

INTERNATIONAL CIVIL AVIATION ORGANIZATION



**REPORT OF THE FIRST MEETING OF THE ASIA/PACIFIC
VOLCANIC ASH EXERCISES STEERING GROUP (APAC VOLCEX/SG/1)**

MANILA, PHILIPPINES, 27 – 29 MAY 2015

The views expressed in this Report should be taken as those of the
Meeting and not the Organization

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INTRODUCTION

Meeting

1.1 The First Meeting of the Asia/Pacific Volcanic Ash Exercises Steering Group (APAC VOLCEX/SG/1) was held at the Heritage Hotel, Manila, Philippines, from 27 to 29 May 2015, and included a technical tour of the Taal Volcano Observatory on 29 May 2015.

Attendance

2.1 The meeting was attended by forty-four (44) participants from six (6) States, one (1) Special Administrative Region of China and three (3) International Organizations, including Australia, Hong Kong China, Indonesia, Japan, Malaysia, Philippines, Singapore, the International Air Transport Association (IATA), the International Federation of Air Line Pilots' Associations (IFALPA) and ICAO. A list of participants is provided at **Appendix A** to this Report.

Officer and Secretariat

3.1 Mr. Koichiro Kakihara presided as Chair of the meeting.

3.2 Mr. Peter Dunda, Regional Officer Aeronautical Meteorology, and Mr. Shane Sumner, Regional Officer Air Traffic Management, ICAO Asia and Pacific Office, acted as the Secretariat and ICAO Coordinators for the meeting.

Language and Documentation

4.1 The VOLCEX/SG met as a plenary throughout the meeting. The working language of the meeting was English inclusive of all documentation and this Report. A total of three (3) working papers (WP) and five (5) information papers (IP) were considered by the meeting. The list of working and information papers is attached at **Appendix B** to this report.

REPORT ON AGENDA ITEMS

Agenda Item 1: Opening of the Meeting

Civil Aviation Authority of the Philippines

1.1 Lt. Gen. William Hotchkiss III, Director General of the Civil Aviation Authority of the Philippines (CAAP), welcomed participants and formally opened the meeting.

Philippine Institute of Volcanology and Seismology

5.1 Mr. R. U. Solidum, Jr., Director of the Philippine Institute of Volcanology and Seismology (PHIVOLCS), also welcomed all the participants to the meeting.

ICAO Regional Office

5.2 On behalf of Mr. Arun Mishra, Regional Director of the ICAO Asia and Pacific Office, Mr. Peter Dunda welcomed all the participants to the meeting.

Agenda Item 2: Election of Chairperson and Adoption of Agenda

Election of Chairperson

2.1 The Secretariat advised the meeting that, as the focus of VOLCEX/SG/1 was on planning the first ICAO volcanic ash exercise for the APAC Region, it would be ideal to elect an appropriately qualified expert as Chairperson for the meeting, preferably with prior knowledge and experience in conducting volcanic ash exercises in the ICAO context.

2.2 Mr. Koichiro Kakihara, Senior Coordinator for International Aeronautical Meteorology, Aeronautical Meteorology Division, Administration Department, Japan Meteorological Agency, was nominated by Hong Kong China for the position of Chairperson of VOLCEX/SG/1. The nomination was seconded by Australia. No further nominations were received.

2.3 Mr. Koichiro Kakihara was duly elected as Chair of VOLCEX/SG/1.

Adoption of Agenda

2.4 The provisional agenda (distributed prior to the meeting) was adopted by the meeting.

Agenda Item 3: Review Background Information

Existing Flow of Information on Volcanic Ash (SP/04)

3.1 PHIVOLCS presented information on the flow of information in the event of an observed or anticipated volcanic eruption, culminating in the release of an eruption bulletin. The normal timeframe for release of the eruption bulletin after receipt of volcanic activity information was 10 minutes.

3.2 It was noted that, due to the division of the Volcanic Ash Advisory Centres' (VAACs') areas of responsibility covering the flight information region (FIR) for the Philippines (i.e., Manila FIR) between VAAC Tokyo and VAAC Darwin, the Philippines adopted the practice of distributing the volcano observatory notice for aviation (VONA) for all Philippine volcanoes to both VAACs.

