International Civil Aviation Organization
Regional Aviation Safety Group - Pan America (RASG-PA)

WORKING PAPER

APPENDIX C

RASG-PA/10 — WP/07
08/04/19

Tenth Regional Aviation Safety Group — Pan America Plenary Meeting (RASG-PA/10)
Quito, Ecuador, 20-21 June 2019

Agenda Item 2: Organizational challenges

2.3 NACC & SAM GASP Implementation Status (USOAP, SMS/SSP/Safety Plans, challenges)

ASSISTANCE TO STATES FOR AERODROME CERTIFICATION AS PART OF GREPECAS PROJECT F AND IN SUPPORT OF SAMSP GOALS

(Presented by the Secretariat)

EXECUTIVE SUMMARY

This paper presents the advances and challenges of Aerodromes Certification in the SAM Region, as well as a proposal for direct assistance to States, under the GREPECAS F1 Project for the SAM Region, so that States with difficulties to certify their aerodromes can make use of the support of experts from other States, with the assistance of the Regional Office and the SRVSOP TC, to achieve the certification of their aerodromes.

Action:	The Meeting is invited to take note of the opportunities offered by the regional safety oversight mechanism to support States in the certification of aerodromes, recognize the progress of the region since 2013 and analyze possibilities to encourage certification of aerodromes as a risk mitigation mechanism for operational safety.
Strategic Objectives:	• Safety • Air Navigation Capacity and Efficiency
References:	• Global aviation safety plan (GASP) • ICAO Global Air Navigation Plan (GANP) • Regional Safety Plan of the SAM Region (SAMSP) • Regional air navigation plan eANP • Annex 14 - Aerodromes, Vol. I, 8th Edition, July 2018 • Document 9981 PANS Aerodromes - Second Edition, 2016 • Fourth Meeting of the GREPECAS CRPP (CRPP / 4) • Eighteenth Meeting of GREPECAS (GREPECAS / 18) • Thirteenth Meeting of SRVSOP AGA Expert Panel

1. Introduction

1.1 Aerodrome certification has been an ICAO standard since 2001 (Annex 14, Vol. I - Aerodrome design and operations). According to Annex 14 Vol. I, when a certificate is granted to the aerodrome, for aircraft operators and other organizations that operate in it, it means that, at the time of certification, it complies with the specifications relating to the installation and its operation and that it has, in agreement with the certification authority, the ability to continue to meet those specifications during the validity of the certificate.

1.2 The aerodrome certification process allows both the State and the Operator to identify gaps in infrastructure and processes that could negatively affect operational safety. Therefore, it constitutes a barrier to mitigate risks to runway excursions (RE) by ensuring compliance, among other things, with international provisions associated with:

- maintenance of the runway, and its relation to the braking action
- the geometry and design of the movement area, the limitation and frangibility of obstacles
- provision of runway safety end areas (RESA) to reduce the severity of excursions
- the effectiveness of the emergency plan
- Local Runway Safety Teams

1.3 The aerodrome certification has been identified by the GASP as a mitigation measure to reduce runway incursions (RI) and runway excursions (RE[1]). Similarly, the GANP[2] identified the aerodrome certification as a mechanism to ensure that the appropriate infrastructure is provided to support safe operations. The latest RASGPA annual safety report (ASR) identifies the aerodrome facilities, as well as the poor braking action, contamination on runways and the lack of effectiveness of the SMS as contributing factors to the accidents related to runway excursions (RE) in the period 2013-2017.

2. Certification Strategy in the SAM Region

2.1 The Bogota Declaration proposed a goal from 2013 to 2016, of certification of 20% of international aerodromes based on the AOP Table of the Regional Air Navigation Plan for the SAM Region. Additionally, in the AGA Program of GREPECAS, the SAM Region worked on a strategy for the States, through the Regional System of Cooperation for Safety Oversight (SRVSOP), to work together in the development of:

- Common regulations (LAR AGA)
- Common guidance material for AGA safety inspectors (MIAGA)
- Training programs for government inspectors AGA (GSI LAR AGA)
- Horizontal cooperation with multinational certification / surveillance or technical assistance teams
- Mechanisms for definition and control of competences of LAR AGA inspectors

