



International Civil Aviation Organization

South American Office

Sixth Meeting of Air Navigation and Flight Safety Directors of the SAM Region (ANFS/6)

(Lima, Peru, 24 to 25 June, 2019)

ANFS/6 – WP/20

04/06/19

**Agenda Item 5: Other Business**

**NEW PROJECT PROPOSAL UNDER THE AERODROME PROGRAMME FOR THE SAM REGION – AERODROME PLANNING**

(Presented by the Secretariat)

**SUMMARY**

Following the transition of GREPECAS to a more project based approach PIRG, and following analysis done by the Secretariat, this working paper presents to the Meeting a new project proposal under the AGA Programme on Aerodrome Planning as an enabler to future capacity on aerodromes to support increasing demand. The initial documentation for the project, which includes an associate Business Case, were prepared using PRINCE2 methodology in order to facilitate its review by the Meeting.

**Action:** The Meeting is invited to review the proposal, comment on it and recommend its presentation at PPRC/5 Meeting for endorsement under the GREPECAS Aerodrome Programme.

**References:**

- Doc 9750 - Global Air Navigation Plan (GANP), 6<sup>th</sup> Ed.
- CARSAM Regional e-Air Navigation Plan, Vol. II
- ICAO GANP Portal (<https://www4.icao.int/ganpportal/>)
- Report of the GREPECAS18 Meeting, April 2018
- GREPECAS18 Information Paper #14

**Strategic Objective(s)**

*This working paper is related to Strategic Objective(s)*

- Air Navigation Capacity and Efficiency
- Environmental Protection

**1. Introduction**

1.1. On the past GREPECAS/18 meeting, the Meeting decide that, in order to gain efficiencies, Projects F1 and F2 of the Aerodromes and Ground Aids (AGA) Programme of GREPECAS will merge into one single project F named “Aerodrome Safety and Certification Implementation Project”. After this decision, each Region only have one Project under the F Programme (Project F1). Currently, there is no other project dealing with capacity and efficiency matters from the aerodrome perspective, as aerodrome certification serves as a basic building block due to its more Safety and compliance connotation.

1.2. Under the 2019 version of the GANP, ICAO addresses the need for States to ensure the foundations for a robust air navigation system thru the implementation of the Basic Building Blocks (BBB). To ensure the provision of seamless air navigation services based on the deployment of interoperable systems and harmonized procedures, States need to leverage the implementation of the BBBs through their national air navigation plans as a strategic part of their national aviation planning framework. Aerodrome Design is considered as part of Aerodromes BBBs, however, there is no current direct effort or project under the Aerodrome Programme dealing with this matter.

1.3. The Volume II of CARSAM Air Navigation Plan recognizes the need to tackle aerodrome capacity and planning, as it indicates on section 2.14 that *“The declared capacity/demand condition at aerodromes should be periodically reviewed in terms of a qualitative analysis for each system component and, when applicable, the result of the qualitative assessment upon mutual agreement be used for information”*.

1.4. Furthermore, section 2.17 says that *“Aerodrome capacity should be assessed by aerodrome authorities in consultation with the parties involved for each component (terminal/apron/aircraft operations) using agreed methods and criteria for level of delays.”*

## **2. Project on Aerodrome Planning**

2.1. On September 2018, a Seminar & Workshop on Airport Planning for the SAM Region (code 18ADPLAN) was held at the ICAO SAM Regional Office premises. The event was attended by 67 participants from 12 States, 10 Aerodrome operators, and with the participation of expert speakers from different international organizations related to airport planning.

2.2. As a result of the event, the group agreed that the SAM Region should adopt a vision in order to tackle the airport infrastructure problems that were clearly identified at the event. This agreed vision was:

*“To be a Region recognized worldwide for the collaborative planning of its airports, which ensures the timely and balanced capacity to bring the benefits of air transport to all the people of South America”*

2.3. In order to accomplish this vision, a series of activities, including the analysis and identification of the probable root-cause(s) for aerodrome capacity constraints in the SAM Region, and corresponding action plans for States to address it, were indicated as necessary.

