support to address issues.

1.4.7   At the regional level, the AP-RASP commits RASG-APAC to continuing the following efforts:

a)   Focus on the development of the current regional SEIs to address the global High Risk Categories HRCs of LOC-I, CFIT, MAC, RI and RE, and other priorities as identified for the APAC region in a data-driven and strategic manner, which may include emerging risks such as unmanned aircraft systems (UAS), dangerous goods, and space transportation;

b)   Continue implementation support to States/ Administrations and industry, including the development of improved guidance materials as well as the organization of workshops to provide assistance and guidance to APAC States/ Administrations e.g. on SEI implementation;

c)   Assist States/ Administrations in the implementation of SMS and SSP, and in the development of NASPs;

d)   Promote regional government and industry collaboration for sharing best practices in safety management;

e)   Facilitate the use of Standardized taxonomies for data collection in the region, for example in the description of safety occurrences, ramp inspection outcomes and definitions of audit findings, which in turn facilitates benchmarking and sharing of data among States/ Administrations;

f)   Put in place a structure for the collection, analysis and sharing of safety and operational data in the region to support a comprehensive approach to risk management, and facilitate initiatives to develop regional data collection, and analysis, as well as support collaboration with existing data sharing systems (ASIAS, AP-SHARE and IATAFDX and IDX programmes);

g)   Encourage States/ Administrations to adopt safety information protection protocols; and

h)   Promote the effective implementation of AGA, with a focus on runway safety programmes that support the establishment of Runway Safety Teams (RSTs) and implementation of inter-organizational SMS and Collaborative Safety Teams (CSTs).

1.4.8   States/ Administrations and industry are committed to the following efforts:

a)   Implement, as appropriate, the GASP SEIs and AP-RASP Actions in a data-driven, strategic and timely manner;

b)   [For any States with SSCs] Accord priority to the resolution of any SSCs identified by the ICAO USOAP CMA programme. These should draw on the necessary resources available, including technical assistance from other States/ Administrations and regional programmes such as COSCAPs and RSOOs to resolve the SSCs promptly;

c)   Accord priority to the implementation of SMS and SSP;

d)   Use data-driven methodologies to identify HRCs, and implement collaborative solutions to reduce accident rates and fatalities in the region, and likewise accord priority to the implementation of respective SEIs;

e)   Implement the recommendations of the APAC-AIG; and

f)   Consider various options to leverage ICAO-recognized industry assessment programmes such as the IATA Operational Safety Audit (IOSA), IATA Safety Audit for Ground Operations (ISAGO), IATA Standard Safety Assessment Programme (ISSA), Civil Air Navigation Services Organization (CANSO) and European organization for the Safety of Air Navigation (EUROCONTROL) maturity assessment within the Standard of Excellence in Safety Management Systems, Flight Safety Foundation (FSF) Basic Aviation Risk Standard (BARS), International Business Aviation Council (IBAC) International Standard for Business Aircraft Operations (IS-BAO) and ACI's APEX in Safety peer assessment programme. These options range from the recognition of such programmes to encouraging registration by all applicable operators as a means to strengthen their safety management and compliance.

2. APAC REGION'S STRATEGIC APPROACH TO MANAGING AVIATION SAFETY

2.1 Operational context of the APAC region

2.1.1   Air transport is a key enabler for sustainable economic and social development. In 2019, i.e. before the outbreak of COVID-19, the Global Air TransportIndustry supports almost 87.7 million jobs worldwide and contributes USD 3.5 trillion to Global Gross Domestic Product (GDP), equivalent to 4.1% of global GDP.

2.1.2   Pre-COVID 19 the APAC Region had become the world's largest aviation market in terms of available seat-kilometres with aglobal market share of 38.8% of passengers, and generates the world's largest share of international revenue passenger- kilometres, seeing a 9.5% growth in 2018 over 2017. Growth in aircraft departures and number of passengers carried in 2018was also the highest among all regions, at 5.8% and 8.5% respectively. Airbus and Boeing Global Market Forecasts 2016- 2035 expect that passenger traffic in the APAC region will double, and its share of global passenger traffic will increase to 48.7%, by 2035. As the growth continues, so will corresponding air traffic capacity, efficiency and safety challenges.

2.1.3   The APAC region is diverse with 39 contracting States, two Special Administrative Regions of China and 13 other Territories and 42 ANS Providers, and an operating environment of 50 Flight Information Region (FIRs) (or 40% of the world's FIRs). The region comprises vast oceanic airspace covering some 197.3 million square kilometres. For the list of APAC Contracting States, other Territories and International Organizations, refer to https://www.icao.int/APAC/Pages/about-apac-member-states.aspx.

2.1.4   For Pacific States with large areas of Oceanic airspace and geographical separation the air traffic capacity and efficiency challenges are not so relevant. Pacific States rely on aviation for economic sustainability through tourism, trade and regional connections. Passenger and aircraft volumes are low compared to other APAC regions with compliance, infrastructure and ability to meet some ICAO SARPs major challenges.

2.1.5   One characteristic of the Asia-Pacific aviation safety regulatory landscape is that States vary significantly in terms of capacity and civil aviation development, with USOAP Effective Implementation (EI) scores ranging from 5% to over 90%.

2.1.6   The RASG-APAC region had an overall USOAP Effective Implementation (EI) score (%) of 66.35% in 2022, up from 63.91% in 2021. The global USOAP Effective implementation scores have shown a gradual improvement over the past 5 years, reaching 69.32% in 2022 (see Appendix J).

2.1.7   RASG-APAC's accident rate has maintained a steady decline from 1.64 per million departures to 0.82 per million departures from 2017 to 2021.

2.1.8   There is also significant intrinsic diversity among APAC States/ Administrations and industry in terms of operational context, governance/ sovereignty, geography and terrain, culture, language, level of development and expertise.

2.2 Strategic direction for the management of aviation safety

2.2.1   The AP-RASP was developed with the aim to address the APAC region's diverse regulatory and operational landscape in a timely manner, and as applicable. It is expected that this approach will facilitate APAC States'/ Administrations' support and participation in the implementation of these Actions at both the regional and domestic levels. The three-year period of the AP-RASP, i.e. 2023 to 2025, was selected to coincide with the GASP review period of the same duration, to ensure continued alignment with the latest global plans.

2.2.2   As such, the AP-RASP adopts a two-pillar approach. The **first pillar** involves enhancing existing regional platforms/ mechanisms and establish effective safety oversight and management capabilities, in particular, to:

   a)   integrate and refine existing RASG-APAC/ APRAST building blocks already put in place by RASG-APAC/ APRAST, RASG-APAC/ APRAST SEIs and their associated (Online) Implementation Monitoring Mechanism which tracks the status of SEI implementation by States/ Administrations; and the APAC Annual Safety Report (APAC ASR); and enhance links, coordination and communication with other regional mechanisms, especially COSCAPs and PASO, andAPANPIRG and its Subgroups;

b) strengthen existing regional mechanisms which have been working well, and leverage these at sub-regional level and making resources, expertise and training across COSCAPs and RSOOs more readily available to APAC States/ Administrations. This will help facilitate their establishment of effective safety oversight capabilities. Refer to the Appendices for a list of resources and tools to support the implementation of AP-RASP and descriptions of APAC regional bodies, mechanisms and platforms and their roles/ functions in providing direction, expertise, training and technical assistance;

c) Improve the scheduling and streamline the number of regional safety-related events, especially those involving similar participants; and

d) improve communication and sharing of data and information between States/ Administrations faced with common issues, especially if quick action is warranted.

2.2.3 The **second pillar** involves addressing operational safety risks effectively and establishing effective safety management, in particular, to focus on the implementation of existing 17 RASG-APAC/ APRAST SEIs and SCBP, and the safety initiatives of the APAC Seamless ANS Plan. These SEIs and supplementary safety tools are to be implemented and adopted by APAC States/ Administrations and their industry in a more targeted and customized manner.

2.3 Leveraging on existing platforms and enhance collaboration among relevant stakeholders

2.3.1 The RASG-APAC/APRAST has, through the years, put in place several foundational building blocks of strategic safety management, which include the following:

a) RASG-APAC/ APRAST SEIs and the associated (Online) Monitoring Mechanism, which tracks the status of SEI implementation by States/ Administrations; and

b) APAC Annual Safety Report (APAC ASR), which contains several organizational and operational indicators and targets, regional USOAP Effective Implementation (EI) scores, and identifies safety-related challenges and the prioritization of areas that require action to enhance safety in the APAC region.

2.3.2 As in the previous triennium not all APAC States/ Administrations have fully implemented the existing SEIs, and so there is still a need to further refine and better integrate the existing building blocks to ensure that they successfully track and analyse safety performance towards identifying and addressing safety risks, while proactively identifying new or emerging safety risks. The conceptual architecture of the envisioned Safety Data Collection and Processing System (SDCPS) for the APAC region is presented in **Figure 4**. For more details on the workings of an SDCPS, refer to the 4th Edition of the ICAO Safety Management Manual (Doc 9859) at https://www.icao.int/safety/SafetyManagement/Pages/GuidanceMaterial.aspx.

Figure 4. Conceptual architecture of the SDCPS for the APAC region

2.3.3   As a first step towards establishing this system and to facilitate AP-RASP implementation, it is necessary to enhance the communication and flow of safety data and information, as well as and coordination processes, among RASG-APAC, APRAST WGs, and regional platforms namely. the ICAO-APAC, States/ Administrations, COSCAPs and PASO. There is also still a need to continue to enhance collaboration with APANPIRG through coordinated processes to sustain the collection and sharing of regional air traffic management (ATM) data and the sharing and resolution of safety issues. This, in turn, will support the implementation of Aviation System Block Upgrade (ASBUs) and ensure that their implementation accounts for and properly manages existing and emerging risks, e.g. approaches with vertical guidance (APV) to mitigate risks associated with CFIT and runway excursions.

3. ADDRESSING REGIONAL OPERATIONAL SAFETY RISKS (Ops)

3.1 Top operational risks in the APAC region

3.1.1 The GASP 2023-2025 edition retains the global high risk categories of occurrences (G-HRCs) [2] as LOC-I, CFIT, MAC, RE and RI, in no particular order, from the previous edition.In the APAC region in 2021, the topmost frequent types of accidents were runway safety, which includes RE, RI and abnormal runway contact (ARC), specifically hard landings and tailstrikes during landing.

3.1.2 There was only one fatal accident in Asia-Pacific in 2021 which was a case of LOC-I.

3.1.3 There were also accidents that caused substantial damage to the aircraft. These involved the following six occurrence categories: abrupt maneuver (AMAN), abnormal runway contact (ARC), ground collision (GCOL); icing (ICE); ground handling (RAMP); and system/component failure or malfunction (non-powerplant) (SCF-NP). The turbulence encounter (TURB) occurrence category accounted for the most accidents that caused serious injuries to aircrew or passengers.

3.1.1 MAC is one of the HRC in the GASP 2023 – 2025 edition that also points out the requirements for aircraft to be equipped with traffic alert and collision avoidance systems have significantly reduced the number of MAC. However, when MAC occurs, these events often result in fatalities.

3.1.2 However, there is no indication that MAC is an emerging risk as at August 2022 based on the existing data used to determine the regional HRCs.

3.1.3 Therefore, for the triennium of 2023-2025, the addition of MAC has been put on hold as at Q4 2022 pending the formal recommendations by the IAT to the APRAST's SRP WG into the list of regional HRCs. The regional HRCs for the 2022 – 2025 triennium are as follows:

a) LOC-I;
b) RS including RE, RI and ARC; and
c) CFIT

3.1.4 However, given the expected recovery of air traffic volume in the APAC region from 2023[1] onwards, the risks associated with MAC will likely grow in tandem. As such, there is a need for the APAC region to continue to collect and analyse safety data pertaining to MAC through the work of IAT and SRP WG, and add MAC to the list of regional HRC as per the amendment procedure described in 6.3.1 as required.

3.1.5 Regulatory oversight, safety management, meteorology, aircraft malfunction, manual handling/ flight controls, vertical/lateral/speed deviation, unstable approach, , and SOP adherence//SOP Cross-verification were top contributing factors in their respective categories, for accidents within the APAC region.

3.1.6 Refer to **Appendix H** for the process used to determine and prioritize top regional safety risks and other safety issues,and to **Appendix I** for the detailed accident and serious incident data and trend analyses.

3.2 Roadmap of Ops Actions

3.2.1 In order to address the regional operational safety risks listed above, the AP-RASP includes a series of Actions related to a continuous reduction of operational safety risks, and regional and industry safety risk management activities to address the top APAC regional risks. These Actions include targeted safety activities, safety data analysis, safety risk assessments, and safety promotion.

3.2.2 The Actions are laid out in an operational safety risks (Ops) roadmap in **Appendix A**, and address the top regional HRCs. The Actions also support Regional Goal I of the AP-RASP, 'Reduction in Operational Risks'.

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[1] ACI forecast, June 2024

3.2.3   The Ops roadmap is not divided into components or steps, and Actions can be accomplished in parallel.

3.2.4   While APRAST has set its focus for the 2023-2025 period on implementation of existing SEIs, it will continue to develop and implement further SEIs to mitigate the risk of the identified contributing factors and conduct continuous evaluation of the performance of the SEIs.

3.3   Disruption Events

3.3.1   Disruption events are rare yet very significant at a global, regional or national level, which adversely impactsaviation activities. Disruption events affect States, including safety and security authorities, as well as aircraft operators, operators of aerodromes, ATS providers, and industries dependent on aviation.

3.3.2   Disruption events are not typically aviation-centric but have significant impact on aviation operations. States in the region should develop measures to respond effectively to disruption events to maintain a safe, resilient and sustainable level of operations. These include the management of change, communication and coordination plans with all relevant stakeholders at the national, regional and international levels.

3.3.3   The nature of disruption events, such as the recent COVID-19 pandemic, can vary in complexity, scope, and duration and may affect the identification of hazards and management of safety risks. Recovery from a disruption event may also affect the operational safety risks. In case of any such event, States may adopt the following practices:

   a)   States should identify hazards that may develop into disruption events.

   b)   States should also establish a mechanism and measures to share, communicate and collaborate on effective mitigation measures and efforts to support operational continuity and safe resumption of operations during and following a disruption event.

   c)   States may also consider applying changes to safety plans/regulations and procedures in accordance with risk analyses. The policies, processes and mechanisms implemented for the SSP should support the management of disruption events.

   d)   States may also enhance monitoring of aviation activities in their region to ensure proper capturing of hazards.

3.3.4   States may refer detailed guidance related to the management of the COVID-19 pandemic, aviation restart and recovery, and building resilience can be found on the ICAO website at https://www.icao.int/covid/cart/Pages/default.aspx.

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[2] The GASP calls for States, regions and industry to conduct regular national and regional risk analyses, taking into consideration the global HRCs. RASGs should utilise available data to determine the region's operational safety risks which include global HRCs and additional regional operational safety risks.

4. ADDRESSING OTHER REGIONAL SAFETY ISSUES (Org)

4.1 Overview of the APAC region's States' safety oversight capabilities

4.1.1 The APAC region is committed to the effective implementation of the ICAO eight critical elements (CEs) of a safetyoversight system among all APAC States, as part of its overall safety oversight responsibilities, which emphasise its commitment to safety in respect of its aviation activity.

4.1.2 Deficiencies in a specific critical element of an effective safety oversight system may be common to a number of APAC States and considered a top concern. In such cases, these deficiencies must be addressed as a safety issue in the AP-RASP because of their impact on the ability of States/ Administrations to fulfil their safety oversight responsibilities, which impacts the APAC region as a whole.

4.1.3 Based on data from the RASG-APAC Annual Safety Report 2022, the RASG-APAC region had an overall USOAP Effective Implementation (EI) score of 66.35% in 2022, up from 63.91% in 2021. However, this result remains lower than the global level of 69% in 2019.

4.1.4 In terms of Critical Elements (CE), the APAC region had lower EI scores for all categories as compared to global average. CE-8 on Resolution of safety concerns, CE-4 on Technical personnel qualifications and training, and CE-7: Surveillance Obligations had the lowest EI scores within RASG-APAC. By Audit Area, Accident and Incident Investigation (AIG), Aerodrome and Ground Aids (AGA) and Civil Aviation Organization (CAO) had the lowest EI scores. Refer to **Appendix J** for details on the ICAO eight CEs and data analyses on the safety oversight capabilities in the APAC region.

