International Civil Aviation Organization

EIGHTEENTH MEETING OF THE METEOROLOGY SUB-GROUP (MET SG/18) OF APANPIRG

ICAO Regional Sub-Office, Beijing, China
18 – 21 August 2014

Agenda Item 7: Research, development and implementation issues in the MET field

7.4 Advisories and warnings

OUTCOMES OF VOLCANIC ASH EXERCISE IN KAMCHATKA IN 2014 (VOLKAM14)

(Presented by Japan)

SUMMARY

This paper presents overview of remarkable outcomes of the Volcanic Ash Exercise in Kamchatka in 2014 (VOLKAM14) conducted on 4-5 March 2014

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 (EUR (EAST) VOLCEX/SG/1) 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 volcanological observatories. The meeting discussed objectives and procedures of the Volcanic Ash Exercise in

Kamchatka in 2013 (VOLKAM13) and determined its date. 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.

1.5 VOLKAM13 was conducted on 15-16 January 2013 successfully, especially in terms of identification of issues in contingency operations by exercise participants.

1.6 Based on the outcomes of VOLKAM13, second volcanic ash exercise (VOLKAM14) was planned through the debrief meeting of VOLKAM13 and EUR (EAST) VOLCEX/SG/2 and 3. The main objectives were agreed to demonstrate coordination procedures between all participating parties (ANSPs, ATM Centres, AIS, VOs, VAACs, MWOs, users), tactical re-routes, VAAC Tokyo and VAAC 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.

1.7 VOLKAM14 was conducted on 4-5 March 2014 successfully.

2. Discussion

2.1 To achieve successful outcomes in VOLKAM14, the participating agencies agreed to draw up an exercise scenario, which simulates a major eruption of Bezymianny and an ash cloud expanding far east from Kamchatka. VAAC Tokyo contributed to this effort by developing exercise VAAs and those in graphical format (VAGs).

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 via e-mail. In response to them, operators and ATS units implemented reroute operations. A teleconference was also taken among organizations concerned around two hours after the eruption to discuss the latest situation.

2.3 A debrief meeting was held in ICAO EUR/NAT Regional Office on 13-14 February 2014 to summarize the conclusions of VOLKAM14. The meeting noted successes and leaned lessons from VOLKAM14 and agreed recommendations which were listed as tasks in an action plan to be dealt with by participants after enough discussion.

2.4 VOLKAM14 was the first exercise that practiced the use of contingency routes and procedures between Petropavlovsk-Kamchatsky and Fukuoka Oceanic FIRs as per an exercise letter of agreement between the Russian Federation and Japan. Additionally, it demonstrated the correct routing of special air-reports on volcanic ash from ACC to MWO to VAAC as well as SADIS and WIFS. Handover between VAACs Tokyo and Anchorage was also successful.

2.5 For further improvements, the need of continued work on establishing contingency procedures is noted as one of the tasks on ATM operations. As a VAAC's duty, handover procedures between VAACs Tokyo and Anchorage are to be more clarified to reduce the time of handover. It is also noted that the necessity to assure special air-reports in real-time are disseminated in the same manner as in the exercise.

2.6 Teleconferences should be held approximately one hour after a new set of VAA/VAG is issued with VOLKAM sheet distributed one-half hour in advance.

2.7 More detailed outcomes are available in the VOLKAM14 Debrief Report posted at the website of ICAO EUR/NAT Regional Office[1].

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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[1] http://www.icao.int/EURNAT/Documents/Meteorology/EAST_VOLCEX/VOLKAM14_Final_Report.pdf