ICAO

Doc 10004

Global Aviation Safety Plan

2023-2025 Edition

DRAFT

INTERNATIONAL CIVIL AVIATION ORGANIZATION

EXECUTIVE SUMMARY

Safety is a top priority in aviation. The Global Aviation Safety Plan (GASP) presents the global strategy for the continuous improvement of aviation safety. The purpose of the GASP is to continually reduce fatalities, and the risk of fatalities, by guiding the development of a harmonized aviation safety strategy. A safe, resilient and sustainable aviation system contributes to the economic development of States and their industries. The GASP promotes the effective implementation of a State safety programme, including a State's safety oversight system, a risk-based approach to managing safety as well as a coordinated approach to collaboration between States, regions (that is, a group of States and/or entities working together to enhance safety within a geographic area) and industry. It provides a framework in which regional and national aviation safety plans (RASP and NASP) are developed and implemented.

The International Civil Aviation Organization (ICAO) recognizes the need for its safety strategy to evolve and ensure its sustained effectiveness and efficiency in the changing regulatory, economic and technical environments. The 2023-2025 edition of the GASP maintains some key elements from its previous edition, such as the six goals and the five global high-risk categories of occurrences (G-HRCs). Main changes in the plan include new and revised targets, as well as amendments based on feedback received, mainly as part of the High-level Conference on COVID-19 (HLCC 2021). This edition also addresses the impact of global aviation disruption events on aviation safety and the need for resilience. 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. Disruption events are not covered in depth in the GASP, due to their rapidly changing nature and the preset GASP update cycle, which happens once every three years.

The vision of the GASP is to achieve and maintain the aspirational safety goal of zero fatalities in commercial operations by 2030 and beyond, which is consistent with the United Nations' *2030 Agenda for Sustainable Development*. The plan's mission is to continually enhance international aviation safety performance and resilience by providing a collaborative framework for States, regions and industry. This is supported by a series of goals:

Goal 1 is to achieve a continuous reduction of operational safety risks.
Goal 2 calls for all States to strengthen their safety oversight capabilities.
Goal 3 calls for the implementation of effective State safety programmes.
Goal 4 calls for States to increase collaboration at the regional level to enhance safety.
Goal 5 aims to expand the use of industry programmes and safety information sharing networks.
Goal 6 focuses on the appropriate infrastructure needed to support safe operations.

In order to mitigate the risk of fatalities, States, regions and industry need to address the G-HRCs. The selection of types of occurrences is based on actual fatalities from past accidents, high fatality risk per accident or the number of accidents and incidents. The following G-HRCs, in no particular order, have been identified for this edition of the GASP: controlled flight into terrain; loss of control in-flight; mid-air collision; runway excursion; and runway incursion.

Each region and each State should use the GASP to develop a RASP and NASP respectively, which includes industry participation. The RASP or NASP presents the strategic direction for the management of aviation safety at the regional or national level, for a set period and should be developed in line with the GASP's goals, targets and G-HRCs. To achieve the GASP goals and targets, authorities within the State need to provide sufficient resources and qualified technical personnel for the development and implementation of the State's NASP.

The global aviation safety roadmap serves as an action plan to assist the aviation community in achieving the GASP goals. The roadmap, previously included in the GASP, was updated and is now contained in the *Global Aviation Safety Roadmap* (Doc 10161)[1].

1. At the time of publication of this manual, Doc 10161 was still in preparation.

SUMMARY OF AMENDMENTS

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

Amendment	*Rationale*
Goal 2 — Target 2.1 (States to reach an effective implementation (EI) score of 75 per cent by 2022) 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 2.2 (States to reach a safety oversight index greater than one, in all categories, by 2022) was deleted.	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 3 — Target 3.1 (States to implement the foundation of a State safety programme (SSP) by 2022) was extended to 2023.	Date of completion extended by one year due to the impact of the COVID-19 pandemic.
Goal 3 — A new Target 3.2 (States to publish a national aviation safety plan (NASP) by 2024) was added under this goal.	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 — A new Target 3.3 (States to work towards an effective SSP by 2028) replaces Target 3.2 from the 2020–2022 edition.	A phased approach, with an extended date of completion for effective SSP implementation, is considered more feasible since feedback received indicated this is States' main organizational challenge.
Goal 4 — Target 4.1 (States to seek assistance to strengthen safety oversight capabilities by 2020) was extended to 2023 and reworded.	Date of completion extended by three years due to the impact of the COVID-19 pandemic. It was reworded to clarify its intent.
Goal 4 — A new Target 4.2 (Regions to publish an updated regional aviation safety plan (RASP), by 2023) was added.	The RASP presents the strategic direction for the management of aviation safety at the regional level and outlines to all stakeholders where to allocate resources over the coming years. It is a key element in increasing collaboration at the regional level and in supporting State safety management.
Goal 4 — Existing Target 4.2 (States to contribute information on safety risks, including SSP safety performance indicators (SPIs) to their respective regional aviation safety group (RASGs) by 2022) was extended to 2025 and reworded as the new Target 4.3.	Date of completion was extended by three years, as the implementation of the RASP (by 2023) will assist in achieving this target. It was reworded to focus on operational safety risks and emerging issues, aligning with GASP terminology.

Amendment	*Rationale*
Goal 4 — Existing Target 4.3 (States with effective safety oversight capabilities and an effective SSP to actively lead RASGs' safety risk management activities by 2022) was deleted.	As the new Target 4.3 encompasses these activities, which should also be reflected through the RASP, this target is no longer required.
Goal 5 — Target 5.1 (Service providers to use globally harmonized safety performance indicators (SPIs) as part of their safety management system (SMS) by 2020) was expanded into a new Target 5.1, without a completion date but rather to become an increasing trend.	The target focuses on industry's contribution in safety information sharing networks to States and regions to assist in the development of NASP and RASP. Since this is an ongoing activity, no set completion date was included. The notion of harmonized SPIs was deleted, to clarify that the emphasis is on harmonized metrics, not the SPIs themselves.
Goal 5 — Target 5.2 (Increase the number of service providers participating in the corresponding ICAO-recognized industry assessment programmes by 2022) was deleted. It was moved to an example indicator under Target 5.1.	Service providers' participation in the corresponding ICAO-recognized industry assessment programmes is considered a means to an end, therefore best suited as an indicator to measure progress than as a target.
Goal 6 — Target 6.1 (States to implement air navigation and airport core infrastructure by 2022) was extended to 2025 with a focus on an increasing trend rather than a completion date, and was reworded.	The target is about ongoing activities, so while a completion date was included the focus is on demonstrating an increasing trend in the level of compliance. The target was rewritten to clarify its intent, focusing on ICAO Standards.
— Clarified the use of the GASP indicators, as examples. — Revised and reduced the number of indicators presented for each GASP target.	Unlike the GASP goals and targets, indicators serve as examples that may be used to measure progress in achieving the goals and targets. However, feedback suggested that they are mistakenly viewed as mandatory indicators. Text was modified in consequence. The number of indictors was reduced and indicators revised, as feedback suggested too many indicators created a challenge for States when adopting them for their NASPs.
Created a new section in Chapter 1 on the development of a strategy and an action plan.	The GASP was revised to be a strategic document, presenting what is to be achieved, that is, goals and targets; while the global aviation safety roadmap is considered an action plan, depicting how to achieve them.
Created a new section in Chapter 1 to address the relationship between plans, including a graphical representation, and a new Chapter 6 on NASP and RASP.	These additions provide clear guidance on the relationship between the State's NASP and the RASP and GASP, including mapping the content of the NASP and RASP to the GASP goals, targets and high-risk categories of occurrences (NASP-SSP relationship is addressed in guidance material).

Amendment	*Rationale*
Created a new section in Chapter 1 to address GASP-related guidance material and tools, including a graphical representation.	Feedback received indicated that States need assistance in identifying the suite of materials and tools to help them develop a NASP, in line with the GASP, and RASP as applicable.
— Revised terminology to include the term "global high-risk categories of occurrences (G-HRCs)". — Removed the term "additional categories of operational safety risks" and replaced it by "operational safety risks".	Introduce, at a high level in the GASP, the notion that Regions and States should consider the G-HRCs when identifying regional and national operational safety risks. Terminology was updated to provide clarity.
— Created a new section in Chapter 3 on disruption events. — The concept of resilience was included in the GASP mission.	Although the GASP 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.
— The content of Part II, Chapters 1 and 2 (related to the RASP and NASP) of the 2020–2022 edition of the GASP was transferred and expanded in the *Manual on the Development of Regional and National Aviation Safety Plans* (Doc 10131). — Part II, Chapter 3 and Appendices A and B (related to the global aviation safety roadmap), are now in the standalone *Global Aviation Safety Roadmap* (Doc 10161). — Appendix C (related to implementation support) was deleted; information is found on the ICAO public website at www.icao.int/safety.	To maintain the GASP as a high-level document focused on strategy and to enable a more flexible, periodic review of supporting guidance material, the content related to implementation support was migrated to standalone documents which, along with the GASP itself, would form a comprehensive suite of materials aimed at the development and implementation of safety strategies at the international, regional and national levels.

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GLOSSARY

DEFINITIONS

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).

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.

Hazard. A condition or an object with the potential to cause or contribute to an aircraft incident or accident.

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

Risk mitigation. The process of incorporating defences, preventive controls or recovery measures to lower the severity and/or likelihood of a hazard's projected consequence.

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 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 operational safety risks or to address an identified safety issue.

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 over a 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

ACI	Airports Council International
ANC	Air Navigation Commission
ASBU	Aviation system block upgrade
ATS	Air traffic service
BARS	Basic aviation risk standard
BBB	Basic building block
CAA	Civil Aviation Authority
CANSO	Civil Air Navigation Services Organisation
CAP	Corrective action plan
CAST	Commercial Aviation Safety Team
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
EASA	European Union Aviation Safety Agency
EI	Effective implementation
EUROCONTROL	European Organisation for the Safety of Air Navigation
FSF	Flight Safety Foundation
GANP	Global Air Navigation Plan
GASP	Global Aviation Safety Plan
GASeP	Global Aviation Security Plan
GASP-SG	Global Aviation Safety Plan Study Group
G-HRC	Global high-risk category of occurrence
IATA	International Air Transport Association
IBAC	International Business Aviation Council
IOSA	IATA Operational Safety Audit

ISAGO	IATA Safety Audit for Ground Operations
IS-BAO	International Standard for Business Aircraft Operations
iSTARS	Integrated Safety Trend Analysis and Reporting System
LOC-I	Loss of control in-flight
MAC	Mid-air collision
NASP	National aviation safety plan
OLF	Online framework
PASO	Pacific Aviation Safety Office
PQ	Protocol question
PANS	Procedures for Air Navigation Services
PIRG	Planning and implementation regional group
RAIO	Regional Accident and Incident Investigation Organization
RASG	Regional aviation safety group
RASP	Regional aviation safety plan
RE	Runway excursion
RI	Runway incursion
RSOO	Regional Safety Oversight Organization
SARPs	Standards and Recommended Practices
SDG	Sustainable Development Goal
SEI	Safety enhancement initiative
SMS	Safety management system
SPI	Safety performance indicator
SSC	Significant safety concern
SSP	State safety programme
UN	United Nations
USOAP	Universal Safety Oversight Audit Programme

Chapter 1

INTRODUCTION

1.1 ICAO STRATEGIC OBJECTIVE ON SAFETY

1.1.1 Safety is the highest priority of the International Civil Aviation Organization (ICAO) Strategic Objectives. This Strategic Objective aims to enhance global civil aviation safety and focuses primarily on a State's effective safety oversight and its capabilities in the management of safety. The objective is set in the context of growing passenger and cargo movements, and the need to address efficiency and environmental sustainability. A safe aviation system contributes to the economic development of States and their industries. The Global Aviation Safety Plan (GASP) outlines the global strategy for the triennium, to achieve the Safety Strategic Objective of ICAO.