3.3 Australia reminded the meeting that each VAAC has continuing arrangements in place to provide back-up for the other VAAC. Australia and Japan both indicated that distribution of Philippine VONA to both VAACs was helpful.

3.4 In reply to a query, PHIVOLCS advised it had no current plans to provide the volcano level of alert colour codes for aviation in the VONA, but would consider doing so in the future if required by users¹. The meeting was reminded that the colour-coded categorization was intended to more readily illustrate the status of activity of volcanoes specifically to assist aviation.

3.5 Japan suggested that State volcano observatories carefully consider the capabilities for assigning volcano level of alert colour codes for aviation, especially with respect to the requirement to specify, if possible, the volcanic ash-plume height (when assigning the colour codes).

3.6 PHIVOLCS also advised that, following generation of the eruption bulletin, no further updates were provided for sustained volcanic activity unless there was a significant change in the nature or intensity of the activity.

3.7 Hong Kong, China suggested the group take into consideration possible opportunities to enhance the availability of VONA for users through social media sites and noted related ICAO meeting outcomes in which the feasibility of the use of social media sites to make the VONA information accessible to users would be further investigated².

Volcanic Ash Impacts on Aviation Operations (SP/01)

3.8 Japan provided a presentation on the characteristics of volcanic ash, the potential effects on aviation operations, and the history of the establishment of VAACs by ICAO. The presentation included explanation of the information sources, information flow and the VONA, volcanic ash advisory information issued in abbreviated plain language (VAA) and volcanic ash advisory information in graphical format (VAG). The importance of harmonized VONA and VAA was stressed. The information was also provided on websites hosted by Tokyo and Darwin VAACs, and by the Washington VAAC for relevant Pacific areas.

3.9 The presentation included a case study of the eruption of Mount Ontake in 2014 and highlighted the opportunity to improve coordination and cooperation within the aviation system through the conduct of volcanic ash exercises in the APAC Region.

Establishment of the APAC VOLCEX/SG (IP/01)

3.10 The Secretariat presented an overview of the establishment of the Asia/Pacific Volcanic Ash Exercises Steering Group (APAC VOLCEX/SG).

3.11 Guidance material for conducting volcanic ash exercises in ICAO regions was introduced in 2010 in ICAO Doc 9766 – *Handbook on the International Airways Volcano Watch (IAVW)*, Second Edition 2004; Appendix F – *Guidance for Conducting Volcanic Ash Exercises in ICAO Regions*.

¹ In accordance with the guidance in ICAO Doc 9766, *Handbook on the International Airways Volcano Watch (IAVW)*

² Conjoint Session of ROBEX WG/13 and MET/H TF/5, Decision (ROBEX WG/13-MET/H TF/5)/6 – *Use of social media sites for sharing VONA information*

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3.12 In accordance with Doc 9766, Appendix F, “*A volcanic ash exercises steering group may be established by a PIRG³ to coordinate all aspects of the organization and conduct of the exercises*”.

3.13 The overview included historical information on the ICAO European and North Atlantic Volcanic Ash Exercises Steering Group (EUR/NAT VOLCEX/SG), which prepared the EUR/NAT Volcanic Ash Exercises Operating Instructions (EUR/NAT VOLCEX OPINS) as guidance material to facilitate the conducting of regular volcanic ash exercises in the EUR and NAT Regions of ICAO, and the EUR (EAST) VOLCEX/SG, which was established to organize and conduct regular volcanic ash exercises in the far east of the Russian Federation based on volcanoes on the Kamchatka Peninsula located under the area of responsibility of the VAAC Tokyo.

3.14 It was noted that the guidance material in ICAO Doc 9766 proposed a minimum composition for a volcanic ash exercises steering group. The APAC VOLCEX/SG needed to ensure that the right people and organizations were engaged in the activity. There appeared to be a sufficiently broad range of participants at the meeting.

3.15 The meeting noted that the volcanic ash exercise/s should be planned and conducted as far as possible within the constraints of existing ICAO Standards and Recommended Practices (SARPs) and regional air navigation agreements and, as such, the use of volcanic ash “concentration charts” should not be considered as part of the exercise/s. This was also discussed under 3.17 below.