2.2 The LAR AGA Process of the SRVSOP entails a series of obvious benefits to participating States, including:

[1] ICAO Doc 10004 GASP 2020-2022 Edition, Appendix B

[2] ICAO GANP 6th Edition – Aerodrome Operations Basic Building Blocks

- A Panel of AGA Experts from States that share information and generate the process of creating and updating regulations.
- Economies of Scale: process of creating standards, guide material, training.
- Horizontal cooperation among States to share AGA specialties (sometimes necessary, but not available in the States)
- Regulations updated according to ICAO SARPs and best practices
- Regulations and guidance material in compliance with PQs of the USOAP CMA in the AGA area.
- Certification assistance processes with multinational experts.
- Appointment of an AGA specialist in the Technical Committee of the SRVSOP based in Lima.

3. Advances and challenges of the aerodrome certification in the SAM region

3.1 At the last GREPECAS Program and Project Review Committee Meeting (CRPP / 4), it was decided to take actions to re-evaluate the strategy of the projects associated with aerodrome certification. With the support offered by the FAA of the United States and ACI-LAC, in GREPECAS / 18 was presented a new project that merged the two current projects of the AGA F program into a single Project F called "*Project for the Implementation of Operational Safety and Aerodrome Certification* ". This new project identified the need for a more direct assistance approach, using what is available (SRVSOP) as well as other resources. Among the activities, the States would also be surveyed to know their certification plans and training needs, in order to better assist the State.

3.2 With this, seminars and workshops were held jointly by the States and the aerodrome operators in the implementation of the certification, also on the safety assessments and compatibility studies necessary for the certification of aerodromes.

3.3 In addition to these activities, through the SRVSOP, a “Certification Pilot” was carried out in Montevideo, Uruguay, which brought with it many lessons learned and benefits that were incorporated into a new proposal for a Project of Assistance to States for Certification. The pilot concluded with the certification by the DINACIA of Carrasco International Airport (MVD) in 2018. At the moment similar assistances is being organized for Panama and Argentina.

3.4 Brazil, Chile and Colombia, carried out certification processes on their own, which has allowed the number of certified aerodromes to rise from a 8% baseline in 2013 to 36% in 2019. A detail of the aerodromes certificates and the progress of certification since 2013 is attached as **Appendix A** to this working paper.

4. Proposal for Assistance Project for Certification (under Project F1 SAM GREPECAS)

4.1 The new Project (as a result of the experience in Uruguay), prepared on the basis of the PRINCE2® Project Management methodology, consists of missions by teams of specialists from SRVSOP Member States and / or other voluntary States, under the coordination of the Coordinator of the GREPECAS AGA Program and the SRVSOP TC (or volunteers from other States), which serve as advisors to the host State and the aerodrome operator and accompany the entire process in a mixture of on-site and virtual missions, through the use of tools of monitoring and communication.

4.2 The main objective is to directly support the State to certify its aerodromes, while preparing the national inspectors (OJT) to follow the process in the rest of the State's international aerodromes according to those published in the Table AOP of the Regional Air Navigation Plan.

4.3 The duration of the assistance will depend on some variables to be evaluated as level of maturity and / or harmonization of the national regulations in relation to the LAR set, available national guidance material or to be supplied, level of maturity of the operator, among other variables. A model business case is attached to this note as **Appendix B** for reference by the interested States, in which an approximate duration of 12 months is estimated.

4.4 This Project proposal will be presented to the States in the next CRPP/5 for its consideration.

5. **Suggested action**

5.1 The Meeting is invited to:

a) take note of the information contained in this paper;

b) review and comment on the content of this paper and its corresponding attachment; and

c) encourage those States facing difficulties for certifying their aerodromes to consider the possibility of requesting this assistance.

