



| ICAO

Doc 10004

Global Aviation Safety Plan

2026–2028 Edition

Notice to users

This document is a draft version of an ICAO publication pending endorsement by the ICAO Assembly, at the 42nd Session. Any content, information, data or conclusions presented in this draft are provisional and may still be supplemented, removed or otherwise modified. ICAO shall not be responsible whatsoever for any costs or liabilities incurred as a result of its use.

INTERNATIONAL CIVIL AVIATION ORGANIZATION

Published in separate English, Arabic, Chinese, French, Russian
and Spanish editions by the
INTERNATIONAL CIVIL AVIATION ORGANIZATION
999 Robert-Bourassa Boulevard, Montréal, Quebec, Canada H3C 5H7

For ordering information and for a complete listing of sales agents
and booksellers, please go to the ICAO website at www.icao.int

2026–2028 Edition

Doc 10004, *Global Aviation Safety Plan*

Order Number: 10004

ISBN 978-92-9275-702-1

© ICAO 2025

All rights reserved. No part of this publication may be reproduced, stored in a
retrieval system or transmitted in any form or by any means, without prior
permission in writing from the International Civil Aviation Organization.

AMENDMENTS

Amendments are announced in the supplements to the *Products and Services Catalogue*; the Catalogue and its supplements are available on the ICAO website at www.icao.int. The space below is provided to keep a record of such amendments.

RECORD OF AMENDMENTS AND CORRIGENDA

[illegible][illegible]

FOREWORD

The Global Aviation Safety Plan (GASP) has proven to be a driving force for the implementation of regional and national aviation safety plans, providing the framework for Member States, regional entities and industry stakeholders to develop strategies aimed at improving international civil aviation safety. The GASP contributes to the identification of global safety issues and assists in the design and revision of safety enhancement initiatives that shape regional and national priorities, guiding action plans that serve as the basis for continuous improvement.

Initially introduced in 1997, the GASP has evolved through continual consultations and reviews. The Plan, now published as the 2026–2028 edition, continues to align with current needs, capabilities and resources available to States. This edition considers the safety issues presented to Member States and industry by a dynamic and ever-changing environment, as well as recent developments in the field of aviation safety. Key revisions include new targets to address challenges such as insufficient financial resources for safety oversight authorities, lack of qualified technical personnel and the need to facilitate assistance to States struggling in the regions. This edition maintains the same five global high-risk categories of occurrences as before but addresses other global risk categories of occurrences, such as turbulence encounters, which have featured prominently in recent accidents and incidents.

Continued aviation safety-related events reinforce the need for an unwavering collective determination to enhance aviation safety worldwide, as demonstrated in the fifth edition of the GASP, in line with the ICAO's Strategic Plan 2026–2050 and our Strategic Goal to ensure every flight is safe and secure. It calls for a strong expression of commitment from States to allocate sufficient resources to meet their national and international obligations in terms of safety management, to continue collaborating through ICAO and with industry, and to deliver outcomes at the national, regional and global levels. We are committed to achieving zero fatalities from aviation accidents and incidents.

Salvatore Sciacchitano, President of the ICAO Council

Juan Carlos Salazar, ICAO Secretary General

EXECUTIVE SUMMARY

The International Civil Aviation Organization (ICAO) is committed to enhancing aviation safety, to the resourcing of supporting activities and to increasing collaboration at the global level. The Global Aviation Safety Plan (GASP) presents the global strategy for the continuous improvement of aviation safety. The GASP aims to continually reduce fatalities, and the risk of fatalities, through the development and implementation of a global aviation safety strategy. A safe, resilient and sustainable aviation system contributes to the economic development of States across all regions and their industries. The GASP is the master planning document, upon which the regional aviation safety plans (RASPs) and national aviation safety plans (NASPs), respectively, are developed and implemented. This plan lists global safety issues and sets global safety goals and targets. It provides a collaborative framework for States and regions to manage operational safety risks and organizational challenges, through their respective NASPs and RASPs, together with industry. The GASP is complemented by a series of safety enhancement initiatives (SEIs) to achieve its goals, contained in the *Global Aviation Safety Roadmap* (Doc 10161).

The periodic review of the content of the GASP is done to ensure the plan remains relevant and best reflects current global safety issues in aviation safety, as well as means to address them. The 2026–2028 edition of the GASP marks a significant change in how the global safety strategy is developed. The global safety issues addressed through this plan were identified using a set of standardized frameworks and data from multiple sources, including industry. This new development process was created to ensure that goals and targets for this edition of the GASP focus on the issues that States and regions are facing and that they serve as catalyst to address them. This edition also includes a process for the development and review of the GASP, to foster alignment with other ICAO Global Plans.

Most of the goals for the 2026–2028 edition of the GASP remain the same as in the previous two editions. This is to ensure the stability and continuity of the plan, and to minimize its impact on existing RASPs and NASPs, as well as the SEIs already underway. The five global high-risk categories of occurrences (G-HRCs) also remain the same as in the previous two editions. States, regions and industry need to address the following G-HRCs to mitigate the risk of fatalities: controlled flight into terrain; loss of control in-flight; mid-air collision; runway excursion; and runway incursion. The main changes in the GASP include new and revised targets, as well as amendments based on feedback received, mainly as part of the ICAO Fourteenth Air Navigation Conference. This edition also addresses three other global risk categories of occurrences, in addition to the G-HRCs, which though they may not have a high fatality risk, figure prominently in the most frequent types of accidents and serious incidents across ICAO regions: abnormal runway contact; system/component failure or malfunction (non-powerplant); and turbulence encounter.

The vision of the GASP is “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 global 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 aims to strengthen States’ safety oversight capabilities.

Goal 3 calls for the establishment and management of State safety programmes.

Goal 4 focuses on strengthening collaboration at the regional and national levels to address safety issues.

Goal 5 calls for strengthening aviation safety planning, through RASPs and NASPs.

Goal 6 aims to expand the use of industry evaluation programmes and safety data sharing programmes.

Each region and each State should use the GASP to develop a RASP and NASP respectively, with industry participation. The RASP and NASP present the strategic direction for the management of aviation safety at the regional and national levels, for a set period and should be developed in line with the goals and targets of the GASP. 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.

SUMMARY OF AMENDMENTS

This table contains a summary of the amendments made to the 2026–2028 edition of the GASP and their rationale.

<i>Amendment</i>	<i>Rationale</i>
Goal 1 – Target 1.1, from the 2023–2025 edition, (Maintain a decreasing trend of global accident rate) was expanded into three separate targets.	The target was expanded to encompass not only a decrease in the accident rate, but also in the rate of accidents and serious incidents for each of the five global high-risk categories of occurrences (G-HRCs), and the three other global risk categories of occurrences identified in the 2026–2028 edition of the GASP.
Goal 1 – Targets that replace the previous Target 1.1 call for States, regions and industry to decrease the rates, using a five-year rolling average and the year 2025 as a baseline.	The targets rely on a five-year rolling average to provide more stability in measuring progress towards their achievement.
Goal 2 – Targets, from the 2023–2025 edition, calling for States to reach an effective implementation (EI) score of a certain per cent were replaced by targets addressing specific challenges, based on critical elements and audit areas.	This goal remains unchanged. However, existing targets were removed to address expressed concerns that setting high EI scores as targets, within a short time frame, was ineffective and deterred States with low EI scores from taking action, knowing they would be unable to reach the targets. The first new target under Goal 2 addresses the identified global organizational challenge relating to the provision of financial resources to each safety oversight authority to meet national and international obligations. The other two new targets address specific critical elements and audit areas, based on the analysis of the Universal Safety Oversight Audit Programme (USOAP) results. Their objective is to focus States' attention on specific issues to be addressed, taking into consideration their limited resources.
Goal 3 – A new Target 3.1 was established for all States to assess the level of implementation of their State safety programme (SSP) by 2026. It replaces Target 3.1 from the 2023–2025 edition (By 2023, all States to implement the foundation of an SSP).	There is limited information on SSP implementation globally. Therefore, this new target focuses on States' completion of self-assessments by (end of) 2026 to determine a baseline on SSP implementation.
Goal 3 – A new Target 3.2 (By 2028, all States to establish an SSP) replaces Target 3.3 from the 2023–2025 edition (All States to work towards an effective SSP), which was removed.	Changes to the previous Target 3.3 were made to align with Annex 19 – <i>Safety Management</i> and the guidance provided in the <i>Safety Management Manual</i> (Doc 9859) to promote the effective implementation of the SSP-related Standards and Recommended Practices (SARPs), which incorporate the notion of a continuous improvement of the SSP. The concept of SSP “maturity

<i>Amendment</i>	<i>Rationale</i>
	levels" is not referenced in the new Target 3.2, since it is not addressed in the SARPs of Annex 19.
Goal 3 – Target 3.2, from the 2023–2025 edition (By 2024, all States to publish a national aviation safety plan (NASP)), was moved under a new Goal 5 and its timeline extended so that the plan may be revised in line with the latest edition of the GASP and the corresponding RASP.	A new Goal 5 in the 2026–2028 edition, on strengthening aviation safety planning, is meant to consolidate the existing targets aimed at the publication of NASPs and regional aviation safety plans (RASPs). This new goal and its targets are in line with Assembly Resolution A41-6 and serve as the basis for the development, revision and implementation of a safety strategy at national and regional levels, harmonized with the latest edition of the GASP.
Goal 4, from the 2023–2025 edition, which focused on increasing collaboration at the regional level, was expanded to encompass collaboration at the regional and national levels to address safety issues (in line with those identified in the 2026–2028 edition of the GASP).	The targets under this goal are meant to empower the regions to identify and help individual States to put in place mechanisms to address safety issues. This should facilitate the achievement of GASP goals at the regional and national levels, thus contributing to the improvement of safety globally.
Goal 4 – Target 4.2, from the 2023–2025 edition (By 2023, all Regions to publish an updated RASP), was moved under a new Goal 5 and its timeline extended so that the plan may be revised in line with the latest edition of the GASP.	A new Goal 5 in the 2026–2028 edition, on strengthening aviation safety planning, is meant to consolidate Targets 3.2 and 4.2, from the 2023–2025 edition, aimed at the publication of NASPs and RASPs, respectively. This new goal and its targets are in line with Assembly Resolution A41-6 and serve as the basis for the development, revision and implementation of a safety strategy at national and regional levels, harmonized with the latest edition of the GASP.
Goal 5, from the 2023–2025 edition, which focused on the expanded use of industry programmes and safety information sharing networks by service providers, was maintained, apart from "safety information sharing networks by service providers", which was removed. The goal was renumbered as a new Goal 6.	The text related to "safety information sharing networks by service providers" was removed to focus this goal exclusively on expanding the use of industry evaluation programmes and safety data sharing programmes. Its target was maintained but modified to focus on the use of these programmes.
Goal 6, from the 2023–2025 edition, related to the need for appropriate infrastructure to support safe operations, was removed.	This goal is captured under the <i>Global Air Navigation Plan</i> (GANP, Doc 9750), which focuses on key aspects, such as the basic building blocks. Therefore, to avoid duplication of efforts, it was no longer deemed necessary in the GASP. The removal of Goal 6 (from the 2023–2025 edition) and its indicators also addresses discussions from the Fourteenth Air Navigation Conference (AN-Conf/14), calling for the removal of duplicate indicators from the respective Plans, as part of the longer-term work towards building a common performance framework for all Global Plans, which contains a comprehensive set of indicators.

