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INTERNATIONAL CIVIL AVIATION ORGANIZATION

AFRICA-INDIAN OCEAN REGION AIR TRAFFIC MANAGEMENT CONTINGENCY FRAMEWORK

(AFI RACF)

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Approved by AASPG/2 and published by the
ICAO ESAF and WACAF Regional Offices

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AFI REGION ATM CONTINGENCY FRAMEWORK

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FOREWORD

Guidelines for contingency measures for application in the event of disruptions of air traffic services (ATS) and related supporting services were first approved by the Council on 27 June 1984 in response to Assembly Resolution A23-12, following a study by the Air Navigation Commission and consultation with States and international organizations concerned, as required by the Resolution. The guidelines, published in Attachment C to Annex 11 — *Air Traffic Services,* were subsequently amended and amplified in light of experience gained with applying contingency measures in various parts of the world and differing circumstances.

This document provides guidelines to ensure the safe and orderly flow of international air traffic across the ICAO Africa-Indian Ocean (AFI) Region in the event of disruption of ATS or related supporting services, that may lead to a contingency event, and to preserve the availability of major ATS routing in such circumstances. This document replaces and supersedes the AFI Region air traffic management (ATM) Contingency Plan. To support air navigation service providers (ANSPs) in developing their national contingency and emergency plans, a National ATM Contingency Plan Template, ATS Emergency Response Template and Tower Emergency Plan Template are available on the ICAO Eastern and Southern African (ESAF) and ICAO Western and Central African (WACAF) Offices websites [link]. In accordance with Annex 11 provisions, these guidelines provide regional contingency procedures and arrangements to support effective regional collaboration, minimize disruption impacts, and ensure the continued safety of flight operations.

Implementing the regional framework will prepare the region to respond to and manage contingency events effectively. States are responsible for ensuring compliance with ICAO provisions on contingency and emergency planning and implementation.

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RECORD OF AMENDMENTS

Amendment Number	Effective Date	Date entered	Entered by	Subject	Section/Paragraph

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ABBREVIATIONS AND ACRONYMS

ACC	Area control centre
ACG	ATM contingency group
ADS-C	Automatic dependent surveillance–contract
AFTN	Aeronautical fixed telecommunication network
AMHS	ATS message handling system
AFI	Africa-Indian Ocean
AFRAA	African Airlines Association
AIS	Aeronautical Information Service
ANS	Air navigation services
ANSP	Air navigation service provider
APP	Approach control
ATC	Air traffic control
ATFM	Air traffic flow management
ATM	Air traffic management
ATS	Air traffic services
BPE	Basic planning elements
CAA	Civil aviation authority
CAT	Contingency category
CCC	Contingency Coordinating Committee
CCT	Contingency Coordinating Team
CDM	Collaborative decision-making
CNS	Communications, Navigation, Surveillance
CPA	Contingency procedures and arrangements
CPDLC	Controller pilot data link communications
CR	Contingency Route
ESAF	Eastern and Southern African
FFR	Flood and fire relief
FIC	Flight information centre
FIR	Flight information region
FIS	Flight information service
FLAS	Flight level allocation scheme
FPL	Filed flight plan
GNSS	Global navigation satellite system
GSS RFI	GNSS radio frequency interference
HIRA	Hazard identification and risk assessment
IATA	International Air Transport Association
IAVW	International airways volcano watch
IVATF	International volcanic ash task force
KPIs	Key performance indicators
LOA	Letter of Agreement
MET	Meteorology
MWO	Meteorological watch office
OTS	Oriented track system
PAR	Post assessment requirement
PPR	Prior permission required
RACF	Regional ATM contingency framework
RCC	Rescue coordination centre
RON	Resilient operational network
RSC	Rescue Sub-centre

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RVSM	Reduced vertical separation minima
SAR	Search and Rescue
SITREP	Situation report
SMS	Safety management system
SRA	Safety risk assessment
SRR	Search and rescue region
TIBA	Traffic information broadcast by aircraft
TWR	Tower
VAA	Volcanic ash advisory
VAAC	Volcanic ash advisory centre
WACAF	Western and Central African

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CHAPTER 1

INTRODUCTION

1.1 The Africa-Indian Ocean Region ATM Contingency Framework (AFI RACF) has been developed to assist in providing for the safe and orderly flow of international air traffic in the event of disruption or potential disruption of ATS and related supporting services and infrastructure within the ICAO ESAF and WACAF Regions, in accordance with the provisions of ICAO Annex 11 – *Air Traffic Services*, Chapter 2, 2.32 and its Attachment C. This framework assists States, ANSPs, and involved aviation stakeholders in developing their national contingency plans.

1.2 The framework includes contingency procedures and arrangements (CPA) – a set of predefined contingency scenarios with their associated pre-agreed CPAs between adjacent area control centres (ACCs), and relevant ATS units when required, that would be applied in most contingency events – to be implemented in cases when the airspace users decide to circumnavigate airspace(s) due to contingency-related events such as armed conflict, adverse weather, natural disasters, or public health emergencies. The framework also includes scenarios when the ATS are disrupted due to events such as ATM system failure, industrial actions, national security, or pandemics, which might significantly affect traffic routing and increase air traffic movements in other airspace(s) and require cross-border coordination.

Note. Where the ATS are provided by a service provider based on multilateral agreements among States, arrangements should be implemented to ensure that contingency management is part of such agreements, and special procedures to be applied in case of contingency events may be required for the relevant ATS units, such as approach and towers in the States concerned. In this context, the term ACC encompasses the ATS units involved in contingency management.

1.3 The framework adheres to the full ATM contingency management cycle, which consists of four Phases: Be Ready (Prepare and Plan), Response, Recovery, and Review and Improve discussed in chapter 4

1.4 The framework defines the roles, responsibilities and functions of the Contingency Coordination Committee (CCC) and the ATM Contingency Group (ACG) that manage the State's response to contingency events. The framework also describes the role and responsibilities of the Contingency Coordination Teams (CCTs), as a mechanism used to ensure effective regional coordination and collaboration in responding to and managing contingency events.

1.5 The framework supports preparedness to address contingency events at the national, regional and inter-regional levels through guidelines on the planning aspects and the CPAs to be implemented. It also provides guidance on the roles of each stakeholder and the process to follow.

1.6 The ICAO ESAF and WACAF Regional Offices will coordinate with ICAO Headquarters and the Regional Offices concerned about any amendments to the AFI RACF and its components.

1.7 The relevant ICAO Regional Offices will distribute this document to all States and international organizations within their regions.

1.8 This version and its updates are available on the ICAO ESAF and WACAF Offices websites [link].

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1.9 To help keep this document up to date, Stakeholders are encouraged to send their comments/suggestions for improvements to the ICAO ESAF and WACAF Regional Offices (ICAOESAF@icao.int and ICAOWACAF@icao.int).

1.10 The AFI RACF comprises two main aspects: national and regional, as reflected in **Figure 1**. It also describes the regional ATM contingency planning principles and the basic planning elements.

Scope and scale of contingency event and response

1.11 To establish operational clarity, the AFI RACF delineates the scope of disruptions across three distinct thresholds:

Crisis: The baseline term defining any macro-event (e.g., natural disasters, public health outbreaks) with a major, destabilizing impact on standard operations.

Emergency: A localized, abnormal act or failure directly impacting specific facility or aircraft operations.

