MET PANEL (METP)
MET OPERATIONS GROUP (MOG)
VOLCANIC ASH (VA)

SECOND MEETING

Buenos Aires, Argentina, 27 to 28 April 2016

Agenda Item 6: VAAC Management Reports

VAAC LONDON IAVW MANAGEMENT REPORT December 2013 – February 2016

(presented by the United Kingdom)

SUMMARY

This paper presents the VAAC London IAVW Management Report

1. INTRODUCTION

1.1 VAAC London is operated by the UK Met Office. The VAAC London area of coverage includes the British Isles and adjacent sea areas, and the North-eastern part of the North Atlantic Ocean including Iceland, Scandinavia and Spitzbergen. Boundary areas are covered by the Toulouse VAAC and Montreal VAAC. This report covers the period December 2013 – February 2016. There was one eruption (Bardabunga) during the period of the report (ultimately not ash producing) but an extensive, regular programme of exercises takes place within the region to ensure a high state of readiness. Further improvements and enhancements to the VAAC London production facilities have been made during the period.

2. OPERATIONS OF THE VAAC

2.1 Issuance of volcanic ash advisories

Operational: A short series of advisories (7) were issued for the eruption of Bardabunga in the latter part of August 2014.

Exercises: 15

Regular (mainly monthly) exercises were held throughout the period resulting in the issuance of 98 advisories. In addition, two back-up exercises were conducted in conjunction with VAAC Toulouse.

2.2 Significant eruptions in the VAAC area

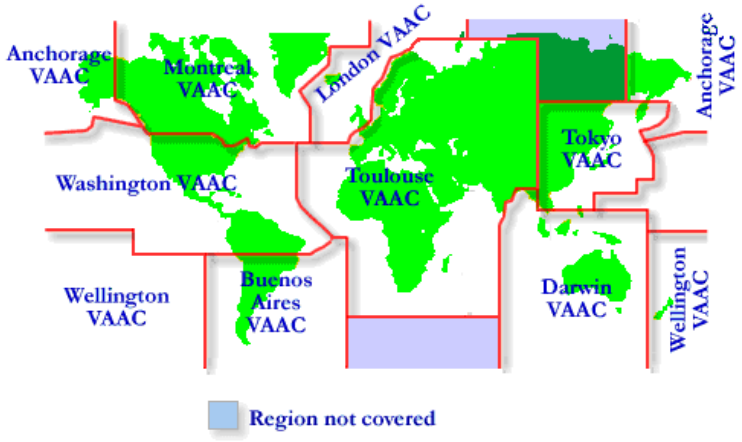
An eruption of Bardabunga on Iceland occurred on 29th August 2014. This ultimately did not produce any volcanic ash (it was a fissure eruption producing lava) and so no forecast information was required. The lava eruption continued, to a greater or lesser extent, for approximately 6 months, eventually ceasing during the latter part of February 2015.

2.3 Significant operational or technical changes;

2.3.1 VAAC personnel carry out end-to-end testing of the VA software each shift. This includes the running of the dispersion model, the ingestion of this data into an Intervention tool, the subsequent editing and manipulation of the data and, ultimately, the generation of products (sent to an internal location). This twice-daily testing ensures continued familiarity of the VAAC team with the various software components, as well as acting as a regular test for component failure.

2.3.2 In the event of a volcanic eruption affecting the VAAC London area of responsibility, VAAC London will continue to provide ash concentration forecast charts in support of the ICAO EUR/NAT Volcanic Ash Contingency Plan. These include forecast Volcanic Ash Concentration charts for 3 concentration levels, and provision of csv data files containing the co-ordinates of the polygons for both the VAG and forecast concentration charts.

2.3.3 The Area of Responsibility (AoR) of London VAAC was modified as of 1st July 2014. The enlarged area now includes Scandinavia and parts of the far north of Russia. Maps showing the old (pre-July 2014) and new (post July 2014) AoR are inserted below:



Pre-July 2014 AoR (above)

Post July 2014 AoR (above)

2.4 VAAC back-up

2.4.1 As a follow on from the meetings held between VAAC London and VAAC Toulouse in 2013, to agree the procedures for backing each other up, regular back-up exercises have occurred (approximately once per year) during the period of this report in order to test this back-up arrangement. These back-up tests are useful in demonstrating the capability of VAACs London and Toulouse to produce and issue/publish VA products on behalf of the other.

