



INTERNATIONAL CIVIL AVIATION ORGANIZATION

**TWENTY-SECOND MEETING OF THE
ASIA/PACIFIC AIR NAVIGATION PLANNING AND
IMPLEMENTATION REGIONAL GROUP (APANPIRG/22)**

Bangkok, Thailand, 5-9 September 2011

Agenda Item 3: Performance Framework for Regional Air Navigation Planning and Implementation

3.4-CNS/MET

CORDON CUALLE ERUPTION – LESSONS LEARNT

(Presented by IATA)

SUMMARY

This paper provides information on lessons learnt from the recent Cordon Caulle Eruption regarding provision of information from VAACs and industry positions

This paper relates to **Strategic Objective:**

A: Safety – Enhance global civil aviation safety

Global Plan Initiatives:

GPI-9 Situational awareness

GPI-16 Decision support systems and alerting systems

1. INTRODUCTION

1.1 In early June 2011 Cordon Caulle Volcano in Chile erupted; emitting ash clouds that spread around the Southern hemisphere affecting aviation operations in Australasia, South Africa and Southern America.

1.2 The resulting spread of the Ash cloud meant up to four Volcanic Ash Advisory Centres were involved simultaneously in providing information to aviation stakeholders on the extent and impact of the ash dispersion.

1.3 One of the issues highlighted in this paper is the need for better co-ordination between VAACs and standardisation of reporting, modelling and dissemination of information.

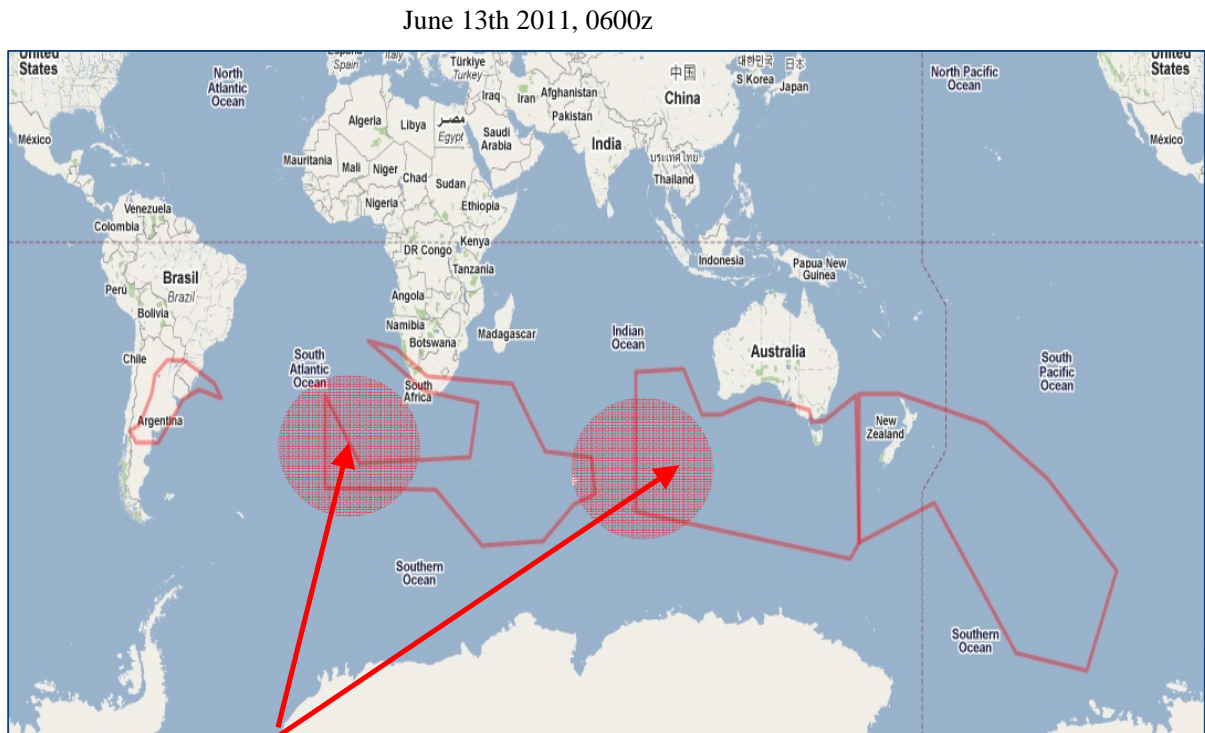
1.4 IATA's position is that airlines should be responsible for operational decisions.