Outcomes from Other Volcanic Ash Exercises (IP/02)

3.16 The Secretariat provided information on the outcomes of volcanic ash exercises conducted in the ICAO EUR Region.

3.17 In response to a related query concerning the use of volcanic ash concentration charts in other ICAO Regions, the meeting noted that, while these had been discussed as part of the EUR/NAT Region volcanic ash contingency planning⁴, volcanic ash concentration charts were provided through State arrangements (*not* required by Annex 3 provisions) and any global requirements for the development and provision of concentration charts would be a long-term exercise and, therefore, would not be considered within the scope of the volcanic ash exercise/s.

3.18 The Secretariat reminded the meeting that the exercise/s should be designed to test current standards and practices.

3.19 The meeting noted the need to locate or develop a suitable template for special air-reports of volcanic ash by pilots, to air traffic control, in the same way as there was a template for post-flight reporting.

3.20 The meeting noted that the highest priority should be placed on how and where to distribute information, and what information to distribute.

³ Planning and Implementation Regional Group (of ICAO)

⁴ Volcanic Ash Contingency Plan – EUR and NAT Regions, December 2010

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1982 – 2015 Ash Encounters South East Asia (SP/05)

3.21 Australia presented information on aircraft encounters with volcanic ash, and a graphical presentation of volcanic ash cloud activity during recent years.

3.22 It was stressed that volcanic ash clouds could rapidly affect large volumes of airspace, involving multiple FIRs.

3.23 In response to a question, Australia advised that the IATA was firmly of the opinion that States should not *close* airspace in response to volcanic ash events, but should act to ensure the sharing of information and facilitation of aircraft avoidance of the affected airspace.

VOLKAM15 outcomes (SP/03)

3.24 Japan provided the meeting with a briefing on the 2015 volcanic ash exercise conducted in Kamchatka, in the far east of the Russian Federation (VOLKAM15).

3.25 A diagram illustrating the correlation of activities between different stakeholder agencies was included and discussed by the meeting. It was noted that, while each scenario and each State were different, such a diagram may be useful to illustrate information flows in the planned APAC volcanic ash exercise.

3.26 The meeting noted that email may be a useful communication medium, but the reliability and timeliness of transfer of information by email was dependent on infrastructure (e.g. public internet) that may be beyond the control of participating stakeholders.

3.27 Tele-conferencing was very useful for sharing the situation and intention, but the availability of facilities and equipment to conduct the conference needed to be taken into account.

3.28 The VOLKAM sheet (adopted by the EUR (EAST) VOLCEX/SG for use in VOLKAM15) resulted in a high workload among participants as it was not possible to share information in real-time. Instead, information had to be gathered from each participant, integrated in the VOLKAM sheet and then redistributed to all participants. While there may be security issues to be managed, web-based information sharing may be a better solution.

3.29 The Secretariat reminded the meeting that in cases where there was flexibility to incorporate new ways of sharing information they should be considered, but the exercise also needed to ensure compliance with current standard information distribution requirements.

Related Air Traffic Management Meeting Outcomes (IP/03)

3.30 The Secretariat provided a briefing on the outcomes of the Regional ATM Contingency Plan Task Force (RACP/TF) and the Asia/Pacific Region Air Traffic Flow Management Steering Group (ATFM/SG). It was emphasized that the collaborative trajectory options programs that were used in Europe and North America for the avoidance of constrained airspace would not be achievable in the Asia/Pacific Region, apart from some isolated in-State examples, for the foreseeable future. ATFM measures available in APAC Region in the medium term were expected to be metering or time-based entry to airspace sectors, and ground delay programs, to balance demand and capacity in constrained airspace.

3.31 It was noted that, volcanic ash cloud causing an airspace volume to become unavailable/unused would as a consequence cause airspace constraints in nearby airspace where flights were operating to avoid the volcanic ash cloud.

3.32 The meeting was also advised that many States did not have separate ATFM units /centres, and there was as yet no sub-Regional or Regional agency filling the ATFM/Network Manager role.