1.1.2 More information on the ICAO Strategic Objectives can be found at the website www.icao.int.

1.2 WHAT IS THE GASP?

The GASP is the document that presents the global strategy for the continuous improvement of aviation safety. In Resolution A40-1: *ICAO Global planning for safety and air navigation*, the Assembly recognized the importance of a global framework to support the Safety Strategic Objective of ICAO. In addition, the Assembly resolved that the GASP, along with the *Global Air Navigation Plan* (GANP, Doc 9750), shall provide the framework in which regional and national aviation safety plans will be developed and implemented, thus ensuring consistency, harmonization and coordination of efforts aimed at improving international civil aviation safety, capacity and efficiency.

1.3 PURPOSE OF THE GASP

1.3.1 The purpose of the GASP is to continually reduce fatalities, and the risk of fatalities, associated with accidents by guiding the harmonized development and implementation of regional and national aviation safety plans. States, regions and industry facilitate the implementation of the strategy presented in the GASP through regional and national aviation safety plans. The GASP seeks to assist States, regions and industry in their respective safety planning and implementation by:

a) establishing a global safety strategy, including goals, targets and indicators;

b) providing a framework for the development and implementation of regional and national aviation safety plans;

c) providing guidance for the development of action plans to support the implementation of regional and national aviation safety plans, through the use of the global aviation safety roadmap (refer to the *Global Aviation Safety Roadmap* (Doc 10161)); and

d) providing a methodology to guide the identification of organizational challenges, hazards and emerging issues, and the management of operational safety risks.

1.3.2 Through the GASP, ICAO continues to prioritize global action in areas of aviation safety by addressing the currently identified global high-risk categories of occurrences (G-HRCs): controlled flight into terrain; loss of control in-flight; mid-air collisions; runway excursions; and runway incursions. Safety enhancement initiatives (SEIs), presented in the global aviation safety roadmap, address precursors and contributing factors for each of these G-HRCs, thereby contributing to the reduction of the global accident rate and the continuous reduction of fatalities.

1.4 GASP PRINCIPLES

The GASP contains a vision which states the intent behind this plan. It also includes a mission statement, which reflects what ICAO seeks to achieve through the GASP. A set of values are presented in the plan, which aim to guide regional and national aviation safety planning and enable the GASP to meet its purpose.

Vision: To achieve and maintain the goal of zero fatalities in commercial operations by 2030 and beyond.

Mission: To continually enhance international aviation safety performance and resilience by providing a collaborative framework for States, regions and industry.

***Values*:** GASP strives to enhance global civil aviation safety by:

a) promoting a positive safety culture;

b) recognizing and promoting the aviation sector's responsibility for the safety of the public;

c) encouraging collaboration, teamwork and shared learning in the management of safety;

d) protecting safety data and safety information;

e) promoting the sharing and exchange of safety information;

f) taking data-driven decisions;

g) prioritizing actions to address operational safety risks and organizational challenges through a risk-based approach;

h) allocating resources to identify and analyse hazards, and address their consequences or outcomes through a risk-based approach; and

i) proactively managing emerging issues.

1.5 SCOPE OF THE GASP

1.5.1 The GASP is a strategic document that enables States, regions and industry to adopt a flexible, step-by-step approach for the development and implementation of regional and national aviation safety plans, and related SEIs aimed at improving safety. In accordance with ICAO Standards and Recommended Practices (SARPs), States must develop their safety oversight capabilities, as part of the implementation of a State safety programme (SSP). The GASP is a means for States to achieve compliance with ICAO safety-related SARPs and to go beyond the minimum level of compliance by proactively enhancing safety through the management of organizational challenges, operational safety risks and emerging issues. The GASP assists States to identify hazards and safety deficiencies and prioritize actions so they can meet their

safety responsibilities through an action plan presented in the *Global Aviation Safety Roadmap* (Doc 10161). The GASP further assists States in strengthening their capabilities in the management of safety through a structured process founded on the critical elements (CEs) of a State safety oversight system and the implementation of an SSP.

1.5.2 Regional aviation safety plans (RASPs) should be coordinated through the regional aviation safety groups (RASGs) to address specific regional safety issues, in line with the GASP goals and targets. The coordination of activities between the RASGs and the planning and implementation regional groups (PIRGs) is key to the successful achievement of the GASP goals and the GANP ambitions, respectively, since increases in air navigation capacity and improvements in efficiency must be done in a safe manner and appropriate safety risk mitigations are required to prevent accidents.

Note.— The Safety Management Manual *(Doc 9859) contains guidance related to a State's safety management responsibilities.*

1.6 GASP REVIEW PROCESS

1.6.1 The GASP is reviewed and updated prior to each session of the ICAO Assembly, every three years.

1.6.2 The GASP is developed through the efforts of the GASP Study Group (GASP-SG), a joint regulatory-industry expert group established by ICAO to ensure that the plan and its content reflect the needs of the aviation community at the international, regional and national levels.

1.6.3 The Air Navigation Commission (ANC) reviews the GASP as part of its work programme and consults with States and non-governmental organizations on proposed amendments. The consultation is conducted via the State letter process or alternatively through an Air Navigation Conference, a High-level Safety Conference, or similar divisional-type meetings or high-level events. The ANC then reports to the Council of ICAO and provides the following input:

a) review of the global progress made in improving aviation safety performance and in the implementation of SSPs and safety management systems (SMS), as well as any relevant risk mitigations;

b) recommendations by RASGs;

c) lessons learned by States, regions and industry;

d) possible changes in future aviation needs, regulatory contexts and other influencing factors;

e) results of research, development and validation on operational and technological matters which may affect the global aviation safety roadmap; and

f) proposed amendments to the GASP's content.

1.6.4 The GASP is under the authority of the Council of ICAO to ensure consistency among the GASP, the other ICAO global plans, and the ICAO Strategic Objectives. The Council approves the GASP prior to eventual budget-related developments and endorsement by the ICAO Assembly. After approval by the Council, the GASP is presented to the following session of the Assembly for endorsement.

1.7 RELATIONSHIP WITH OTHER GLOBAL PLANS

1.7.1 The Convention on International Civil Aviation establishes ICAO's objective to foster "the planning and development of international air transport". Air transport is a key enabler for sustainable economic and social development.

ICAO's global plans are essential in supporting safe, secure, efficient, economically viable and environmentally responsible air transportation. They provide a means to advance ICAO's Strategic Objectives. The ICAO global plans include: the GASP, the GANP and the Global Aviation Security Plan (GASeP).

1.7.2 Safety is critical when planning implementation of air navigation operational improvements, in line with the GANP, to determine if these improvements can be implemented in a safe manner. A safety risk assessment provides information to identify hazards that may arise from, for example:

a) any planned modifications in airspace usage;

b) the introduction of new technologies or procedures; or

c) as a result of the decommissioning of older navigational aids.

1.7.3 A safety risk assessment also enables the assessment of potential consequences (such as a mid-air collision). Based on the results of a safety risk assessment, mitigation strategies may be implemented to measure and monitor the safety performance associated with any air navigation operational improvement. Any operational improvement to enhance the performance of the air navigation system should be built based on a safety risk assessment.

1.7.4 The GASP complements the GANP by providing States and industry with the tools to implement a safety management approach through their SSP and SMS. The GANP, through the evolution of the system described in the conceptual roadmap and the operational improvements detailed in the technical frameworks, supports the goals within the GASP and the GASeP by enhancing safety and security of the air navigation system as reflected in the performance ambitions.

1.7.5 Safety and security are of paramount importance in aviation. The travelling public's perception of a safe aviation system is also linked to how secure the system is in actuality. Fatalities that result from acts of unlawful interference affect the public's perception of aviation safety. The GASeP provides the foundation for States, industry and other stakeholders to work together with the shared and common goal of enhancing aviation security worldwide. It aims to achieve key priority outcomes, such as developing a security culture and improving oversight. The GASP goals and targets support the GASeP by providing best practices and models that can be as effective in managing security as they are in safety management. These include: effective oversight, organizational culture, risk management and assurance processes. The GASeP in turn supports the GASP's vision of zero fatalities. In accordance with Annex 17 — *Aviation Security*, security measures shall be implemented to protect civil aviation "against acts or attempted acts such as to jeopardize the safety of civil aviation". Thus, effective implementation of security measures is instrumental to ensuring safety of civil aviation. Therefore, overall cumulative improvements to aviation security globally enhance not only the security of civil aviation but also contribute to safety, facilitation and operations of the international civil aviation system. There is also a need to assess safety risks stemming from mitigation strategies in the area of security. Integrated risk management principles have the benefit of enabling the best use of risk management measures implemented in both domains in order to strengthen the overall safety of civil aviation, in particular by avoiding negative interference between sector-specific mitigation strategies.

1.8 RELATIONSHIP WITH THE GLOBAL AVIATION SAFETY ROADMAP

1.8.1 Two key elements need to be included in aviation safety planning:

a) a strategy: *what is to be achieved by a plan*? This includes the analysis of challenges, the definition of goals and targets, and how to measure the achievement of these goals and targets; and

b) an action plan: *how will the goals and targets defined in the strategy be achieved*? This includes initiatives needed to achieve the goals and targets.

1.8.2 The GASP contains the global safety strategy. The global aviation safety roadmap (which is now presented in a standalone ICAO manual, Doc 10161) serves as an action plan to assist the aviation community in developing regional and national aviation safety plans (RASPs and NASPs), in line with the GASP goals, through a structured, common frame of reference for all relevant stakeholders. The global aviation safety roadmap outlines specific SEIs associated with the GASP goals and targets, as well as the G-HRCs. Each SEI includes a set of actions that stakeholders may use to develop and implement specific action plans. States and regions, in collaboration with industry, should use the roadmap to feed or complement, as applicable, national and regional safety management activities and develop specific SEIs to support the strategy presented in their NASPs and RASPs respectively. The use of the global aviation safety roadmap as the basis for regional and national safety action plans enhances coordination, thus reducing inconsistencies and duplication of effort. Figure 1-1 illustrates the relationship between the GASP and the roadmap.