4.1.5 In addition to the varying levels of safety oversight capabilities in the APAC region, other regional safety issues andactivities have been identified and selected for inclusion in the AP-RASP. These were derived from the ICAO APAC Regional Report, analysis of USOAP data, accident and incident investigation reports, safety oversight activitiesover recent years from APAC States/ Administrations, as well as on the basis of regional analysis conducted by SRP WG andon the organizational challenges described in the GASP, particularly in the period of 2018-2019. These align with the ICAO APAC Seamless ANS Plan.

a) **Fast-growing air traffic volume**. While the APAC region is among the world's fastest-growing regions in terms of air traffic volume, its average USOAP EI score is currently below global average, and a significant proportion of APAC States have an overall EI score below the 60% GASP Target, especially in the AIG and AGA areas. USOAP EI scores also vary significantly among APAC States. Particular attention should be paidto ensuring adequate airport and ATM infrastructure, with a focus on runway safety. A number of aerodromes in the region are not equipped with the appropriate infrastructure to support safe operations, and/or are not certified due to lack of capacity of their respective regulatory authorities. There are also increasing risks associated withairspace congestion, such as arising from a high density of holding patterns within the same portion of airspace.

b) **Increasing complexity of our aviation system**. The pace of SSP and RASG-APAC/ APRAST SEI implementation, as well as understanding of newer safety management and performance-based concepts, is slow. Effective implementation of SMS is essential for the industry to identify hazards and resolve safety concerns. The robust implementation of the SSP also enables States/ Administrations to focus their safety oversight resources where they are most needed. It is also difficult for the APAC States/ Administrations to focus their efforts and resources, and it is not realistic for them to adopt and implement Standardized or one-size-fits-all solutions, owing to significant diversity among APAC States/ Administrations and industry in areassuch as operational context, governance/ sovereignty, geography and terrain (e.g. airports at high altitude or inmountainous terrain or near water bodies), culture, language, level of development and expertise.

c) **Increased need for capability and capacity building**. In view of insufficient trained/ specialized safety oversight resources and expertise in many States/ Administrations in the APAC region, sustainable growth of the international aviation system will require the introduction of advanced safety capabilities (e.g. full trajectory-based operations) that increase capacity while maintaining or enhancing operational safety margins.The long-term safety objective is intended to support a collaborative decision making environment characterized by increased automation and the integration of advanced technologies on the ground and in the air, as contained in ICAO's ASBUs strategy. Many APAC States have yet to fully implement ICAO Annex 13 requirements for accident investigation. APAC-AIG recommendations offer guidance to States to at least

meet the minimum requirements. Implementation of these recommendations would help to improve each State's capacity to effectively investigate accidents and serious incidents and should also enhance the level of reporting by States/ Administrations to assist in the identification of regional safety issues and trends.

d) **Limited collection of and use of safety data for decision-making**. The evolution from reactive to predictive safety management and data-driven regulatory oversight systems hinges on the availability of high quality safety data. Proper risk management and oversight is also reliant on the effective investigation of accidents andincidents in order to prevent recurrence. APAC States/ Administrations often lack the resources and expertise to manage and collect data on a State level and there are currently no formal mechanisms in place that allow for the sharing and benchmarking of information at the regional level. Furthermore, while many Air Operators in APAC have Flight Data Analysis Programmes, many have yet to fully incorporate the data into their risk management decision-making and few are leveraging the valuable information available from external data- sharing platforms such as the IATA FDX and IDX programmes.

4.1.6   It is crucial that States/ Administrations' safety oversight and management capabilities, and both physical and institutional aviation infrastructure should keep pace with these regional safety issues.

4.1.7   Therefore, for the triennium of 2023-2025, the APAC region should continue to focus its efforts in addressing the following top regional organizational issues:

a)   Slow pace of implementation of RASG-APAC/ APRAST SEIs and tools to mitigate operational risks;

b)   Lower USOAP EI scores for all categories as compared to global average;

c)   Slow pace of SSP implementation, as well as understanding of newer safety management and performance-based concepts;

d)   Lack of resources and expertise to manage and collect data on a State level, and no formal mechanisms in place that allow for the sharing and benchmarking of information at the regional level;

e)   Increasing risks associated with airspace congestion, and the lack of appropriate infrastructure to support safe operations; and

f)   lack of capacity of regulatory authorities.

4.2   Roadmap of Org Actions

4.2.1   In order to address the issues and activities listed above, the AP-RASP includes a series of Actions which address organizational and systemic challenges at the individual State level, such as States'/ Administrations' safety oversight capabilities and the implementation of SSPs, and the industry's implementation of SMS, and is aimed at enhancing the overall safety management capabilities within the region. These Actions enable civil aviation stakeholders to operate safely. Since most of these Actions, which support the achievement of regional safety goals and targets, are linked to overarching SEIs at the international level, they help to enhance safety at a regional and global levels to facilitate international operations. The AP-RASP Actions and Targets are also intended to be linked to APAC States' individual NASP SEIs, therefore harmonizing the regional strategy with those of individual States.

4.2.2   The Actions are laid out in an organizational (Org) Roadmap in **Appendix A**. The roadmap contains two distinct components, namely a SSO System and an SSP. States should have basic elements of the first component in place to ensure effective safety oversight before pursuing the second component of safety management, which focus on SSP and SMS implementation. The Org Roadmap is also divided into two horizontal streams, each with specific Actions aimed at the APAC region and industry (applicable to Regions).

4.2.3   The Actions address the five Regional Goals of the AP-RASP, namely I. Reduce operational risks; II. Improvement in safety oversight and compliance; III. Consistent and effective SMS and SSP; IV. Data-driven regulatory oversight;and V. Enhanced aviation infrastructure (physical and institutional).

4.2.4   It is recommended that the Org Actions be accomplished in a specific order, i.e. starting from the left and moving towards the right (refer to Figure 3 in Chapter 1.4). However, the Actions should not be viewed as stand-alone activities. In many cases, they are interrelated and serve to meet several goals simultaneously.

PART II – IMPLEMENTATION

5.   RESPONSIBILITIES

5.1   Entities responsible for governance, development, implementation and monitoring of AP-RASP

5.1.1   RASG-APAC is responsible for the overall development, implementation and monitoring of the AP-RASP, togetherwith APAC States/ Administrations, Industry Partners, International Organizations, regional groupings including the three APAC COSCAPs and PASO, the ICAO-APAC, and APANPIRG. The AP-RASP is to be supported by NASPs developed byStates in the APAC region as well as work plans of other stakeholders, such as regional and non-governmental organizations.The Custodians are the lead entities for the general aspects concerning the implementation of the AP-RASP and its Actions, and assume the roles and responsibilities as summarized in **Table 2**.

Custodians	Roles and Responsibilities
ICAO-APAC Regional Office (Administrator of AP-RASP)	• Coordinate implementation of AP-RASP Actions and achievement of Targets • Include AP-RASP Actions in yearly Workplans of APRAST and other regionalplatforms and mechanisms, including APAC COSCAPs • Advise on available Mechanisms/ Tools to facilitate implementation of Actions
APRAST Co-Chairs	• Oversee that top APAC safety risks and challenges are identified and addressed (especially emerging issues with high and widespread impact), and ensure achievement of objectives and Targets • Report progress status of AP-RASP implementation and achievement of Targets toRASG-APAC • Present proposed revisions to the AP-RASP, following endorsement by APRAST,to RASG-APAC for approval
SRP WG	• Develop second-order indicators, as appropriate, to measure and track progress ofthe achievement of Targets • Prepare AP-RASP progress reports customized for every RASG-APAC and APRAST meeting
SEI WG	• Develop clear guidelines for States/ Administrations to indicate their implementation status for each Ops Action • Develop indicators to track and analyse the relevance and effectiveness of Org andOps Actions, in close coordination with the SRG WG • Work with Action Custodians to track and analyse the progress of implementationof all AP-RASP Actions
COSCAPs and PASO	• Support their respective States/ Administrations and industry stakeholders withimplementation of the AP-RASP and its Actions
AP-RASP Standing -WG	• Review and update the AP-RASP • Present the updated AP-RASP to APRAST/RASG-APAC for endorsement • Monitor the implementation of AP-RASP Actions and achievement of Targets
Action Custodians	• Appointed by APRAST to lead the group of stakeholders identified in the AP-RASP to further develop specific details for implementation of their respective Actions • Provide updates to SEI and SRP WGs and ICAO-APAC on the progress status of their Actions

Table 2. Custodians responsible for the administration of AP-RASP, and their roles

5.1.2   Where not already identified, Action Custodians are to be appointed by APRAST for each Org Action from among the group of stakeholders identified in the AP-RASP for that Action, while the rest of the group of stakeholders will support and contribute to the implementation work as assigned by the Action Custodian. The ICAO-APAC Regional Office will disseminate the Org Actions, as appropriate, to relevant APAC regional platforms and mechanisms to follow up to include in their Workplans, andrequest the Action Custodians and their respective identified Stakeholder groups to further develop specific details for implementation of their respective Org Actions.

5.1.3   For Ops Actions which have already been developed, SEI WG is the overall Action Custodian. To develop new SEIsand/ or Ops Actions in future, Action Custodians may be assigned by APRAST.

5.2   Guidance to APAC States to develop NASP

5.2.1   APAC States need to prioritise aviation in their national plans, and are recommended to establish their National Aviation Safety Plans (NASPs), taking into account the AP-RASP and the GASP.

5.2.2   In developing their NASPs, States should follow the eight-step process , and other guidelines provided in ICAO Manual: Doc 10131, 'Manual on the Developmentof Regional and National Aviation Safety Plans'. States should identify which top safety risks and key issues described in theGASP and AP-RASP apply to their national context, and add on other safety risks, issues and national priorities that are relevant to their industry and operational context. Based on the regional and national analyses, States/ Administrations and RASG-APAC/ APRAST should conduct an assessment of the number of operational safety risks that can be managed, and prioritise them according to the safety risk management process.

5.2.3   At a minimum, States should also include the AP-RASP Actions and Targets listed in **Table 3** in their NASP Roadmap. These Actions and Targets (refer to Chapters 3.2, 4.2 and 6.1 for the details) were deemed relevant for inclusion in NASPs as these are intended for implementation by States/ Administrations in their domestic context. States should also consider including SEIs in the GASP, which are applicable to individual States and Industry (domestic) and other national priorities.

AP-RASP Actions		AP-RASP Targets
A.I.1-A.I.18 (as prioritized and customized to each States' unique operational context)	A.II.2-A.II.4, A.III.1, A.III.3, A.IV.1, A.IV.4, A.V.4, A.V.6-A.V.7	T1-T4, T6, T8-T13, T15-T18

Table 3. Actions and Targets of the AP-RASP 2020-2022 Edition to be included in APAC States' NASPs

5.2.4   The NASPs should detail Ops and Org roadmaps to address operational challenges and mitigate operational and organizational safety risks respectively. In addition, States/ Administrations and RASG-APAC/ APRAST should develop a method of measuring the progress of any initiative taken in that given time period.

5.2.5   NASPs should include, wherever appropriate, specific references to the GASP and AP-RASP for any adopted or adapted content, especially safety risks, issues, Actions and Targets. For this purpose, States are recommended to use the mapping template at **Appendix K**. The AP-RASP Editions called for closer structural alignment between AP-RASP and NASPs for better compatibility and cross-referencing. States still in the process of developing should bear this mind.

5.2.6   Successful implementation of the NASP Actions will require the commitment of resources from stakeholders withinStates/ Administrations, availability of data to effectively monitor the achievement of NASP Targets, and proper project governance and coordination. **Table 4** lists some anticipated project risks and their respective proposed mitigation measures, which typically pertain to the aforementioned two areas.

Project Risks	Mitigation measures
Lack of understanding of the expectations of the AP-RASP Actions	APRAST/ ICAO-APAC and custodian of the NASP to provide additional clarification on the expectations of the Actions.
Limited manpower and financial resources to fully implement Actions or develop indicators to and keep track of implementation of AP-RASP Actions and achievement of Targets	Custodian of the NASP to provide support, either directly or through partial delegation of responsibility to other local agencies. Approach ICAO-APAC, PASO and COSCAPs for advice on technical assistance avenues.

	Attend NASP workshops.
Lack of relevant skills and knowledge to effectively implement and monitor targets and indicators at a regional level	Collate relevant documentation/ educational material to support development of skills and knowledge where these are inadequate.
Lack of timely, consistent, quality data and systems to support monitoring of targets and indicators	Relevant domestic agencies/ bodies to collate relevant documentation/ educational material to support development of quality data collection mechanisms and monitoring of targets and indicators. All stakeholders should contribute data and information as necessary for the monitoring of targets and indicators, or otherwise communicate reason(s) for not being able to do so, so that such reasons can be addressed.
Inefficient approval processes (for Actions which require swifter decision-making and actions	Regular meetings and/or correspondences may be required to expedite decisions where lack of such decisions impacts timely implementation of the NASP Actions.
Lack of coordination and cooperation between Administrator, Custodians and Stakeholders	Ensure formal communication mechanisms to ensure there is a coordinated effort to support information flow and encourage cooperation between stakeholders.

Table 4. Project risks and mitigation measures associated with NASP implementation

6. MONITORING IMPLEMENTATION AND EFFECTIVENESS

6.1 Monitoring of progress and effectiveness of AP-RASP Actions and Targets

6.1.1   The Actions in the AP-RASP are implemented through the working arrangements of RASG-APAC/ APRAST, activities conducted by APAC regional bodies such as COSCAPs and PASO, as well as the safety oversight entities of APAC States/ Administrations and service providers' Safety Management Systems (SMS) at the individual States'/ Administrations' level. The safety performance of the civil aviation system within the APAC region will be continuously monitored to ensure that the Actions listed in the AP-RASP, including those related to compliance monitoring and safety risk management, contribute to the enhancement of safety. Successful achievement of the roadmap implementation relies upon close collaboration and cooperation of all stakeholders, especially in contributing the relevant data and information for monitoring purposes in a timely manner.

6.1.2   In addition to the RASG-APAC ASR, the AP-RASP includes a series of Targets to monitor and measure implementation of AP-RASP Actions and the resulting outcomes and safety improvement. These were selected in alignment with GASP Targets applicable to the Regions and respective Industry, since only such targets are more appropriately addressed at the RASG-/ APAC regional-level. The Targets also incorporate those from the Beijing Declaration and reflect the intended improvements and outcomes of the Actions under the five Regional Goals of the AP-RASP. The Targets have been selected to ensure a focus on both organizational or systemic improvements and addressing operational safety risks.

6.1.3   The Targets and related Actions are presented in **Appendix A**.

6.1.4   To gauge the relevance and effectiveness of the AP-RASP Actions, second-order milestones or indicators should be developed, and updated in tandem with the status of progress of the implementation of Actions. Similarly, to measure and track progress of the achievement of the AP-RASP Targets, additional operational safety performance indicators, which are not already covered by the AP-RASP Targets, should be developed to measure and track the reduction of top APAC safety risks and resolution of challenges, as well as the overall improvement of aviation safety in the APAC region. To this end, a Standardized approach should be developed and adopted to facilitate reporting of information from individual States/ Administrations and other stakeholders at the regional level, and improving the provision of information to RASG-APAC/ APRAST. This will allow the APAC region to receive information and better assess safety risks using common methodologies.

6.2 Communication of progress to RASG-APAC and regional stakeholders

6.2.1   The progress of implementation of the AP-RASP Org Actions may be collated from meeting reports of respective regional platforms/ mechanisms, and/ or from the Custodians of the respective Actions. As for the Ops Actions, the Online Monitoring Mechanism will be made available to all APAC States/ Administrations, and clearer guidelines should be provided to assist States/ Administrations in indicating their implementation status for each Ops Action.

6.2.2   The abovementioned information will culminate in a report on progress of implementation of the AP-RASP Actions and achievement of Targets will be presented at every APRAST and RASG-APAC meeting. The progress report should cover minimally the following aspects:

a)   Brief overview of the overall implementation of the AP-RASP;

b)   Analysis on delay/ challenges encountered in implementation of Actions; and

c)   If regional safety goals and targets are not met, causes will be addressed and presented to relevant stakeholders.