<i>Amendment</i>	<i>Rationale</i>
The five existing G-HRCs remain the same as in the two previous editions of the GASP. Additionally, three other global risk categories of occurrences were identified and referenced in Goal 1 – Target 1.3: abnormal runway contact (ARC); system/component failure or malfunction (non-powerplant) (SCF-NP); and turbulence encounter (TURB).	Other global risk categories of occurrences may not have a high fatality risk, such as the G-HRCs, but figure prominently in the most frequent types of accidents and serious incidents across ICAO regions. Therefore, they are also addressed as part of the targets referenced in Goal 1 – Target 1.3.
Restructured the GASP chapters into Sections that follow the RASP template, presented in the <i>Manual on the Development of Regional and National Aviation Safety Plans</i> (Doc 10131).	Restructuring the GASP ensures that all the key content is presented at the global level, thus allowing for better alignment between the global, regional and national levels.
Updated the “GASP development and review process”, presented in Section 1.	Figure 1-1. was developed to depict the GASP development and review process, in response to proposals from AN-Conf/14, calling for the revision of the process for Global Plans’ development, to clarify inputs in the development of the GASP, as well as how the plan inputs into the work programme of ICAO.
Updated the “roles and responsibilities”, presented in Section 1 (previously Chapter 2 in the 2023–2025 edition of the GASP).	The content of Section 1.4 was updated to address AN- Conf/14 discussions calling for the revision of the roles and responsibilities of key aviation stakeholders and ICAO, contained in both the GASP and the GANP, to align the content and foster collaboration between the Global Plans and their respective expert groups.
Defined the scope of the GASP in Section 1 and its time horizon in Section 2.	These changes were made in response to proposals from AN-Conf/14 requesting the definition of the respective scopes and time horizons in each Global Plan.
Chapter 6 (related to the RASP and NASP) of the 2023–2025 edition of the GASP was deleted and its content transferred and expanded in the third edition of Doc 10131.	To maintain the GASP as a high-level document focused on strategy and avoid any duplication, the content related to NASP and RASP development was migrated to a standalone document.

CONTENTS

	<i>Page</i>
Glossary	xv
Abbreviations and acronyms	xvii
Section 1. Introduction to the global aviation safety plan	1-1
1.1 Overview of the global aviation safety plan	1-1
1.2 Structure of the global aviation safety plan.....	1-2
1.3 Global aviation safety plan development and review process	1-2
1.4 Roles and responsibilities in aviation safety planning.....	1-4
Section 2. Purpose of the global aviation safety plan.....	2-1
2.1 Global strategic direction for the management of aviation safety	2-1
2.2 Relationship with regional and national aviation safety plans.....	2-1
2.3 Initiatives to support the improvement of aviation safety	2-2
2.4 Other plans considered in the development of the global aviation safety plan	2-3
Section 3. Global operational safety risks	3-1
3.1 General.....	3-1
3.2 Summary of accidents and serious incidents at the global level.....	3-1
3.3 Global high-risk categories of occurrences.....	3-2
3.4 Other global risk categories of occurrences	3-2
3.5 Contributing factors	3-3
Section 4. Global organizational challenges.....	4-1
4.1 General.....	4-1
4.2 Summary of effective safety oversight capabilities at the global level	4-2
4.3 Global organizational challenges.....	4-4
Section 5. The global strategic direction for the management of aviation safety	5-1
5.1 General.....	5-1
5.2 Global aviation safety plan goals, targets and indicators.....	5-1
5.3 Adapting the global aviation safety plan goals, targets and indicators to the regional aviation safety plan and national aviation safety plan	5-9
5.4 Adapting the safety enhancement initiatives to the regional aviation safety plan and national aviation safety plan	5-10
5.5 Emerging issues and safety risks	5-10

	<i>Page</i>
Section 6. Monitoring implementation.....	6-1
6.1 International Civil Aviation Organization process to monitor implementation and measure safety performance	6-1
6.2 Process to revise global aviation safety plan content.....	6-1
6.3 Standardized approach to provide information at the global level	6-1

GLOSSARY

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.

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.

Safety data. A defined set of facts or values collected for reference, processing or analysis which could be used to maintain or improve safety.

Safety enhancement initiative (SEI). One or more actions to eliminate or mitigate operational safety risks or to address organizational challenges.

Safety information. Safety data processed, organized or analysed in a given context to support safety management and the development of safety intelligence.

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 measurable effect on safety achievement.

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

State safety programme (SSP). An integrated set of laws, regulations, policies, objectives, processes, procedures and activities aimed at managing safety, at the State level.

ABBREVIATIONS AND ACRONYMS

AA	Audit area
ACI	Airports Council International
AI	Artificial Intelligence
ANC	Air Navigation Commission
ARC	Abnormal runway contact
ATS	Air traffic service
BARS	Basic aviation risk standard
CANSO	Civil Air Navigation Services Organisation
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
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
GNSS	Global navigation satellite system
IATA	International Air Transport Association
IBAC	International Business Aviation Council
IOSA	IATA Operational Safety Audit
ISAGO	IATA Safety Audit for Ground Operations
IS-BAH	IBAC International Standard for Business Aircraft Handling
IS-BAO	IBAC 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
N-HRC	National high-risk category of occurrence
OLF	Online framework
PQ	Protocol Question
PANS	Procedures for Air Navigation Services
RAIO	Regional Accident and Incident Investigation Organization
RASG	Regional Aviation Safety Group
RASP	Regional aviation safety plan
RE	Runway excursion
RFI	Radio frequency interference
R-HRC	Regional high-risk category of occurrence
RI	Runway incursion
RSOO	Regional Safety Oversight Organization
SARPs	Standards and Recommended Practices

SCF–NP	System/component failure or malfunction (non-powerplant)
SDCPS	Safety data collection and processing system
SEI	Safety enhancement initiative
SMS	Safety management system
SOP	Standard operating procedure
SSP	State safety programme
SUPPS	Regional Supplementary Procedures
TURB	Turbulence encounter
USOAP	Universal Safety Oversight Audit Programme

Section 1

INTRODUCTION TO THE GLOBAL AVIATION SAFETY PLAN

1.1 OVERVIEW OF THE GLOBAL AVIATION SAFETY PLAN

1.1.1 The International Civil Aviation Organization (ICAO) is committed to enhancing aviation safety, to the resourcing of supporting activities and to increasing collaboration at the global level. The Global Aviation Safety Plan (GASP) presents the global strategy for the continuous improvement of aviation safety. The GASP aims to continually reduce fatalities, and the risk of fatalities, through the development and implementation of a global aviation safety strategy. A safe, resilient and sustainable aviation system contributes to the economic development of States across all regions and their industries. The GASP serves as the master planning document, upon which the regional aviation safety plans (RASPs) and national aviation safety plans (NASPs), respectively, are developed and implemented. It provides a collaborative framework for States and regions to manage operational safety risks and organizational challenges, through their respective NASPs and RASPs, together with industry.

1.1.2 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, in the form of value statements, which serve as guiding principles for regional and national aviation safety planning and enable the GASP to meet its purpose.

Vision:	Zero fatalities in commercial operations by 2030 and beyond.
Mission:	To continually enhance global 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 safety deficiencies, and address their consequences or outcomes through a risk-based approach; and i) proactively managing emerging issues.

1.1.3 The scope of the GASP encompasses the whole spectrum of civil aviation activities, as per the eight critical elements (CEs), which serve as the building blocks of an effective and sustainable State safety oversight system. It also encompasses the civil aviation areas, addressed through the audit areas (AAs) covered in the Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA) and a safety management approach (in line with Annex 19 – *Safety Management*).

Note.— With regards to operational safety risks, the GASP is currently limited to commercial operations involving aeroplanes, due to data availability. When sufficient, verified data becomes available at the global level, commercial helicopter operations, general aviation and other types of operations (such as remotely piloted aircraft systems and electric vertical take-off and landing aircraft) may be considered for future editions of the GASP.

1.2 STRUCTURE OF THE GLOBAL AVIATION SAFETY PLAN

This GASP comprises six sections. In addition to the introduction, sections include: the purpose of the GASP; the global operational safety risks identified in the plan; the global organizational challenges identified in the plan, the global strategic direction for the management of aviation safety; and a description of how the progress made towards the achievement of the GASP goals is going to be monitored.

1.3 GLOBAL AVIATION SAFETY PLAN DEVELOPMENT AND REVIEW PROCESS

1.3.1 ICAO is responsible for developing, supporting implementation and monitoring the GASP. Figure 1-1 presents a description of the GASP development and review process. The process mirrors the NASP development process, presented in the *Manual on the Development of Regional and National Aviation Safety Plans* (Doc 10131). A similar process is used for the *Global Air Navigation Plan* (GANP, Doc 9750). The GASP is reviewed and updated prior to each session of the ICAO Assembly, every three years. The GASP is developed and revised 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 global, regional and national levels. This work is done in alignment with the revision of the GANP.

1.3.2 The GASP-SG initiates the revision of the GASP, taking into consideration the previous edition of the plan, as well as safety data and information from several sources. Inputs in this process include: accident and incident data; safety issues identified in the RASPs; ICAO documents (such as the GANP, the *Global Aviation Security Plan* (GASeP, Doc 10118) and the Long-term global aspirational goal (LTAG) for international aviation); tools (such as the USOAP CMA online framework (OLF)); and work of other ICAO expert groups (such as the Safety Management Panel and the Occurrence Validation Study Group).

