



SAFE SKIES.  
**SUSTAINABLE  
FUTURE.**



# ICAO Global Provisions – Contingency Management

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ICAO APAC/MID Contingency Planning Workshop  
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Why are we here

ICAO Provisions and  
Guidelines ref. Contingency  
Arrangements

CCTs

Status of CPs

Next steps

Summary

## WHY are we here this week?





# We are here to improve the preparedness and management of ATM Contingencies Globally



Crisis can happen anywhere and disrupt operations



## NATURAL DISASTERS



tornado



volcano



earthquake



tsunami



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***To blindly work towards*** a vision of sustainable growth of the global civil aviation system, ***without*** an eye on, and a preparedness for, serious, irregular but reasonably predictable disasters, whether they be global, sub-regional or at the State level,

***leaves one open to failure,*** often at the greatest moment of need.





## A41-13: Strategy on disaster risk reduction and response mechanism in aviation

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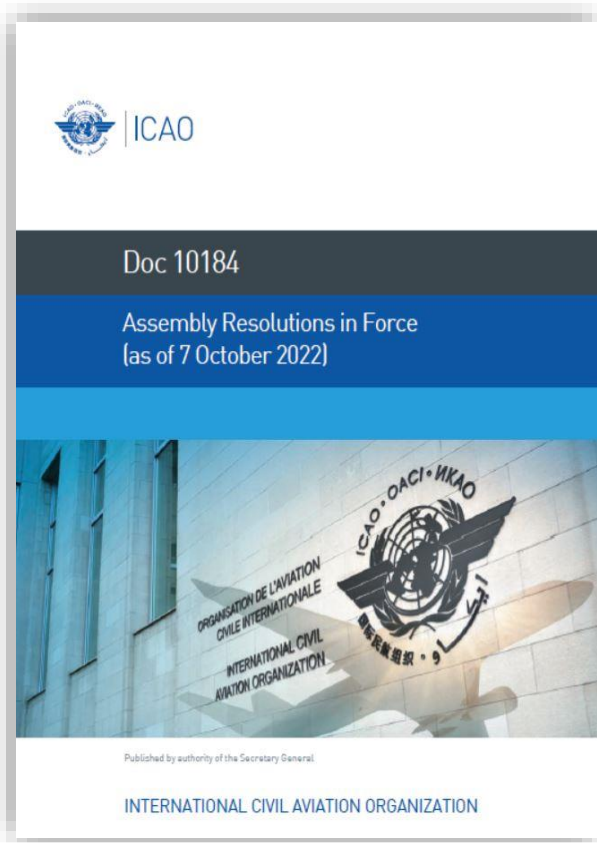
*Urges* States to recognize the significant **role of aviation in the context of disaster risk reduction** at the national level, including in their Air Transport Sector Strategic Plans;

*Urges* States to **take into consideration the disaster risk reduction priorities** as contained in the Sendai Framework for Disaster Risk Reduction 2015–2030, as well as the best practices of Member States, in the development of **their State emergency response plans**, as well as in the emergency response plan requirements for aviation service providers;

*Instructs* the Secretary General to **establish an ICAO network of crisis coordination structures and associated coordination mechanisms**, and an arrangement **between ICAO, regions, States and industry** supporting coordinated political and operational crisis response and assistance at the most appropriate level;

## A41-27: Consolidated statement of continuing ICAO policies in the air transport field

*Requests* the Council to prepare **guidelines in order to provide States with the flexibility to temporarily respond** to international crises while protecting the integrity of ASAs, facilitating the continuation of traffic during a crisis and ensuring a return to “normal” afterward, taking into consideration in particular, lessons learned from the COVID-19 pandemic, which has been a shock of unprecedented scale to the international aviation system; and



### A22-11:

## International assistance in re-establishing operation of international airports and related air navigation facilities

*Urges all those States able to do so to provide*, at the request of the State concerned addressed to the Council, *immediate assistance to that State through the provision of qualified staff and operational equipment*, to permit speedy resumption of full operation of the international airport, including those facilities that were damaged or destroyed, until such time as the service in the country involved has been fully restored;