6.3 Process for amendment to the AP-RASP

6.3.1 A review of the AP-RASP should be triggered under two circumstances:

a) **New Edition**. The ICAO-APAC should prompt RASG-APAC to task APRAST to review the AP-RASP and develop a new Edition for the next triennium. An ad-hoc WG should be formed for this purpose, and adhere tothe recommended Modalities of AP-RASP ad-hoc WG as per its terms of reference.

b) **Ad-hoc amendment**. At any time during the triennium. if new critical regional issues are identified and reasonable measures are required to mitigate the safety risks as soon as practicable, RASG-APAC and/ or APRAST may make changes to the existing AP-RASP Edition on an ad-hoc basis, without forming an ad-hocWG. The amended version of the AP-RASP should be indicated as a revised Edition.

6.3.2 Key aspects to be considered during the Review include the following:

a) Ensure continuity with the existing AP-RASP Edition;
b) Causes for any Actions not implemented or Targets not met, and any corrective actions to be taken;
c) Ensure alignment with new draft GASP Edition and revised APAC Ministerial Declaration (Beijing Declaration), including an analysis to identify gaps between these documents and the existing AP-RASP;
d) AP-RASPAT has been integrated into the previous edition of AP-RASP 2020-22;
e) The ad hoc working group was dissolved;
f) Address current regional safety risks and challenges identified by APRAST, COSCAPs, PASO and APAC-AIG; and
g) If any existing AP-RASP Actions and Targets need to be revised or new ones introduced.

6.3.3 Prior to the endorsement of the revised AP-RASP by APRAST and then approval by RASG-APAC, adequate consultation of the proposed contents and amendments should be undertaken among APRAST WGs, APAC-AIG, COSCAPs and PASO, APAC States/ Administrations, Industry Partners, International Organizations and the ICAO-APAC. Especially where ATM issues are involved, other non-safety-centric regional entities such as APANPIRG and its Subgroups should also be consulted. The assistance of the ICAO-APAC Regional Office can be sought in this respect.

6.3.4 The typical timeline for the review process of the AP-RASP is described in **Table 5**. In case of an exigency requiring swift major changes to particular Actions, it is recommended that deviations from this process, such as seeking approval in writing instead of at an RASG-APAC meeting, may be allowable depending on the circumstances and upon recommendation by ICAO-APAC and approval by RASG-APAC Co-Chairs.

Time	Task	Custodian
Minimally 2 APRAST meetings or 1 year before end of existing validity period (to coincide with GASP), e.g. at the second APRAST meeting in 2024, or	Trigger the formation of an ad-hoc WG to review AP-RASP in accordance with the above stated guidelines, and insert thisas an agenda item in the upcoming APRAST meeting.	ICAO-APAC Regional Office
	Ensure the formation of an ad-hoc WG to review AP-RASPand develop revised Edition.	APRAST Co-Chairs
if new critical regional issues are identified and reasonable measures are required to mitigate the safety risks as soon as practicable		
At the APRAST meeting preceding the last RASG-APAC meeting before the end of the existing validity period, e.g. at APRAST meeting before RASG-APAC/15 in 2025	Submit the revised AP-RASP for endorsement by APRAST.	Ad-hoc WG

At RASG-APAC meeting before end of existing validity period, *e.g. at RASG-APAC/15 in 2025*	Seek approval for the revised AP-RASP. Upon approval, AP-RASP to be put into implementation.	APRAST Co-Chairs
At every APRAST, RASG and DGCA meeting during validity period	Report achievement of AP-RASP milestones and targets as a routine agenda item.	SRP WG, ICAO-APAC
Within validity period, *e.g. 2023-2025*	Propose changes to the Actions and Targets if necessary for APRAST's endorsement and RASG-APAC's approval.	APRAST Co-Chairs

Table 5. Typical timeline for AP-RASP review process

6.4 Project risks and challenges associated with AP-RASP implementation

6.4.1 Successful implementation of the AP-RASP Actions will require the commitment of resources from stakeholders within the APAC region, availability of data to effectively monitor the achievement of AP-RASP Targets, and proper project governance and coordination. **Table 6** lists some anticipated project risks and their respective proposed mitigation measures, which typically pertain to the aforementioned two areas.

Project Risks	Mitigation measures
Lack of understanding of the expectations of the Actions	APRAST leadership team to provide additional clarification on the expectations of the Actions
Limited manpower and financial resources to fully implement Actions or develop indicators to keep track of implementation of Actions and achievement of Targets	APRAST leadership team and WGs to provide support, either directly or through the partial delegation of responsibility to other APRAST members
Lack of relevant skills and knowledge to effectively implement and monitor targets and indicators at a regional level	APRAST WGs to collate relevant documentation/ educational material to support the development of skills and knowledge where these are inadequate
Lack of timely, consistent, quality data and systems to support monitoring of targets and indicators	APRAST WGs to collate relevant documentation/ educational material to support the development of quality data collection mechanisms and monitoring of targets and indicators. To this end, all stakeholders should contribute data and information as and when required, or otherwise communicate the reason(s) for not being able to do so, so that such reasons can be addressed
Ineffective approval processes (given that there are only 2 APRAST and 1 RASG-APAC meetings annually) for Actions which may require swifter decision-making and actions to be taken	All stakeholders should recognise that inter-session meetings and/or correspondences may be required to expedite decisions where the lack of such decisions impacts timely implementation of the AP-RASP Actions
Lack of coordination and cooperation between Administrator, Custodians and Stakeholders, including States/ Administrations, Industry Partners and International Organizations	APRAST to establish formal communication mechanisms to ensure that there is a coordinated effort to support information flow and encourage cooperation between stakeholders

Table 6: Project risks associated with AP-RASP implementation and their mitigation measures

6.4.2 In addition to the above mitigation measures, information should be collected as to the extent and nature of the abovementioned project risks, as well as other risks that may be identified in the course of implementation of the AP-RASP.

APPENDIX A. AP-RASP 2023-25 EDITION ROADMAPS

The AP-RASP Org and Ops Roadmaps are detailed in Tables 1-8. Each Roadmap covers the following points:

a) **Regional Goals**. The APAC Regional Goals I-V support the APAC region's strategic approach to managing safety at the regional level.

b) **Target(s)**. Targets which serve to fulfil their respective Regional Goal, including the year(s) in which the respective Target is expected to be achieved.

c) **GASP SEI**. Where the Actions stem from the SEIs in the GASP Roadmap, specific references are made for easier reference.

d) **Action**. A description of the specific SEI or initiative, and the tasks required for its implementation. The Actions support the Targets of the Regional Goals.

e) **Action Custodian**. Appointed by APRAST to lead the group of stakeholders identified to further develop specific details for implementation of the respective Action.

f) **Timeline**. The year(s) in which the respective Action is expected to be implemented.

g) **Stakeholders**. The entities/ stakeholders in the APAC region, to which the Actions is addressed.

h) **Metrics**. A description of the specific Target, and the indicators required for performance measurement.

i) **Source/ fulfils**. Indicates key existing global or regional documents from which the Action is adopted or adapted, if applicable.

j) **Asterisk (*)**. Actions and Targets which States should consider for inclusion in their NASPs the GASP SEIs applicable to States and Industry (domestic), as well as those in theAP-RASP Edition mentioned in Chapter 5.2.

k) **Colour scheme**. Org and Ops-related Roadmaps are coloured ==yellow== and ==green== respectively.

l) **Source/ Fulfils**. Indicates key existing global or regional documents from which the Action is adopted, and adapted, if applicable.

Ops Roadmap

Regional HRC 1: LOC-I							
Regional Goal I: Reduction in Operational Risks **Targets** **T1***: Maintain a 3-year moving average decreasing trend of fatal accidents per million departures **T2***: Maintain a 3-year moving average decreasing trend of LOC-I-related accidents per million departures							
GASP SEI	**Action**	**Action Custodian**	**Timeline**	**Stakeholders**	**Metrics**	**Source/ Fulfils**	**Monitoring Activity**
Ops1 (CFIT); Ops2 (LOC-I) Ops2 (LOC-I)	**A.I.1*** LOC 1, CFIT 2: Model Advisory Circular — Air Operators Standard Operating Procedures for Flight Deck Crewmembers **A.I.2*** LOC 2, LOC 4: Guidance Material on Flight Crew Proficiency **A.I.3*** LOC 5: Advisory Circular — Mode Awareness and Energy State Management Aspects of Flight Deck Automation **A.I.4*** LOC 6: Guidance material on Upset Prevention and Recovery Training (UPRT) – ICAO Doc 10011 – ICAO Doc 9868 – Airplane UPRT Aid	SEI WG	2025	APRAST, SEI WG, SRP WG, COSCAPs, ICAO-APAC, other regional platforms/ bodies, States/ Administrations., Industry/ Associations, International Organizations, APANPIRG, PASO	Implementation levels A-D	GASP	RASG-APAC/ APRAST Online SEI monitoring tool

Table 1: Ops Actions and Targets associated with Regional HRC 1

Regional HRC 2: RS, including RE and ARC							
Regional Goal I: Reduction in Operational Risks **Targets** **T1***: Maintain a 3-year moving average decreasing trend of fatal accidents per million departures **T3***: Maintain a 3-year moving average decreasing trend of RS-related accidents per million departures							
GASP SEI	**Action**	**Action Custodian**	**Timeline**	**Stakeholders**	**Metrics**	**Source/ Fulfils**	**Monitoring Activity**
Ops4 (RE); Ops5 (RI)	**A.I.5*** RS 1: Runway Safety Maturity Checklist	SEI WG	2025	APRAST, SEI WG, SRP WG, COSCAPs, ICAO-APAC, other regional platforms/ bodies, States/ Administrations., Industry/ Associations, International Organizations, APANPIRG, PASO	Implementation levels A-D	GASP	RASG-APAC/ APRAST Online SEI monitoring tool
Ops4 (RE)	A.I.6* Runway Excursion (RE) 2: Guidance material on Unstabilised Approach						
	A.I.7* RE 7: Guidance material and training program for runway pavement, maintenance and operations from aerodrome operator's perspective						
Ops5(RI)	**A.I.8*** RI 2: Model Advisory Circular — Runway Incursion (RI) Prevention and Pilot Training						

Table 2: Ops Actions and Targets associated with Regional HRC 2

Regional HRC 3: CFIT							
Regional Goal I: Reduction in Operational Risks **Targets** **T1***: Maintain a 3-year moving average decreasing trend of fatal accidents per million departures							
GASP SEI	**Action**	**Action Custodian**	**Timeline**	**Stakeholders**	**Metrics**	**Source/ Fulfils**	**Monitoring Activity**
Ops1 (CFIT)	**A.I.9*** CFIT 1: Model Regulation on Ground Proximity Warning System (GPWS)	SEI WG	2025	APRAST, SEI WG, SRP WG, COSCAPs, ICAO-APAC, other regional platforms/ bodies, States/ Administrations., Industry/ Associations, International Organizations, APANPIRG, PASO	Implementation levels A-D	GASP	RASG-APAC/ APRAST Online SEI monitoring tool
	A.I.10* CFIT 1: Advisory Circular — Guidance for Operators to Ensure Effectiveness of GPWS Equipment						
	A.I.11* CFIT 1: Advisory Circular — Guidance for Operators on Training Programme on the use of GPWS						
	A.I.12* CFIT 3: Model Advisory Circular — Instrument Approach Procedures Using Continuous Descent Final Approach Techniques						
	A.I.13* CFIT 4: Guidance on the Establishment of a Flight Data Analysis Programme (FDAP)						
	A.I.14* CFIT 5: Advisory Circular — Crew Resource Management Training Programme (CRM)						
	A.I.15* CFIT 6: Advisory Circular — Controlled Flight into Terrain (CFIT) and Approach and Landing Accident Reduction (ALAR) Training Programme						

	A.I.16* CFIT 7: Guidance for Air Operators in Establishing a Flight Safety Documents System						
	A.I.17* CFIT 8: Model Advisory Circular — Issuance of Terrain or Obstacle Alert Warning						
Ops1 (CFIT); Ops2 (LOC-I)	**A.I.1* [duplicate]** LOC 1, CFIT 2: Model Advisory Circular — Air Operators Standard Operating Procedures for Flight Deck Crewmembers						

Table 3: Ops Actions and Targets associated with Regional HRC 3

Org Roadmap

<table>
<tr><td colspan="9">Issue 1: Slow pace of implementation of RASG-APAC/ APRAST SEIs and tools to mitigate operational risks</td></tr>
<tr><td colspan="9">Regional Goal I: Reduction in Operational Risks
Targets
T4*: States/ Administrations and industry to update the online SEI monitoring tools on their status of implementation of all applicable priority RASG-APAC/ APRAST SEIs (Ops Actions) [by 2025]

T5: States/ Administrations with effective safety oversight capabilities (i.e. which have, or are expected to meet, GASP Goal 2 and have attained Level 4 SSP implementation), should actively lead RASG-APAC's safety risk management activities [by 2025]
T6*: States/ Administrations should contribute information on safety risks, including SSP safety performance indicators (SPIs), to RASG-APAC [by 2025]</td></tr>
<tr><td>GASP SEI</td><td>Action</td><td>Action Custodian</td><td>Timeline</td><td>Stakeholders</td><td>Metrics</td><td colspan="2">Source/ Fulfils</td><td>Monitoring Activity</td></tr>
<tr><td>2.1.1 SEI-3; 2.1.2 SEI-7; 3.1 SEI-2C; 3.1 SEI-3 (A,B)</td><td>A.I.18* Review, implement (and update the status of) priority RASG-APAC/ APRAST SEIs aka AP-RASP Ops Actions</td><td>SEI WG</td><td>2025</td><td>APRAST, SEI WG, States/ Administrations, COSCAPs, Industry, PASO</td><td>No. of States/ Administrations which have updated their implementation status on RASG-APAC/ APRAST Online SEI monitoring tool</td><td colspan="2">GASP,</td><td>RASG-APAC/ APRAST Online SEI monitoring tool</td></tr>
<tr><td>2.1.1 SEI-3; 2.1.2 SEI-7</td><td>A.I.19 Enhance the current methodology for the tracking of RASG-APAC/ APRAST SEI implementation, and introduce indicators and targets to measure the implementation and effectiveness thereof; disseminate the results to Directors General</td><td></td><td></td><td>APRAST, SEI WG, SRP WG</td><td>Completion of review and enhancement of tracking methodology; Introduction of indicators and targets to measure effectiveness of implementation</td><td colspan="2">GASP</td><td>Progress report to APRAST and RASG-APAC meetings</td></tr>
<tr><td>2.1.1 SEI-3; 2.1.2 SEI-7; 3.1 SEI-3 (A,B)</td><td>A.I.20 Develop an inspector competency building framework, and any new RASG-APAC/ APRAST SEIs for urgent risks</td><td>To be determined by APRAST</td><td></td><td>APRAST, SEI WG, SRP WG, States/ Administrations, PASO</td><td>Completion of framework; New SEIs introduced to address urgent risks</td><td colspan="2">GASP, DGCA-APAC/55</td><td></td></tr>
<tr><td>2.2 SEI-16</td><td>A.I.21 Develop a more precision/ targeted approach of prioritisation of existing RASG-APAC/</td><td>SEI WG</td><td></td><td>APRAST, SEI WG, COSCAPs, States/ Administrations, Industry, PASO</td><td>Completion of prioritisation approach</td><td colspan="2">GASP, APRAST /13</td><td></td></tr>
</table>

	APRAST SEIs for implementation (by sub-region or common-issue/risk States/ Administrations)						

Table 4: Org Actions and Targets associated with Regional Issue 1

Issue 2: Lower EI scores for all categories as compared to global average, namely
- CE-8: Resolution of safety concerns (CE-8),
- CE-4: Technical personnel qualifications and training,
- CE-7: Surveillance Obligations
- Aircraft and incident investigation (AIG),
- Aerodrome and ground aids (AGA), and
- Air navigation services (ANS)