1.3.3 The GASP-SG then conducts a global evaluation, using all these inputs and develops a proposed list of global safety issues, based on the results of the global evaluation, which help it identify common hazards and safety deficiencies at the global level. The global safety issues are presented in a list under the form of organizational challenges and operational safety risks, including global high-risk categories of occurrences (G-HRCs). The GASP-SG uses two tools that it developed to guide the analysis of existing data sources in a transparent and repeatable manner: the *Standardized Framework for the Identification of Organizational (ORG) Challenges*; and the *Standardized Framework for the Identification of High-risk Categories of Occurrences (HRCs)*, which are contained in the third edition of Doc 10131. The GASP-SG then drafts GASP goals, targets and indicators, for the revised edition of the plan, based on the list of global safety issues. To do so, the study group uses two tools that guide the drafting process: the *Standardized Framework for the Development of Goals, Targets and Indicators (GTI) in Aviation Safety Plans*; and the *Decision Aid for Existing Goals and Targets*, which are contained in Doc 10131 and in the *Manual on Monitoring Implementation of Regional and National Aviation Safety Plans* (Doc 10162), second edition, respectively. As part of the drafting process, the GASP-SG also analyses the status of the GASP targets for the current edition of the plan and the progress in achieving them. The list of global safety issues and the GASP goals, targets and indicators form the basis for the global safety strategy.

1.3.4 The Air Navigation Commission (ANC) conducts a preliminary review of the proposals from the GASP-SG, as part of its work programme and consults with States and international organizations on proposed amendments. The consultation process is conducted through an Air Navigation Conference, a High-level Safety Conference, or similar divisional-type meeting or high-level event, or alternatively via the State Letter process. The GASP-SG reviews the feedback received via the consultation process and amends the list of global safety issues and/or the draft GASP goals, targets and indicators, as needed. It then proceeds to finalise the draft of the GASP document and develops an action plan to support implementation. This includes the development and revision of guidance material and tools. At this stage of the process, the GASP-SG may recommend to the Secretariat the development or amendment of ICAO provisions (such as Standards and Recommended Practices (SARPs)) to facilitate the development and implementation of RASPs and NASPs or their safety enhancement initiatives (SEIs). This may require coordination with other expert groups, such as Panels.

1.3.5 Once the draft GASP document is completed, the ANC conducts a final review of the plan, provides its inputs then reports to the Council of ICAO on the proposed amendments to the content of the GASP. 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 Goals. The Council approves the GASP. After approval by the Council, the GASP is presented to the following session of the ICAO Assembly for endorsement. Following endorsement by the Assembly, the next edition of the GASP is published, accompanied by all the supporting guidance material to facilitate implementation – these constitute the outputs of the process.

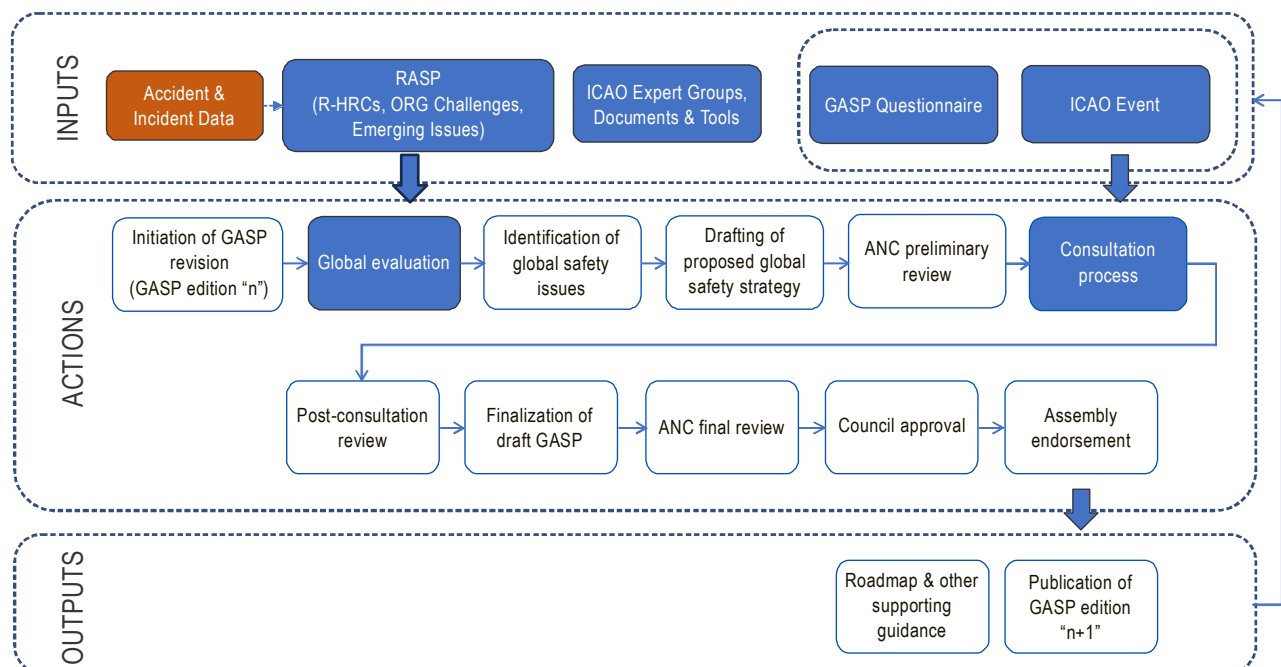


Figure 1-1. GASP development and review process

1.4 ROLES AND RESPONSIBILITIES IN AVIATION SAFETY PLANNING

1.4.1 Introduction

This section provides an overview of the roles and responsibilities of key aviation stakeholders in aviation safety planning and particularly in the context of the GASP. Key aviation stakeholders include, but are not limited to, ICAO, States, Regional Aviation Safety Groups (RASGs)¹, Regional Safety Oversight Organizations (RSOOs), Regional Accident and Incident Investigation Organizations (RAIOs), Cooperative Development of Operational Safety and Continuing Airworthiness Programmes (COSCAPs), as well as traditional and emerging industries. All aviation stakeholders need to be involved in the effort to continually improve safety. The GASP provides a strategy for the continuous improvement of aviation safety at the global level. States and regions are responsible for the development of NASPs and RASPs, in line with that strategy, in consultation with industry.

1.4.2 International Civil Aviation Organization

ICAO plays a role in supporting and monitoring the achievement of the GASP goals at the global, regional and national levels. The role and responsibilities of ICAO in aviation safety planning include the following:

- a) develop the global strategy to enhance safety, through a comprehensive process, in alignment with other ICAO Global Plans (refer to Figure 1-1);
- b) develop provisions, guidance material and tools to assist regions and States in the development and implementation of RASPs and NASPs, respectively;
- c) provide capacity-building to States, to support NASP development and implementation;
- d) provide data and tools to monitor the GASP goals and targets; and
- e) maintain the global safety strategy's relevance, by identifying new hazards and safety deficiencies, amending the Organization's work programme, and revising the GASP.

1.4.3 States

The role and responsibilities of States in aviation safety planning include the following:

- a) develop and implement a NASP, taking into consideration the corresponding RASP and the GASP (and other national plans within the State);
- b) coordinate and track the implementation of national SEIs;
- c) monitor the achievement of the national safety goals, consistent with those in the GASP and the corresponding RASP;
- d) share relevant safety information with the RASG and ICAO (including national safety issues and the status of national safety goals and targets); and
- e) actively participate in, and support the work of, the RASG, by providing technical expertise and ensuring that adequate resources are available.

1. A RASG may also be referred to as an Aviation System Planning Group or an Aviation System Planning and Implementation Group, depending on the region, when combined with a Planning and Implementation Regional Group.

1.4.4 Regions

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. 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. 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. The role and responsibilities of the RASG in aviation safety planning include the following:

- a) structure its work in line with the GASP to address regional operational safety risks, organizational challenges, emerging issues and safety performance measurement;
- b) develop and support the implementation of a RASP, taking into consideration the GASP (and any other pertinent regional or sub-regional plans);
- c) coordinate and track the implementation of regional SEIs;
- d) support, monitor and report on the achievement of the regional safety goals, consistent with those in the GASP;
- e) coordinate all activities undertaken to address regional safety issues with RSOOs, RAIOS and COSCAPs, ensuring harmonization to the extent practicable; and
- f) provide capacity-building to States, to support NASP development and implementation.

1.4.5 Industry

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 international organizations and other entities that form part of the aviation industry, as appropriate. The role and responsibilities of industry in aviation safety planning include the following:

- a) actively support the achievement of the GASP goals, by being involved in the development of RASPs and NASPs;
 - b) assist in the implementation of SEIs that support RASPs and NASPs, through specific action plans;
 - c) provide safety information to States, RASGs and ICAO (including on operational safety risks) that may benefit the development and revision of aviation safety plans;
 - d) actively participate in, and contribute to, the RASGs to enhance safety in a coordinated manner; and
 - e) provide guidance material and training within industry (primarily via regional and international organizations) to address safety issues.
-

Section 2

PURPOSE OF THE GLOBAL AVIATION SAFETY PLAN

2.1 GLOBAL STRATEGIC DIRECTION FOR THE MANAGEMENT OF AVIATION SAFETY

2.1.1 The global aviation safety plan (GASP) is the master planning document containing the strategic direction, at the global level, for the management of aviation safety for a period of three years (2026 to 2028). This plan lists global safety issues and sets global safety goals and targets (commonly referred to as GASP goals and targets). The GASP is complemented by a series of SEIs to achieve those goals, contained in the *Global Aviation Safety Roadmap* (Doc 10161).

2.1.2 The mandate of the GASP stems from an Assembly Resolution. In Resolution A41-6: ICAO Global planning for safety and air navigation, the Assembly recognized the importance of a global framework to support the ICAO Strategic Goal for safety (“ensure every flight is safe and secure”). In addition, the Assembly resolved that the GASP 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.

2.1.3 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 RASPs and NASPs. The GASP seeks to assist States, regions and industry in their respective aviation safety planning by:

- a) establishing a global safety strategy, including goals, targets and indicators;
- b) providing a framework for the development and implementation of RASPs and NASPs;
- c) providing guidance for the development of action plans to support the implementation of RASPs and NASPs, through the use of the global aviation safety roadmap (refer to Doc 10161); and
- d) providing a methodology to guide the identification of operational safety risks, organizational challenges and the development of safety goals, targets and indicators in aviation safety plans, through the use of standardized frameworks (refer to Doc 10131).

2.2 RELATIONSHIP WITH REGIONAL AND NATIONAL AVIATION SAFETY PLANS

2.2.1 The GASP establishes a global strategy for improving aviation safety. It presents global goals and targets. As the GASP presents a global perspective, its content needs to be adapted to meet regional needs. 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 and targets. However, it should be based on the region’s own risk assessment and address the region’s specific operational safety risks and organizational challenges.

