



International Civil Aviation Organization

Eight Meeting of the Communications/Navigation/Surveillance and Meteorology Sub-Group (CNS/MET SG/8) of APANPIRG

Bangkok, Thailand, 12-16 July 2004

**Agenda Item 10: Review of the implementation of ICAO warning system
1) International Airways Volcano Watch (IAVW)**

VOLCANIC ASH SIGMET ISSUES IN THE REGION

(Presented by Australia)

SUMMARY

This paper gives a brief discussion of continuing volcanic ash SIGMET challenges, and suggests the need for further co-ordination of remedial actions.

1. INTRODUCTION

1.1 The meeting will already be aware of issues regarding the implementation of the International Airways Volcano Watch in the Asia-Pacific, including the relatively low rate of SIGMET compliance in the region, and the ICAO special implementation project to address these issues.

1.2 At the recent IAVWOPSG/1 meeting in Bangkok, a proposal to raise the status of Volcanic Ash Advisories to warning status, designed to circumvent some of these problems with respect to volcanic ash, was rejected in favour of renewed efforts at getting the SIGMET system to work.

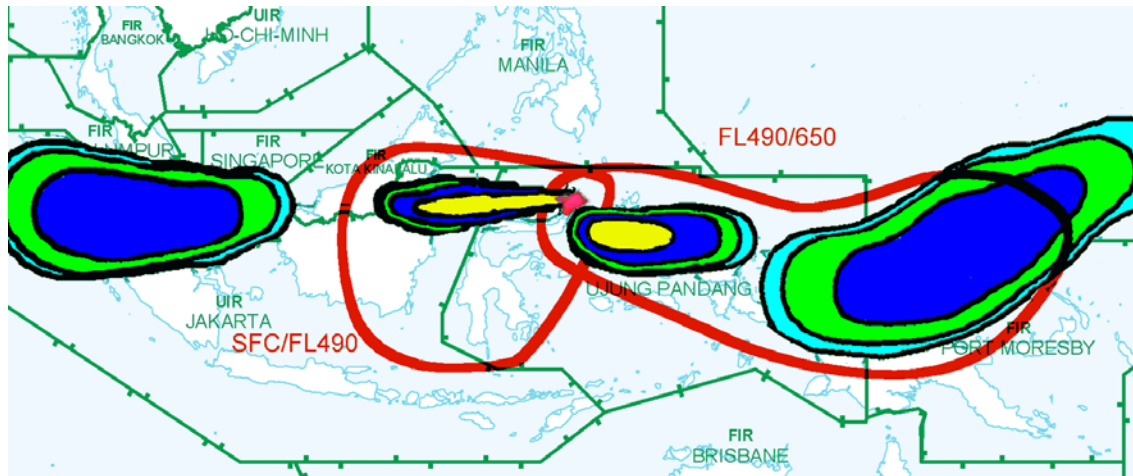
1.3 Australia is firmly committed to supporting these efforts. However, we remain concerned about a number of issues:

2. ISSUES

2.1 Volcanic ash is a marked hazard around the Pacific Rim, due to the combination of a high number of potentially explosive volcanoes, poor infrastructure and communications, and high levels of cloudiness and ambient water vapour restricting the use of satellite techniques. Volcanic monitoring is generally under-resourced and, understandably, focused on hazards to local populations.

2.2 SIGMETs for volcanic ash are relatively complex warnings. When SIGMET issuance in the region is improved, we anticipate a corresponding increase in co-ordination difficulties across Flight Information Regions in the region. To illustrate this point, the figure below shows the number of FIRs crossed by the cloud from the eruption of Ruang, Indonesia, in September 2002. In this case, we are not aware of any SIGMETs that were issued for the event. Should any SIGMETs have been issued, we note that at least eight FIR/UIRs were potentially affected by the ash cloud (the

eastern part of the ash cloud, from FL490/650, is well above cruising levels, and the volcanic cloud in this area was only detected in post analysis, but we have been advised that this information, if available in real time, is still of great importance to aviation operators). The challenge for consistent SIGMETs across this region is formidable.



Forecast (solid area) and observed (outlined area) spread of ash from Ruang eruption, 24-27 September, 2002. After "System for warning flight crews of volcanic ash hazard still faces challenges", A.Tupper, ICAO Journal, Issue 4, 2004

3. SOLUTION

3.1 To aid the development of SIGMETs for volcanic ash in the region, Australia is considering a number of strategies, including, but not limited to, visits to MWOs and ACCs, the preparation of 'draft SIGMETs' in the Darwin VAAC for the Darwin VAAC's area of responsibility, and regional test exercises. However, we recognize that unilateral action along these lines may be counterproductive if not done collaboratively in the region. We therefore suggest that the Asia-Pacific VA/TC Implementation Task Force co-ordinate these and similar actions.

3.2 On the broader scale, it is extremely important that volcanological agencies in the region are funded appropriately and that the volcanic ash hazard to aviation is seen as a relevant funding justification. The IAVWOPSG and various countries are beginning to address this internationally. We suggest that States in this region seek every opportunity to support these efforts.

4. CONCLUSION

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

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