

PROPOSAL FOR REGIONAL VOLCANIC ASH EXERCISE

(Presented by the Secretariat)

1. Introduction

1.1 Japan presented working paper WP/16 – *Proposal for regional volcanic ash exercise* in which it invited the group to discuss conducting hypothetical volcanic ash exercises led by ICAO APAC Office.

1.2 In support of Japan's proposal, the meeting is also invited to consider the guidance provided in Appendix F – *GUIDANCE FOR CONDUCTING VOLCANIC ASH EXERCISES IN ICAO REGIONS* to the HANDBOOK ON THE INTERNATIONAL AIRWAYS VOLCANO WATCH (IAVW), Doc 9766.

2. Discussion

2.1 The aforementioned guidance states that a volcanic ash exercises steering group may be established by a PIRG to coordinate all aspects of the organization and conduct of the exercises. The steering group should have representatives from, as a minimum, the volcanic ash advisory centres (VAACs) concerned, air navigation service providers (ANSPs), airspace users and regulators.

2.2 With respect to the coordination necessary to conduct volcanic ash exercises in the APAC region, the meeting may consider that none of the existing contributory bodies under the APANPIRG would have all the experts required to do the work.

2.3 Noting that key stakeholders in volcanic ash exercises would include volcano observatories, VAACs, MWOs, ACCs, NOFs, ANSPs and aircraft and aerodrome operators, the meeting may wish to propose that a steering group should be formed comprising appropriate experts to organize and oversee volcanic ash exercises in the APAC region.

2.4 In view of the discussion above, the meeting is invited to formulate the following draft conclusion:

Draft conclusion 18/x – Establishment of a volcanic ash exercises steering group in the APAC region

That, the ICAO, in consultation with MET/H TF, ROBEX WG and MET/R TF as appropriate, be invited to establish a steering group comprising appropriate experts representing key stakeholders to organize and conduct volcanic ash exercises in the APAC region. The composition of the group and the terms of reference should be based on Appendix F to the Handbook on the International Airways Volcano Watch (Doc 9766).

2.5 In support of the draft conclusion, the meeting may wish to consider the draft terms of reference based on the guidance in Appendix F to the Handbook on the International Airways Volcano Watch (Doc 9766) provided in **the Attachment** to this paper.

3. Action by the Meeting

3.1 In support of the proposal in WP/16 by Japan, the meeting is invited to adopt the draft conclusion in paragraph 2.4, above.

APAC VOLCANIC ASH EXERCISE STEERING GROUP

DRAFT 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
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 “Ring of Fire”, not surprisingly 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 range of the 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 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) air traffic management (ATM) response;
- f) aircraft operator response (including safety risk assessment);
- g) meteorological watch office response (i.e. SIGMET); and
- h) suitability of information, its frequency, format and content.

DELIVERABLES

The steering group is expected to:

1. Appoint exercise leader for volcanic ash exercise
2. Conduct planning meeting for a volcanic ash exercise (to be conducted in 2015)
3. Publish volcanic ash exercise directive:
 - ✓ scenario – location should cover an area that could be affected by volcanic ash and the time/period should ensure volcanic ash would impact international routes
 - ✓ Procedures/instructions
 - ✓ Participants
4. Conduct volcanic ash exercise in 2015
5. Conduct debrief meeting to review the volcanic ash exercise:
 - ✓ Discuss reports
 - ✓ Review the lessons learnt
 - ✓ Revise and improve the volcanic ash exercise directive (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
 - ✓ Consolidated report to the appropriate Sub-Group/s and APANPIRG

STAKEHOLDERS/ROLES/RESPONSIBILITIES

Volcano observatory	Participant	VONA
VAAC	Participant	VAA/VAG
MWO	Participant	MET watch, SIGMET, supply information on VA
ACC	Participant	Inform aircraft, issue ASHTAM/NOTAM, activate contingencies, forward special air-reports
ANSP /AIS/NOF	Participant	issue ASHTAM/NOTAM
RODB	Support	OPMET exchange
Users , aircraft/aerodrome operators	Participant	Tactical response
ICAO regional office	Facilitator	Meeting and exercise support
Regulators	Support	Regulations

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