2.2.2 The content of the GASP and the RASP need to be adapted to meet national needs. To do so, each State should produce a NASP. The NASP presents the strategic direction for the management of aviation safety at the national level, for a set period. It presents national operational safety risks (including national HRCs or N-HRCs), national organizational challenges, the national safety goals and targets, as well as SEIs with specific actions to address the issues (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, 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 targets for all States (in some cases, their industry), to enhance safety nationally and contribute to the improvement of aviation safety at the global level. The RASP presents regional HRCs (R-HRCs) and regional organizational challenges, as well as regional safety goals and targets, 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. However, some targets or SEIs in the RASP may be applicable to individual States in that region. In such cases, the regional safety target(s) or specific SEI(s) should be included in the State's NASP, in addition to relevant information from the GASP. Figure 2-1 illustrates the relationship between the GASP, the RASP and the NASP.

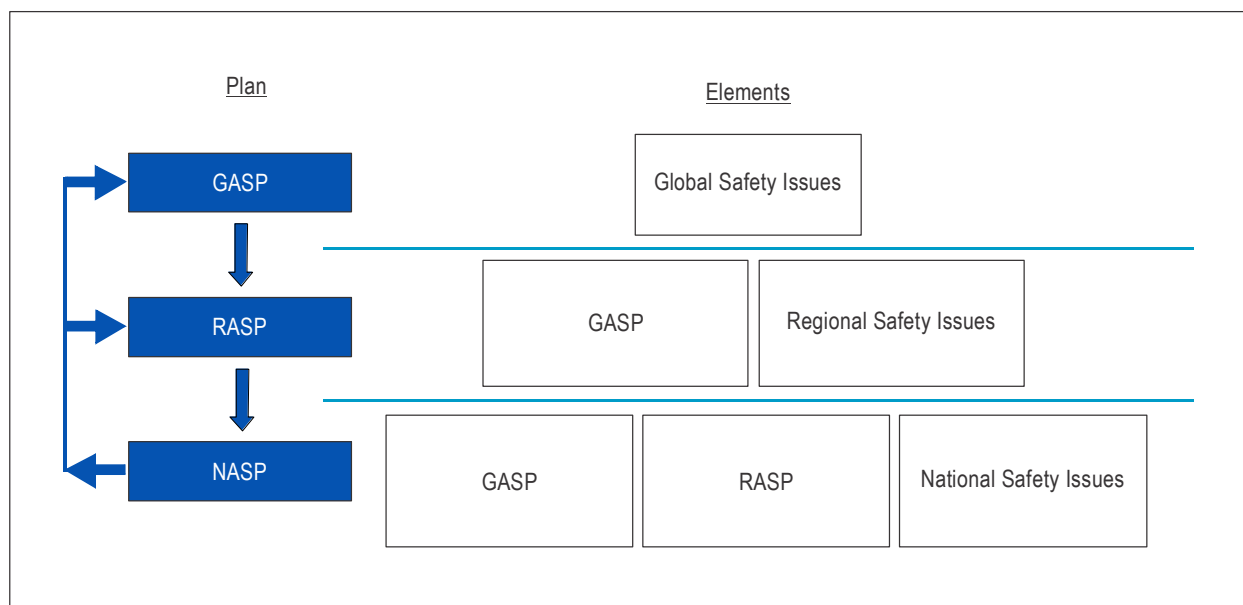


Figure 2-1. Relationship between the GASP, the RASP and the NASP

2.3 INITIATIVES TO SUPPORT THE IMPROVEMENT OF AVIATION SAFETY

2.3.1 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 safety issues, the definition of goals and targets, and how to measure their achievement; 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 (referred to as SEIs).

2.3.2 The GASP contains the global safety strategy. The global aviation safety roadmap (presented in Doc 10161) serves as an action plan to assist the aviation community in developing RASPs and NASPs, in line with the GASP goals and targets, through a structured, common frame of reference for all relevant stakeholders. It defines how the goals and targets outlined in the strategy may be achieved. To do so, the global aviation safety roadmap outlines specific SEIs associated with the GASP goals and targets. 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 national and regional safety management activities, and develop specific SEIs to support the strategy presented in their NASPs and RASPs, respectively. Figure 2-2 illustrates the relationship between the GASP and the roadmap, in the context of aviation safety planning.

<i>Aviation Safety Planning</i>	
<i>Strategy</i>	<i>Action Plan</i>
<i>Global Aviation Safety Plan</i> (Doc 10004)	<i>Global Aviation Safety Roadmap</i> (Doc 10161)

Figure 2-2. Relationship between the GASP and the roadmap

2.3.3 In addition to the global aviation safety roadmap, ICAO developed an updated suite of guidance material and tools related to the GASP, to support the improvement of aviation safety. 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 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 2-3 illustrates the suite of guidance material and tools that complement the GASP and support the development and implementation of NASPs and RASPs.

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

2.4 OTHER PLANS CONSIDERED IN THE DEVELOPMENT OF THE GLOBAL AVIATION SAFETY PLAN

2.4.1 Other plans were considered in the development of the GASP, including the following: the GANP, the GASeP and the latest RASPs (refer to www.icao.int/rasp).

2.4.2 The GANP is an important planning tool for setting global priorities to drive the evolution of the global air navigation system and ensure that the vision of an integrated, harmonized, globally interoperable and seamless system becomes a reality. The GASP and GANP are complementary in nature, and the GANP was considered during the revision of the GASP, to enhance the alignment between both plans and avoid duplication of efforts.

2.4.3 The GASeP provides a framework to guide the work of all stakeholders in enhancing aviation security. It provides shared focus and direction for the global aviation security community through its aspirational goal, milestones and Global Priority Areas of focus. 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.

2.4.4 The RASPs present the strategic direction for the management of aviation safety at the regional level. Common operational safety risks and organizational challenges, predominant across several regions, were considered for potential inclusion at the global level in the GASP.

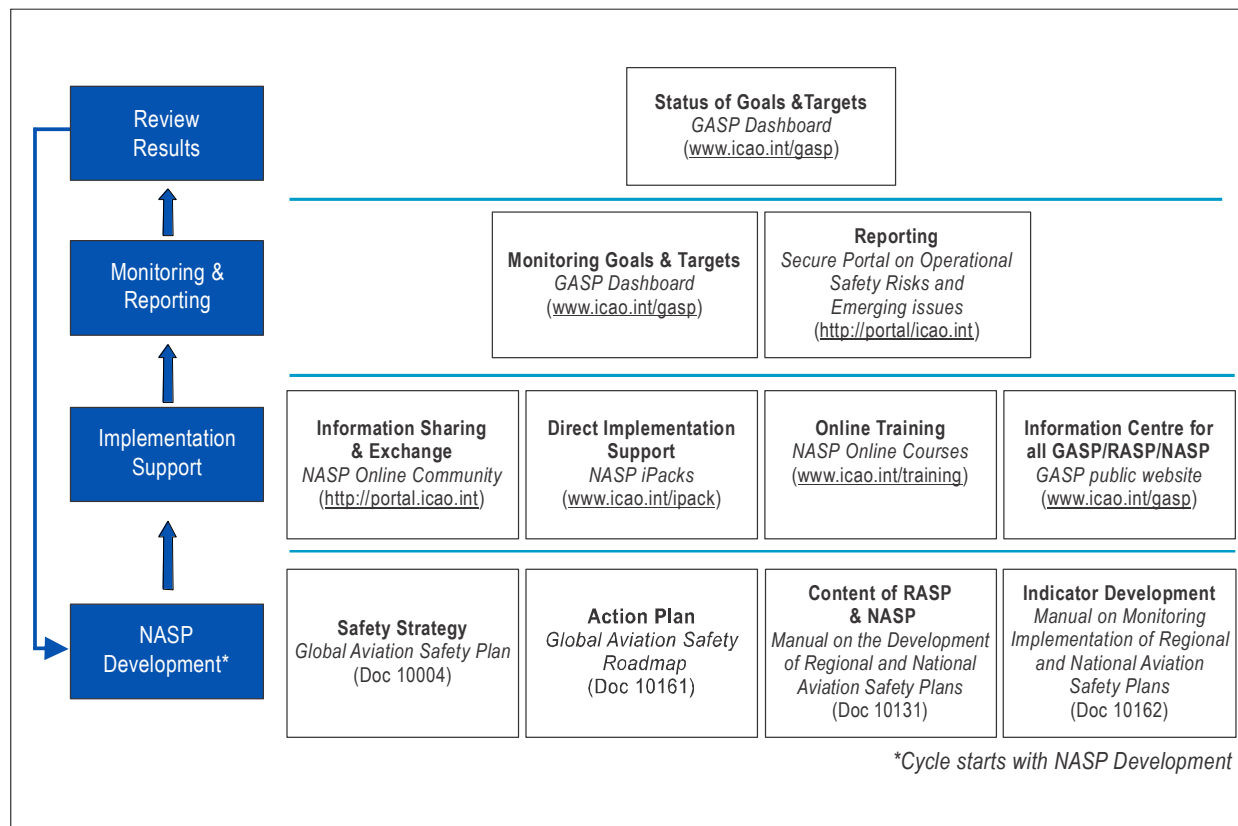


Figure 2-3. GASP-related guidance material and tools

Section 3

GLOBAL OPERATIONAL SAFETY RISKS

3.1 GENERAL

3.1.1 The vision of the global aviation safety plan (GASP) is to achieve and maintain zero fatalities in commercial operations by 2030 and beyond. To support this vision, operational safety risks need to be identified and addressed. Operational safety risks are those which arise during aviation activities (for example, the operation of an aircraft or an airport, or the provision of air traffic services). The process of identifying and addressing operational safety risks includes identifying hazards, safety deficiencies and related safety issues, analysing the interactions between people and technology, as well as the operational context in which aviation activities are carried out.

3.1.2 As there is a multitude of operational safety risks across the aviation system, and limited resources to address them, it is critical to adopt a mechanism to prioritize where efforts should be allocated. To help States, regions and industry prioritize and focus actions to address operational safety risks, ICAO conducted an analysis to identify the highest priority occurrence categories, referred to as global high-risk categories of occurrences (G-HRCs) which have historically resulted in the highest unsafe outcomes across the world; as well as other global risk categories of occurrences that are trending up – therefore, stakeholders should monitor them and take action, as appropriate. States, regions and industry should identify and address operational safety risks that contribute to G-HRCs and other global risk categories.

