International Civil Aviation Organization
CAR/SAM Regional Planning and Implementation Group (GREPECAS)

WORKING PAPER

GREPECAS/23 — WP/8.21
14/01/26

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

UPDATE OF THE ATM CONTINGENCY PLANS OF THE CENTRAL AMERICAN STATES AND COCESNA

(Presented by COCESNA)

EXECUTIVE SUMMARY

COCESNA and the Central American States have an ATM contingency planning framework in place to ensure the continuity of air traffic services and to maintain operational safety in situations of service degradation or interruption. This framework is supported by an existing Regional ATM Contingency Plan, complemented by ATS contingency agreements and addenda with the States.

The contingency experienced in 2025 at the CENAMER Control Center made it possible to validate this framework and to generate lessons learned that highlight the need to update the contingency plans and associated agreements as part of the continuous improvement process.

The modernization of the CENAMER Control Center has expanded the available backup capabilities through the incorporation of the ATM Simulation and Contingency System (SIM/CONT), which features an independent technical architecture and is in immediate proximity to the CENAMER ACC, improving response times and operational transition during contingencies.

In this context, the update of the ATM contingency plans of the Central American States and COCESNA is proposed, in alignment with the CAR Region ATM Contingency Plan, through the conduct of a Regional Workshop with ICAO technical support. In addition, the execution of contingency simulations is anticipated to validate the effectiveness of the updated plans and to strengthen the operational preparedness of the regional ATM system.

Action:	• Take note of the initiative to update the ATM contingency plans of the Central American States and COCESNA through a Regional Workshop and the conduct of contingency simulations. • Endorse the request for ICAO technical support and the cooperation of CANSO, IATA, and other stakeholders.

	• Encourage States to actively participate in the process of reviewing, harmonizing, and validating contingency plans and agreements.
Strategic Objectives 2026-2050:	• Every flight is safe and secure • Aviation is environmentally sustainable • Aviation delivers seamless, accessible, and reliable mobility for all • No country left behind • 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 •
References:	• Annex 11 — Air Traffic Services • Annex 19 — Safety Management • PANS-ATM, Doc 4444 • Regional Supplementary Procedures, Doc 7030 • CAR Region ATM Contingency Plan

1. Introduction

1.1 Planning and response to ATM contingencies constitute a fundamental factor in ensuring the safe continuity of air traffic services in the event of partial or total disruptions. Within this framework, ICAO and GREPECAS have promoted harmonized regional approaches that facilitate coordinated responses among States, air navigation service providers, adjacent ATS units, and airspace users.

1.2 The CAR Region ATM Contingency Plan provides the regional reference framework for contingency planning and coordination in situations with potential cross-border impact, promoting inter-State cooperation and consistency in the application of operational measures.

1.3 In Central America, the regionalized provision of ATS by COCESNA requires contingency planning that integrates national and regional arrangements, ensuring interoperability, clarity of responsibilities, and response capability under different scenarios.

2. COCESNA ATM Contingency Planning

2.1 COCESNA has a Regional ATM Contingency Plan for the MHCC UTA/FIR, which establishes in a structured manner the organizational, operational, and technical arrangements required to respond to contingencies affecting the provision of ATS. The plan defines contingency scenarios, activation, execution, and deactivation phases, ATS and ATFM measures, and coordination procedures with civil aviation authorities, adjacent ATS units, and international organizations.

2.2 At the time the plan was developed, the primary technical backup in the event of a major failure was the Contingency Control Center located in Ilopango, which meant that the predominant service continuity strategy was based on the temporary delegation of ATS, in accordance with the existing contingency agreements and addenda with the Central American States.

2.3 As part of the modernization process of the CENAMER Control Center, COCESNA currently has an additional backup control centre located at its Honduras headquarters, corresponding to the ATM Simulation and Contingency System (SIM/CONT). This system features a technical architecture independent from CENAMER's operational ATM system, including its own servers, networks, operational

positions, and surveillance tools, enabling its use both for simulation purposes and for the provision of ATS in contingency scenarios.

