



ICAO

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North American, Central American and Caribbean Office

WORKING PAPER

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Mexico City, Mexico, 12 – 14 March 2019

Agenda Item 1: ICAO Requirements for Air Navigation Services (ANS) Contingency Planning

ICAO REQUIREMENTS FOR PLANNING AND RESPONSE TO CONTINGENCIES AND EMERGENCY SITUATIONS BY ATS PROVIDERS

(Presented by the Secretariat)

EXECUTIVE SUMMARY	
The purpose of this Working Paper is to detail the ICAO requirements for planning and response to contingencies and emergency situations by Air Traffic Service (ATS) providers in the CAR Region and the status of compliance by States.	
Action:	Suggested actions are presented in Section 5.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none">• Safety• Air Navigation Capacity and Efficiency• Economic Development of Air Transport
<i>References:</i>	<ul style="list-style-type: none">• Annex 11 to the Convention on International Civil Aviation, Air Traffic Services• Annex 19 to the Convention on International Civil Aviation, Safety Management

1. Introduction

1.1 The ICAO Standards and Recommended Practices (SARPs) provide the fundamental basis for the harmonized sustainability of the safety and efficiency of civil aviation worldwide, promoting the standardization of functional and performance requirements of civil aviation facilities and air navigation services that support the orderly development of air transport.

1.2 ICAO Member States use these SARPs and policies to ensure that their national civil aviation operations and standards conform to international standards, while allowing safe and reliable operation in the global civil aviation network.

1.3 The Caribbean Region is periodically under the threat of hurricanes, which makes infrastructure and aviation operations vulnerable to their deadly impact, but at the same time, these same infrastructures are necessary for a rapid recovery from disasters. In this regard, the Region has taken appropriate measures to address the contingencies based on the ICAO SARPs.

2. ICAO Standards and Recommended Practices and Regional Requirements

2.1 With regard to the planning and response to contingencies and emergency situations, by the air navigation service providers, we can find references in Annexes 11 and 19 to the Chicago Convention.

2.2 Annex 11 – Air Traffic Services

2.2.1 Annex 11 to the Chicago Convention requires air traffic services authorities to develop and promulgate contingency plans for implementation in the event of disruption, or potential disruption, of air traffic services 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 air traffic services 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.

2.2.2 In addition, ICAO will initiate and coordinate appropriate contingency action in the event of disruption of air traffic services and related supporting services affecting international civil aviation operations provided by a State wherein, for some reason, the authorities cannot adequately discharge this responsibility. In such circumstances, ICAO will work in coordination with States responsible for airspace adjacent to that affected by the disruption and in close consultation with international organizations concerned. ICAO will also initiate and coordinate appropriate contingency action at the request of States.

2.3 Annex 19 – Safety Management.

2.3.1 Annex 19 establishes that States shall require ATS providers under their authority to implement a Safety Management System (SMS). As part of this SMS, the service provider required to establish and maintain an emergency response plan for accidents and incidents in aircraft operations and other aviation emergencies shall ensure that the emergency response plan is properly coordinated with the emergency response plans of those organizations it must interface with during the provision of its products and services.

2.3.2 If we consider the interruption or possible interruption of air traffic services as an aviation emergency, both provisions complement each other in a coherent manner.

2.4 Regional requirements.

2.4.1 CAR/SAM Planning and Implementation Regional Group (GREPECAS) Conclusion 13/68 – *ATM CONTINGENCY PLANS FOR CAR/SAM REGIONS*, requires CAR/SAM States/Territories/International Organizations to develop ATM contingency plans for the airspace under their jurisdiction, conclude bilateral agreements and/or multilateral with States/Territories /International Organizations responsible for the adjacent airspace, in coordination with the ICAO Regional Offices, to prepare an ATM Contingency Plan using the guidelines presented by ICAO and send to the corresponding ICAO Regional Office a copy of their ATM Contingency Plan.

3. Current situation

3.1 When reviewing the result of the Protocol Question for the Air Navigation Services area of the ICAO Universal Safety Oversight Audit Program (USOAP) that addresses this requirement, we can verify that currently 8 States of the CAR Region (42%) do not ensure that contingency plans have been prepared and implemented to deal with interruptions or possible interruptions of Air Traffic Services (ATS) or services that serve as support.

3.2 Other States, which have promulgated their contingency plans, have not updated them periodically, despite having undergone significant changes in their ATS system, changes in authorities, different operational contexts, etc.

3.3 In addition, the ICAO NACC Regional Office has not established and implemented a systematic process to keep updated and publish the contingency plans that, according to the regional arrangements, must be sent by the NACC States and Territories.

4. Conclusions

4.1 The planning and response to contingencies and emergency situations by the ATS providers is a responsibility of the States, which must have adequate coordination and the support of the ICAO NACC Regional Office, with the objective of guaranteeing safety, minimize the impact on users and ensure a prompt recovery of operations.

