



**Agenda**

**Item 6: Global Air Navigation Plan (GANP) seventh edition and GREPECAS commitments for the CAR/SAM Regional Plan**

**IMPLEMENTATION OF VOLUME III OF THE REGIONAL PLAN - ANP CAR/SAM**

(Prepared by the Secretariat)

<b>RESUMEN</b>	
This paper is intended to improve participants' understanding of the ANP CAR/SAM, Vol. III. It is also aimed at promoting concrete actions of SAM/IG to support GREPECAS in the face of the challenges of effectively implementing Volume III of the CAR SAM ANP.	
<b>Reference</b>	
<ul style="list-style-type: none"><li>• Twentieth Meeting of the Regional Planning and Implementation Group of the Caribbean and South America - GREPECAS/20, Salvador, Brazil, November 15 – 18, 2022.</li><li>• Regional Workshops on the Preparation of Volume III of the NPA CAR/SAM</li></ul>	
<b>ICAO's Strategic Objectives:</b>	<i>A - Safety</i> <i>B - Air Navigation Capacity and Efficiency</i>

**1. Background**

1.1 During the GREPECAS/20 meeting, the process of formulating Vol. III of the Regional Air Navigation Plan CAR/SAM (RANP) was reported. It was noted that ICAO formed an inter-regional Working Group for the implementation of a standardized template for Volume III of the RANPs, with a performance-based approach. As a result of this Working Group, a pilot project was set up in the CAR/SAM Regions, with the aim of facilitating the implementation of this document in all ICAO Regions.

1.2 Between 2019-2022, activities have been carried out with States/Territories and Organizations to disseminate the Template proposed by ICAO and reinforce the concepts of performance-based planning, in order to build Volume III of the Regional Air Navigation Plan CAR/SAM (e-ANP CAR/SAM). In these activities, the Secretariat had noted the need to strengthen, first, Volumes I and II of the RANP and then to work on the formulation of Vol. III of the RANP CAR/SAM.

1.3 The Secretariat, once the process of reviewing and updating Vol. I and II was completed, has worked on the formulation of Vol. III of the RANP, with a Performance-Based Approach (PBA), working with a Template formulated by ICAO.

1.4 In this process, through workshops and teleconferences, opportunities for improvement have been identified for the text of the template and for the Schedules, including proposals for new columns and explanatory texts, so that they can be associated with the concepts of the GANP, as well as facilitate the interaction of planners with the tools (tutorials, catalogs, etc.). dashboards, AN-SPA, etc.), provided on the GANP website. Likewise, it is important to mention that, in the SAM Region, the need to have the GANP and the ANP CAR/SAM in Spanish has been emphasized and reiterated.

1.5 The GREPECAS Meeting /20 noted that the Secretariat together with the States, after three years of work, formulated version "0" of Vol. III of the e-ANP CAR/SAM, consequently after reviewing the content presented, the Meeting decided to approve it through the Conclusion shown in **Appendix A**.

## 2. Analysis

### *Summary*

2.1 In November 2012, the Twelfth Air Navigation Conference (AN-Conf/12) formulated Recommendation 6/1 - Regional action framework - Planning methodologies and tools related to the alignment of regional ANPs with the fourth edition of the Global Air Navigation Plan (GANP<sup>1</sup> - Doc. 9750). The result was the adoption of the template of the Regional Air Navigation Plan (ANP) in April 2014, which included changes to the regional ANP with a new structure of three Volumes and improvements in format and content, as detailed:

- A. Volume I of the ANP contains stable elements whose amendment requires approval by the Council, such as the assignment of responsibilities to States for the provision of services of:
  - ✓ aerodromes
  - ✓ air navigation facilities and services
  - ✓ additional requirements specific to the region and not covered by the SARPs.
- B. Volume II must contain the dynamic elements of the plan, the amendment of which does not require Council approval (approval is by regional agreement of the relevant PIRGs), referring to:
  - ✓ the assignment of responsibilities;
  - ✓ mandatory requirements subject to a regional agreement; and/or
  - ✓ additional requirements specific to the region and not covered by the SARPs
- C. Volume III<sup>2</sup> stipulates the dynamic/flexible elements of the plan providing implementation planning guidance for air navigation systems.

### *Three Frameworks of the GANP*

2.2 Since 2020, in the Secretariat's assistance activities for the preparation of Vol. III, difficulty was observed in distinguishing the following three GANP frameworks:

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<sup>1</sup> <https://www4.icao.int/ganportal/>

<sup>2</sup> *The template for Volume III was approved by the ICAO Council in June 2014.*

- 1 BBB Framework: Basic Building Blocks
- 2 ASBU Framework: Aviation System Block Upgrade
- 3 GANP Performance Framework

2.3 Since the approval of the seventh edition of the GANP in 2022, 4 new Key Performance Indicators (KPIs) were incorporated on the key performance area “operational safety”, which allow measuring/monitoring the implementation of certain elements of the *Operational* common thread of the ASBU<sup>3</sup> framework.