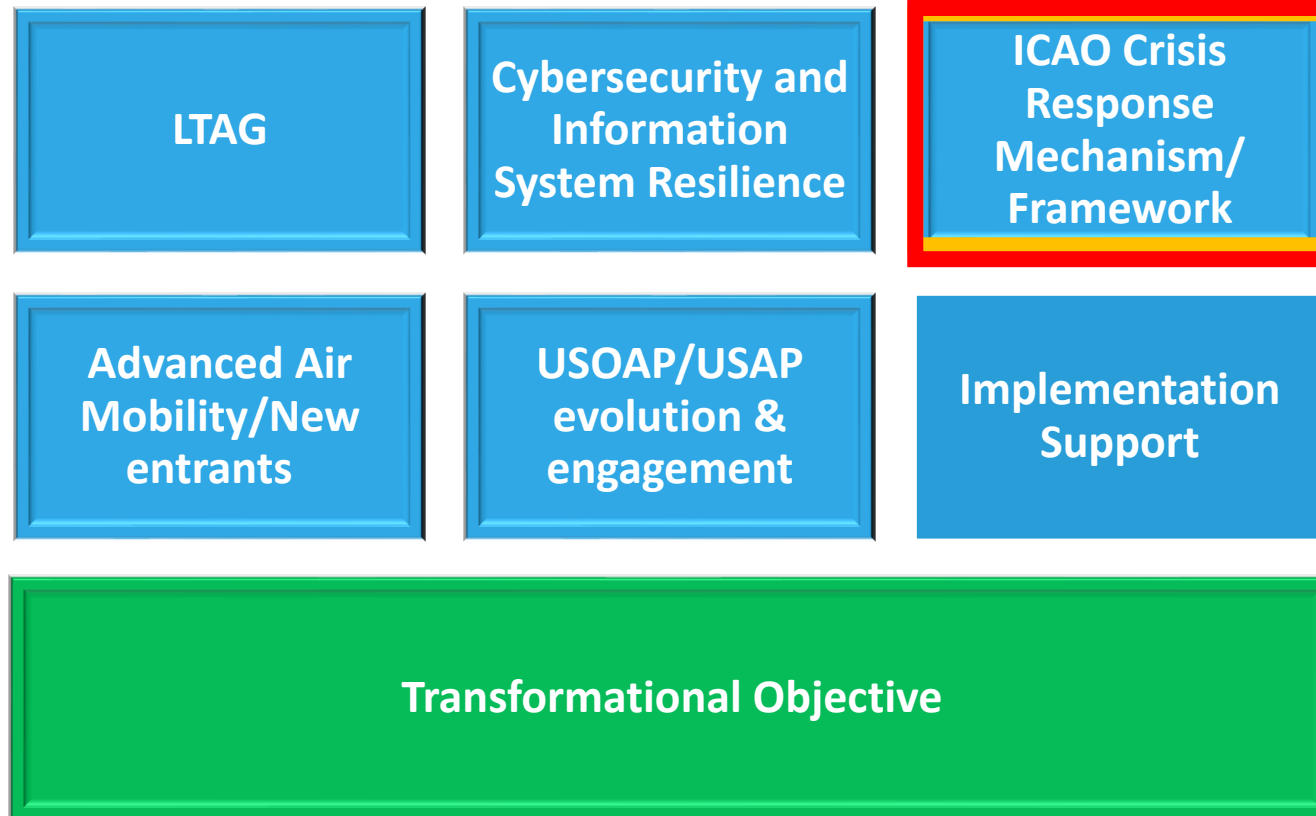
### A41-10: Consolidated statement of continuing ICAO policies and associated practices related specifically to air navigation

## APPENDIX G - Delimitation of air traffic services (ATS) airspaces

The Council should *encourage* States providing air traffic services *over the high seas to enter*, as far as is practicable, *into agreements with appropriate States providing air traffic services in adjacent* airspaces, so that, in the event the required air traffic services over the high seas cannot be provided, *contingency plans, which may require temporary modifications of ATS airspace limits*, will be available to be put into effect with the approval of the ICAO Council until the original services are restored.



## Global Priorities - Priority Focus Areas ICAO Business Plan 2023-2025



## ICAO Provisions and Guideline for Contingency Arrangements

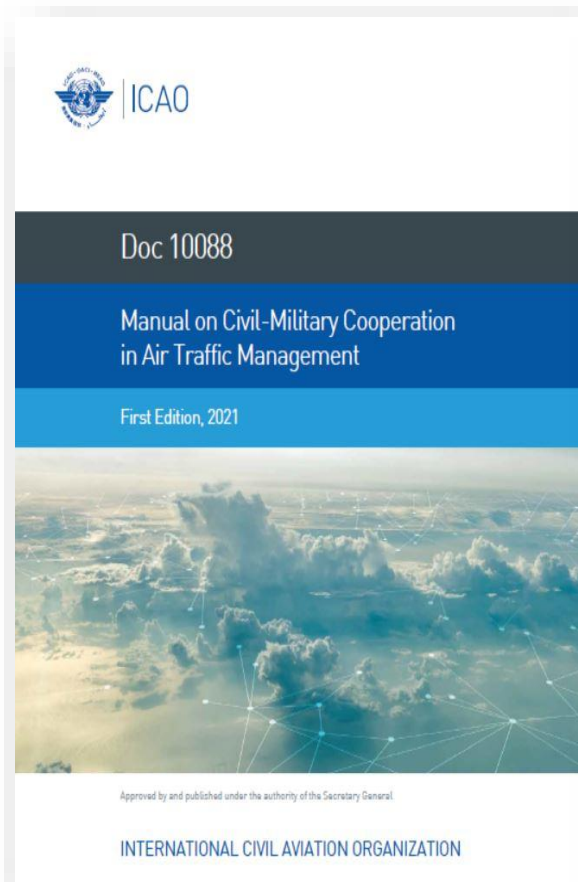
# ICAO Global Requirement for Contingency Planning