2.4. Based on the conclusions, analysis and action plans proposed by the experts at the Seminar-Workshop, the proposed Project aims to deliver guidance for a consultative and collaborative approach with users in the master plan development in order to ensure its optimal functionality, capacity and safety. In addition, the Project will support States to include conditions so that the plans contain a schedule of priorities including a phased implementation plan and that is reviewed periodically to consider current and future aerodrome traffic based on data. All this along with associate capacity building for State specialists. The Project also must consider the environmental considerations on aerodrome land use and planning.

2.5. A copy of the initial Business Case and Project Brief is included in Appendix A of this WP.

**3. Suggested action**

3.1. The Meeting is invited to:

- a) take note of the information provided in this working paper;
- b) analyse the document on Appendix A;
- c) comment on the convenience or not of proposing this project to PPRC meeting for its endorsement and implementation in the SAM Region;
- d) Propose candidates to work with ICAO on the development of the Project.

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**APPENDIX A**



INTERNATIONAL CIVIL AVIATION ORGANIZATION  
SOUTH AMERICAN REGIONAL OFFICE

PROJECT DOCUMENTATION

## **BUSINESS CASE**

**Project: Aerodrome Planning in the SAM Region**

Release: 1

Date: 04 June 2019

## **PRINCE2**

Author: SAM AGA Regional Officer

Owner: GREPECAS

Client: SAM States

Document Ref: CAP-AGA-17-001

Version No: 1.13

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## 1 Business Case History

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### 1.1 Document Location

This document is only valid on the day it was printed.

The source of the document will be found at this location – *[AGA Projects\Project CAP-AGA-17-001\_Airport Planning]*

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### 1.2 Revision History

Date of this revision:

Date of next revision:

Revision date	Previous revision date	Summary of Changes	Changes marked
04/06/19		First issue	

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### 1.3 Approvals

This document requires the following approvals.

Signed approval forms should be filed appropriately in the project filing system.

Name	Signature	Title	Date of Issue	Version
PPRC				

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### 1.4 Distribution

This document has been distributed to:

Name	Title	Date of Issue	Version
RCC			
Project Board			
Project Team			

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### 3 Executive Summary

Based on the ***Declaration to promote Connectivity through the Development and Sustainability of Air Transport in the Pan-American Region - Vision 2020-2035 (IWAF/4)***, endorsed by Pan-American States in Fortaleza, Brazil in September 2018, the sustainable development of aviation in the Region depends on the availability of capacity and efficiency of its operations, through coordinated actions, in alignment with the GANP. Airports are an important link in the process to ensure the needed capacity and efficiency for aircraft operations to occur.

On September 2018, a Seminar & Workshop on Airport Planning for the SAM Region (code 18ADPLAN) was held at the ICAO SAM Regional Office premises. The event was attended by 67 participants from 12 States, 10 Aerodrome operators, and with the participation of expert speakers from different international organizations related to airport planning.

As a result of the event, the group agreed that the SAM Region should adopt a vision in order to tackle the airport infrastructure problems that were clearly identified at the event. This agreed vision was:

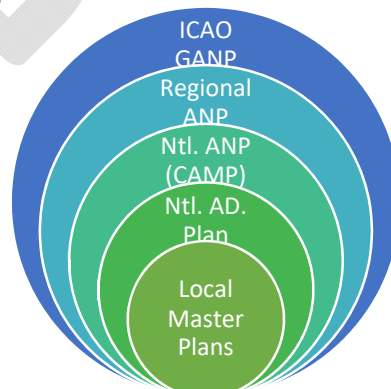
*“To be a Region recognized worldwide for the collaborative planning of its airports, which ensures the timely and balanced capacity to bring the benefits of air transport to all the people of South America”*

In order to accomplish this vision, a series of activities, including the analysis and identification of the probable root-cause(s) for aerodrome capacity constraints in the SAM Region, and corresponding action plans for States to address it, were indicated as necessary.

Based on the conclusions, analysis and action plans proposed by the experts at the Seminar-Workshop, this Project aims to produce a regional plan with recommendations to States on how to establish mechanisms to evaluate and monitor capacity/demand based on data, in order to implement provisions to ensure that selected international aerodromes prepare plans that contain a schedule of priorities including a phased implementation plan and that is reviewed periodically to consider current and future aerodrome traffic based on data.

This plans will be aligning to a National Airport Plan, which is on its own part of the National Air Navigation Plan (ANP) and State’s Civil Aviation Master Plan (CAMP).