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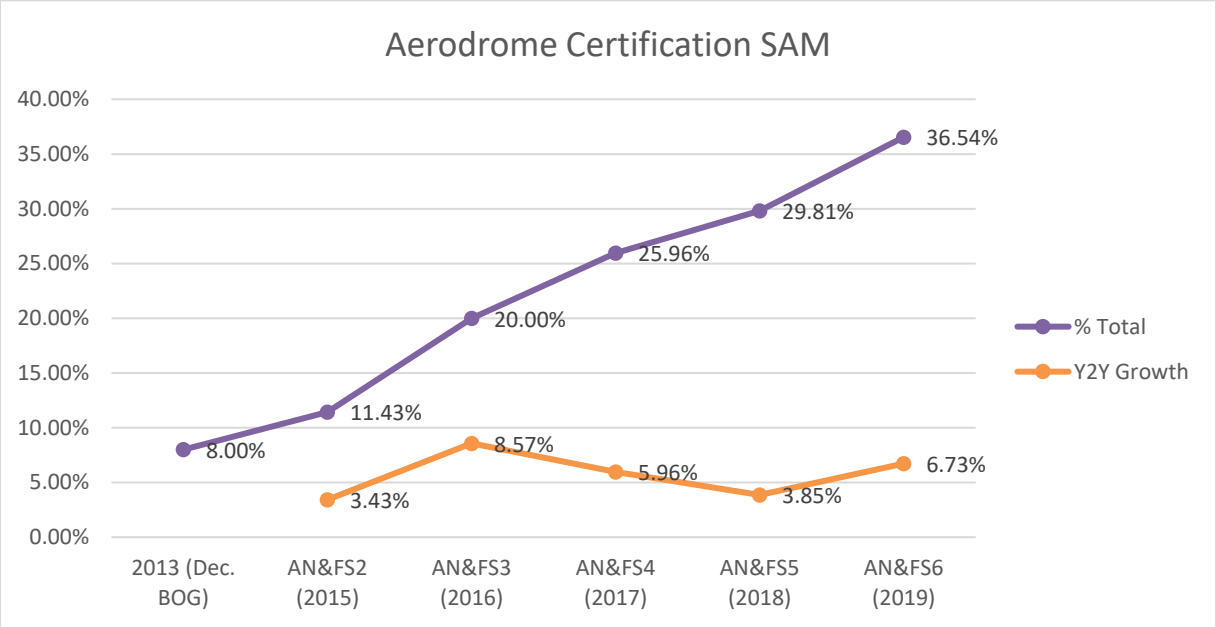
APPENDIX A

TABLE OF CERTIFIED AERODROMES FOR THE SAM REGION AS OF JUNE 2019

State	No. of Intl. aerodromes CAR/SAM ANP Vol. II	Certified aerodromes	% Certified in the State
		Jun-19	
Argentina	16	0	0%
Bolivia	3	3	100%
Brazil	29	19	66%
Chile	8	5	63%
Colombia	11	3	27%
Ecuador	4	2	50%
French Guiana	1	1	100%
Guyana	2	2	100%
Panamá	6	0	0%
Paraguay	2	0	0%
Perú	8	1	13%
Suriname	1	0	0%
Uruguay	2	1	50%
Venezuela	11	1	9%
Total	**104**	**38**	**36.54%**

PROGRESS OF THE CERTIFICATION OF INTERNATIONAL AERODROMES FOR THE SAM REGION REPORTED AT THE MEETINGS OF DIRECTORS OF AN & FS (SAM)



APPENDIX B

INTERNATIONAL CIVIL AVIATION ORGANIZATION
SOUTH AMERICAN REGIONAL OFFICE

PROJECT DOCUMENTATION

BUSINESS CASE

Project: **SAM Aerodrome Certification Assistance for the Certification of Aerodromes – [STATE]**

Release: ***DRAFT VERSION ***

Date: DD / MMM / YYYY

PRINCE2

Author: SAM Programme F Coordinator

Owner: ICAO SAM

Client: [STATE]

Document Ref: SAF-AGA-17-003

Version No: 1.2

1 Business Case History

1.1 Document Location

This document is only valid on the day it is printed.
The source of the document will be found at this location. – *[\AGA Projects\Project SAF-AGA-17-003_Aerodrome Certification]*

1.2 Revision History

Date of this revision: dd/mm/yy
Date of next revision:

Revision date	Previous revision date	Summary of changes	Changes marked
DD/MM/YY		First version	

1.3 Approvals

This document requires the following approvals.
Signed approval forms must be properly filed in the project filing system.

