



WORKING PAPER

RASG-PA ESC/33— WP/03
26/08/19

**Thirty Third Regional Aviation Safety Group — Pan America Executive Steering Committee Meeting
(RASG-PA ESC/33)**

Lima, Peru, 11 to 12 September 2019

Agenda Item 2: Items related to RASG-PA’s internal operation

REGIONAL AVIATION SAFETY PLAN

(Presented by Secretariat)

EXECUTIVE SUMMARY	
According to the Global Aviation Safety Plan (2020-2022), each region and each State should use the GASP to develop a regional aviation safety plan and national aviation safety plan, respectively. The RASP will serve as RASG-PA strategic roadmap based on its set of goals and targets.	
Action:	The meeting is invited to: a) Take note on the contents of this Working Paper; b) Provide comments; and c) Consider the conclusion proposed in 2.3
<i>Strategic Objectives:</i>	<ul style="list-style-type: none"> • Safety
<i>References:</i>	<ul style="list-style-type: none"> • ICAO Doc 10004 Global Aviation Safety Plan 2020-2022

1. Introduction

1.1 According to the Global Aviation Safety Plan (2020-2022), each region and each State should use the GASP to develop a regional aviation safety plan and national aviation safety plan, respectively, which includes industry participation. The regional or national aviation safety plan presents the strategic direction for the management of aviation safety at the regional or national level, for a set time period and should be developed in line with the GASP’s goals, targets and HRCs.

1.2 Although the GASP presents a global perspective, its content may need to be adjusted to meet regional needs. In order to do so, each region should produce a regional aviation safety plan. The regional aviation safety plan presents the strategic direction for the management of aviation safety at the regional level for a set time period (e.g. over the next five years). It outlines to all stakeholders where the different regional entities involved in the management of aviation safety and the SSP should target resources over the coming years. The RASGs are considered the main drivers behind the planning and implementation of SEIs at the regional level. They are the regional entity responsible for the development and implementation of the regional aviation safety plan.

1.3 Regional aviation safety plans should be developed in alignment with the GASP. However, priority should be given to regional safety concerns. Regional SEIs should be adapted to address issues faced by the States concerned as well as industry and should be based on a regional analysis. The development process of the regional aviation safety plan should include consultation with States, industry and other stakeholders. National aviation safety plans of States which make up the region should be aligned and coordinated with the region's aviation safety plan (as appropriate) and with other efforts aimed at enhancing aviation safety. Guidelines should be provided to States on the development of a national aviation safety plan to harmonize content at the regional level. Regional aviation safety plans should be updated to take into consideration revisions to the GASP.

1.4 The RASGs are considered the main drivers behind the regional aviation safety plans. However, other regional stakeholders may share the responsibility for the development and implementation of the regional aviation safety plan to ensure the harmonization and coordination of efforts

2. Relationship between the Regional Safety Plan and the Safety Plan Developed by the Regional Offices

2.1 Regional Offices (NACC and SAM) have developed Safety Plans, based on their State's specific level of SARPs effective implementation, SSP level of implementation and maturity, and safety risks, to assist their States in the development of National Safety Plans. These plans are aligned with the goals and objectives of the GASP.

2.2 Safety Plans from the NACC and SAM Regions, as well as the NASPs may include more restrictive targets than the RASP, depending on their current implementation status.

2.3 States will develop their National Aviation Safety Plans (NASP) based on the NACC and SAM Safety Plans developed by the corresponding NACC and SAM Regional Office, under their respective regional processes, considering their specific effective implementation, level of SSP implementation and maturity, and operational risks.

2.4 The RASG-PA Regional Safety Plan (RASP) and the Safety Plans developed by Regional Offices although they are related and aligned to the GASP, they serve different purposes, and therefore there is no conflict between them. The RASP will serve as RASG-PA strategic roadmap based on its set of goals and targets, while Safety Plans from NACC and SAM, will serve as a data-driven local reference for the development of the National Safety Plans (NASP).

2.5 States will report NASP implementation to their respective Regional Offices, while Regional Offices will provide State-level implementation to RASG-PA, for the update of the corresponding RASP indicators.

2.6 ICAO has developed a template for the development of the Regional Aviation Safety Plan. Based on that template, a draft version of the RASP is attached to this paper as **Appendix A**.