1.5 Good decision making requires accurate, timely and reliable information and the information provided should support risk and safety assessment processes.

2. DISCUSSION

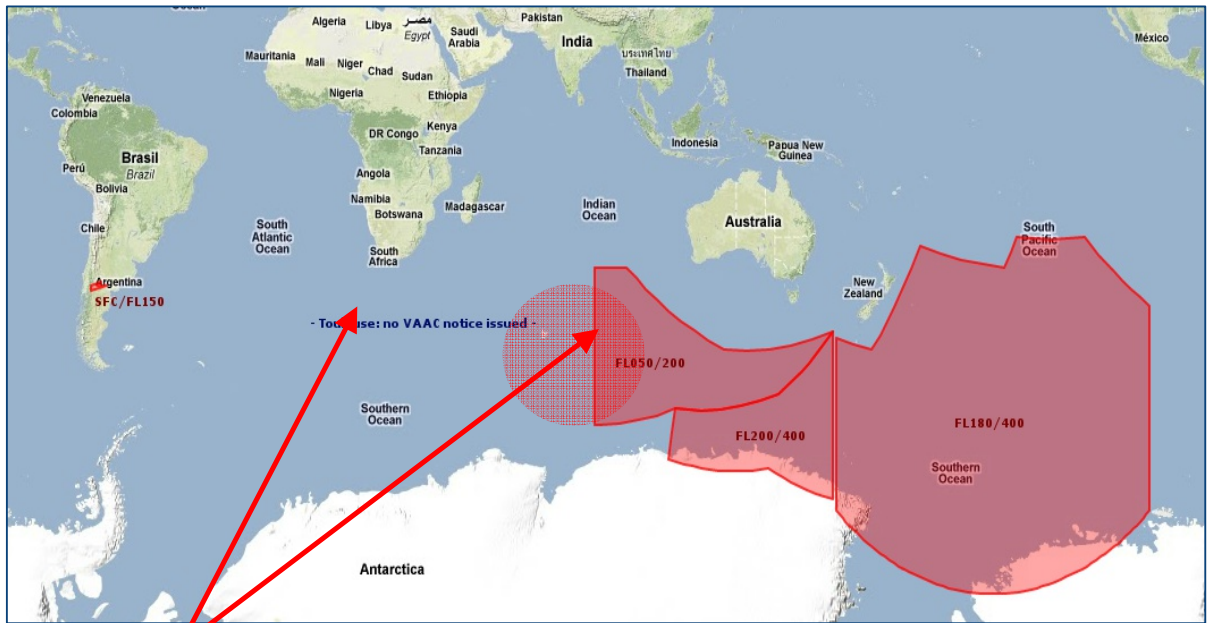
2.1 Disconnect between VAACs became evident during this event. Information provided by Toulouse, Darwin, Buenos Aires and Wellington did not seem to align and it was therefore difficult for airlines to gain a complete picture on which to base decisions.

2.2 Two examples of lack of coordination are presented below:



Abrupt boundary of ash area

June 27th 2011, 0000z



Sharp contrast

2.3 Coinciding with the International Union of Geodesy and Geophysics General Assembly in Melbourne Australia in early July 2011; IATA initiated a meeting with the Darwin VAAC, CASA, Air Services Australia and ICAO Technical Officer Met from Montreal.

