



| ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY

**WACAF workshop on the
provision of information on
volcanic eruptions and ash
clouds**

16 to 20 June 2025



WACAF workshop on the provision of information on volcanic eruptions and ash clouds

2

Volcanic Ash and ATM Contingency Plans integration

ICAO

Serge TCHANDA

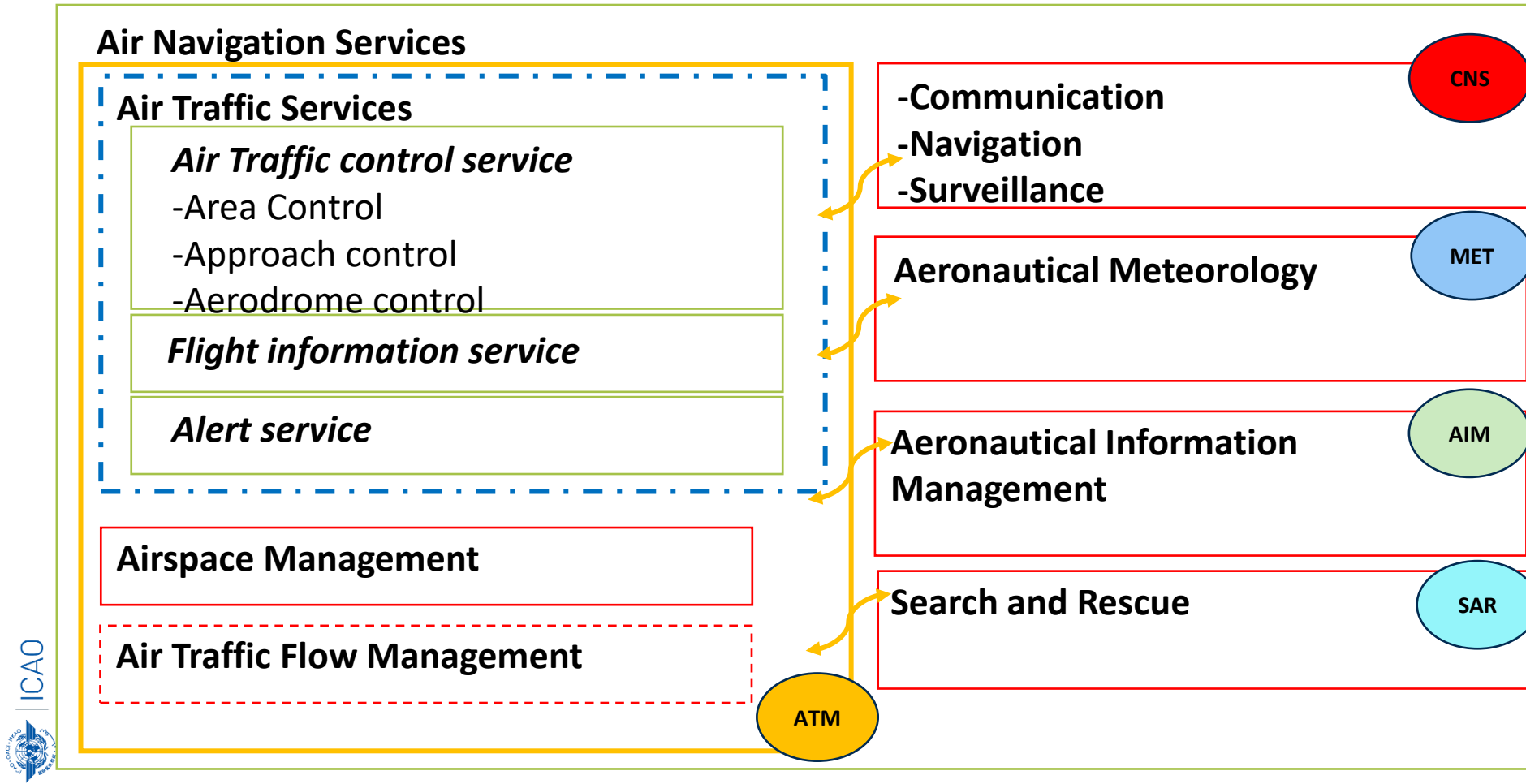
Regional Officer ATM/SAR WACAF

Summary

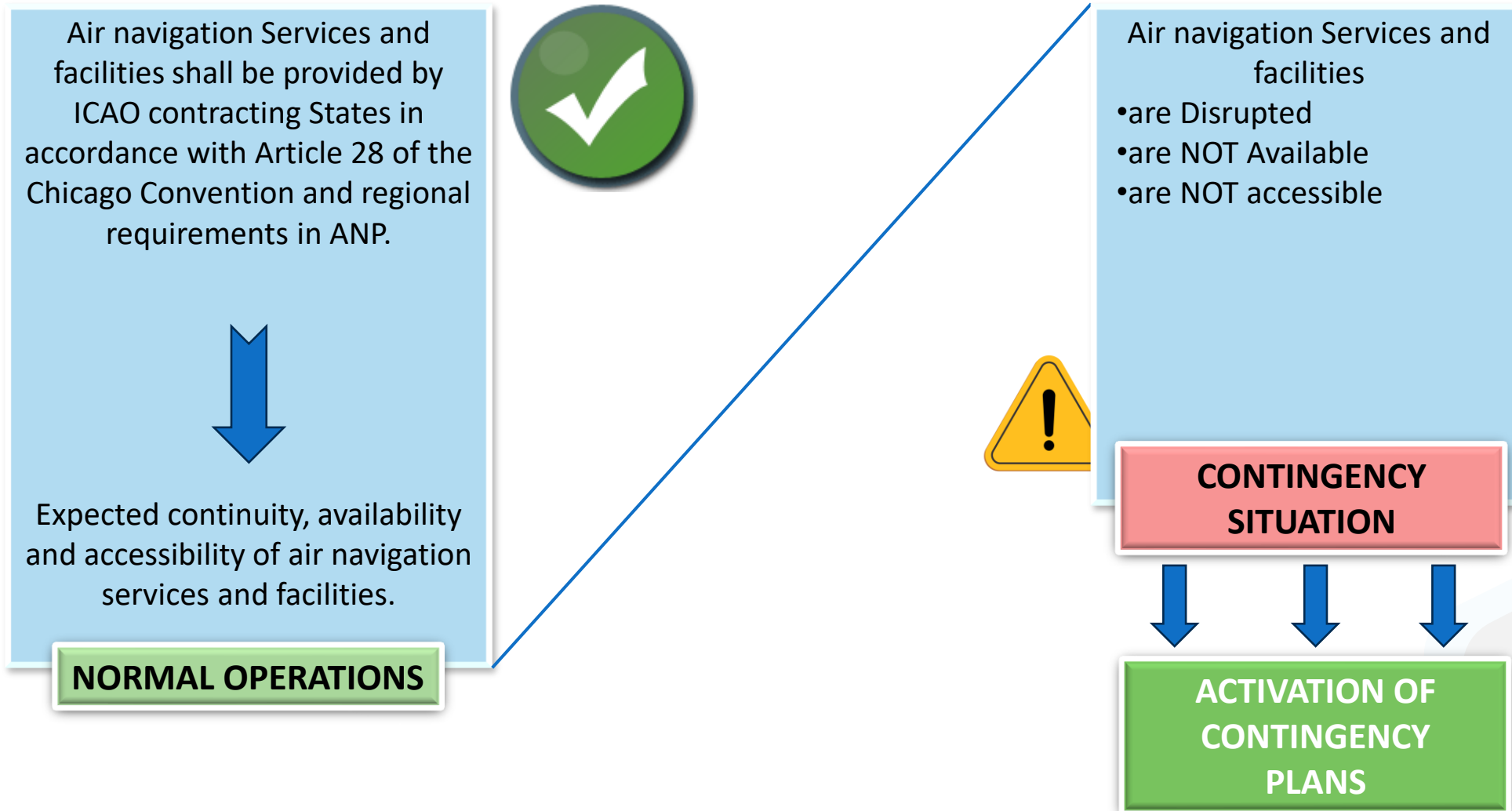
- Overview of ANS architecture
- General on ATM contingency situation
- Safety risk management associated with ATM contingency
- Volcanic Ash in the AFI ATM Contingency plan
- Process for the development of a national contingency plan

