ICAO

# Doc 10131

## Manual on the Development of Regional and National Aviation Safety Plans

### First Edition, 2020

## INTERNATIONAL CIVIL AVIATION ORGANIZATION

# ICAO

# Doc 10131

# Manual on the Development of Regional and National Aviation Safety Plans

First Edition, 2020

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

| AMENDMENTS | | | | CORRIGENDA | | |
|---|---|---|---|---|---|---|
| No. | Date | Entered by | | No. | Date | Entered by |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

# FOREWORD

In line with the Safety Strategic Objective of the International Civil Aviation Organization (ICAO), the 2020-2022 edition of the *Global Aviation Safety Plan* (GASP, Doc 10004) outlines key safety enhancement initiatives (SEIs) at the global level, the roles and responsibilities for States, regions and industry, and provides a framework for the cooperation and collaboration of these to support States with the management of organizational challenges and operational safety risks. The global aviation safety roadmap, included in the GASP, serves as an action plan to assist the aviation community in achieving the GASP goals through a structured, common frame of reference for all relevant stakeholders.

Consistent with the GASP, each region and State is encouraged to develop a regional aviation safety plan (RASP) and national aviation safety plan (NASP), respectively, outlining its strategic direction for the management of aviation safety for a set time period. Each plan should be developed in line with the GASP goals, targets and high-risk categories of occurrences (HRCs). The NASP demonstrates a State's commitment to the implementation of activities for the improvement of safety.

This manual complements the 2020-2022 edition of the GASP. It addresses different aspects to be considered by a region or State when developing or modifying its aviation safety plan, and in implementing regional and national aviation safety plans consistent with the GASP.

The content of this manual was developed with inputs from experts from civil aviation authorities, industry, as well as regional and international organizations, and thereafter submitted for extensive peer review, taking into account feedback from the expert community. ICAO gratefully acknowledges the contributions of the ICAO Global Aviation Safety Plan Study Group (GASP-SG) and individual experts who provided support, advice and input for this manual.

_____

# TABLE OF CONTENTS

_____

# GLOSSARY

## DEFINITIONS

**Accident investigation authority.** The authority designated by a State as responsible for aircraft accident and incident investigations within the context of Annex 13.

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

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

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

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

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

**Gap analysis.** An evaluation that compares an existing situation to the desired one, it identifies specific steps that can be taken to reach a desired goal.

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

**Incident.** An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

*Note.— The types of incidents which are of main interest to the International Civil Aviation Organization for accident prevention studies are listed in Annex 13, Attachment C.*

**Maximum mass.** Maximum certificated take-off mass.

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

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

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

***Safety enhancement initiative (SEI).*** One or more actions to eliminate or mitigate risks associated with contributing factors to a safety occurrence or to address an identified safety deficiency.

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

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

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

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

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

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

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

_____

# ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| ADREP | Accident/incident data reporting |
| AIB | Accident investigation board |
| ATO | Approved training organization |
| CAA | Civil aviation authority |
| CAST | Commercial Aviation Safety Team |
| CICTT | ICAO Common Taxonomy Team |
| GASP | Global Aviation Safety Plan |
| HRC | High-risk category of occurrence |
| LOC-I | Loss of control in-flight |
| NASP | National aviation safety plan |
| NCLB | No Country Left Behind |
| PIRG | Planning and implementation regional group |
| PQ | Protocol Question |
| RAIO | Regional accident and incident investigation organization |
| RASG | Regional aviation safety group |
| RASP | Regional aviation safety plan |
| RSOO | Regional safety oversight organization |
| SARP | Standards and Recommended Practices |
| SEI | Safety enhancement initiative |
| SMS | Safety management system |
| SSC | Significant Safety Concern |
| SSP | State safety programme |
| USOAP | Universal Safety Oversight Audit Programme |

_____

# Chapter 1

# INTRODUCTION

## 1.1   BACKGROUND

1.1.1      Safety is aviation's top priority, Assembly Resolution A40-1: *ICAO Global planning for safety and air navigation* recognizes the importance of a global framework in support of the Safety Strategic Objective of ICAO. The *Global Aviation Safety Plan* (GASP, Doc 10004), available at www.icao.int/gasp, sets forth ICAO's safety strategy, which supports the prioritization and continuous improvement of aviation safety. Its purpose is to continually reduce fatalities, and the risk of fatalities, by guiding the development of a harmonized safety strategy and the implementation of regional and national aviation safety plans. The GASP promotes coordination and collaboration among international, regional and national initiatives, such as the *No Country Left Behind* (NCLB) initiative.

1.1.2      Each region and State is encouraged to develop a regional aviation safety plan (RASP) and national aviation safety plan (NASP), respectively, in which the strategic direction for the management of aviation safety for a set time period is presented. Each plan should be developed in line with the GASP goals, targets and high-risk categories of occurrences (HRCs). For States that have fully implemented a State safety programme (SSP), the NASP demonstrates commitment to the implementation of additional initiatives for the improvement of safety in the State (e.g. strengthening the SSP and achieving the State's safety objectives).

1.1.3      A questionnaire was distributed in preparation for the Thirteenth Air Navigation Conference (AN-Conf/13), held in October 2018, providing States and other key stakeholders the opportunity to give feedback on the draft 2020-2022 edition of the GASP, in relation to organizational challenges, operational safety risks, implementation of the GASP at the national and regional levels, and safety performance measurement. Seventy-one States and five international organizations replied to the questionnaire. To assist with its implementation, respondents suggested the following be made available:  workshops; training; sample tools; and a template for the NASP.

## 1.2   PURPOSE

1.2.1      This manual complements the 2020-2022 edition of the GASP. It addresses different aspects to be taken into account by a region or a State when developing or modifying its aviation safety plan, and to implement regional and national aviation safety plans consistent with the GASP. In the context of the GASP, the term "region" refers to a group of States and/or entities working together to enhance aviation safety within a geographic area.

1.2.2      This manual provides guidance that may be used to:

a)   establish a development process for the aviation safety plan, including methods to identify safety enhancement initiatives (SEIs) of the RASP and NASP;

b)   address the relationship between the NASP and SSP;

c)   monitor the plans' implementation and their effectiveness; and

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

### 1.3 APPLICABILITY

The content of this manual is presented as guidance and should not be considered as the sole means to develop and implement regional and national aviation safety plans. States should consult specific requirements within their region and align their efforts with the RASP, where applicable. States should address Significant Safety Concerns (SSCs), if any, as a priority and comply with ICAO Standards and Recommended Practices (SARPs), as a means to achieve the GASP Goals.

_____

# Chapter 2

# DEVELOPMENT PROCESS

## 2.1    DEVELOPING REGIONAL AND NATIONAL AVIATION SAFETY PLANS

The GASP sets out a process for the development of regional and national aviation safety plans. Figure 2-1 illustrates the seven steps of the NASP development process. These steps assist the responsible entity in the State (e.g. civil aviation authority) to develop a NASP that defines the specific SEIs to improve safety. Detailed guidance on each step is found in the GASP. This chapter focuses on Steps 4 and 5 of the process – the selection and prioritization of SEIs to be included in the NASP.

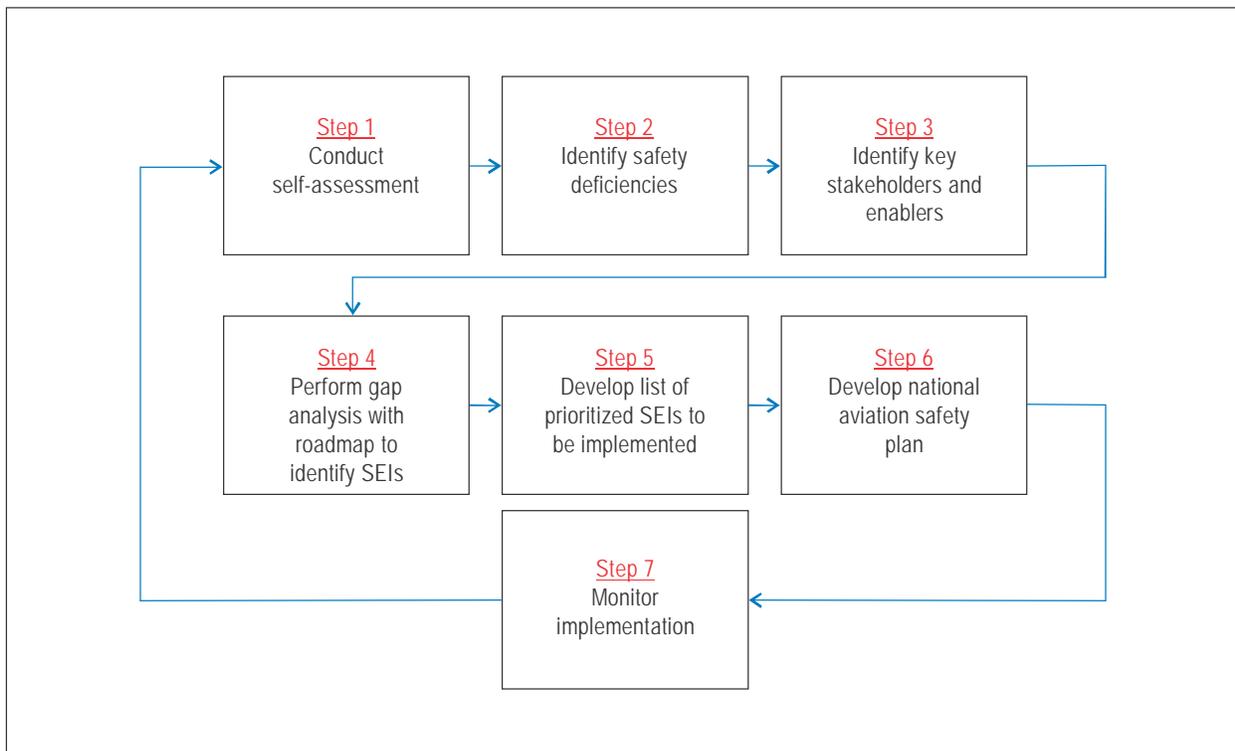*Note.— The same steps and rationale should be used when developing a RASP.*



**Figure 2-1.    National aviation safety plan development process**

## 2.2   UNDERSTANDING THE DEVELOPMENT PROCESS

2.2.1        A NASP is a strategic document that serves as an action plan which defines specific SEIs that should be implemented nationally to improve safety. The process for developing the NASP begins with an evaluation of the current situation in the State to obtain an understanding of its operational context; this activity is referred to as a self-assessment. Based on the results of the self-assessment, the responsible entity can identify the safety deficiencies that need to be addressed, as well as the stakeholders who should be involved in addressing them. In the context of the NASP development process, safety deficiencies include operational safety risks and other safety issues, such as organizational challenges (e.g. lack of effective safety oversight, difficulties in implementing an SSP). In addition to the State's self-assessment, the responsible entity should consult the latest edition of the GASP and RASP, if one exists, to assist in determining operational safety risks (including HRCs) and their contributing factors, as well as organizational challenges (e.g. systemic issues) as presented in the respective parts of the roadmap that may be common to the region or of global concern. It may also refer to the RASG for assistance in identifying safety deficiencies.

2.2.2        The next step is to conduct a gap analysis, which helps the responsible entity identify specific steps to be taken to reach a desired goal (e.g. implement an effective SSP). The responsible entity should not only focus on the weaknesses it needs to address, but also identify the strengths within the State that can facilitate closing the gap, such as existing economic frameworks, access to training, etc. For the purpose of developing the NASP, the responsible entity should conduct the gap analysis using the global aviation safety roadmap.