Aviation Safety Planning	
Strategy	*Action Plan*
Global Aviation Safety Plan (Doc 10004)	Global Aviation Safety Roadmap (Doc 10161)

Figure 1-1. Relationship between the GASP and the roadmap

1.9 RELATIONSHIP WITH REGIONAL AND NATIONAL AVIATION SAFETY PLANS

1.9.1 The GASP establishes a global strategy for improving aviation safety. It presents global goals and G-HRCs. As the GASP presents a global perspective, its content needs to be adapted to meet regional needs. In order to do so, each region should produce a RASP. The RASP presents the strategic direction for the management of aviation safety at the regional level (or "for a region") for a set period. It outlines to all stakeholders where the different regional entities involved in the management of aviation safety should target resources over the coming years. The RASP should be developed in line with the GASP goals, targets and G-HRCs. However, it should be based on the region's own risk assessment and address the region's specific operational safety risks and organizational challenges.

1.9.2 A NASP presents the strategic direction for the management of aviation safety at the national level, for a set period. It presents the national safety goals and targets, the operational safety risks and organizational challenges, as well as SEIs with specific actions to address them (that is, an action plan). The State should use both the GASP and the RASP to develop its NASP. Although the State should consult the latest edition of the GASP and RASP, if one exists (as depicted in Figure 1-2); it should not solely refer to the GASP and/or RASP when developing its NASP. It is valuable to identify the State's operational safety risks and organizational challenges, using existing processes and information (for example, safety risk assessments). The GASP includes specific targets that are applicable to all States, to enhance safety nationally and contribute to the improvement of aviation safety at the international level. The RASP presents regional goals, targets and HRCs, some of which are additional to the ones listed in the GASP. Some of the SEIs in the RASP may not apply directly to a State, as they may be addressed to the RASG or to another regional entity (for example, the RASG to establish a regional safety risk registry by 2024). However, some targets or SEIs may be addressed to individual States (such as States in the region to certify all aerodromes used for international operations by 2025). In this case, the regional target or specific SEI should be included in the State's NASP, in addition to the relevant information from the GASP. Therefore, the State should consult both the GASP and the relevant RASP when developing its NASP. Figure 1-2 illustrates the relationship between the GASP, the RASP and the NASP.

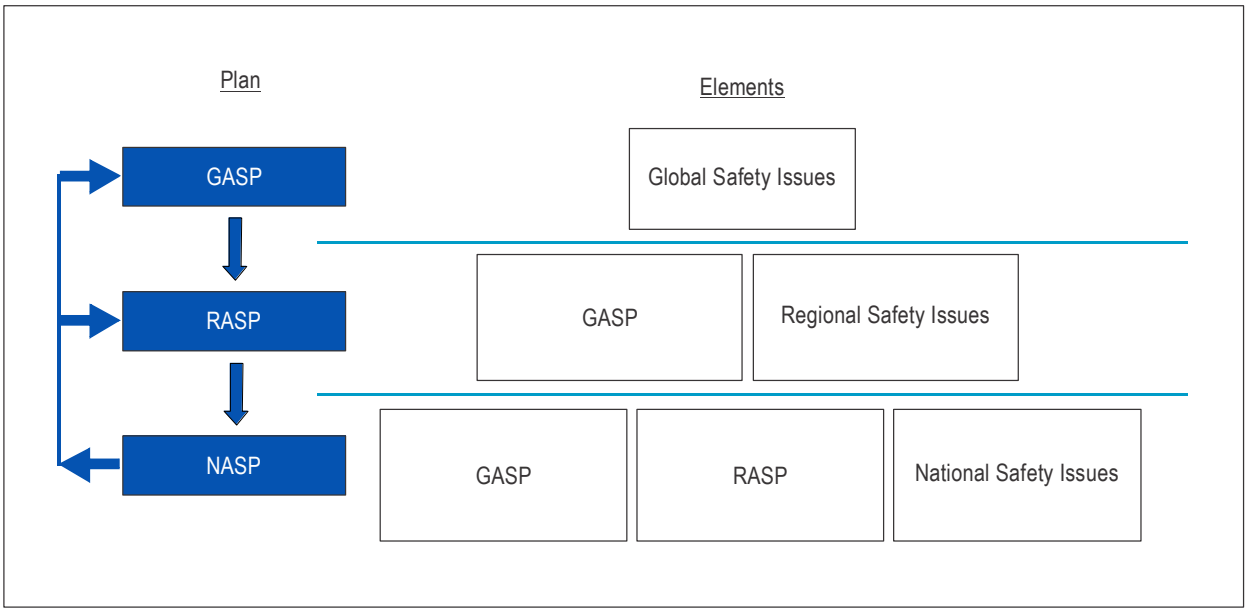

Figure 1-2. Relationship between the GASP, the RASP and the NASP

1.10 GUIDANCE MATERIAL AND TOOLS

1.10.1 ICAO developed an updated suite of guidance material and tools related to the GASP. They focus on the development and implementation of a NASP (with the same processes applying to a RASP, at the regional level). The guidance material and tools will assist States to advance through the NASP development process. Electronic tools enable the identification of safety issues, as well as monitoring and reporting to measure safety performance. They are designed to monitor the implementation of the NASP and assess its actual effectiveness in terms of improving safety at the national level. Figure 1-3 illustrates the suite of guidance material and tools that complement the GASP and support the development and implementation of NASPs and RASPs.

1.10.2 More information on GASP-related guidance material and tools can be found on the ICAO website at www.icao.int/gasp.

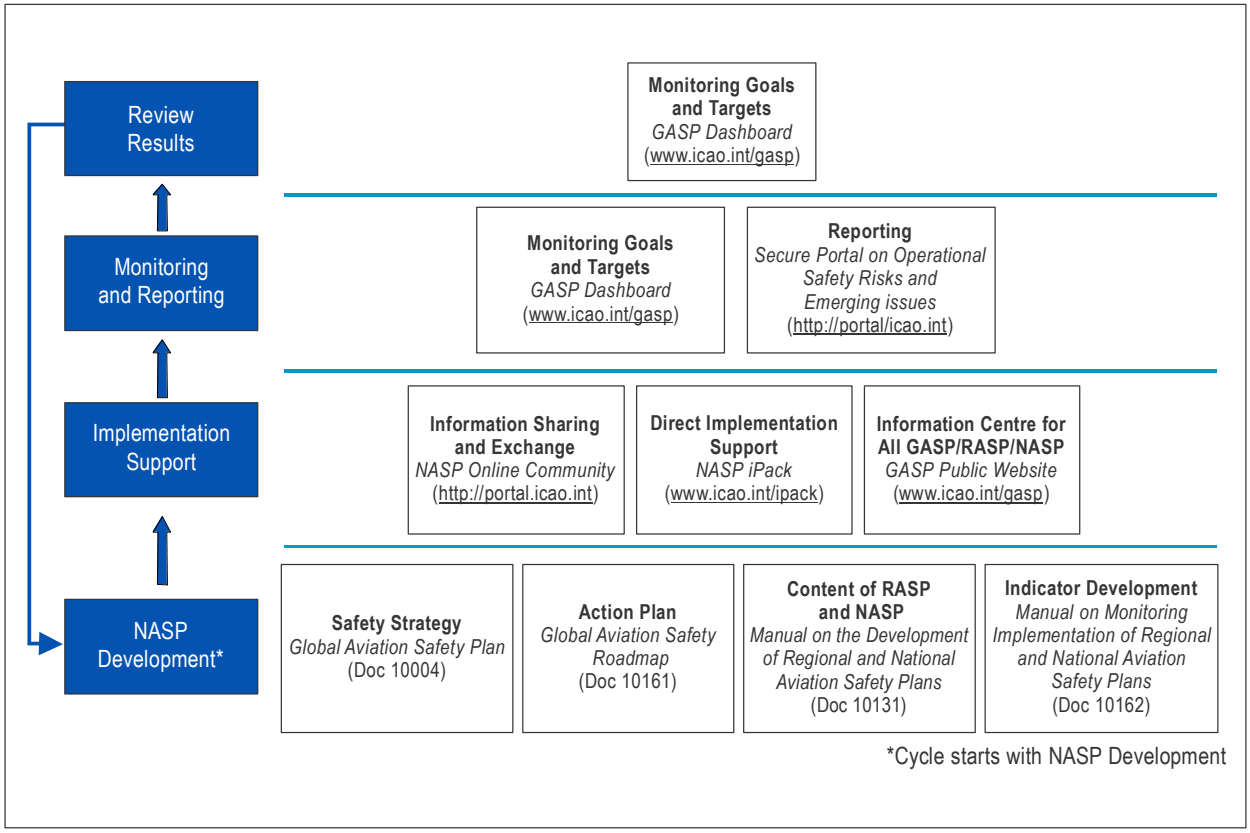

Figure 1-3. GASP-related guidance material and tools

Chapter 2

ROLES AND RESPONSIBILITIES

2.1 GENERAL

An individual State's responsibility for safety oversight is the foundation upon which a safe global air transport system is built. States that experience difficulties in carrying out safety oversight functions can impact the state of international civil aviation. Despite the decreasing trend in the global accident rate, fatalities associated with scheduled commercial operations persist. Meanwhile, as air traffic volume is expected to increase, the pressure to reduce the global accident rate is compounded. A series of identified G-HRCs needs to be addressed to continue reducing fatalities and the risk of fatalities (refer to Chapter 3). The GASP provides a collaborative framework for States, regions and industry to manage organizational challenges and operational safety risks, through the development and implementation of RASPs and NASPs.

2.2 STAKEHOLDERS — ROLES AND RESPONSIBILITIES UNDER THE GASP

2.2.1 Key aviation stakeholders for the GASP include, but are not limited to, ICAO, States, RASGs, Regional Safety Oversight Organizations (RSOOs), Regional Accident and Incident Investigation Organizations (RAIOs), Cooperative Development of Operational Safety and Continuing Airworthiness Programmes (COSCAPs), and industry. The PIRGs also play a key role, coordinating with the RASGs (refer to 1.5.2).

2.2.2 All aviation stakeholders need to be involved in the effort to continually improve safety. In addition to the development of SARPs, ICAO supports the achievement of the GASP goals by providing resources, implementation tools and assistance via different programmes and initiatives. States that may be in a position to do so can also assist other States in achieving the GASP goals.

2.2.3 The GASP provides a strategy for the continuous improvement of aviation safety at the international level. States and regions are responsible for the development of NASPs and RASPs, in line with the GASP. National and regional safety goals and targets should be adapted based on challenges faced by States and other stakeholders concerned. The following sections describe the specific roles of ICAO, States, regions and industry with regard to the achievement of the GASP goals.

