



**Nineteenth Meeting of the CAR/SAM Regional Planning and Implementation Group
 (GREPECAS/19)
 Online, 27 – 29 October 2021**

Agenda Item 3: GREPECAS Work Programmes, Objectives and Results

3.2 GREPECAS work programs, objectives and results

**CAR / SAM INTEGRATION FOR THE DEVELOPMENT OF AIR TRAFFIC FLOW
 MANAGEMENT (ATFM) IN THE REGION**

(Presented by Brasil)

| EXECUTIVE SUMMARY | |
|---|---|
| <p>The Working Paper reports the implementation of the Air Navigation Management Center (CGNA) in Brazil. In addition, it presents the difficulties faced during the COVID-19 pandemic in the Region and the collaborative actions that have been implemented, and those that are planned, with the interested States, to build solid solutions for a safe and efficient environment for the CAR / SAM Regions.</p> | |
| Action: | It is described in Section 4. |
| <i>Objectives Strategic:</i> | <ul style="list-style-type: none"> • Capacity and Efficiency • Economic development of air transport • Environment Protection |
| <i>References:</i> | <ul style="list-style-type: none"> • Annex 11 – <i>Air Traffic Services</i>. • Doc. 4444 – PANS-ATM • SAM Implementación Group Meeting (SAMIG) |

1. Introduction

1.1 Except for a few navigable rivers, which allow trade in the SAM Region, this activity in the South American continent has always faced natural barriers to its development, both due to the difficulty of crossing the Andes Mountains, as well as extensive areas of dense vegetation.

1.2 This characteristic historically provided the concentration of the means of production in coastal cities due to the proximity of ports and, consequently, less development in the interior of all countries.

1.3 If, on the one hand, coastal development provided proximity to ports, trade through the naval modality still faces the difficulty of navigating long distances to reach the opposite side of the

continent. In addition to transporting people, aviation has offered a solution to the dilemma of transporting cargo and made trade more fluid and reach places and communities that seemed isolated.

1.4 With the increase in the number of flights in recent decades, all countries have begun a continuous development process more sustainably, due to the characteristic of aviation itself of not being subject to natural obstacles.

1.5 The expansion of aviation has given a boost to industrial activities, and trade also benefited since aviation allows the arrival of inputs promptly for production and reduces losses caused by long periods of land or naval transport, mainly in the case of perishable products.

2. Analysis

2.1 According to indicated in section 1.4, the number of flights increasing has impacted the capacity and efficiencies of the air navigation systems. This scenario required the implementation of a planning methodology for air operations to increase the capacity and efficiencies of the system without affecting the level of operational safety.

2.2 Considering this premise, in 2007, Brazil created the Air Navigation Management Center (CGNA), which was designed with the growth of aeronautical activity at airports and Brazilian airspace as a determining factor. The Department of Airspace Control (DECEA) assumed the mission of establishing the CGNA to allow the agency to manage current actions in air traffic management and its related infrastructure.

2.3 The entry into operation of the CGNA made the management of traffic flow in Brazilian airspace a reality, modernizing national air traffic control, facilitating the work of pilots and flight controllers, and providing fuel-saving without losing sight of the safety of air operations.

2.4 However, in April 2020, the entire region again found itself in a challenging scenario caused by the COVID 19 pandemic, which caused all aviation to come to a standstill, and commercial exchanges practically were similarly restricted.

2.5 Despite the highly adverse scenario, the need for joint action to develop aviation in the SAM Region and, consequently, due to its proximity to the CAR Region, was also highlighted para el desarrollo de la aviación en la Región SAM y, en consecuencia, por su cercanía la Región CAR.

2.6 In this sense, Brazil has always positioned itself collaboratively with ICAO and with the region's countries through training, technical support, service provision, and exchange of practices and assuming leadership of the Caribbean and South American Monitoring Agency (CARSAMMA), responsible for airspace monitoring in the CAR and SAM Regions.

2.7 his entire association has been further strengthened since early 2021 with the collaborative participation of South American countries in meetings to build an ATFM model for the region.

2.8 In this model, teams have the real possibility of having a fully interactive environment and the opportunity to present their point of view. In addition, they all have the technology already developed to consult the demand for flights that directly affect the flow of air traffic in their country.

2.9 It is also worth mentioning that participating countries also benefit directly from direct access to the teams that led most of the implementations in Brazil and can answer questions during the forums.

