



# ICAO

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North American, Central American and Caribbean Office  
INFORMATION PAPER

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## **Ninth North American, Central American and Caribbean Working Group Meeting (NACC/WG/09)**

Mexico City, Mexico, 30 September to 04 October 2024

### **Agenda Item 3: Actions for the development of the Air Navigation Plans of the States and the CAR/SAM Plan and progress in regional performance dashboards**

#### **REGIONAL GUIDANCE MATERIAL FOR SUPPORT STATES IN THE COST-BENEFIT ANALYSIS IN AIRPORTS AND AIR NAVIGATION PLANNING**

(Presented by Secretariat)

##### **EXECUTIVE SUMMARY**

This Paper provides information of the Regional Guidance Material to Support States in the Cost-Benefit Analysis in airports and air navigation planning.

<i>Strategic Objectives:</i>	<ul style="list-style-type: none"><li>• Safety</li><li>• Air Navigation Capacity and Efficiency</li></ul>
<i>References:</i>	<ul style="list-style-type: none"><li>• <a href="https://www.icao.int">BBBs (icao.int)</a></li></ul>

### **1. Introduction**

1.1 According to Manual on Global Performance of the Air Navigation System (Doc 9883), ATM community members need to cooperate in a performance-based manner, for the best results. For this reason, ICAO supports and encourages the global adoption of performance management techniques, which is part of the transition towards a performance-based global Air Navigation System (ANS).

### **2. General Context**

2.1 The performance-based approach is a way of organizing the performance management process. For air navigation system (ANS), the Doc 9883 proposes Six Steps Method:

- Step 1: Define/review scope, context and general ambitions/expectations
- Step 2: Identify opportunities, issues and set (new) objectives
- Step 3: Quantify objectives
- Step 4: Select solutions to exploit opportunities and resolve issues
- Step 5: Implement solutions
- Step 6: Assess achievement of objectives

2.2 Steps 1 and 2 help to understand your system's strengths, weaknesses, opportunities, and threats through a SWOT analysis, as well as evaluate its current performance to set objectives. Based on these objectives, targets are established in Step 3. In Step 4, potential solutions are identified to achieve the targets by addressing the system's weaknesses and threats. Once potential solutions are identified, a **cost-benefit analysis**, environmental impact assessment, safety assessment, and human factors assessment should be conducted to determine the optimal solution.

2.3 For these steps, it is important to note that the Global Air Navigation Plan (GANP) (Doc 9750) performance framework provides a list of **Key Performance Indicators (KPIs)** linked to the relevant objectives in the performance objectives catalogue. These KPIs are used to set targets by quantifying the objectives. In Step 4, a potential list of solutions to consider includes the Aviation System Block Upgrade (ASBU) framework, which offers functional descriptions of operational improvements and their associated performance benefits.

2.4 Finally, Step 5 involves the coordinated deployment of the agreed-upon solution by all stakeholders, based on the outcomes of the previous steps. Step 6 consists of monitoring and reviewing the system's performance after the full deployment of the solution.

### 3. Cost-Benefit Analysis in Airports and Air Navigation Planning

3.1 According to the Final Report of Twenty-first Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/21), approved the *Decision GREPECAS/21/05* that approved Version 0.1 of CAR/SAM RANP Volume III. In addition, this meeting approved the Conclusion GREPECAS/21/04, Actions for The Progress of Volume III of CAR/SAM Regional Air Navigation Plan, that *"ICAO NACC and SAM Regional Offices strengthen the assistance concerning Vol. III, including dissemination of the relevance of the CAR/SAM ANP to ensure cost-efficient and interoperable implementations, as well as the contribution of such planning to the socio-economic development objectives in each State"*.

3.2 In response to the decisions and conclusions of GREPECAS/21, the Secretariat submitted the following activities for evaluation and approval by the Multi-Regional Civil Aviation Assistance Programme (MCAAP). These activities were approved during the Eleventh Meeting of the RLA09801 MCAAP Project Steering Committee (RLA09801 PSC/11):

- a) Activity No. 11/2024 – Guidance material for VOL III of the Regional Air Navigation Plan; and
- b) Activity No. 4/2024 – Workshop on the development of the Global Air Navigation Plan Key Performance Indicators Evaluation.

3.3 These MCAAP activities have the following deliverables/outcomes:

- a) Hold a workshop to capacity building of States in the CAR Region on the cost-benefit analysis in air navigation planning;
- b) Develop regional guidance material for supporting States in the cost-benefit analysis in air navigation planning; and
- c) Hold a workshop to support States in the CAR Region in developing and calculating GANP KPIs.

3.4 The ICAO NACC Regional Office carried out the Workshop on strategic planning focused on air navigation and airports, including guidance for decision-making based on cost-benefit analysis, from 17 to 20 September 2024<sup>1</sup>, with two Subject Matter Experts. The event was attended by approximately 60 representatives from States, International Organizations, and industry, both in person and virtually. This workshop was a crucial step in our ongoing efforts to enhance regional capacity and efficiency in air navigation, specifically within the CAR region. This event also responds to a significant opportunity identified earlier this year at the Second CAR Workshop for the Implementation of the CAR/SAM Air Navigation Plan Volume III (CAR/SAM/ANP-VOLIII/2). Effective planning and decision-making in civil aviation can lead to improved routes, reduced greenhouse gas emissions, and enhanced air traffic flow management, ultimately benefiting both society and the environment.

3.5 Regarding the regional guidance material for supporting States in the cost-benefit analysis in air navigation planning, the material is planned to be developed by two Subject Matter Experts (SMEs), with the first version expected to be completed by July 2025. The following is the initial structure of the regional guide material, which is subject to change:

- 1. Socioeconomic Evaluation of Projects
- 2. Fundamentals of Intervention
- 3. Informational Requirements for Cost-Benefit Analysis (CBA)
- 4. Estimation of Economic Costs
- 5. Estimation of Economic Benefits
- 6. Estimation of Externalities
- 7. Project Viability Indicators
- 8. Risk Analysis
- 9. Distributional Analysis
- 10. Presentation of Results

3.6 During the workshop held in September 2024, the need for a virtual meeting to present the first version of the regional guidance material with the States was identified. Additionally, new activities and projects were suggested, including the development of market value catalogues and carrying out a real case.

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<sup>1</sup> [CAR/SAM/ANP \(icao.int\)](https://www.icao.int/CAR/SAM/ANP)

3.7 Finally, regarding the Workshop to support States in the CAR Region in developing and calculating GANP KPIs, the ICAO NACC Regional Office will carry out such event from 28 to 31 October 2024<sup>2</sup>, with the participation of experts from Brazil and the USA.

3.8 The Meeting is invited to take note.

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<sup>2</sup> [GANP-KPI-Workshop \(icao.int\)](https://www.icao.int/GANP-KPI-Workshop)