2.3 THE ROLE OF ICAO

ICAO plays a role in supporting and monitoring the achievement of the GASP goals at the global, regional and national levels. The role of ICAO within the GASP includes the following:

a) promoting collaboration at the global level to enhance safety;

b) coordinating activities of the RASGs to ensure they are aligned with the GASP;

c) ensuring close coordination between the RASGs and the PIRGs;

d) encouraging the active participation of States and industry in the RASGs;

e) encouraging the active involvement of regional mechanisms, such as RSOOs, RAIOs and COSCAPs, in RASG activities;

f) supporting regional safety oversight mechanisms with the goal of strengthening national and regional safety oversight capabilities, accident investigation and SSPs of individual States;

g) encouraging States with effective safety oversight systems to assist other States, where practicable;

h) providing data and tools to support the monitoring of GASP goals;

i) facilitating the sharing and exchange of safety information and best practices across regions;

j) facilitating access to resources and technical assistance by States; and

k) facilitating training and workshops.

2.4 THE ROLE OF STATES

The role of States within the GASP includes the following:

a) addressing significant safety concerns (SSC) as a priority;

b) acquiring the necessary expertise, either directly or through access to workshops, pools of experts, etc.;

c) developing and implementing a NASP, taking into account the RASP and the GASP (refer to Chapter 6);

d) ensuring the effective implementation of the eight CEs of a State safety oversight system (see Chapter 3, Figure 3-1);

e) building upon safety oversight systems to adopt a safety management approach under the SSP (the Annex 19 — *Safety Management* SARPs are intended to assist States in managing aviation safety risks. States shall require that applicable service providers under their authority implement an SMS (Chapter 3, 3.2.2 refers));

f) providing technical assistance to other States, where practicable;

g) actively participating and supporting the work of the RASG, including its contributory bodies, and other relevant regional groups (including covering safety-related aspects in accident investigation and/or air navigation) by providing technical expertise and ensuring that adequate resources are available; and

h) sharing safety information with the RASG and ICAO (including the status of national safety goals and targets).

2.5 THE ROLE OF REGIONS

2.5.1 In the context of the GASP, the term “region” refers to a group of States and/or entities working together to enhance safety within a geographic area.

2.5.2 At the regional level, RASGs are the main drivers of the aviation safety strategy and the related planning process. They are composed of States, regional entities and industry, among others. RASGs build on work already done by States and/or existing regional organizations such as the COSCAPs and RSOOs. They serve as regional cooperative fora integrating global, regional, national and industry efforts in continuing to enhance aviation safety worldwide. RASGs eliminate duplication of effort through the establishment of cooperative regional safety programmes. This coordinated approach significantly reduces both financial and human resource burdens on States and allows for the delivery of measurable safety improvements.

2.5.3 The role of the RASG within the GASP includes the following:

a) supporting and monitoring progress towards the achievement of the GASP goals at the regional level;

b) structuring its work in line with the GASP to address organizational challenges, operational safety risks, emerging issues and safety performance management;

c) identifying hazards, collaborating in the undertaking of regional safety risk assessments and encouraging States to initiate action using the *Global Aviation Safety Roadmap* (Doc 10161), as the basis for an action plan;

d) coordinating and tracking the implementation of regional SEIs;

e) developing, supporting implementation, and monitoring a RASP consistent with the GASP (refer to Chapter 6 and the *Manual on the Development of Regional and National Aviation Safety Plans* (Doc 10131));

f) providing technical assistance to States in the region (e.g. by identifying subject matter experts, conducting workshops and facilitating training); and

g) serving as the focal point to coordinate regional initiatives, efforts and programmes related to the GASP aimed at mitigating operational safety risks.

2.5.4 As an integral part of the GASP, RASGs, together with RSOOs, coordinate all activities undertaken to address regional safety issues ensuring harmonization to the extent practicable. RSOOs play an important role by supporting the establishment and operation of safety oversight systems and analysing safety information at the regional level. A number of States face difficulties resolving safety deficiencies due to a lack of resources. ICAO has taken the initiative to address this issue by facilitating the establishment of RSOOs through which groups of States can collaborate and share resources to improve their safety oversight capabilities. There are a growing number of RSOOs, several of which are already well established, while some are expected to become fully operational over the next few years. RSOOs cover, in a general sense, a number of legal fora and institutional structures including international intergovernmental organizations, such as the European Union Aviation Safety Agency (EASA) and the Pacific Aviation Safety Office (PASO). Less institutionalized projects, established under the ICAO COSCAP, also play a key role in the GASP. The RASP, referred to in 2.5.3 e) above, may be supplemented by aviation safety plans developed by RSOOs.

Note.— Guidance related to the establishment and management of an RSOO is provided in the Safety Oversight Manual, *Part B* — The Establishment and Management of a Regional Safety Oversight Organization *(Doc 9734, Part B).*

2.5.5 RAIOs facilitate the implementation of accident and incident investigation systems by allowing States to share the necessary financial and human resources, thus enabling them to meet their accident investigation obligations under the Convention on International Civil Aviation.

Note.— Guidance related to the establishment and management of an RAIO is provided in the Manual on Regional Accident and Incident Investigation Organization *(Doc 9946).*

2.6 THE ROLE OF INDUSTRY

2.6.1 In the context of the GASP, the term “industry” refers to service providers, such as: aircraft operators; approved maintenance organizations; organizations responsible for the type design or manufacture of aircraft, engines or propellers; approved training organizations; air traffic services (ATS) providers; and operators of aerodromes, as well as non-governmental organizations (for example, international organizations) and other entities that form part of the aviation industry, as appropriate.

2.6.2 Industry should actively support the achievement of the GASP goals, by being involved in the development and implementation of RASPs and NASPs. The RASP and NASP development process should include consultation with industry. Industry stakeholders should review the roadmap to identify SEIs that support RASP and NASP implementation through specific action plans. To this end, industry should actively participate in, and contribute to, the RASGs to enhance safety in a coordinated manner.

2.6.3 Industry should engage in SMS implementation to continually identify hazards and manage safety risks, as well as work collaboratively with ICAO, the regions and individual States on safety information exchange, safety monitoring and auditing programmes. Non-governmental organizations should provide guidance material and training to assist their members with addressing HRCs and SMS implementation.

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Chapter 3

CHALLENGES AND PRIORITIES IN SAFETY PLANNING

3.1 GENERAL

3.1.1 This chapter presents safety-related challenges and priorities that are deemed of concern to the international aviation community. These challenges are derived from the analysis of safety data collected from proactive and reactive safety-related activities conducted by ICAO. The challenges identified are used to assist ICAO in defining priorities for global action, which then serve as the basis for the development of the GASP goals and targets. The identification of safety-related challenges and the prioritization of areas that require action are key steps in the aviation safety planning process. Safety data used to identify challenges and define priorities includes, but is not limited to: accident or incident investigations; safety reporting; continuing airworthiness reporting; operational performance monitoring; inspections, audits, surveys; and safety studies and reviews. This chapter provides background information on the goals and targets selected for the 2023–2025 edition of the GASP.

3.1.2 When a State, region or industry conducts its own data-driven analysis to identify challenges and determine priorities, it should consider its strengths, weaknesses, opportunities and threats. These provide a foundation and context for developing a RASP or NASP in line with the GASP goals and targets (refer to Chapter 4). Several factors affect the way the GASP is adapted at the regional and national levels. These should be considered as part of the analysis and should include: political, legal, economic, socio-cultural, and technological factors.

3.1.3 The analysis undertaken by ICAO led to the identification of challenges addressed in the GASP. These challenges relate primarily to a State's responsibilities for the management of safety. Section 3.4 of this chapter presents the findings from the analysis of operational safety risks that served to identify the G-HRCs that States and regions should consider, and Section 3.5 addresses emerging issues. In addition, the analysis examined the need for appropriate infrastructure to support safe operations (refer to Section 3.3). Findings from the analysis included in this chapter were used to develop the GASP goals and targets presented in Chapter 4.

3.1.4 In addition to the above, the COVID-19 pandemic has highlighted the need for safety plans to consider the different impacts of disruption events on aviation. Disruption events are discussed in Section 3.6.

3.2 ORGANIZATIONAL CHALLENGES

Organizational challenges are systemic issues, which take into consideration the impact of organizational culture, and policies and procedures on the effectiveness of safety risk controls. Organizations include entities in a State, such as the Civil Aviation Authority (CAA) and service providers, such as aircraft operators, ATS providers, approved aviation training organizations, approved maintenance organizations, operators of aerodromes, etc. Organizations should identify hazards and mitigate the associated risks to manage safety. Two common organizational challenges faced by States are the lack of effective safety oversight and difficulties in implementing an SSP.

3.2.1 Effective safety oversight

3.2.1.1 Safety oversight is a function by means of which States ensure effective implementation of the safety-related SARPs and associated procedures contained in the Annexes to the Convention on International Civil Aviation and related ICAO documents. Safety oversight also ensures that the national aviation industry provides a safety level equal to, or better than, that defined by the SARPs. States have overall safety oversight responsibilities, which emphasize a State's commitment to safety in respect of the State's aviation activity. The eight critical elements (CEs) of a safety oversight system are presented in Figure 3-1. States must establish CE-1 through CE-5 prior to the implementation of CE-6 through CE-8 in order to provide effective safety oversight and safety management. An individual State's responsibility for safety oversight is the foundation upon which a safe global air transport system is built. States that experience difficulties in carrying out safety oversight functions can impact the state of international civil aviation.