As National Airport Plans usually follow State priorities, the Project also aims to produce Regional Guidance, following the Regional Air Navigation Plan, in order for States to include regional provisions on their national plans.



Finally, the Project also proposes to build capacity and competences in State CAA's regarding airport planning by having at least one (1) trained staff in each CAA on airport planning by 2023. This Staff, assigned by the Member State, will serve, as a focal point for the project with ICAO RO, will be responsible to follow up Project's activities related to the State in conjunction with ICAO's SAM Regional Office.

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## **4 Reasons**

According to ICAO Doc 9854<sup>1</sup>, the principal challenge to aerodrome operators will be to provide sufficient aerodrome capacity, while the challenge to the ATM system will be to ensure that all available capacity is fully and efficiently utilized.

In the SAM Region there is a lack of airport infrastructure capacity in many important hubs that had led to increased costs, saturation, delays, inefficiencies, and loss of opportunity due to the lack of space to operate, thus acting against the common long-term national and regional interest of realizing the benefits of growing air connectivity.

In addition, State Letter AN 4/1.1.59-18/103 includes an amendment proposal for Annex 14, Vol. I in order to include specific provisions for Aerodrome Master Planning. This proposal, included initially as a Recommendation, will be reviewed at a later time to be upgraded to a mandatory Standard. Along with these provisions, ICAO is updating its guidance material related to aerodrome master planning, that will support project's objectives.

The State letter also addresses that since decisions made by the airports regarding their master planning will undoubtedly have an impact on airlines and passengers, there is a real danger that ineffective and inadequate collaborative consultation will result in sub-optimal functionality and possible capacity and/or safety issues. It is important that collaboration is mutual and that stakeholders actively participate and share as much information as possible. The same was agreed by the group participating on the ICAO 18ADPLAN event.

With a clear roadmap, better regional guidance material in addition to new ICAO guidance, increased knowledge and competencies on airport planning, States will be on a better position to plan ahead and analyse data in order to execute the needed airport infrastructure projects on time.

This will enable the needed capacity to cope with the demand, thus increasing connectivity to the State and to the network in a safe and efficient matter. This increased connectivity will give more access to air travel to the general public and foster the Region's development.

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## **5 Business Options**

### **1. Do nothing**

This option leaves the Region at the status quo: if no further actions taken, infrastructure deficiencies will continue to be the major capacity issue in the Region, and although some projects will be put in place to cope with air traffic demand, usually airport development projects are very large in scope and have a long time horizon from planning to completion, thus not delivering the needed capacity on-time. Also, the airport development projects may not respond to the State's or other stakeholders needs if an inadequate collaborative consultation is not addressed.

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<sup>1</sup> "Global Air Traffic Management Operational Concept" (Montreal: ICAO, 2005).

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## **2. Do the minimum: Deliver seminars on airport planning**

In this scenario, the Regional Office may deliver seminars and other type of training on airport planning to increase competences in States; however, as the gap analysis is not made and no framework or mechanism is established within the State and aligned with Regional realities, the results of the training may not be seen, as the staff participating in this type of activities are not usually full time working on airport planning matters.

## **3. Do something: Project on airport planning (Analysis-plan-training)**

This is the recommended option. By having Regional guidelines in coordination with international organizations and/or consultants on how to develop national and local airport master plans and at the same time capacity building in States thru well prepared and trained staff, States will be on a better position to establish mechanisms and frameworks to develop quality aviation infrastructure commensurate with the level of predicted traffic growth and based on Regional and Global Plans.

These frameworks will be aligned with the Regional Airport Planning initiatives and will facilitate the ICAO SAM Regional Office to follow up with States in order to predict and avoid capacity constraints in the system.

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## **6 Expected Benefits**

### **• Main Outputs:**

- Guidance for States to align their National Aerodrome Plans (as part of National Air Navigation Plans) to the Regional scenario (regional ANP).
- Guidance material for States to endorse a collaborative consultation approach on airport planning.
- Draft regulations regarding Annex 14 Vol. I new requirements for airport master planning so that States may harmonize with their local regulations.
- Capacity building and knowledge transfer to State and Airport experts on the airport planning area.

