



**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
3.3 CAR/SAM Air Navigation Services (ANS) Implementation Level

**UPDATE OF THE FORMAT AND PROCEDURE FOR ATM CONTINGENCY PLANS OF THE
 CAR/SAM REGIONS**

(Presented by the Secretariat)

EXECUTIVE SUMMARY	
<p>This Working Paper provides details on the action plan proposed by GREPECAS for the development of the ATM contingency plans for the CAR/SAM Regions, its progress, the challenges it faces in its current state, while proposing actions to update it considering the evolution of the air navigation systems.</p>	
Action:	Suggested actions are included in Section 5
<i>Strategic Objectives:</i>	<ul style="list-style-type: none"> • Safety • Air Navigation Capacity and Efficiency
<i>References:</i>	<ul style="list-style-type: none"> • Convention on International Civil Aviation • Annex 11 – Air Traffic Services • Final Report of the Thirteenth Meeting of the CAR/SAM Planning and Implementation Regional Group (GREPECAS/13), Santiago, Chile, 14 – 18 November 2005 <ul style="list-style-type: none"> ○ Appendix AO to the Report, Action Plan for the Development of ATM Contingency Plans • CAR Region ATM Contingency Plan • SAM Region ATS Contingency Framework Plan • Final Report of the Third NAM/CAR Regional Contingency and Emergency Planning and Response Meeting (NAM/CAR/CONT/3), Mexico City, Mexico, 9 to 11 May 2023 • ATS SAM SOUTH Meeting, Lima, Peru, September 5 to 9 2022 and ATS SAM NORTH, Lima, Peru, October 24 to 28 2022

1. Introduction

1.1 Article 28 of the Convention on International Civil Aviation establishes that each contracting State undertakes, so far as it may find practicable, to provide, in its territory, airports, radio services, meteorological services and other air navigation facilities to facilitate international air navigation, in accordance with the standards and practices recommended or established from time to time, pursuant to this Convention.

1.2 The States, in their responsibility to provide Air Traffic Services (ATS) in the airspaces under their jurisdiction, constantly face challenges to guarantee the continuity and sustainability in the provision of such services. The Caribbean region is periodically under the threat of hurricanes and their devastating effects, without being immune to other types of hazards, natural or man-made, which may cause a limitation to, or a partial and/or total interruption of ATS. A proper and timely response to contingencies is vital for air navigation and the continuity of air transportation in the Caribbean and neighbouring regions.

1.3 Annex 11 to the Chicago Convention requires ATS authorities to develop and promulgate contingency plans for implementation in the event of disruption, or potential disruption, of ATS and related supporting services in the airspace for which they are responsible for the provision of such services. Such contingency plans shall be developed with the assistance of ICAO as necessary, in close coordination with the ATS authorities responsible for the provision of services in adjacent portions of airspace and with airspace users concerned. The purpose of these plans is to ensure that other facilities and services operate when the facilities and services indicated in the air navigation plan are temporarily interrupted.

2. Background

2.1 The GREPECAS/13 Meeting, held in Santiago, Chile, 14 to 18 November 2005, addressed the applicable provisions of Annex 11 related to contingency arrangements and recalled the bilateral discussions among States to exchange their proposals for contingency plans. The Meeting recognized the need to promote the compliance with these requirements and that the coordination among ATM authorities of the CAR/SAM Region was necessary to ensure the harmonization of the contingency plans.

2.2 GREPECAS/13 decided to approve an action plan for the development of ATM contingency plans. This action plan was comprised of three phases:

- Phase I - Development of ATM contingency plans
- Phase II - Harmonization of ATM contingency plans with neighbouring States/Territories/International Organizations
- Phase III - Submission of ATM contingency plans to the ICAO Regional Offices.

2.3 To support Phase I of this process, GREPECAS approved a template for States' ATM contingency plans. The purpose of this template is to provide guidance to develop the ATM Contingency Plans, to ensure the continued safety of air navigation in the event of partial or total disruption of air traffic services. This contingency plan should be designed to provide alternative routes, using existing airways in most cases, which will allow aircraft operators to fly through or avoid affected airspace.

3. Analysis

3.1 Since GREPECAS/13 the CAR/SAM Regions States/service providers have worked to develop their ATM contingency plans and submit them to the corresponding ICAO Regional Office. This process showed greater progress in the SAM Region than in the CAR Region. In this last region, several States did not comply with phases 1 or 2 described above.