Contingency: The specific ATM classification used when a crisis or an emergency degrades service levels or limits airspace availability, requiring a coordinated operational response. Therefore, the term "contingency" refers to events that impact airspace operations. Not every emergency or crisis requires a regional contingency response, especially if it does not affect regional traffic flow.

Abnormal event that do not require a regional response: a power outage in an ATS unit where the unit's emergency procedures were applied and services rendered accordingly. Hence, there was no need to call for a CCT to respond to such an abnormal event.

Escalation Example: A localized technical emergency, such as a catastrophic power failure resulting in an 'ATS Zero' at a major area control centre (ACC), can rapidly escalate into a regional contingency event by disrupting traffic flows across multiple neighbouring flight information regions (FIRs). Another example is when an emergency at a major aerodrome hub affects regional traffic flows, due to many flights being diverted, rerouted, or delayed in neighbouring airspaces.

1.12 The following three levels describe the scale of a contingency:

Level 1: contingency event is contained within the State's delineated airspace that can be managed locally;

Level 2: cross-border contingency event requiring collaboration between two adjacent States; and

Level 3: cross-border contingency event requiring collaboration of more than two States.

1.13 To specify more clearly the necessary mitigation measures for any contingency scenario, the possible degradation of ATS due to human resources or any supporting services is presented in four statuses:

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a) ATS Normal;

b) ATS Degraded – ATC available with limitations;

c) ATS Degraded – Advisory service, flight information service (FIS) and/or Alerting Service available; and

d) ATS Zero (complete loss of ATS).

1.14 The airspace availability is described in three statuses:

a) Airspace Available (full access to the whole airspace);

b) Airspace Partially Available (access limited to the portion of the airspace impacted by the contingency event, but aircraft can operate in the other portion of the airspace); and

c) Airspace Not Available (the airspace is closed or avoided by the airspace users, irrespective of the ATS status).

1.15 The following are the categories of contingency events that identify the scope of the event and its potential impact on traffic flows. These categories are based on combinations of airspace availability and status of air traffic services:

Category A – Airspace Available and ATS Degraded – ATC available with limitations.

Category B – Airspace Partially Available and ATS Normal.

Category C – Airspace Partially Available and ATS Degraded – ATC available with limitations.

Category D – Airspace Available or Partially Available and ATS Degraded – advisory service, FIS and/or alerting service available.

Category E – Airspace Available or Partially Available and ATS Zero.

Category F – Airspace Not Available or avoided by airspace users regardless of the status of the ATS.

1.16 The matrix in **Table 1.** provides the combinations of airspace availability and status of air traffic services:

Status	**ATS Normal**	**ATS Degraded – ATC Available with Limitations**	**ATS Degraded – Advisory Service, FIS and/or Alerting Service Available**	**ATS Zero**
Airspace Available	**Normal Situation**	CAT A	CAT D	CAT E
Airspace Partially Available	CAT B	CAT C	CAT D	CAT E
Airspace NOT Available	CAT F	CAT F	CAT F	CAT F

Table 1. Matrix between airspace availability and status of air traffic services

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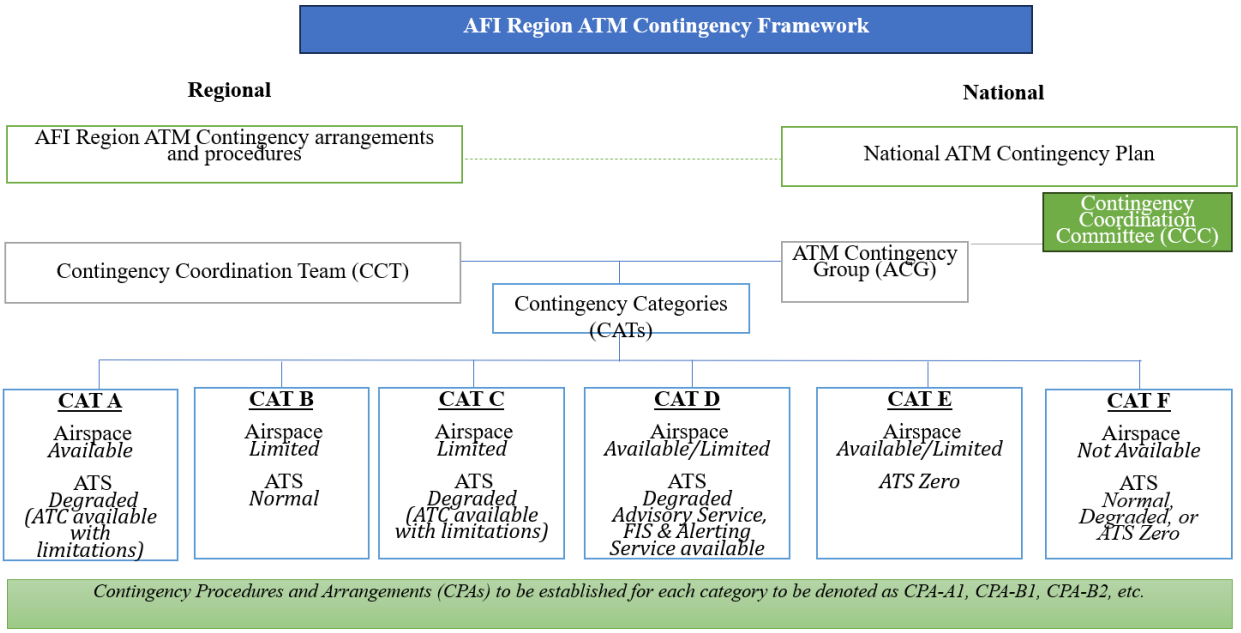


Figure 1. AFI Region ATM Contingency Framework

1.17 Events that would impact the availability of airspace and/or the provision of ATS include, but are not limited to: industrial action, pandemic, earthquake, adverse weather, ATM system failure, volcanic ash, nuclear emergency, military activity, national security, political unrest, conflict zones, complete loss of facility operational capability, loss of manpower, global navigation satellite system (GNSS) radio frequency interference (RFI), cyber security, major events.

1.18 The relations of different contingency events with the national, regional, and global focus are provided in **Figure 2**, for illustrative purposes (Reference ICAO EUR Doc 031).

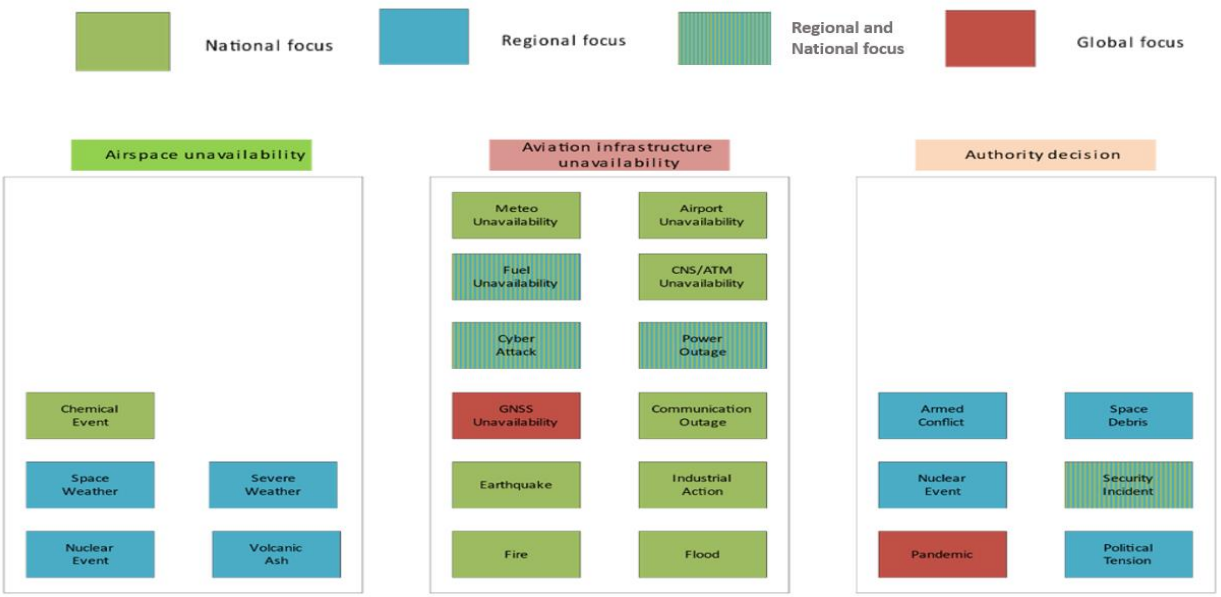


Figure 2. Relationships of different contingency events with the national, regional, and global focus