Regional Goal II: Improvements to safety oversight and compliance
Targets
T7: Conduct workshops and seminars relating to ANS, AIG, AGA at least yearly [from 2023 to 2025]
T8*: Endeavour to have no Significant Safety Concerns (SSCs) under the USOAP Continuous Monitoring Approach (CMA), and to resolve any SSCs promptly within the time frame specified in the Corrective Action Plan and agreed to by ICAO [from 2023 to 2025]
T9*: Increase the number of IOSA registered APAC airlines and ISAGO registrations by 50% over July 2016 figures (82 and 51 respectively) [by 2025]
T10*: States to progressively enhance safety oversight capability to achieve at least 75% EI in USOAP CMA, and to achieve an APAC average overall USOAP EI score higher or equal to the global average [by 2024]

GASP SEI	Action	Action Custodian	Timeline	Stakeholders	Metrics	Source/ Fulfils	Monitoring Activity
2.1.1 SEI-1; 2.1.2 SEI-6	**A.II.1** Conduct workshops and courses to promote effective implementation of SARPs, especially in the technical areas of ANS, AIG, AGA	Philippines supported by USA and ACI	2023-2025	APRAST, COSCAPs, PASO, ICAO-APAC, States/ Administrations	No. of workshops conducted on areas of ANS, AIG, AGA	GASP	Progress report to APRAST and RASG-APAC meetings
2.1.1 SEI-5; 2.1.1 SEI-9	**A.II.2*** Establish, enhance and populate COSCAP and RSOO technical expert databases	APAC COSCAPs		COSCAPs, PASO, States/ Administrations	No. of qualified technical experts populated in database	GASP, APAC COSCAPs	
3.1 SEI-7 (C,D,E,F)	**A.II.3*** Encourage IATA's IOSA and ISAGO registrations	IATA		APRAST, Industry, States/ Administrations	No. of IOSA and ISAGO registrations	GASP	
NA	**A.II.4*** GEN: Standardized Capacity Building Programme	SEI WG	2025	APRAST, SEI WG, SRP WG, COSCAPs, ICAO-APAC, other regional platforms/ bodies, States/ Administrations, Training Organizations, PASO	Implementation levels A-D	Beijing Declaration	RASG-APAC/ APRAST Online SEI monitoring tool

SEI-1	A.II.5 Encourage use of APEX in Safety as tool to enhance AGA EI and aerodrome certification	ACI and States	2025	APRAST, SEI-WG, Aerodrome Operators	Number of aerodromes having undergone APEX assessments	DGCA/57 GASP	APRAST RASG-APAC

Table 5: Org Actions and Targets associated with Regional Issue 2

Issue 3: Slow pace of SSP implementation, as well as understanding of newer safety management and performance-based concepts

Regional Goal III: Effective SMS and SSP **Targets** **T11***: States should implement an SSP that is present [by 2025] **T12***: States should publish national aviation safety plans (NASP) [by 2024]							
GASP SEI	**Action**	**Action Custodian**	**Timeline**	**Stakeholders**	**Metrics**	**Source/ Fulfils**	**Monitoring Activity**
2.2 SEI-10; 2.2 SEI-11; 2.2 SEI-12; 3.1 SEI-7 (C,D,E,F)	**A.III.1*** Support the robust implementation and continuous improvement of SMS and SSP	ICAO APAC RO, COSCAPs Australia; Hong Kong, China, India & Philippines	2023-2025	DGCA-APAC, RASG-APAC, APRAST, SEI WG, SRP WG, APAC-AIG, COSCAPs, PASO, ICAO-APAC, other regional platforms/ bodies, States/ Administrations, Industry	RO/COSCAPs to conduct at least 2 SSP/SMS-related courses/workshops/ webinars for APAC region a year. (RO may include relevant events hosted by other States / Administrations, IATA, ACI etc.) No. of SSP-related courses/ workshops conducted for region (not including domestic); No. of States participated in workshop	GASP	Progress report to APRAST and RASG-APAC Meetings
2.2 SEI-11; 3.1 SEI-1 (C,D); 3.1 SEI-7 (C,D,E,F)	**A.III.2** Improve the sharing of best practices in safety management, safety data and analyses among regional platforms including APANPIRG Sub-groups via RASG-APAC	ICAO APAC RO	2023-2025	RASG-APAC, APRAST, APAC-AIG, COSCAPs, ICAO-APAC, other regional platforms/ bodies, APANPIRG, PASO	No. of SSP-related sharing sessions/ presentations; No. of SSP areas covered; No. of States which presented	GASP, Beijing Declaration	
2.2 SEI-11	**A.III.3***Support the development of NASPs	ICAO APAC RO	2024	ICAO HQ, ICAO-APAC, APRAST, States/ Administrations, PASO	No. of States who have published their NASP		

Table 6: Org Actions and Targets associated with Regional Issue 3

Issue 4: Lack of resources and expertise to manage and collect data on a State level, and no formal mechanisms in place that allow for the sharing and benchmarking of information at the regional level

Regional Goal IV: Data-driven regulatory oversight
Targets
T13 Develop a regional mechanism for data collection, analysis and sharing [by 2025]
T14* Pursue a 50% increase in participation in flight data sharing initiatives by APAC Air Operators, with aircraft of mass 27,000kg above, over July 2019 figures (15) [by 2025]

GASP SEI	Action	Action Custodian	Timeline	Stakeholders	Metrics	Source/ Fulfils	Monitoring Activity
2.1.1 SEI-5; 2.1.2 SEI-9	**A.IV.1*** Establish a mechanism to collect and analyse SSP SPI data from APAC States and common industry Indicators	AP-RASP 2022 ORG Roadmap Action , India	2022 (completed)	APRAST, SRP WG, COSCAPs, ICAO-APAC, States/ Administrations, Industry, PASO	Completion of mechanism	GASP	Progress report to APRAST and RASG-APAC meetings
2.2 SEI-13; 3.1 SEI-4C; 3.1 SEI-7 (C,D,E,F)	**A.IV.2** Establish and populate a Regional Risk Register	SRP WG	2025	APRAST, SRP WG, COSCAPs, States/ Administrations, Industry	Completion and population of risk register	GASP, APRAST	
2.2 SEI-14	**A.IV.3** Develop guidance on governance framework for cross-border aviation safety data sharing projects (including G2B/ third party involvement, funding, liability, info security/ protection)	Philippines and Singapore	2025	APRAST, COSCAPs, States/ Administrations	Completion of governance framework	GASP	
2.2 SEI-14; 2.2 SEI-15	**A.IV.4*** Establish a mechanism for regional aviation safety data collection and sharing and support States'/ Administrations' participation in regional aviation safety data-sharing projects		2025	APRAST, States/ Administrations, Industry	Launch of mechanism	GASP, AP-RASPAT	
2.2 SEI-16; 3.1 SEI-4C; 3.1 SEI-7 (C,D,E,F)	**A.IV.5** Develop a more data-driven, precision-/ targeted approach of identifying risks (by sub-region or common-issue/risk groups of States/ Administrations)	SRP WG	2025	APRAST, SEI WG, SRP WG, COSCAPs, States/ Administrations, Industry	Completion of approach	GASP, Beijing Declaration	

Table 7: Org Actions and Targets associated with Regional Issue 4

Issue 5: Increasing risks associated with airspace congestion, and the lack of appropriate infrastructure to support safe operations; lack of capacity of regulatory authorities

Regional Goal V: Enhanced aviation infrastructure (physical and institutional)
Targets
T15* States should achieve at least 75% EI in AGA of USOAP CMA, and an APAC average USOAP EI score in AGA higher or equal to the global average [by 2025]
T16* States should achieve at least 75% EI in AIG of USOAP CMA, and an APAC average USOAP EI score in AIG higher or equal to the global average [by 2025]
T17* Certify all aerodromes the APAC region that are used for international operations [by 2025]
T18* States should establish an independent accident and incident investigation authority (AAIIA) as required by Annex 13, as well as related investigation system and procedures [by 2025]

GASP SEI	Action	Action Custodian	Timeline	Stakeholders	Metrics	Source/ Fulfils	Monitoring Activity
2.1.1 SEI-4; 2.1.2 SEI-8	**A.V.1** Integrate the existing basic building blocks of RASG-APAC/ APRAST towards the envisioned safety data collection and processing system (SDCPS) for the APAC region	Lead Pakistan: Philippines: Support Pakistan: Philippines: US-FAA: India: 1.	2023 - 2025	APRAST, SEI WG, SRP WG, APAC-AIG, COSCAPs, ICAO-APAC	Completion of documented clear lines and procedures for communication of respective types of data/ information between APRAST and other regional groups	GASP	Progress report to APRAST and RASG-APAC meetings
2.1.1 SEI-4; 2.1.2 SEI-8	**A.V.2** Enhance the terms of reference (TORs) of various regional bodies using a TOR framework	ICAO APAC RO	2025	APRAST, SEI WG, SRP WG, APAC-AIG, COSCAPs, ICAO-APAC	Completion of review and revision of TORs	ICAO-APAC	
2.1.1 SEI-4; 2.1.2 SEI-8	**A.V.3** Improve the communication of activities and coordination of schedules among regional bodies and meetings, regional workshops/ courses, e.g. via a one-stop calendar of regional events		2024	DGCA-APAC, RASG-APAC, APRAST, SEI WG, SRP WG, APAC-AIG, COSCAPs, ICAO-APAC, other regional platforms/ bodies, States/ Administrations, Industry, PASO	Completion of documented clear lines and procedures for communication of respective events; completion of regional one-stop calendar	GASP	

2.1.1 SEI-5; 2.1.2 SEI-9	**A.V.4*** Continue to encourage States/Administrations to informally share information and coordinate on operational issues in the USOAP Audit Areas of OPS, ANS and AGA by conducting regular meetings and via the platform established in previous triennium.	**Philippines**: Other Participants: ACI, IATA ICAO RO, PASO, Cambodia, Maldives, Sri Lanka, Afghanistan, , Timor-Leste	2025	APRAST, COSCAPs, ICAO-APAC, States/ Administrations, PASO	Completion of directory of appropriate CAA contact points for various areas and associated procedures to update the directory. Regular informal reports APRAST on sharing of USOAP results and assistance offered.	GASP	
3.1.1 SEI-7 (F)	**A.V.6*** Implement safety-related initiatives from the APAC Seamless ANS Plan[3] in a timely manner, as applicable	APANPIRG	2025	APANPIRG, ICAO-APAC, States/ Administrations, PASO	Number of States whichhave implemented safety-related initiatives under APAC Seamless ANS Plan	APAC Seamless ANS Plan	APANPIRG and Sub Groups meeting reports
2.1.1 SEI-2	**A.V.7*** Establish an independent accident and incident investigation authority (AAIIA) as required by Annex 13, as well as related investigation system and procedures	APAC-AIG	2025	APAC-AIG, States/ Administrations	No. of States which have established their AAIIA	GASP, Beijing Declaration	Progress report to APRAST and RASG-APAC meetings

Table 8: Org Actions and Targets associated with Regional Issue 5

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[3] The safety-related initiatives under the APAC Seamless ANS Plan (version 3.0, November 2019) are as follows:

a) Implementation of runway safety teams (ICAO Manual on the Prevention of Runway Incursions (Doc 9870) and RST Handbook refers);

b) Implementation of advanced surface traffic management visual aids, pilot comprehensive awareness and runway alerting and enhanced ATC alerting systems such as A-SMGCS, routing service to support ATC and enhanced vision systems (EVS) for taxiing and runway safety alerting logic consistent with SURF-B1/1 – 5 (second column: Asia/Pacific Seamless ANS Plan refers);

c) Implementation of ground-based safety nets, including STCA, MTCD, APW, APM and MSAW consistent with ASBU elements FRTO-B0/4 and SNET-B0/1 – 4 (second column: Asia/Pacific Seamless ANS Plan refers);

d) Implementation of regulations supporting the integration of UAS operations in non-segregated airspace, using a risk-based approach and in accordance with the Asia/Pacific Regional Guidance for the Regulation of UAS, as a minimum (second column: Asia/Pacific Seamless ANS Plan refers); and

e) Implementation of enhanced and effective safety reporting (second column: RASMAG Reports refer).

APPENDIX A1.   List of Targets Under the Roadmap

Ops Roadmap

Regional Goal I: Reduction in Operational Risks

Regional HRC 1: LOC-I

- T1*: Maintain a 3-year moving average decreasing trend of fatal accidents per million departures

- T2*: Maintain a 3-year moving average decreasing trend of LOC-I-related accidents per million departures

Regional HRC 2: RS, including RE and ARC

- T1*: Maintain a 3-year moving average decreasing trend of fatal accidents per million departures

- T3*: Maintain a 3-year moving average decreasing trend of RS-related accidents per million departures

Regional HRC 3: CFIT

- T1*: Maintain a 3-year moving average decreasing trend of fatal accidents per million departures

Org Roadmap

Regional Goal I: Reduction in Operational Risks

- T4*: States/ Administrations and industry to update the online SEI monitoring tools on their status of implementation of all applicable priority RASG-APAC/ APRAST SEIs (Ops Actions) [by 2025]

- T5: States/ Administrations with effective safety oversight capabilities (i.e. which have, or are expected to meet, GASP Goal 2 and have attained Level 4 SSP implementation), should actively lead RASG-APAC's safety risk management activities [by 2025]

- T6*: States/ Administrations should contribute information on safety risks, including SSP safety performance indicators (SPIs), to RASG-APAC [by 2025]

Regional Goal II: Improvements to safety oversight and compliance

- T7: Conduct workshops and seminars relating to ANS, AIG, AGA at least yearly [from 2023 to 2025]

- T8*: Endeavour to have no Significant Safety Concerns (SSCs) under the USOAP Continuous Monitoring Approach (CMA), and to resolve any SSCs promptly within the time frame specified in the Corrective Action Plan and agreed to by ICAO [from 2023 to 2025]

- T9*: Increase the number of IOSA registered APAC airlines and ISAGO registrations by 50% over July 2016 figures (82 and 51 respectively) [by 2025]

- T10*: States to progressively enhance safety oversight capability to achieve at least 75% EI in USOAP CMA, and to achieve an APAC average overall USOAP EI score higher or equal to the global average [by 2024]

Regional Goal III: Effective SMS and SSP

- T11*: States should implement an SSP that is present [by 2025]

- T12*: States should publish national aviation safety plans (NASP) [by 2024]

Regional Goal IV: Data-driven regulatory oversight

- T13 Develop a regional mechanism for data collection, analysis and sharing [by 2025]

- T14* Pursue a 50% increase in participation in flight data sharing initiatives by APAC Air Operators, with aircraft of mass 27,000kg above, over July 2019 figures (15) [by 2025]

Regional Goal V: Enhanced aviation infrastructure (physical and institutional)

- T15* States should achieve at least 75% EI in AGA of USOAP CMA, and an APAC average USOAP EI score in AGA higher or equal to the global average [by 2025]

- T16* States should achieve at least 75% EI in AIG of USOAP CMA, and an APAC average USOAP EI score in AIG higher or equal to the global average [by 2025]
- T17* Certify all aerodromes the APAC region that are used for international operations [by 2025]

- T18* States should establish an independent accident and incident investigation authority (AAIIA) as required by Annex 13, as well as related investigation system and procedures [by 2025]

Note: There were 19 targets in RASP 2020-2022. T12 (States should attain L3 SSP implementation [by 2022]) was removed in the current edition as per GASP 2023-2025. T13 to T19 were renumbered to T12 to T18 in this edition.

APPENDIX B.   AD-HOC WORKING GROUP MEMBERS AND CONTACT DETAILS FOR ENQUIRIES

State/ Administrations		Industry Partners and International Organizations	
Australia	Singapore	**ACI (Co Lead)**	AAPA
China	Sri Lanka	Airbus	ICAO (incl. COSCAPs)
Hong Kong China	Thailand	IATA	PASO
India (Co Lead)	**USA (Co-Lead)**	Boeing	
ROK			

Table 1: Ad-hoc Working Group members for AP-RASP 2023-2025 Edition

Contact Points for enquiries

For enquiries on AP-RASP and development of NASPs, please contact the ICAO-APAC at apac@icao.int.