2.4 The availability of SIM/CONT as a contingency control centre provides additional service continuity capability, allowing the application of strategies based on co-located/shared facilities and hybrid models, in complement to ATS delegation. Furthermore, due to its immediate proximity to the CENAMER Control Center, this backup facility offers improved response times and operational transition, facilitating the activation of contingency measures and service recovery.

3. TS Contingency Agreements and Addenda with the States

3.1 As a complement to the regional plan, COCESNA has entered ATS contingency agreements and addenda with the Central American States, which establish specific arrangements applicable during contingencies, such as the temporary delegation of ATS, the definition of routes and flight levels, coordination procedures, and the responsibilities of the civil aviation authorities and ATS units involved.

3.2 The evolution of infrastructure and the available contingency strategies make it necessary to review and update these addenda to ensure their consistency with current technical and operational capabilities.

4. Contingency Strategies Considered

4.1 As ATM contingency planning may rely on different treatment strategies, which can be applied individually or in combination, depending on the type and scope of the contingency. The main strategies include:

- **ATS delegation**, which involves the temporary transfer of the provision of ATS to another unit or external provider through formal agreements.
- **Co-located, shared, or joint facilities**, which allow the continued provision of ATS from alternative facilities within the same organization, using replicated systems.
- **Hybrid models**, which combine two or more strategies, enabling a flexible and phased response to different scenarios.

4.2 The modernization of CENAMER and the availability of SIM/CONT now allow the application of schemes based on co-located facilities and hybrid models, reducing exclusive reliance on ATS delegation.

5. Contingency Experienced in 2025

5.1 During 2025, the CENAMER Control Center experienced a significant operational contingency associated with a general failure of communications, surveillance, and automation systems, which temporarily affected the normal provision of ATS in the MHCC UTA/FIR.

5.2 In response to this situation, the procedures established in the Regional ATM Contingency Plan were immediately activated, including coordination with civil aviation authorities, adjacent ATS units, and airspace users. The management of the event made it possible to maintain the operational safety of aircraft under COCESNA’s responsibility, apply temporary operational arrangements, and issue the corresponding aeronautical information.

5.3 The post-event analysis showed that the existing planning framework enabled a coordinated response, validating the decision-making and regional coordination mechanisms. Likewise, lessons learned were identified aimed at strengthening the resilience of the technical infrastructure and updating contingency plans and agreements to reflect the currently available capabilities.

6. Regional Workshop for the Update of Contingency Plans

6.1 The update of the ATM contingency plans of the Central American States and COCESNA will be carried out through a Regional Workshop for the Update of Contingency Plans, scheduled for the second quarter of 2026, in compliance with the recommendations arising from the NAM/CAR/CONT/5 Meeting.

6.2 The workshop will include the participation of the Central American States, COCESNA, adjacent States and ANSPs, as well as international organizations and other stakeholders. Its objective will be to review and harmonize national and regional plans, ATS contingency agreements and addenda, and the applicable contingency strategies. For this process, technical support has been requested from ICAO's NACC Regional Office.

7. Contingency Simulations as Part of Strengthening Planning

7.1 In addition to updating the ATM contingency plans, COCESNA plans to develop and conduct contingency simulations in 2026 as a tool to validate the feasibility and effectiveness of the established procedures.

7.2 The simulations will allow, in a controlled environment, the evaluation of the practical application of the updated plans, the defined contingency strategies, coordination mechanisms, and decision-making processes, including transitions between normal, degraded, service continuity, and recovery modes of operation.

8. Conclusions

a) The current ATM contingency planning framework in Central America has proven to be functional in maintaining operational safety and service continuity.

b) The contingency experienced in 2025 made it possible to validate this framework and identify opportunities for improvement as part of the continuous improvement process.

c) The modernization of the CENAMER Control Center and the availability of the SIM/CONT system have expanded the available backup capabilities, enabling the application of additional contingency strategies.

d) Updating the ATM contingency plans and associated agreements is necessary to reflect these new capabilities and ensure regional consistency.

e) The conduct of a Regional Workshop and the execution of contingency simulations, with ICAO technical support, constitute complementary mechanisms to validate the effectiveness of the updated plans and strengthen the resilience of the regional ATM system.

— END —