2.4 The seventh edition of the GANP also clarifies how to manage the BBB framework and how to verify it, thereby establishing a practical link between the Global Plans; the GANP and the Global Aviation Safety Plan (GASP - Doc. 10004).

2.5 In summary, the GANP seventh edition and the GASP 2023-2025 edition converge on the following concepts:

- The BBB stipulated in the GANP and the GASP form an independent framework, and not a block of the ASBU framework.
- The BBB framework does not represent any evolutionary step, but rather a reference. This reference is defined by the essential services agreed to by States within the framework of the Convention on International Civil Aviation so that international civil aviation develops in a safe and orderly manner. In accordance with the approved format and content of the ANP, the data linked to the BBB is set out in Volume I and Volume II which describe the aforementioned essential services.
- The ASBU framework defines a group of operational improvements within some areas of the air navigation system on which the aviation community has agreed to work in order to maintain or improve the performance of the system (ASBU threads).
- An ASBU element is a specific change in operations aimed at improving the performance of your air navigation system under specific operational conditions.

2.6 Finally, the GANP Performance Framework is composed of; the catalog of performance objectives, the definition of 23 KPIs, and a tool for “Air Navigation System Performance Assessment (AN-SPA)”.

*Volume III of the CAR/SAM ANP and Performance-Based Planning*

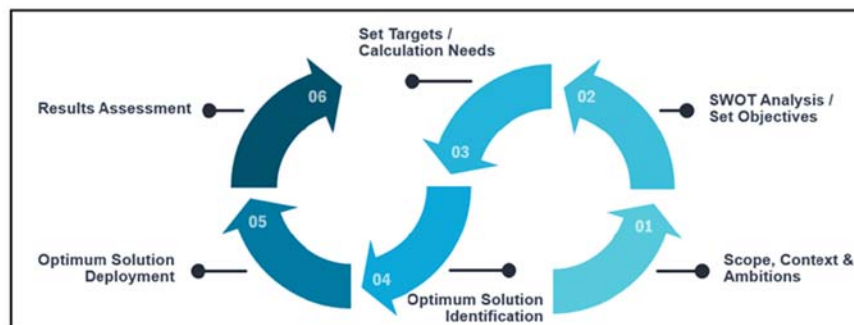
2.7 In Volume III, the 6-step methodology of performance-based planning is deployed, which stipulates an iterative process, always within the ASBU framework and the respective performance framework that covers, to date, four KPAs; Efficiency, Capacity, Predictability, and Operational Safety<sup>4</sup>.

2.8 The six steps of the iterative process (see graph 1) are:

<sup>3</sup> The ASBU Framework is divided into three guiding threads; Operational, Information and Technology.

<sup>4</sup> There are seven other KPAs for which indicators will be developed.

- Step 1: Define/examine scope, context, and overall ambitions/expectations.  
 Step 2: Determine opportunities, problems and establish objectives (performance ambitions).  
 Step 3: Quantify objectives (with KPI baselines and based on performance improvement goals).  
 Step 4: Determine solutions (from the ASBU<sup>5</sup> framework) to exploit opportunities and solve problems.  
 Step 5: Implement solutions (from the ASBU framework)  
 Step 6: Evaluate the achievement of objectives. (measure/monitor progress of KPIs according to formulated goals)



Graph 1

2.9 The CAR/SAM Regions began activities to prepare Volume III since 2020. In this process, through workshops and teleconferences, opportunities for improvement have been identified for the text of the template and for the Planning Tables, including proposals for new columns and explanatory texts, so that they can be associated with the GANP concepts, as well as facilitate the interaction of planners with the tools (tutorials, catalogues, dashboards, AN-SPA, etc.), provided on the GANP website.

2.10 GREPECAS/20 (Brazil, November 2022) through Conclusion GREPECAS/20/07 adopted the initial version (version 0) of Volume III of the CAR/SAM ANP, and following actions for the management and development of planning based on performance.

#### *Current situation, advanced steps*

2.11 The CAR/SAM region has developed initial competencies for the formulation of the Tables of Vol. III. Working with States, Organizations, ANSPs and, basically, with Industry. The Secretariat assisted in the preparation of Tables required in steps 1 and 2.

2.12 Regarding the development of step 3, the Secretariat considers crucial the need to strengthen the management of KPI indicators by the Administrations with the assistance of the Regional Offices. This should be a scalable process that can begin with the collection of air traffic demand data, and take-off/landing times versus estimated times, as well as off-block and in-block times, compared taxi times for departure and arrival, flow of operations at an airport, comparison of planned flight and actual flight, etc.

2.13 Following the definition of KPI baselines, temporary goals (targets) should be established for said indicators, that is, initially it will be very difficult to specifically agree on improvement ambitions for the indicators. A practical proposal would be to agree on minimum goals for the indicator and, in

<sup>5</sup> In theory, the possibility of Non-ASBU solutions is also considered.

parallel, observe the behaviour of the associated KPI for a period (between 1 and 2 years). Note that some implementations are in progress in CAR/SAM, among others, the ASBU APTA and FRTO modules. At the same time, in the aforementioned period it would be perfecting the management of indicators in the States.