3.2 SUMMARY OF ACCIDENTS AND SERIOUS INCIDENTS AT THE GLOBAL LEVEL

3.2.1 The summary of accidents that occurred worldwide, and by ICAO region, is shown in the Annual Safety Report, which is available on the Organization's website at: www.icao.int/safety/Pages/Safety-Report.aspx. ICAO's global accident rate provides an overall indicator of safety performance for air transport operations. The accident rate is based on scheduled commercial operations involving fixed-wing aircraft with a certified maximum take-off weight (MTOW) over 5 700 kg. In addition, ICAO validates and categorizes accidents for scheduled and non-scheduled commercial operations involving aircraft with a certified MTOW over 5 700 kg using the Commercial Aviation Safety Team (CAST)/ICAO Common Taxonomy Team (CICTT) taxonomy for occurrence categories. The CICTT taxonomy is found on the ICAO website at <https://www.icao.int/safety/airnavigation/AIG/Pages/Taxonomy.aspx>.

3.2.2 To identify the G-HRCs and other global risk categories of occurrences, ICAO conducted an analysis of its safety data and information using the Accident/Incident Data Reporting (ADREP) system, as well as those from international organizations (mainly the Flight Safety Foundation (FSF) and the International Air Transport Association (IATA)). The analysis was guided by the criteria defined in the *Standardized Framework for the Identification of HRCs* (refer to Doc 10131). These criteria include, but are not limited to:

- a) number of fatalities;
- b) fatality risk by accident or serious incident occurrence categories (as per CICTT);
- c) number of accidents or serious incidents by occurrence categories (as per CICTT);
- d) breakdown by ICAO Region (based on a minimum of five-year data set); and

- e) occurrence categories appearing in several RASPs (R-HRCs).

3.2.3 The main findings from the analysis included the following:

- a) the five G-HRCs identified for the 2023–2025 edition of the GASP remain unchanged for this edition of the GASP (refer to 3.3);
- b) there is a need to address other global risk categories of occurrences. These occurrences may not have a high fatality risk, to be classified as G-HRCs, but they figure prominently in the most frequent types of accidents and serious incidents across ICAO regions (refer to 3.4); and
- c) the G-HRCs and occurrence categories identified for aircraft with a certified MTOW over 5 700 kg involved in accidents and serious incidents were similar regardless of the type of aircraft (in other words, turboprop aircraft, turbojet aircraft or turbofan aircraft).

3.3 GLOBAL HIGH-RISK CATEGORIES OF OCCURRENCES

Based on results from the analysis of safety data and information, the following G-HRCs were identified for the 2026–2028 edition of the GASP. They are considered of the utmost priority, in the international context, considering the criteria described in 3.2.2. The G-HRCs for 2026–2028 are as follows:

- 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).

3.4 OTHER GLOBAL RISK CATEGORIES OF OCCURRENCES

In addition to the G-HRCs listed above, the following were identified as other global risk categories of occurrences (as per CICTT) for the 2026–2028 edition of the GASP. These may not have a high fatality risk, such as the G-HRCs, but figure prominently in the most frequent types of accidents and serious incidents across ICAO regions. The other global risk categories of occurrences for 2026–2028 are as follows:

- a) abnormal runway contact (ARC);
- b) system/component failure or malfunction (non-powerplant) (SCF-NP); and
- c) turbulence encounter (TURB).

3.5 CONTRIBUTING FACTORS

The G-HRCs represent unsafe outcomes that are “end states”, which need to be avoided to prevent fatalities. Therefore, efforts by States, regions and industry should focus on addressing pre-cursors and contributing factors to these G-HRCs, to avoid accidents and serious incidents. To assist, ICAO identified examples of contributing factors leading to the five G-HRCs. Some examples are presented in Table 3-1. For a more comprehensive list, consult the *Global Aviation Safety Roadmap* (Doc 10161).

Table 3-1. Examples of contributing factors associated with G-HRCs

<i>G-HRC</i>	<i>Examples of contributing factors¹</i>
CFIT	– Flight in adverse environmental conditions – Inaccurate approach design and inadequate documentation (for approaches with vertical guidance (APV) or localizer performance with vertical guidance (LPV)) – Phraseology used (standard versus non-standard) – Pilot fatigue, sensory illusion and loss of situational awareness – Global navigation satellite system (GNSS) radio frequency interference (RFI)
LOC-I	– Distraction – Adverse weather – Complacency – Inadequate standard operating procedures (SOPs) for effective flight management – Insufficient height above terrain for recovery – Automation dependency leading to degraded pilot proficiency in manual flying, lack of awareness or competence in procedures for recovery from unusual aircraft attitudes – Startle effect, inappropriate flight control inputs in response to sudden awareness of an abnormal aircraft state (such as bank angle, angle of attack or stall) – GNSS RFI
MAC	– Traffic conditions: considerations include traffic density, complexity and the mixture of aircraft types and capabilities – Air traffic control (ATC) performance: factors such as workload, competence, teamwork and adherence to procedures. Additionally, the influence of the air navigation services provider's (ANSP) safety management system (SMS) – Flight crew training and organizational (corporate) culture: aspects such as workload management, competence, teamwork, adherence to procedures and the impact of the operator's SMS – ATC systems: elements such as flight data processing, communication systems, short-term conflict alert (STCA) systems, as well as the interaction between the human operators and the aircraft systems and the procurement policies of ANSPs – Aircraft equipment: considerations include autopilot systems, transponders and airborne collision avoidance system (ACAS), as well as aircraft performance characteristics (such as rate-of-climb) and their physical dimension – Surveillance systems: coverage and quality of surveillance technologies used to monitor aircraft positions and movements – Flight plan processing: the efficiency and reliability of processes related to flight plan submission, approval and distribution

1. This list is not exhaustive and is presented in no particular order.

G-HRC	<i>Examples of contributing factors¹</i>
	– Airspace design: the complexity of airspace structure, route layouts and the extent of controlled or uncontrolled airspace and proximity of military operational or training areas – Flight in adverse environmental conditions that may influence conflict management and collision avoidance – GNSS RFI
RE	– Ineffective SOPs – Lack of adherence to SOPs – Long/floated/bounced/firm/off-centre/crabbed landing – Unstabilized approach – Inadequate reporting of runway surface conditions – Inadequate approach procedures design – Inadequate regulatory oversight
RI	– Operations in low visibility conditions – Complex or inadequate aerodrome design, equipment and signage – Diversity and complexity of traffic (such as multiple simultaneous line-ups) – Conditional clearances – Simultaneous use of intersecting runways – Late issue of or late changes to departure clearances – Unintentional deviations from ATC clearances by flight and ground crew – Phraseology use (such as non-standard versus standard; call-sign confusion) – Concurrent use of more than one language for ATC communications – English language proficiency – Inadequate manoeuvring area driver training and assessment programme

Section 4

GLOBAL ORGANIZATIONAL CHALLENGES

4.1 GENERAL

4.1.1 In addition to the global operational safety risks listed in the global aviation safety plan (GASP), ICAO identified global organizational challenges. Organizational challenges are systemic issues, which take into consideration the impact of organizational aspects (such as organizational culture; policies and procedures; employee selection and training; and allocation of resources) on a State's safety oversight and safety management capabilities. In the context of the GASP, an "organization" primarily refers to a State's aviation-related entities, such as the Civil Aviation Authority and the Accident Investigation Authority. However, in the regional or national context, organizations may also include service providers, such as aircraft operators, ATS providers, approved aviation training organizations, approved maintenance organizations and operators of aerodromes.

4.1.2 Organizational challenges need to be identified and addressed, to improve a State's safety oversight and safety management capabilities, and ultimately enhance safety overall. ICAO defines eight CEs of a safety oversight system. These CEs encompass the whole spectrum of civil aviation activities. They are the building blocks upon which an effective safety oversight system is based. The eight CEs are presented in Figure 4-1.

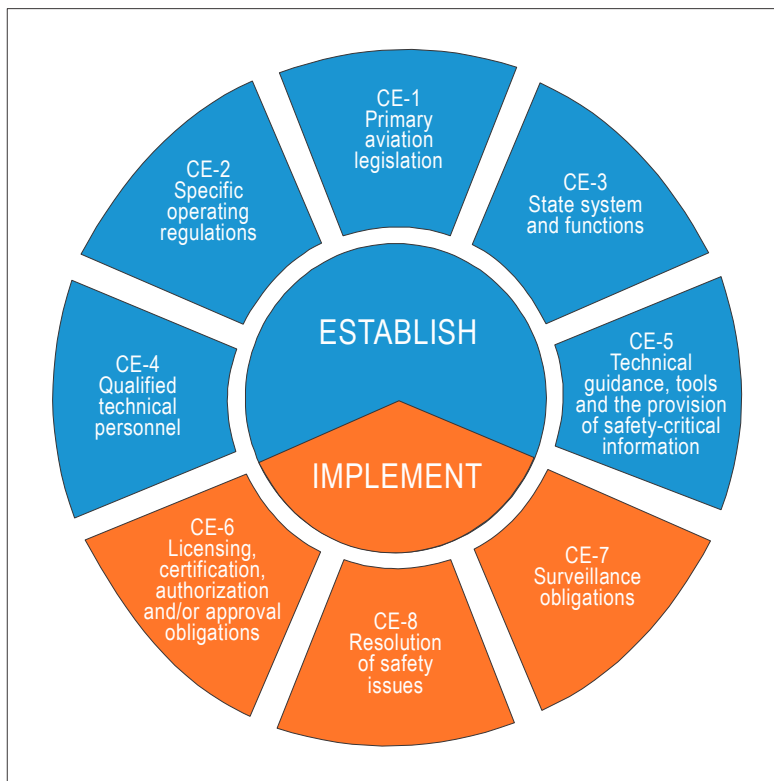


Figure 4-1. Critical elements of a State's safety oversight system

4.1.3 In addition, ICAO defines audit areas (AAs), which refer to civil aviation areas covered in the USOAP CMA audits and validations. These AAs are defined in the *Universal Safety Oversight Audit Programme Continuous Monitoring Manual* (Doc 9735).

4.1.4 Through USOAP CMA, ICAO measures a State's safety oversight capability, calculated for each CE, each AA or as an overall measure. This measure is referred to as the "effective implementation" or "EI". The EI is expressed as a percentage; it is an indicator of a State's capability for safety oversight. The primary tool used in USOAP to assess the level of effective implementation of a State's safety oversight system is referred to as Protocol Questions (PQs). In addition, Priority Protocol Questions (PPQs) are a subset of PQs that, if found not satisfactory, may indicate a lack of capability by a State to identify and/or resolve operational safety and fundamental accident investigation deficiencies effectively, and consequently, its inability to conduct safety oversight or a proper accident investigation. The list of PQs can be found on the USOAP CMA online framework (OLF) at www.icao.int/safety/CMAForum/Pages/default.aspx.