2.5 Volcanic Ash Exercises

2.5.1 VAAC London took part in approximately monthly VA exercises (known as VOLCICE) throughout the period of this report. The main protagonists in these exercises were London VAAC, Iceland Met Office (IMO) and the Icelandic CAA (ISAVIA). The purpose of these exercises is to ensure continued familiarity of the various teams to the required response to a volcanic eruption within the London VAAC area of responsibility. Reports of the exercises and planning meetings may be accessed via the ICAO secure portal. http://portallogin.icao.int/

2.6 Staff training

2.6.1 The team that delivers the operational VAAC response to an eruption within London VAAC's AoR comprises approximately 18 meteorologists. This team undertakes a yearly competency assessment to ensure their continued proficiency, an important undertaking considering that a real operational response is only required, on average, every 3 to 4 years. In addition, the team attend a yearly VA Observation course to ensure that they are well informed about the current state of observational techniques for detecting VA. Further, the software components that are part of the operational VA response are tested by the team on a twice daily basis (each shift) to ensure continued familiarity and to ensure awareness of any IT problems that may have occurred.

2.6.2 The Volcanic Ash Intervention Tool software continues to undergo iterative improvements to functionality.

2.7 Distribution of Bulletins

2.7.1 ASHTAM and NOTAM for Volcanic Ash continue to be broadcast successfully on the SADIS Satellite Broadcast[1] and the Secure SADIS FTP server.

2.7.2 The SADIS Provider State is required to route VAGs in PNG format to the SADIS 2G broadcasts and Secure SADIS FTP. As of April 2016, VAGs in PNG format were being routed from all 9 VAACs Anchorage, Buenos Aires, Darwin, London, Montreal, Tokyo, Toulouse, Washington and Wellington to the SADIS Gateway. VAGs should be routed to EGZZVANW. The WMO bulletin headers in use are:-

PFXD(01-10) ADRM
PFXD(01-04) CWAO
PFXD(01-03) EGRR, PFXD05 EGRR
PFXD(20-27) KNES
PFXD(05-09) LFPW
PFXD(01-05) NZKL
PFXD(21-25) PAWU
PFXD01 RJTD
PFXD(01-05) SABM

2.7.3 Volcanic Ash Advisory Centres are invited to contact the SADIS Manager, chris.tyson@metoffice.gov.uk, in the event of changes to production of VAGs – particularly any changes to WMO Abbreviated Header Line.

2.8 Civil Contingencies Aircraft

2.8.1 A dedicated civil contingencies aircraft (Cessna 421) is available at 24 hours notice to provide in-situ observations of volcanic ash during actual eruptions for the UK FIRs. A number of neighbouring States within the EUR region have similar capabilities.

3. FUTURE DEVELOPMENTS

3.1 London VAAC, in collaboration with Toulouse VAAC, propose to replace the current Volcanic Ash concentration charts with Volcanic Ash contamination charts using a **total ash-column** based approach. These products, to be known as Column Mass Loading (CML) charts, will be demonstrated to users and stakeholders in a series of VA exercises during 2016. As a result of these exercises, feedback from users and stakeholders will then be considered ahead of the development of a suitable tool in order to provide the CML charts on an operational basis, planned for the summer of 2017.

4. ACTION BY THE MOG

4.1 The MOG is invited to note the information in this paper.

[1] The SADIS 2G Satellite Broadcast will be discontinued at 1200 UTC, 31 July 2016. The Secure SADIS FT service will continue and is unaffected by the cessation of SADIS 2G. Given the cessation of the satellite component of the SADIS service, effective 1 August 2016 'SADIS' will be re-defined to mean 'Secure Aviation Data Information Service', as endorsed by WG-MOG/1, September 2015.

— END —