

ASIA/PACIFIC VOLCANIC ASH EXERCISES STEERING GROUP TERMS OF REFERENCE

VISION

Maintain safety, regularity and efficiency of aviation in the event of a volcanic eruption.

OBJECTIVES

Coordinate all aspects of the organization and conduct of volcanic ash exercises in the APAC region in order to:

1. Test volcanic activity alerting, AIS and MET message routing, volcanic ash information, air traffic control procedures, air traffic flow and capacity management and aircraft operator response and the CDM between the various actors in accordance with regional and global procedures. The exercises should be designed to:
 - a) practice the conduct of volcanic activity response in accordance with the regional reference documents;
 - b) verify existing information, AIS and MET message routing via AFTN addresses, relevant e-mail addresses, telephone and fax numbers, and internet addresses (URLs);
 - c) maintain appropriate information and message routing between all involved agencies and organizations;
 - d) provide volcanic activity response training for key personnel involved;
 - e) allow regulators to assess the preparedness and operational response in terms of planning, process and procedures of operators; and
 - f) provide, when appropriate, recommendations for amendment of the reference documents, in accordance with the lessons learned and conclusions contained in the final exercise report.
2. Ensure that detrimental effects of exercises on the aviation system performance are avoided, but that nevertheless useful experience and information is generated; and
3. Practice and develop inter-agency response to volcanic activity.

SCOPE

There is significant regional variation in the nature, frequency, observation of and response to volcanic eruptions. As the APAC region encompasses much of the volcanically active zone known as the “Ring of Fire”, there are several States where regular air traffic flow is at risk from encounters with volcanic ash.

The IAVW was established globally to mitigate the risks; however the diverse nature of the APAC region, in terms of both its geography and its communities, is reflected by the diverse challenges faced in responding to volcanic ash events. Therefore, each exercise may have different objectives, which the scenario will be designed to address. For example, any or all of the activities listed below may be tested depending on the scope of the individual exercise:

- a) AFTN, e-mail addresses, websites, message routing and voice communications;
- b) alerting and observation of ash (e.g. use of VONA and VAR);
- c) VAAC response (e.g. volcanic ash information);
- d) ATS response (including air traffic control and AIS for NOTAM issuance);
- e) ATM response;
- f) aircraft operator response (including safety risk assessment);
- g) MWO response (i.e. SIGMET); and
- h) suitability of information, its frequency, format and content.

DELIVERABLES

The steering group is expected to:

1. Appoint an exercise leader for volcanic ash exercise/s;
2. Conduct planning meetings for volcanic ash exercise/s (initial exercise to be conducted in 2015);
3. Publish volcanic ash exercise directive/s, including:
 - Scenario/s – location/s should cover an area/s that could be affected by volcanic ash and the time/period/s should ensure volcanic ash would impact international routes;
 - Procedures/instructions; and
 - Participants
4. Conduct volcanic ash exercise/s (initial exercise to be conducted in 2015);
5. Conduct debrief meeting/s to review the volcanic ash exercise/s, including:
 - Discuss reports;
 - Review the lessons learnt;
 - Revise and improve the volcanic ash exercise directive/s (based on lessons learnt);
 - Recommend improvements to the regional volcanic ash ATM contingency plan;
 - Recommend improvements to global ICAO provisions and forward to APANPIRG and/or IAVWOPSG;
 - Update the future work plan – for subsequent volcanic ash exercise/s; and
 - Consolidated report to the appropriate Sub-Group/s and APANPIRG

STAKEHOLDERS, ROLES and RESPONSIBILITIES

STAKEHOLDERS / STAKEHOLDER GROUPS¹	ROLES	RESPONSIBILITIES
<u>Air navigation service providers (ANSP)²</u>	Participant	Inform aircraft, issue ASHTAM/NOTAM, activate contingencies, forward special air-reports
Airport operators	Participant	Tactical response

¹ Includes relevant industry organizations (CANSO, IATA, AIC, IFALPA)

² Includes air traffic management (ATM), area control centres (ACC), aeronautical information services (AIS) and NOTAM offices (NOF)

STAKEHOLDERS / STAKEHOLDER GROUPS¹	ROLES	RESPONSIBILITIES
<u>Airspace users</u>	Participant	Tactical response
<u>ICAO</u>	Facilitator	Support the steering group, meetings and exercises
Meteorological watch offices (MWO)	Participant	Provide MET watch, issue SIGMET, supply information on volcanic ash (VA)
Regional OPMET Data Banks (RODB)	Support	OPMET exchange
<u>Regulators</u>	Participant	Regulations
<u>Volcanic ash advisory centres (VAAC)</u>	Participant	Issue volcanic ash advisory information (VAA) including graphical format (VAG)
Volcano observatories	Participant	Send information on volcanic activity including Volcano Observatory Notice for Aviation (VONA)

Minimum representation (bold type underlined) required for a quorum for the volcanic ash exercises steering group³.

³ Note: A representative from each stakeholder group should be involved as necessary during each phase (planning, conducting, debrief) of volcanic ash exercises.