4.1.5 Deficiencies related to certain CEs and AAs are common to most States across all regions. These are considered a top concern and are identified as global safety issues in the GASP because of their impact on the ability of States to fulfil their safety oversight responsibilities, which ultimately impacts aviation safety at the global level.

4.2 SUMMARY OF EFFECTIVE SAFETY OVERSIGHT CAPABILITIES AT THE GLOBAL LEVEL

4.2.1 To identify systemic issues, considered to be global organizational challenges, ICAO conducted an analysis, guided by the criteria defined in the *Standardized Framework for the Identification of ORG Challenges* (refer to Doc 10131). These criteria include, but are not limited to, aggregated status of States' safety oversight systems and capabilities at the global level; consideration of regional organizational challenges in setting global ones; and State safety programme (SSP) implementation and maintenance.

4.2.2 Information generated by the USOAP CMA OLF was used as the primary source for the analysis. Among the main points analysed were:

- a) the five lowest scoring PPQs by AA and CE combination globally, based on a consolidated global "Heat Map";
- b) PQs used to assess the civil aviation organization & State system and functions (ORG/CE-3) at the global level;
- c) the lowest scoring PPQ globally;
- d) organizational challenges that appear in several RASPs; and
- e) results from the SSP self-assessment tool (on OLF) and the SSP gap analysis application (on the Integrated Safety Trend Analysis and Reporting System (iSTARS)).

4.2.3 The main findings from the analysis included the following:

- a) the five lowest scoring PPQs by AA and CE combination globally (in ascending order) were:
 - 1) aircraft accident and incident investigation & qualified technical personnel (AIG/CE-4);
 - 2) aerodromes and ground aids & qualified technical personnel (AGA/CE-4);
 - 3) aerodromes and ground aids & resolution of safety issues (AGA/CE-8);

- 4) aircraft accident and incident investigation & resolution of safety issues (AIG/CE-8); and
 - 5) aircraft operations & surveillance obligations (OPS/CE-7) – related specifically to dangerous goods;
- b) for PQs used to assess ORG/CE-3:
- 1) PQ 2.051 (the only PPQ in this set) focuses on the establishment and implementation of a mechanism by the State to ensure that each safety oversight authority has sufficient financial resources to meet its national and international obligations. The global score was 67.57 per cent, which is below the global overall EI score at the time of this analysis;
 - 2) PQ 2.053 looks at the establishment of a mechanism by the State to ensure that each safety oversight authority has sufficient personnel to meet its national and international obligations – The global score was 41.71 per cent; and
 - 3) PQ 2.103 focuses on each safety oversight entity/investigation authority's ability to attract, recruit and retain sufficiently qualified/experienced technical personnel. The global score was 53.51 per cent;
- c) the lowest scoring PPQ globally was under the AA and CE combination of primary aviation legislation and civil aviation regulations & specific operating regulations (LEG/CE-2):
- 1) PQ 1.205 looks at the establishment and implementation of a process by the State to ensure the identification and publication in the State's aeronautical information publication (AIP) of significant differences between the Standards and Recommended Practices (SARPs)/Procedures for Air Navigation Services (PANS)/Regional Supplementary Procedures (SUPPS) and the State's regulations and practices – related specifically to AIP;
- d) organizational challenges appearing in several RASPs:
- 1) three out of six RASPs cited lack of resources and expertise, as well as human factors and competence of personnel as regional organizational challenges; and
- e) results from the SSP self-assessment tool (on the OLF) and the SSP gap analysis application:
- 1) it was not possible to ascertain the maturity level of SSP among States via SSP self-assessment (due to unavailability of information at the time of this analysis); and
 - 2) the SSP gap analysis application showed that under five per cent of States self-reported having achieved a Level 4 ("SSP implementation completed"), as per the application's levels.

4.3 GLOBAL ORGANIZATIONAL CHALLENGES

Based on results from the analysis, the following five global organizational challenges were identified for the 2026–2028 edition of the GASP. They are considered of the utmost priority, in the international context, because they impact States' safety oversight and safety management capabilities and, consequently, aviation safety at the global level. The global organizational challenges for 2026–2028 are as follows:

- a) lack of sufficient financial resources for the safety oversight authority to meet its national and international obligations;
 - b) lack of qualified technical personnel, primarily aircraft accident investigators and aerodrome inspectors;
 - c) lack of a regulatory process to address the resolution of safety issues, primarily related to aerodrome operations;
 - d) low level of SSP implementation at the global level; and
 - e) deficiencies in safety data and safety information collection, analysis and exchange, to support safety management activities.
-

Section 5

THE GLOBAL STRATEGIC DIRECTION FOR THE MANAGEMENT OF AVIATION SAFETY

5.1 GENERAL

5.1.1 The global aviation safety plan (GASP) includes a series of safety goals and targets for the management of aviation safety, as well as indicators to monitor the progress made towards their achievement. In addition, the *Global Aviation Safety Roadmap* (Doc 10161) presents the safety enhancement initiatives (SEIs) that were developed to help achieve each of the goals and targets described in this section.

5.1.2 The GASP goals are the results towards which efforts in aviation safety are directed. The GASP goals are written in a manner that describes high-level outcomes that States, regions or industry aim to achieve as part of the global safety strategy.

5.1.3 The GASP goals contain 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 identify who the specific actions are directed to (for example, States).

5.1.4 Each GASP target also includes indicators to measure progress towards its achievement. The indicators provide evidence on 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). Ultimately, the indicators are used to measure the achievement of the GASP goals.

5.1.5 The GASP goals, targets and indicators, for the 2026–2028 edition of the GASP, were derived from the analysis presented in Sections 3 and 4, which identified global safety issues that require action at the international, regional and national levels, to enhance aviation safety. The following section provides detailed information regarding each of the goals and targets, as well as the associated indicators.

5.2 GLOBAL AVIATION SAFETY PLAN GOALS, TARGETS AND INDICATORS

5.2.1 The GASP contains an aspirational safety goal to achieve and maintain zero fatalities in commercial operations by 2030 and beyond, in line with its vision. A series of goals, targets and indicators support this aspirational safety goal. They are presented in Table 5-1. Most of the goals and targets for the 2026–2028 edition of the GASP remain the same as the previous two editions. This is to ensure the stability and continuity of the plan, and its impact on existing RASPs and NASPs, as well as all the SEIs already underway at the regional and national levels. The goals and targets for the 2026–2028 edition of the GASP focus on the main operational safety risks and organizational challenges that States and regions are facing and are meant to serve as catalysts to address them.

5.2.2 Several factors were considered, when deciding which specific actions to take for each existing target (in other words, to extend the deadline; close it out at the end of the previous GASP cycle; add a new target replacing one being closed). The main factor for maintaining an existing target was its relevance to the newly identified global safety issues (as presented in Sections 3 and 4). Another factor was the status of achievement of the targets, based on the analysis of available data, primarily accident statistics and information available on Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA) online framework (OLF), as well as on Integrated Safety Trend Analysis and Reporting System (iSTARS). Additionally, the interdependency between targets was considered. Some targets call for incremental improvements or a phased approach; thus, the deadline to achieve one target directly impacts another in some cases. For example, regions need to first identify States that need assistance to address safety issues; then they can facilitate the required assistance.

5.2.3 *Goal 1* of the GASP is to achieve a continuous reduction of operational safety risks. This goal addresses operational safety issues, which States, regions and industry should mitigate as part of their regional aviation safety plans (RASPs) and national aviation safety plans (NASPs). New targets were included to specifically address the G-HRCs and the other global risk categories of occurrences (as presented in Section 3). The scope of the targets was also expanded to encompass serious incidents, and the use of a five-year rolling (moving) average to determine trends over a given period¹.

5.2.3.1 *Target 1.1* calls for States, regions and industry to decrease the accident rate, globally and within each ICAO region, by 2028. This decrease is measured using a five-year rolling average and the year 2025 as a baseline. Indicators linked to this target are the accident rate (the number of accidents per million departures); fatal accident rate (number of fatal accidents per million departures); and the fatality rate (the number of fatalities per billion passengers carried).

5.2.3.2 *Target 1.2* calls for States, regions and industry to decrease the rate of accidents and serious incidents for each of the five G-HRCs (identified in Section 3.3), globally and within each ICAO region, by 2028. This decrease is measured using a five-year rolling average and the year 2025 as a baseline. Indicators linked to this target are the accident rate by G-HRC; the serious incident rate by G-HRC; the percentage of accidents related to the G-HRCs compared to all accidents; and the percentage of serious incidents related to the G-HRCs compared to all serious incidents.

5.2.3.3 *Target 1.3* calls for States, regions and industry to decrease the rate of accidents and serious incidents related to the other global risk categories of occurrences (identified in Section 3.4), globally and within each ICAO region, by 2028. This decrease is measured using a five-year rolling average and the year 2025 as a baseline. Indicators linked to this target are the accident rate by other global risk category of occurrence; the serious incident rate by other global risk category of occurrence; the fatal accident rate by other global risk category of occurrence; the fatality rate by other global risk category of occurrence; and the injury rate (that is, the number of injuries per billion passengers carried).

5.2.4 *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 effective implementation of their safety oversight system by addressing the specific issues they face. New targets were drafted to address those specific issues, in line with the global organizational challenges identified in the analysis, mainly the lack of sufficient financial resources, qualified technical personnel, and a regulatory process to address the resolution of safety issues (as presented in Section 4.3). The targets address specific critical elements (CEs) and audit areas (AAs), based on the analysis of USOAP results. Their objective is to focus States' attention on specific issues to be addressed, taking into consideration their limited resources.

1. A five-year rolling average is the average calculated every year based on the data of the previous five years. It gives a more realistic picture by reducing the impact of outliers in the data, smoothing the trend curve. It helps identify trends otherwise hard to detect. For example, in 2026, the 2025 baseline five-year rolling average is calculated with data from 2021, 2022, 2023, 2024 and 2025. The following year, the 2026 rolling average will use 2022, 2023, 2024, 2025 and 2026 data.

5.2.4.1 *Target 2.1* calls for all States to commit, through their NASPs, the allocation of sufficient financial resources to each safety oversight authority to meet national and international obligations, with at least 70 per cent of States having sufficient financial resources, by 2028. USOAP contains a specific Protocol Question (PQ 2.051), which relates to this obligation. This deficiency was identified in the analysis of global safety issues, which confirmed a lack of sufficient financial resources for safety oversight authorities was preventing them from meeting national and international obligations. A 70 per cent score was selected as a minimum target, rather than 100 per cent, since it represented global average (as the baseline) at time of the analysis. One indicator, linked to this target, is the percentage of States with a “satisfactory” rating for the USOAP PQ 2.051.