2.7 In order to move forward with the development of the RASG-PA Regional Aviation Safety Plan, the following Conclusion is proposed:

CONCLUSION		RASG-PA REGIONAL AVIATION SAFETY PLAN	
RASG-PA ESC/33/D2			
What:	<p>That the ESC creates a project team, to complete the RASG-PA's Regional Aviation Safety Plan, based on the proposal presented by the Secretariat, to be presented at the ESC/34 meeting.</p>	Expected impact:	<input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Operational/Tech.
Why:	To comply with the GASP 2020-2022.		
When:	To be presented at ESC/34	Status:	Valid
Who:	<input type="checkbox"/> States <input type="checkbox"/> ICAO <input type="checkbox"/> Other <input checked="" type="checkbox"/> ICAO SAM Office (Secretariat)		Javier Puente

3. Required action

3.1 The meeting is invited to:

- a) Take note on the contents of this Working Paper;
- b) Provide comments; and
- c) Consider the conclusion proposed in 2.5

or

— END —

1. INTRODUCTION

1.1 Overview of the RASP

1.1.1 Panamerica 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 Panamerica, the States which comprise it, and their industries.

1.1.2 This Plan promotes the effective implementation of safety oversight systems of States in Panamerica, a risk-based approach to managing safety at the regional level, as well as a coordinated approach to collaboration between States in the region, International Organizations and industry. All stakeholders are encouraged to support and implement this Plan as the regional strategy for the continuous improvement of aviation safety.

1.1.3 The RASP of Panamerica is in alignment with the ICAO Global Aviation Safety Plan (GASP, Doc 10004), the Safety Plans developed by the NACC and SAM Regional Offices, and the national aviation safety plans of States in the region.

1.2 Structure of the RASP

1.2.1 This RASP presents the regional strategy for enhancing aviation safety for a period of 10 years. It is comprised of six sections. In addition to the introduction, sections include: the purpose of the RASP, RASG-PA strategic approach to managing aviation safety at the regional level, the regional operational safety risks identified for the 2020-2030 RASP, other regional safety issues addressed in the RASP, and a description of how the implementation of the safety enhancement initiatives (SEIs) is going to be monitored.

1.3 Responsibility for the RASP Development, Implementation and Monitoring

1.3.1 The RASG-PA is responsible for the development, implementation and monitoring of the RASP, in collaboration with its members. The RASP was developed in consultation with States, operators and other stakeholders in the region, and in alignment with the 2020-2022 Edition of the GASP.

1.4 Regional Safety Issues, Goals and Targets

1.4.1 The RASP addresses the following regional safety issues:

- 1) Loss of control in flight;
- 2) Mid-air collision;
- 3) Controlled flight into terrain; and
- 4) Runway safety

1.4.2 In order to address the issues listed above and enhance safety at the regional level, the 2020-2030 RASP contains the following goals and targets:

- 1) **Goal 1:** Achieve a continuous reduction of operational safety risks
 - a. **Target 1.1** Maintain a decreasing trend of global accident rate
- 2) **Goal 2:** Strengthen States' safety oversight capabilities

- a. **Target 2.1** All States to improve their score for the effective implementation (EI) of the critical elements (CEs) of the State’s safety oversight system (with focus on priority PQs) as follows:
 - i. by 2022 – 75 per cent
 - ii. by 2026 – 85 per cent
 - iii. by 2030 – 95 per cent
 - b. **Target 2.2** By 2022, all States to reach a safety oversight index greater than 1, in all categories
- 3) **Goal 3:** Implement effective State safety programmes (SSPs)
- a. **Target 3.1** By 2022, all States to implement the foundation of an SSP
 - b. **Target 3.2** By 2025, all States to implement an effective SSP, as appropriate to their aviation system complexity
- 4) **Goal 4:** Increase collaboration at the regional level
- a. **Target 4.1** By 2020, States that do not expect to meet GASP Goals 2 and 3, to use a regional safety oversight mechanism, another State or other safety oversight organization’s ICAO-recognized functions in seeking assistance to strengthen their safety oversight capabilities
 - b. **Target 4.2** By 2022, all States to contribute information on safety risks, including SSP safety performance indicators (SPIs), to RASG-PA
 - c. **Target 4.3** By 2022, all States with effective safety oversight capabilities and an effective SSP, to actively lead RASG-PA safety risk management activities
- 5) **Goal 5:** Expand the use of industry programmes
- a. **Target 5.1** By 2020, all service providers to use globally harmonized SPIs as part of their safety management system (SMS)
 - b. **Target 5.2** By 2022, increase the number of service providers participating in the corresponding ICAO-recognized industry assessment programmes
- 6) **Goal 6:** Ensure the appropriate infrastructure is available to support safe operations
- a. **Target 6.1** In coordination with GREPECAS, by 2022, all States to implement the air navigation and airport core infrastructure