WACAF workshop on the provision of information on volcanic eruptions and ash clouds

Overview of ANS architecture

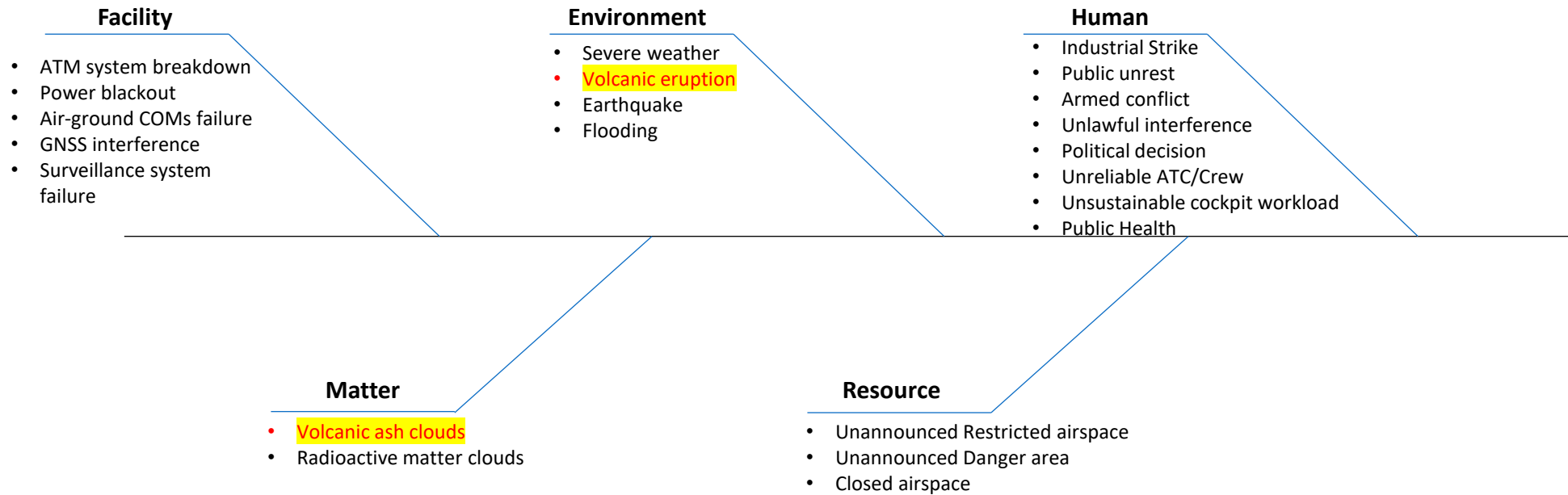


Generals on contingency events in Air Navigation



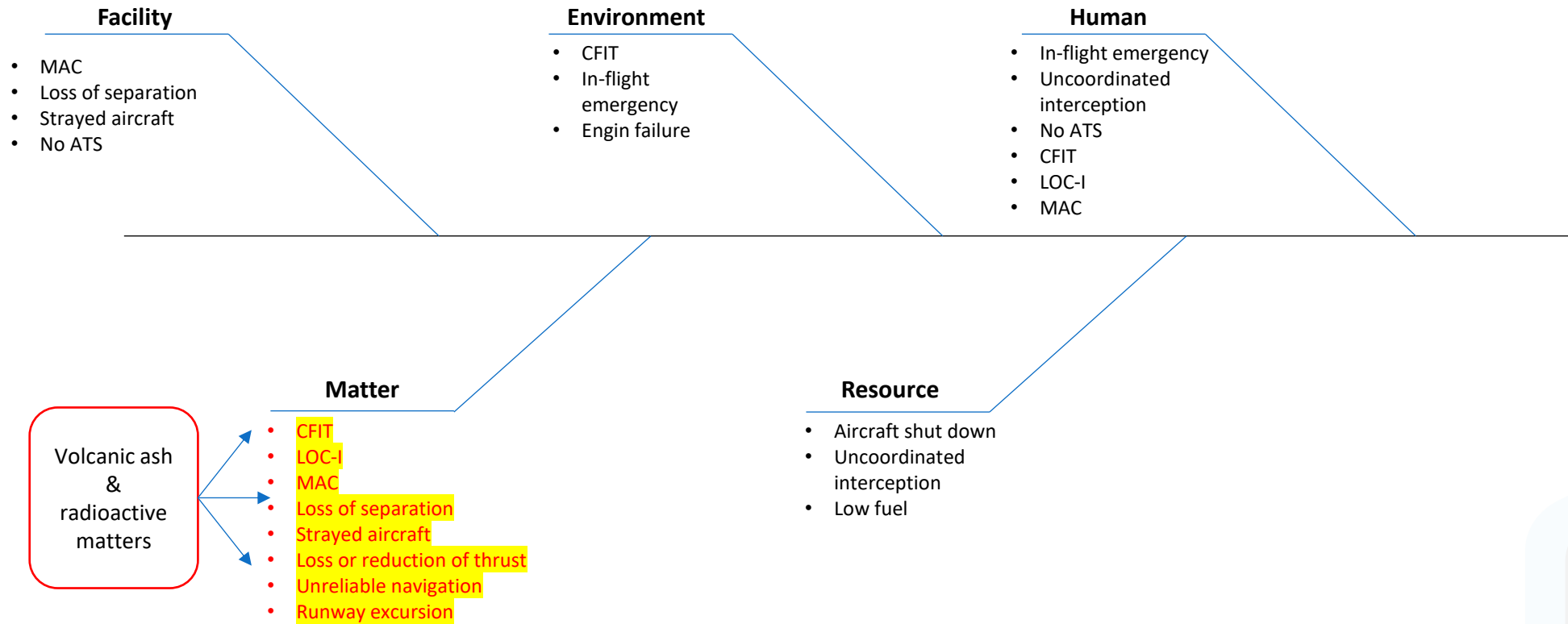
Safety risk management associated with ATM contingency

➤ Hazards associated with ATM Contingency



Safety risk management associated with ATM contingency

➤ Safety risks in contingency situations



Safety risk management associated with ATM contingency

➤ Safety risks assessment related to volcanic ash

Safety Risk		Severity				
Probability		Catastrophic A	Hazardous B	Major C	Minor D	Negligible E
Frequent	5	5A	5B	5C	5D	5E
Occasional	4	4A	4B	4C	4D	4E
Remote	3	3A	3B	3C	3D	3E
Improbable	2	2A	2B	2C	2D	2E
Extremely improbable	1	1A	1B	1C	1D	1E

Volcanic ash

**INTOLERABLE
RISKS**

- CFIT
- LOC-I
- MAC
- Loss of separation
- Strayed aircraft
- Aircraft components failure

IMMEDIATE ACTION REQUIRED.

Perform priority safety risk mitigation to ensure additional or enhanced preventative controls are in place to bring down the safety risk index to tolerable

Safety risk management associated with ATM contingency

➤ Safety risks Control/Mitigation of ATM contingency events

- Development and implementation of the ATM contingency plan
- Training of personnel (Pilot, ATCOs, MET, AIS)
- Implementation of new facilities, as appropriate
- Contingency plan testing (realistic operational exercise)
- and post-exercise assessment
- Periodic contingency plan review

Safety Risk		Severity				
Probability		Catastrophic A	Hazardous B	Major C	Minor D	Negligible E
Frequent	5	5A	5B	5C	5D	5E
Occasional	4	4A	4B	4C	4D	4E
Remote	3	3A	3B	3C	3D	3E
Improbable	2	2A	2B	2C	2D	2E
Extremely improbable	1	1A	1B	1C	1D	1E

