



**Fifth GREPECAS–RASG-PA Joint Meeting (GREPECAS-RASG-PA/5) and
 Twenty-Third Meeting of the CAR/SAM Regional Planning and Implementation Group
 (GREPECAS/23)**

Virtual Phase (Asynchronous, 19 January to 17 February 2026)

In-Person Phase (Mexico City, Mexico, 4 to 6 March 2026)

Agenda Item 8: CAR/SAM Air Navigation Implementation

DIAGNOSIS OF CENTRAL AMERICAN AIRSPACE

(Presented by COCESNA)

EXECUTIVE SUMMARY

Following up on the Study Note presented at the Twenty-Second Meeting of the Caribbean and South American Regional Planning and Implementation Group (GREPECAS/22), regarding the Diagnosis of Central American Airspace, COCESNA presents to this meeting an update on the execution plan of the diagnosis, its methodological approach, the mechanisms established for knowledge management and transfer, and the strategy for its gradual extension to the rest of the Member States.

The diagnosis constitutes the initial phase of the Central American airspace redesign process and aims to establish a technical, operational, and prospective baseline that allows the identification of limitations, bottlenecks, and opportunities for improvement in terms of operational safety, capacity, efficiency, and environmental sustainability, in alignment with the Global Air Navigation Plan (GANP) and ICAO guidance documents.

The execution of the diagnosis will begin with the State of Guatemala, defined as the pilot State, with an estimated duration of twelve (12) weeks. The experience gained during this phase will allow for the progressive and harmonized extension of the diagnosis to the rest of COCESNA’s Member States.

Action:	<ul style="list-style-type: none"> • Take note of the execution plan and the methodological approach of the Central American airspace diagnosis. • Take note of the scope and implementation of the diagnosis in the pilot State (Guatemala); and • Take note of the planned progressive approach for extending the diagnosis to the rest of the Central American States.
<i>Strategic Objectives 2026-2050:</i>	<ul style="list-style-type: none"> • Every flight is safe and secure • Aviation is environmentally sustainable • Aviation delivers seamless, accessible, and reliable mobility for all • No country left behind

	<ul style="list-style-type: none"> • The International Civil Aviation Convention and Other Treaties, Laws and Regulations Address All Challenges • The Economic Development of Air Transport Assures the Delivery of Economic Prosperity and Societal Well-Being for All
<i>References:</i>	<ul style="list-style-type: none"> • Doc ICAO 9992 – Manual on the Use of Performance-Based Navigation (PBN) in Airspace Design • Doc ICAO 9613 – Manual PBN • Doc ICAO 4444 – PANS-ATM • Doc ICAO 8168 – PANS-OPS

1. Introduction

1.1 Central American airspace constitutes a significant transit region for international aviation, serving as a corridor between North and South America. The growth of air traffic and the complexity of operations have increased demand on the current airspace structure and associated procedures.

1.2 In this context, it is necessary to adopt a regional, data-driven approach that allows for the assessment of airspace performance both in its current configuration and under future growth scenarios, considering aspects of safety, efficiency, and sustainability.

2. Background

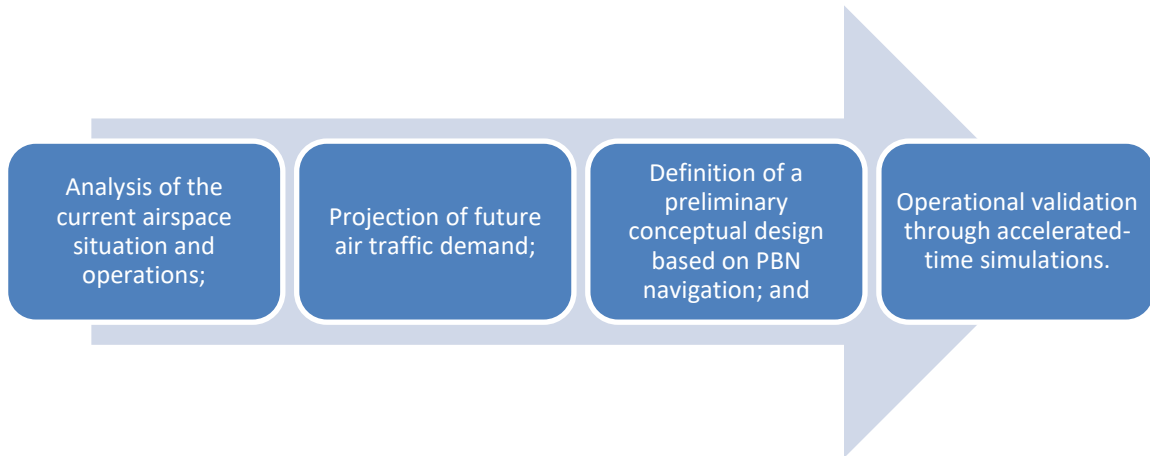
2.1 At GREPECAS/22, COCESNA presented a Study Note proposing the conduct of a diagnosis of Central American airspace as a preliminary step toward a coordinated regional redesign process.