1.5 Operational Context

There were XXXX of movements in Panamerica over the period of 2000-2018. Traffic in the region is expected to increase by XX per cent over the next 10 years.

There were 8 States in Panamerica with a score below 60 per cent for the effective implementation (EI) of the critical elements (CEs) of the State’s safety oversight system by the end of 2018. There were 2 States with a safety oversight index below one, in all categories by the end of 2018. As of 2019, XX of States had implemented the foundation of a State safety programme (SSP), and XX of States had implemented an effective SSP, as appropriate to their aviation system complexity.

Common challenges in Panamerica include: *To be completed*

2. PURPOSE OF PANAMERICA REGIONAL AVIATION SAFETY PLAN

The RASP is the master document containing the strategic direction of Panamerica for the management of aviation safety for a period of 10 years (2020 to 2030). 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 safety risks and recommended SEIs for individual States in the region.

The RASP has been developed using international safety goals and targets and HRCs from the ICAO GASP (www.icao.int/gasp). 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.

3. PANAMERICA STRATEGIC APPROACH TO MANAGING AVIATION SAFETY

3.1 The RASP presents the SEIs that were developed based on the ICAO GASP's organizational challenges (ORG) roadmap and operational safety risks (OPS) roadmap, when applicable, as well as region-specific issues identified by Panamerican Aviation Safety Team (PA-RAST). This plan is developed and maintained by the RASG-PA, in coordination with all stakeholders and is updated at least every 2 years.

3.2 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
1. Example, Achieve a continuous reduction of operational safety risks	1.1 Maintain a decreasing trend of the regional accident rate 1. n	1.1.1 Number of accidents involving operators in the region per thousand departures 1.1.2 Percentage of occurrences related to HRCs reported by operators in the region 1.2. n	[describe link] This goal is direct is directly linked to Goal 1 and Target 1.1 of the GASP
2.	2.1 2. n		
3.	3.1 3. n		

4. <i>Example, Increase collaboration at the regional level</i>	4.1 <i>By 2020, States that do not expect to meet RASP Goals to use the RASG in seeking assistance to strengthen their safety oversight capabilities</i> 4. <i>n</i>	4.1.1 Number of champion States offering assistance 4.1.2 Number of States that received assistance 4.1.3 Number of capacity building missions on accident and incident investigations completed in the region 4.2. <i>n</i>	<i>This goal is direct is directly linked to Goal 4 and Target 4.1 of the GASP</i>
5.	5.1 5. <i>n</i>		
6.	6.1 6. <i>n</i>		

3.3 The SEIs in this plan are implemented through the working arrangements of the RASG-PA, activities conducted by International Organizations and the Industry as well as the existing safety oversight capabilities and service providers’ safety management systems (SMS) at the individual States’ level. Since these SEIs, which support the achievement of these safety goals and targets, are linked to overarching SEIs at the international level, they help to enhance safety at a regional and global levels and facilitate international operations. The full list of the SEIs is presented in the Appendix A to the RASP.

3.4 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 Panamerica remain vigilant on emerging issues to identify potential safety risks, collect relevant data and proactively develop mitigations to address them. The RASP addresses the following emerging issues, which were identified by PA-RAST and the Annual Safety Report Team (ASRT) for further analysis:

- 1) *To be completed*

4. REGIONAL OPERATIONAL SAFETY RISKS

4.1 The RASP includes SEIs that address safety at the operational level, 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.

4.2 RASG-PA publishes an Annual Safety Report, available on the RASG-PA. The summary of accidents and serious incidents for aircraft registered in States located in Panamerica involved in commercial air transport and aircraft involved in general aviation is shown in the table below.