2.10 To get an idea of what Brazil managed to implement in the recovery process; Following the practice of Europe concerning air traffic in the region, it adapted the plan used by EUROCONTROL to its reality. Through frequent meetings with representatives of national airlines, airports, and IATA, it developed an efficient model for controlling and projecting its air traffic demand that allowed adapting the airspace structure to the air traffic demand. In addition, more efficient routes linking national city pairs and non-route airspaces were collaboratively developed, providing savings of approximately 21 tons of fuel in operations from April 2020 to July 2021.

2.11 Also, within the COVID 19 Recovery Plan developed by Brazil, other points of the airspace and airports were studied together with the community, and possibilities for improvements were implemented, such as:

- a) the vertical sectorization of airspaces that were the target of an increasing volume of air traffic;
- b) performance of improvements in airport operations in times of greater influx, given the new operating model of national companies and the higher performance of the terminals, which now have an increase in traffic volume due to the creation of new hubs and to the growth of general aviation traffic operations.

3. Implementations in the scope of ATFM

3.1 To share the achievements made with the CAR/SAM Region States with the national plan of operations and assist in the regional planning of international flights that should gradually increase due to the advance of immunization, Brasil encouraged the resumption of an ATFM agenda. This work had to be addressed, in SAM Region, within the scope of SAMIG, through the creation of SUBGROUP 3 - ATFM of the SAM Group for the Study and Implementation of SAM Airspace (GESEA) of SAMIG. In this context, the ICAO Regional Office in Lima and the States of the SAM Region understood that Brazil, through the CGNA, should coordinate SUBGROUP 3. In this context, actions have been carried out collaboratively with the States region. In just three months of work, the following advances have been achieved:

- a) **Study of the main flows:** Study developed to identify and map the primary air traffic flows within South America and also between South America and other continents, to contribute to the definition of strategies to optimize airspace and balance demand and capacity;
- b) **ATFM Operations Plan for the SAM Region:** Document prepared based on the CGNA Operations Plan - COVID-19 Resumption to create a regional mechanism to balance the demand and capacity of the main flows of South America;
- c) **Pre-tactical briefing:** Weekly, the purpose of this briefing is the exchange of information between States at a pre-tactical ATFM level, that is, within a horizon of 7 days. This briefing takes place every Tuesday **from July 6, 2021**, between

Brazil and Argentina and will now have the participation of the other States of the SAM Region;

- d) **Strategic and Post-Operations Briefing:** Every week, the purpose of this briefing is to exchange information between the States at the strategic and post-operational ATFM level, that is, within a period of more than seven days in advance and looking at previous data, respectively. This informational meeting will take place every last Thursday of the month starting October 28, 2021;
- e) **Data exchange panel:** Panel developed based on the CGNA panel that supports the information in the Operations Plan - COVID-19 Curriculum, to support the exchange of information and the pre-tactical briefing and strategic briefing and postoperative; and
- f) **ATFM Implementation Guide for the SAM Region:** Guidance document to assist the States of the region in implementing the ATFM service.

3.2 At the Third Meeting of SUBGROUP 3 - ATFM, the activities for the following work cycle were also defined, which will be focused on:

- a) **Capacity Manual for the SAM Region:** This Manual is already under development, and this work cycle will include criteria that are in the final stage of development within the ATC Capacity Adhoc Group of the Study Commission on Airspace Planning (GEPEA), which the CGNA also carries out; and
- b) **Panel de intercambio de datos:** mejora de los mecanismos de detección de la demanda mediante la inclusión de una metodología para realizar pronósticos de demanda para la aviación general; identificación de tiempos de saturación de aeropuertos y sectores ATC mediante la inclusión de características relacionadas con la capacidad de la pista y ATC; y permitir el análisis posterior a la operación estandarizando el intercambio de datos posterior a la operación.

3.3 Regarding benefits, it is clear that the participation of all States will generate a condition of the entire association to improve the flow of air traffic throughout the region. Consequently, it will bring positive effects, in the medium and long term, both in terms of operational safety and direct savings for airlines and airports.

3.4 All of these savings can also translate into the ability to sustain air operations over the years, further fueling a virtuous and sustainable business cycle that will gain momentum as the joint work evolves.

3.5 In this way, Brazil makes itself available again, through the Air Navigation Management Center - CGNA team, to collaborate collaboratively and for constructive purposes with all the countries of the CAR / SAM Regions that wish to be part of the construction of the ATFM of the Region.

4. Requested Actions

4.1

The meeting is invited to:

- a) Take note of the content of this working paper;
- b) Socialize the ATFM progress with all the Air Navigation Services (ANS) providers of the CAR / SAM Regions;
- c) Invite all States to join the ATFM collaborative scheme; and
- d) Consider other actions that the meeting deem necessary.

— END —