



International Civil Aviation Organization

**NINETEENTH MEETING OF THE METEOROLOGY SUB-GROUP  
(MET SG/19) OF APANPIRG**

Bangkok, Thailand, 3 – 6 August 2015

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**Agenda Item 6: Research, development and implementation issues in the MET field**

6.3) Forecasts, advisories and warnings

**OUTCOMES OF VOLCANIC ASH EXERCISE IN KAMCHATKA IN 2015 (VOLKAM15)**

(Presented by Japan)

**SUMMARY**

This paper presents overview of challenges and outcomes at the Volcanic Ash Exercise in Kamchatka in 2015 (VOLKAM15) conducted on 15-16 April 2015.

**1. INTRODUCTION**

1.1 In ICAO EUR/NAT Region, Volcanic Ash Exercise (VOLCEX) has been conducted since 2008 so as to test the ICAO EUR/NAT Regions contingency plan (EUR Doc 019/NAT Doc 006, Part II), with a view to mitigating impacts of volcanic ash on air traffic.

1.2 Meanwhile, the International Volcanic Ash Task Force (IVATF) agreed that contingency plan for volcanic ash was necessary for safety flight and formulated conclusion that recommended each ICAO Region to establish regional Air Traffic Management Volcanic Ash Contingency Plan (ATM VACP) with its template.

1.3 In this context, the European Air Navigation Planning Group Programme Coordinating Group (EANPG COG) established the Volcanic Ash Exercises Steering Group for the (far) Eastern part of the EUR Region (EUR (EAST) VOLCEX/SG) and tasked it to ensure the conduct of regular volcanic ash exercises in the EUR (EAST) Region, including Kamchatka Peninsula.

1.4 First meeting of the steering group was held in Petropavlovsk-Kamchatsky, Russian Federation in August 2012, and attended by delegates from Japan Civil Aviation Bureau (JCAB) and Japan Meteorological Agency (JMA, as Tokyo VAAC), as well as relevant Russian air traffic organization, meteorological watch offices, and volcano observatories. The meeting determined the date and discussed objectives and procedures of the Volcanic Ash Exercise in Kamchatka in 2013 (VOLKAM13). Participants agreed that main objective was to consider adapting ATM VACP template developed for use in the region based on the exercise conclusions. The objectives, procedures and attributes of the exercise were then formalized in the Exercise Directive for VOLKAM13 that was conducted on 15-16 January 2013.

1.5 Based on the outcomes of VOLKAM13, second volcanic ash exercise (VOLKAM14) was planned through the debrief meeting of VOLKAM13 and the second and third meetings of the steering group. The main objectives were agreed to demonstrate coordination procedures between all participating parties, tactical re-routes, VAACs Tokyo and Anchorage handover, transmission of air-reports on volcanic ash in accordance to Annex 3 (aircraft → ACC → MWO → VAAC), and information sharing via teleconferences and website. VOLKAM14 was conducted on 4-5 March 2014.

1.6 Considering the outcomes of VOLKAM14, third volcanic ash exercise (VOLKAM15) was planned and conducted on 15-16 April. Participating parties kept working on the main objectives at the previous exercise but pursued higher performance combined with some new challenges such as using a VOLKAM sheet for information sharing and conducting a chat communication between the VAACs for handover.

## **2. DISCUSSION**

2.1 To obtain meaningful outcomes in VOLKAM15, participants agreed to draw up an exercise scenario, which simulates a major eruption of Ksudach with an ash cloud expanding to the southeast from Kamchatka and covering a part of Fukuoka FIR.

2.2 During the exercise, test messages such as Volcano Observatory Notice for Aviation (VONA), VA SIGMET, VAA/VAG and NOTAM were issued via AFTN and/or e-mail. In response to them, operators and ATS units implemented reroute operations. A teleconference was taken among organizations concerned around two hours after the eruption to discuss the latest situation. In addition, a VOLKAM sheet, in which participating parties wrote down the current status and future plan, was distributed via e-mail to share information in near real time. On VAACs' side, they discussed the current and future ash extent in a chat room and conducted a handover with a confirmation phone call after sending a Handover Request Sheet (HRS; a form for handover).

2.3 A debrief meeting was held in ICAO EUR/NAT regional office on 22 - 23 April 2015 to summarize the conclusions of VOLKAM15. Successes were noted in the meeting. Lessons learned and recommendations were submitted to the meeting and discussed. For example, the method to share a VOLKAM sheet will be improved: a web conference or something instead of e-mail will be tested in VOLKAM16 to avoid information overload. The agreed recommendations were listed as tasks in an action plan to be dealt with by participants.

2.4 Through the first to third exercises, the communication procedures and other preparation have been improved remarkably. There still exists some tasks and all the participant parties continue efforts, but the exercise is steadily going forward.

## **3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matters as appropriate.

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