2.2.3        The roadmap contains a series of SEIs providing detailed actions to be taken when addressing the identified safety deficiencies. Using the roadmap, the responsible entity selects which SEIs, and their specific actions, will be implemented and in what order. As a result of this step, the responsible entity generates a prioritized list of SEIs. From that list, the responsible entity builds the NASP, which presents the national safety goals and targets, the operational safety risks and other safety issues (i.e. the identified safety deficiencies), the SEIs and specific actions to address them, the time frame and the entity responsible for their implementation.

2.2.4        Reviews of unsuccessful attempts at previous efforts to improve safety have shown that strategic plans should be developed so that they define successive activities that are achievable. The responsible entity should not select SEIs that would require significant transformations of the aviation system in a short time frame. It should identify a step-by-step approach to achieving implementation (following all the steps presented in Figure 2-1).

## 2.3   THE OPERATIONAL CONTEXT

2.3.1        To develop the NASP, the responsible entity should understand the operational context in which the SEIs will be implemented. Every State has a collection of factors that support aviation safety within it. A key part of the NASP development process is to identify the State's strengths and enablers that can promote change and to build upon these. The self-assessment helps to understand the State's operational context and should include: the analysis of established capabilities; system size and level of complexity; and available resources, using several sources of information. Additional information on a State's operational context is presented in Chapter 4, 4.3.1.

2.3.2        Other key aspects that should be assessed by the responsible entity are:

a)   the effective implementation of the eight critical elements of a safety oversight system; and

b)   the status of SSP implementation and its continuous maintenance.

2.3.3        These aspects allow the responsible entity to understand the State's safety oversight capabilities and operational context. At the regional level, these aspects should be assessed for the States that make up the region. The Integrated Safety Trend Analysis and Reporting System (iSTARS) may assist States in identifying specific deficiencies

related to safety oversight and SSP implementation. These tools are available online at www.icao.int/safety/iStars. Additionally, the *Safety Management Manual* (Doc 9859) provides guidance on the State safety risk management process.

2.3.4        Although States may also have a series of regional SEIs from the RASP to incorporate and implement into their respective NASPs, it is valuable for the responsible entity to understand the State's operational context and identify its organizational challenges and operational safety risks. These are important steps in the NASP development process.


## 2.4    INVOLVING ALL STAKEHOLDERS

2.4.1        The NASP development process requires the involvement of all stakeholders within the State. The wide representation of all stakeholders allows for a better understanding of the operational context, the identification of safety deficiencies and the development of possible mitigation strategies from the perspective of each stakeholder. Therefore, stakeholders should be identified early in the development process. In addition to the direct stakeholders (e.g. civil aviation authority, service providers), any entity which could be involved in financing, implementing or influencing changes, or which is significantly affected by these changes, should be considered.

2.4.2        Once the key stakeholders have been identified, the responsible entity should review the list of participants on the NASP development team to ensure that all appropriate constituents are represented. Successful implementation of the NASP depends on having the appropriate stakeholders actively engaged in its development.


## 2.5    IDENTIFYING AND PRIORITIZING SEIS

2.5.1        To identify SEIs that address organizational challenges, the responsible entity should refer to the Organizational Challenges (ORG) Roadmap portion of the Global Aviation Safety Roadmap. Using data from a number of existing sources (e.g. Universal Safety Oversight Audit Programme (USOAP), State's surveillance activities, industry assessment programmes) or from the knowledge provided by subject matter experts, the responsible entity can identify the appropriate starting point within the ORG Roadmap (e.g. Phase I).

2.5.2        Following the completion of the gap analysis, the responsible entity should select a series of SEIs that are needed to address the safety deficiencies identified and that will achieve the national safety goals and targets presented in the NASP. By reviewing the safety deficiencies identified and/or results of the gap analysis in comparison to the selected SEIs, a list of potential SEIs can be selected. For example, in Phase I of the ORG Roadmap, SEI-3 calls for States to establish an independent accident and incident investigation authority, consistent with Annex 13 — *Aircraft Accident and Incident Investigation*. To determine if the State has already completed this SEI, the responsible entity may consider the latest USOAP results or the State's own data if an internal evaluation was conducted. If it is determined that the State has not established an independent accident and incident investigation authority, consistent with Annex 13, this would then be listed as a "gap". SEI-3 would then be identified as one of the SEIs that should be incorporated into the NASP. The associated actions listed under SEI-3 (as presented in the roadmap) would need to be listed as actions to complete this SEI.

2.5.3        In addition, the responsible entity should conduct a similar review of the SEIs presented in the Operational Safety Risks (OPS) Roadmap portion of the Global Aviation Safety Roadmap and identify those that have not been implemented to serve as safety risk mitigations for the HRCs. A series of SEIs should be implemented to address contributing factors leading to the HRCs. Some of these SEIs may be derived from the OPS Roadmap; others may be identified through sources such as accident or incident investigations or safety risk assessments.

2.5.4        The gap analysis identifies SEIs that have not been adequately implemented. By reviewing the gaps and the associated SEIs, a list of potential actions can be produced. However, it is impractical to attempt to implement a plan that addresses all SEIs listed in the roadmap. The responsible entity should select the SEIs relevant to the State and its operational context.

2.5.5        When reviewing the gaps identified, the responsible entity should consider evaluating the safety impact and the ability of (or ease of implementation for) the State to effect the change for each gap.

*Safety impact*

2.5.6        The responsible entity should evaluate how safety will be enhanced through the elimination of each identified gap and should prioritize SEIs that have the greatest impact on safety. Ideally, a quantitative approach using various methodologies should be used. However, it may be difficult to apply a quantitative assessment to the SEIs, as most address the key foundation of aviation safety. For example, ORG Roadmap SEI-17 — *Establishment of safety risk management at the national level (step 1)*, calls for States to establish a confidential voluntary safety reporting system providing data to the safety database. It may be difficult to quantify the impact of implementing a voluntary safety reporting system in isolation. However, it is possible to qualitatively evaluate the gap created by the absence of such a system by noting that SEI-17 provides the necessary groundwork so that many of the elements of a safety management system (SMS), such as hazard identification, can be implemented. With the knowledge of subject matter experts that form part of the NASP development team, the responsible entity can list potential actions in a manner that will have the greatest impact on safety.

*Ease of Implementation*

2.5.7        Although the responsible entity should consider the impact on safety as the primary method to prioritize the list of potential SEIs, it should also assess the ability of the stakeholders to make the changes and adapt to a new situation. The evaluation of the ability to effect a change should include:

> a)    the existence of political will to change; and
>
> b)    the availability of resources necessary to implement the change.

## 2.6   USING SEIS TO DEVELOP THE NASP

2.6.1        Once a list of potential prioritized SEIs is developed, the responsible entity develops the NASP, which becomes the master document for implementing the SEIs at the national level. Using the list of SEIs, the responsible entity should specify which should be implemented first. The list should include a manageable set of actions that represent the steps necessary to progress towards the achievement of the national safety goals and targets, in line with those of the GASP.

2.6.2        The NASP does not have to include all actions that will support each SEI in detail; some SEIs may be presented in a stand-alone document containing a detailed implementation plan (e.g. the establishment of an independent accident and incident investigation authority or the implementation of an SSP). The NASP should provide a summary of the SEI, associated actions, the responsible entity assigned to lead the implementation, general timelines, stakeholders involved, metrics to measure implementation, the priority assigned to the SEI and the means to monitor implementation and effectiveness. A link or reference to the detailed implementation plan may be included in the NASP.

2.6.3        Detailed guidance on the development of the RASP and NASP is presented in Chapters 3 and 4, respectively.

### 2.7    MONITORING IMPLEMENTATION AND CONTINUOUS IMPROVEMENT

2.7.1        The responsible entity's work does not end once the plan has been developed and turned over to the organizations or individuals responsible for leading the implementation. It should continuously monitor the implementation of SEIs on an ongoing basis to ensure actions are being accomplished, that they are effective and that any difficulties with implementation are dealt with.

2.7.2        When implementation is completed, the responsible entity should repeat the steps listed in Figure 2-1 to identify other SEIs the State may need to manage. This promotes a regular update of the plan to address newly identified safety deficiencies and ensures continuous improvement.

_____

# Chapter 3

# DRAFTING THE REGIONAL AVIATION SAFETY PLAN

## 3.1  GENERAL

3.1.1        This chapter provides guidance to help regional entities, including RASGs and regional safety oversight organizations (RSOOs), determine what to include in a regional aviation safety plan (RASP). It does not supersede the current edition of the GASP. A template of a RASP is presented in the appendix to this chapter and should be considered solely as an example; the RASP should be developed based on the region's own risk assessment and address the region's specific operational safety risks and other safety issues.

3.1.2        In the context of the GASP and the RASP, the term "region" refers to a group of States and/or entities working together to enhance aviation safety within a geographic area. The RASG is the regional entity responsible for the development and implementation of the RASP. The RASP development process should include consultation with States, industry and other stakeholders. The NASP of each State in the region should be aligned and coordinated with the RASP and with other efforts aimed at enhancing aviation safety.

## 3.2  CONTENT OF THE RASP

As described in the GASP, the RASP should contain the following sections, as a minimum:

   a)   an introduction;

   b)   the purpose of the RASP, including links to both the NASPs of States that make up the region and the GASP;

   c)   the region's strategic approach to managing safety in civil aviation, including regional safety goals, targets and indicators;

   d)   a description of the regional operational safety risks and initiatives to address them;

   e)   a description of other regional safety issues, such as challenges related to SSP and SMS implementation, and initiatives to address them; and

   f)   a description of how the region will measure safety performance to monitor the implementation of the RASP and its effectiveness.

## 3.3  DETAILED SECTIONS OF THE RASP

### Introduction of the RASP

3.3.1        When drafting the introduction (or foreword), the following should be included:

a)  an overview of the RASP, including its structure (chapters, sections and their content);

b)  the region's commitment to aviation safety and to the resourcing of activities (at the regional level) to enhance aviation safety;

c)  the entities responsible for the RASP's development, implementation and monitoring;

d)  the regional safety issues;

e)  the regional safety goals and targets; and

f)  the region's operational context (may be presented in table format), including, but not limited to:

    1)  the traffic volume in the region, as well as anticipated growth or decline;

    2)  the maturity of aviation systems among the States making up the region (e.g. varying levels of implementation of an effective safety oversight system); and

    3)  common hazards or challenges particular to the region, which may be grouped by categories such as environmental, technical, organizational and human.

### *Purpose of the RASP*

3.3.2      When drafting the purpose of the RASP, the following should be included:

a)  a description of the region's strategic direction for the management of aviation safety;

b)  the duration of the RASP (refer to 3.3.3 a) 1));

c)  the relationship between the RASP, the NASP of each State in the region and the most current edition of the GASP;

d)  initiatives at the regional level that will support the improvement of aviation safety at the individual State level and the wider international level; and

e)  other documents and plans that have been considered in the development of the RASP (e.g. the *Global Air Navigation Plan* (GANP, Doc 9750), the regional Air Navigation Plan, the *Global Aviation Security Plan* (GASeP, Doc 10118), etc., as appropriate).