3.2 In response to the low level of compliance with ATS contingency arrangements and several contingency events that occurred in 2017-2018 the ICAO NACC Regional Office implemented the CAR Regional Contingency Planning and Response Strategy, which approved the CAR Region ATM Contingency Plan and established the annual contingency planning and response meeting for the CAR Region. The level of compliance with the submission of the ATM contingency plans to the ICAO NACC Office increased from 20% in 2017 to 65% in 2023.

3.3 Despite the renewed strategy and improved results, the ICAO NACC Regional Office continued to face challenges completing the GREPECAS action plan. The compliance with the development of contingency plans (phase I) and the harmonization of ATM contingency plans with neighbouring States/Territories/International Organizations (phase II) highlighted significant challenges that needed to be addressed.

3.4 Most States/Territories in the CAR/SAM Regions that have used the GREPECAS template for the development of their contingency plans, have established an ATS contingency routes scheme to be used in the case of total disruption of ATS, where air operators would fly through affected airspace without ATS surveillance or two-way communications. This ATS contingency routes scheme requires the coordination with adjacent ATS units to become effective. This coordination is normally reflected through bilateral Letters of Agreement (LoA).

3.5 The ICAO NACC Regional Office organized the Third NAM/CAR Regional Contingency and Emergency Planning and Response Meeting (NAM/CAR/CONT/3), in Mexico City, Mexico, from 9 to 11 May 2023, to address identified issues and harmonize with different regional initiatives.

3.6 Some States called the attention of the challenges they face with the use of contingency routes where no surveillance and communication services are being provided. Since the use of these routes (along with responsibilities and procedures) need to be agreed upon by the Air Navigation Service Providers (ANSPs) that will utilize these routes, LOAs will be needed to document the approval/agreement of all ANSPs involved. The United States made a statement regarding the activities within their National Airspace System. Facility by facility, the United States Federal Aviation Administration (FAA) is identifying the safest and most efficient solution for providing the continuity of ATC services during a contingency event. The FAA is currently reviewing their existing LoAs and procedures, as well as working collaboratively with stakeholders to find suitable options that will meet both regulatory requirements and customer needs, such as acceptable/approved level of communications with ATC. Additionally, the FAA intends to coordinate these plans with neighbouring ANSPs, where applicable to provide for improved contingency operations.

3.7 Given the time that has elapsed since the contingency procedures approved by GREPECAS were published, the NAM/CAR/CONT/3 Meeting considered it appropriate to present to the GREPECAS, the difficulties regarding the regionally adopted contingency procedures, as well as to make recommendations that promote its updating in the current context of operations. This will ensure stakeholders expectations are considered, to guarantee improved levels of services, as far as practicable.

3.8 The CAR Region ATM Contingency Plan and the SAM Region ATS contingency framework plan, describe a hierarchy of contingency plans of three levels:

- Level 1, for internal State plans dealing with internal/domestic coordination actions for the ANSPs;
- Level 2, for coordinated (inter-State) contingency plans involving two or more States; and
- Level 3, to detail contingency arrangements in the event of partial or total disruption of Air Traffic Services (ATS) designed to provide alternative routes, using existing airways in most cases, which will allow aircraft operators to fly through or avoid airspace within the relevant Flight Information Regions (FIRs).

3.9 Until now, the CAR regional strategy has focused on addressing level 3 contingency planning. However, given the need for enhanced resiliency of the provision of air traffic services and to improve the robustness of ANS in the Region, more attention is required to level 1 contingency plans.

3.10 In the SAM Region, for the short term, the harmonization of the ATS level 2 Contingency Plans of each State with its neighbours is being completed. For the medium term, the development of Level 3 Contingency Plans for subregional spaces is planned, which include route structures and a simplified flight level scheme. At the same time, the priority of having level 1 contingency plans has been recognized.

4. Conclusions

4.1 Contingency plans may constitute a temporary deviation from the approved regional air navigation plans. The limited knowledge of the CAR/SAM air navigation plan concept and the lack of understanding by decision makers of the role of the ICAO regional offices assigned by the Annex 11 are key challenges that the Region encounters for different initiatives. GREPECAS need to address these challenges in particular raising awareness of the importance of the CAR/SAM air navigation plan as the main planning reference for both regions.

4.2 The expectations regarding the availability of services and the continuity of operations by stakeholders is significantly higher now than 20 years ago when the GREPECAS approved its action plan for ATM contingency plans. GREPECAS need to update its contingency planning and response strategy to match the current stakeholders' expectations.

4.3 Most of the contingency events that affect the continuity of air traffic services are caused by a wide range of factors derived from failures of different support services, like communication, navigation and surveillance, aeronautical information, and others. The analysis of contingency procedures needs to be given multidisciplinary attention by the GREPECAS and not only by ATM groups.