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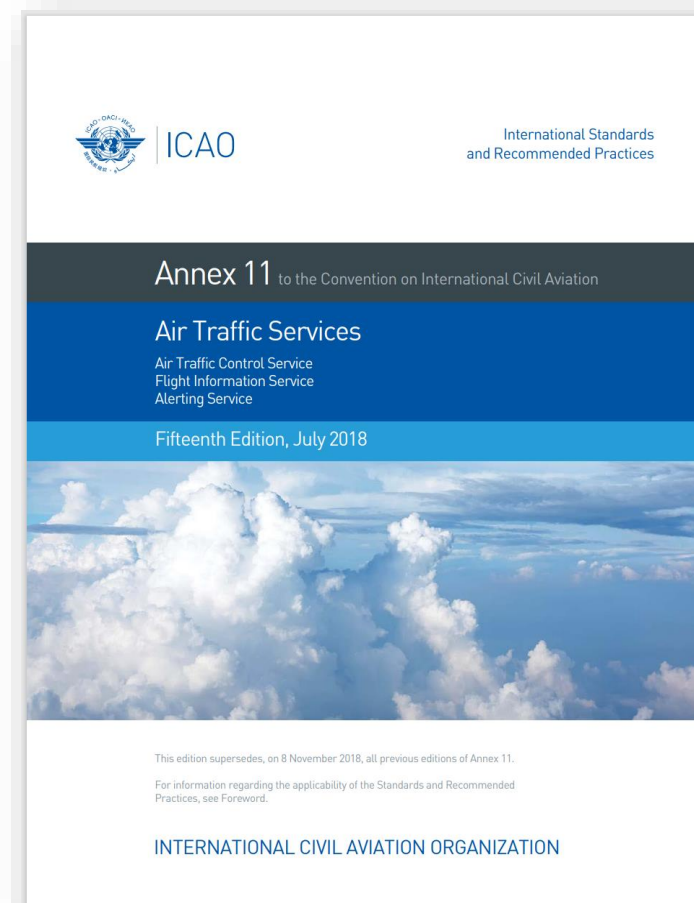
**STANDARD** in Annex 11 – *Air Traffic Services*, **2.32**

**Guidance Material** contained in **Attachment C** to Annex 11

But also other Manuals support the implementation of contingency arrangements



## Regional ATM Contingency Plans

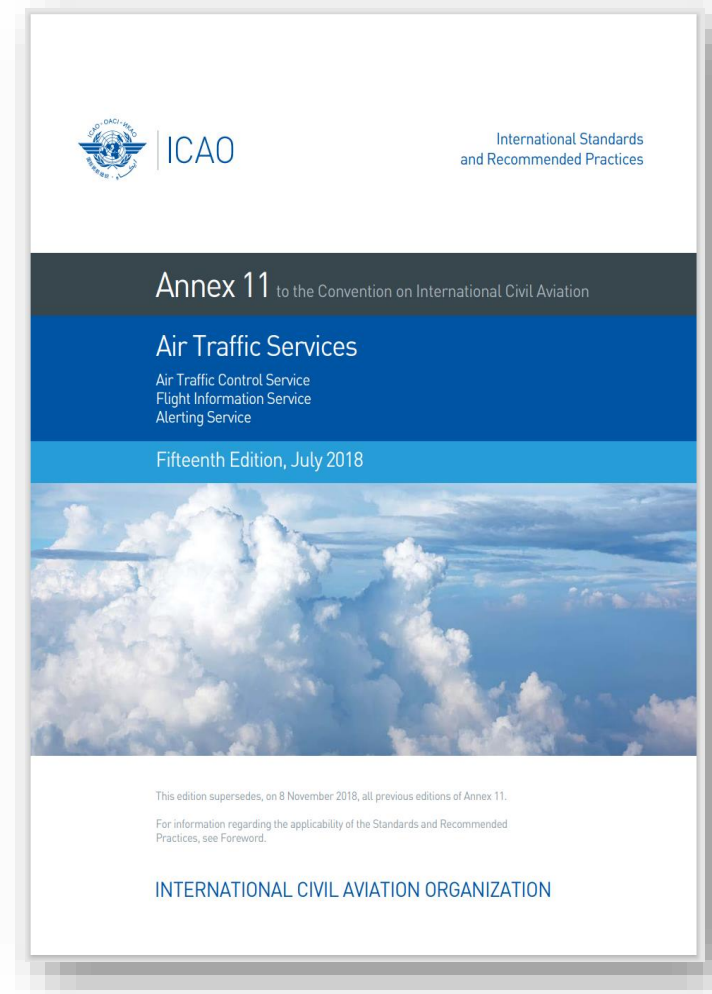


## Annex 11 - 2.32 Contingency arrangements

**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.

*Note 1.— **Guidance material** relating to the development, promulgation and implementation of contingency plans is contained in **Attachment C**.*