ATM Contingency Planning Principles

1.19 The ATM contingency planning principles in **Appendix A** form the basis for the development of contingency responses and management of any contingency event, including bilateral and multilateral States CPAs.

ATM Contingency Basic Planning Elements

1.20 The Basic Planning Elements (BPE) in **Appendix B** define the minimum recommended considerations for inclusion in contingency responses, such as those related to administration, plan management, airspace management, ATM procedures, pilot/operator procedures, communications facilities and procedures, aeronautical support services including aeronautical information services (AIS) and meteorology (MET), and contact details of involved facilities and focal points in contingency response and management.

1.21 ANSPs should establish and implement a mechanism to determine the safety and operational impacts of a contingency event promptly to ensure an effective and rapid response to such an event.

1.22 States and ANSPs should include aspects of contingency management in the training programme of all personnel involved in contingency management, including those related to the RACF and its components. Workshops and exercises at national level should be conducted annually, and cross-border ones at least every three years, to raise awareness and prepare the regions for effective response to contingency events.

AFI Region ATM Contingency Focal Points

1.23 The list of AFI Region ATM Contingency Focal Points is available on the ICAO ESAF and WACAF Offices websites [link]. States and international organizations are urged to keep the contact details of their focal points up to date by contacting the ICAO ESAF or WACAF Regional Offices (ICAOESAF@icao.int and ICAOWACAF@icao.int).

AFI Region ATM Contingency Monitoring Mechanism

1.24 The monitoring mechanism and status of the AFI Region's readiness to respond to contingency events are available at the ICAO ESAF and WACAF Regional Offices websites [link].

AFI Region ATM Contingency Risk Register

1.25 A contingency risk register for events that may require a contingency response based on the assessment of their potential impact regarding their severity and probability should be developed and reviewed by the AASPG/AAO Sub-group at its annual meetings or earlier if deemed necessary. The register is to be maintained on the ICAO ESAF and WACAF Regional Offices websites [link].

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CHAPTER 2

NATIONAL

2.1 In accordance with Annex 11, air traffic services authorities shall 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.

2.2 Preparatory actions should include the initial development of a contingency plan that covers responses to contingency events categories A to F that are likely to affect the availability of airspace for civil aircraft operations and/or the provision of air traffic services and supporting services.

2.3 The responsibility for appropriate contingency action for airspace over the high seas continues to rest with the State(s) normally responsible for providing the services until, and unless, that responsibility is temporarily reassigned by ICAO to other State(s) in accordance with the provisions of Annex 11.

2.4 States are required to review annually their National ATM Contingency Plan and coordinate any amendments with neighbouring States and the ICAO ESAF and/or WACAF Regional Offices. Copies of the latest version of the National ATM Contingency Plan should be provided to the ICAO ESAF and WACAF Regional Offices for posting on their websites [link].

2.5 ATM Contingency Plan Template, and an Emergency Checklist have been developed to support States in customizing their national ATM Contingency Plans and responding to contingencies and emergencies. These documents are available on the ICAO ESAF and WACAF Regional Offices websites [links].

2.6 States are urged to conduct training for the personnel involved in contingency management as well as periodic contingency management tabletop exercises and simulations, as applicable, as these are key elements for effectively responding to and managing a contingency event, supported by ICAO as required.

2.7 States should establish an ATM Contingency Group (ACG) responsible for planning, responding to, managing and recovery of contingency events. During a contingency event, the ACG introduces CPAs in full adherence to Collaborative Decision Making (CDM) principles and provides up-to-date information at national and regional levels on the situation and associated contingency measures until operations return to normal. The ACG should perform its tasks in accordance with an established communication policy and coordination mechanism to engage internal and external stakeholders.

2.8 A National Contingency Coordination Committee (CCC), comprising high-level representatives from aviation and non-aviation key stakeholders, should be established to serve as the central authority for information exchange and strategic coordination during disruptions. As the primary decision-making body, the CCC supports the ACG in executing contingency and recovery workflows. The ACG shall maintain a continuous feedback loop with the CCC, providing updates on the situation, the status of implemented measures, operational challenges, and required high-level interventions. If a State possesses an existing national crisis and disaster management entity, a distinct CCC is unnecessary, provided the roles and functions defined in this framework are formally adopted by the existing entity.

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2.9 The terms ACG and CCC are used as indicative names. States may use different terms, especially if established entities already perform the same tasks.

2.10 The ACG should be composed of the following as a minimum; other experts and representatives may be invited to join as required:

Note. The title "ACC Manager" is used throughout this document for illustrative purposes; in some States, these functions may be performed by an equivalent position. Additionally, these tasks may be delegated to designated staff acting on behalf of the Manager. When the ATS provider's area of responsibility extends through multiple FIRs, the ATS unit providing the services should be considered as the designated ACG.

ACG minimal membership

a) ACC Manager as Lead;

b) Head of or their delegates: ATFM unit (if established), AIS, CNS, MET, RCC; Airspace Planning; CAA/ANS (regulator); facility maintenance; airport operation;

c) Military Liaison Officer;

d) Managers or supervisors of other ATS units, as required;

e) Representative(s) of aerodrome, as required;

f) Representatives of air operators, as required; and

g) Representatives of other relevant authorities/agencies, as required.

ACG key functions

2.11 The ACG functions should include, but not be limited to, the following:

a) develop National ATM Contingency Plan in coordination with all stakeholders;

b) ensure that all personnel involved in contingency management are competent and well trained;

c) conduct table-top exercises, local, national and cross-border exercises to test the preparedness for responding to contingency events;

d) convene promptly to exchange information to support the assessment of the situation responding to a contingency event;

e) identify which Contingency Procedures and Arrangements (CPA) to apply;

In cases when the event is not covered in a CPA the ACG must explore contingency arrangements and procedures to be implemented;

f) advise and coordinate with adjacent ATS units, ICAO Regional Office, and airspace users (International Air Transport Association (IATA) and African airlines association (AFRAA)), if no other unit is in place to do so;

g) inform the CCC of the situation and indicate actions required from the CCC, if any;

h) activate the national ATM contingency plan and initiate the implementation of the associated contingency procedures and arrangements as reflected in the relevant CPA;

Note: At this stage required NOTAM should be issued by all the States concerned.

i) remain continually updated on the contingency situation;

j) facilitate airspace access clearance when restrictions are applied;

k) review and update the contingency arrangements and procedures, as required;

l) participate and contribute to the discussions of the CCT when established by ICAO

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and provide required information and updates;

m) exchange up-to-date information with the adjacent ATS authorities concerned to coordinate contingency measures;

n) notify the designated organizations of the contingency situation sufficiently in advance and/or as soon as possible thereafter;

o) take necessary action to issue NOTAM in accordance with the contingency plan or as otherwise required by the particular contingency situation. NOTAM Templates should be prepared in advance and used as far as possible. In the case of foreseeable disruption, the advance notice should in any case not be less than 48 hours;

p) prepare actions for the recovery phase - resumption of normal operations;

q) assess and confirm if the situation is rectified and normal operations can be resumed;

r) agree on the deactivation of the contingency plan and advise the CCT, if established;

s) cancel the NOTAM related to the contingency situation; and

t) conduct a post-event assessment for lessons learned.