2.14 Step 4 refers to the deployment of planning, leading to the selection of ASBU elements in terms of solutions that cover improvement expectations. In this step it should be recognized, again, that there are implementations in progress. Planning for step 4 would be carried out in a *Top-down* approach, with the assistance of the Secretariat.

2.15 Step 5 would be the responsibility of States/Organizations that carry out the implementation of the ASBU or, in the case of an implementation that is already in process, analyse whether it is required to reinforce an implementation in progress.

2.16 Step 6 of the method will be to evaluate the achievement of the objectives and goals of the implementation, however, the first years would initially be considered transitory goals, as set out in paragraph 2.13 above.

*Pending Tasks and identified issues.*

2.17 To date, most States are in the preparatory process for the formulation of KPI baselines. As a result, in version 0 of the ANP, Tables PMP III-4 and PMP III-5 have been populated with data provided by four (04) States. Therefore, to move forward with Volume III, it is necessary to **re-improve tasks for compliance** with step 3 by the States.

2.18 Identified problems during the process:

- Understanding of the relevance of the CAR/SAM ANP Regional Plan as a global planning instrument and for the establishment of international responsibilities, and of the relationship of the Regional Plan with the right to establish aeronautical charges.
- Lack of cooperation between the State air navigation planning body and the data providers that are necessary for the formulation of KPIs. In some cases, both depend on the same administration, however, the delivery of data is not facilitated.
- Insufficient resources, knowledge and/or technology to manage *simple* indicators and *complex* indicators (example: KPI17 and KPI19 require automation).
- Need to improve the cost-benefit analysis in the decision-making process for implementing improvement elements in the air navigation area.
- Reorientate regional planning to introduce the six-step method as a reference for GREPECAS, so that it can be verified that the agreed improvement elements for air navigation provide the expected results. Identify the tools necessary for the NACC and SAM Offices to appropriately assist with this objective.

*Reflexions***Considering the above:**

- a) Can a Regional Air Navigation Plan be disregarded?
- b) What would be a different mechanism to declare the Regional commitments derived from the Chicago Convention?
- c) How can the interoperability of air navigation systems and facilities in CAR/SAM, the alignment of national air navigation plans, as well as operational safety be guaranteed? What are the limitations that do not allow multidisciplinary teams to be supported in the administrations for Regional ANP Planning? Does this affect the management activities of national air navigation plans?
- d) Have the risks of acquiring CNS/ATM equipment that does not respond to a timely cost-benefit analysis been identified in the Region and/or in the States?
- e) Can joint work with Industry, Airlines and airspace users be strengthened? What are the areas of cooperation that can facilitate the proper management of the Regional Air Navigation Plan for interested parties?

**3. Suggested Action****3.1 The meeting is invited to:**

- a) Take note of the presented information;
- b) analyse the specific challenges faced in the effective implementation of Volume III, so that it becomes a management tool for performance-based planning; and
- c) propose and, if necessary, approve specific actions of SAM/IG to support GREPECAS in the face of the challenges of effectively implementing Volume III of the ANP CAR SAM.

## APPENDIX A

<b>CONCLUSION</b> GREPECAS/20/07		<b>APPROVAL OF THE INITIAL VERSION (VERSION 0) OF VOLUME III OF THE CAR/SAM ANP, AND FOLLOWING ACTIONS FOR THE MANAGEMENT AND DEVELOPMENT OF PERFORMANCE-BASED PLANNING</b>	
<b>What:</b> That,  ;		<b>Expected impact:</b> <input type="checkbox"/> Political / Global <input checked="" type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Operational/Technical	
<p>a) GREPECAS approve the initial version (version 0) of Volume III of the CAR/SAM ANP (Appendix B of the report), formulated based on the ICAO Council Template, and aligned with Recommendation 4.3/1, d), of the AN-Conf 13;</p> <p>b) GREPECAS approve the Programme for the management of Volume III of the CAR/SAM ANP (Appendix B of the report), which allows the sustainable implementation of performance-based planning; and</p> <p>the States implement work teams to develop data collection activities and management of GANP KPIs as a basis for populating the data of the Planning Tables of Vol. III, with the assistance of the Secretariat to report in GREPECAS/21.</p>			
<b>Why:</b> To implement the six-step method for performance-based planning in the CAR/SAM Regions and complete the data population process of the States/Territories and, therefore, Volume III Management.			
<b>When:</b> a) immediately b) report for PPRC/05 c)		<b>Status:</b> <input checked="" type="checkbox"/> Valid / <input type="checkbox"/> Superseded / <input type="checkbox"/> Completed	
<b>Who:</b> <input checked="" type="checkbox"/> States <input checked="" type="checkbox"/> ICAO <input type="checkbox"/> Other:			

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