*Note 2.— Contingency plans may constitute a temporary deviation from the approved regional air navigation plans; such **deviations are approved**, as necessary, **by the President of the ICAO Council on behalf of the Council**.*





# 1. Introduction

The **purpose** of the guidelines is **to assist** in providing for the **safe** and **orderly flow of international air traffic** in the event of **disruptions** of air traffic services and related supporting services and in **preserving** the availability of **major** world **air routes** within the air transportation system in such circumstances.

They set forth the **allocation of responsibility among States and ICAO for the conduct of contingency planning and the measures to be taken into consideration** in developing, applying and terminating the application of such plans.

The guidelines are **based on experience** which has shown, inter alia, that the effects of disruption of services in particular portions of airspace are likely to affect significantly the services in adjacent airspace, thereby creating a requirement for international coordination, with the **assistance of ICAO** as appropriate. Hence, **the role of ICAO** in the field of contingency planning and coordination of such plans is described in the guidelines.

They also reflect the experience that **ICAO's role in contingency planning must be global and not limited to airspace over the high seas and areas of undetermined sovereignty**, if the availability of major world air routes within the air transportation system is to be preserved.

They further reflect the fact that **international organizations concerned**, such as the International Air Transport Association (**IATA**) and the International Federation of Airline Pilots' Associations (**IFALPA**), are valuable advisers on the practicability of overall plans and elements of such plans.

## 2. Status of contingency plans

**Contingency plans** are intended to provide **alternative** facilities and services to those provided for in the regional air navigation plan when those facilities and services are temporarily not available.

Contingency arrangements are therefore **temporary in nature**, remain in effect only until the services and facilities of the regional air navigation plan are **reactivated** and, accordingly, **do not constitute amendments** to the **regional plan** requiring processing in accordance with the “Procedure for the Amendment of Approved Regional Plans”.

Instead, in cases where the contingency plan would **temporarily deviate from the approved regional air navigation plan**, such deviations are **approved**, as necessary, by the **President of the ICAO Council** on behalf of the Council.

### 3. Responsibility for developing, promulgating and implementing contingency plans

The State(s) responsible for providing air traffic services and related supporting services in particular portions of airspace is (are) also **responsible**, in the event of disruption or potential disruption of these services, for instituting measures to **ensure the safety of international civil aviation operations** and, where possible, for making provisions for **alternative facilities and services**. To that end the State(s) should **develop, promulgate and implement** appropriate contingency plans.

Such plans should be developed **in consultation with other States and airspace users** concerned and with **ICAO**, as appropriate, whenever the effects of the service disruption(s) are likely to affect the services in adjacent airspace.

The responsibility for appropriate contingency **action** in respect of 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 (an)other State(s).

## 4. Preparatory action

**Time is essential** in contingency planning if hazards to air navigation are to be reasonably prevented.

States should take **preparatory action**, as appropriate, for facilitating timely introduction of contingency arrangements. Such preparatory **action should include**:

- preparation of **general contingency plans** for introduction in respect of generally foreseeable events;
- **assessment of risk to civil air traffic** due to military conflict or acts of unlawful interference with civil aviation as well as a review of the likelihood and possible consequences of natural disasters or public health emergencies;
- **initial development** of special contingency plans in respect of **natural disasters, public health emergencies, military conflicts or acts of unlawful interference** with civil aviation that are likely to affect the availability of airspace for civil aircraft operations and/or the provision of air traffic services and supporting services;
- **monitoring of any developments** that might lead to events requiring contingency arrangements to be developed and applied;
- States should consider **designating persons/administrative units** to undertake such monitoring and, when necessary, to initiate effective follow-up action; and
- **designation/establishment of a central agency** which, in the event of disruption of air traffic services and introduction of contingency arrangements, would be able to provide, **24 hours a day**, up-to-date information on the situation and associated contingency measures until the system has returned to normal. A coordinating team should be designated within, or in association with, such a central agency for the purpose of coordinating activities during the disruption.



## 4. Preparatory action

ICAO will be **available for monitoring** developments that might lead to events requiring contingency arrangements to be developed and applied and will, as necessary, assist in the development and application of such arrangements.

During the emergence of a potential crisis, a **coordinating team** will be established in the **Regional Office(s)** concerned and at **ICAO Headquarters** in Montreal, and arrangements will be made for competent staff to be available or reachable 24 hours a day.