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APPENDIX D. KEY REFERENCE DOCUMENTS USED TO DEVELOP THE AP-RASP 2023-2025 EDITION

1. Reports of RASG-APAC/8, and RASG-APAC/9, APRAST/12, /13,/14,/17 and /18 meetings, and Working Papers RASG-APAC/8-WP/13, APRAST/13-WP/13, APRAST/14-WP/8 and WP/9 (https://www.icao.int/APAC/RASG/Pages/RASG- Meetings.aspx)

2. ICAO GASP 2023-2025 Edition (Doc 10004) (www.icao.int/gasp)

3. Global Aviation Safety Roadmap 2023-25 (https://www.icao.int/safety/GASP/Pages/Roadmaps.aspx)

4. Beijing (APAC Ministerial) Declaration 2018 (www.icao.int/APAC/Meetings/Pages/2018-APACMC.aspx)

5. RASG-APAC Annual Safety Report 2022

6. RASG-APAC/ APRAST SEIs (https://www.icao.int/APAC/RASG/eDocs/Forms/AllItems.aspx)

7. TORs of RASG-APAC, APRAST and Sub-Groups

   (https://www.icao.int/APAC/RASG/Documents/ToRs%20-%20RASG-APAC.pdf.pdf https://www.icao.int/APAC/RASG/Documents/ToR%20-%20APRAST.pdf.pdf https://www.icao.int/APAC/RASG/Documents/ToR%20-%20APAC%20AIG.pdf.pdf https://www.icao.int/APAC/RASG/Documents/ToR%20-%20AP-SRP%20WG.pdf.pdfhttps://www.icao.int/APAC/RASG/Documents/ToR%20-%20SEI%20WG.pdf.pdf)

8. ICAO Manual: Doc 10131, 'Manual on the Development of Regional and National Aviation Safety Plans' (https://www.icao.int/safety/GASP/Documents/Doc%2010131/10131_en.pdf)

9. CAST/ ICAO Common Taxonomy Team (CICTT) taxonomies for hazards and occurrences (www.intlaviationstandards.org)

10. APAC Seamless Air Navigation Services (ANS) Plan Version 3.0 (November 2019) (Asia/Pacific Seamless ATM Plan V1.1 (icao.int))

11. ICAO APAC Regional Report (https://www.icao.int/publications/journalsreports/2010/ICAO_APAC-Regional-Report.pdf)

12. Aviation Benefits Beyond Borders Report 2020 (https://aviationbenefits.org)

APPENDIX E.   GASP Org SEIs CONSIDERED WHEN DEVELOPING THE AP-RASP

The following is a list of SEIs of the Org Roadmap of the GASP, which were considered in the development of the AP-RASP. These were selected from the GASP SEIs for Regions and Industry (applicable to regions), since such GASP SEIs can only be addressed at RASG-/ regional-level. GASP SEIs for States and Industry (domestic) were deemed more appropriate to be included in NASPs.
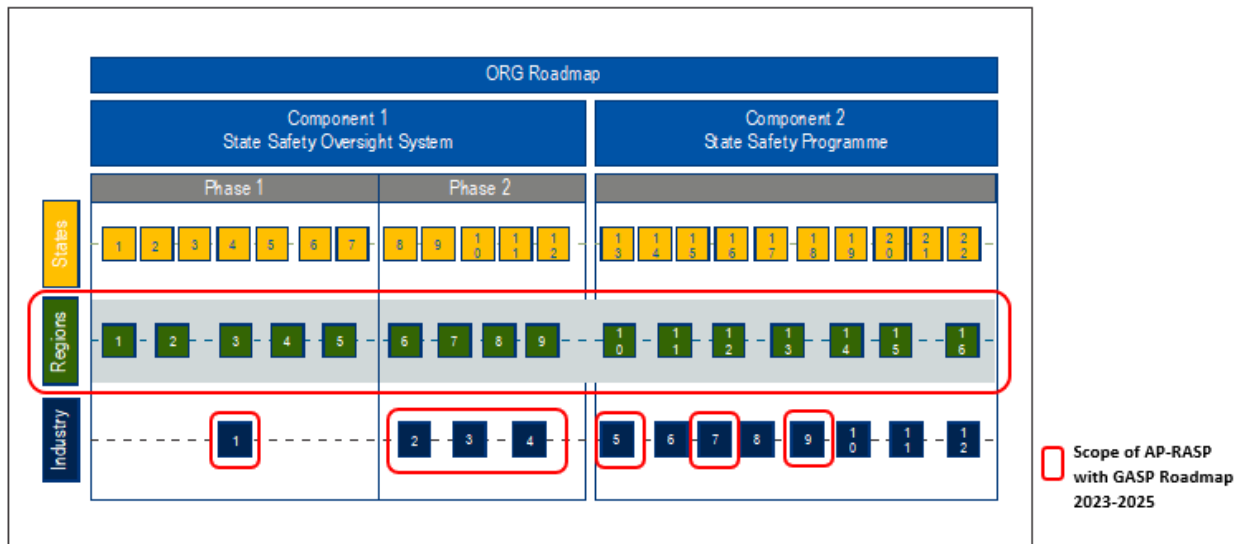
Figure 1: SEIs in GASP Org Roadmap considered in developing AP-RASP

As stakeholders accomplish each Action, represented by a numbered box in the diagram, they advance through the roadmap thus achieving the different GASP Goals. For example, Box number '1' in the row named 'Regions' refers to "SEI-1 — Consistent implementation of ICAO SARPs at regional-level" under the GASP Org Roadmap '2.1 Component 1 — State safety oversight (SSO) system, 2.1.1 Phase 1 — Establishment of a safety oversight framework (CE-1 to CE-5)'. For more details on how to interpret this Roadmap, refer to Chapter 2 of ICAO Doc 10161 on Global Aviation Safety Roadmap 2023-2025.

Organizational Challenges (Org) Roadmap- Regions

ICAO Doc 10161 provides the Org SEIs to meet the GASP goals related to Regions' state safety oversight system capabilities and implementation of SSP. Same are mentioned below:

   2.1 Component 1 — State safety oversight (SSO) system

      2.1.1 Phase 1 — Establishment of a safety oversight framework (CE-1 to CE-5)

   • SEI-1 — Consistent implementation of ICAO SARPs at regional-level
   • SEI-2 — Establishment independent regional accident and incident investigation process, consistent with Annex 13
   • SEI-3 — Regional safety enhancement initiatives to support consistent coordination of regional programmes inestablishing adequate safety oversight capabilities
   • SEI-4 — Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner
   • SEI-5 — Provision of the regional safety information to ICAO by asking States to complete, submit and update allrelevant documents and records

      2.1.2 Phase 2 — Implementation of a safety oversight system (CE-6 to CE-8)

   • SEI-6 — Continued implementation of and compliance with ICAO SARPs at the regional level
   • SEI-7 — Regional safety enhancement initiatives to support consistent coordination of regional programmes inimplementing adequate safety oversight capabilities

- SEI-8 — Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner
- SEI-9 — Continued provision of the primary source of regional safety information to ICAO by asking States toupdate all relevant documents and records as progress is made

2.2 Component 2 — State safety programme

- SEI-10 — Start of promotion of SSP implementation at the regional level
- SEI-11 — Regional safety enhancement initiatives to support consistent coordination of regional programmes forSSP implementation
- SEI-12 — Strategic collaboration with key aviation stakeholders to support SSP implementation
- SEI-13 — Establishment of safety risk management at the regional level
- SEI-14 — Regional allocation of resources to support continued development of the proactive use of risk modellingcapabilities
- SEI-15 — Regional collaboration with key aviation stakeholders to support the proactive use of risk modelling
- SEI-16 — Advancement of safety risk management at the regional level

3.1 Component 1 — State safety oversight (SSO) system

3.1.1 Phase 1 — Establishment of a safety oversight framework (CE-1 to CE-5)

- SEI-1C — Participate in regional activities for sharing of best practices, mentoring and conducting follow-up actions
- SEI-1D — Address regional and national high-risk categories of occurrences, as applicable, in coordination with States and regions
- SEI-2C — Encourage active participation of industry in RASGs to assist with implementation of SEIs
- SEI-3A — Identify resources that are available to support enhancement initiatives for States andRegions
- SEI-3B — Participate in regional and international government/industry collaborative safety enhancement initiatives
- SEI-4C — Continue to work with regional groups to address regional and national high- risk categories of occurrences
- SEI 5B — Notify competent authorities/entities in the region (States, RASG, RSOO) when there may be discrepancies in the application of SMS requirements among States in the region
- SEI-7C — Support RASG and/or RSOO efforts to establish a mentoring system, including providing assistance toStates/industry, as well as sharing of best practices to support SSP implementation
- SEI-7D — Provide input to process for sharing technical guidance, tools and safety-critical information related to

  SSP & SMS (e.g. advisory circulars, staff instructions, safety performance indicators), in collaboration with States, RASG, RSOO, ICAO and/or other stakeholders
- SEI-7E — Support continuous improvement of SSP, in collaboration with States, RASG, RSOO, ICAO and/or other stakeholders
- SEI-7F — Continue to work with regional groups to address regional and national high-risk categories of occurrences
- SEI 9E — Encourage sharing of information from industry to the State and region to assist in the development of national and regional aviation safety plans

APPENDIX F.   MAPPING OF KEY CONTENTS OF AP-RASP TO GASP GUIDELINES

Mapping template for AP-RASP key contents to ICAO's RASP guidelines

Doc 10131, Chapter 3, 3.3, Detailed Sections of the RASP (reference)	*Regional aviation safety plan (RASP) content (aspect to be analysed or question to be answered)*	*Answer (Yes/No or N/A[1])*	*Reference in RASP(if different from template)*
3.3.1 Introduction of the RASP			
3.3.1 a)	Does it provide an overview of the RASP, including its structure (chapters, sections and their content)?	☐**Yes** ☐No	Foreword, Chap 0, 1.1-1.3
3.3.1 b)	Does it note the region's commitment to aviation safetyand to the resourcing of activities (at the regional level)to enhance aviation safety?	☐**Yes** ☐No	Foreword, Chap 0.1, 1.4, 2.3
3.3.1 c)	Does it describe the entities responsible for the RASP's development, implementation and monitoring?	☐**Yes** ☐No	Chap 0.10, 5.1
3.3.1 d)	Does it describe the regional safety issues?	☐**Yes** ☐No	Chap 0.4
3.3.1 e)	Does it describe the regional safety goals and targets?	☐**Yes** ☐No	Chap 0.5-0.8
3.3.1 f)	Does it describe the region's operational context?	☐**Yes** ☐No	Chap 2.1
3.3.2 Purpose of the RASP			
3.3.2 a)	Does it include a description of the region's strategic direction for the management of aviation safety?	☐**Yes** ☐No	Chap 0.2, 1.1, 2.2
3.3.2 b)	Does it establish the duration of the RASP?	☐**Yes** ☐No	Chap 1.1.2, 2.2.1
3.3.2 c)	Does it note the relationship between the RASP, the NASP of each State in the region and the most currentedition of the GASP?	☐**Yes** ☐No	Chap 1.4, 5.2
3.3.2 d)	Does it include initiatives at the regional level that will support the improvement of aviation safety at the individual State level and the wider international level?	☐**Yes** ☐No	Chap 1.4, 2.3, 3.2, 4.2, Appendix G
3.3.2 e)	Does it identify other plans that have been considered in the development of the RASP?	☐**Yes** ☐No	Chap 1.2.1, 1.4, Appendix D
3.3.3 The region's strategic direction for the management of aviation safety			
3.3.3 a)	Does it describe how the RASP is developed and endorsed, including any collaboration with stakeholders?	☐**Yes** ☐No	Chap 1.3, 2.3, 5.1, 6.1, 6.3-6.4, Appendix H

3.3.3 a) 1)	Does it describe the governance of the RASP, this includes how frequently it is reviewed and updated?	☐ **Yes** ☐ No	Chap 1.3, 2.3, 5.1, 6.1, 6.3-6.4, Appendix H
3.3.3 a) 2)	Does it explain that a collaborative approach is neededto identify regional safety issues and implement safety enhancement initiatives (SEIs) to address them?	☐ **Yes** ☐ No	Chap 5.1, 6.1, 6.3-6.4, Appendix H
3.3.3 a) 3)	Does it describe the process used to determine regional operational safety risks and organizational challenges?	☐ **Yes** ☐ No	Chap 1.3, 2.3, 5.1, 6.1, 6.3-6.4, Appendix H
3.3.3 b)	Does it list the regional safety goals, targets and indicators?	☐ **Yes** ☐ No	0.5-0.8, Appendix A
3.3.3 b) 1)	Does it explain how the regional safety goals, targetsand indicators are linked to the GASP?	☐**Yes** ☐No	Chap 6.1, Appendix A
3.3.3 b) 2)	Does it list any specific regional safety goals, targetsand indicators over and above those of the GASP, if applicable?	☐ **Yes** ☐ No	Chap 6.1, Appendix A
3.3.3 c)	Does it describe how the SEIs help to achieve the regional safety goals?	☐ **Yes** ☐ No	Chap 6.1, 6.2
3.3.3 c) 1)	Does it explain the link between the regional safety goals and targets with the SEIs that the region will undertake to improve safety?	☐ **Yes** ☐ No	Chap 0.6-0.7, Chap 1.4, 5.2, 6.1 Appendix A, Appendix E
3.3.3 c) 2)	Does it explain how the regional safety goals and targets are linked to States' individual SEIs (within theregion) or overarching initiatives at the international level?	☐ **Yes** ☐ No	Chap 0.6-0.7, Chap 1.4, 5.2, 6.1 Appendix A, Appendix E
3.3.3 d)	Does it list the emerging issues that may require further analysis?	☐ **Yes** ☐ No	Chap 1.4, 2.3
3.3.4 Regional operational safety risks			
3.3.4 a)	Does it provide a summary of accidents and serious incidents that have occurred in the region during a set time period and those which involved aircraft registeredin States in the region, particularly for aircraft of a maximum mass of over 5 700 kg during scheduled commercial operations?	☐ **Yes** ☐ No	Chap 3.1, Appendix I
3.3.4 b)	Does it list and describe the regional HRCs (R-HRCs), including the reason they were given priority?	☐ **Yes** ☐ No	Chap 0.3, 3.1, 3.2
3.3.4 c)	Does it explain how other regional operational safety risks are identified, including the reason they were givenpriority?	☐ **Yes** ☐ No	Chap 0.3, 3.1
3.3.4 d)	Does it list the main contributing factors leading to theR-HRCs identified in the region?	☐ **Yes** ☐ No	Chap 3.1, Appendix I
3.3.4 e)	Does it include a description of a set of SEIs to mitigatethe risks associated with the R-HRCs and any other regional operational safety risks the region wishes to mitigate through the RASP?	☐ **Yes** ☐ No	Chap 3.1, 3.2, Appendix A

3.3.4 e) 1)	Does it list SEIs that the region plans to implement, or is in the process of implementing, to address all the identified R-HRCs and the other regional operational safety risks?	☐ **Yes** ☐ No	Chap 3.2, Appendix A
3.3.4 e) 2)	Does it identify those SEIs derived from the global aviation safety roadmap, where applicable?	☐ **Yes** ☐ No	Chap 1.4, 3.2, Appendix A
3.3.4 f)	Does it describe the taxonomy used in the process of determining regional operational safety risks?	☐ **Yes** ☐ No	Appendix H
3.3.5 Organizational challenges			
3.3.5 a)	Does it provide a summary of the States' effective safety oversight capabilities for States in the region?	☐ **Yes** ☐ No	Chap 4.1, Appendix J
3.3.5 b)	Does it include a list and description of organizational challenges selected for the RASP, including the reason they were given priority?	☐ **Yes** ☐ No	Chap 4.1
3.3.5 c)	Does it explain how they were identified, including, but not limited to, a data-driven approach?	☐ **Yes** ☐ No	Chap 0.3-0.4, 4.1, Appendix H
3.3.5 d)	Does it include a description of a set of SEIs to address the organizational challenges identified?	☐ **Yes** ☐ No	Appendix A
3.3.5 d) 1)	Does it list SEIs the region plans to implement, or is in the process of implementing, to address all organizational challenges identified?	☐ **Yes** ☐ No	Appendix A
3.3.5 d) 2)	Does it identify those SEIs that were derived from the global aviation safety roadmap, where applicable?	☐ **Yes** ☐ No	Chap 4.2, Appendix E, Appendix A
3.3.6 Monitoring implementation			
3.3.6 a)	Does it describe how the region will monitor the implementation of the SEIs listed in the RASP and how it will measure safety performance of the regional civil aviation system to ensure the intended results are achieved?	☐ **Yes** ☐ No	Chap 0.10, 6.1
3.3.6 b)	Does it explain how corrections and adjustments to the RASP and its SEIs will be made and reported?	☐ **Yes** ☐ No	Chap 6.2-6.3
3.3.6 c)	Does it explain how each regional safety target will be monitored to track performance?	☐ **Yes** ☐ No	Chap 6.1, Appendix A
3.3.6 d)	Does it describe how stakeholders will be provided with relevant up-to-date information on the progress made in achieving the regional safety goals, as well as the implementation status of SEIs?	☐ **Yes** ☐ No	Chap 5.1, 6.2
3.3.6 e) 1)	Does it include an explanatory text addressing the following situation: "If the regional safety goals are not met, the root causes should be presented"?	☐ **Yes** ☐ No	Chap 6.2-6.4

3.3.6 e) 2)	Does it include an explanatory text addressing the following situation: "If the region identifies critical operational safety risks, reasonable measures will be taken to mitigate them as soon as practicable, possiblyleading to an unscheduled revision of the RASP"?	☐ **Yes** ☐ No	Chap 6.2-6.4
3.3.6 f)	Does it explain that States have adopted a standardized approach, as outlined by the RASG or other relevant regional entity, to provide information at the regional level?	☐ **Yes** ☐ No	Chap 6.1.4, 6.2
3.3.6 g)	Does it include contact information for inquiries or further information?	☐ **Yes** ☐ No	Chap 0.13, Appendix B

APPENDIX G.   RESOURCES, TOOLS AND PLATFORMS TO SUPPORT AP-RASP IMPLEMENTATION

The following is a non-exhaustive list of available ICAO resources and tools to support the implementation of GASP, RASPand NASP, in addition to the ICAO publications referenced in the GASP.