CCC minimal membership

2.12 The CCC should include high-level representation from the following as necessary:

a) Civil Aviation Authority as Lead (or the lead of the national crisis group if existing);

b) ANSPs;

c) Military Authorities;

d) Aerodrome Operators;

e) Airspace users (Commercial air transport, business aviation, general aviation, cargo, state aircraft operations);

f) Meteorological Service Provider if not part of ANSP;

g) Search and rescue (RCC, RSCs, and mission control facilities);

h) Representatives of authorities or Ministry responsible for defence/national Security, Finance, Interior Affairs, International Affairs, Health, Transportation, Communication; and

i) Other relevant authorities/agencies.

CCC key functions

2.13 The CCC functions should include, but not be limited to, the following:

a) convene rapidly to exchange information and provide high-level support and resources to the ACG in responding to and managing contingency events, as required;

b) take actions, such as mobilizing resources for the provisions of ATS;

c) facilitate coordination between relevant civil and military authorities for the dynamic management of the airspace, including the establishment of contingency routing as applicable; and

d) coordinate internally and with the States and organizations concerned for actions that require high-level decision-making, as necessary.

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Contingency event response action flow by the ACG

2.14 The following provides the step-by-step actions to be taken in case of a contingency event:

Note. The title "ACC Manager" is used throughout this document for illustrative purposes; in some States, these functions may be performed by an equivalent position. Additionally, these tasks may be delegated to designated staff acting on behalf of the Manager. Also, the cases when the ATS provider's area of responsibility extends through multiple FIRs should be considered as the designated ACG.

1- The ACC supervisor to action as per the applicable standards of operations;

2- ACC supervisor to inform the ACC Manager to assess the situation;

3- ACC Manager as the Lead of ACG calls for the ACG;

4- The ACG decides which CPA to apply;

5- The ACG Lead advises the adjacent States, ICAO Regional Office and IATA;

6- The ACG Lead informs the CCC, indicating if actions are required from the CCC;

7- ACG activates the contingency plan (CPA to be implemented);

8- NOTAM issuance by all the States concerned (affected FIRs), as applicable;

9- Contingency Response goes Live – ACG to call for meetings (in-person or via video conference);

10- ACG monitors and continuously assesses the situation;

11- ACG reviews and introduces adjustments to the CPAs as needed;

12- When the contingency event ceased – ACC Manager advises the adjacent States and ICAO Regional Office and the CCC;

13- Deactivation of contingency plan (Cancellation of NOTAM); and

14- ACG to carry out a post-assessment for improvements.

Contingency event response action flow by the CCT

2.15 When informing the ICAO Regional Office (ref. step 5) or based on information received by ICAO, a CCT, as described in Chapter 3, may be established and follow the following steps:

1- To assess the situation, the need, and the scope of the CCT, the ICAO Regional Officer/ATM (RO) coordinates with the following:

   a) ICAO Headquarters and other Regional Offices concerned;

   b) Contingency Focal Points of States concerned;

   c) IATA; and

   d) Other organizations as needed.

2- ICAO Regional Office activates the CCT and calls for the first CCT Meeting;

3- CCT agrees on the implementation of CPAs;

4- CCT monitors and continuously assesses the situation;

5- ICAO arranges for periodic meetings (usually via web conference) of the CCT;

6- ICAO Regional office shares regular situation report (SITREP) through information bulletin;

7- ICAO shares the outcome of CCT meetings and updates received;

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8- Contingency event ceased – ICAO deactivates the CCT. In the event of a long running but stable contingency, the CCT may be put into monitoring status; and

9- CCT members carry out post-assessments for improvements.

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CHAPTER 3

REGIONAL

3.1 A Contingency Coordination Team (CCT) would be established with the support of the ICAO ESAF and/or WACAF Regional Offices to effectively respond to and manage a contingency event involving more than one State (Level 2 or 3). CCT is a forum for exchanging information related to a contingency event and for agreeing on the implementation of necessary CPAs in a collaborative manner.

3.2 A Contingency Coordination Team (CCT) should be established from the following members:

a) ICAO (Headquarters and Regional Offices);

b) States concerned (CAAs and ANSPs);

c) IATA and AFRAA (representing airspace users affected by the contingency events); and

d) other organizations and agencies as deemed necessary.

3.3 The main functions of the CCT include but not limited to the following:

a) continuous monitoring of the information from all relevant sources;

b) apply CDM principles, with affected airspace user representative bodies (IATA/AFRAA) participating in decisions concerning contingency route structures, capacity limitations, ATFM measures, prioritization criteria, and recovery planning

c) initiate action for the activation/deactivation of the CPAs determined for the contingency event;

d) arrange for the constant exchange of relevant information to the ICAO Regional Offices and Headquarters; and

e) enable the exchange of up-to-date information among States directly concerned and States that would be potentially involved in contingency respons.

3.4 Tactical ATC considerations during periods of overloading may require re-routing, which might be coordinated through CCT.

3.5 CCT should facilitate the agreement on alternative routes to maximize the use of existing available airspace, level of ATS, and communication, navigation, and surveillance.

3.6 In the event that ATS is disrupted, NOTAM should be published indicating the following:

a) time and date of the beginning of the contingency measures;

3.7 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, advisory service, FIS and alerting service), including an expected date of restoration of services if available;

d) information on the provisions made for alternative services;

e) ATS contingency routes that have been activated as alternate routes;

f) procedures to be followed by neighbouring ATS units;

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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.

3.8 In the event that the State/ANSP is unable to issue NOTAM, arrangements will be made for another NOTAM Office to issue the required NOTAM.

3.9 Draft NOTAM are included as templates in each CPA to be used in case of a contingency event.

3.10 Contingency Routes (CRs) might be developed in advance and be included in the CPAs in case the traffic cannot be accommodated on the current ATS route structure.

3.11 States should establish and maintain pre-agreed regional contingency route networks that are published and available for integration into operator flight-planning systems.

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

3.13 It is recognized that airspace users may incur economic penalties during a contingency event. Therefore, air traffic flow management (ATFM) measures should be implemented to the extent possible to make operations more predictable.

3.14 Capacity restrictions implemented during contingencies should be applied in a transparent, equitable, non-discriminatory and operationally justifiable manner with due regard to humanitarian flights, search and rescue flights and flights in emergency.

Traffic Information Broadcast by Aircraft (TIBA) Procedures

3.15 Traffic Information Broadcast by Aircraft (TIBA) procedures shall be applied in accordance with ICAO Annex 11 – *Air Traffic Services*, Attachment B. The TIBA frequency for the AFI Region is xxxxxMHz in accordance with Africa - Indian Ocean Aviation System Planning and Implementation Group (AASPG) Conclusion xx/y.