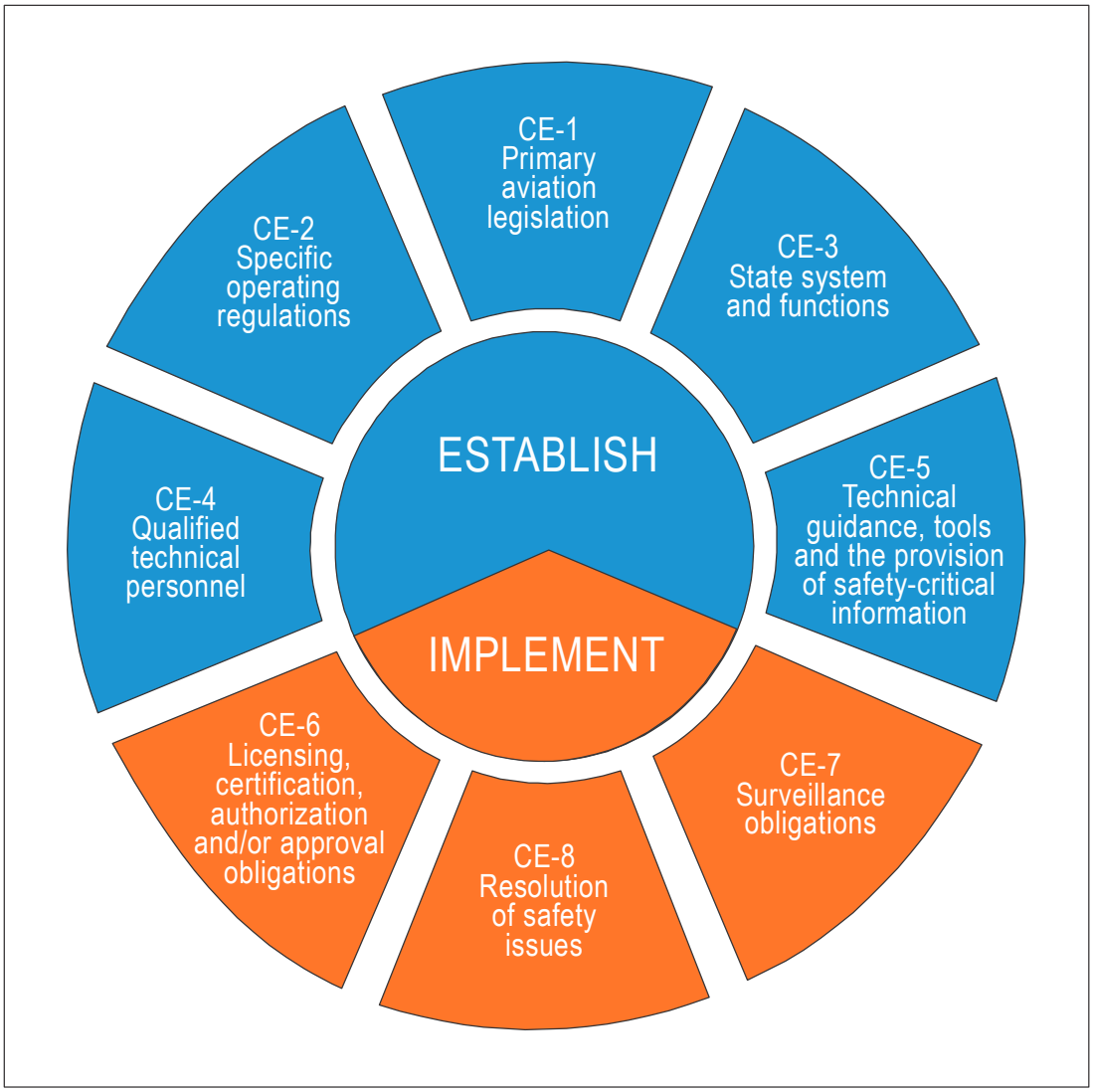

Figure 3-1. Critical elements (CEs) of a State's safety oversight system

3.2.1.2 States should work to continually improve their effective implementation of the eight CEs of the State's safety oversight system in all relevant areas, as appropriate to their aviation system complexity. Through collaborative efforts, the level of effective implementation of the CEs of a State's safety oversight system can increase, particularly in those regions where a State faces shortages of human, financial or technical resources. Collaboration may involve the establishment of organizations that provide safety solutions in regions experiencing resource constraints. Effective safety oversight requires investment in human and technical resources to achieve the GASP goals and to ensure that SEIs yield the intended benefits. States may rely on assistance provided by ICAO, other States and/or organizations, including RSOOs and RAIOs.

3.2.1.3 States may voluntarily consider delegating safety functions, including those related to certification and surveillance, to competent States and/or organizations.

3.2.1.4 Furthermore, States may consider delegating activities to other competent organizations, such as trade associations, industry representative organizations or other bodies that may collect, analyse and protect safety data and safety information on their behalf, provide training or conduct monitoring activities.

3.2.1.5 Although States may delegate functions to other States and/or organizations, including RSOOs, they remain responsible for their obligations under the Convention on International Civil Aviation. However, subject to agreements under Article 83 *bis*, a State of Registry may elect to transfer certain functions and duties, together with the responsibilities, to the State of the Operator in the case of lease, charter or interchange of aircraft or any similar arrangement. The primary purpose of the transfer of certain functions under an Article 83 *bis* agreement is to enhance safety oversight capabilities by transferring responsibility for oversight to the State of the Operator, recognizing that this State may be in a better position to carry out these functions. However, before agreeing to transfer any functions, the State of Registry should determine that the State of the Operator is fully capable of carrying out the functions to be transferred in accordance with the Convention on International Civil Aviation and SARPs; and the State of the Operator accepts to discharge and take responsibility for such functions.

Note.— Guidance related to Article 83 bis *is provided in the* Manual on the Implementation of Article 83 *bis* of the Convention on International Civil Aviation *(Doc 10059)*.

3.2.2 State safety programme implementation

3.2.2.1 States should build upon fundamental safety oversight systems to implement effective SSPs. As per Annex 19, States shall require that applicable service providers under their authority implement an SMS. The SMS enables service providers to capture and transmit safety information, which contributes to safety risk management. An SSP requires the implementation of a risk-based approach to measure and monitor the safety performance of the State's civil aviation system and the progress towards achieving the State's safety objectives. In this context, the role of the State evolves to include the establishment and achievement of safety performance targets, as well as effective oversight of its service providers' SMS.

3.2.2.2 An SSP requires increased collaboration across operational domains to identify hazards and manage safety risks. The analysis of various forms of safety data is needed to develop effective mitigation strategies specific to each State or region. This requires ICAO, States, regions and industry to work closely together on safety risk management. In addition, collaborative efforts between key stakeholders, including service providers and regulatory authorities, are essential to the achievement of safety performance targets established through a State's SSP or service providers' SMS. Through partnerships with such key stakeholders at national and regional levels, safety data should be analysed to support maintenance of safety performance indicators (SPIs) related to the safety risks and the major components of the aviation system. Key stakeholders should reach agreements to identify appropriate SPIs, determine common classification schemes and establish analysis methodologies that facilitate the sharing and exchange of safety information, in accordance with ICAO provisions on the protection of safety information.

3.2.2.3 Implementation of the SSP and SMS involve regulatory, policy and organizational changes that may require additional resources or different personnel qualifications, depending on the degree to which each of the SSP and SMS elements have already been implemented. Additional resources may also be needed to support the collection, analysis and management of data and information required to develop and maintain a risk-based decision-making process. In some cases, States in need of such resources may obtain assistance through the RASGs, RSOOs or other competent States or organizations. In addition, technical capabilities should be developed to collect, analyse and protect safety data and safety information, identify safety trends and disseminate results to relevant stakeholders. An SSP may require investments in the technical systems that enable analytical processes, as well as knowledgeable and skilled professionals required to support the programme.

3.3 APPROPRIATE INFRASTRUCTURE TO SUPPORT SAFE OPERATIONS

3.3.1 International air transport strongly relies on a safe, secure, sustainable and interoperable global aviation system. To support this system, States need to ensure the appropriate infrastructure is available. To do so, States must meet relevant ICAO Standards contained in the different Annexes related to air navigation and aerodrome infrastructure. A robust air navigation system should include the provision of essential services, across different areas of operations.

3.3.2 The GASP reinforces the provision of the essential services outlined in the Basic Building Block (BBB) framework, which describes the backbone of any robust air navigation system by defining the essential air navigation services to be provided for international civil aviation, according to ICAO SARPs and Procedures for Air Navigation Services (PANS). These are essential services in the areas of aerodrome operations, air traffic management, search and rescue, meteorology and aeronautical information. Once these essential services are being provided, they constitute the baseline for any operational improvement to enhance the performance of the system (aviation system block upgrades (ASBU)). In addition to the essential services, the BBB framework identifies the end users of these services as well as the assets necessary to be deployed to provide these services (communications, navigation and surveillance infrastructure).

3.3.3 The BBB is an independent framework, not a block of the ASBU framework. The BBB do not represent any evolutionary step, but the baseline. This baseline is defined by the essential services agreed by the States under the Convention on International Civil Aviation so that international civil aviation may be developed in a safe and orderly manner. The ASBU framework defines a group of operational improvements within some areas of the air navigation system which the aviation community agreed to work on in order to maintain or improve the performance of that system (ASBU threads). An ASBU element is a specific change in operations designed to improve the performance of the air navigation system under specified operational conditions.

Note.— Additional information on the BBB framework is found in the Global Air Navigation Plan, *(GANP, Doc 9750) as well as on the ICAO website at https://www4.icao.int/ganpportal.*

3.3.4 The GASP supports the implementation of the GANP by ensuring there is an appropriate infrastructure to support safe operations and by fostering an increasing trend of States with air navigation and aerodrome infrastructure that meets relevant ICAO Standards. Ensuring effective safety oversight and safety management as part of the SSP in conjunction with appropriate infrastructure to support safe operations will provide States with the capability to deliver essential air navigation services and safely introduce improvements to increase air navigation capacity and efficiency.

3.4 OPERATIONAL SAFETY RISKS

3.4.1 Operational safety risks arise during the delivery of a service or the conduct of an activity (for example, operation of an aircraft, airports or provision of air traffic control). Operational interactions between people and technology, as well as the operational context in which aviation activities are carried out, are taken into consideration to identify

performance limitations and hazards. Operational safety risks should be classified according to categories of occurrences, such as incidents or accidents, aligned with the aviation occurrence categories from the Commercial Aviation Safety Team (CAST)/ICAO Common Taxonomy Team (CICTT).

3.4.2 Global high-risk categories of occurrences

The vision of the GASP is to achieve and maintain the goal of zero fatalities in commercial operations by 2030 and beyond. The GASP identifies a series of global high-risk categories of occurrences (G-HRCs) that need to be addressed to mitigate the risk of fatalities (previously referred to as "global safety priorities"). The types of occurrences considered to be G-HRCs, in alignment with the CAST/CICTT occurrence categories, were selected based on actual fatalities, high fatality risk per accident or the number of accidents and incidents. Based on results from the analysis of safety data collected globally from proactive and reactive sources of information, as well as from ICAO and other non-governmental organizations, five G-HRCs were originally identified for the 2020–2022 edition of the GASP. These same G-HRCs (listed in no particular order) are maintained as G-HRCs for the 2023–2025 edition of the GASP:

a) controlled flight into terrain (CFIT);

b) loss of control in-flight (LOC-I);

c) mid-air collision (MAC);

d) runway excursion (RE); and

e) runway incursion (RI).

Note.— Information on accident statistics, the G-HRCs and other safety data is found on the ICAO website at: www.icao.int/safety/Pages/Safety-Report.aspx.

3.4.2.1 Controlled flight into terrain

CFIT is an in-flight collision with terrain, water or obstacle without indication of loss of control. Accidents categorized as CFIT involve all instances where an aircraft is flown into terrain in a controlled manner, regardless of the crew's situational awareness. CFIT accidents involve many contributing factors, including: procedure design and documentation; pilot disorientation; and adverse weather. Requirements for aircraft to be equipped with ground proximity warning systems have significantly reduced the number of CFIT accidents. Despite the absence of CFIT accidents involving transport category aircraft over the past few years, CFIT accidents often have catastrophic results when they occur, with very few, if any, survivors. Therefore, there is a high fatality risk associated with these events.