Philippine Procedure for Issuance of SIGMET (SP/06)

3.33 The Philippine Atmospheric, Geophysical and Astronomical Service Administration (PAGASA) provided a presentation on the process for receipt of volcanic ash information and subsequent issuance of SIGMET⁵ on volcanic ash, compliant with WMO and ICAO requirements.

3.34 It was highlighted that volcanic ash information received from VAACs did not necessarily stand out from other routine information, and could be ‘lost’ among a volume of other information that was also received at the time. While the meeting discussed possibilities for using higher level (AFTN⁶) message priority indicators, it was noted that, in accordance with ICAO Annex 10 – *Aeronautical Telecommunications*, Volume II, 4.4.1.1.3 c), priority indicator FF is used for flight safety messages including SIGMET information, and any change was unlikely to gain global or regional support.

3.35 The meeting was reminded of future developments for the distribution of volcanic ash advisory information, which will include, if approved as part of Amendment 77 to Annex 3 — *Meteorological Service for International Air Navigation*, which is expected to become applicable on 10 November 2016, the recommendation that volcanic ash advisory centres should issue volcanic ash advisory information in digital form, and the requirement that volcanic ash advisory information, if disseminated in digital form, shall be formatted in accordance with a globally interoperable information exchange model and shall use extensible mark-up language (XML)/geography mark-up language (GML).

IATA Volcanic Ash Position (SP/02)

3.36 IATA provided its position in relation to volcanic ash events, summarized as follows:

- Aircraft operators are responsible for the safety of operation in relation to volcanic ash events;
- IATA opposed the closure of airspace due to volcanic ash events. Aircraft Operators’ internal risk management processes should determine whether they use the airspace;
- IATA did not support the use of ash concentration charts
- IATA supported the use of observed/discerned data to constrain the output of modelling data, to facilitate informed decision making.
- Supported the concept of aircraft avoiding visible ash.

⁵ Information issued by a meteorological watch office concerning the occurrence or expected occurrence of specified en-route weather phenomena which may affect the safety of aircraft operations

⁶ Aeronautical fixed telecommunication network—*A worldwide system of aeronautical fixed circuits provided, as part of the aeronautical fixed service, for the exchange of messages and/or digital data between aeronautical fixed stations having the same or compatible communications characteristics.*

- Supported the direction taken in the agreed Air Traffic Management Volcanic Ash Contingency Plan Template.
- Actively supported the development of on-board aircraft volcanic ash detection and the use of this capability within operators' risk assessment processes.

3.37 The meeting discussed the issue of aircraft operator responsibility for the safe operation of aircraft, but noted that there would be buffers and amended routes put in place by air navigation service providers.

Flow of Aeronautical Information Relative to Volcanic Activity (IP/05)

3.38 The CAAP provided a briefing on the stakeholders involved in aeronautical information on volcanic ash, and the flow of information.

3.39 In reply to a query, Philippines advised that the presentation related only to the flow of information in the domestic domain. CAAP recognized that further development of the information flow would be necessary in order for it to include cross-boundary information sharing.

Agenda Item 4: Review Terms of Reference of Volcanic Ash Exercises Steering Group

Review of APAC VOLCEX/SG Terms of Reference (WP/02)

4.1 The Secretariat provided for review by the meeting the VOLCEX/SG Terms of Reference (TOR), as adopted by the Twenty-fifth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/25), in its Decision 25/47 – *Establishment of a Volcanic Ash Exercises Steering Group in the APAC Region*.

Agenda Item 5: Planning for Volcanic Ash Exercise in 2015

Appoint Exercise Leader

5.1 The meeting duly noted that, in accordance with the TOR of the APAC VOLCEX/SG and the guidance material discussed earlier in the meeting, an exercise leader should be appointed for each exercise to oversee the key components of planning, conducting and follow-up of the volcanic ash exercises. As Japan had considerable experience participating in previous ICAO volcanic ash exercises, the Secretariat recommended that, for the first ICAO APAC volcanic ash exercise, the group endorse the appointment of Mr. Koichiro Kakihara, the meeting Chairperson, in the role as exercise leader.