The tasks of these teams will be to:

- **monitor continuously** information from all relevant sources;
- **arrange for the constant supply** of relevant information received by the State aeronautical information service at the location of the Regional Office and Headquarters;
- **liaise with international organizations** concerned and their regional organizations, as appropriate; and
- **exchange up-to-date information** with States directly concerned and States which are potential participants in contingency arrangements.

Upon analysis of all available data, authority for initiating the action considered necessary in the circumstances will be obtained from the State(s) concerned.

## 5. Coordination

A **contingency plan** should be **acceptable** to **providers and users of contingency services** alike, i.e. in terms of the ability of the providers to discharge the functions assigned to them and in terms of safety of operations and traffic handling capacity provided by the plan in the circumstances.

Accordingly, **States** which anticipate or experience disruption of air traffic services and/or related supporting services should **advise, as early as practicable, the ICAO Regional Office** accredited to them, and **other States** whose services might be affected. Such advice should include information on associated contingency measures or a request for assistance in formulating contingency plans.

Detailed **coordination requirements** should be determined by **States and/or ICAO**, as appropriate, keeping the above in mind. In the case of contingency arrangements not appreciably affecting airspace users or service provided **outside** the airspace of the (**single**) State involved, coordination requirements are naturally few or non-existent. Such cases are believed to be few.

In the case of **multi-State ventures**, detailed coordination leading to **formal agreement of the emerging contingency plan** should be undertaken with each State which is to participate. Such detailed coordination should also be undertaken with those States whose services will be significantly affected, for example by re-routing of traffic, and with international organizations concerned who provide invaluable operational insight and experience.

Whenever necessary to **ensure orderly transition** to contingency arrangements, the coordination referred to in this section should include agreement on a detailed, **common NOTAM text** to be promulgated at a **commonly agreed effective date**.

## 6. Development, promulgation and application of contingency plans <sup>19</sup>

Development of a sound contingency plan is dependent upon circumstances.

Sovereign airspace can be used only on the initiative of, or with the agreement or consent of, the authorities of the State concerned regarding such use. Otherwise, the contingency arrangements must involve bypassing the airspace and should be developed by adjacent States or by ICAO in cooperation with such adjacent States.

Airspace over the high seas or of undetermined sovereignty, development of the contingency plan might involve, depending upon circumstances, including the degree of erosion of the alternative services offered, temporary reassignment by ICAO of the responsibility for providing air traffic services in the airspace concerned.

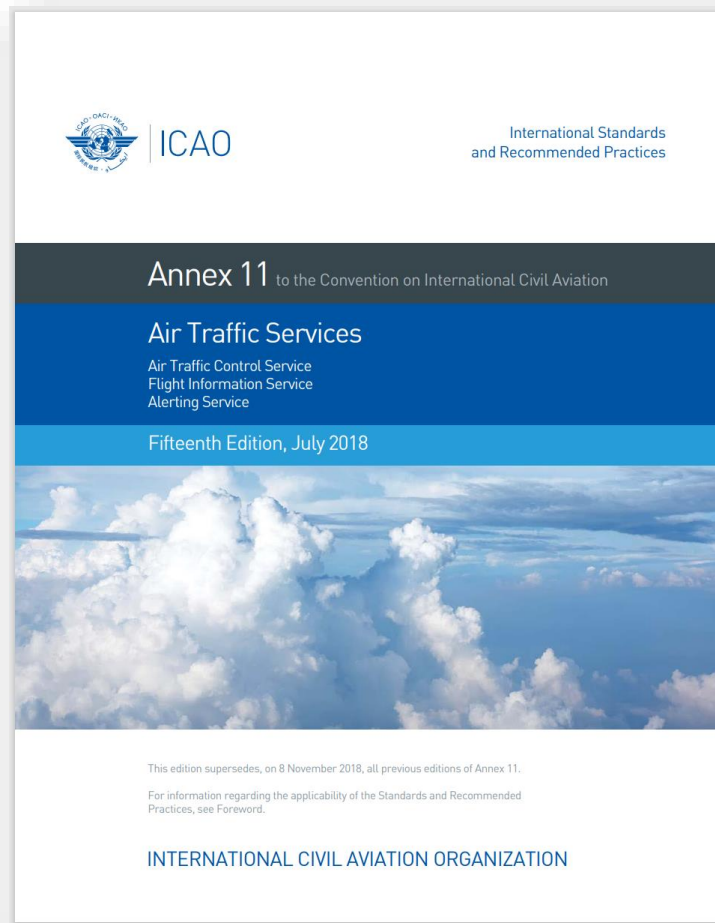
Development of a contingency plan presupposes as much information as possible on current and alternative routes, navigational capability of aircraft and availability or partial availability of navigational guidance from ground-based aids, surveillance and communications capability of adjacent air traffic services units, volume and types of aircraft to be accommodated and the actual status of the air traffic services, communications, meteorological and aeronautical information services.