- **Programmes** including No Country Left Behind (NCLB) and iMPLEMENT, Next Generation of Aviation Professionals (NGAP), Technical Assistance Programme, Runway Safety Progamme, Cabin Safety Initiative, GADSS, and GASP and Safety Management Implementation websites;

- **Electronic tools** including iSTARS, USOAP CMA Online Framework (OLF), SSP Foundation Tool, Aviation Safety Implementation Assistance Partnership (ASIAP); and

- **Products and services** including Safety Fund (SAFE), Global Aviation Safety Oversight System (GASOS), Civil Aviation Safety Inspectors (CASI) and cross-border transferability (XBT), Competency-based Training and Assessment Task Force (CBTA).

Relevant APAC regional bodies and mechanisms to discuss the implementation of Actions of the AP-RASP, include thefollowing:

- **APAC regional bodies and mechanisms** including. ICAO-APAC and website and CAT Missions, APAC Ministerial Conference, DGCA-APAC, RASG-APAC, APRAST including SEI WG and SRP WG/ IAT, APAC-AIG, APAC COSCAPs and CCBM, PASO, APANPIRG and its Subgroups including RASMAG and AOPSG, ICAORTCOs in APAC, APEC Aviation Safety Experts Subgroup Meeting, ASEAN, SARI, AAPA, EU ARISE+, EU- SEA and EU-SA APPs, FAA/APAC Bilateral Partnership, US CAST.

Refer to the below table for more information on the key safety-related APAC regional bodies, mechanisms and platforms.

Name	Function
ICAO-APAC	The APAC Office is accredited to 39 contracting States, two Special Administrative Regions of China and 13 other Territories. The Asia/Pacific Region covers vast airspace, with 50 Flight Information Regions. The primary role of the APAC Office is to foster the planning and implementation by the States of the ICAO provisions: International Standards and Recommended Practices (SARPs), Procedures for Air Navigation Services (PANS) and Regional Air Navigation Planning, for the safety, security and efficiency of air transport.
Directors General of Civil Aviation (DGCA) Conference	The Annual Conference of Directors General of Civil Aviation is a major event in the Asia/Pacific Region. The Conference is hosted by States within the Asia/Pacific Region on a rotating basis. The Conference is strictly with the Directors General, but because of the association of the Regional Office right from the beginning, ICAO is considered an integral and a key partner of this event. ICAO serves the Conference as the Secretary and is involved in its planning, conduct and follow-up. It also provides guidance and follows up on preparations as well as provision of facilities and services by the Host State. The Conference is unique in the retention of its informal nature, which allows the Directors General to discuss any issue openly and frankly. The forum also provides the essential linkage for all the Aeronautical Authorities of the Region to establish a very close and personal rapport which contributes greatly to the co-ordination on Civil Aviation matters in the Region.

	The aims and objectives of the Annual Conference of the Directors General of Civil Aviation in the Asia/Pacific Region are to:
	a) Review and exchange information on matters of interest in civil aviation.
	b) Enhance co-ordination of civil aviation activities in the Region.
	c) Allow in-depth deliberations on one or two items of crucial importance to the Region as Theme Topic(s).
	d) Develop specific *Action Items* that are of common interest and importance to the Region.
	e) Provide overall guidance, harmonization and co-ordinated application of standards and procedures in the Region.
	f) Follow up and co-ordinate, by the Secretariat, on issues of importance in a timely and orderly manner.
Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG)	APANPIRG comprises all States in the APAC region who are service providers in the APAC region, appropriate International Organizations and other Partners who could provide support to enhance air navigation services in the APAC region. The Group's objectives are to ensure continuous and coherent development of the APAC Regional Air Navigation Plan and other relevant documentation in a harmonized manner with adjacent regions, to facilitate the implementation of air navigation systems and services as identified in the APAC Regional Air Navigation Plan, and to identify and address specific deficiencies in the air navigation field.
Aerodromes Operations and Planning Sub-Group (AOP SG)	The AOPSG is a sub group of APANPIRG. Its objectives are to ensure the continuous and coherent development of the AOP Parts of the APAC ANP, facilitate the implementation of AOP services, and review, identify and address AOP deficiencies.
Regional Airspace Safety Monitoring Advisory Group (RASMAG)	RASMAG is a sub group of APANPIRG. It is tasked with facilitating the safe implementation of reduced separation minima and CNS/ATM applications within the Asia and Pacific Regions with regard to airspace safety monitoring; and to assist States to achieve the established levels of airspace safety for international airspace within the APAC region.
Regional Aviation Safety Group for the Asia and Pacific Regions (RASG-APAC)	RASG-APAC comprises all States/Administrations in the APAC region, appropriate International Organizations and other Partners who could provide support to enhance safety in the APAC region. The RASG-APAC, similar to Planning and Implementation Regional Groups (PIRGs), allows the reports of RASGs to be reviewed by the Air Navigation Commission on a regular basis, and by Council as deemed necessary, thus providing interregional harmonization related to flight safety issues and a means to monitor implementation of the Global Aviation Safety Plan /Global Aviation Safety Roadmap (GASP/GASR).
Asia Pacific Regional Safety Team (APRAST)	APRAST is a sub-group of RASG-APAC providing support in the implementation of safety enhancement initiatives. APRAST works closely with industry and other organizations to coordinateimplementation efforts. APRAST assists RASG-APAC in the monitoring and implementing of the APAC regional aviation safety priorities and targets in line with the ICAO Global Aviation Safety Plan. Also develops Work Programme for RASG-APAC. APRAST reviews regional trends on accidents, incidents and other areas of concern which may warrant interventions. The focus and priority for APRAST will be to introduce, support, and develop actions, which have the potential to effectively and economically reduce the regional aviation risk. APRAST also supports and implements the sharing of best practices and information.
Asia Pacific Accident InvestigationGroup (APAC AIG)	APAC AIG is a sub-group of RASG-APAC. APAC-AIG assists States/ Administrations to achieve a high level of compliance with ICAO SARPs in the area of AIG. It enhances capabilities among AIG bodies, through organizing workshops, seminars, forums and training, and through cooperation.

Safety Reporting and Programme WG (SRP WG)	SRP WG is a sub-group of APRAST. It determines aviation safety risks and key contributors to accidents in APAC. It also develops the APAC Regional Annual Safety Report.
Safety Enhancement Initiative WG (SEI WG)	SEI WG is a sub-group of APRAST. It develops, implements and reviews SEIs to address contributing factors to operational risks, e.g. Loss of Control In-flight (LOC-I), Controlled Flight into Terrain (CFIT), Runway Safety (RS).
Information Analysis Team (IAT)	IAT is a sub group of APRAST. It supports the development of SEIs and APAC Regional Annual Safety Reports through processing significant volume of data and information.
APRAST Capacity Building Task Force	The TF was formed on a once-off basis for a specific purpose to resolve a specific issue identified by APRAST. In this instance, it was on "developing a Standardized Capacity Building Programme". This programme was subsequently proposed to RASG for acceptance, supported by APRAST. With RASG's acceptance, the programme was disseminated to all APAC States/ Administrations by the ICAO-APAC. Note: The member selection of the TF is similar to that of the WGs, on volunteer basis. The TF was dissolved once it had completed its mission.
APAC Regional Aviation Safety Priorities and Targets (AP-RASPAT) ad-hoc WG	The ad-hoc WG was formed on a once-off basis for a specific purpose to resolve a specific issue identified by APRAST. In this instance, it was to facilitate and conduct the review and revision of the AP-RASPAT, to progress improvement of aviation safety in the region, and to recommend a more long-term mechanism of ensuring alignment and relevance of Regional Priorities and Targets. The review was completed prior to APRAST/12, for discussion and finalization at APRAST/12 and approval at RASG-APAC/8. Note: The ad-hoc WG has been dissolved and the AP-RASPAT subsumed under the AP-RASP.
APRAST Regional Aviation Safety Plan ad-hoc WG	The ad-hoc WG is a subgroup of the APRAST that only convenes for the explicit purpose to review the AP-RASP and develop a new Edition for the next triennium in accordance with the RASG-APAC Procedural Handbook and the processes outlined within the AP-RASP. The ad-hoc WG is co-led by States/Administrations and Industry Organizations on a rotating basis and the membership consists of volunteers from the APRAST.
APRAST Regional Aviation Safety Plan Implementation WGs	Multiple ad-hoc WGs were established to contribute to the implementation of specific actions within the Org road map. ICAO-APAC nominates the action custodians consisting of champions/lead roles for each appropriate action and the members of the APRAST volunteer for supporting roles.

Cooperative Development of Operational Safety and Continuing Airworthiness Programmes (COSCAP)	The COSCAP Programmes support and strengthen aviation safety among participating Civil Aviation Administrations through: a) advancing safety oversight policies, procedures and regulations; b) supporting harmonization and standardization; c) efficient and cost-effective method for the training safety oversight personnel; and, d) Supporting Regional Aviation Safety Teams (RASTs) to assist in identifying hazards and implementing safety enhancement actions to reduce safety risks There are three COSCAPs in Asia: a) **COSCAP South Asia** (1998): Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka b) **COSCAP South East Asia** (2001): Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Viet Nam c) **COSCAP North Asia** (2003): China (including Hong Kong and Macau SARs), the Democratic People's Republic of Korea, Mongolia, and the Republic of Korea. There is a **Regional Aviation Safety Team under each COSCAP (NARAST, SARAST and SEARAST**).

	The COSCAP Programmes in Asia Pacific closely coordinate their efforts to support Member States/ Administrations in six primary areas: 1. Supporting Member States/ Administrations to strengthen their safety oversight programme, including preparation for activities related to the **ICAO USOAP** Continuous Monitoring Approach (CMA) such as the development and implementation of Corrective Action Plans and preparation for an ICAO Audits and Coordinated Validation Missions (ICVM). 2. Supporting Member States/Administrations in establishing an effective oversight of Safety Management Systems 3. Supporting Member States/Administrations in establishing an integrated State Safety Programme 4. Supporting Member States/ Administrations in Developing **regulations, standards and guidance material**; 5. Coordinating the provision of **training courses, seminars, and workshops**; and, 6. Coordinating COSCAP **Regional Aviation Safety Teams** to develop and recommend to their respective Steering Committee safety enhancement actions to reduce safety risk in the APAC Region and to support the implementation of the GASP.
Pacific Aviation Safety Office (PASO)	PASO is a Regional Safety Oversight Organization (RSOO) overseeing aviation safety and security in the pacific islands using guidelines provided by ICAO. PASO was established on 11 June 2005 as a result of the Pacific Islands Civil Aviation Safety and Security Treaty (PICASST). Cook Islands, Kiribati, Niue, Nauru, PNG, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu are currently parties to PICASST. Non Parties to PICASST, but contributors to PASO are Australia, New Zealand and Fiji.
ICAO Training Platforms - TRAINAIR PLUS - Next Generation of Aviation Professionals Programme (NGAP) - ICAO Regional Training Centre of Excellence (RTC) in Asia Pacific (e.g. Singapore Aviation Academy)	TRAINAIR PLUS – A cooperative network of training organizations and industry partners working together to develop and deliver ICAO-harmonized training packages. NGAP – ICAO Programme to develop strategies, best practices tools, standards and guidelines as applicable and to facilitate information sharing that assist the global aviation community in attracting, educating and retaining the next general of aviation professionals. RTC – To lead in the development and delivery of competency-based ICAO training courses.
https://www.icao.int/APAC/Pages/dgca-conference.aspx	Virtual platform previously known as the Asia Pacific Consultative Link that can be used to exchange views among APAC ICAO Member States.
ICAO Global and ICAO-APAC website	Virtual ICAO platforms for ICAO Member States to share information globally.
DGCA Conference websites by individual host States/Administrations	Virtual platforms set up by hosts of the DGCA Conference to share information on the conference, including serving as a repository of Conference Discussion and Information papers.
Asia Pacific Ministerial Conference for Civil Aviation	The inaugural Conference held in 2018 endorsed a declaration formalising their shared commitments on high-priority aviation safety and efficiency objectives, recognizing the objectives under the various ICAO global plans GANP, GASP, and NCLB initiative.

Table 1: Key safety-related APAC regional bodies, mechanisms and platforms and their functions

APPENDIX H. PROCESS USED TO DETERMINE AND PRIORITISE TOP REGIONAL SAFETY OPERATIONAL RISKS AND OTHER SAFETY ISSUES

The 2023-2025 edition of AP RASP inherits the process used to determine and prioritise top safety risks and other safety issues from the previous edition. Both HRC identified in the current (2023-2025) edition of GASP and regional operational safety risks are taken into consideration.. The following global HRCs, in no particular order, have been identified in the 2023-2025 Edition of the GASP: CFIT; LOC-I; MAC; RE; and RI.

The APAC region and its industry conduct regular national and regional risk analyses, taking into consideration the global HRCs presented in the GASP. RASG-APAC and APRAST use available data to determine the region's operational safety risks, which include global HRCs and additional regional operational safety risks.