4.4 Taking into consideration the information presented in this Paper, the following draft Conclusion is proposed:

DRAFT CONCLUSION GREPECAS/21/XX		ACTIONS TO STRENGTHEN CONTINGENCY PLANNING IN THE CAR/SAM REGIONS	
What: That, considering the challenges faced by the CAR/SAM Regions with respect to contingencies that may affect the provision of air navigation services, the Meeting: a) approve the proposed changes to the ATM Contingency Plan Template* included in the Appendix to WP/22; and b) instruct the Secretariat to define and promote a comprehensive strategy to improve contingency planning in the air navigation services of the CAR/SAM Regions, which includes guidelines for the establishment of level 1 and level 2 contingency plans. * Conclusion 13/68, GREPECAS/13.		Expected impact: <input type="checkbox"/> Political / Global <input checked="" type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Operational/Technical	
Why: To improve the response of air navigation services to possible degradations or interruptions, to ensure operational safety and the safe and orderly air traffic flow, in line with ICAO Annex 11, Attachment C.			
When: Report to GREPECAS/22		Status: <input checked="" type="checkbox"/> Valid / <input type="checkbox"/> Superseded / <input type="checkbox"/> Completed	
Who: <input checked="" type="checkbox"/> States <input checked="" type="checkbox"/> ICAO <input checked="" type="checkbox"/> Other:		IATA	

5. Suggested actions

5.1 The Meeting is invited to:

- a) note the information provided in this Working Paper.
- b) establish a position on the use of ATS contingency routes when there is no availability of surveillance and air-ground communications services coverage.
- c) approve the draft conclusion presented in Section 4.4; and
- d) take any additional action deemed necessary.

APPENDIX

CONTINGENCY PLAN TEMPLATE

ATM REGIONAL CONTINGENCY PLAN FOR CTA/UTA/FIR

OBJECTIVE

1. This contingency plan contains arrangements to ensure the continued safety of air navigation in the event of partially or total disruption of ATS and is related to ICAO Annex 11- *Air Traffic Services*. The contingency plan should be designed to provide alternative routes, using existing **airways** **ATS infrastructure** in most cases, which will allow aircraft operators to fly through or avoid airspace within the (XXX) Control Area (CTA)/Upper Control Area (UTA)/FIR.

AIR TRAFFIC MANAGEMENT**ATS Responsibilities**

2. Tactical ATC considerations during periods of overloading may require re-assignment of routes or portions thereof.

3. Alternative routes should be designed to maximize the use of existing ATS route structures and communication, navigation and surveillance services.

4. In the event that ATS cannot be provided within the (XXX) CTA/UTA/FIR, the Civil Aviation Authority (CAA) shall publish the corresponding NOTAM/ASHTAM indicating the following:

- a) time and date of the beginning of the contingency measures;
- b) airspace available for landing and overflying traffic, and airspace to be avoided;
- c) details of the facilities and services available or not available and any limits on ATS provision (e.g., ACC, Approach (APP), Tower (TWR) and Flight Information Service (FIS)), including an expected date of restoration of services if available;
- d) information on the provisions made for alternative services;
- e) ATS contingency routes;
- f) procedures to be followed by adjacent ATS units;
- g) procedures to be followed by pilots; and
- h) any other details with respect to the disruption and actions being taken that aircraft operators may find useful.**
- h)i) Emergency contact information for the relevant ATS authority.**

5. In the event that the CAA is unable to issue the NOTAM, they shall designate an (alternate) CTA/UTA/FIR who will be responsible for take action to issue ~~issuing~~ the NOTAM, under the LoA or Memorandum of Understanding (MoU) with other State or International Organization, of closure airspace upon notification by corresponding CAA or the ICAO NACC Regional Office.

Separation

6. Separation criteria will be applied in accordance with the Procedures for Air Navigation Services in Doc 4444 – *ATM – Air Traffic Management* and the Regional Supplementary Procedures (Doc 7030).

Level Restrictions

7. Where possible, aircraft on long-haul international flights shall be given priority with respect to cruising levels.

Other measures

8. Other measures related to the closure of airspace and the implementation of the contingency scheme in the (XXX) CTA/UTA/FIR may be taken as follows:

- a) suspension of all VFR operations;
- b) delay or suspension of general aviation IFR operations; and
- c) delay or suspension of commercial IFR operations.

TRANSITION TO CONTINGENCY SCHEME

9. During times of uncertainty when airspace closures seem possible, aircraft operators should be prepared for a possible change in routing while en-route, familiarization of the alternative routes outlined in the contingency scheme as well as what may be promulgated by a State via NOTAM, Aeronautical Information Circular (AIC), Supplement (SUP) or AIP.