### *The region's strategic approach to managing aviation safety*

3.3.3      When drafting the region's strategic approach to managing safety in civil aviation, the following should be included:

a)  how the RASP is developed and endorsed, including any collaboration with stakeholders (e.g. States, industry, international organizations, etc.);

    1)  describe the governance of the RASP; this includes how frequently it is reviewed and updated (e.g. reviewed every year and updated at least every three years) – the alignment with the GASP revision cycle should be considered here;

2)    explain that a collaborative approach is needed to identify issues and implement SEIs to mitigate risks;

3)    describe the process used to determine regional operational safety risks and other safety issues (e.g. organizational challenges);

b)    the regional safety goals, targets and indicators (may be presented in table format);

1)    explain how the regional safety goals, targets and indicators are linked to the GASP (this may be accomplished by referencing the GASP goals, targets and indicators);

2)    list any specific regional safety goals, targets and indicators over and above those of the GASP, if applicable;

c)    how the SEIs help to achieve the regional safety goals;

1)    explain the link between the regional safety goals, and targets with the SEIs that the region will undertake to improve safety;

2)    explain how regional safety goals and targets are linked to States' individual SEIs (within the region) or overarching initiatives at the international level; and

d)    the emerging issues that may require further analysis.


### *Regional operational safety risks*

3.3.4          When drafting the regional operational safety risks, the following should be included:

a)    a summary of accidents and serious incidents that have occurred in the region during a set time period and those which involved aircraft registered in States in the region, particularly for aircraft of a maximum mass of over 5 700 kg during scheduled commercial operations (statistics and data on accidents and serious incidents may be gathered from the accident and incident databases of States or can be found using the ICAO Accident/Incident Data Reporting (ADREP) system application available via iSTARS at www.icao.int/safety/iStars);

b)    the regional HRCs, including the reason they were given priority:

1)    the RASP should include all HRCs in the GASP; and

2)    include additional categories of operational safety risks, if applicable;

c)    other regional operational safety risks identified, including how and why they were given priority (e.g. data-driven approach). This identification may:

1)    be done by individual States in the region (e.g. through their safety data collection and processing system);

2)    derive from a regional analysis (e.g. by the RASG, RSOO, planning and implementation regional group (PIRG), and/or regional accident and incident investigation organization (RAIO)); and/or

3)    be based on the additional operational safety risks categories described in the GASP — the regional operational safety risks should encompass different sectors of aviation (such as aerodromes, commercial air transport, general aviation, helicopter operations);

    d)    the main contributing factors leading to the HRCs identified in the region;

    e)    a description of a set of SEIs to mitigate the risks associated with the HRCs and the additional categories of operational safety risks:

        1)    list SEIs that the region plans to implement, or is in the process of implementing, to address all the identified regional HRCs (this list may be presented in an appendix);

        2)    identify those SEIs derived from the GASP roadmap (mainly taken from the operational safety risks roadmap), where applicable; and

    f)    the taxonomy used in the process of determining regional operational safety risks – it is recommended to use the aviation occurrence categories from the CAST/ICAO Common Taxonomy Team (CICTT).

*Note.— Additional information on HRCs and additional categories of operational safety risks is provided in the GASP (Doc 10004), Part I, Chapter 3. Information on the CICTT Taxonomy is found on the ICAO website at https://www.icao.int/safety/airnavigation/AIG/Pages/Taxonomy.aspx.*

### Other regional safety issues

3.3.5        When drafting other regional safety issues addressed in the RASP, the following should be included:

    a)    a summary of the States' effective safety oversight capabilities for States in the region. This may be accomplished by presenting the results of the States' latest activities conducted under the ICAO USOAP Continuous Monitoring Approach (CMA). Information related to USOAP CMA is available on the USOAP CMA Online Framework at www.icao.int/usoap. Details on the safety oversight index (SOI) are available at www.icao.int/gasp;

    b)    a list and description of other safety issues (e.g. organizational challenges) selected for the RASP, including why they were given priority;

    c)    how they were identified, including, but not limited to, a data-driven approach. This identification may:

        1)    be done by individual States in the region (e.g. through their safety data collection and processing system);

        2)    derive from regional analysis (e.g. by the RASG, RSOOs, PIRGs, and/or RAIOs);

        3)    be based on the organizational challenges described in the GASP; and/or

        4)    be based on regional overview of USOAP and individual State's oversight data; and

    d)    a description of a set of SEIs to address the other safety issues identified:

        1)    list SEIs the region plans to implement, or is in the process of implementing, to address all other safety issues identified (this list may be presented in an appendix); and

        2)    identify those SEIs derived from the GASP roadmap (mainly taken from the organizational challenges roadmap).

*Monitoring implementation*

3.3.6         When drafting the section on monitoring and measuring the implementation of the RASP and its effectiveness, the following should be included:

a)    how the region will monitor the implementation of the SEIs listed in the RASP and how it will measure safety performance of the civil aviation system to ensure the intended results are achieved;

b)    how corrections and adjustments to the RASP and its SEIs will be made and reported;

c)    how each regional safety target will be monitored to track performance:

1)    indicators being used to measure safety performance should, in principle, be consistent with or linked to those in the GASP;

d)    how stakeholders will be provided with relevant up-to-date information on the progress made in achieving the regional safety goals and targets, as well as the implementation status of SEIs (e.g. a dashboard);

e)    an explanatory text addressing the following situations:

1)    if the regional safety goals and targets are not met, the root causes should be presented;

2)    if the region identifies critical operational safety risks, reasonable measures will be taken to mitigate them as soon as practicable, possibly leading to an unscheduled revision of the RASP;

f)    explain that States have adopted a standardized approach, as outlined by the RASG or other relevant regional entity, to provide information at the regional level (e.g. for individual States to report to the RASG). This allows the region to receive information and assess operational safety risks using common methodologies; and

g)    contact information for inquiries or further information.

## 3.4    RASP TEMPLATE

The appendix to this chapter presents a RASP template, which aims to promote international harmonization of RASPs. Use of this template is not mandatory and is not intended to replace existing SARPs. The template provides an example that promotes a uniform development of a RASP and addresses the minimum content proposed in the GASP, while remaining flexible enough to accommodate any region-specific requirements. Regions that adopt the RASP template should work in collaboration with States in the region, regional entities and ICAO Regional Office(s) to ensure consistency of the RASP with the NASPs from States in the region and the current edition of the GASP. Regions may also collaborate with RASGs from other regions, as applicable.

_____

# Appendix A to Chapter 3

# REGIONAL AVIATION SAFETY PLAN TEMPLATE

## SECTION 1.   INTRODUCTION

### 1.1   Overview of the RASP[1]

[Region] is committed to enhancing aviation safety, to the resourcing of supporting activities and to increasing collaboration at the regional level. The purpose of this regional aviation safety plan (RASP) is to continually reduce fatalities, and the risk of fatalities, through the development and implementation of a regional aviation safety strategy. A safe aviation system contributes to the economic development of [Region], the States which comprise it, and their industries. The RASP promotes the effective implementation of safety oversight systems of States in [Region], a risk-based approach to managing safety at the regional level, as well as a coordinated approach to collaboration between States in the region, [list names of entities] and industry. All stakeholders are encouraged to support and implement the RASP as the regional strategy for the continuous improvement of aviation safety.

The RASP of [Region] is in alignment with the ICAO *Global Aviation Safety Plan* (GASP, Doc 10004) and the national aviation safety plans of States in the region.

### 1.2   Structure of the RASP

This RASP presents the regional strategy for enhancing aviation safety for a period of [number] years. It comprises six sections. In addition to the introduction, sections include: the purpose of the RASP, [Region]'s strategic approach to managing aviation safety at the regional level, the regional operational safety risks identified for the [date interval — *Example, 2020-2022*] RASP, other regional safety issues addressed in the RASP, and a description of how the implementation of the safety enhancement initiatives (SEIs) listed in the RASP is going to be monitored.

### 1.3   Responsibility for the RASP Development, Implementation and Monitoring

The [name of responsible entity — *Example, the regional aviation safety group (RASG)*] is responsible for the development, implementation and monitoring of the RASP, in collaboration with [list names of entities — *Example, the ICAO Regional Office*] and with the aviation industry. The RASP was developed in consultation with States, operators and other stakeholders in the region, and in alignment with the [current edition] of the GASP

---

1.   Section 1.1. may also be presented as a stand-alone Foreword

### 1.4    Regional Safety Issues, Goals and Targets

The RASP addresses the following regional safety issues:

1) [list risks and other safety issues — *Example, Loss of control in-flight occurrences, bird strikes, the lack of aircraft accident and incident investigation capabilities at the regional level*]

2) [...]

3) [...]

To address the issues listed above and enhance aviation safety at the regional level, the [date interval] RASP contains the following goals and targets:

1) [list goals and targets — *Example, Goal 1: Achieve a continuous reduction of operational safety risks and Target 1.1: Maintain a decreasing trend of the regional accident rate*]

2) [...]

3) [...]

### 1.5    Operational Context

There were [number] movements in [Region] over the period of [year-year]. Traffic in the region is expected to [increase/decrease] by [number] per cent over the next [x] years. In [year]:

There were [number] States in [Region] with a score below [number] per cent for the effective implementation (EI) of the critical elements (CEs) of the State's safety oversight system by the end of [year]. There were [number] States with a safety oversight index below one, in all categories by the end of [year]. As of [year], [number] States had implemented the foundation of a State safety programme (SSP), and [number] States had implemented an effective SSP, as appropriate to their aviation system complexity.

Common challenges in [Region] include: [list challenges — *Example, Topography, meteorology, infrastructure,* and *socio-political issues*].

### SECTION 2.   PURPOSE OF [REGION]'S REGIONAL AVIATION SAFETY PLAN

The RASP is the master planning document containing the strategic direction of [Region] for the management of aviation safety for a period of [number] years ([year] to [year]). This plan lists regional safety issues, sets regional aviation safety goals and targets, and presents a series of safety enhancement initiatives (SEIs) to address identified safety deficiencies and achieve the regional safety goals and targets.

The RASP addresses safety management from a regional perspective and includes several SEIs to address specific operational safety risks and recommended SEIs for individual States in the region. It is expected that States in the region adopt these SEIs and include them in their respective national aviation safety plans.

The RASP has been developed using international safety goals and targets and HRCs from the ICAO GASP (www.icao.int/gasp). These are highlighted in the text, where applicable. The SEIs listed in the RASP support the improvement of safety at the individual State level, for States in the region, and contribute to the enhancement of safety at the wider international level.

**SECTION 3.    [REGION]'S STRATEGIC APPROACH TO MANAGING AVIATION SAFETY**

The RASP presents the SEIs that were developed based on the ICAO GASP's organizational challenges (ORG) roadmap and operational safety risks (OPS) roadmap as well as region-specific issues identified by [list methods — *Example, a safety risk assessment, RASG activities, etc.*]. This plan is developed and maintained by [name of responsible entity — *Example, the RASG*], in coordination with all stakeholders and is updated at least every [number] years.