5.2.4.2 *Target 2.2* calls for all States to improve their score for the effective implementation (EI) of qualified technical personnel (CE-4) for two specific areas and with specific scores: for aircraft accident and incident investigation (AIG) and for aerodromes & ground aids (AGA), respectively, with a further commitment that no State has a score of less than the baseline global average, by 2028 – calculated using year 2025 as that baseline. This is linked to findings from the analysis of global safety issues, which identified a lack of qualified technical personnel within States, primarily aircraft accident investigators and aerodrome inspectors. Indicators linked to this target are the number of States that meet the EI score for the CE-4/AIG and for the CE-4/AGA combinations.

5.2.4.3 *Target 2.3* calls for all States to improve their score for the EI of the resolution of safety issues (CE-8) in AGA, with a further commitment that no State has a score of less than the baseline global average, by 2028 – calculated using year 2025 as that baseline. This is linked to findings from the analysis of global safety issues, which identified a lack of a regulatory process to address the resolution of safety issues, primarily related to aerodrome operations. One indicator, linked to this target, is the number of States that meet the EI score for the CE-8/AGA combination.

5.2.5 *Goal 3* is aimed at States individually and calls for the establishment and management of State safety programmes (SSPs), in accordance with Annex 19 – *Safety Management*. New targets were drafted to align with Annex 19 and promote the effective implementation of the SSP-related Standards and Recommended Practices (SARPs), which incorporate the notion of a continuous improvement of the SSP. The updated targets focus on States’ self-assessments to determine a baseline on SSP implementation and call for a progressive approach to the implementation and continuous improvement of these programmes.

5.2.5.1 *Target 3.1* calls for all States to assess the level of implementation of their SSP, by 2026. This is linked to findings from the analysis of global safety issues, which identified a low level of SSP implementation at the global level. There is a need to obtain more information from States to best understand the status of their SSP implementation and the challenges they face when establishing the programme. To do so, the SSP self-assessment, available on the USOAP CMA OLF, was considered the most adequate tool. All States should complete the self-assessment, even if they have not started implementing an SSP, as it will still provide them with valuable information. One indicator, linked to this target, is the percentage of States having completed their SSP PQ self-assessment, using the USOAP CMA OLF.

5.2.5.2 *Target 3.2* leverages the results from completing the self-assessment in Target 3.1, and calls for all States to establish an SSP, by 2028. This is linked to the same findings from the analysis of global safety issues, noted for the previous target. The establishment of an SSP includes establishing a safety data collection and processing system (SDCPS) to capture and collect, store, aggregate, process and enable the analysis of safety data and safety information. Having an established SDCPS enables States to address deficiencies in the collection, analysis, and exchange of safety data and safety information (as presented in Section 4.3) and provides the foundation for safety intelligence to support safety management activities. Indicators linked to this target include the percentage of States having established an SSP and the percentage of States having established an SDCPS. In addition, another indicator focuses on the need for States to establish means to protect data and information collected for safety management purposes, as a key enabler for the establishment of an SSP.

5.2.5.3 Guidance on establishing and managing the SSP, through means such as a maturity assessment, is presented in the *Safety Management Manual* (Doc 9859). A periodic maturity assessment is intended to provide the State with assurance that as the SSP matures, it is operating as intended and is effective at achieving its stated safety objectives and targets.

5.2.6 *Goal 4* is aimed at the regions (as defined in the GASP) and calls for them to strengthen collaboration at the regional and national levels to address safety issues. This goal, which previously focused on increasing regional collaboration, was expanded to encompass collaboration at the national level to address safety issues (in line with those identified in the GASP). The targets under this goal are meant to empower the regions to identify and help individual States to put in place mechanisms to address safety issues. This should facilitate the achievement of GASP goals at the regional and national levels, thus contributing to the improvement of safety globally.

5.2.6.1 *Target 4.1* calls for all regions to identify States that need assistance to address safety issues, by 2026. The year 2026 was selected because it represents the end of the first year of the current GASP cycle. This gives States, needing assistance, sufficient lead-time to achieve the other targets in the GASP, set for 2028. Indicators linked to this target are the percentage of States in each region that need assistance to address each of the specific global safety issues, as identified in Sections 3 and 4. This target is linked to Target 4.2.

5.2.6.2 *Target 4.2* calls for all regions to facilitate the required assistance, to States identified under Target 4.1, to address safety issues by 2028 – the last year in the current GASP cycle. This target is linked to Target 4.1 and presents a two-step approach to strengthen collaboration at the regional and national levels to address safety issues identified under that target. During the three-year GASP cycle, regions have time to provide targeted assistance to States, identified as needing assistance under the previous target, so they may achieve the GASP targets, set for 2028. Indicators linked to this target are the percentage of States in each region that receive the required assistance to address each of the specific safety issues, previously identified.

5.2.6.3 *Target 4.3* calls for all regions to implement a mechanism to make use of the information on operational safety risks and emerging issues for the purpose of aviation safety planning, by 2027. This target aims to build up the safety risk management capabilities of each RASG, to better equip them in identifying and addressing regional safety issues. Indicators linked to this target include the number of reports received via the Secure Portal on Operational Safety Risks and Emerging Issues; the percentage of SEIs completed by RASGs; and the number of regions implementing a mechanism to make use of the information on operational safety risks and emerging issues.

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>.

5.2.7 *Goal 5* is aimed at States and regions and seeks to strengthen aviation safety planning. This new goal and its targets are in line with Assembly Resolution A41-6 and serve as the basis for the development, revision and implementation of a safety strategy at the national and regional levels, in line with the current edition of the GASP.

5.2.7.1 *Target 5.1* calls for all regions to publish an updated RASP, taking into consideration the 2026–2028 edition of the GASP by 2026, the end of the first year of the current GASP cycle. RASPs address regional operational safety risks and organizational challenges. The publication of a current 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 all regions have published a RASP, but it should be updated to align with the latest edition of the GASP to demonstrate long-term sustainability and continuity of the regional planning process. This gives regions sufficient lead time to revise the regional safety strategy and the related action plan(s) to achieve the other targets in the GASP, set for 2026–2028. Indicators linked to this target are the number of regions having published an updated RASP; the number of RASPs developed in consultation with industry; and the number of regions reporting provision of safety information by industry to assist in the development of RASPs.

5.2.7.2 *Target 5.2* calls for all States to publish an updated NASP, taking into consideration the 2026–2028 edition of GASP and their corresponding RASP, by 2027. It is important to note that States having published a NASP should update it to align with the latest editions of the corresponding RASP and the GASP. While ideally, both the RASP and the NASP should be revised once the latest edition of the GASP is published, the year 2027 was selected for this target, to allow for sufficient time for the updated RASPs to be published, as per Target 5.1. Indicators linked to this target are the number of States that published an updated NASP; number of NASPs developed in consultation with industry; and number of States reporting provision of safety information by industry to assist in the development of NASPs.

5.2.8 *Goal 6* is aimed at industry (as defined in the GASP) to expand the use of industry evaluation programmes and safety data sharing programmes. This goal acknowledges the value of such programmes in assisting service providers to enhance their safety performance and their readiness when undergoing compliance audits. While industry evaluation programmes do not replace the need for safety oversight by States, ICAO recognizes their benefits and positive effect on operational safety among service providers.

5.2.8.1 *Target 6.1* calls for industry to maintain an increasing trend in its use of industry evaluation programmes and safety data sharing programmes, by 2028. Indicators linked to this target are the number of service providers participating in the corresponding ICAO-recognized industry assessment programmes, as well as those participating in industry safety data sharing programmes.

5.2.8.2 For the purpose of the GASP, ICAO-recognized industry evaluation programmes refer to 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) Standard of Excellence in Safety Management Systems measurement;
- 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);
- f) International Business Aviation Council (IBAC) International Standard for Business Aircraft Operations (IS-BAO); and
- g) IBAC International Standard for Business Aircraft Handling (IS-BAH).

5.2.8.3 Further guidance and examples of industry safety data sharing programmes can be found in *Global Aviation Safety Roadmap* (Doc 10161).

Table 5-1. GASP goals, targets and indicators

<i>ICAO aspirational safety goal “zero fatalities by 2030 and beyond”</i>			
<i>Goal</i>	<i>Target</i>		<i>Indicators</i>
Goal 1: Achieve a continuous reduction of operational safety risks	1.1	By 2028, States, regions and industry to decrease the accident rate, globally and within each ICAO region ²	– Accident rate (number of accidents per million departures) – Fatal accident rate (number of fatal accidents per million departures) – Fatality rate (number of fatalities per billion passengers carried)
	1.2	By 2028, States, regions and industry to decrease the rate of accidents and serious incidents for each global high-risk category of occurrence (G-HRC), globally and within each ICAO region ²	– Accident rate by G-HRC – Serious incident rate by G-HRC – Percentage of accidents related to G-HRC compared to all accidents – Percentage of serious incidents related to G-HRC compared to all serious incidents
	1.3	By 2028, States, regions and industry to decrease the rate of accidents and serious incidents related to the other global risk categories of occurrences, globally and within each ICAO region*	– Accident rate by other global risk category of occurrence – Serious incident rate by other global risk category of occurrence – Fatal accident rate by other global risk category of occurrence – Fatality rate by other global risk category of occurrence – Number of injuries per billion passengers carried (injury rate)
Goal 2: Strengthen States’ safety oversight capabilities	2.1	By 2028, all States to commit to national aviation safety plans that allocate to each safety oversight authority sufficient financial resources to meet national and international obligations, with at least 70 per cent of States having sufficient financial resources	– Percentage of States with a “satisfactory” rating for the Universal Safety Oversight Audit Programme (USOAP) protocol question (PQ) 2.051³
	2.2	By 2028, all States to improve their effective implementation (EI) score for qualified technical personnel (CE-4) for aircraft accident and incident investigation (AIG) and for aerodromes and ground aids (AGA), respectively, with a further commitment that no State has a score of	– Number of States that meet the EI score of equal or greater than the baseline global average for CE-4/AIG – Number of States that meet the EI score of equal or greater than the baseline global average for CE-4/AGA

2. Using a 5-year rolling average and year 2025 as a baseline.

3. PQ 2.051: Has the State established and implemented a mechanism to ensure that each safety oversight authority has sufficient financial resources to meet its national and international obligations?

