



International Civil Aviation Organization

**FOURTEENTH MEETING OF THE ASIA/PACIFIC
METEOROLOGICAL INFORMATION EXCHANGE WORKING GROUP
(MET/IE WG/14)**

Bangkok, Thailand, 7 – 9 March 2016

Agenda Item Conjoint C2: SIGMET and (volcanic ash and tropical cyclone) advisory information (including SIGMET tests)

REPORT OF VOLKAM15 AND AIM OF VOLKAM16

(Presented by Japan)

SUMMARY

This paper presents outcomes of a Volcanic Ash Exercise in Kamchatka in 2015 called VOLKAM15 and the aim of VOLKAM16 which is to be conducted on 21-22 April 2016.

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 The first Volcanic Ash Exercise in Kamchatka in 2013 called VOLKAM13 was conducted on 15-16 January 2013 with an objective to consider adapting the ATM VACP template for this region based on the exercise conclusions. It was successfully done with participants such as Air Navigation Service Providers (ANSPs), ATM Centres, Aeronautical Information Services (AIS), Volcano Observatories (VOs), Volcanic Ash Advisory Centers (VAACs), Meteorological Watch Offices (MWOs) and users, especially in terms of identification of issues in contingency operations by exercise participants.

1.5 Based on the outcomes of VOLKAM13, the second Volcanic Ash Exercise of VOLKAM14 was conducted on 4-5 March 2014 with objectives to demonstrate coordination procedures between all participating parties, tactical re-routes, handover between VAACs Tokyo and Anchorage, transmission of air-reports on volcanic ash in accordance to Annex 3 and information sharing via teleconferences and website.

1.6 The third Volcanic Ash Exercise of VOLKAM15 was conducted on 15-16 April 2015 aiming at more enhanced communication and coordination, and the fourth exercise of VOLKAM16 is scheduled on 21-22 April 2016.

2. DISCUSSION

2.1 For VOLKAM15, an exercise scenario was drawn up which simulates a major eruption of Ksudach, a volcano in the southern part of Kamchatka Peninsula, with an ash cloud expanding to the southeast. During the exercise, test messages such as Volcano Observatory Notice for Aviation (VONA), VA SIGMET, VAA and Notice to Airmen (NOTAM) were issued via AFTN and/or via e-mail. In response to them, Aircraft Operators and Air Traffic Services (ATS) units implemented reroute operations. Teleconferences were also taken among participating organizations to discuss the latest situation.

2.2 Real-time information sharing was one of the main tasks to improve and a spread sheet called VOLKAM Sheet was used as a trial basis during VOLKAM15. On VAACs' side, VAACs Tokyo and Anchorage tested more enhanced communication and coordination for handover procedures.

2.3 VOLKAM Sheet is a sheet in which participating parties wrote down the current status and future plan. The sheet was distributed via e-mail to share information in near real time during the exercise which resulted in a recognition that the sharing method still has a room to improve: a web conference or something instead of e-mail will be tested in future exercises to avoid information overload.

2.4 As for coordination between VAACs at a handover, VAACs Tokyo and Anchorage exchange a specific form in which necessary items are already put and forecasters only need to add the date/time, volcano name, advisory number, and so on. Previously, they were exchanging the form via FAX but have started to exchange operationally via e-mail with a confirmation phone call so that forecasters can open it without delay. In addition, the VAACs have been testing the effectiveness of further communication on the current and future volcanic ash extent in a chat room using NOAA's NWSChat system. The communication and coordination with these procedures, introduced more in detail in the ROBEX WG/13 MET/H/TF/5 – IP/C3, were tested during VOLKAM15 and went very well. The outcomes were reported in the VOLKAM15 DEBRIEF & EUR (EAST) VOLCEX/SG/6 MEETINGS on 22 April 2015.

2.5 Considering the results of VOLKAM15, a scenario has been prepared for the next exercise. As for the real-time information sharing method, it is currently under discussion how to improve. On VAACs' side, VAACs Tokyo and Anchorage will newly test the impact onto users when two VAAs are issued from two VAACs at one time in order to provide advisories in a more user-friendly manner. It is highly recommended to avoid separating a volcanic ash cloud in VAAs when it extends across the boundary of multiple VAACs' areas of responsibility, but the impact has not yet confirmed when volcanic ash clouds extend in two or more directions from the same volcano and multiple VAACs provide VAAs for each cloud. Therefore, in the scenario, a hypothetical eruption at

Karpinsky Group in Northern Kurile Islands will produce volcanic ash clouds extending to the north and the southeast, and VAAC Tokyo will hand over the responsibility to VAAC Anchorage for the cloud extending to the north but keep issuances for the cloud extending to the southeast. Then, after the handover, VAAC Tokyo will issue a VAA only for cloud in the southeast while VAAC Anchorage will issue a VAA only for the cloud in the north. Adding to this objective, the VAACs will also provide twenty-four hours forecast in graphic (T+24 VAG), which is required for all VAACs to produce on a trial basis following the Conclusion 8/18 of the eighth meeting of the International Airways Volcano Watch Operations Group (IAVWOPSG/8) based on user requirements, during the exercise to collect user feedback.

2.6 Outcomes of VOLKAM16 will be reported in a debrief meeting in May 2016 and users' reaction will be reflected in the handover procedures between VAACs Tokyo and Anchorage. The experience and knowledge obtained through the exercises from VOLKAM13 to 16 will also contribute in building a better scenario and cooperative relationship in the Volcanic Ash Exercise in APAC region.

3. ACTION BY THE MEETING

3.1 The meeting is invited to note the information contained in this paper and provide comments.