The RASP includes the following regional safety goals and targets, for the management of aviation safety, as well as a series of indicators to monitor the progress made towards their achievement. They are tied to the goals, targets and indicators listed in the GASP and include additional regional safety goals, targets and indicators [if applicable to the region].

| *Goal* | *Targets* | *Indicators* | *Link to GASP* |
|---|---|---|---|
| [list goals] | [list targets] | [list indicators] | [describe link] |
| 1.  *Example, Achieve a continuous reduction of operational safety risks* | 1.1  *Maintain a decreasing trend of the regional accident rate.*<br><br>1. *n* | 1.1.1  *Number of accidents occurring in the region per million departures.*<br><br>1.1.2  *Number of accidents occurring in the region to aircraft over 5 700 kg involved in scheduled commercial operations.*<br><br>1.2. *n* | *This goal is directly linked to Goal 1 and Target 1.1 of the GASP.* |
| 2. | 2.1<br><br>2. *n* | | |
| 3. | 3.1<br><br>3. *n* | | |
| 4.  *Example, Increase collaboration at the regional level* | 4.1  *By 2020, States that do not expect to meet RASP Goals to use the RASG in seeking assistance to strengthen their safety oversight capabilities*<br><br>4. *n* | 4.1.1  *Number of champion States offering assistance*<br><br>4.1.2  *Number of States that received assistance*<br><br>4.1.3  *Number of capacity-building missions on accident and incident investigations completed in the region* | *This goal is directly linked to Goal 4 and Target 4.1 of the GASP* |

| | | 4.2.*n* | |
|---|---|---|---|
| 5. | 5.1<br><br>5. *n* | | |
| 6. | 6.1<br><br>6. *n* | | |

The SEIs in this plan are implemented through the working arrangements of the RASG, activities conducted by [list names of entities], as well as the existing safety oversight capabilities and service providers' safety management systems (SMS) at the individual States' level. SEIs derived from the ICAO global aviation safety roadmap were identified to achieve the regional safety goals and targets presented in the RASP. Some of the regional SEIs are linked to overarching SEIs at the international level and help to enhance aviation safety at regional and global levels. The full list of the SEIs is presented in the appendix to the RASP.

The RASP also addresses emerging issues. Emerging issues include concepts of operations, technologies, public policies, business models or ideas that might impact safety in the future, for which insufficient data exists to complete typical data-driven analysis. It is important that [Region] remain vigilant on emerging issues to identify potential operational safety risks, collect relevant data and proactively develop mitigations to address them. The RASP addresses the following emerging issues, which were identified by [describe the process — *Example, an analysis conducted by the RASG*] for further analysis:

1) [list emerging issues — *Example, small drones operating in the vicinity of aerodromes*]

2) [...]

3) [...]

**SECTION 4.    REGIONAL OPERATIONAL SAFETY RISKS**

The RASP includes SEIs that address regional operational safety risks, derived from lessons learned from operational occurrences and from a data-driven approach. These SEIs include actions such as: policy development, targeted safety activities, safety data analysis, safety risk assessments, and safety promotion. Separate sections are provided to address commercial air transport and general aviation to make the information more accessible to stakeholders [if applicable to the region].

[Name of responsible entity. *Example, the RASG*] publishes an Annual Safety Report, available on the [name of responsible entity] website [(link to website, if available)]. The summary of accidents and serious incidents that occurred in [Region], and those for aircraft registered in States located in [Region] involved in commercial air transport and aircraft involved in general aviation, is shown in the tables below.

| *Year* | *Fatal accidents* | *Non-fatal accidents* | *Serious incidents* |
|---|---|---|---|
| **Commercial air transport occurrences in [Region]** | | | |
| [year to year, average] | | | |
| [current year] | | | |
| **General aviation aircraft occurrences in [Region]** | | | |
| [year to year, average] | | | |
| [current year] | | | |

| *Year* | *Fatal accidents* | *Non-fatal accidents* | *Serious incidents* |
|---|---|---|---|
| **Occurrences involving commercial air transport aircraft registered in [Region]** | | | |
| [year to year, average] | | | |
| [current year] | | | |
| **Occurrences involving general aviation aircraft registered in [Region]** | | | |
| [year to year, average] | | | |
| [current year] | | | |

The following [number] national high risk categories of occurrences (HRCs) in the [Regional] context were considered of the utmost priority because of the number of fatalities and risk of fatalities associated with such events. They were identified based on analysis from mandatory and voluntary reporting systems, accident and incident investigation reports, safety oversight activities conducted by States in the region over the past [number] years and their respective State safety programmes, as well as on the basis of regional analysis conducted by [list names of entities — *Example, the RASG, RSOO, PIRG, and/or RAIO*] and on the operational safety risks described in the GASP. These HRCs are in line with those listed in the [current edition] of the GASP:

      1)   [list HRCs — *Example, Loss of control in-flight (LOC-I)*]

      2)   […]

      3)   […]

In addition to the regional operational safety risks listed above, the following additional categories of operational safety risks have been identified:

      1)   [list additional categories of operational safety risks — *Example, Bird strikes*]

      2)   […]

      3)   […]

The aviation occurrence categories from the CAST/ICAO Common Taxonomy Team (CICTT) were used to assess risk categories in the process of determining national operational safety risks. The CICTT Taxonomy is found on the ICAO website at https://www.icao.int/safety/airnavigation/AIG/Pages/Taxonomy.aspx

To address the regional operational safety risks listed above, [name of responsible entity — *Example, the RASG*] identified the following contributing factors leading to HRCs and [name of responsible entity] will implement a series of SEIs, some of which are derived from the ICAO OPS roadmap, contained in the GASP:

**HRC 1: [name of occurrence category — *Example, Loss of control in-flight (LOC-I)*]**

      1)   [list contributing factors — *Example, Inadequate standard operating procedures for effective flight management*]

      2)   […]

      3)   […]

**HRC 2: [name of occurrence category]**

      1)   [list contributing factors]

      2)   […]

      3)   […]

**HRC *n*: [name of occurrence category]**

      1)   [list contributing factors]

      2)   […]

      3)   […]

The full list of the SEIs is presented in the appendix to the RASP.

## SECTION 5.   OTHER REGIONAL SAFETY ISSUES

In addition to the regional operational safety risks listed in the RASP, [name of responsible entity] has identified other regional safety issues and initiatives selected for the RASP. These are given priority in the RASP since they are aimed at enhancing and strengthening the management of aviation safety at the regional level.

The eight critical elements (CEs) of a safety oversight system are defined by ICAO. [Region] is committed to the effective implementation of these eight CEs among all States in the region, as part of its overall safety oversight responsibilities, which emphasize [Region]'s commitment to safety in respect of its aviation activities. The eight CEs are presented in Figure 1.
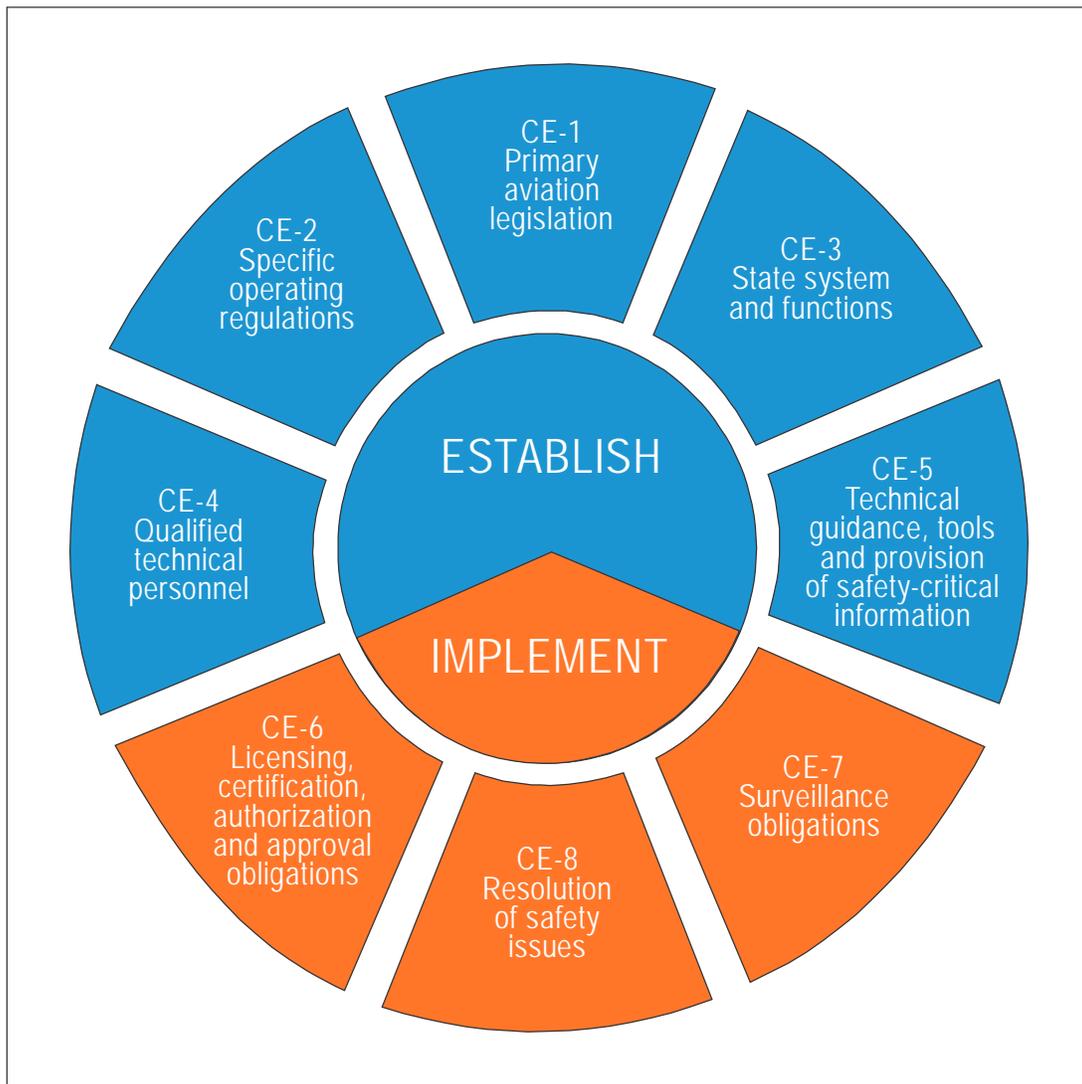


**Figure 1.   Critical elements of a State's safety oversight system**

Certain deficiencies in a specific CE of a safety oversight system are common to the majority of States in the region and considered a top concern. These deficiencies are addressed as a safety issue in the RASP because of their impact on the ability of States to fulfil their safety oversight responsibilities, which impacts the region as a whole.