10. In the event of airspace closure that has not been promulgated, ATC should, if possible, broadcast to all aircraft in their airspace, what airspace is being closed and to stand by for further instructions.

11. ATS providers should recognize that when closures of airspace or airports are promulgated, individual airlines might have different company requirements as to their alternative routings. ATC should be alert to respond to any request by aircraft and react commensurate with safety.

TRANSFER OF CONTROL AND COORDINATION

12. The transfer of control and communication between ATS units should be at the common FIR boundary unless there is mutual agreement between adjacent ATS units. ATS providers should also review current coordination requirements in light of contingency operations or short notice of airspace closure. The bilateral letter of agreements should include requirements to ensure all procedures, coordination, and agreements are properly documented between all facilities involved.

PILOTS AND OPERATOR PROCEDURES

13. Pilots need to be aware that in light of current international circumstances, a contingency routing requiring aircraft to operate off of normal traffic flows, could result in an intercept by military aircraft. Aircraft operators must therefore be familiar with international intercept procedures contained in ICAO Annex 2 – *Rules of the Air*, paragraph 3.8 and Appendix 2, Sections 2 and 3.

14. Pilots need to continuously guard the VHF emergency frequency 121.5 MHz and should ~~ensure transponders are operational~~~~operate their transponder~~ at all times during flight, regardless of whether the aircraft is within or outside airspace where Secondary Surveillance Radar (SSR) is used for ATS purposes. Transponders should be set on a discrete code assigned by ATC or select code 2000 if ATC has not assigned a code.

15. If an aircraft is intercepted by another aircraft, the pilot shall immediately:

- a) follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with international procedures;
- b) notify, if possible, the appropriate ATS unit;
- c) attempt to establish radio communication with the intercepting aircraft by making a general call on the emergency frequency 121.5 MHz and 243 MHz if equipped; and
- d) set transponder to code 7700, unless otherwise instructed by the appropriate ATS unit.

16. If instructions received by radio from any source conflict with those given by the intercepting aircraft, the intercepted aircraft shall request immediate clarification while continuing to comply with the instructions given by the intercepting aircraft.

OVERFLIGHT APPROVAL

17. Aircraft operators should obtain overflight approval from States/Territories/International Organizations for flights operating through their jurisdiction of airspace, where required. In a contingency situation, flights may be rerouted at short notice and it may not be possible for operators to give the required advanced notice in a timely manner to obtain approval. States/Territories/International Organizations responsible for the airspace in which contingency routes are established should consider making special arrangements to expedite flight approvals in these contingency situations.

CONTINGENCY UNIT

18. The ATM national contingency unit assigned the responsibility of monitoring developments that may dictate the enforcement of the contingency plan and coordination of contingency arrangements is:

Name of Agency:

Contact Person:

Telephone:

Fax:

Email:

19. During a contingency situation, the National Contingency Unit will coordinate with the adjacent ATS units and liaise with the ICAO NACC Regional Office as appropriate.

CAR/SAM Regions Contingency Plan Template

20. The ICAO NACC Regional Office shall:
- a) closely oversee the situation and coordinate with all affected States/Territories/International Organizations and the IATA Regional Office, so as to facilitate the provision of air navigation services to international aircraft operations in the CAR Region;
 - b) take note of any incidents reported and take appropriate action;
 - c) provide assistance as required on any issue with the CAAs involved in the contingency plan; and
 - d) keep the President of the Council of ICAO, the Secretary General, Strategic Planning Coordination and Partnerships (SPCP) Office and Director/Air Navigation Bureau (D/ANB) continuously informed on developments, including activation of the contingency plan.

CONTINGENCY ROUTING SCHEME

21. Aircraft operators should file their flight plans using the alternative contingency routes listed in the scheme below in order to operate in the airspace under the jurisdiction of (XXX).

Present ATS ROUTE	CONTINGENCY ROUTINGS	FIRs INVOLVED
In lieu of:	(ATS unit) provides ATC on the following routings: CR1: CR2: CR3:	XXX: In coordination with XXX
In lieu of:	(ATS unit) provides ATC on the following routing: CR4:	XXX: In coordination with XXX

22. All aircraft should establish and maintain contact on published VHF or HF frequencies with the (XXX) ATS unit (APP/ACC/FIC) responsible for the airspace being traversed.

List of points of contact of all concerned States/Territories/International Organizations, IATA and ICAO NACC Regional Office.

State /International Organization	<i>Point of contact</i>	Telephone	E-mail
		Tel.	
		Tel.	
		Tel.	
IATA		Tel.	
ICAO (Regional Office)		Tel.: AFTN:	