Volcanic ash + effective
Contingency plan

TOLERABLE
RISKS

MACRO STRUCTURE

GANP- Global Air Navigation Plan

Global air
navigation
planning and
implementati
on guidance

RANP- Regional Air Navigation Plan

Regional air
navigation
planning and
implementation
requirements

NANP- National Air Navigation Plan

National air
navigation
planning and
implementation
requirements

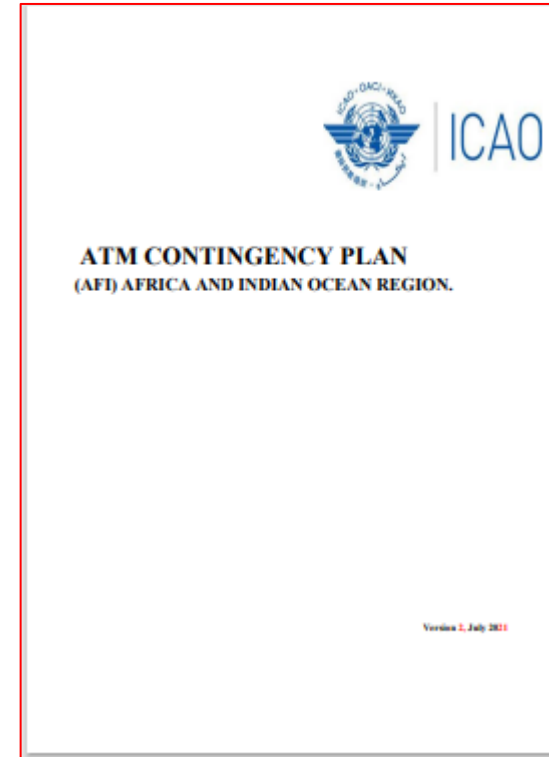
ATM CP

ATM CONTINGENCY STRUCTURE & CONTENT

1

➤ Inner Plan Structure

- Plan Objective
- Scope
- Contingency activation, notification and reporting
- Contingency events scenarios (“*What if*” approach)
- Operational guidance procedures (Pilot, ATC)
- Plan evaluation
- Appendices : A to L

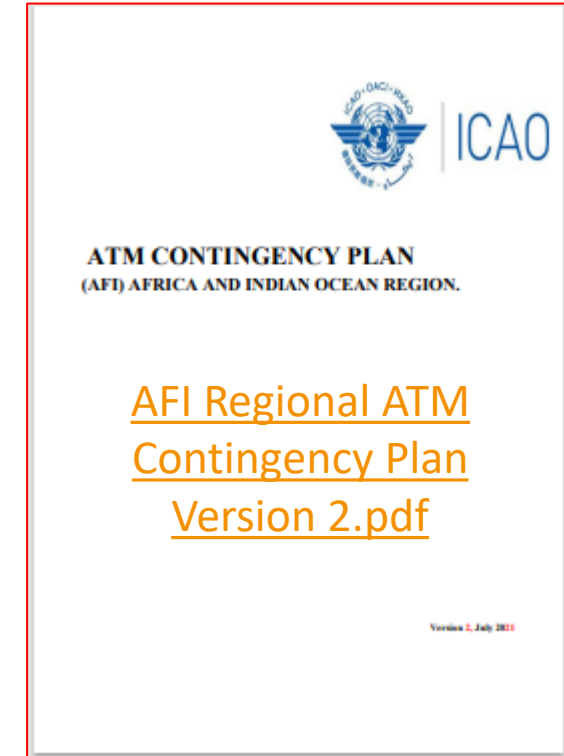


-APPENDIX H: VOLCANIC ASH CONTINGENCY PLAN

Volcanic Ash in the AFI ATM Contingency plan

➤ VOLCANIC ASH CONTINGENCY PLAN

- **Function:** Regional guideline
- **Scope :** Involved AFI ATM community,
- **Applicability:** All phases of flight during volcanic eruption with volcanic ash
- **Operational impact of volcanic ash:** on air ops, on aircraft, on ATS, on ATFM, on ASM
- **Regional Preparation:** IAVW guidance (Doc9766)
- **Information Management:** Through Special AIREP, VONA, satellite data, SIGMET, VAA/VAG, NOTAM
- **Response to volcanic ash event:** Expected actions from, VO, VAAC, MWO, ATS (ACC, FIC) and ATFM Units during Pre-eruption, eruption and recovery



STEPS



STEP1:

- Develop the Terms of Reference of the ATM CP Project based on airspace safety review
- Establish the ATM CP Multidisciplinary Project Team to draft and follow-up on the plan.



STEP2:

- Draft the ATM CP using the regional template and
- validate within the Team.



STEP3:

- Approve the ATM CP
- Promote the ATM CP
- Promulgate the ATM CP



STEP4:

- Implement the ATM CP
- ensure periodic review and
- adjust as necessary.





Thank you!
Merci beaucoup!