3.4.2.2 Loss of control in-flight

A loss of control in-flight (LOC-I) is an extreme manifestation of a deviation from intended flight path. Accidents categorized as LOC-I involve a loss of control in-flight that is not recoverable. LOC-I accidents often have catastrophic results with very few, if any, survivors. Therefore, there is a high fatality risk associated with these events. LOC-I events involve many contributing factors that can be categorized as being either aeroplane systems-induced, environmentally induced, pilot/human-induced or any combination of these three. Of the three, pilot-induced accidents represent the most frequently identified cause of LOC-I accidents. The number of fatalities resulting from LOC-I events involving commercial air transport aeroplanes has led to an examination regarding current training practices, such as the introduction of upset prevention and recovery training requirements for flight crew members.

3.4.2.3 Mid-air collision

A mid-air collision refers to a collision between aircraft while both are airborne. Mid-air collisions can be the result of a level bust due to a loss of separation between aircraft. Mid-air collisions involve many contributing factors, including: traffic conditions; air traffic controller workload; aircraft equipment; and flight crew training. Requirements for aircraft to be equipped with traffic alert and collision avoidance system/airborne collision avoidance system (TCAS/ACAS) have significantly reduced the number of mid-air collisions. However, when they occur, mid-air collisions often have catastrophic results with very few, if any, survivors. Therefore, there is a high fatality risk associated with these events.

3.4.2.4 Runway excursion

A runway excursion is a veer off or overrun off the runway surface. The term “runway excursion” is a categorization of an accident or incident which occurs during either the take-off or landing phase. The excursion may be intentional or unintentional, for example the deliberate veer off to avoid a collision brought about by a runway incursion. Runway excursions involve many contributing factors, including unstabilized approaches and the condition of the runway. The high number of accidents resulting from runway excursions involving commercial air transport aeroplanes has led to several initiatives regarding runway safety. The term “runway safety” describes a series of occurrence categories, including: abnormal runway contact; ground collision; runway excursion; runway incursion; loss of control on the ground; collision with obstacle(s); and undershoot/overshoot. However, runway excursions remain predominant in terms of number of occurrences. Although statistically the majority of runway excursions are survivable, the fatality risk remains significant. The outcome of a runway excursion (such as whether it is survivable) is based on several factors, including the speed at which an aircraft touches down or departs the runway end during the excursion (high energy excursions), runway contamination and the characteristics of the runway end safety area at the aerodrome.

3.4.2.5 Runway incursion

A runway incursion is any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft. Incursions produce an increased risk of collision for aircraft occupying the runway. When collisions occur outside the runway (for example, on a taxiway or on the apron), the aircraft and/or vehicles involved are usually travelling relatively slowly. However, when a collision occurs on the runway, at least one of the aircraft involved will often be travelling at considerable speed (high energy collisions) which increases the fatality risk. Runway incursions involve many contributing factors, including: aerodrome design; pilot and air traffic controller workload; and use of non-standard phraseology. Although statistically very few runway incursions result in collisions, there is a high fatality risk associated with these events. The collision between two B747s at Los Rodeos Airport, Tenerife, in 1977, was the result of a runway incursion and remains the worst accident in aviation history, with the highest number of fatalities.

3.4.3 Consideration of G-HRCs to identify national and regional HRCs

3.4.3.1 States, regions and industry should consider the G-HRCs in conducting regular safety risk assessments to identify national and regional HRCs for which sufficient data exists, and further analyse the underlying precursors and contributing factors as well as prioritize those that should be mitigated as part of national and regional aviation safety plans. More information about addressing operational safety risks in safety planning, including HRCs, is provided in Chapter 4 (refer to 4.3) and in the *Manual on the Development of Regional and National Aviation Safety Plans* (Doc 10131).

3.4.3.2 ICAO has developed a dedicated site on its secure portal for the RASGs to list operational safety risks. For consistency of reporting, States and regions are encouraged to use the aviation occurrence categories from the CAST/CICTT.

Note.— Additional information on the CICTT is found on the ICAO website at https://www.icao.int/safety/airnavigation/AIG/Pages/Taxonomy.aspx.

3.5 EMERGING ISSUES

3.5.1 Emerging issues include concepts of operations, technologies, public policies, business models or ideas that might impact safety in the future, for which insufficient data exists to complete typical data-driven analysis. Due to the lack of data, emerging issues cannot automatically be considered as operational safety risks. It is important that the international aviation community remain vigilant on emerging issues to identify hazards, collect relevant data and proactively develop mitigations to address any associated risks. The management of emerging issues, particularly by mitigating safety risks, can provide opportunities to foster innovation. The use of new technologies, procedures and operations should therefore be encouraged.

3.5.2 ICAO developed a dedicated site on its secure portal to collect information from States, regional and international organizations on emerging issues and operational safety risks, thereby contributing to the improvement of safety by facilitating the sharing and exchange of safety information. Stakeholders are requested to provide information on a regular basis and the information collected also serves to guide future editions of the GASP. Details on how regional entities and other stakeholders may use this information for regional and national aviation safety planning is found on the ICAO website at https://www.icao.int/safety/GASP/Pages/Secure-Portal.aspx.

3.6 DISRUPTION EVENTS

3.6.1 A disruption event is a rare yet very significant event at a global, regional or national level, which adversely impacts aviation 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.

3.6.2 Disruption events are not typically aviation-centric but have significant impact on aviation operations. States 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.

3.6.3 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. To the extent practicable, States should share and communicate hazards that may develop into disruption events. States and regions may also consider applying changes to safety plans in accordance with risk analyses. The policies, processes and mechanisms implemented for the SSP should support the management of disruption events.

3.6.4 To the extent practicable, States and regions should also establish a mechanism and measures to share, communicate and collaborate on effective mitigation measures and efforts to support safe resumption of operations following a disruption event.

3.6.5 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.

Chapter 4

GASP GOALS, TARGETS AND INDICATORS

4.1 GENERAL

4.1.1 The GASP goals were developed using the structure presented in the United Nations (UN) *2030 Agenda for Sustainable Development*, which contains a series of Sustainable Development Goals (SDGs) and targets (refer to https://sustainabledevelopment.un.org/sdgs for more information). This Agenda is a plan of action for people, planet and prosperity. It contains seventeen UN SDGs that balance the three dimensions of sustainable development: economic; social; and environmental. ICAO's Strategic Objectives are strongly linked to fifteen of the seventeen SDGs and ICAO is fully committed to work in close cooperation with States and other UN Bodies to support related targets.

Note.— Additional information on the contribution of each ICAO Strategic Objective to the UN SDGs can be found at www.icao.int/about-icao/aviation-development/Pages/SDG.aspx.

4.1.2 The GASP goals are the results toward which efforts in aviation safety are directed. They present the desired outcomes that ICAO's Safety Strategy (as presented in the GASP) aims to produce. The GASP goals are written in a manner that describes high-level outcomes that States, regions or industry aim to achieve. Each of the GASP goals contains specific targets. Targets are specific desired outcomes from the actions taken by States, regions and industry to achieve the goals, at a certain point in time. The GASP targets are written in a manner that identifies who the specific actions are directed to (e.g. States). Each GASP target also includes examples of indicators that stakeholders may use to measure progress towards achieving the respective GASP goal. Some goals contain more than one target and each of the GASP targets is linked to a series of sample indicators. Indicators are used to evaluate if the GASP yields the expected results by States, regions and industry. The indicators provide evidence about whether the desired outcomes occurred, and measure the progress in the activities related to the GASP targets. They are written in a manner that references quantitative data (such as number or percentage). Some indicators refer to occurrences (for example, number of accidents) that are deemed an outcome of deficient management of aviation safety. Others refer to activities conducted by States or other stakeholders (for example, completion of corrective action plans (CAPs)), deemed to improve management of aviation safety. Ultimately, the indicators are used to measure the achievement of the GASP goals.

4.1.3 The GASP goals, targets and examples of indicators, for the 2023–2025 edition of the GASP, are presented in Table 4-1. These goals are derived from the analysis presented in Chapter 3, which identified safety-related challenges and the prioritization of areas that require action to enhance safety. The following sections provide detailed information regarding each of the goals and targets, as well as the associated indicators.

4.2 DESCRIPTION OF GASP GOALS, TARGETS AND INDICATORS

4.2.1 The GASP contains an aspirational safety goal to achieve and maintain zero fatalities in commercial operations by 2030 and beyond. This goal is deemed "aspirational" as it represents an ambition of achieving an even safer aviation system. The year 2030 has been selected as this aligns with the target year presented in the UN SDGs *Agenda for Sustainable Development*. The GASP is aligned with the timelines of this agenda since the GASP goals contribute to the achievement of the UN SDGs.

4.2.2 A series of goals support this aspirational safety goal. The 2023–2025 edition of the GASP contains six goals, which are the same goals that were presented in the previous, 2020–2022 edition of the GASP. They are maintained for this edition because they remain pertinent considering organizational challenges and operational safety risks, and to ensure consistency and continued alignment with published RASPs and NASPs.

4.2.3 **Goal 1** of the GASP is to achieve a continuous reduction of operational safety risks. This reduction is achieved by a series of SEIs targeting the G-HRCs. This goal addresses operational safety issues, which States, regions and industry may face that should be mitigated as part of NASPs and RASPs.

4.2.3.1 **Target 1.1** calls for the decrease of the global accident rate for commercial scheduled operations. Several examples of indicators are linked to this target including: number of accidents; fatal accidents and fatalities by State, region or globally; as well as accident, fatal accident and fatality rates (that is, number of occurrences per million departures). These indicators also include the percentage of occurrences related to the HRCs. Goal 1 and Target 1.1 remain unchanged from the previous edition of the GASP.

4.2.4 **Goal 2** is aimed at States individually and seeks to strengthen their safety oversight capabilities. This goal calls for all States to progress in their implementation of the eight CEs and address the organizational challenges they face when implementing a safety oversight system. In the 2020–2022 edition of the GASP, there were two targets associated with this goal; these were revised and the 2023–2025 edition of the GASP now has one target associated with this goal, which contains a three-step approach. The target related to the safety oversight index (SOI) 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 of actual safety improvements.

4.2.4.1 **Target 2.1** calls for all States to improve their score for the EI of the CEs of the State's safety oversight system in a progressive manner that would result in incremental increases, until a high overall EI score is reached. As part of this target, States should focus closely on the priority protocol questions (PQs) related to a safety oversight system. The term "priority PQs" refers to PQs that have a higher correlation to operational safety risks. Examples of indicators related to this target include the number of States that have fully implemented the priority PQs and the percentage of required CAPs submitted by States to ICAO via the online framework (OLF) to address findings from Universal Safety Oversight Audit Programme (USOAP) continuous monitoring approach (CMA) activities.

Note.— The list of priority PQs can be found on the USOAP CMA OLF at https://www.icao.int/safety/CMAForum/Pages/default.aspx.