Name	Signature	Title	Date of issue	Version
		Director [STATE]		
		[ICAO counterpart]		

1.4 Distribution

This document has been distributed to:

Name	Title	Date	Version
Project Team			
ACI-LAC			
RLA99/901 Project Coordination			
Aerodrome Operator			

2 Table of Contents

3 Executive Summary

As part of the GREPECAS Aerodromes (AGA) Programme for the SAM Region, the ***Safety Implementation and Aerodrome Certification Project*** includes in its activities the planning of assistance teams or “Go-Teams” to support States in the implementation of aerodrome certification.

Through letter [YYYY], [STATE] requested direct assistance for the certification of its aerodromes within the framework of GREPECAS Project F for the SAM Region.

The purpose of this project is to provide assistance to the [CAA] of [STATE] and to the selected aerodrome operator for the conduction of the aerodrome certification process in accordance with national regulations, which have been reported to be in line with the AGA LARs. The assistance will consist of advisory services by experts from other States and from operators of the Region.

According to ICAO Annex 14, the certification process guarantees that, at the time of certification, international aerodrome operators meet the specifications concerning facilities and operation and, according to the certification authority, they are capable of continuing to meet such specifications.

4 Reasons

Aerodrome certification has been an ICAO standard for aerodromes with international operations since 2003 (according to Annex 14, Volume I, 1.4.1). However, [STATE] does not have certified aerodromes. Certification includes important processes such as the acceptance of the SMS of the aerodrome operator, and other processes related to emergency management, maintenance, infrastructure, operation, among others.

SMS implementation has been identified as a key element for the implementation of the SAM Regional Safety Plan (SAMSP), just like the creation and operation of RSTs has been identified in the ICAO Global Runway Safety Action Plan as a strategy for enhancing runway safety. Both processes are analysed during aerodrome certification.

Likewise, aerodrome certification is directly related to a significant number of USOAP protocol questions (PQs). Therefore, it is expected that its implementation in all the international aerodromes of the State will result in a significant increase in effective implementation (EI), according to the objectives regionally agreed in the SAMSP.

In the report of the last USOAP CMA validation activity in [STATE] (ICVM, [day] [month] [year]), ICAO identified as a high priority: *[include background of the report of the last USOAP activity].*

Likewise, the [CAA] has noted that its staff does not have enough experience to conduct an aerodrome certification process. Accordingly, in addition to supporting the certification process, the objective of this assistance project is to provide on-the-job training (OJT) to [AAC] staff for the conduction of the process.

In accordance with the Memorandum of Understanding between ICAO and the Latin American Civil Aviation Commission (LACAC), one of the main objectives of the Regional Safety Oversight Cooperation System (SRVSOP) is to recommend the necessary measures so that States can resolve the issues identified during USOAP activities and to ensure compliance with the corresponding safety

oversight responsibilities by its member States. To this end, it has experts that can support those States that do not have a proper combination of disciplines to achieve aerodrome certification. This has been done in other SRVSOP member States with very positive results.

5 Business Options

1. Do nothing

If no action is taken, the State would continue to be in noncompliance with ICAO Annex 14 and would not be able to guarantee that international aerodrome operators meet the specifications concerning facilities and operation and, according to the certification authority, are capable of continuing to meet these specifications.

2. Do the minimum

The State could undertake aerodrome certification projects without international assistance; however, there is a high risk of delay in such projects, given the lack of experience in aerodrome certification processes and in the resolution of problems in case of identifying deviations from national regulations.

3. Do something: Direct assistance for aerodrome certification

With the direct assistance of ICAO, the SRVSOP and the support of ACI and other States, the State and the aerodrome operator would have a highly competent advisory team with experience in certification processes to carry out the process in a continuous, documented, and orderly manner, allowing for the transfer of knowledge to achieve the certification objective.

