



**Twenty-first Meeting of the CAR/SAM Regional Planning and Implementation Group
(GREPECAS/21)**

Santo Domingo, Dominican Republic, 15 to 17 November 2023

Agenda Item 3: Global and Regional Developments
**3.2 Work report on the CAR/SAM Regional Air Navigation Plan Vol. III
and Regional Progress**

**Working Session for the Effective Implementation of the CAR/SAM
ANP Vol. III – Working Guide #2**

Effective Implementation of the CAR/SAM ANP Vol. III

(Presented by the Secretariat)

Summary

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 Air Navigation Plans (ANPs) with the fourth edition of the Global Air Navigation Plan (GANP¹ - 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 ICAO Standards and Recommended Practices (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 Planning and Implementation Groups (PIRGs)), referring to:

¹ <https://www4.icao.int/ganportal/>

- ✓ 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 III² stipulates the dynamic/flexible elements of the plan providing implementation planning guidance for air navigation systems.

Three Frameworks of the GANP

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

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

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 ASBU³ framework.

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 (Doc 10004 – GASP).

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 The template for Volume III was approved by the ICAO Council in June 2014.

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

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

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 Safety⁴.

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

Step 1: Define/examine scope, context, and overall ambitions/expectations.

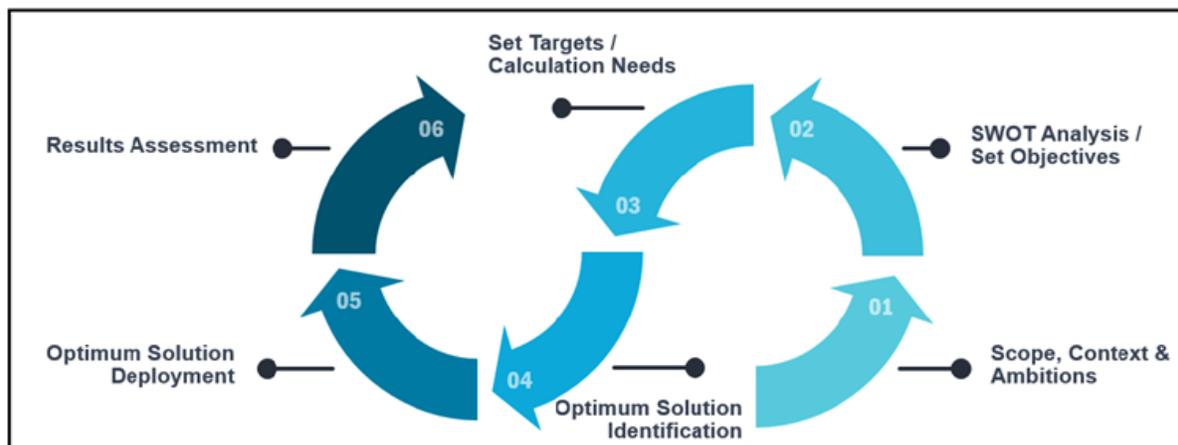
Step 2: Determine opportunities, problems and establish objectives ([performance ambitions](#)).

Step 3: Quantify objectives ([with KPIs baselines and based on performance improvement goals](#)).

Step 4: Determine solutions ([from the ASBU⁵ 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

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.

⁴ There are seven other KPAs for which indicators will be developed.

⁵ In theory, the possibility of Non-ASBU solutions is also considered.

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. Likewise, GREPECAS/20 adopted an amendment procedure for the aforementioned Volume⁶. In April 2023, ICAO Council was informed about this GREPECAS activity, and welcomed the progress made in the preparation of Volume III.

Current situation, advanced steps

- a) 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.
- b) 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.
- c) 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 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 Airport Accessibility (APTA) and (Free Route Operations (FRTO) modules. At the same time, in the aforementioned period it would be perfecting the management of indicators in the States.
- d) 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.
- e) 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.
- f) 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 c) above.

⁶ Refer to the GREPECAS/20 Final Report: <https://www.icao.int/NACC/Pages/meetings-2022-grepecas20.aspx>

Working Session for the Effective Implementation of the CAR/SAM ANP Vol. III – Exercise

Problem Statement:

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.

Identified problems during the process:

- Lack of 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.

Considering the above, at your working session discuss the following:

- 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?

**Instructions for the Working Session for the effective implementation
of the CAR/SAM ANP Vol. III: Exercise**

1. Objective of the working session

- ✓ Prepare guidelines for a Work Plan so that GREPECAS can address the challenges of effectively implementing Volume III of the ANP CAR SAM.
- ✓ Encourage collaboration, knowledge sharing and problem solving among participants.
- ✓ Improve the understanding of the CAR/SAM ANP, Vol. III by the table participants.

2. Activities of the working session

Participants in the GREPECAS meeting will be divided into groups and will be assigned the task of preparing outlines of a Work Plan that addresses the challenges and considerations discussed.

Each group will nominate a leader to present the results to the meeting and provide a Word document. Group presentations, feedback and discussions will be facilitated to encourage learning and knowledge sharing. Is required:

- ✓ Analyze the specific challenges faced in the effective implementation of Volume III, so that it becomes a management tool for performance-based planning.
- ✓ Identify stakeholders, establish effective communication channels, and define the purpose, objectives, and scope of the project document.

3. Deliverables of the working session

- ✓ Group presentations showing the strategy or approach to address the challenges.
- ✓ Delivery of a Word file to the Secretariat with the results of your discussions.

4. Expected results.

- ✓ Well-designed project document with guidelines for a Work Plan that addresses the challenges of effective implementation of Volume III.
- ✓ Improving project management capabilities within South American and Caribbean aviation specialists.