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CHAPTER 4

CONTINGENCY PROCEDURES AND ARRANGEMENTS (CPA)

4.1 Contingency procedures and arrangements (CPAs) are designed to bridge the gap between the planning and implementation phases. They may include a set of pre-agreed contingency arrangements and procedures to be implemented by ATS units in response to contingency events.

4.2 The CPAs should be developed and maintained based on a determination of the airspace availability and the status of air traffic services to be provided. The matrix below (**Table 2**) illustrates the link of each CPA with the contingency category:

Status	**ATS Normal**	**ATS Degraded ATC available with limitations**	**ATS Degraded Advisory Service, FIS and/or Alerting Service**	**ATS Zero**
Airspace Available	**Normal Situation**	CAT A CPA-A1	CAT D CPA-D1	CAT E CPA-E1
Airspace Partially Available	CAT B CPA-B1	CAT C CPA-C1	CAT D CPA-D[2]	CAT E CPA-E2
Airspace NOT Available	CAT F CPA-F1	CAT F CPA-F2	CAT F CPA-F3	CAT F CPA-F4

Table 2. Contingency Procedures and Arrangements (CPAs) Matrix

4.3 The CPAs therefore cover a comprehensive range of contingency events; however, appropriate CPAs might be required to address other contextual factors. Therefore, ANSPs are required to effectively engage with their neighbouring ATS units, airspace users (IATA, AFRAA) and ICAO, if needed, via the CCT, to agree on the specific CPAs for such events.

4.4 CPAs are required when the normal arrangements and procedures agreed upon in the ATS letters of agreement (LoAs) between adjacent ATS units cannot be applied, hence they are temporary in nature and should be periodically reviewed and updated as needed.

4.5 The following CPAs, that should be detailed utilizing the template in Appendix C, can be populated and reused as required during contingency events. The CPAs can be provided on a web-based platform or an app for easy access and utilization. The following are examples on considering the applicable CPA for a contingency event:

CPA-A1:
Airspace is available as usual, but ATS is degraded due to events such as industrial action, pandemic, earthquake, nuclear emergency, adverse weather, ATM system failure, and GNSS RFI, which would affect the provision of ATS to some extent. In this kind of event, traffic will have access to the entire airspace; however, the ATS unit will be limited in providing services as usual.

CPA-B1
ATS is normal; however, the airspace is limited due to contingency events such as Volcanic Ash, nuclear emergencies, armed conflict, and weather. In this kind of event, traffic would not have access to the affected portion of the airspace; accordingly, the ATS unit will have to accommodate traffic in the available airspace by introducing changes to the ATS route structure.

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CPA-C1
Airspace is limited, and ATS are degraded due to contingency events such as Volcanic Ash, nuclear emergencies, military activity, ATM system failure and adverse weather. This kind of event requires procedures to circumnavigate traffic away from the affected airspace, taking into consideration the limitations of ATS.

CPA-D1-D2
Airspace is available or partially available, , but no air traffic control (ATC), only flight information services can be provided, due to a contingency event such as a pandemic, national security, industrial action, or ATM system failure. In this kind of event, air traffic control is affected, but other ATS will remain available or arranged. One contingency measure would be changing the airspace classification to Class G.

CPA-E1-E2
Airspace is available or partially available, but ATS is unavailable (ATS Zero) due to a contingency event, such as a complete loss of facility operational capability, total loss of manpower, or security. In this kind of event, ATS could not be provided; however, traffic might still have access to, or operate within, the affected uncontrolled airspace. This may require neighbouring ATS units to reroute traffic to avoid the affected airspace.

CPA-F1-F4
Airspace is not available or avoided due to an imposed closure by the State or when airlines avoid the airspace due to adverse weather, armed conflict, or natural disaster, despite the status of ATS (normal or degraded). This kind of event requires neighbouring ATS units to reroute traffic to avoid the airspace.

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CHAPTER 5

CONTINGENCY MANAGEMENT CYCLE

5.1 The contingency management should be a continuous, cyclic process recognizing that the effective management of disruptive events does not merely begin when air traffic services are lost and ends when the circumstances cease; however, it requires an active progression through four distinct, interconnected phases as illustrated in **Figure 3**:

Phase 1: Be Ready (Prepare/Plan)

Phase 2: Respond

Phase 3: Recover

Phase 4: Review & Improve



Figure 3. Contingency Management Cycle

5.2 By systematically applying these four phases, the region ensures that the aviation network maintains the maximum possible resilience, safety, and continuity during non-normal operations.

Phase 1: Be Ready (Prepare/Plan)

5.3 The foundational phase of the regional contingency loop focuses on proactive risk management, capability building, and vulnerability reduction.

5.3.1. Airspace Contingency Planning and Agreements:

a) Promulgation of Plans: States must establish, promulgate, and maintain proactive contingency plans to address anticipated threat levels before an emergency unfolds.

b) Bilateral and/or Multilateral Frameworks: States should establish formal cross-border understandings and regional coordination mechanisms to handle localized or widespread airspace closures effectively.

c) States/Administrations should include a list of emergency facilities in their State ATM Contingency Plans and/or Emergency Response Plans to facilitate timely coordination and continuity of operations during contingency events.

5.3.2. Threat and Safety Risk Assessments

a) Hazard Identification: Regions must implement dynamic Hazard Identification and Risk Assessment (HIRA) processes and scrutinise the horizon for geopolitical conflicts, severe weather, volcanism, public health crises, and system vulnerabilities.

b) The "Three Rs" Principle: Planners must integrate Redundancy, Robustness, and Resiliency into critical ATM/CNS network layers. This includes preserving a Resilient Operational Network (RON) to safeguard navigation against primary system failures or signal degradation (e.g., systemic GNSS RFI).

5.3.3. Training, Testing, and Joint Exercises:

a) Contingency management should be included in the training programmes of all personnel involved in contingency management.

b) Simulations and Desktop Exercises: CAA/ANS, ANSPs, and airspace users must participate in desktop scenario training, computer simulations, and live "stress test" exercises.

c) Regional Validation: Multi-national coordination exercises must be conducted at least once every three years with adjacent flight information regions (FIRs) to identify single points of failure and validate cross-border handling procedures.

Phase 2: Respond

5.4 The response phase is triggered when an unusual, hazardous, or disruptive event alters or is foreseen to alter nominal service levels or compromises regional airspace integrity.

5.4.1. Contingency Coordination Team (CCT) Activation:

a) Level 1 Contingency will be managed by the ACG, keeping the ICAO Regional Office apprised of the development as required.

b) Operational Bridging for Level 2 or 3: Upon a severe regional disruption, a CCT is activated to serve as an operational bridge between affected ANSPs, adjacent States, and international operators (including IATA).

c) Tactical Flow Management: The CCT exchanges information among its members and coordinates CPAs as required to ensure the safety and continuity of the traffic flow.

5.4.2. Civil-Military Cooperation and Dynamic Airspace Management:

a) Airspace avoidance: in case of hazardous activities to civil aircraft, safety protections must be implemented immediately through the temporary designation of restricted areas over a State's sovereign airspace or only danger areas over high seas.

b) Promulgation of Constraints: All critical route adjustments, security constraints, and service degradations must be immediately broadcast via standardized, explicit NOTAM templates to maintain absolute network transparency.

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c) Dynamic airspace management: through effective civil-military cooperation, manage the restricted areas (releasing them or changing their dimensions and time), allowing for the prompt establishment of contingency routing to support avoiding the affected airspace.

