



# ICAO

International Civil Aviation Organization  
North American, Central American and Caribbean Office  
WORKING PAPER

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**Fifth NAM/CAR Regional Contingency and Emergency Planning and  
Response Meeting (NAM/CAR/CONT/5)**  
Mexico City, Mexico 15 to 16 May 2025

**Agenda Item 4: Evaluation of Impact and Response of Contingencies Faced in 2024**

**ANALYSIS OF CONTINGENCIES FACED IN 2024**

(Presented by the Secretariat)

EXECUTIVE SUMMARY	
This Working Paper presents a summary and review of the contingencies that occurred in the CAR Region in 2024, with a brief analysis for lessons learned.	
<b>Action:</b>	Suggested Actions are included in Section 6.
<b>Strategic Objectives:</b>	<ul style="list-style-type: none"><li>• Safety</li><li>• Air Navigation Capacity and Efficiency</li></ul>
<b>References:</b>	<ul style="list-style-type: none"><li>• Annex 11 – <i>Air Traffic Services</i>.</li><li>• Final Report of the Fourth NAM/CAR Regional Contingency and Emergency Planning and Response Meeting (NAM/CAR/CONT/4), On-line, 28 May 2024</li><li>• CAR Region ATM Contingency Plan</li></ul>

**1. Introduction**

1.1 The Air Navigation Services (ANS) are a vital component of the air transportation system and the safe conduction of air operations across the globe.

1.2 The planning and responding to contingencies and emergencies is a fundamental part in the support of civil aviation in our Region, of which is increasingly dependent, not only as a means of transportation but also as an ingredient for sustainability and economic growth.

1.3 Threats to the air navigation system are part of the context in which the operations are carried out. Special attention is normally given to hurricanes and meteorological events due to their recurrence and devastating power; however, the system is not exempt from other threats, which should be carefully analysed to enhance current control and operational practices.

## **2. Background**

2.1 States and Territories of the Caribbean (CAR) Region periodically face events that threaten the continuity of air operations, in some cases due to limitation of the provision of ANS or restrictions of airport services.

2.2 Thorough analysis of these events can call attention to the vulnerabilities of systems and help implementing or improving control mechanisms, allowing a proper response to contingencies and emergencies.

2.3 In line with its core responsibilities, the ICAO NACC Regional Office has been promoting contingencies coordination and information sharing activities, supporting the annual review of the ATM contingency plans for the CAR Region.

## **3. Analysis**

3.1 The nature of the contingencies faced in the CAR Region during 2024 remained practically the same as previous years, except for the escalation of social unrest to impact the safety of air operations.

### *3.2 Hurricanes and tropical storms.*

3.2.1 During this period, the Region was impacted by several hurricanes and tropical storms, which caused significant damages to the States and Territories of our Region, as well as the interruption of ANS and airports.

3.2.2 The greatest challenge faced from this type of events, in addition to their destructive force and added disturbances (such as floods and landslides that affect operations), is the scope of their threat. Some events commence disrupting at the Eastern Caribbean islands, move westbound causing damages throughout the central Caribbean and Central America, ending up affecting the southern and eastern parts of the United States.

3.2.3 Some events caused damages to air navigation facilities and flooded airports, which delays the receipt of humanitarian assistance and support to rescue operations.

### *3.3 Communications Navigation and Surveillance (CNS) systems failures and ATC Zero.*

3.3.1 Failures in support systems for the provision of ANS, such as communications and surveillance systems, affect the continuity of operations at different levels, ultimately causing total disruption of air traffic control services, normally referred to as ATC Zero.

3.3.2 These events range from the interruption of critical coordination channels and information sharing systems (supporting oral coordination, automated transfer of estimates, flight plan reception or RADAR data sharing), partial or total failure of surveillance systems (RADAR antennas or

RADAR processing systems), failures of air-ground voice communications systems, to failures in the power supply systems for air traffic control centres (causing a total loss of services).

3.4.3 These events are triggered by lack of proper planning for maintenance or update of systems, lack of clear communication between CNS and ATC staff scheduled maintenance activities or systems updates, inadequate or lack of contingency planning and new unforeseen scenarios for different systems integration.

3.3 *Social demonstration and civil unrest.*

3.3.1 Another situation that recurrently affects some States in our region is the occurrence of social demonstrations and protests. These situations limit the continuity of operations by blocking access to critical facilities for the provision of services, such as airports and ANS.

3.3.2 in 2024 one of the scenarios of social unrest escalated to the shooting of aircraft in the final approach procedure for landing. These isolated events required the interactions with several intergovernmental agencies, including the military, national security agencies, along with the Ministry of Foreign Affairs and the Civil Aviation Authorities.

#### **4. Lessons learned**

4.1 The role of the State and Civil Aviation Authorities regarding contingency planning and response needs to be clearly defined.

4.1.1 States are signatories to the Chicago Convention and ultimately responsible for services provided on their behalf. The response to certain events requires and reflect the State position regarding their civil aviation system.

4.1.2 States' responsibilities need to be clearly defined, and authorities must ensure to be updated regarding any situation that affect or may affect civil aviation operations.

4.2 Importance of development and periodic update of contingency plans.

4.2.1 The lack of adequate planning and implementation of contingency procedures is the main limitation for several States/Territories and Service Providers. Trying to respond to the different contingency situations that may arise without a properly prepared and disseminated plan, both internally and externally, is not only an inefficient exercise but also an ineffective one, despite the demonstrated need to develop contingency response procedures, some States continue to ignore this critical requirement.

4.2.2 Another aspect to be taken into consideration is the lack of rehearsal or trials of the already developed plans. In some cases, the steps or actions described in the contingency plans cannot be carried out, stakeholders are not clear of their role, and these deficiencies only come up when a real contingency occurs.

4.3 Harmonization of contingency procedures between neighbouring States and adjacent airspace is a basic requirement for its functionality.

4.3.1 Some States continue to develop and maintain their contingency procedures unilaterally, which prevents a coordinated response and increase recovery times, causing significant challenges to the Region due to new flows of traffic, unplanned workload for ATC, etc.

## **5. Conclusions**

5.1 Transparency and open communication regarding contingencies and system failures must be encouraged at national and regional levels.

5.2 The States/Territories and International Organizations, responsible for the provision of ANS in the NAM/CAR Regions, should continue to work collaboratively, evaluating current and possible threats to the provision of these services, improving the regional resilience of civil aviation.

5.3 ICAO must continue to provide guidance and support to develop, update and rehearse contingency procedures.

## **6. Suggested actions**

6.1 The Meeting is invited to:

- a) take note of the information provided in this Working Paper, evaluate and give recommendations to enhance contingency preparedness in the CAR Region;
- b) encourage States, Territories and International Organizations providing air navigation services in the CAR Region to share information about the contingencies and limitations faced, including determination of root causes and implementation of corrective measures;
- c) request the ICAO NACC Regional Office to analyse the different contingencies occurred and provide recommendations to improve the resiliency of the ANS and Airports system of the Region;
- d) urge the States, Territories and International Organizations that provide ATS in the NAM/CAR Regions, to share good practices and lessons learned, and support actions carried out to enhance the resiliency of the regional air navigation system; and,
- e) make any additional recommendation deemed necessary.