ICAO aspirational safety goal “zero fatalities by 2030 and beyond”			
Goal	Target		Indicators
		less than the baseline global average ⁴	
	2.3	By 2028, all States to improve their EI score for the resolution of safety issues (CE-8) in AGA with a further commitment that no State has a score of less than the baseline global average ⁴	– Number of States that meet the EI score of equal or greater than the baseline global average for CE-8/AGA
Goal 3: Establish and manage State safety programmes (SSPs)	3.1	By 2026, all States to assess the level of implementation of their SSP	– Percentage of States having completed their SSP PQ self-assessment, using the ICAO online framework (OLF)
	3.2	By 2028, all States to establish an SSP	– Percentage of States having established an SSP – Percentage of States having established a safety data collection and processing system (SDCPS) – Percentage of States having established a framework for the protection of safety data and safety information
Goal 4: Strengthen collaboration at the regional and national levels to address safety issues	4.1	By 2026, all regions to identify States that need assistance to address safety issues	– Percentage of States in each region that need assistance to address the lack of sufficient financial resources for the safety oversight authority to meet its national and international obligations – Percentage of States in each region that need assistance to address the lack of qualified technical personnel, primarily aircraft accident investigators and aerodrome inspectors – Percentage of States in each region that need assistance to address the resolution of safety issues, primarily related to aerodrome operations – Percentage of States in each region that need assistance to address a low level of SSP implementation – Percentage of States in each region that need assistance to address deficiencies in safety data and safety information collection, analysis and exchange, to support safety management activities – Percentage of States in each region that need assistance to address operational

4. The global average is calculated using year 2025 as a baseline.

ICAO aspirational safety goal “zero fatalities by 2030 and beyond”		
Goal	Target	
		safety risks, including HRCs – Percentage of States in each region that need assistance to address other safety issues
	4.2	By 2028, all regions to facilitate the required assistance, to identified States, to address safety issues – Percentage of States in each region that receive the required assistance to address the lack of sufficient financial resources for the safety oversight authority to meet its national and international obligations – Percentage of States in each region that receive the required assistance to address the lack of qualified technical personnel, primarily aircraft accident investigators and aerodrome inspectors – Percentage of States in each region that receive the required assistance to address the resolution of safety issues, primarily related to aerodrome operations – Percentage of States in each region that receive the required assistance to address a low level of SSP implementation – Percentage of States in each region that receive the required assistance to address deficiencies in safety data and safety information collection, analysis and exchange, to support safety management activities – Percentage of States in each region that receive required assistance to address operational safety risks, including HRCs – Percentage of States in each region that receive the required assistance to address other safety issues
	4.3	By 2027, all regions to implement a mechanism to make use of the information on operational safety risks and emerging issues for the purpose of aviation safety planning – Number of States registered to the Secure Portal on Operational Safety Risks and Emerging Issues – Number of reports received via the Secure Portal on Operational Safety Risks and Emerging Issues – Number of studies or analyses conducted by regional aviation safety groups (RASGs) based on reports received via Secure Portal on Operational Safety

ICAO aspirational safety goal “zero fatalities by 2030 and beyond”			
Goal	Target		Indicators
			Risks and Emerging Issues – Percentage of safety enhancement initiatives completed by RASGs – Number of regions having a mechanism that makes use of the information on operational safety risks and emerging issues
Goal 5: Strengthen aviation safety planning	5.1	By 2026, all regions to publish an updated regional aviation safety plan (RASP), taking into consideration the 2026–2028 edition of the GASP	– Number of regions having published an updated RASP – Number of RASPs developed in consultation with industry – Number of regions reporting provision of safety information by industry to assist in the development of RASPs
	5.2	By 2027, all States to publish an updated national aviation safety plan (NASP), taking into consideration the 2026–2028 edition of the GASP and their corresponding RASP	– Number of States that published an updated NASP – Number of NASPs developed in consultation with industry – Number of States reporting provision of safety information by industry to assist in the development of NASPs
Goal 6: Expand the use of industry evaluation programmes and safety data sharing programmes	6.1	By 2028, industry to maintain an increasing trend in its use of industry evaluation programmes and safety data sharing programmes	– Number of service providers participating in the corresponding ICAO-recognized industry evaluation programmes – Number of service providers participating in industry safety data sharing programmes

5.3 ADAPTING THE GLOBAL AVIATION SAFETY PLAN GOALS, TARGETS AND INDICATORS TO THE REGIONAL AVIATION SAFETY PLAN AND NATIONAL AVIATION SAFETY PLAN

5.3.1 The goals and targets presented in this section should serve as the basis for the regional and national goals and targets, to be included in a RASP and NASP, respectively. The RASP and NASP should include the regional and national safety goals and targets for the management of aviation safety, respectively, as well as a series of indicators to monitor the progress made towards their achievement. These should be tied to the applicable 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 or NASP should explain how the regional or national safety goals, targets and indicators are linked to the GASP (this may be accomplished by referencing the GASP goals, targets and indicators). Guidance related to the development of RASPs and NASPs is provided in the *Manual on the Development of Regional and National Aviation Safety Plans* (Doc 10131).

5.3.2 When the GASP is adapted at the regional and national levels, respectively, regions and States may use the GASP 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 or NASP. Guidance for the development of RASP and NASP indicators, based on the GASP indicators, is provided in the *Manual on Monitoring Implementation of Regional and National Aviation Safety Plans* (Doc 10162).

5.4 ADAPTING THE SAFETY ENHANCEMENT INITIATIVES TO THE REGIONAL AVIATION SAFETY PLAN AND NATIONAL AVIATION SAFETY PLAN

5.4.1 The global aviation safety roadmap presents SEIs for States, regions and industry to address each of the goals and targets described in this section. It provides a flexible approach to implementing a NASP or RASP, in line with the GASP, by providing an action plan to address operational safety risks and organizational challenges.

5.4.2 ICAO developed a series of SEIs that include actions that seek to eliminate or mitigate the operational safety risks listed in Section 3. These SEIs form the operational safety risks (OPS) roadmap, contained in the *Global Aviation Safety Roadmap* (Doc 10161). ICAO also developed a series of SEIs that include actions to address the organizational challenges listed in Section 4. These SEIs form the organizational challenges (ORG) roadmap, also contained in Doc 10161.

5.4.3 At the regional and national levels, SEIs in RASPs and NASPs should be implemented through the working arrangements of the RASG activities, and by the existing safety oversight capabilities of States and their service providers' safety management systems (SMS), respectively.

5.4.4 As a minimum, States and regions should identify appropriate SEIs to address their respective safety issues. The SEIs may be derived from the global aviation safety roadmap, to achieve the regional and national safety goals presented in RASPs and NASPs, respectively. Some of the regional or national SEIs should be linked to overarching SEIs at the global level and help to enhance aviation safety at national, regional and global levels.

Note.— The manuals listed in this section are found on the ICAO website at www.icao.int/gasp.

5.5 EMERGING ISSUES AND SAFETY RISKS

5.5.1 Emerging issues may stem from new concepts of operations, new technologies, changes to public policies, new 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. For example, the increased use of Artificial Intelligence (AI) in automation and in safety-critical activities may allow for easier adoption of innovations in the field, but its integration also introduces potential new hazards in the aviation system. It is important that the international aviation community remain vigilant on emerging issues to identify hazards, collect and share relevant data, and proactively develop mitigations to address any associated risks. Leveraging “big data” and predictive analytics can help in proactively identifying operational safety risks before they lead to occurrences. Managing risks associated with the development of new technologies and business models helps their adoption and fosters innovation. The use of new technologies, procedures and operations should therefore be encouraged. Integrating advanced analytics in safety risk management processes holds the potential to improve both aviation safety and operational efficiency, for legacy airspace users as well as new entrants.

5.5.2 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. This site is called the Secure Portal on Operational Safety Risks and Emerging Issues. Stakeholders should provide information on this site on a regular basis. The information collected will 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>.

Section 6

MONITORING IMPLEMENTATION

6.1 INTERNATIONAL CIVIL AVIATION ORGANIZATION PROCESS TO MONITOR IMPLEMENTATION AND MEASURE SAFETY PERFORMANCE

6.1.1 The safety performance of the global aviation safety plan (GASP) is measured by indicators, to determine the progress made by States and regions in achieving the plan's goals. ICAO does not monitor the implementation of individual safety enhancement initiatives (SEIs) at the global level; this is done regionally, based on each regional aviation safety plan (RASP). Each RASG monitors the implementation of the SEIs listed in the corresponding RASP and measures the safety performance of the regional civil aviation system to ensure the intended results are achieved.

6.1.2 In addition to the above, ICAO reviews the GASP every three years, to keep the identified global operational safety risks, organizational challenges and SEIs (found in the roadmap) updated and relevant. ICAO periodically reviews the safety performance of the initiatives listed in each RASP to ensure the achievement of the goals. If required, ICAO will seek the support of the RASGs, regional safety oversight organizations (RSOOs), international organizations and expert groups to ensure the timely implementation of SEIs to address safety issues.

6.1.3 ICAO uses the indicators listed in Section 5 of this plan (as well as the guidance provided in Doc 10162) to measure the safety performance of the international civil aviation system and monitor each GASP target. An annual Safety Report is published to provide relevant up-to-date information on the progress made in achieving the GASP goals.

6.1.4 If the GASP goals are not met, the contributing factors will be presented to stakeholders. If ICAO identifies critical operational safety risks, reasonable measures will be taken to mitigate them as soon as practicable, possibly leading to an earlier revision of the GASP.

6.2 PROCESS TO REVISE GLOBAL AVIATION SAFETY PLAN CONTENT

Any proposed corrections or adjustments to the GASP will be initiated by the ICAO Secretariat, in coordination with the GASP-SG, and submitted thereafter for consultation with stakeholders following the GASP development and review process presented in Section 1.

6.3 STANDARDIZED APPROACH TO PROVIDE INFORMATION AT THE GLOBAL LEVEL

ICAO adopted a standardized approach to facilitate reporting of information from individual States and other stakeholders at the global level, and to improve the provision of information to the RASGs. Methodologies used include: (1) the Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA) online framework (OLF), as the primary platform for States to input their information; (2) Accident/Incident Data Reporting (ADREP) for the reporting of accidents and incidents (as per Annex 13 – *Aircraft Accident and Incident Investigation* provisions); (3) the use of CAST/ICAO Common Taxonomy Team (CICTT) to classify occurrences; and (4) the Secure Portal on Operational Safety Risks and Emerging Issues to raise concerns at the RASG level. This allows ICAO to receive information and assess operational safety risks and organizational challenges, using common methodologies.

CONTACT INFORMATION FOR INQUIRIES OR FURTHER INFORMATION

Any questions regarding the GASP and its initiatives, and further requests for information, may be addressed to the following:

Air Navigation Bureau
International Civil Aviation Organization
999 Robert-Bourassa Boulevard
Montréal, Quebec, Canada H3C 5H7
gasp@icao.int
www.icao.int/gasp

— END —

ISBN 978-92-9275-702-1