5.2 In view of the above, Mr. Koichiro Kakihara was appointed exercise leader for the first ICAO APAC volcanic ash exercise in 2015.

Adopt Volcanic Ash Exercise Directive (WP/01)

5.3 The Secretariat presented a draft APAC volcanic ash exercise directive based on the template provided in the EUR/NAT VOLCEX OPINS and the VOLKAM15 exercise directive adopted by EUR (EAST) VOLCEX/SG/5.

5.4 The proposed date (in the draft exercise directive) for the first ICAO APAC volcanic ash exercise was not suitable for the exercise leader so a new date (preferably in August 2015) would be selected.

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5.5 The meeting noted that in order to complete detailed information in the directive (e.g., participating agencies, directing staff, volcano and scenario) it would first be necessary to determine the exercise scenario.

5.6 Japan proposed a volcanic ash exercise scenario in which an eruption of the Taal Volcano (volcano number⁷: 273070, position: N1400 E12100), on the island of Luzon, Philippines, emits a volcanic ash cloud that spreads northwards and contaminates the Manila FIR.

5.7 The meeting agreed that such a scenario as presented by Japan should be adopted as it would constrain the scope of the first ICAO volcanic ash exercise in the APAC Region to involve a reasonably small group of stakeholders required to directly participate in the exercise (i.e., compared with a more complex scenario that affected multiple FIRs and involved a great number and variety of stakeholders).

5.8 The meeting also agreed that other parts of the [whole] system would then be subject to testing during subsequent exercises and that subsequent exercise scenarios should include follow-up in the Manila FIR; to build upon experience from the first exercise, as well as including volcanoes in Indonesia and other States with active volcanoes such as Papua New Guinea and the Pacific Island States.

5.9 Japan proposed a two-stage approach where the first exercise scenario would be in the Philippines (with a primary objective to practice alerting and distributing volcanic ash information) while the second exercise would involve parallel scenarios: one to enable follow-up work in the Manila FIR (as suggested in 5.8 above) and the other to bring on volcanic ash exercises to Indonesian volcanoes. This type of approach, to incrementally expand the scope of volcanic ash exercises in the APAC Region, was supported by the meeting.

5.10 In view of the discussion above, the meeting agreed that it would also be beneficial to the volcanic ash exercises to appoint 'in-State' leaders for the exercise scenarios in the Philippines and Indonesia to lead and facilitate the local planning and coordination necessary for the success of the exercise/s. Furthermore, the meeting noted the potential future need to establish more than one group of exercise directing staff in case more than one volcanic ash exercise is to be conducted in parallel.

5.11 States and International Organizations represented at the meeting, that would not be required to participate directly under the exercise scenario discussed above (i.e., not deemed as "directing staff"), would be invited to participate indirectly (e.g., as "observers") by recording the receipt of volcanic ash exercise messages (as necessary) and reporting to the exercise leader for the follow-up phase of the exercise.

5.12 In addition to practicing the distribution of volcanic ash information (e.g., VONA, VAA/VAG, SIGMET, NOTAM⁸ and AIREP⁹), and verifying address lists used, the meeting agreed

⁷ In accordance with the Smithsonian database at <http://www.volcano.si.edu/>)

⁸ A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

⁹ Air-report—A report from an aircraft in flight prepared in conformity with requirements for position, and operational and/or meteorological reporting.

that the exercise directive should ensure that the volcanic ash exercise, while being reasonably constrained in its scope, does include demonstration of the correct handling of special air-reports concerning volcanic ash and the practice of multi-agency collaborative decision making (CDM), using an appropriately selected communication mechanism.

5.13 The technical and administrative details of the CDM component (e.g., tele-conference and/or web-conference) would be finalized by the exercise leader taking into account the type of infrastructure available and the preferences of the exercise directing staff involved. Previous ICAO volcanic ash exercises (e.g. VOLKAM) provided insight into issues associated with conducting multi-agency tele-conferences and these would be taken into consideration.

5.14 The meeting agreed that a procedure should be added to the volcanic ash exercise directive to manage any necessity to postpone or cancel the exercise due to unforeseen circumstances/events (e.g., such as a real volcanic eruption or major event affecting the aviation system).