The latest ICAO activities, which aim to measure the effective implementation of the eight CEs of States' individual safety oversight systems, as part of the ICAO Universal Safety Oversight Audit Programme (USOAP), have resulted in the following scores, compiled as an average for the region of [Region] as a whole:

| *Overall EI score for [Region]* | | | | | | | |
|:---:|:---:|:---:|:---:|:---:|:---:|:---:|:---:|
| [X]% | | | | | | | |
| **EI score by CE for [Region]** | | | | | | | |
| **CE-1** | **CE-2** | **CE-3** | **CE-4** | **CE-5** | **CE-6** | **CE-7** | **CE-8** |
| [X]% | [X]% | [X]% | [X]% | [X]% | [X]% | [X]% | [X]% |
| **EI score by audit area[2] for [Region]** | | | | | | | |
| **LEG** | **ORG** | **PEL** | **OPS** | **AIR** | **AIG** | **ANS** | **AGA** |
| [X]% | [X]% | [X]% | [X]% | [X]% | [X]% | [X]% | [X]% |

The safety oversight index (SOI) of a State is an ICAO indicator of its safety oversight capabilities. Every State audited by ICAO has a safety oversight index. It is a number greater than zero, where the number one represents a level at which the safety oversight capabilities of a State would indicate the minimum expected capabilities considering the number of departures as an indication of the size of that State's aviation system. The calculations conducted by ICAO of each State's individual SOI have resulted in the following scores, compiled for the region of [Region] as a whole:

| *Overall SOI score for [Region]* | *Score in the area of Operations for [Region]* | *Score in the area of Air Navigation for [Region]* | *Score in the area of Support Functions for [Region]* |
|:---:|:---:|:---:|:---:|
| | | | |

The following [number] other safety issues in the [Regional] context were considered of the utmost priority because they are systemic issues which impact the effectiveness of safety risk controls. They were identified based on analysis from USOAP data, accident and incident investigation reports, safety oversight activities over the past [number] years from States in the region, their State safety programmes, as well as on the basis of regional analysis conducted by [list names of entities. *Example, the RASG, RSOO, PIRG, and/or RAIO*]. These issues are typically organizational in nature and relate to challenges associated with the conduct of States' safety oversight functions, implementation of SSP at the

---

2. Eight audit areas pertaining to USOAP, i.e. primary aviation legislation and civil aviation regulations (LEG), civil aviation organization (ORG); personnel licensing and training (PEL); aircraft operations (OPS); airworthiness of aircraft (AIR); aircraft accident and incident investigation (AIG); air navigation services (ANS); and aerodromes and ground aids (AGA).

regional level, and the level of SMS implementation by industry in the region. They take into consideration organizational culture, policies and procedures within [list names of entities] and those of service providers. These safety issues are in line with those listed in the [current edition] of the GASP:

       1)  [list safety issues — *Example, lack of aircraft accident and incident investigation capabilities at the regional level. This was the area where States in the region received the lowest EI score during the most recent ICAO USOAP audits and was therefore placed as a high priority issue to resolve.*]

       2)  […]

       3)  […]

To address the issues listed above, [name of responsible entity] will implement a series of SEIs, some of which are derived from the ICAO ORG roadmap, contained in the GASP. The full list of the SEIs is presented in the appendix to the RASP.

### SECTION 6.   MONITORING IMPLEMENTATION

[Name of responsible entity — *Example, the RASG*] will continuously monitor the implementation of the SEIs listed in the NASP and measure safety performance of the regional civil aviation system, to ensure the intended results are achieved, using the mechanisms presented in the appendix to this plan.

In addition to the above, [name of responsible entity] will review the RASP every [number] years or earlier, if required, to keep the identified operational safety risks, safety issues and selected SEIs updated and relevant. The [name of responsible entity] will periodically review the safety performance of the initiatives listed in the RASP to ensure the achievement of regional safety goals and targets. If required, [name of responsible entity] will seek the support of [list names of entities] to ensure the timely implementation of SEIs to address safety deficiencies and mitigate risks. Through close monitoring of the SEIs, [name of responsible entity] will make adjustments to the RASP and its initiatives, if needed, and update the RASP accordingly.

In addition, [name of responsible entity] will use the indicators listed in Section 3 of this plan to measure safety performance of the civil aviation system and monitor each regional safety target. A periodic [e.g. annual, every three years, etc.] safety report will be published to provide stakeholders with relevant up-to-date information on the progress made in achieving the regional safety goals and targets, as well as the implementation status of the SEIs.

In the event that the regional safety goals and targets are not met, the causes will be addressed and presented to stakeholders. If [name of responsible entity] 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 RASP.

[Name of responsible entity] adopted a standardized approach to facilitate reporting of information from individual States and other stakeholders at the regional level, and to improve the provision of information to the RASG [describe methodologies used by the region]. This allows the region to receive information and assess operational safety risks using common methodologies.

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

<div align="center">

[Name of responsible entity]
[Mailing address]
[Telephone number]
[Fax number]
[Email]
[Website]

</div>

<div align="center">

———————————

</div>

# Appendix to the RASP

**DETAILED SEIS: REGIONAL OPERATIONAL SAFETY RISKS**

| **HRC x:** [name of HRC e.g. *Loss of control in-flight (LOC-I)*] | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Goal x:** [name e.g. *Goal 1: Achieve a continuous reduction of operational safety risks*] <br> **Target x.x:** [description e.g. *Target 1.1: Maintain a decreasing trend of the national accident rate*] | | | | | | | |
| *Safety enhancement initiative* | *Action* | *Timeline* | *Responsible entity* | *Stakeholders* | *Metrics/Indicators* | *Priority* | *Monitoring Activity* |
| [name of SEI and GASP SEI number, if applicable] | [describe action(s)] | [insert time frame for completion] | [name] | [list stakeholders] | [list metrics/indicators] | [Low/ Medium/ High] | [list mechanisms for verifying SEI implementation] |
| SEI-n [describe] (GASP, SEI-x) | | | | | | | |
| e.g., *GASP OPS SEI on LOC-I (Region) — Mitigate contributing factors to LOC-I accidents and incidents* | *Organize safety seminars or workshops* | *Q1 2020 to Q4 2022* | *RASG* | • *Civil aviation authorities (CAAs)* <br> • *Operators* <br> • *Approved training organizations* <br> • *Accident Investigation Board (AIBs)* <br> • *Manufacturers* <br> • *Regional organizations* | • *Number of workshops held* <br> • *Attendance at workshops* <br> • *Change in States' training requirements in the region* | *High* | • *Include in regional survey/dashboard* <br> • *CMA self-assessment question* |

**DETAILED SEIS: OTHER SAFETY ISSUES**

| Issue x[1]: [name of issue e.g. *Lack of aircraft accident and incident investigation capabilities at the regional level*] | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Goal x:** [name e.g. *Goal 4: Increase collaboration at the regional level*]<br>**Target x.x:** [description e.g. *Target 4.1: By 2020, States that do not expect to meet RASP Goals to use the RASG in seeking assistance to strengthen their safety oversight capabilities*] | | | | | | | |
| *Safety enhancement initiative* | *Action* | *Timeline* | *Responsible entity* | *Stakeholders* | *Metrics/Indicators* | *Priority* | *Monitoring Activity* |
| [name of SEI and GASP SEI number, if applicable] | [describe action(s)] | [insert time frame for completion] | [name] | [list stakeholders] | [list metrics/indicators] | [Low/ Medium/ High] | [list mechanisms for verifying SEI implementation] |
| SEI-n [describe] (GASP, SEI-x) | | | | | | | |
| e.g., *GASP ORG SEI-3 (Region) — Establishment of an independent accident and incident investigation authority, consistent with Annex 13 — Aircraft Accident and Incident Investigation* | *Identify champion States, via the RASGs, to assist in building the accident and incident investigation capabilities of States which require assistance* | *Q1 2020 to Q4 2022* | *RASG* | • *AIBs*<br><br>• *CAAs*<br><br>• *Aircraft manufacturers*<br><br>• *RAIO* | • *Number of champion States offering assistance*<br><br>• *Number of States that received assistance*<br><br>• *Number of capacity-building missions on accident and incident investigations completed in the region* | *High* | *USOAP/CMA results following next audits in the region* |

---

1.    One issue may be associated with multiple goals and/or targets.

# Chapter 4

# DRAFTING THE NATIONAL AVIATION SAFETY PLAN

## 4.1   GENERAL

This chapter provides guidance to help a State decide what to include in its national aviation safety plan (NASP). It does not supersede the current edition of the GASP. A template of a NASP is presented in the appendix to this chapter and should be considered solely as an example; the NASP should be developed based on the State's own risk assessment and address the State's specific operational safety risks and other safety issues. The State should link its NASP to its State safety programme (SSP), if implemented, when creating the plan.

> Note.— Guidance on the relationship between the NASP and the SSP is provided in the GASP (Doc 10004), Part II, Chapter 2.

## 4.2   CONTENT OF THE NASP

As described in the GASP, the NASP should contain the following sections, as a minimum:

a)   an introduction;

b)   the purpose of the NASP, including links to both the RASP and the GASP;

c)   the State's strategic approach to managing safety in civil aviation, including national safety goals, targets and indicators;

d)   a description of the national operational safety risks and initiatives to address them;

e)   a description of other safety issues, such as challenges related to SSP and SMS implementation, and initiatives to address them; and

f)   a description of how the State will measure safety performance to monitor the implementation of the NASP and its effectiveness.

## 4.3   DETAILED SECTIONS OF THE NASP

### Introduction of the NASP

4.3.1      When drafting the introduction (or foreword), the following should be included:

a)   an overview of the NASP, including its structure (chapters, sections and their content);

b)    the State's commitment to aviation safety and to the resourcing of activities at the national level to enhance aviation safety, by issuing a statement signed by a senior aviation ministerial or government agency representative. If a statement already exists in another document (e.g. the State safety policy), it should be referenced in this section of the NASP;

c)    how the NASP is linked to the SSP or how the NASP is linked to achieving effective safety oversight in the absence of a fully implemented SSP, in addition to a statement on when the State expects to fully implement the SSP;

d)    the entities responsible for the NASP's development, implementation and monitoring;

e)    the national safety issues (if a description already exists in another document, it should be referenced in this section of the NASP);

f)    the national safety goals and targets;

g)    the State's operational context (may be presented in table format), including, but not limited to:

1)    the traffic volume in the State, as well as anticipated growth or decline;

2)    the maturity of different sectors, such as aerodromes, commercial air transport, general aviation, helicopter operations; and

3)    common hazards or challenges, which may be grouped by categories such as environmental, technical, organizational and human.

### *Purpose of the NASP*

4.3.2    When drafting the purpose of the NASP, the following should be included:

a)    a description of the State's strategic direction for the management of aviation safety;

b)    the duration of the NASP (refer to 4.3.3 a) 1));

c)    the relationship between the NASP, the RASP and the most current edition of the GASP; and

d)    other documents and plans that have been considered in the development of the NASP (e.g. National Development Plan, Civil Aviation Master Plan, the GANP, the electronic Air Navigation Plan (eANP), the GASeP, etc., as appropriate).

### *The State's strategic approach to managing aviation safety*

4.3.3    When drafting the State's strategic approach to managing safety in civil aviation, the following should be included:

a)    how the NASP is developed and endorsed, including any collaboration with internal and external stakeholders (e.g. industry, international organizations, other government agencies, etc.);

1)    describe the governance of the NASP (which may already be covered in the SSP documentation), this includes how frequently it is reviewed and updated (e.g. reviewed every year and updated at least every three years) – the alignment with the GASP and RASP revision cycle should be considered;

      2)    explain that a collaborative approach is needed to identify issues and implement SEIs to mitigate risks;

      3)    describe the process used to determine national operational safety risks and other safety issues (e.g. organizational challenges) – if this process is not part of the State's SSP, it should be explained in this section;

   b)   the national safety goals, targets and indicators (may be presented in table format);

      1)    explain how the national safety goals, targets and indicators are linked to the GASP and RASP (this may be accomplished by referencing both documents); and

      2)    list any specific national safety goals, targets and indicators over and above those of the GASP, if applicable;

   c)   how the SEIs help to achieve the national safety goals;

      1)    explain the link between the national safety goals, and targets with the SEIs that the State will undertake to improve safety;

      2)    explain how national safety goals and targets are linked to overarching SEIs at the regional or international levels; and

   d)   the emerging issues that may require further analysis.