The objectives of the APRAST include recommending interventions to the RASG-APAC which will reduce aviation safety risks. To do so, the various Subgroups under RASG-APAC perform the following roles and functions:

   a)   The **Asia Pacific – Accident Investigation Group (APAC–AIG)** reviews, for application within the AsiaPacific region, existing policies and procedures relating to accident investigation and the reporting of errors and incidents that have already been developed. It reviews, for application within the Asia Pacific region, the best practices and metrics defined in Global Safety Initiative/ Focus Areas 3 and 4 of the GASP/GASR, namely 'Impediments to Reporting of Errors and Incidents', and 'Ineffective Incident and Accident Investigation' respectively. It also reviews regional accidents, significant incident trends and other areas of local concerns to determine unique issues that may warrant locally developed policies and procedures to effectively capture information for study and for the development of recommendations. The focus and priority for APAC-AIG is to introduce, support, and develop actions that have the potential to effectively and economically reduce regional aviation accident risks.

   b)   **APRAST** reviews for application within the Asia Pacific region, existing safety interventions which have already been developed through the efforts of well-established, multinational safety initiatives. It reviews, for application within the Asia Pacific region, the best practices and metrics defined in the GASP. It also reviews regional accidents, significant incident trends and other areas of local concerns to determine unique issues that may warrant locally developed interventions. In particular, common, frequent, high-severity impact and cross-cutting issues will be considered priority risks for the APAC region. The focus and priority for APRAST will be to introduce, support, and develop actions that have the potential to effectively and economically reduce regional aviation risks. APRAST will also review, for application within the Asia Pacific region, existing safety interventions which have already beendeveloped through the efforts of well-established, multinational safety initiatives.

       i)   **SRP WG** gathers safety information from various sources to determine the main aviation safety risks in the APAC region. The Information Analysis Team (IAT) formed within the SRP WG analyses the available safety information to identify risk areas.; and

      ii)   **SEI WG** assists APRAST in the development, implementation and review of SEIs for effectiveness, from which the priority SEIs will be adopted as AP-RASP Ops Actions, to reduce aviation risks. These SEIs could be established based on the analysis of regional data, ICAO initiatives or the initiatives of other relevant organizations or regions. Org Actions can be developed to address safety oversight deficiencies identified through the USOAP CMA process. The identified AP-RASP Ops Actions and SEIs should be prioritized to ensure that those that have the greatest potential for reducing safety risk are examined first.

   c)   **Other regional entities** namely. ICAO-APAC, States/Administrations, COSCAPs, PASO and APANPIRG will also highlight safety trends and challenges, especially at the sub-regional level, from time to time at their respective meetings. Key outcomes of these discussions may be raised to the attention of APRAST and its Working Groups forfurther analysis.

The primary tool used by RASG-APAC and APRAST to monitor safety performance and determine operational regional safety risks is the RASG-APAC Annual Safety Report (ASR) developed by the SRP WG and published by APRAST. It is developed from gathering safety information from various stakeholders, analysing the main aviation safety risks in the Asia Pacific region, and identifying possible actions for enhancing aviation safety in a coordinated manner.

The 2022 version of the RASG-APAC ASR was used as the key reference source to determine the top regional risks in the 2023-2025 Edition of the AP-RASP. The report focusses on reactive information relating to hull loss and fatal accidents (both on the ground and in-flight) involving commercial aeroplanes operated by (or registered with) the member States/ Administrations of the RASG-APAC, i.e. States/ Administrations associated with the ICAO-APAC. It also includes proactive information for the Asia Pacific region based on USOAP CMA. The safety information presented in this report is based on the compilation and analysis of data provided by ICAO, IATA, US CAST and data from the Official Airline Guide (OAG), checked and verified by ICAO. In earlier editions of the ASR, accident and fatal accident occurrence data was sourced from ICAO iSTARS for the reference period 2009–2016, with data for 2017–2018 being sourced from ICAO's Occurrence Validation Study Group (OVSG)). In subsequent APAC ASRs, OVSG data replaces all iSTARS data.

The approach taken by the SRP WG is to process the accident occurrence information, provided by ICAO, IATA and CAST, involving commercial aircraft of Maximum take-off weight (MTOW) greater than 5700kg operated by (or registered with) the members States/ Administrations of RASG-APAC. All reported information is for aircraft involved in scheduled commercial activities which are either validated or under validation. The analysis initially focuses on accident rates, numbers and categories from a global versus APAC perspective, then on the sub-regions of North Asia, South Asia, South East Asia and the Pacific. The process is illustrated in **Figure 1**.
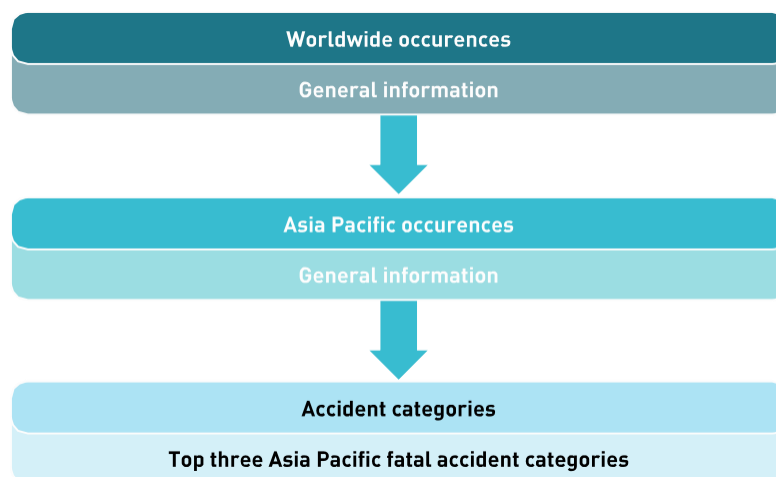
Figure 1. Approach for analysis

The aviation occurrence categories from the CAST/ICAO Common Taxonomy Team (CICTT) were used to assess risk categories in the process of identifying national operational safety risks. The SRP WG is developing a process to identify and prioritise safety risk at the regional level that encompasses reactive and proactive safety information.

APPENDIX I. ACCIDENTS AND SERIOUS INCIDENTS IN THE APAC REGION

The summary of accidents for aircraft registered in States/ Administrations located in the APAC region involved in commercial air transport is shown in **Figure 1**.
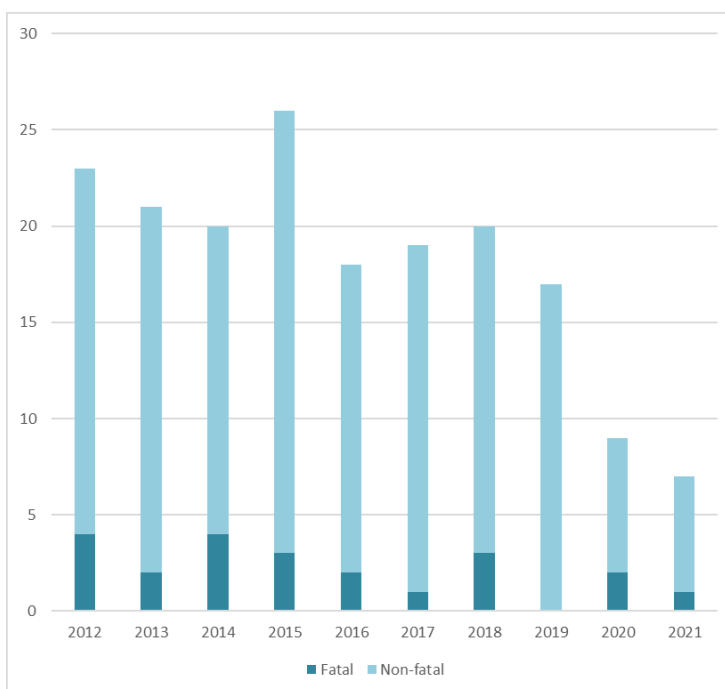

Figure 1. Accident count in the APAC region over a 10-year period of 2012 to 2021 [Source: OVSG, iSTARS, SISG, OAG]The overall accident count in the APAC region over the 10-year period to 2021 has remained relatively stable, with a decline evident in recent years, particularly in 2020 and 2021, as a consequence of the reduced aviation activity due to COVID-19.

The number of accidents attributable to States/Administrations in the RASG-APAC region in 2021 reduced to 7 from 9 in 2020. A single fatal accident was recorded in the APAC region in 2021, down from 2 in 2020, with the cause of this accident being Loss of Control in Flight (LOC-I).

The number of fatal and non-fatal accidents is shown in Figure 1 (**See above**).

In terms of fatalities, there was one fatal accident in 2021, down from 2 in 2020. The Global and APAC accident rates and associated 5-year trends are shown in Figure 2.
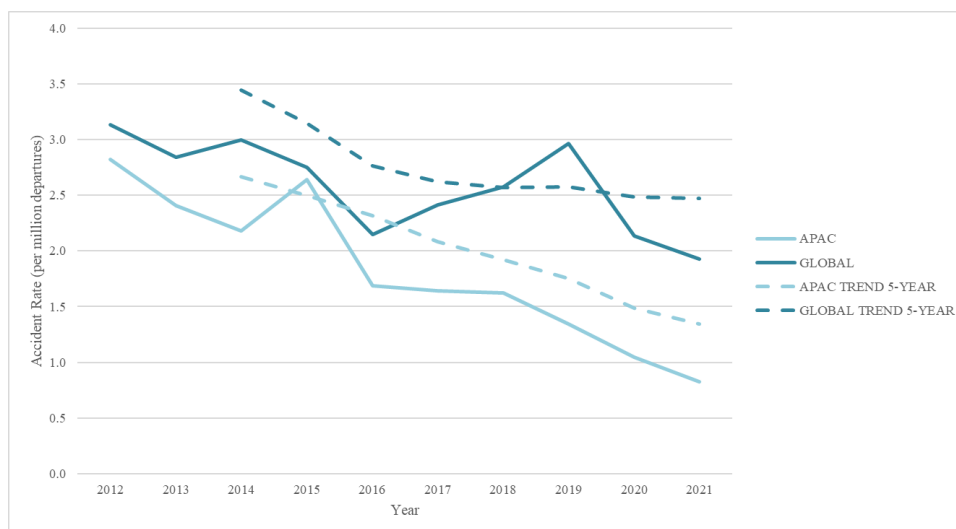
Figure 2. Global and APAC accident rates over 2012 to 2021 [Source: iSTARS, SISG, OAG]

In recent years, the global accident rate has seen a gradual rise to 2019 followed by a sharp downtrend, decreasing from 2.41 accidents per million departures in 2017 to 1.93 per million departures in 2021. On the other hand, RASG-APAC's accident rate has maintained a steady decline from 1.64 per million departures to 0.82 per million departures over the same period. The RASG-APAC's accident rate has remained lower than the global accident rate over the past decade. Overall, the five-year moving average accident rate, globally and for RASG-APAC, has shown a consistent downward trend.

A summary of accident categories in the APAC Region is shown in Table 1

Table 1. APAC Accident Categories 2017 - 2021

Year	TURB	F-NI	RE	GS	OTH	USOS	LOC-I	CFIT	ADRM	ARC	RAMP	GCOL	CTOL	AMAN	Total	Runway Safety (RE+RI+USOS+ARC)
2017	6	0	4	1	1	1	0	0	1	4	0	1	0	0	19	9
2018	3	0	6	0	2	1	1	0	0	5	0	1	1	0	20	12
2019	7	1	4	0	0	0	0	0	0	4	1	0	0	1	18	8
2020	3	1	0	0	0	0	0	0	0	3	0	0	0	0	7	3
2021	2	0	0	0	0	0	1	0	0	3	0	0	0	1	7	3
Total	21	2	14	1	3	2	2	0	1	19	1	0	1	2	71	35

Runway safety-related events (including Abnormal Runway Contact, Runway Excursion/Incursion) were amongst the most common accident categories in the APAC region for the period 2017-2021. Abnormal Runway Contact was also the most common accident category in 2021, Turbulence was the most common cause of accidents in the APAC region over the past 5 years, with 2 such accidents occurring in 2021.

Data from CAST, as shown in **Figure 3**, identified CFIT and LOC-I as the leading causes for fatality risk for APAC operator domiciled countries, while Runway Excursion on Landing has been the leading cause for accidents, in the last 10 years (2012 – 2021).
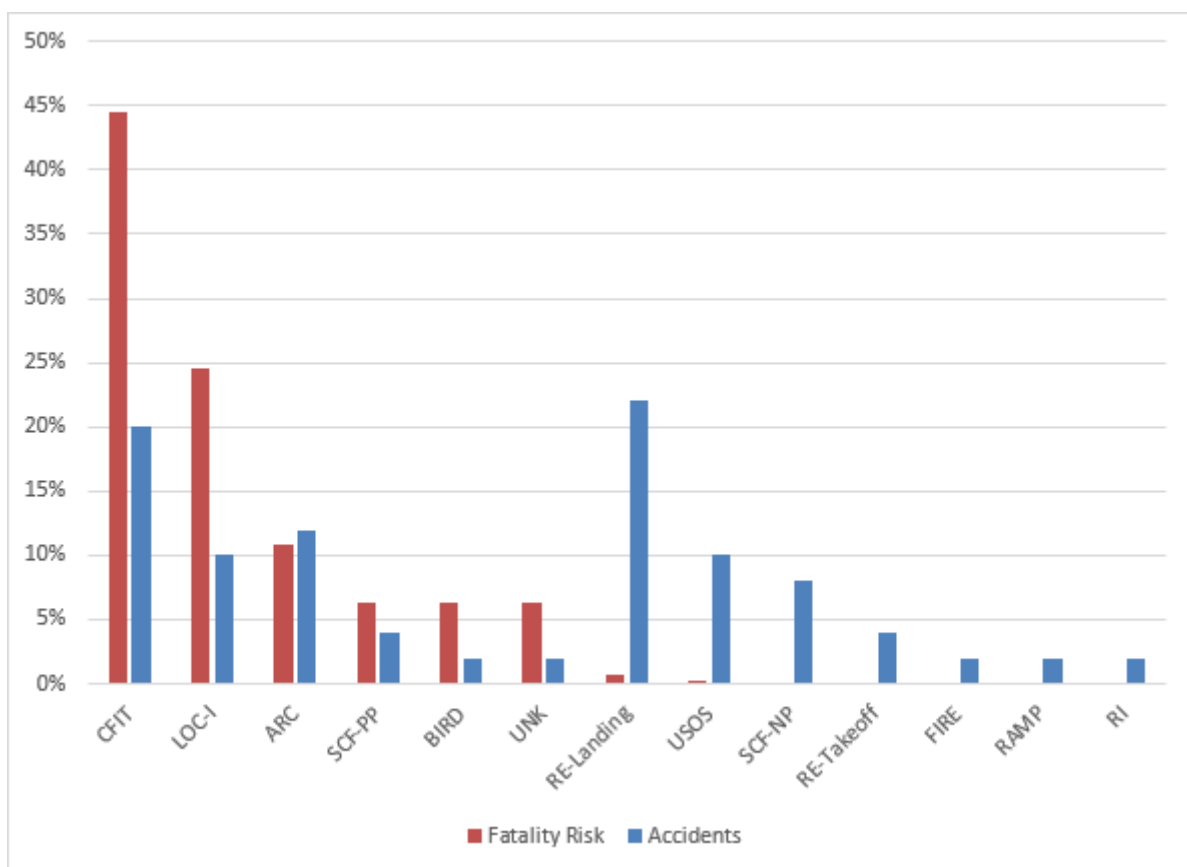
a)   .

APPENDIX J.   SAFETY OVERSIGHT CAPABILITIES IN THE APAC REGION

The RASG-APAC region had an overall USOAP Effective Implementation (EI) score (%) of 66.35% in 2022, up from 63.91% in2021 (see **Figure 1**).

The global USOAP Effective implementation scores have shown a gradual improvement over the past 5 years, reaching 69.32% in 2022.