2.4 At this meeting positive discussion took place on a number of issues including the above examples. It was an excellent interaction between the scientists and their “customers” which resulted in better understanding and agreements to enhance future advisory and supplementary information.

2.5 Additionally prior to the IVATF/2 meeting in Montreal IATA initiated meetings with all Nine VAAC representatives, to discuss issues, coordination between VAACs and ensure understanding of industry positions.

2.6 The IVATF/2 Report will identify conclusions and positions. IATA also established the following general additional positions in regard to Volcanic Ash, which were included as Appendix 7A in the IVATF Report:

APPENDIX 7A

**IATA POSITION ON SPECIFIC POINTS CONSIDERED UNDER AGENDA
ITEMS 2, 3 AND 4 OF THE IVATF/2 MEETING**

Agenda Item 2: Report of the Science Sub-Group (SCI SG)**2.1: Volcanic ash cloud detection/avoidance systems and associated guidance**

IATA Position: That, areas of discernible SO₂ separate from ash should not be included in the VAAC products at this time.

Agenda Item 2: Report of the Science Sub-Group (SCI SG)**2.3: Supporting requirements for airworthiness determination**

IATA Position: That,

- a) for VAAC en-route observed reporting procedures and for the preparation of the VAA/VAG, one lower threshold at the value of conceptual visible ash (currently proposed to be 2mg/m³) should be used until the science can provide a refined definition; and*
- b) for the production of a METAR, clearly define visible ash observation procedures in ICAO and WMO documentation and exclude any reference to “residual ash”.*

Agenda Item 2: Report of the Science Sub-Group (SCI SG)**2.4: Technologies and systems to support improved eruption source parameterization for dispersion modelling**

IATA Position: That, an agreed set of VAAC procedures should be drafted which will ensure consistency and performance measurements and support new standards for inclusion in Annex 3. Metrics will be created for compliance of the above mentioned standard.

Agenda Item 3: Report of the Airworthiness Sub-Group (AIR SG)**3.7: Other issues**

IATA Position: With relation to operations in airspace contaminated by volcanic ash, that:

- a) airspace should not be closed when contaminated by volcanic ash;*
- b) the decision to operate in areas affected by contaminated volcanic ash should be left to the airlines; and*
- c) IATA will augment their IOSA (IATA Operational Safety Audit) process to include risk assessment with relation to operations in airspace contaminated by volcanic ash.*

Agenda Item 4: Report of the Air Traffic Management Sub-Group**4.1: Air traffic management contingency planning, procedures and guidance**

IATA Position: That,

- a) the longer term goal is the production of accurate concentration charts with demonstrated accuracies acceptable to the industry. The IVATF noted a proposal from IATA to immediately change the current concentration levels to two levels;*
- b) until such time that a VAAC could demonstrate that it was capable of producing ash concentration charts to the accuracy level, or better, of the supplementary products provided by the meteorological offices co-located with the London and Toulouse VAACs, then other VAACs should not issue ash concentration charts on their public internet websites; and*

- c) *that until best practice performance measurements are available, London and Toulouse VAACs should present their current benchmark level of accuracy.*

IATA Position: That, the (temporary) danger area should be eliminated with respect to operations in volcanic ash.

**Agenda Item 4: Report of the Air Traffic Management Sub-Group
4.2: Flight planning information dissemination**

IATA Position: That, NOTAMs should not be used to close airspace when contaminated by volcanic ash. The ASHTAM/NOTAM is redundant with the VA SIGMET, therefore a review should be conducted with regard to the relevance of continued issuance of the ASHTAM/NOTAM.

**Agenda Item 4: Report of the Air Traffic Management Sub-Group
4.3: Operational information exchange**

IATA Position: That, a more efficient process needs to be put in place, and included within that process would be the ANSPs' automatic sending of AIREPs to operators or made available on-line.

3. ACTION BY THE MEETING

- 3.1 Note the information contained in this paper; and
- 3.2 Use this information as reference material, as appropriate, if formulating regional plans or positions for future events.

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