### *National operational safety risks*

4.3.4        When drafting the national operational safety risks, the following should be included:

   a)   a summary of accidents and serious incidents that have occurred in the State during a set time period and those which involved aircraft registered in the State, particularly for aircraft of a maximum mass of over 5 700 kg during scheduled commercial operations (statistics and data on accidents and serious incidents may be gathered from the State's accident and incident database or can be found using the ICAO ADREP system application available via iSTARS at www.icao.int/safety/iStars);

   b)   the national HRCs, including the reason they were given priority:

      1)    the NASP should include all HRCs in the RASP and GASP; and

      2)    include additional categories of operational safety risks, if applicable;

   c)   other national operational safety risks identified, including how and why they were given priority (e.g. data-driven approach). This identification may:

      1)    be done as part of the State's analysis (e.g. through their safety data collection and processing system);

      2)    derive from a regional analysis (e.g. by the RASG, RSOOs, PIRGs, and/or RAIOs); and/or

      3)    be based on the additional operational safety risks categories described in the GASP – the national operational safety risks should encompass different sectors of aviation (such as aerodromes, commercial air transport, general aviation, helicopter operations);

    d)    the main contributing factors leading to the HRCs identified by the State;

    e)    a description of a set of SEIs to mitigate the risks associated with the HRCs and the additional categories of operational safety risks:

        1)    list SEIs that the State plans to implement, or is in the process of implementing, to address all the identified national HRCs (this list may be presented in an appendix);

        2)    identify those SEIs derived from the GASP roadmap (mainly taken from the operational safety risks roadmap), where applicable; and

        3)    provide references to corresponding SEIs in the RASP, where applicable; and

    f)    the taxonomy used in the process of determining national operational safety risks – it is recommended to use the aviation occurrence categories from the CAST/ICAO Common Taxonomy Team (CICTT).

    *Note.— Additional information on HRCs and additional categories of operational safety risks is provided in the GASP (Doc 10004), Part I, Chapter 3. Information on the CICTT Taxonomy is found on the ICAO website at* https://www.icao.int/safety/airnavigation/AIG/Pages/Taxonomy.aspx.

### Other safety issues

4.3.5        When drafting other national safety issues addressed in the NASP, the following should be included:

    a)    a summary of the State's effective safety oversight capabilities. This may be accomplished by presenting the results of the State's latest activities conducted under the ICAO USOAP CMA. Information related to USOAP CMA is available on the USOAP CMA Online Framework at www.icao.int/usoap. Details on the SOI are available at www.icao.int/gasp;

    b)    a list and description of other safety issues (e.g. organizational challenges) selected for the NASP, including why they were given priority;

    c)    how they were identified, including, but not limited to, a data-driven approach. This identification may:

        1)    be done as part of the State's analysis (e.g. through their safety data collection and processing system);

        2)    derive from regional analysis (e.g. by the RASG, RSOOs, PIRGs, and/or RAIOs);

        3)    be based on the organizational challenges described in the GASP; and/or

        4)    be based on USOAP results and the State's own oversight data; and

    d)    a description of a set of SEIs to address the other safety issues identified:

        1)    list SEIs the State plans to implement, or is in the process of implementing, to address all other safety issues identified (this list may be presented in an appendix);

        2)    identify those SEIs derived from the GASP roadmap (mainly taken from the organizational challenges roadmap); and

        3)    provide references to corresponding SEIs in the RASP, where applicable.

***Monitoring implementation***

4.3.6        When drafting the section on monitoring and measuring the implementation of the NASP and its effectiveness, the following should be included:

a)    how the State will monitor the implementation of the SEIs listed in the NASP and how it will measure safety performance of the civil aviation system to ensure the intended results are achieved;

b)    how corrections and adjustments to the NASP and its SEIs will be made and reported;

c)    how each national safety target will be monitored to track performance:

1)    indicators being used to measure safety performance should, in principle, be consistent with or linked to those in the GASP and the RASP;

d)    how stakeholders will be provided with relevant up-to-date information on the progress made in achieving the national safety goals and targets, as well as the implementation status of SEIs (e.g. a dashboard);

e)    an explanatory text addressing the following situations:

1)    if the national safety goals and targets are not met, the root causes should be presented;

2)    if the State identifies critical operational safety risks, reasonable measures will be taken to mitigate them as soon as practicable, possibly leading to an unscheduled revision of the NASP;

f)    explain that the State has adopted a standardized approach, as outlined by the RASG or other relevant regional entity, to provide information at the regional level (e.g. for reporting to the RASGs). This allows the region to receive information and assess operational safety risks using common methodologies; and

g)    contact information for inquiries or further information.

## 4.4    NASP TEMPLATE

The appendix to this chapter presents a NASP template, which aims to promote international harmonization of NASPs. Use of this template is not mandatory and is not intended to replace existing SARPs. The template provides an example that promotes a uniform development of a NASP and addresses the minimum content proposed in the GASP, while remaining flexible enough to accommodate any State-specific requirements. States that adopt the NASP template should work in collaboration with other States in the region, as well as their RASG and ICAO Regional Office, to ensure consistency of the NASP with the RASP and the current edition of the GASP.

_____

# Appendix A to Chapter 4

# NATIONAL AVIATION SAFETY PLAN TEMPLATE

### SECTION 1.    INTRODUCTION

#### 1.1    Overview of the NASP[1]

[State] is committed to enhancing aviation safety and to the resourcing of supporting activities. The purpose of this national aviation safety plan (NASP) is to continually reduce fatalities, and the risk of fatalities, through the development and implementation of a national aviation safety strategy. A safe aviation system contributes to the economic development of [State] and its industries. The NASP promotes the effective implementation of [State's] safety oversight system, a risk-based approach to managing safety, as well as a coordinated approach to collaboration between [State] and other States, regions and industry. All stakeholders are encouraged to support and implement the NASP as the strategy for the continuous improvement of aviation safety.

The NASP of [State] is in alignment with the ICAO *Global Aviation Safety Plan* (GASP, Doc 10004) and the [name of the regional aviation safety plan (RASP)].

[Signature]
[Name]
**[Title (e.g. *Director General of Civil Aviation or Minister of Transport*)**

#### 1.2    Structure of the NASP

This NASP presents the strategy for enhancing aviation safety for a period of [number] years. It comprises six sections. In addition to the introduction, sections include: the purpose of the NASP, [State's] strategic approach to managing aviation safety, the national operational safety risks identified for the [date interval (e.g. *2020-2022*)] NASP, other safety issues addressed in the NASP, and a description of how the implementation of the safety enhancement initiatives (SEIs) listed in the NASP is going to be monitored.

#### 1.3    Relationship between the NASP and the State safety programme (SSP)

*[Paragraph below only applies to States that have not fully implemented an SSP]*

This NASP addresses operational safety risks identified in the ICAO GASP and the [name of the RASP] in the absence of [State]'s SSP. [State] is committed to fully implement an SSP by [date] as a State's responsibilities for the management of safety comprise both safety oversight and safety management, collectively implemented through an SSP. Initiatives listed in this NASP address organizational challenges and aim to enhance organizational capabilities related to effective safety oversight.

---

1.    Section 1.1. may also be presented as a stand-alone foreword.

*or*

**[Paragraph below only applies to States that have fully implemented an SSP]**

Through an effective SSP, [State] identifies and mitigates national operational safety risks. The SSP provides safety information to the NASP. The SSP allows [State] to manage its aviation activities in a coherent and proactive manner, measure the safety performance of its civil aviation system, monitor the implementation of the NASP's SEIs and address any identified hazards and deficiencies. The NASP is one of the key documents produced as part of [State]'s SSP documentation. It is the means by which [State] defines and drives the implementation of SEIs generated by the SSP process and drawn from the ICAO GASP and the [name of the RASP]. It also allows [State] to determine initiatives to strengthen the SSP or otherwise needed to achieve its safety objectives. Safety intelligence gathered through the SSP also contributes to other national plans, such as the air navigation plan. Further information on [State]'s SSP can be found at [link to website, if available].

### 1.4    Responsibility for the NASP development, implementation and monitoring

The [name of responsible entity (e.g. *Civil aviation authority (CAA)*)] is responsible for the development, implementation and monitoring of the NASP, in collaboration with [list names of entities] and with the national aviation industry. The NASP was developed in consultation with national operators and other stakeholders, and in alignment with the [current edition] of the GASP and the [name of the RASP].

### 1.5    National safety issues, goals and targets

The NASP addresses the following national safety issues:

1) [list risks and other safety issues — *Example, Loss of control in-flight occurrences, bird strikes, the lack of aircraft accident and incident investigation capabilities at the national level*];

2) [...];

3) [...].

To address the issues listed above and enhance aviation safety at the national level, the [date interval] NASP contains the following goals and targets:

1) [list goals and targets — *Example, Goal 1: Achieve a continuous reduction of operational safety risks and Target 1.1: Maintain a decreasing trend of the national accident rate*];

2) [...];

3) [...].

### 1.6    Operational Context

There are [number] certified aerodromes in [State], including [number] international aerodromes. The airspace of [State] is classified into Class [list all airspace classes]. There were [number] movements in [State] over the period of [year] to [year]. There are currently [number] air operator certificates (AOCs) issued by [State], and of those there are [number] issued to operators conducting international commercial air transport operations. [State] also has [number] operators, which operate domestic air taxi services, primarily on turboprop aircraft, as well as [number] helicopter operators. There are [number] heliports in [State]. Common challenges in [State] include: [list challenges, e.g. *Topography, meteorology, infrastructure, and socio-political issues*].

**SECTION 2.    PURPOSE OF [STATE]'S NATIONAL AVIATION SAFETY PLAN**

The NASP is the master planning document containing the strategic direction of [State] for the management of aviation safety for a period of [number] years ([year] to [year]). This plan lists national safety issues, sets national aviation safety goals and targets, and presents a series of safety enhancement initiatives (SEIs) to address identified safety deficiencies and achieve the national safety goals and targets.

The [name of the civil aviation master plan, where one is established (include link to website, if available)] addresses all aspects of air transport at the State level, with the objective of providing a clear and comprehensive planning and implementation strategy for the future development of the entire civil aviation sector. The NASP contains in-depth information specific to aviation safety aspects that are referenced in [name of the civil aviation master plan, where one is established].

The NASP has been developed using international safety goals and targets and HRCs from both the GASP (www.icao.int/gasp) and the [name of the RASP]. These are highlighted in the text, where applicable. The SEIs listed in the NASP support the improvement of safety at the wider regional and international levels and include several actions to address specific operational safety risks and recommended SEIs for individual States set out in the [name of the RASP (include link to website, if available)]. [State] has adopted these SEIs and has included them in this plan. Cross-references are provided to the [name of the RASP] for individual SEIs where relevant.

## SECTION 3.    [STATE]'S STRATEGIC APPROACH TO MANAGING AVIATION SAFETY

***[Paragraph below only applies to States that have not fully implemented an SSP]***

The NASP presents the SEIs that were developed based on the organizational challenges (ORG) and operational safety risks (OPS), as presented in the ICAO global aviation safety roadmap, as well as State-specific issues identified by [list methods, e.g. *legislation, directive, etc.*]. This plan is developed and maintained by [name of responsible entity, e.g. *CAA*], in coordination with all stakeholders and is updated at least every [number] years.

*or*

***[Paragraph below only applies to States that have fully implemented an SSP]***

The NASP presents the SEIs derived from the SSP, including [State]'s safety risk management process and safety data collection and processing systems, as well as the work undertaken by service providers in the development and implementation of their safety management systems (SMS). This plan is developed and maintained by [name of responsible entity, e.g. *CAA*], in coordination with all stakeholders and is updated at least every [number] years.