5.4.3. Interface with ICAO Headquarters Crisis Management Framework:

a) Escalation and Verification: If a disruption exceeds standard localized coping procedures or involves massive UN humanitarian responses, Regional Offices will interface with the ICAO Crisis Manager to verify and formally declare a designated crisis.

b) Unified Communications Protocol: To prevent misinformation, all official communications and public statements during an officially designated crisis must be funnelled exclusively through the ICAO Crisis Manager and senior legal/external relations teams.

Phase 3: Recover

5.5 The recovery phase manages the orderly transition from emergency/degraded contingency configurations back into normalized, baseline air traffic management operations. Recovery planning should consider airspace users' operational needs, including restoring network connectivity, repositioning requirements, crew recovery, airport congestion management, and normalizing traffic flows.

5.5.1. Infrastructure Restoration and Stabilization:

a) System Re-verification: Prior to restoring normal flight routing parameters, verification should be conducted for the infrastructure and facilities if they were impacted by the contingency events.

b) Workforce readiness: verification of the readiness of all personnel involved in the provisions of ANS.

c) Notification: ensure aeronautical information is published well in advance to provide airspace users sufficient time to accommodate the changes in their operations.

d) Handling Priority Air Traffic: During the recovery curve, priority should continue to be given to handling, parking allocation, and logistical provisioning to arriving or departing international humanitarian, search and rescue (SAR), and relief operations.

5.5.2. Stabilization of Contingency Teams:

a) Gradual Deactivation: CCT and regional response components must remain active and accessible via a stable deactivation curve rather than shutting down abruptly. Oversight bodies must verify that the regional operational environment has permanently stabilized before formal deactivation occurs.

b) Deactivation: Once it has been concluded that the operation is normal, the CCT will be deactivated by the ICAO Regional Office.

5.5.3. The following is an initial set of key performance indicators (KPIs) that should be updated based on regional experience:

KPI-1. Development of National Contingency Plan in accordance with Annex 11 provisions and the AFI RACF.

KPI-2. Establishment of ACG

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KPI-3. Establishment of CCC or its functions be added to a similar existing entity at national level.

KPI-4. Update the CCT list of focal points.

KPI-5. Agreement on CPAs at national and cross border levels.

KPI-6. Initial contingency event notification in less than 60 minutes.

KPI-7. The regional office initiates coordination within 120 minutes of the notification.

KPI-8. First stakeholder briefing in less than 180 minutes.

KPI-9. SITREP issuance at least once every 24 hours.

KPI-10. Publication of estimated service restoration milestones whenever practicable.

KPI-11. Regular updates regarding expected recovery timelines.

KPI-12. Update on actions implemented during recovery phase at least every 24 hours.

Phase 4: Review and Improve

5.6 As shown in **Figure 3**, the loop connects the end of an operational cycle back to preparedness through comprehensive debriefing and systemic modification.

5.6.1. Post-Event Analysis and Just Culture:

a) Non-Punitive Systemic Debriefing: As soon as practicable following a contingency deactivation, a rigorous post-event evaluation must collect comprehensive feedback from all participating ANSPs, regulators, military stakeholders, and aircraft operators.

b) Focus on Learning: Consistent with a Just Culture, the evaluation must avoid individual finger-pointing or blaming human errors. Instead, it must look structurally at system interfaces, procedure omissions, and latent technical holes.

5.6.2. Build Back Better and Documentation Revision:

a) Integrating Lessons Learned: Findings from the review process must be incorporated into updated regional policies, organizational manuals, and local emergency frameworks to proactively mitigate future cost, safety, and efficiency degradations.

b) Regulatory Compliance Reporting: To evaluate the ongoing success of these modifications, States within the region must complete and submit updated contingency plans to their accredited Regional Office at least once per calendar year.

c) Review the KPIs for improvement after implementation of the contingency plan.

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CHAPTER 6

AFI ATM VOLCANIC ASH CONTINGENCY PLAN

6.1. The ICAO Air Traffic Management Volcanic Ash Contingency Plan Template provides information on terminology related to volcanic ash contingency responses, and the *pre-eruption*, *start of eruption*, *on-going eruption* and *recovery* phases of volcanic ash cloud events. Information is also provided on air traffic services procedures and on-air traffic flow management procedures.

6.2. The phases of volcanic eruption activity may be summarized as follows:

Pre-Eruption Phase: a volcanic eruption is expected.

Start of Eruption Phase: commences with the outbreak of the volcanic eruption and entrance of volcanic ash into the atmosphere.

On-going Eruption Phase: commences with the issuance of the first volcanic ash advisory (VAA) containing information on the extent and movement of the volcanic ash cloud.

Recovery Phase: commences with the issuance of the first VAA containing a statement that no volcanic ash is expected.

6.3. The actions to be taken by relevant Volcanic Observatories, Volcanic Ash Advisory Centres (VAAC), MWOs, AIS Units and ACCs are described in ICAO Doc 9766 – *Handbook on the International Airways Volcano Watch (IAVW)*.

6.4. Operators are required by ICAO Annex 6 – *Operation of Aircraft* to implement appropriate mitigation measures for volcanic ash in accordance with their safety management system (SMS), as approved by the State of the Operator/Registry. This document assumes that ICAO requirements regarding safety management systems have been implemented by all States and aircraft operators. Detailed guidance on Safety Risk Assessments (SRAs) for flight operations with regard to volcanic ash contamination can be found in the manual on *Flight Safety and Volcanic Ash – Risk Management of Flight Operations with Known or Forecast Volcanic Ash Contamination* (ICAO Doc 9974).

6.5. States' regulatory provisions and arrangements should be reviewed in accordance with the guidance provided in ICAO Doc 9974:

a) Aircraft operators are required to include in their safety management system (SMS) an identifiable safety risk assessment for operations into airspace forecast to be, or at aerodromes known to be, contaminated with volcanic ash; and

b) Safety oversight procedures are used for the evaluation of operators' capability to conduct flight operations safely into airspace forecast to be, or aerodromes known to be, contaminated with volcanic ash.

6.6. States' airspace and airport management policies and procedures should be reviewed to ensure that (in accordance with the guidance provided in ICAO Doc 9974 – *Flight Safety and Volcanic Ash* and the provisions of ICAO Doc 4444 – *PANS-ATM*, 15.8.1c and Note 2):

a) Airspace affected by volcanic ash cloud should not be 'closed';

b) Specification in NOTAM of alternate routing or other air traffic flow management (ATFM) measures to manage airspace constraints arising from volcanic ash cloud should be solely for the purpose of ensuring the predictability and regularity of air

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traffic, and should be based on an assessment of capacity and demand in airspace affected by volcanic ash and/or by aircraft avoiding the volcanic ash cloud;

c) NOTAM specifying alternate routing or other ATFM measures related to a volcanic eruption or volcanic ash cloud should be issued separately from the ASHTAM/NOTAM issued in accordance with Annex 15 and PANS-AIM;

d) Aerodromes should only be closed by NOTAM for periods of observed volcanic ash contamination of the surface of the aerodrome movement area;

e) Airport capacity limitations of alternate aerodromes, including apron capacity, should be considered, and recommendations for the use of other alternates considered for inclusion in NOTAM (in c, above); and

f) If required by State regulations, any declaration of a Danger Area or Restricted Area should be confined to the pre-eruptive or erupting volcano and the area containing its forecast or observed ejecta[1].