Commercial air transport aircraft			
Year	Fatal accident	Non-fatal accident	Serious incident
[year to year, average]			
[current] year			

4.3 The following 4 High Risk Categories (HRCs) of occurrences 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 XX years and their respective State safety programmes, as well as on the basis of regional analysis conducted by the PA-RAST, and on the operational safety risks described in the GASP. These HRCs are in line with those listed in the 2020-2022 of the GASP:

- 1) Loss of control in flight;
- 2) Mid-air collision;
- 3) Controlled flight into terrain; and
- 4) Runway safety

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

- 1) ...

4.5 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>

5. OTHER REGIONAL SAFETY ISSUES

5.1 In addition to the regional operational safety risks listed in the RASP, RASG-PA 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.

5.2 The eight critical elements (CEs) of a safety oversight system are defined by ICAO. Panamerica 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 Panamerica’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

5.3 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.

5.4 The latest ICAO activities, which aim to measure the effective implementation of the eight CEs of States' individual safety oversight system, 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 Panamerica							
75.12 %							
EI score by CE for [Region]							
CE-1	CE-2	CE-3	CE-4	CE-5	CE-6	CE-7	CE-8
81.22%	80.78%	77.05%	68.18%	79.9%	76.15%	63.8%	65.7%
EI score by audit area for [Region]							
LEG	ORG	PEL	OPS	AIR	AIG	ANS	AGA
81.32%	81.47%	95.98%	82.58%	84.04%	68.26%	68.32%	66.12%

5.5 The following XX other safety issues in the Panamerica 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 of analysis from USOAP data, accident and incident investigation reports, safety oversight activities over the past 5 years from States in the region, their State safety programmes, as well as on the basis of regional analysis conducted by ARCM, ACSA, SRVOP, CASSOS.... 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 regional level, and the level of SMS implementation by industry in the region. They take into consideration organizational culture, policies and procedures within International Organizations and those of service providers. These safety issues are in line with those listed in the 2020-2022 of the GASP:

1) **To be determined...**

5.6 In order to address the issues listed above, RASG-PA will implement a series of SEIs, some of which may derived from the ICAO ORG roadmap, contained in the GASP.

6. MONITORING IMPLEMENTATION

6.1 RASG-PA will continuously monitor the implementation of the SEIs regionally 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.

6.2 In addition to the above, RASG-PA will review the RASP every 2 years or earlier, if required, to keep the identified operational safety risks, safety issues and selected SEIs updated and relevant. RASG-PA 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, will seek the support of its members to ensure the timely implementation of SEIs to address safety deficiencies and mitigate risks. Through close monitoring of the SEIs, RASG-PA will make adjustments to the RASP and its initiatives, if needed, and update the RASP accordingly.

6.3 In addition, RASG-PA 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. An annual 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.

6.4 In the event that the regional safety goals and targets are not met, the causes will be addressed and presented to stakeholders. If RASG-PA identifies critical safety risks, reasonable measures will be taken to mitigate them as soon as practicable, possibly leading to an earlier revision of the RASP.

6.5 RASG-PA will adopt a standardized approach to facilitate reporting of information from individual States and other stakeholders at the regional level, and improving the provision of information to the RASG-PA. This allows the region to receive information and assess safety risks using common methodologies.

7. RELATIONSHIP OF THE RASP WITH SAFETY PLANS DEVELOPED BY REGIONAL OFFICES

7.1 This RASP presents the regional strategy for enhancing aviation safety for a period of 10 years, and is to be used by RASG-PA to set the course of action required to reach the defined targets of Section 3.

7.2 States will develop their National Aviation Safety Plans (NASP) based on the NACC and SAM Safety Plans developed by the corresponding NACC and SAM regions under their respective regional processes, considering their specific effective implementation, level of SSP implementation and maturity, and operational risks.

7.3 Safety Plans from the NACC and SAM Regions, as well as the NASP's may include more restrictive targets than the RASP, depending on their current implementation status.

7.4 States will report NASP implementation to their respective Regional Offices, while Regional Offices will provide State-level implementation to RASG-PA, for the update of the corresponding RASP indicators.