The NASP includes the following national safety goals and targets, for the management of aviation safety, as well as a series of indicators to monitor the progress made towards their achievement. They are tied to the goals, targets and indicators listed in the GASP and the [name of the RASP] and include additional national safety goals, targets and indicators (if applicable to the State).

| *Goal* | *Target* | *Indicators* | *Link to GASP and RASP* |
|---|---|---|---|
| [list goals] | [list targets] | [list indicators] | [describe link] |
| 1.  *Example, Achieve a continuous reduction of operational safety risks* | 1.1 *Maintain a decreasing trend of the national accident rate.*<br><br>1. *n* | 1.1.1  *Number of accidents occurring in the State per 10 000 departures.*<br><br>1.1.2  *Number of accidents occurring in the State to aircraft over 5 700 kg involved in scheduled commercial operations.*<br><br>1.2. *n* | *This goal is directly linked to Goal 1 and Target 1.1 of the GASP and linked to Goal 1 and Target 1.1 of the RASP.* |
| 2.  *Example, Strengthen the State's safety oversight capabilities* | 2.1  *By 2026, reach an effective implementation score of 85%.*<br><br>2. *n* | 2.1.1  *Overall EI score for the State.*<br><br>2.1.2  *Percentage of priority PQs implemented nationally.*<br><br>2.1.3  *Percentage of completed corrective action plans (CAPs) completed nationally.* | *This goal is directly linked to Goal 2 and Target 2.1 of the GASP and linked to Goal 2 and Target 2.1 of the RASP.* |

|  |  | 2.2. *n* |  |
|---|---|---|---|
| 3. | 3.1 <br><br> 3. *n* |  |  |
| 4. | 4.1 <br><br> 4. *n* |  |  |
| 5. | 5.1 <br><br> 5. *n* |  |  |
| 6. | 6.1 <br><br> 6. *n* |  |  |

The SEIs in this plan are implemented through [State]'s existing safety oversight capabilities and the service providers' SMS. SEIs derived from the ICAO global aviation safety roadmap were identified to achieve the national safety goals and targets presented in the NASP. Some of the national SEIs are linked to overarching SEIs at the regional and international levels and help to enhance aviation safety globally. The full list of the SEIs is presented in the appendix to the NASP.

The NASP also addresses emerging issues. Emerging issues include concepts of operations, technologies, public policies, business models or ideas that might impact safety in the future, for which insufficient data exists to complete typical data-driven analysis. It is important that [State] remain vigilant on emerging issues to identify potential operational safety risks, collect relevant data and proactively develop mitigations to address them. The NASP addresses the following emerging issues, which were identified by [describe the process, e.g. *an analysis conducted by service providers*] for further analysis:

    1)    [list emerging issues — *Example, small drones operating in the vicinity of aerodromes*]

    2)    […]

    3)    […]

**SECTION 4.   NATIONAL OPERATIONAL SAFETY RISKS**

The NASP includes SEIs that address national operational safety risks, derived from lessons learned from operational occurrences and from a data-driven approach. These SEI may include actions such as: rule-making; policy development; targeted safety oversight activities; safety data analysis; and safety promotion. Separate sections are provided to address commercial air transport and general aviation to make the information more accessible to stakeholders (if applicable to the State).

[State] publishes an Annual Safety Report, available on the [State] website [insert link to website, if available]. The summary of accidents and serious incidents that occurred in [State], and those for aircraft registered in [State] involved in commercial air transport and aircraft involved in general aviation, is shown in the tables below.

| *Year* | *Fatal accidents* | *Non-fatal accidents* | *Serious incidents* |
|---|---|---|---|
| **Commercial air transport occurrences in [State]** | | | |
| [year to year, average] | | | |
| [current year] | | | |
| **General aviation aircraft occurrences in [State]** | | | |
| [year to year, average] | | | |
| [current year] | | | |

| *Year* | *Fatal accidents* | *Non-fatal accidents* | *Serious incidents* |
|---|---|---|---|
| **Occurrences involving commercial air transport aircraft registered in [State]** | | | |
| [year to year, average] | | | |
| [current year] | | | |
| **Occurrences involving general aviation aircraft registered in [State]** | | | |
| [year to year, average] | | | |
| [current year] | | | |

The following [number] national high-risk categories of occurrences (HRCs) in the [State] context were considered of the utmost priority because of the number of fatalities and risk of fatalities associated with such events. They were identified based on analyses from mandatory and voluntary reporting systems, accident and incident investigation reports, safety oversight activities over the past [number] years, the SSP (if applicable to the State), as well as on the basis of regional analysis conducted by [list names of entities, e.g. *RASG, RSOO, PIRG, and/or RAIO*] and on the operational safety risks described in the GASP. These HRCs are in line with those listed in the [current edition] of the GASP, as well as the [name of the RASP]:

   1)   [list HRCs — *Example, Loss of control in-flight (LOC-I)*]

    2)   […]

    3)   […]

In addition to the national operational safety risks listed above, the following additional categories of operational safety risks have been identified:

    1)   [list additional categories of operational safety risks — *Example, Bird strikes* ]

    2)   […]

    3)   […]

The aviation occurrence categories from the CAST/ICAO Common Taxonomy Team (CICTT) were used to assess risk categories in the process of determining national operational safety risks. The CICTT Taxonomy is found on the ICAO website at https://www.icao.int/safety/airnavigation/AIG/Pages/Taxonomy.aspx.

To address the national operational safety risks listed above, [State] identified the following contributing factors leading to HRCs and will implement a series of SEIs, some of which are derived from the ICAO OPS roadmap, contained in the GASP:

**HRC 1: [name of occurrence category, e.g. *Loss of control in-flight (LOC-I)*]**

    1)   [list contributing factors — *Example, Inadequate standard operating procedures for effective flight management*]

    2)   […]

    3)   […]

**HRC 2: [name of occurrence category]**

    1)   [list contributing factors]

    2)   […]

    3)   […]

**HRC *n*: [name of occurrence category]**

    1)   [list contributing factors]

    2)   […]

    3)   […]

The full list of the SEIs is presented in the appendix to the NASP.

## SECTION 5.    OTHER SAFETY ISSUES

In addition to the national operational safety risks listed in the NASP, [State] has identified other safety issues and initiatives selected for the NASP. These are given priority in the NASP since they are aimed at enhancing and strengthening [State]'s safety oversight capabilities and the management of aviation safety at the national level.

The eight critical elements (CEs) of a safety oversight system are defined by ICAO. [State] is committed to the effective implementation of these eight CEs, as part of its overall safety oversight responsibilities, which emphasize [State]'s commitment to safety in respect of its aviation activities. The eight CEs are presented in Figure 1 below.
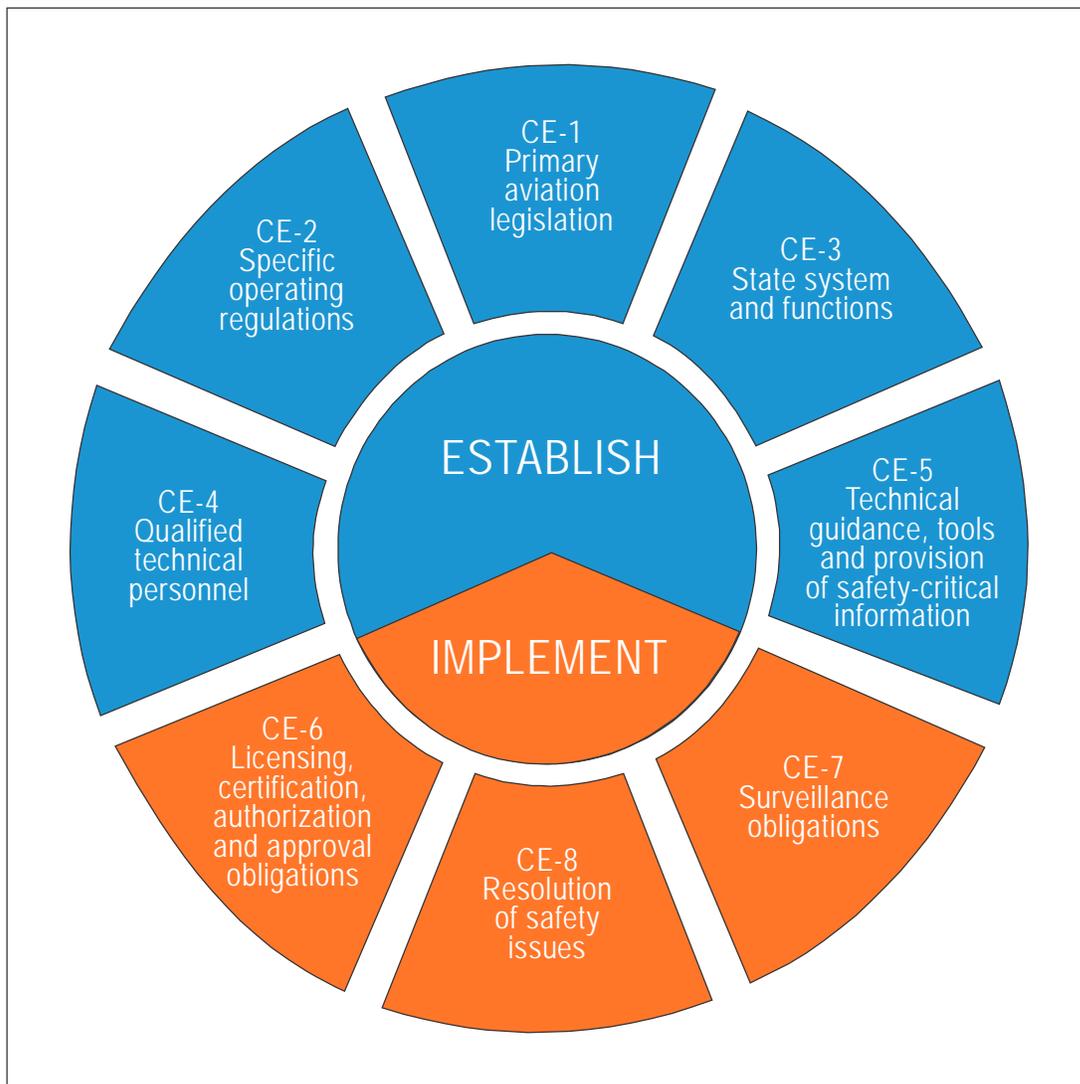


**Figure 1.    Critical elements of a State's safety oversight system**

The latest ICAO activities, which aim to measure the effective implementation of the eight CEs of [State]'s safety oversight system, as part of the ICAO Universal Safety Oversight Audit Programme (USOAP), have resulted in the following scores:

| Overall EI score | | | | | | | |
|---|---|---|---|---|---|---|---|
| [X]% | | | | | | | |
| **EI score by CE** | | | | | | | |
| **CE-1** | **CE-2** | **CE-3** | **CE-4** | **CE-5** | **CE-6** | **CE-7** | **CE-8** |
| [X]% | [X]% | [X]% | [X]% | [X]% | [X]% | [X]% | [X]% |
| **EI score by audit area**[2] | | | | | | | |
| **LEG** | **ORG** | **PEL** | **OPS** | **AIR** | **AIG** | **ANS** | **AGA** |
| [X]% | [X]% | [X]% | [X]% | [X]% | [X]% | [X]% | [X]% |

The safety oversight index (SOI) of a State is an ICAO indicator of its safety oversight capabilities. Every State audited by ICAO has an SOI. It is a number greater than zero, where "1" represents a level at which the safety oversight capabilities of a State would indicate the minimum expected capabilities considering the number of departures as an indication of the size of that State's aviation system. The calculations conducted by ICAO of [State]'s SOI have resulted in the following scores:

| *Overall SOI score* | *Score in the area of Operations* | *Score in the area of Air Navigation* | *Score in the area of Support Functions* |
|---|---|---|---|
| | | | |

The following [number] other safety issues in the [State] context were considered of the utmost priority because they are systemic issues, which impact the effectiveness of safety risk controls. They were identified based on analysis from USOAP data, accident and incident investigation reports, safety oversight activities over the past [number] years, the SSP (if applicable to the State), as well as on the basis of regional analysis conducted by [list names of entities, e.g. *RASG, RSOO, PIRG, and/or RAIO*]. These issues are typically organizational in nature and relate to challenges associated with the conduct of States' safety oversight functions, implementation of SSP at the national level and the level of SMS implementation by national service providers. They take into consideration organizational culture, policies and procedures within [list names of the State's entities] and those of service providers. These safety issues are in line with those listed in the [current edition] of the GASP, as well as the [name of the RASP]:

1) [list safety issues and briefly explain why they were given priority — *Example, Lack of aircraft accident and incident investigation capabilities at the national level. This was the area where the State received the lowest EI score during the most recent ICAO USOAP audit and was therefore placed as a high priority issue to resolve*]

---

2. Eight audit areas pertaining to USOAP, i.e. primary aviation legislation and civil aviation regulations (LEG), civil aviation organization (ORG); personnel licensing and training (PEL); aircraft operations (OPS); airworthiness of aircraft (AIR); aircraft accident and incident investigation (AIG); air navigation services (ANS); and aerodromes and ground aids (AGA).