4.2.5 **Goal 3** is also aimed at individual States and calls for the implementation of effective SSPs. The goal addresses organizational challenges faced by States when implementing an SSP and includes the implementation of SMS by service providers within individual States, in accordance with Annex 19. In the 2020–2022 edition of the GASP, two targets were linked to this goal as part of a phased approach to SSP implementation. These were revised and the 2023-2025 edition of the GASP now has three targets associated with this goal, which take into account the progress made by States in implementing their SSP and associated challenges.

4.2.5.1 **Target 3.1** calls for all States to implement the foundation of an SSP by 2023. The term "foundation of an SSP" refers to a subset of USOAP PQs that aim to assist States in building a solid safety oversight foundation for the implementation of an SSP. These are referred to as "SSP foundation PQs". Examples of indicators related to the foundation of an SSP include the number of States having implemented the applicable SSP foundation PQs, as well as the percentage of required CAPs related to the SSP foundation PQs submitted by States using the OLF.

Note.— The full list of SSP foundation PQs is provided with the SSP foundation tool available via the ICAO iSTARS at www.icao.int/safety/iStars.

4.2.5.2 **Target 3.2** calls for all States to publish a NASP by 2024. This is a new GASP target. It is integrated as part of the SSP-related GASP goal because a State should define and publish its strategy and actions to ensure effective safety management and address organizational challenges in a dedicated plan, as part of the SSP (refer to Chapter 3).

Therefore, the NASP can assist a State in developing a strategy, including an action plan with specific SEIs, to facilitate SSP implementation. Through the NASP, the State expresses its commitment to enhancing aviation safety and to the resourcing of supporting activities. The publication of a NASP, as the document containing the State's strategic direction for the management of aviation safety at the national level, allows for the allocation of resources dedicated to the SSP, through the development and implementation of that plan (refer to Chapter 6). The example of an indicator for this target is the number of States having published a NASP.

4.2.5.3 Once States have implemented the foundation of an SSP, they can then progress into **Target 3.3**, which calls for work towards an effective SSP through a phased approach, with target dates leading up to 2028. An "effective SSP" refers to an SSP that actually achieves the desired results. Effectiveness of the different aspects of an SSP is measured through maturity level matrices in the State Safety Programme Implementation Assessment (SSPIA), which forms part of the USOAP CMA activities to assess States' implementation of ICAO safety management provisions.

4.2.6 **Goal 4** is aimed at the regions as defined in the GASP. It calls for States to increase collaboration at the regional level to enhance safety. Three targets are associated with this goal. Two targets reflect those included in the 2020–2022 edition of the GASP; a third, new target was included in this edition of the GASP and replaces a previous one which was removed (refer to 4.2.6.3).

4.2.6.1 **Target 4.1** urges States that do not expect to meet GASP Goals 2 and 3 to seek assistance to strengthen their safety oversight capabilities. This target remains from the 2020–2022 edition of the GASP. States should seek assistance with sufficient lead-time to reach the other targets in the GASP related to safety oversight capabilities, set for 2024. Examples of indicators include the number of States that have submitted a draft NASP to an ICAO Regional Office, as this document should present organizational challenges that the State would require assistance addressing.

4.2.6.2 A new **Target 4.2** calls for all regions to publish an updated RASP, in line with the 2023–2025 edition of the GASP, by 2023. This is a new GASP target. It is integrated as part of the regional collaboration-related GASP goal because RASPs are developed though a collaborative approach in each region, with stakeholders such as States in the region, the RASG, RSOOs and the ICAO Regional Office. RASPs address operational safety risks and organizational challenges. The publication of a RASP, as the document containing the region's strategic direction for the management of aviation safety at the regional level, allows for the allocation of resources dedicated to SEIs, through the development and implementation of that plan. It is important to note that regions may already have published a RASP, but it should be updated to align with the latest edition of the GASP (refer to Chapter 6). The example of an indicator for this target is the number of regions having published an updated RASP.

4.2.6.3 **Target 4.3** calls for all States to contribute information on operational safety risks, including SSP SPIs and emerging issues, to their respective RASGs by 2025. This target is an update of **Target 4.2** in the 2020–2022 edition of the GASP and aims to build up each RASG's safety risk management capabilities. Examples of indicators for this target include the number of reports received via the *Secure Portal on Operational Safety Risks and Emerging Issues* and validated, as well as the percentage of SEIs completed by RASGs on safety risk management. The previous **Target 4.3** from the 2020–2022 edition of the GASP, which called for all States with effective safety oversight capabilities and an effective SSP to actively lead RASGs' safety risk management activities by 2022, has been removed, as it is encompassed in this target.

Note.— Additional information on the Secure Portal on Operational Safety Risks and Emerging Issues is found on the ICAO website at https://www.icao.int/safety/GASP/Pages/Secure-Portal.aspx.

4.2.7 **Goal 5** of the GASP is directed at industry and aims to expand the use of industry programmes and safety information sharing networks by service providers. The 2020–2022 edition of the GASP contained two targets linked to this goal. In the 2023–2025 edition of the GASP, these have been combined into one target.

4.2.7.1 **Target 5.1** calls for industry to maintain an increasing trend in its contribution in safety information sharing networks to States and regions to assist in the development of national and regional aviation safety plans. Examples of indicators related to this target include the number of service providers using globally harmonized metrics for their SPIs;

as well as the percentage of service providers participating in the corresponding ICAO-recognized industry assessment programmes. While such programmes do not replace the need for safety oversight by States, ICAO recognizes the benefits of these programmes, which have a positive effect on operational safety among service providers.

4.2.7.2 For the purpose of the GASP, ICAO-recognized industry assessment programmes include the following:

a) Airports Council International (ACI) Airport Excellence (APEX) in Safety programme;

b) Civil Air Navigation Services Organisation (CANSO) and European Organisation for the Safety of Air Navigation (EUROCONTROL) maturity assessment within the Standard of Excellence in Safety Management Systems;

c) Flight Safety Foundation (FSF) Basic Aviation Risk Standard (BARS);

d) International Air Transport Association (IATA) Operational Safety Audit (IOSA);

e) IATA Safety Audit for Ground Operations (ISAGO); and

f) International Business Aviation Council (IBAC) International Standard for Business Aircraft Operations (IS-BAO).

4.2.8 **Goal 6** focuses on the need to ensure the appropriate infrastructure is available to support safe operations.

4.2.8.1 **Target 6.1** aims to maintain an increasing trend of States with air navigation and aerodrome infrastructure that meets relevant ICAO Standards. Examples of indicators for this target are the number of infrastructure-related air navigation deficiencies by State against the regional air navigation plans and the percentage of States having implemented infrastructure-related PQs linked to the basic building blocks. This target is associated to the activities outlined in the GANP (refer to Chapter 3, Section 3.3).

Note.— The Manual on Monitoring Implementation of Regional and National Aviation Safety Plans *(Doc 10162[1]) contains guidance on data sources for indicators used to measure the achievement of the NASP and RASP goals, respectively, based on the examples of indicators presented in the GASP.*

4.3 ADAPTING THE GASP GOALS, TARGETS AND INDICATORS TO THE RASP AND NASP

4.3.1 The goals and targets presented in this chapter, as well as the G-HRCs presented in Chapter 3, should serve as the basis for the regional and national goals and targets, to be included in a RASP and NASP, respectively. The RASP/NASP should include the regional/national safety goals and targets for the management of aviation safety, as well as a series of indicators to monitor the progress made towards their achievement. These should be tied to the goals, targets and indicators listed in the GASP and include additional safety goals, targets and indicators, as appropriate. As part of the plan, a RASP/NASP should explain how the regional/national safety goals, targets and indicators are linked to the GASP (this may be accomplished by referencing the GASP goals, targets and indicators).

4.3.2 Indicators being used to measure safety performance of a RASP/NASP should be consistent with or linked to those in the GASP to the extent possible. However, the indicators presented in the GASP are only examples, unlike the goals and targets. When the GASP is adapted at the regional and national levels, respectively, regions and States may use the examples of indicators to develop regional and national indicators found in the RASP and NASP. However, not all indicators presented in the GASP need to be duplicated in a RASP/NASP. Refer to Chapter 6 for additional guidance on RASP and NASP development.

1. At the time of publication of this manual, Doc 10162 was still in preparation.

4.3.3 Doc 10161 contains a global aviation safety roadmap, which presents SEIs for States, regions and industry to address each of the goals described in this chapter. The roadmap provides a flexible approach to implementing a NASP or RASP in line with the GASP by providing an action plan to address organizational challenges and operational safety risks (refer to Chapter 1). For the G-HRCs, the roadmap also provides guidance on contributing factors associated with each HRC, and safety actions to mitigate safety risks.

Table 4-1. GASP goals, targets and indicators

ICAO ASPIRATIONAL SAFETY GOAL *"ZERO FATALITIES BY 2030 AND BEYOND"*			
Goal	*Target*		*Examples of Indicators*
Goal 1: Achieve a continuous reduction of operational safety risks	**1.1**	Maintain a decreasing trend of global accident rate.	• Number of accidents • Number of accidents per million departures (accident rate) • Number of fatal accidents • Number of fatal accidents per million departures (fatal accident rate) • Number of fatalities • Number of fatalities per passengers carried (fatality rate) • Percentage of occurrences related to high-risk categories (HRCs)
Goal 2: Strengthen States' safety oversight capabilities	**2.1**	All States to improve their score for the effective implementation (EI) of the critical elements (CEs) of the State's safety oversight system (with focus on priority PQs) as follows: a) by 2024 – 75 per cent EI score b) by 2026 – 85 per cent EI score c) by 2030 – 95 per cent EI score	• Number of States that met the EI score as per the timelines • Number of States that have fully implemented the priority PQs • Percentage of required corrective action plans (CAPs) submitted by States (using OLF) • Percentage of completed CAPs per State (using OLF)
Goal 3: Implement effective State safety programmes (SSPs)	**3.1**	By 2023, all States to implement the foundation of an SSP.	• Number of States having implemented the SSP foundation PQs • Percentage of required CAPs related to the SSP foundation PQs submitted by States (using OLF) • Percentage of required CAPs related to the SSP foundation PQs completed per State (using OLF)
	3.2	By 2024, all States to publish a national aviation safety plan (NASP).	• Number of States having published their NASP

	3.3	All States to work towards an effective SSP as follows: a) by 2025 – Present[2] b) by 2028 – Present and effective	• Number of States having an SSP that is present • Number of States having an SSP that is present and effective • Number of States that require applicable service providers under their authority to implement an SMS
Goal 4: Increase collaboration at the regional level	**4.1**	By 2023, States that do not expect to meet GASP Goals 2 and 3 to seek assistance to strengthen their safety oversight capabilities or facilitate SSP implementation.	• Number of States seeking assistance, by using a regional safety oversight mechanism, another State's or other safety oversight organization's ICAO-recognized functions • Number of States that submitted a draft NASP to an ICAO Regional Office • Number of States registered in the NASP Online Community
	4.2	By 2023, all regions to publish an updated regional aviation safety plan (RASP), in line with the 2023–2025 edition of GASP.	• Number of regions having published an updated RASP
	4.3	By 2025, all States to contribute information on operational safety risks, including SSP safety performance indicators (SPIs), and emerging issues, to their respective regional aviation safety group (RASG).	• Number of States registered to the Secure Portal on Operational Safety Risks and Emerging Issues • Number of States that are sharing their SSP SPIs with RASGs • Number of reports received via the Secure Portal on Operational Safety Risks and Emerging Issues and validated • Number of studies/analyses conducted by RASGs based on reports received via Secure Portal on Operational Safety Risks and Emerging Issues • Percentage of safety enhancement initiatives completed by RASGs on safety risk management • Number of regions having a mechanism to collect and process data on operational safety risks and emerging issues

2. The terms "present" and "present and effective" are based on the maturity levels established in the ICAO SSP Implementation Assessment (SSPIA).