6.7. To ensure effective volcanic ash information, coordination and collaboration, States should:

a) Establish a mechanism to provide regular and timely updates of information during a volcanic eruption and/or ash cloud event to ensure all stakeholders are up to date with current information, situation reports and contingency planning;

b) participate in volcanic ash exercises; and

c) consider establishing an internal crisis management centre, where applicable, to support the collaborative and timely sharing of information such as volcanic eruptions or other crises that will have a significant impact on airport and/or airspace management.

Note. This is supplemental to the provisions of Annexes 3 and 15.

6.8. AIS units are required under the provisions of Annex 15 to issue information relating to volcanic ash cloud. Information may be issued in either NOTAM or ASHTAM format. Annex 15 specifies that ASHTAM shall include *Item E — Colour code for level of alert indicating volcanic activity*. Color-coded levels for volcanic activity are provided by all volcanic observatories and/or Volcanic Ash Advisory Centres (VAACs) supporting the AFI Region. NOTAM format should be used to disseminate volcanic ash cloud information.

6.9. NOTAM issued for volcanic eruption or volcanic ash cloud should include all items of information listed in the ASHTAM format except item I (closure of airspace and/or air routes). Color-coded activity level information may be included in NOTAM if available.

6.10. Each State should ensure that a list of volcanoes relevant to the State is maintained at all International NOTAM Offices, with volcano name, number and nominal position.

6.11. ICAO Doc 9691 *Manual on Volcanic Ash, Radioactive material and Toxic Chemical Clouds* Appendix E – *Cross reference list of volcanoes and navigation aids* provides a list of ICAO registered volcanoes. The information provided includes the following note:

Note. Doc 9691 Appendix E requires that another list, the List of Volcanoes of the World for VAAC Use, available at http://www.volcano.si.edu/projects/vaac-data/ and maintained by the Global Volcanism Program of the Smithsonian Institution, should be used in case of any discrepancy between the Smithsonian database and the list published in Doc 9691 Appendix E.

[1] Information on the definition of a radius of special use airspace definition around a pre-eruptive or eruptive volcano may be found in the AIP New Zealand at http://www.aip.net.nz/pdf/ENR_5.3.pdf.

6.12. The List of Volcanoes of the World for VAAC Use (Smithsonian Institution) should be considered the definitive list of volcanoes for use in the AFI Region. The List of volcanoes is updated frequently, without notification. States should ensure that relevant NOTAM Offices include in their local procedures' provisions for frequent checks of the list to ensure any changes are recorded and used in ASHTAM/NOTAM and NOTAM Templates.

6.13. The AFI Region Volcanic Ash Plan is available on the ICAO ESAF and WACAF Regional Offices websites [links].

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APPENDIX A: ATM CONTINGENCY PLANNING PRINCIPLES

1. Area control centres (ACCs) and flight information centres (FICs) should have a National ATM Contingency Plan to ensure the safe transit of international traffic in the event of disruption or potential disruption of ATS and related supporting services in the airspace for which they are responsible. ATM contingency procedures and arrangements (CPAs) would refer to measures with cross-border aspects (Level 2 or 3 of the RACF).

2. The overriding principle is that safety has primacy over efficiency and optimal levels and routes.

3. Contingency Operations might necessitate lower than normal airspace capacity to ensure safety.

4. System and ATC service redundancy are the most effective contingency capabilities.

5. Contingency Plan should define the following where applicable:

    a) Contingency Routes supported by Flight Level Allocation Scheme (FLAS) and minimum navigation and height-keeping (e.g. RVSM or non-RVSM) capability for access;

    Note. Contingency Route and/or FLAS need not be defined if the Contingency Plan indicates that all routes and/or levels remain available during contingency operations.

    b) provisions for tactical definition and coordination of additional routes/FLAS and priority for access to accommodate selected non-scheduled operations such as humanitarian, medical evacuation and flood and fire relief (FFR) flights;

    c) priority determination for routine scheduled and non-scheduled flights;

    d) flights excluded from operations in contingency airspace, and minimum navigation and height keeping (RVSM) capability required for access to the contingency airspace;

    e) specified minimum longitudinal spacing between consecutive aircraft entering the contingency airspace on non-separated ATS contingency routes;

    f) Contingency communication arrangements including means of communication within contingency airspace and communications transfer arrangements for aircraft entering and leaving the airspace;

    g) Details of delegation of air traffic services arrangements (if any); and

    h) Contingency points of contact.

6. Contingency procedures and arrangements (arrangements between neighbouring administrations) should be included in bilateral or multilateral agreements between States in all cases where the activation of the Contingency Plan would impact upon a neighbouring State.

7. Close cooperation between neighbouring administrations, together with supporting mechanisms for the tactical definition and promulgation of contingency routes.

8. Contingency routes must be vertically separated whenever lateral route spacing is less than the minimum specified by the State for contingency operations.

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9. FLAS planning should include consideration of allocating the optimum flight levels to routes used by long haul aircraft, depending on the traffic density on the route, wherever practicable.

10. Spacing between contingency ATS routes should be in accordance with the applicable separation described in the *Procedures Air Navigation Services – Air Traffic Management (Doc 4444) and Regional Supplementary Procedures (Doc 7030)*.

11. Minimum longitudinal separation between aircraft operating on the same contingency route and not vertically separated should be 15 minutes or 120 NM. However, this may be reduced to 10 minutes or 80 NM in conjunction with application of the Mach number technique authorized by the relevant authority and agreed in the appropriate LOAs or other CPAs.

12. Contingency ATS routes and FLAS, and contingency procedures, should be agreed between geographically grouped neighbouring States to form sub-regional contingency plans.

13. Contingency ATS routes should be published in the State AIP under Section ENR 3.5 to permit the storing of route details in airspace users' navigation databases. CPAs should include the sovereign and, if applicable, also the High Seas part of the airspace.

14. Airspace classifications for ICAO Classes A, B, and C airspace should remain unchanged as practicable during contingency operations to facilitate managed access to the airspace in accordance with the contingency plan. Where necessary restrictions may be imposed to preclude VFR operations for safety requirements.

15. Ground and airborne navigation requirements should be defined, if necessary.

16. Alternate aerodromes should be specified where necessary for the readiness of the airport control towers, approach units and airport operators.

17. Airspace affected by volcanic ash cloud should not be closed to international civil aviation, where operators comply with the relevant ICAO provisions.

18. Amended ATS routes, whether published or promulgated ad-hoc, may be prescribed as part of the air traffic flow management (ATFM) response to expected demand and capacity imbalance caused by aircraft avoiding volcanic ash cloud.

19. Aerodromes should only be closed by NOTAM for periods of observed volcanic ash contamination of the surface of the aerodrome movement area.

20. Closure of airports affected by volcanic ash deposition should be supported by a safety assessment conducted in collaboration between airport operators, aircraft operators and the air navigation service provider, in accordance with their respective safety management systems.

21. Civil aircraft operations over or near conflict zones should be in accordance with ICAO Doc 10084 and ICAO Doc 9554.

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APPENDIX B: BASIC PLAN ELEMENTS OF A CONTINGENCY PLAN

Element 1: Administration

a) Record of signatories, version control and records of amendment.

b) Definition of the objectives, applicable airspace and operations, and exclusions.

Element 2: Plan Management

c) List of States and FIRs affected, and the agreed methods of notification in the event of pre-activation, activation and termination of the plan.