Notification, by NOTAM, of anticipated or actual disruption of air traffic services and/or related supporting services should be dispatched to users of air navigation services as early as practicable. The NOTAM should include the associated contingency arrangements. In the case of foreseeable disruption, the advance notice should in any case not be less than 48 hours.

Notification by NOTAM of discontinuance of contingency measures and reactivation of the services set forth in the regional air navigation plan should be dispatched as early as practicable to ensure an orderly transfer from contingency conditions to normal conditions.

# The CCT

## Contingency Coordination Team

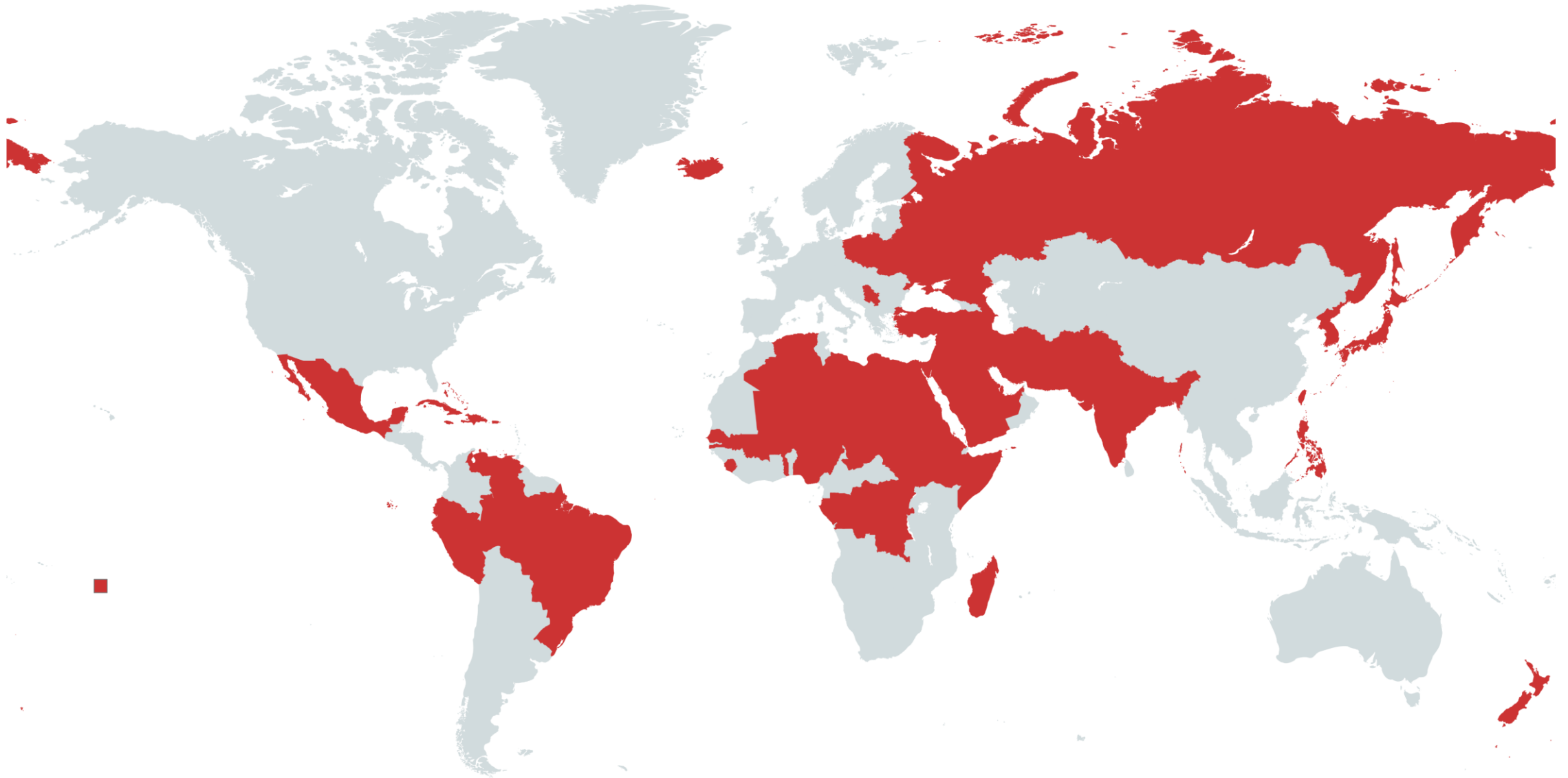


### Described in Annex 11 Attachment C

A **coordinating team** should be designated within, or in association with, a central agency for the purpose of coordinating activities during the disruption.