Agenda Item 6: Future Work Schedule (WP/03)

Debrief Meeting

6.1 The Secretariat proposed dates in WP/03 to conduct the second meeting of the APAC volcanic ash exercise steering group (APAC VOLCEX/SG/2), which would constitute a volcanic ash exercise debrief meeting held in the ICAO Regional Office, Bangkok, Thailand. The proposed dates were generally supported by the meeting, but would need to be further considered with respect to the final date selected for the exercise and would be finalized by the exercise leader in due course.

Future Planning Meeting/s

6.2 Due mainly to time and travel constraints for participating States/Organizations, the meeting generally preferred the option (which was not suggested in WP/03) to combine the next planning meeting for future volcanic ash exercise/s with the debrief meeting (i.e., APAC VOLCEX/SG/2 would be both ‘debrief’ for the first exercise and ‘planning’ for the subsequent exercise/s). In such case, the proposed debrief meeting may need to be delayed somewhat for this approach to effectively plan a subsequent exercise/s in (early) 2016 or even (late) 2015. The dates for the next planning meeting, or the combined debrief/planning meeting if decided that way, would be finalized in accordance with the final dates selected for the exercise and with further consideration as to the practicality of combining debrief and planning meetings.

Future Exercises

6.3 Further to discussions under 5.8 to 5.10, the meeting agreed to a tentative plan for future volcanic ash exercises based on scenarios involving volcanoes in the Philippines and Indonesia, with subsequent exercises envisaged to include Papua New Guinea and the volcanically active Pacific Island States (e.g., Solomon Islands, Vanuatu, Tonga, etc.).

Agenda Item 7: Any Other Business

VOLCEX/SG Task List

7.1 The meeting agreed to the task list included as **Appendix C** to this report, which includes preparatory work necessary for the first ICAO volcanic ash exercise in the APAC Region.

Closing

7.2 The Chairman thanked the meeting participants for their valuable contributions.

**First Meeting of the Asia/Pacific
Volcanic Ash Exercises Steering Group (VOLCEX/SG/1)**

(Manila, Philippines, 27 - 29 May 2015)

Appendix A to the Report

LIST OF PARTICIPANTS

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International Civil Aviation Organization

**The First Meeting of the Asia/Pacific Volcanic Ash Exercises Steering Group
(VOLCEX/SG/1)**

Manila, Philippines, 27 - 29 May 2015

LIST OF WORKING AND INFORMATION PAPERS

WP/IP No.	Agenda Item	Subject	Presented by
WORKING PAPERS			
WP/1	5	Volcanic Ash Exercises Directive	Secretariat
WP/2	4	Review APAC VOLCEX/SG Terms of Reference	Secretariat
WP/3	6	Review and Adopt APAC VOLCEX/SG Future Work Plan	Secretariat
INFORMATION PAPERS			
IP/1	3	Establishment of the APAC VOLCEX/SG	Secretariat
IP/2	3	Outcomes from other ICAO Volcanic Ash Exercises	Secretariat
IP/3	3	Related Air Traffic Management Meeting Outcomes	Secretariat
IP/4	3	ATM Volcanic Ash Cloud Contingency Plan Template	Secretariat
IP/5	3	Flow of Aeronautical Information Relative to Volcanic Activity	Philippines
PRESENTATIONS			
SP/1		Volcanic Ash Impact on Aviation Operations	Japan
SP/2		IATA Volcanic Ash Position	IATA
SP/3		VOLKAM15 Outcomes at JCAB	Japan
SP/4		Two Most Active Volcanoes in Bicol Region	Philippines
SP/5		1982 – 2015 Ash Encounters SE Asia	Australia
SP/6		Procedure for Issuance of WV SIGMET	Philippines

First meeting of the APAC Volcanic Ash Exercises Steering Group

Task List

(last updated – 8 June 2015)

ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
1/1	Finalize exercise date and back-up date	04/06/2015	Exercise Leader, Secretariat	COMPLETED	Exercise date: 11 Aug 2015 *Back-up date: 25 Aug 2015 (GO/NO decision: 1 day prior to each date)
1/2	Finalize exercise debrief meeting date	04/06/2015	Exercise Leader, Secretariat	COMPLETED	14-16 Sep 2015 ; Bangkok
1/3	Confirmation of location of Exercise Leader for coordination of exercise and agreement on other expert attendance.	04/06/2015	Exercise Leader, Secretariat	COMPLETED	ICAO Office Bangkok. Exercise Leader and Secretariat; invite Indonesia (BMKG), IATA, IFALPA (*Note: if exercise is held on back-up date, Exercise Leader will coordinate from Japan)
1/4	Finalize exercise scenario	04/06/2015	Exercise Leader	COMPLETED	Based on scenario provided by VAAC Tokyo in meeting as outlined in draft exercise directive
1/5	Finalize exercise schedule	04/06/2015	Exercise Leader, Secretariat	COMPLETED	As above
1/6	Invite CAAP to provide exercise co-leader for Philippines (on-site) coordination and assist exercise leader	04/06/2015	Exercise Leader, Secretariat	In progress	

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Appendix C to the Report

ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
1/7	Contact/coordinate with relevant authorities in Indonesia regarding future VOLCEX based in Indonesia, in parallel with follow-up exercise in Philippines	04/06/2015	Exercise Leader, Secretariat	In progress	BMKG, DGCA, AirNav Indonesia, CVGHM
1/8	Obtain confirmation from participating agencies that personnel and resources will be available to participate in the exercise	28/06/2015	Secretariat	Open	Include date of exercise, role of participant and exercise reporting requirements
1/9	Finalize exercise directing staff details in section 10 of exercise directive	28/06/2015	Secretariat	Open	Can be done in conjunction with action item 1/8
1/10	Finalize the exercise VONAs	10/07/2015	VOs, Exercise Leader, Secretariat	Open	One month before Exercise Date
1/11	Finalize the exercise VAA/VAGs	10/07/2015	VAACs, Exercise Leader, Secretariat	Open	One month before Exercise Date
1/12	Finalize the exercise SIGMETs	10/07/2015	MWOs, Exercise Leader, Secretariat	Open	One month before Exercise Date
1/13	Finalize the exercise NOTAMs	10/07/2015	NOFs, Exercise Leader, Secretariat	Open	One month before Exercise Date
1/14	Finalize exercise AIREPs	10/07/2015	AOs, Exercise Leader, Secretariat	Open	One month before Exercise Date
1/15	Finalize the exercise ATFM measures	10/07/2015	Exercise Leader, Secretariat	Open	One month before Exercise Date
1/16	Finalize the exercise teleconference procedures	10/07/2015	Exercise Leader, Secretariat	Open	One month before Exercise Date
1/17	Finalize scope for AO exercise responses	10/07/2015	AOs, Exercise Leader, Secretariat	Open	One month before Exercise Date

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Appendix C to the Report

ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
1/18	Provide templates for exercise reports for all participants/observers	10/07/2015	Exercise Leader, Secretariat	Open	One month before Exercise Date
1/19	Finalize message exchange addresses and flow chart/s (for VONA, VAA/VAG, SIGMET, AIREP)	10/07/2015	Exercise Leader, Secretariat on coordination with VO, VAAC, MWO and AO	Open	One month before Exercise Date
1/20	Obtain updated Contact Details for relevant agencies in Doc 9766	10/07/2015	Exercise Leader, Secretariat	Open	One month before Exercise Date
1/21	Tailor the wording of the exercise directive to reflect the CAAP organizational structure	10/07/2015	Exercise Leader, Secretariat, CAAP	Open	One month before Exercise Date
1/22	Finalize the procedure in the exercise directive for postponement or cancellation of the volcanic ash exercise due to unforeseen circumstances/events	10/07/2015	Exercise Leader, Secretariat	Open	One month before Exercise Date
1/23	Finalize the exercise directive	10/07/2015	Exercise Leader, Secretariat	Open	One month before Exercise Date
1/24	Establish exercise website	10/07/2015	Exercise Leader, Secretariat	Open	One month before Exercise Date