4.2 Time is essential in contingency planning if hazards to air navigation are to be reasonably prevented. Timely introduction of contingency arrangements requires decisive initiative and action, which again presupposes that contingency plans have, as far as practicable, been completed and agreed among the parties concerned before the occurrence of the event requiring contingency action, including the manner and timing of promulgating such arrangements.

5. Suggested Actions

5.1 The Meeting is invited to:

- a) suggest States and Territories of the CAR Region authorities to develop, promulgate and coordinate contingency plans for implementation in the event of disruption, or potential disruption, of air traffic services and related supporting services in the airspace for which they are responsible for the provision of such services. Such plans should be drafted following the guidelines included in the **Appendix** to this working paper.
- b) request the ICAO NACC Regional Office to establish and implement a systematic process to keep updated and publish the contingency plans that, according to the regional arrangements, must be sent by the NACC States and Territories. This process must consider the revision and annual update of all the received plans.

GRP 13**CONCLUSIÓN 13/68 PLANES DE CONTINGENCIA ATM PARA LAS REGIONES CAR/SAM**

Que, los Estados/Territorios/Organizaciones Internacionales CAR/SAM que aún no lo hayan hecho:

- a) elaboren sus planes de contingencia ATM para el espacio aéreo bajo su jurisdicción;
- b) celebren acuerdos bilaterales y/o multilaterales con Estados/Territorios/Organizaciones Internacionales responsables del espacio aéreo adyacente, en coordinación con las Oficinas Regionales de la OACI, para elaborar un Plan de Contingencia ATM utilizando las guías presentadas en el **Apéndice AO** a esta parte del Informe; y
- c) envíen a la Oficina Regional de la OACI correspondiente una copia de su Plan de Contingencia ATM a más tardar el **30 de junio 2006**.

CONCLUSION 13/68 ATM CONTINGENCY PLANS FOR THE CAR/SAM REGIONS

That CAR/SAM States/Territories/International Organizations that have not yet done so:

- c) develop their ATM contingency plans for their airspace under their jurisdiction;
- d) establish bilateral or multi-lateral agreements with States/Territories/International Organizations responsible for the adjacent airspace, in coordination with the ICAO Regional Offices, in order to develop an ATM Contingency Plan, using the guidelines presented in **Appendix AO** to this part of the Report; and
- e) send to the corresponding ICAO Regional Office a copy of their ATM Contingency Plan by **30 June 2006**.

APPENDIX B

ACTION PLAN FOR THE DEVELOPMENT OF ATM CONTINGENCY PLANS

This plan is made of the following phases:

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

Phase I. Development of ATM contingency plans

In this phase, the States shall complete the respective ATM Contingency Plans using as a basis Appendix D to Annex 11.

Phase II. Harmonization of ATM contingency plans with neighbouring States

During this phase the necessary coordination will be carried out among the concerned parties, in order to harmonize the ATM contingency plans. The coordination may be made through electronic mail or through bilateral or multilateral meetings, depending on the case.

Phase III. Submission of national ATM contingency plans to the ICAO Regional Offices

The States will keep the corresponding ICAO Regional Office informed on the status of their ATM contingency plans.

ATM REGIONAL CONTINGENCY PLAN FOR CTA/UTA/FIR

OBJECTIVE: This contingency plan contains arrangements to ensure the continued safety of air navigation in the event of partially or total disruption of air traffic services (ATS) and is related to ICAO Annex 11- *Air Traffic Services* Chapter 2, paragraph 2.28. The 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 airspace within the (XXX) CTA/UTA/FIR.

AIR TRAFFIC MANAGEMENT

ATS Responsibilities

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

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

In the event that ATS cannot be provided within the (XXX) CTA/UTA/FIR, the Civil Aviation Authority shall publish the corresponding NOTAM 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, APP, TWR and 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.

In the event that the CAA is unable to issue the NOTAM, the (alternate) CTA/UTA/FIR will take action to issue the NOTAM of closure airspace upon notification by corresponding CAA or the ICAO Regional Office.

Separation

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

Level Restrictions

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

Other measures

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

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 or AIP.

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.

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

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.

PILOTS AND OPERATOR PROCEDURES

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.

Pilots need to continuously guard the VHF emergency frequency 121.5 MHz and should 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.

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.

If any 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

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

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:

During a contingency situation, the National Contingency Unit will liaise with the adjacent ATS units through the ICAO Regional Office.

The ICAO Regional Office will:

- a) closely oversight the situation and coordinate with all affected States/Territories/International Organizations and the IATA Regional Office, so as to ensure air navigation services are provided 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 Civil Aviation Administrations involved in the contingency plan; and
- d) keep the President of the Council of ICAO, the Secretary General, C/RAO, D/ANB and C/ATM continuously informed on developments, including activation of the contingency plan.

CONTINGENCY ROUTING SCHEME

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: <i>CR1:</i> <i>CR2:</i> <i>CR3:</i>	XXX: In coordination with XXX
In lieu of:	(ATS unit) provides ATC on the following routing: <i>CR4:</i>	XXX: In coordination with XXX

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 Regional Office.

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