Figure 1. Average EI score for RASG APAC States vs Global (iSTARS)
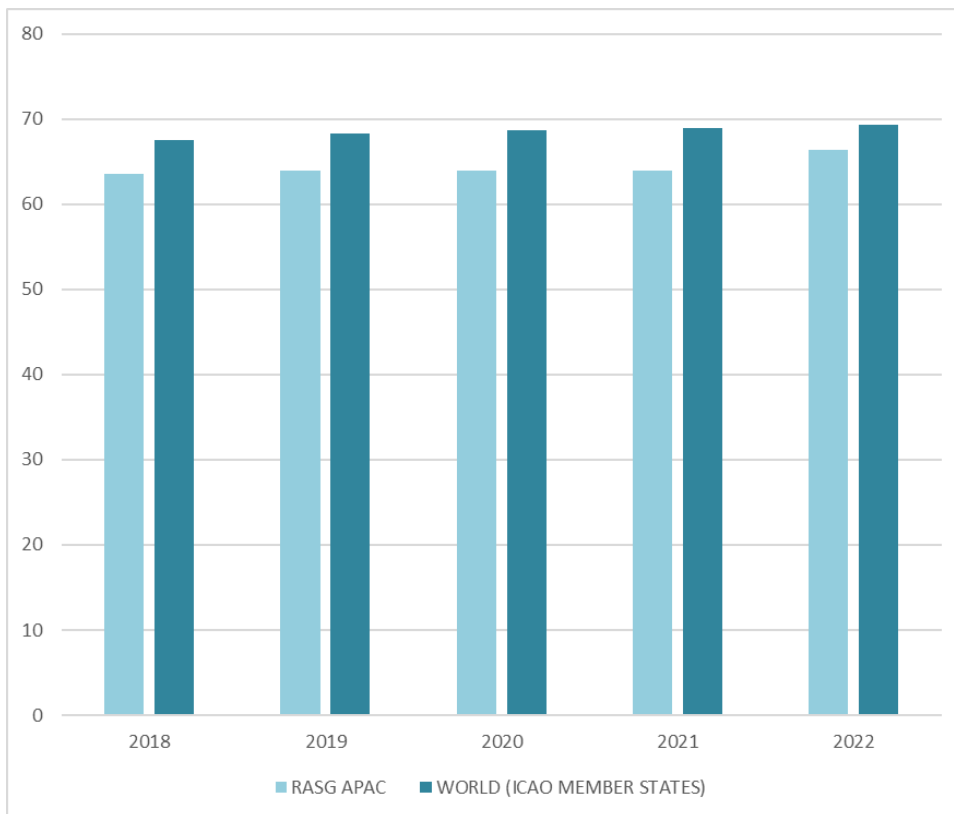
Figure 2 shows the EI scores (%) of all RASG-APAC States and the average for the APAC region.
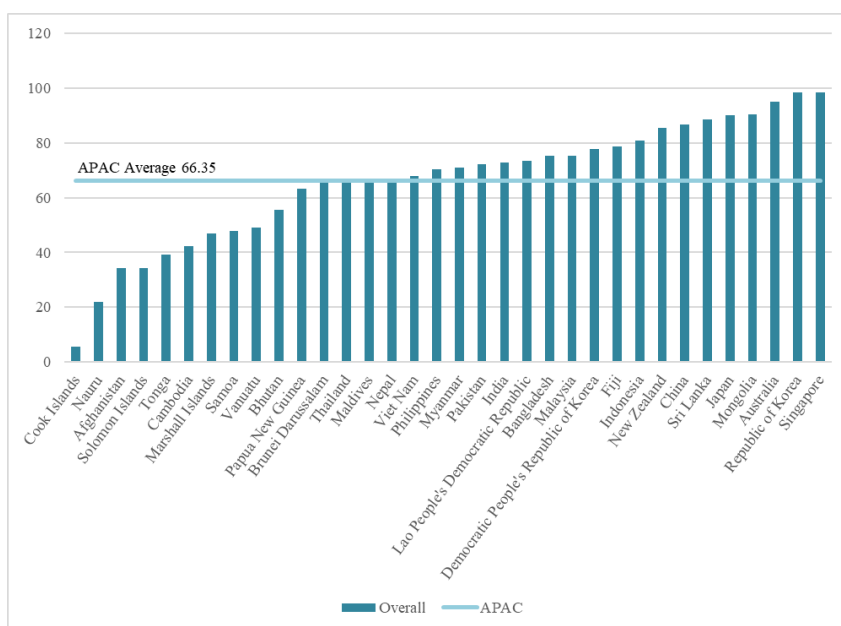
Figure 2. EI scores of all RASG-APAC States vs global average

Fifty-three percent of APAC States achieved an EI score above the global average with a corresponding 47% being below the global average.

The eight critical elements (CEs) of a safety oversight system are defined by ICAO in **Figure 3**.
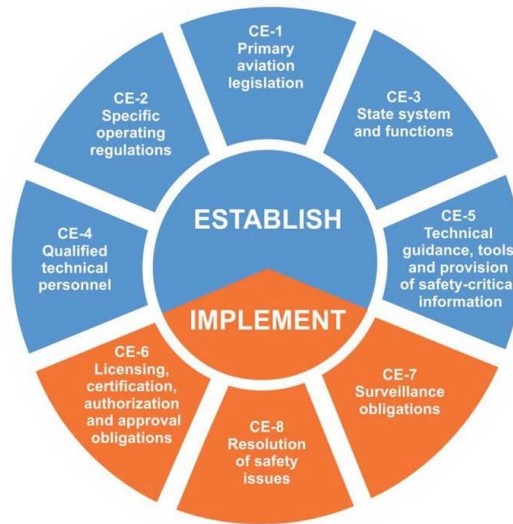
Figure 4.   Critical elements of a State's safety oversight system

Figure 4 compares the average EI scores globally and for the APAC region by critical element.

Figure 4. Average EI scores of RASG-APAC States vs global average by Critical Elements
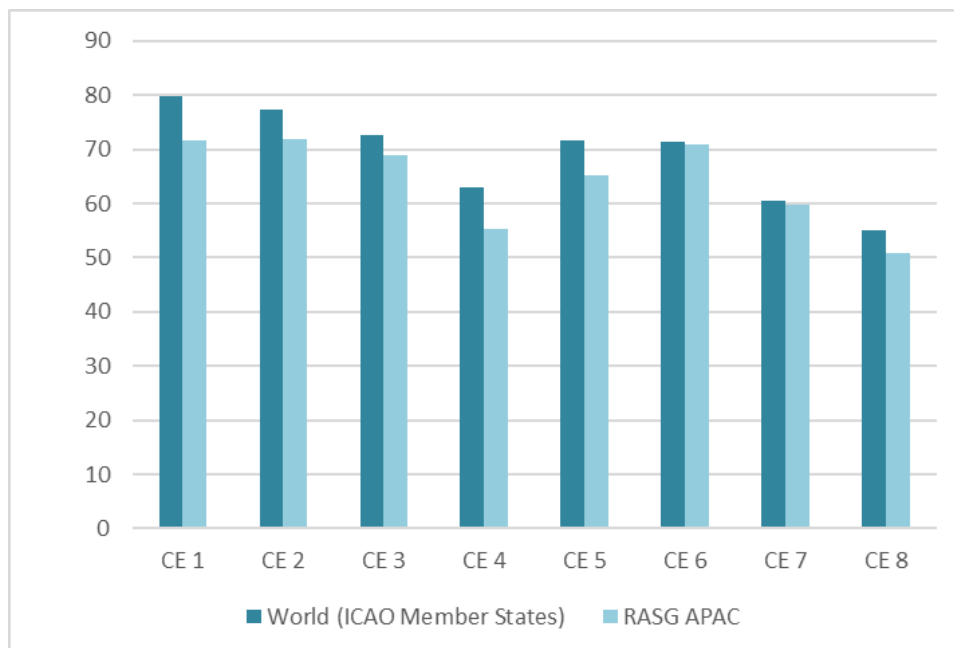
In terms of Critical Elements (CE), the APAC region had lower EI scores for all categories as compared to the global average. By CE, CE-8 on Resolution of safety concerns (CE-8) and CE-4 on Technical personnel qualifications and training had the lowest EI scores within RASG-APAC, at 50.9% and 55.39% respectively (see **Figure 4**).

By Audit Area in the APAC region, Accident and Incident Investigation (AIG) and Aerodrome and Ground Aids (AGA) had the lowest EI scoresof 53.30% and 65.3% respectively (see **Figure 5**). Figure 5 provides a comparison between the EI scores by Audit Area of the APAC region and Global figures.

Figure 5. Average EI scores (%) of RASG-APAC States vs global average by Audit Areas
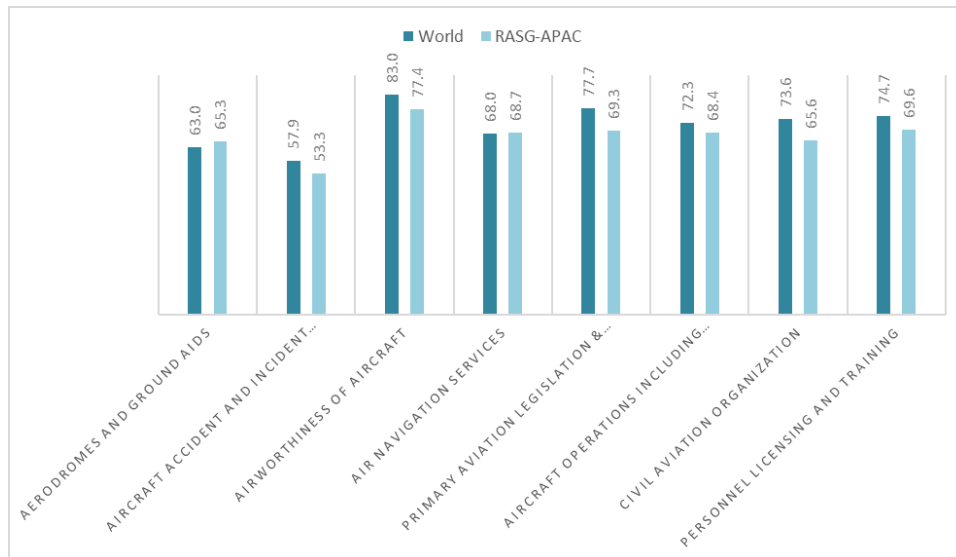
Primary Aviation legislation was the audit area where APAC had the largest difference to the global average being 8.4% below the global average, i.e. 69.3% (APAC) compared with 77.7% global.

The APAC region exceeded the global EI scores for Aerodromes and Ground Aids and Air navigation services, albeit marginally.

**APPENDIX K.   TEMPLATE FOR MAPPING OF KEY CONTENTS OF NASP TO GASP AND
AP-RASP GUIDELINES**

Doc 10131, Chapter 4, 4.3, Detailed Sections of the NASP (reference)	*National aviation safety plan (NASP) content (aspect to be analysed or question to be answered)*	*Answer (Yes/No or N/A[1])*	*Reference in State's NASP (if different from template)*
4.3.1 Introduction of the NASP			
4.3.1 a)	Does it provide an overview of the NASP, including its structure (chapters, sections and their content)?	☐ Yes ☐ No	
4.3.1 b)	Does it note the State's commitment to aviation safety and to the resourcing of activities at the national level to enhance aviation safety by issuing a statement signed by a senior aviation ministerial or government agency representative?	☐ Yes ☐ No	
4.3.1 c)	Does it describe how the NASP is linked to the SSP, where applicable?	☐ Yes ☐ No ☐ N/A	
4.3.1 d)	Does it list the entities responsible for the NASP's development, implementation and monitoring?	☐ Yes ☐ No	
4.3.1 e)	Does it describe the national safety issues?	☐ Yes ☐ No	
4.3.1 f)	Does it describe the national safety goals andtargets?	☐ Yes ☐ No	
4.3.1 g)	Does it describe the State's operational context?	☐ Yes ☐ No	
4.3.2 Purpose of the NASP			
4.3.2 a)	Does it include a description of the State's strategic direction for the management of aviation safety?	☐ Yes ☐ No	
4.3.2 b)	Does it establish the duration of the NASP?	☐ Yes ☐ No	
4.3.2 c)	Does it note the relationship between the NASP, the RASP and the most current edition of the GASP?	☐ Yes ☐ No	
4.3.2 d)	Does it identify other national plans that have been considered in the development of the NASP, where applicable?	☐ Yes ☐ No ☐ N/A	
4.3.3 The State's strategic direction for the management of aviation safety			
4.3.3 a)	Does it describe how the NASP is developed and endorsed, including any collaboration with internal and external stakeholders?	☐ Yes ☐ No	

4.3.3 a) 1)	Does it describe the governance of the NASP, this includes how frequently it is reviewed and updated?	☐Yes ☐No	
4.3.3 a) 2)	Does it explain that a collaborative approach is needed to identify national safety issues and implement SEIs to address them?	☐Yes ☐No	
4.3.3 a) 3)	Does it describe the process used to determine national operational safety risks and organizational challenges?	☐Yes ☐No	
4.3.3 b)	Does it list the national safety goals, targets and indicators?	☐Yes ☐No	
4.3.3 b) 1)	Does it explain how the national safety goals, targets and indicators are linked to the GASP and RASP?	☐Yes ☐No	
4.3.3 b) 2)	Does it list any specific national safety goals, targets and indicators over and above those of the GASP, if applicable?	☐Yes ☐No ☐N/A	
4.3.3 c)	Does it describe how the SEIs help to achieve the national safety goals?	☐Yes ☐No	
4.3.3 c) 1)	Does it explain the link between the national safety goals and targets with the SEIs that the State will undertake to improve safety?	☐Yes ☐No	
4.3.3 c) 2)	Does it explain how national safety goals and targets are linked to overarching SEIs at the regional or international levels?	☐Yes ☐No	
4.3.3 d)	Does it list the emerging issues that may require further analysis?	☐Yes ☐No	
4.3.4 National operational safety risks			
4.3.4 a)	Does it provide a summary of accidents and serious incidents that have occurred in the State during a set time period and those which involved aircraft registered in the State, particularly for aircraft of a maximum mass of over 5 700 kg during scheduled commercial operations?	☐Yes ☐No	
4.3.4 b)	Does it list and describe the national HRCs (N-HRCs), including the reason they were given priority?	☐Yes ☐No	
4.3.4 c)	Does it explain how other national operational safety risks are identified, including the reason they were given priority?	☐Yes ☐No	
4.3.4 d)	Does it list the main contributing factors leading to the N-HRCs identified by the State?	☐Yes ☐No	

4.3.4 e)	Does it include a description of a set of SEIs to mitigate the risks associated with the N-HRCs and any other national operational safety risks the State wishes to mitigate through the NASP?	☐ Yes ☐ No	
4.3.4 e) 1)	Does it list SEIs that the State plans to implement, or is in the process of implementing, to address all the identified N-HRCs and other national operational safety risks?	☐ Yes ☐ No	
4.3.4 e) 2)	Does it identify those SEIs which were derived from the global aviation safety roadmap, where applicable?	☐ Yes ☐ No ☐ N/A	
4.3.4 e) 3)	Does it provide references to corresponding SEIs in the RASP, where applicable?	☐ Yes ☐ No ☐ N/A	
4.3.4 f)	Does it describe the taxonomy used in the process of determining national operational safety risks?	☐ Yes ☐ No	
4.3.5 Organizational challenges			
4.3.5 a)	Does it provide a summary of the State's effective safety oversight capabilities?	☐ Yes ☐ No	
4.3.5 b)	Does it include a list and description of organizational challenges selected for the NASP, including the reason they were given priority?	☐ Yes ☐ No	
4.3.5 c)	Does it explain how they were identified, including, but not limited to, a data-driven approach?	☐ Yes ☐ No	
4.3.5 d)	Does it include a description of a set of SEIs to address the organizational challenges identified?	☐ Yes ☐ No	
4.3.5 d) 1)	Does it list SEIs the State plans to implement, or is in the process of implementing, to address all organizational challenges identified?	☐ Yes ☐ No	
4.3.5 d) 2)	Does it identify those SEIs which were derived from the global aviation safety roadmap, where applicable?	☐ Yes ☐ No ☐ N/A	
4.3.5 d) 3)	Does it provide references to corresponding SEIs in the RASP, where applicable?	☐ Yes ☐ No ☐ N/A	
4.3.6 Monitoring implementation			
4.3.6 a)	Does it describe how the State will monitor the implementation of the SEIs listed in the NASP and how it will measure safety performance of the nationalcivil aviation system to ensure the intended results are achieved?	☐ Yes ☐ No	

4.3.6 b)	Does it explain how corrections and adjustments to the NASP and its SEIs will be made and reported?	☐Yes ☐No	
4.3.6 c)	Does it explain how each national safety target will be monitored to track performance?	☐Yes ☐No	
4.3.6 d)	Does it describe how stakeholders will be provided with relevant up-to-date information on the progress made in achieving the national safety goals, as well as the implementation status of SEIs?	☐Yes ☐No	
4.3.6 e) 1)	Does it include an explanatory text addressing the following situation: "If the national safety goals are not met, the root causes should be presented"?	☐Yes ☐No	
4.3.6 e) 2)	Does it include an explanatory text addressing the following situation: "If the State identifies critical operational safety risks, reasonable measures will be taken to mitigate them as soon as practicable, possibly leading to an unscheduled revision of the NASP"?	☐Yes ☐No	
4.3.6 f)	Does it explain that the State has adopted a standardized approach, as outlined by the RASG or other relevant regional entity, to provide information at the regional level?	☐Yes ☐No	
4.3.6 g)	Does it include contact information for inquiries or further information?	☐Yes ☐No	

— END —