Goal 5: Expand the use of industry programmes and safety information sharing networks by service providers	**5.1**	Maintain an increasing trend in industry's contribution in safety information sharing networks to States and regions to assist in the development of NASPs and RASPs.	• Number of service providers using globally harmonized metrics for their SPIs • Percentage of service providers participating in the corresponding ICAO-recognized industry assessment programmes • Number of States and regions reporting increased and improved provision of safety information by industry to assist in the development of NASPs and RASPs • Number of RASPs developed in consultation with industry • Number of States having established safety data collection and processing systems (SDCPS) to facilitate participation in a safety information-sharing network • Number of service providers contributing to an SDCPS or a safety information sharing network
Goal 6: Ensure the appropriate infrastructure is available to support safe operations	**6.1**	By 2025, maintain an increasing trend of States with air navigation and aerodrome infrastructure that meet relevant ICAO Standards.	• Number or percentage of infrastructure-related air navigation deficiencies by State, against the regional air navigation plans • Number or percentage of States having implemented infrastructure-related PQs linked to the basic building blocks

Chapter 5

SAFETY PERFORMANCE MEASUREMENT

5.1 MEASURING SAFETY PERFORMANCE RELATED TO THE GASP

The safety performance of the GASP is measured by a series of metrics. Elements used to measure safety performance related to the GASP include, but are not limited to:

a) number of fatalities (as the main indicator);

b) accident rate;

c) fatal accident rate;

d) priority PQs for a safety oversight system;

e) SSP foundation PQs; and

f) SSP PQs.

5.2 SAFETY INFORMATION-SHARING AND EXCHANGE

5.2.1 The RASGs play a key role in measuring safety performance and evaluating the success of the GASP. Through the RASPs, RASGs set regional goals and targets and determine a series of SEIs to help them achieve these goals and targets. RASGs also use indicators related to the targets to measure if the SEIs attain their desired outcomes. The RASPs are supported by NASPs developed by States in the region as well as aviation safety plans of other stakeholders, such as regional and non-governmental organizations (for example, RSOOs).

5.2.2 Safety information-sharing and exchange is at the centre of safety performance measurement. The RASGs are in an ideal position to share and exchange safety information due to the composition of their membership, which encompasses representation from States, regions and industry, including but not limited to operators, air navigation services providers, operators of aerodromes and aircraft manufacturers. All these stakeholders bring valuable information on hazards and emerging issues that can feed into the regional safety risk management process.

5.2.3 Some RASGs already conduct safety risk assessments to mitigate risks at the regional level. One of the GASP targets calls for all States to contribute information on operational safety risks, including SSP SPIs and emerging issues, to their respective RASGs. The intent behind this target is to expand the RASGs' safety risk management capabilities by promoting the sharing of safety-related information. Individual States and service providers within a region should contribute information on safety risks to their RASGs. To further promote safety information-sharing and exchange, States should register on the *Secure Portal on Categories of Operational Safety Risks and Emerging Issues* and use the site to submit safety issues to the RASGs for further consideration. The RASGs should use reports received via the site to identify topics, including emerging issues, for the conduct of studies/analyses and potentially develop SEIs to address safety issues. In addition, the RASGs should also encourage States that do not expect to meet GASP Goals 2 and 3 to share their safety concerns with the RASGs as a source of information on regional safety issues. Safety information

collected by the RASGs serves a dual purpose: to identify and prioritize SEIs to address organizational challenges, mitigate operational safety risks and monitor emerging issues, as part of the planning process; and to measure the effect of the SEIs as part of a safety assurance process. ICAO also uses the information collected by the RASG to determine if the GASP goals and targets are met at the regional level, mainly through the achievement of RASP goals and targets.

5.3 PROGRESS REPORTING

5.3.1 The timely and accurate reporting of safety information at the international, regional and national levels is critical to verify whether the goals and targets are being achieved and to monitor the implementation of SEIs. ICAO, the RASGs and partner organizations publish reports on safety as part of their commitment to monitor the progress of their safety goals. Combined, these reports provide perspectives that are both global in nature as well as specific to individual areas, such as flight operations. An analysis of multiple indicators is essential to assess safety performance globally.

5.3.2 ICAO reports once per year on the progress towards achieving the GASP targets. This information can be found on the ICAO website at www.icao.int/gasp.

5.4 RESPONSIBILITIES FOR EVALUATION

Each RASG, in close collaboration with the respective ICAO Regional Office(s), is responsible for evaluating the progress towards the achievement of the RASP goals and targets, in line with the GASP, to determine if these were met within the allotted timeframe. Each State is responsible for submitting pertinent information from the NASP to the RASG, to enable the compilation of regional results. This may be coordinated by an RSOO or another regional entity to avoid duplication of efforts. Other stakeholders, such as international organizations to which specific goals and targets are addressed, should also report to the respective RASGs to contribute to the evaluation. RASGs have adequate procedures in place to ensure reliable and consistent data flow. ICAO Regional Offices are responsible for working with their respective RASGs to produce a report, which is submitted to ICAO Headquarters. The results of this evaluation also serve as feedback for the revision of subsequent editions of the GASP and RASPs.

Chapter 6

REGIONAL AND NATIONAL AVIATION SAFETY PLANS

6.1 THE IMPLEMENTATION OF A REGIONAL AVIATION SAFETY PLAN

6.1.1 The GASP presents a global strategy. Its content needs to be adapted to meet regional needs. In order to do so, each region should develop and implement a RASP, in line with the GASP goals, targets and the global high-risk categories of occurrences (G-HRCs). The RASP presents the strategic direction for the management of aviation safety at the regional level for a set period. It outlines to all stakeholders where the different regional entities involved in the management of aviation safety should target resources over the coming years.

6.1.2 The RASP should align with the GASP while acknowledging that each region may have its own specific safety concerns, priorities and operational context. It should contain SEIs to address issues faced by the States concerned as well as industry. It should be based on a regional assessment to identify challenges and priorities in aviation safety (refer to Chapter 3).

6.1.3 The RASP development process should include consultation with States, industry and other stakeholders. States that make up the region should align and coordinate their NASPs with the RASP and with other efforts aimed at enhancing aviation safety (e.g. RASG activities). The RASP should be reviewed periodically (at least every three years) to take into consideration the latest revision to the GASP.

6.2 BENEFITS OF DEVELOPING A REGIONAL AVIATION SAFETY PLAN

A RASP allows the region to clearly communicate its strategy for improving safety at the regional level to all stakeholders. It provides a transparent means to disclose how States in the region, and other entities involved in civil aviation, work to identify hazards and manage operational safety risks and organizational challenges. It also illustrates how planned SEIs help the region meet the goals established. The RASP emphasizes the region's commitment to aviation safety. It allows a more efficient use of resources and more effective safety risk management by defining regional safety risk mitigations, as opposed to having each State develop mitigation strategies on its own (for example, pooling of resources, information and expertise). Since the plan contains information on safety performance measurement, it can also be used as a means to demonstrate the positive impact of investments addressing existing SEIs that have been successful or as a way to justify the need for additional resources to address ongoing or future safety issues. A RASP helps States be aware of national, regional and international organizational challenges and operational safety risks, and serves to present a strategy for the management of these issues. The RASP can be a useful source of reference for a State to validate its hazard identification and safety risk management activities.

6.3 THE IMPLEMENTATION OF A NATIONAL AVIATION SAFETY PLAN

6.3.1 Assembly Resolution A40-1: *ICAO global planning for safety and air navigation* calls for each State to develop and implement a NASP, in line with the GASP goals, targets and G-HRCs. The NASP should also align with the RASP, while acknowledging that each State may have its own, specific safety concerns, including SSCs, safety priorities and operational context. The NASP presents the strategic direction for the management of aviation safety at the national level, for a set period. It outlines to all stakeholders where the CAA and other entities involved in the management of aviation safety should target resources over the coming years.

6.3.2 The NASP should contain SEIs based on the State's self-assessment to identify national challenges and priorities in aviation safety.

6.3.3 The development process of the NASP should include consultation with industry and other stakeholders, as necessary. The State should review the NASP periodically (at least every three years) to take into consideration the latest revisions to the GASP and to the RASP.

6.4 BENEFITS OF DEVELOPING A NATIONAL AVIATION SAFETY PLAN

Documentation required as part of a State's safety management capabilities contains information regarding a State's policies, procedures and activities related to the management of safety. However, this documentation may not be readily accessible to the public or may be written in a manner that is not understood by persons who are not subject matter experts. A NASP allows the State to clearly communicate its strategy for improving safety at the national level to all stakeholders, including other government branches. It provides a transparent means to disclose how the CAA, and other entities involved in civil aviation, work to identify hazards and manage operational safety risks and organizational challenges. It also illustrates how planned SEIs will help the State meet the established goals. The NASP emphasizes the State's commitment to aviation safety. Since the NASP contains information on safety performance measurement, it can also be used as a means to demonstrate the positive impact of investments in existing SEIs that have been successful or as a way to justify the need for additional resources to address ongoing or future safety issues. The NASP is both a tool to support SSP implementation, as well as documentation of an effective SSP producing measurable safety performance improvements.

6.5 CONTENT OF REGIONAL AND NATIONAL AVIATION SAFETY PLANS

6.5.1 The RASP/NASP should include regional/national safety goals, targets and indicators in line with the GASP, as well as a series of SEIs that will be carried out to address regional/national operational safety risks and organizational challenges. The RASP/NASP should address the identification and prioritization of safety issues across the different sectors of aviation (such as commercial air transport, general aviation, helicopter operations). The region and State should implement the SEIs contained in the RASP and NASP, respectively, by assigning them to the appropriate stakeholders and monitoring their progress at regular intervals.

6.5.2 Guidance related to the development of regional and national aviation safety plans is provided in the *Manual on the Development of Regional and National Aviation Safety Plans* (Doc 10131). The manual is found on the ICAO website at: www.icao.int/gasp. It provides guidance that may be used to:

a) establish a development process for the aviation safety plan, including methods to identify SEIs for the RASP or NASP;

b) address the relationship between the NASP and the SSP;

c) monitor the plan's implementation and its effectiveness; and

d) report on safety performance measurement, including reporting methods for individual States to the RASGs.

— END —

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