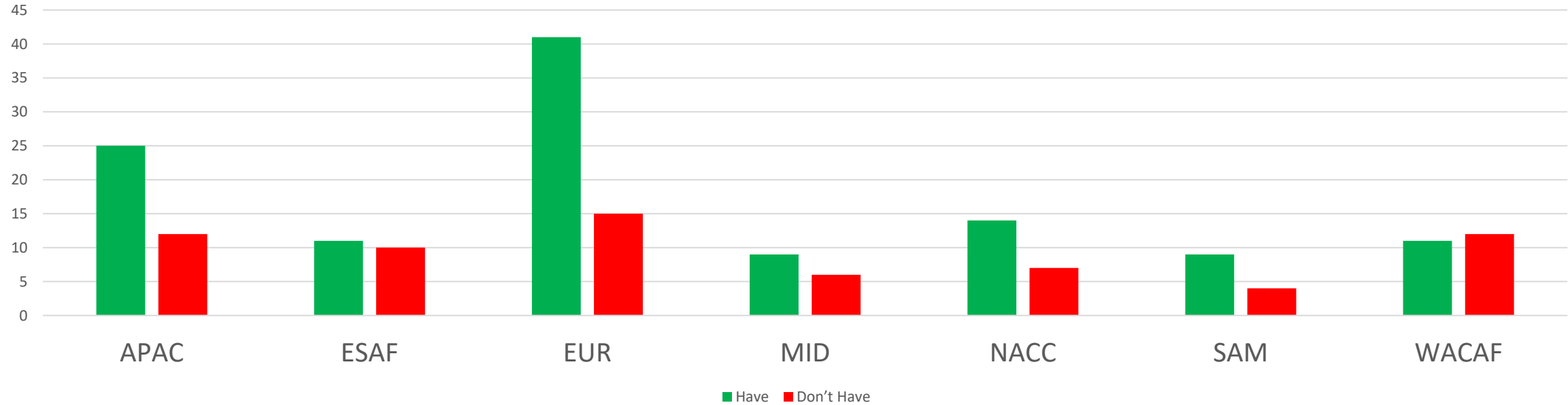
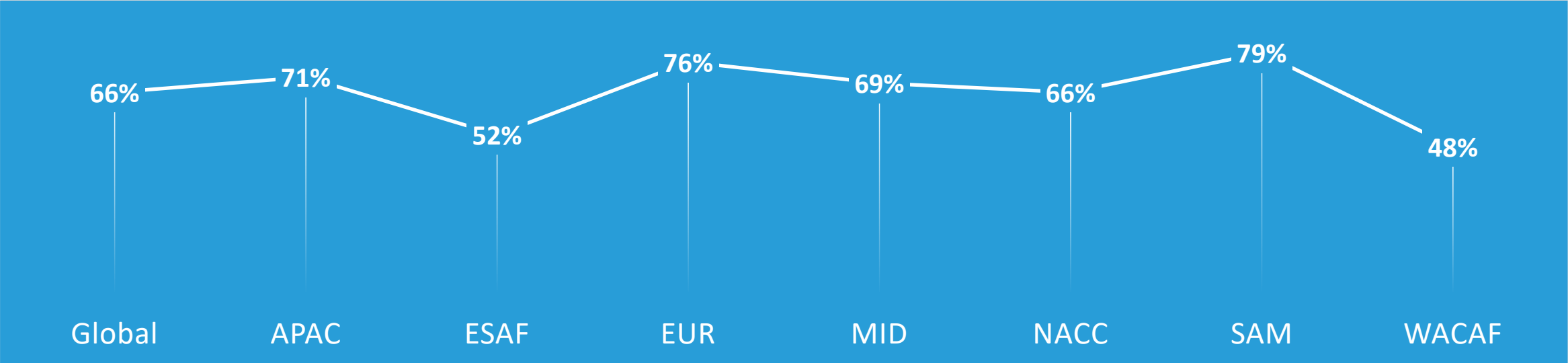


# ATM Contingencies around the world required CCTs



## Status of National ATS Contingency Plans

# USOAP-CMA Status of PQ 7.159 ref. ATS Contingency Plans



## Experience working with States and ATS providers indicates a variety of issues:

### ***Crisis response activities often:***

- *without specific set priorities amongst the overall activities, and without specific resources, (triaging)*
- *without active leadership, a command structure, or coordination or communication strategy*
- *sometimes starting with a blank sheet of paper or worse, an old out-of-date contingency plan;*
- *often utilizing staff without training and/or basic competencies.*