### **• Main Outcomes:**

- Airport planning as part of CAMP (Civil Aviation Master Plan)
- Implementation of a mechanism to evaluate capacity/demand based on available data in order to make better decisions to trigger airport infrastructure needs.
- States to prepare by themselves or thru third parties (using guidance material as baseline for the study terms of reference) National Airport Plans that establishes a high level approach
- States to implement provisions to ensure selected Airports with up-to-date master plans in consultation with affected stakeholders.

### **• Main Benefits:**

- State ensures today the space and provisions for future airport capacity.
- Aviation industry to review and potentially revise project priorities within the overall strategic development/master plan of an airport to balance capacity enhancements and ensure that the right facilities are provided at the right time within the context of overall affordability, operational efficiency and safety.
- Lower costs for airlines to operate
- Lower airfares for the passenger public
- Regional network of airport planners

## 7 Expected Dis-benefits

- The time for staff to be trained may avoid this staff to be doing their regular activities within the CAA.
- Costs to the program on missions, training, etc.
- More workload to States and RO.
- Aerodrome operators may need to engage on costs to update their master plans on a pre-defined period.

## 8 Timescale

The implementation of the Project will be defined by phases and work packages, that will be determined by the project. Nevertheless, the following work packages has been identified as tentative for the project:

- Working package #1: Guidance for States to align their National Aerodrome Plans (as part of National Air Navigation Plans) to the Regional scenario (regional ANP).
- Working package #2: Guidance material for collaborative aerodrome planning
- Working package #3: draft regulations on airport planning
- Working package #4: Implementation Plan (including training)

Draft timescale:

Stage	Activity	Proposed dates
Stage 1	Present Project on Aerodrome Planning. States to endorse Project Select Project Team and Team Managers (per State). Prepared detailed project initiation documentation Select funding.	2019-20
Stage 2	Gap Analysis and high level recommendations (draft framework document) for implementation mechanisms Work with experts/States.	2021
Stage 3	Endorse a common regulatory approach on States based on ICAO SARPs (model regulation and/or guidance material)	2022
Stage 4	Regional Policy (regional ANP)	2023
Stage 5	Training and Implementation	2024-onwards

## 9 Costs

To be detailed on Project Plan. Costs will include activities such as missions, document preparation, workshop preparation and delivery (including simultaneous interpretation, missions, coffee breaks, etc.), meeting preparation, marketing (communications), etc.

## 10 Investment Appraisal

The project is proposed to be funded by resources from Project RLA06/901 and contributions from States or International Organizations.

Like most projects managed by the Regional Office, experts from Member States and Industry support a pro-bono scheme that reduces the costs associated with missions and the preparation of

documents. Project management and administrative costs must be covered by the current mechanisms known for GREPECAS projects. When working on regional guides and projects, the cost-benefit analysis is expected to yield positive results compared to the individual efforts of States accompanied by private consultants. The products will serve to help States to be more prepared to request services from third parties.

## 11 Major Risks

ID	Description	Probability	Impact	Pxl*	Mitigation	Status
1	Staff assigned by State may not be with the required initial competencies	1	3	3	<i>Survey States and put initial requirements for the focal point</i>	Identified
2	Lack of interest from States	1	3	3	<i>Due diligence and explain properly the project's benefits. Relate to SAM PLAN pillars/objectives</i>	Identified
3	The implementation of final solutions may be seen as a threat for current concession agreements and/or may not be possible to implement because of contractual matters	2	3	6	<i>Actively involve organizations such as ACI to gather the stakeholder concerns and include them on the plan. Also, get advice from a legal perspective on how to deal with these scenarios</i>	Identified
4	Not getting the support (funding) for the project	2	3	6	<i>Involve international organizations that may be interest in the development of the region's aviation in order to explain the benefits of better planning of airport infrastructure</i>	Identified
5	Staff assigned by State will abandon the CAA after training	2	2	4	<i>Align with SAM PLAN Institutional Strengthening</i>	Identified
6	Operators (Airlines/Airports) not willing to share sensitive planning data	3	3	9	<i>Propose non-disclosure agreements to mitigate this effect</i>	Identified

*Risk log notes:*

*Probability/severity scored: 1 (low) 2 (medium) 3 (high)*

*Specific actions must be identified where Pxl (=Probability x Impact) > 3*

*Status: Identified / Accepted / Transferred / Avoided or Exploited / Reduced or Enhanced / Shared / Contingency Plan invoked*