6 Expected Benefits

- **Main Outputs:**
  - Direct assistance by experts to the [CAA]
  - Guidance material for the implementation of aerodrome certification
  - Training of both [AAC] inspectors and aerodrome personnel

- **Main Outcomes:**
  - Aerodrome certification in accordance with existing national regulations
  - Aerodrome with an agreed corrective action plan (CAP)
  - State inspectors gaining experience and knowledge to be able to continue with aerodrome certification
  - On-going oversight can be based on monitoring compliance with certification conditions and any additional relevant requirements
  - The operator of the certified aerodrome will have a system to maintain the certification and ensure safety through the SMS.

- **Main Benefits:**
  - Enhanced safety (due to a better assessment and control of aerodrome risks)

- Possibility of enhancing effective implementation of ICAO standards and recommended practices in the AGA field.
- Compliance with regional goals in the AGA field and contribution to the regional goals set forth in the SAMSP.
- Better position to implement the SSP.
- Potential reduction of on-going oversight costs.
- Better definition of investment priorities through gap identification at the certified aerodrome.
- Prestige and other benefits for the aerodrome as a result of proven regulatory compliance.
- Economies of scale: opportunities will be identified for the SRVSOP to better contribute to aerodrome certification and oversight in Panama and in other SRVSOP member States.

7 Expected disbenefits

- Workload: The project will generate the need for human resources in the [CAA] and the aerodrome operator for the execution of the project within the stipulated timeframe.

- Costs: The project will identify investment needs and the need for the operator to adjust its processes, which could entail costs.

8 Timeframes

This Project proposal includes two on-site missions, in addition to virtual assistance.

The scope of the Project will initially cover one (1) international aerodrome, to be designated by the [CAA], estimating a process lasting between 12 and 18 months. The detailed project plan will be developed subsequently.

The first on-site assistance will be a 5-day mission of at least 4 regional experts to start project activities, and the second on-site 5-day mission will consist of at least 5 regional experts to support on-site verification and provide OJT to [CAA] inspectors.

Stage 0	**Start of the project**
Stage 1	**Expression of interest** • On-site assistance (mission #1)
Stage 2	**Formal request** • Virtual assistance
Stage 3	**Documentation assessment (Handbook)** • Virtual assistance
Stage 4	**On-site verification** • On-site assistance (mission #2)
Stage 5	**Corrective action plan** • Virtual assistance
Stage 6	**Closing of the project**

9 Costs

The project budgeted cost is [US$XXXXX], which includes:

1. Initial on-site mission for 1 week by 4 experts to conduct an initial assessment, explain the methodology, develop the project, including a 2-day workshop for 20 participants (facilities provided by the host).

2. On-site verification mission by 5 experts for 1 week to accompany the CAA in on-site verification, in accordance with the fourth phase of the certification process.

10 Investment Appraisal

Most of the project costs are related to travel tickets and travel expenses for the experts who will provide assistance to the State and the operator. However, the project offers these missions on a *pro bono* basis, whereby experts will not charge fees for this activity. Furthermore, the follow-up to on-site missions, through virtual assistance (expert-hours) by the advisors and members of the technical committee will entail no direct cost for the State. The organisations supporting the project are committed to continue paying the salary of the experts that provide the assistance during such activities.

Use of the guidance material developed by the SRVSOP is already covered by the fees paid by the State under project RLA 99/901.

11 Major Risks [to be tailored to each State]

ID	Description	Probability	Impact	PxI*	Mitigation	Status
1	Lack of support by the operator	2	3	6	Encourage participation and openness through support by ACI LAC. Explore mechanisms with the State to generate trust in the operator.	Identified
2	Lack of experts	2	3	6	Use experts of SRVSOP member States/ACI members or other volunteer States	Identified
3	Complexity of the process	2	2	4	Use AGA LAR guidance material and methods and their corresponding alignment to national regulations to facilitate the process.	Identified
4	Follow-up to activities	3	3	9	The Regional Office and the SRVSOP technical committee will manage the project, and will issue regular reports.	Identified

Risk log notes:
Probability/severity score: 1 (low) 2 (medium) 3 (high)

Specific actions must be identified where PxI (=Probability x impact) > 3
Status: Identified / Accepted / Transferred / Avoided or Exploited / Reduced or Enhanced / Shared / Contingency Plan invoked