### ***Leading to:***

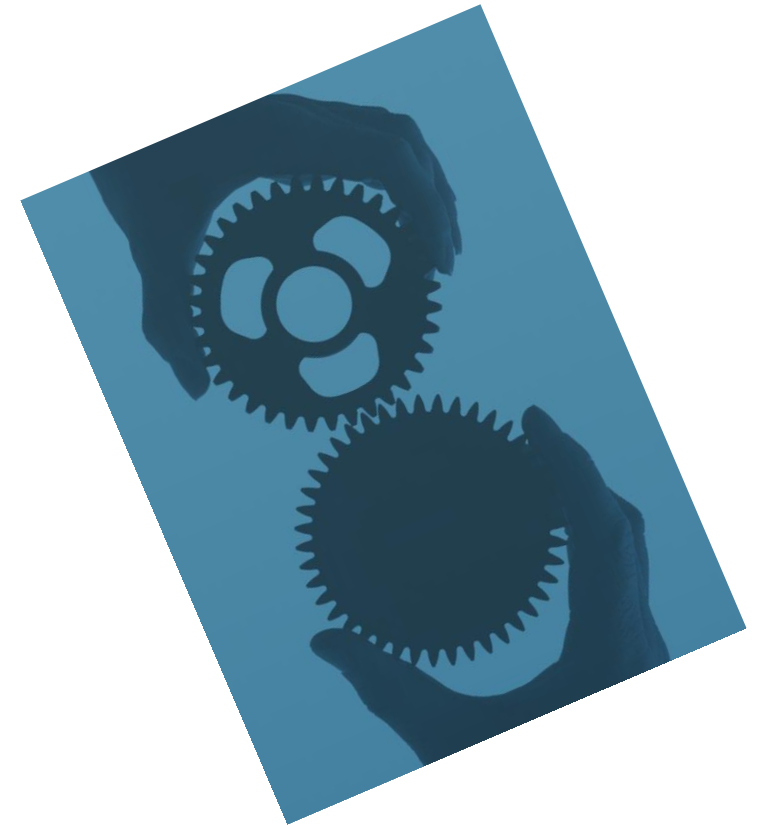
- *Uncoordinated, untimely, confused and even fruitless action.*
- *Non-compliance with ICAO Provisions.*
- *Reputational risk, or worse.*





## Many contingency plans – cover all the bases, but....:

1. *Class G and no ATC services, contingency routes activated.  
And PANS-ATM separations will be applied  
. And ATC services to be provided by adjacent ACC;*
2. *Normal ATC communications  
and Traffic Information Broadcast by Aircraft (TIBA)  
...and IATA Inflight Broadcast Procedure (IFBP).*
3. *Good contingency plan but never activated. No NOTAMs either, but  
aircraft report major disruption in the face of State denial.*
4. *Prior permission required (PPR) procedures are in effect but not available.  
And Aircraft with PPR approval have ATC clearance cancelled on  
reaching boundary.*



## What Next

## What is a Contingency response?

*A set of both strategic and real-time tactical actions taken to mitigate the impacts that represent a critical threat to the safety, security, and orderly flow of international air traffic.*

***Contingency Framework*** to achieve the above needs to be ***versatile, scalable, effective and responsive.***



## What makes a Contingency Plan useful ?

*Set of agreed **arrangements** to be applied during a contingency situation*

*Set of **procedures** for implementation under specific circumstances*

- *It's a contingency playbook – and it needs to be designed as such.*
- *It is a “procedures” document.*
- *It's a pre-agreed measures*
- *Keep it very, very simple.*



**So we should **STOP** calling it a plan and..**

# Call it ATM Contingency Arrangements and Procedures

They should be established **collaboratively**  
between adjacent ATS Units

They should provide for a timely response to a Contingency event



Control is not enough



Management is mandatory.



# The ATM Contingency Management (CM) Cycle

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## 1. Development of the Contingency Plan:

- How the plan is developed, agreed to and authorized
- Is it developed in collaboration with airspace users, military authorities, and adjacent FIRs.

## 2. Airspace arrangements:

- Utilizing existing ATS routes during disruptions, or contingency routes, FLAS, ATFM measures, etc. ?

## 3. ATS Contingency Procedures:

- Specific procedures for ATS during disruptions (e.g., volcanic ash, severe weather, military activity).

## 4. Pilots and Operator Procedures:

- Guidance for pilots and operators during contingency situations.

## 5. Communication Procedures:

- How information is disseminated to relevant parties.

## 6. Aeronautical Support Services:

- Support services available during contingencies (AIS, CNS, MET, SAR, etc).

## 7. TRAINING and more TRAINING.

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## Summary

- ATS authorities shall develop contingency plans in the event of disruption or potential disruption of ATS and related services to ensure the continuity of the safe and orderly flow of international air traffic.
- Relationship with Approved Regional Air Navigation Plan
- Scope of contingency management: ATS vs ATM?
- Agreement with CM Cycle (Prepare, respond, recover, review)
- CM in the context of crisis relief
- Resources should be allocated for CM
- Crisis/contingency response must be timely.
- Contingency Procedures and Arrangements should be established collaboratively
- Include Contingency Procedures and Arrangements in Training
- CCT and its role ensure collaboration between all parties concerned

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# Thank You