Contingency events may arise with insufficient advance notice to permit pre-activation of contingency plans

d) Details of the arrangements in place for management of the plan, including:

i. Establishment of ATM Contingency Group (ACG) for 24-hour response to and management of contingency event and coordination of operational and supporting activities under the contingency plan; and

ii. establishment of a Contingency Coordination Committee (CCC) composed of high-level representatives from aviation and other stakeholders to act as a central agency for the purpose of exchanging information and coordinating activities during disruption. The CCC provides required high-level support to ACG and takes necessary action to restore the situation.

e) Details of testing, review and reporting actions:

i. schedule of desktop and simulator testing;

ii. post-assessment requirements (PAR):

- a preliminary PAR report within 28 days of any activation or testing of contingency plans, including any recommendations to address deficiencies and implement improvements in contingency plans, arrangements, procedures and training.

- a more comprehensive PAR report should be prepared for major contingency events, or any contingency event involving an air safety incident investigation.

A full PAR analysis of major events may necessitate considerable time to complete.

- input to the PAR from all parties affected by or involved in the response to the contingency is actively sought and considered;

- bi-lateral or multi-lateral PAR for activation or testing of Level 2 and 3 CPAs;

iii. timely reporting to ICAO ESAF and/or WACAF Regional Offices and other affected States of anticipated or experienced disruptions requiring activation of contingency plans.

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f) inclusion of contingency plans, procedures and arrangements in ATS and other involved personnel training and refresher training programmes;

g) raising awareness of all parties involved in contingency.

Element 3: Airspace

h) Procedures for dynamic management of the airspace;

Note. Guidance on the dynamic management of restricted, prohibited and danger areas as well as enhanced flexible use of airspace are contained in the ICAO manual on Civil-Military Cooperation in Air Traffic Management (Doc 10088).

i) Criteria for airspace classification changes and associated separation;

j) CNS status and performance requirements;

k) Implementation of oriented track system (OTS) in collaboration with neighbouring ATS units; and

l) Procedures for the Prior Permission Required (PPR) aeronautical information publication when required to access the airspace.

Element 4: ATM Procedures

m) Details of re-routing to avoid the whole or part of the airspace concerned, normally involving establishment of:

   i. strategic and tactical collaborative oriented track system providing additional routes or route segments with associated conditions for their use; and/or

   ii. a simplified route network through the airspace concerned, together with a FLAS, to ensure that a standard minimum vertical separation is applied where less than a specified minimum lateral separation exists between routes.

n) details of how domestic traffic, departing and arriving flights and SAR, humanitarian and State aircraft flights will be managed during the contingency period;

o) procedures for transition from normal services levels to contingency services, and resume normal service;

p) procedures for joining or departing a contingency route;

q) details of reduced levels of service, if any, within the affected airspace;

r) establishment of procedures for controlled access to the contingency area to prevent overloading of the contingency system, utilizing allocated airspace entry times or, where ATFM capability exists, tactical ATFM measures;

s) procedures for adjacent service providers to establish longitudinal spacing at the entry point, and to maintain such separation through the airspace;

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t) reassignment of responsibility for providing air traffic services, to the extent possible, in non-sovereign airspace and to international aircraft transiting sovereign airspace; and/or

u) coordination and communications transfer procedures for aircraft entering and leaving the affected airspace.

Element 5: Pilot/Operator Procedures

v) requirements for flight plan submission during the contingency period, including contingency route planning requirements, and arrangements if airspace is restricted or not available and no contingency route is available;

w) emergency procedures, including TIBA and/or in-flight requirements for broadcast of position and other information, and for continuous listening watch, on specified pilot- pilot and GUARD VHF frequencies;

x) requirements for display of navigation and anti-collision lights;

y) requirements for climbing and descending well to the right of the centreline of specifically identified routes; and

z) requirements for all operations to be conducted in accordance with IFR, including operating at IFR flight levels from the relevant Table of Cruising Levels in Appendix 3 of Annex 2, except when modified by a FLAS.

Element 6: Communications Facilities and Procedures

aa) provision and operation of adequate air-ground communications, aeronautical fixed telecommunication network (AFTN)/ATS message handling system (AMHS) and ATS direct speech links;

bb) specification of radio frequencies to be used for particular contingency routes;

cc) log-on and connection management for controller pilot data link communications (CPDLC) aircraft, where appropriate; and

dd) use of automatic dependent surveillance–contract (ADS-C) automatic position reporting in lieu of voice position reporting to ATS.

Element 7: Aeronautical Support Services including AIS and MET

ee) AIP Information regarding the Contingency Planning, and notification by NOTAM of anticipated or actual disruption of air traffic services and/or supporting services, including associated contingency arrangements, as early as practicable and, in the case of foreseeable disruption, not less than 48 hours in advance; and

ff) reassignment to adjacent States of the responsibility for providing meteorological information and information on status of navigation aids.

Element 8: Contact Details

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gg) contact details for the RCCs and associated RSCs responsible for the search and rescue regions (SRR) adjoined or adjacent to the affected FIR(s), and coordination arrangements;

hh) contact details of adjacent States ANSPs and other international organizations participating in the contingency plan; and

ii) prior notification requirements for adjacent FIR activation of Level 2 and 3 contingency arrangements.

Note. The first priority response to any short notice contingency response should be the immediate handling of the air situation, followed by the activation of the contingency plan.

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APPENDIX C: CONTINGENCY PROCEDURES AND ARRANGEMENTS (CPA) Template

[ACC]

Contingency Procedures and Arrangements (CPA-A1)

CPA-A1 contains procedures and arrangements to ensure the continued safety of flight operations during the disruption. The plan has been prepared in accordance with ICAO Annex 11 ─ *Air Traffic Services,* Chapter 2, paragraph 2.32 and Attachment C to provide the ATS procedures, contingency route structure, and other arrangements, to be used on a temporary basis, while air traffic services are being provided from **[ATS Unit NAME]** but with some limitation than normal situation.

Procedures must account for when conversion or change from feet to metric altimeter units, and vice versa, is required.

Point of Contact Name:	**Contact details:**	**Agreed Date:**

Airspace Status

Airspace	Available	Partially Available	Not Available

ATS Status

ATS	Normal	ATC available with limitations	Advisory Service, FIS and/or Alerting services are available	ATS Zero

Level of Response

	States involved/impacted
Level 1 – One State	
Level 2 – Two adjacent States	
Level 3 – more than two States	

Events details

Due to: (select from risk register what applies)	Date:	Start Time:

Example:	GNSS interference/spoofing Cyber attack Weather Airport unavailability Other (e.g. space weather, Pandemic, fuel shortage)
Controller shortage (or strike) ATM System failure VAC Natural Disaster Power supply/infrastructure failure	

Infrastructure	Status
COM	
SUR	
NAV	
Aerodrome	

Description

Birief on the contingency measures to be taken:

Actions		**Status**
Adjacent ACCs	Contact	
ACC A		
ACC B		
ACC C		
IATA		
ICAO		

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ATS OPERATIONAL PROCEDURES		
Issuing NOTAM		
Rerouting scheme		
Separation standards LAT LONG		
Separation standards Vertical		
ATFM Flow Control		
Capacity Restrictions/Limitations		
Level Restrictions or FLAS		
Airspace Classification		
Capacity declaration		
Transfer of Control		
Position Reporting TIBA		
Overflight Permissions		
Instructions for Overflying traffic		
Procedures for flights to/from airports inside [Name of States]		
Filing of flight plans		
Pilot operating procedures		
Prior Permission Required (PPR)		
Interception of civil aircraft		
Airport impacts		

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