      2)  […]

      3)  […]

To address the issues listed above, [State] will implement a series of SEIs, some of which are derived from the ICAO ORG roadmap, contained in the GASP. The full list of the SEIs is presented in the appendix to the NASP.

### SECTION 6.    MONITORING IMPLEMENTATION

[State] will continuously monitor the implementation of the SEIs listed in the NASP and measure safety performance of the national civil aviation system, to ensure the intended results are achieved, using the mechanisms presented in the appendix to this plan.

In addition to the above, [State] will review the NASP every [number] years or earlier, if required, to keep the identified operational safety risks, safety issues and selected SEIs updated and relevant. The [name of responsible entity (e.g. CAA)] will periodically review the safety performance of the initiatives listed in the NASP to ensure the achievement of national safety goals and targets. If required, [State] will seek the support of [list names of entities (e.g. RASG, industry] to ensure the timely implementation of SEIs to address safety deficiencies and mitigate risks. Through close monitoring of the SEIs, [State] will make adjustments to the NASP and its initiatives, if needed, and update the NASP accordingly.

[State] will use the indicators listed in Section 3 of this plan to measure safety performance of the civil aviation system and monitor each national safety target. A periodic [e.g. annual, every three years, etc.] safety report will be published to provide stakeholders with relevant up-to-date information on the progress made in achieving the national safety goals and targets, as well as the implementation status of the SEIs.

In the event that the national safety goals and targets are not met, the root causes will be presented. If [State] identifies critical operational safety risks, reasonable measures will be taken to mitigate them as soon as practicable, possibly leading to an unscheduled revision of the NASP.

[State] adopted a standardized approach to provide information at the regional level, for reporting to the RASGs [describe methodologies used by the region]. This allows the region to receive information and assess operational safety risks using common methodologies.

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

[Name of responsible entity]
[Mailing address]
[Telephone number]
[Fax number]
[Email]
[Website]

# Appendix to the NASP

**DETAILED SEIS: NATIONAL OPERATIONAL SAFETY RISKS**

| **HRC x:** [name of HRC e.g. *Loss of control in-flight (LOC-I)*] | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Goal x:** [name e.g. *Goal 1: Achieve a continuous reduction of operational safety risks*] <br> **Target x.x:** [description e.g. *Target 1.1: Maintain a decreasing trend of the national accident rate*] | | | | | | | |
| *Safety enhancement initiative* | *Action* | *Timeline* | *Responsible entity* | *Stakeholders* | *Metrics/Indicators* | *Priority* | *Monitoring Activity* |
| [name of SEI and GASP SEI number, as well as RASP SEI number, if applicable] | [describe action(s)] | [insert time frame for completion] | [name] | [list stakeholders] | [list metrics/indicators] | [Low/ Medium/ High] | [list mechanisms for verifying SEI implementation] |
| SEI-n [describe] (GASP, SEI-x) (RASP, SEI-x) | | | | | | | |
| e.g. *GASP OPS SEI on LOC-I (State) — Mitigate contributing factors to LOC-I accidents and incidents* | *Require upset prevention and recovery training in all full flight simulator type conversion and recurrent training programmes* | *Q1 2020 to Q4 2022* | *CAA* | • *Operators* <br> • *Approved training organizations (ATO)* <br> • *Flight simulator product and service providers* <br> • *Pilots' associations* <br> • *CAA inspectors* | • *Training programmes updated with upset prevention and recovery* <br> • *Number/percentage of pilots completing upset prevention and recovery training* <br> • *Upset occurrence rates in voluntary reporting* <br> • *Stick-shaker activation events in FDA data* <br> • *LOC-I occurrence rates* | *High* | *Surveillance of operator and ATO training activities* |

**DETAILED SEIS: OTHER SAFETY ISSUES**

| Issue x[1]: [name of issue e.g. *Lack of aircraft accident and incident investigation capabilities at the national level*] | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Goal x:** [name e.g. *Goal 2: Strengthen the State's safety oversight capabilities*]<br>**Target x.x:** [description e.g. *Target 2.1: By 2026, reach an effective implementation score of 85%*] | | | | | | | |
| *Safety enhancement initiative* | *Action* | *Timeline* | *Responsible entity* | *Stakeholders* | *Metrics/Indicators* | *Priority* | *Monitoring Activity* |
| [name of SEI and GASP SEI number as well as RASP SEI number, if applicable] | [describe action(s)] | [insert time frame for completion] | [name] | [list stakeholders] | [list metrics/indicators] | [Low/ Medium/ High] | [list mechanisms for verifying SEI implementation] |
| SEI-n [describe] (GASP, SEI-x) (RASP, SEI-x) | | | | | | | |
| e.g., *GASP ORG SEI-3 (State) — Establishment of an independent accident and incident investigation authority, consistent with Annex 13 — Aircraft Accident and Incident Investigation* | *Establish an effective system to attract, recruit, train and retain qualified and sufficient technical personnel to support accident and incident investigations* | *Q1 2020 to Q4 2022* | *AIB* | • *AIB*<br>• *CAA*<br>• *Aircraft manufacturers*<br>• *RAIO* | • *Recruitment system updated with new recruitment package*<br>• *Number of training sessions on accident and incident investigations*<br>• *Number/percentage of personnel completing accident and incident investigator training*<br>• *Number/percentage of investigators retained more than 12 months after recruitment* | *High* | *USOAP/CMA results following next audit* |

---

1. One issue may be associated with multiple goals and/or targets.

# Chapter 5

# REPORTING ON REGIONAL AND
# NATIONAL AVIATION SAFETY PLANS

## 5.1    MEASURING SAFETY PERFORMANCE RELATED TO THE PLAN

5.1.1        The safety performance of the GASP is measured by a series of metrics as defined by the GASP indicators. Elements used to measure safety performance related to the GASP include, but are not limited to: number of fatalities; accident rate; priority Protocol Questions (PQs) for a safety oversight system; the safety oversight index; and SSP foundational PQs.

5.1.2        Similarly, regions and individual States should define a series of metrics to measure the safety performance and effectiveness of the RASP and NASP respectively, in alignment with the GASP.

## 5.2    REPORTING FROM THE STATE TO THE RASG

5.2.1        Safety information-sharing and exchange is at the centre of safety performance measurement. At the regional level, the RASG is an appropriate forum to facilitate the sharing and exchange of safety information within the region due to the composition of its membership, which encompasses representation from States, regional entities and industry, including but not limited to aircraft operators, air navigation services providers, operators of aerodromes and aircraft manufacturers. All these stakeholders bring valuable information of hazards and emerging issues that can feed into the regional safety risk management process. Stakeholders, such as individual States and international organizations, may also provide information that can assist the region to determine whether specific SEIs are fully implemented.

5.2.2        The RASG is responsible for monitoring and measuring the implementation of the RASP and its effectiveness, in close collaboration with the respective ICAO Regional Office(s). Each RASG is also responsible for continuously evaluating and reporting on the progress of the regional safety goals and targets, as presented in the RASP, to determine if these were met within the allotted time frame.

5.2.3        In some regions, a RSOO, or another regional entity, may coordinate the reporting from individual States in the region to the RASG to avoid duplication of efforts.

## 5.3    REPORTING FROM THE STATE AND THE RASG TO ICAO

5.3.1        The timely and accurate reporting of safety information at the international, regional and national levels is critical to verify whether the GASP goals are being achieved and to monitor the implementation of the SEIs of the roadmap.

5.3.2        Each State is responsible for submitting pertinent information from the NASP to the RASG to enable the compilation of regional results. This primarily involves sharing of information on specific regional SEIs, such as SSP

implementation, which require improvements at the individual State level. States should provide the required information following the standardized approach as outlined by each individual RASG or other relevant regional entity. As noted in 5.2.3, this may be coordinated by an RSOO or another regional entity to avoid duplication of efforts.


## 5.4    USE OF GASP DASHBOARDS FOR MONITORING

5.4.1        ICAO has developed a series of dashboards that States should use to report on their progress towards the achievement of the GASP goals and targets. These dashboards are publicly available on the ICAO website at www.icao.int/gasp.

5.4.2        Each State is responsible for providing the necessary information to populate its own dashboard on a regular basis and to keep it current. Information from individual States is collated by ICAO to produce regional dashboards, per ICAO region, as well as per each RASG. Dashboards are available to the public for reference, and they are also used to provide updates to different stakeholders on the progress of the GASP implementation, including the Council of ICAO and the ICAO Assembly.


## 5.5    SECURE PORTAL ON EMERGING ISSUES AND ADDITIONAL CATEGORIES OF OPERATIONAL SAFETY RISKS

5.5.1        ICAO has developed the Secure Portal on Emerging Issues and Additional Categories of Operational Safety Risks, a dedicated site on its secure portal for the collection of information on emerging issues and additional categories of operational safety risks by the RASGs. Additional information on the dedicated site is found on the ICAO website at www.icao.int/gasp.

5.5.2        Each State is responsible for updating their information on the secure portal site on a regular basis. Information from individual States is collected by each RASG and used to identify emerging issues, safety hazards and to conduct regional risk assessments. Safety information gathered is useful for the RASGs to update the RASPs. It is also useful for ICAO to consider when developing future editions of the GASP. States can choose to provide information anonymously. The purpose of this site is not to identify State-specific deficiencies but rather to provide a platform where States can communicate emerging issues and additional categories of operational safety risks to the RASGs and to ICAO. This site is not available to the public for reference and is only accessible through approved login credentials.

5.5.3        For consistency of reporting, States and regions are encouraged to use the aviation occurrence categories from the Commercial Aviation Safety Team (CAST)/ICAO Common Taxonomy Team (CICTT) when completing forms in the secure portal site.

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


## 5.6    TRANSPARENCY

There is a need for transparency with regard to regional and national aviation safety planning. It is recommended that RASPs and NASPs are made publicly available (e.g. on a public website) to enable other entities within the region or State, and the travelling public as a whole, to be well informed on the several initiatives being undertaken to enhance aviation safety, in addition to the progress made towards achieving established goals and targets.


**— END —**