2.2 This initiative was subsequently incorporated as a project, establishing a progressive approach that begins with a Pilot State, aimed at validating the methodology, technical assumptions, and coordination mechanisms before its application at the regional level.

3. Methodological Approach of the Diagnosis

3.1 The diagnosis will be developed following a structured approach aligned with ICAO guidance documents, particularly Document 9992, considering the interaction between airspace concepts, navigation, communications, surveillance, and air traffic management processes.

3.2 The methodological approach includes:



4. Scope of the Diagnosis in the Pilot State (Guatemala)

4.1 The airspace diagnosis of the State of Guatemala will be conducted as the initial phase of the regional process, aiming to analyze the current system configuration and generate technical inputs that will serve as a basis for its progressive reorganization.

4.2 The work will include a review of the airport environment and its relationship with the surrounding airspace, allowing for an understanding of traffic flow distribution and the interaction between aerodromes, terminal areas, and in-route routes. Additionally, the current airspace structure will be analyzed, including the various controlled volumes and ATS routes, to identify operational constraints and opportunities for improvement.

4.3 The diagnosis will include the evaluation of instrument flight procedures, both conventional and PBN-based, considering actual operational flows, ATS personnel workload, and operational efficiency objectives. Complementarily, ATM factors and CNS capabilities that influence operations will be analyzed to provide an integrated view of the system.

4.4 The work will also incorporate an analysis of future air traffic demand and simulation of operational scenarios representing both the current situation and possible alternatives. These analyses will allow for the evaluation of system behaviour under different assumptions and the documentation of key findings and conclusions.

4.5 The diagnosis in the pilot State will be carried out over an estimated period of twelve (12) weeks, following a structured sequence that includes data collection and analysis, prospective analysis, scenario simulation, and the preparation of the corresponding technical report.

5. Knowledge Management and Transfer

5.1 The diagnosis of the State of Guatemala incorporates a knowledge management and transfer approach aimed at facilitating the technical adoption of the methodology and results by COCESNA and the Member States.

5.2 This approach includes kick-off and follow-up meetings, technical interaction sessions with operational personnel, and technical workshops focused on diagnosis, airspace design, and evaluation through simulations.

6. Progressive Extension of the Diagnosis to the Rest of the Central American States

6.1 Considering the experience gained during the diagnosis of the pilot State (Guatemala), as well as the results of knowledge management and lessons learned during its implementation, the diagnosis of the airspace of the remaining COCESNA Member States will proceed progressively and sequentially.

6.2 Upon completion of the pilot phase, the process will continue in an orderly manner with the diagnosis of the States of Belize, Nicaragua, and El Salvador, followed subsequently by Costa Rica and Honduras. Finally, a regional consolidation phase will be conducted, aimed at integrating the results of the individual diagnoses and establishing a regional vision of Central American airspace.

6.3 In all States, the diagnosis will maintain a uniform technical scope, which will include data collection and validation, future demand projection, simulation of the current operational scenario, and preparation of the corresponding technical report.

7. Conclusion

7.1 The diagnosis of Central American airspace, initiated with the pilot State of Guatemala, will provide technical information to support the planning of the regional airspace redesign. The adopted methodological approach, knowledge management, and progressive rollout to the rest of the Member States will contribute to a coordinated implementation of the diagnosis at the regional level.