International Civil Aviation Organization

Seventh Meeting of CNS/MET Sub-Group of APANPIRG and Tenth Meeting of CNS/ATM IC Sub-Group of APANPIRG

Bangkok, Thailand, 15 – 21 July 2003

Agenda Item 10: Implementation of ICAO Warning Systems – International Airways Volcano Watch (IAVW)

THE EXTENT OF WELLINGTON VOLCANIC ASH ADVISORY CENTRE AND METEOROLOGICAL WATCH OFFICE OVERSIGHT

(Presented by New Zealand)

SUMMARY

This paper explores New Zealand's perspective on the provision of Volcanic Ash Advisory Centre and Meteorological Watch Office services for high latitude areas where information is sparse or non-existent.

1. Introduction

1.1 New Zealand has operated the Wellington Volcanic Ash Advisory Centre since the inception of the VAACs. For a much longer period New Zealand has maintained the Wellington Meteorological Watch Office and its New Zealand predecessors.

1.2 The pending update of Part VI – Meteorology, of the ASIA/PAC FASID sets out an amendment to the southern boundary of the Wellington VAAC area of responsibility (refer Chart 1). It defines the area as that between *160°E and 140°W and Southward from the Equator*. A note to the defined area states that *coverage south of 60°S latitude is currently not feasible*.

1.3 As for other Meteorological Watch Offices (MWOs) in the ASIA/PAC region, the Wellington MWO has responsibility, as set out in the FASID, for the respective Flight Information Region (FIR). In New Zealand's case this is the Auckland Oceanic FIR (NZZO), which covers the area from 05°S to the South Pole, between 131°W and 163°E, with the exception of the Fiji, Solomon Island, Nauru and Tahiti FIRs (Refer Chart 1).

2. VAAC and MWO Practice and Experience

2.1 While New Zealand and many of its northern neighbour States are located on the "Pacific Ring of Fire" volcanic areas, there has been a relatively frequent need for the Wellington VAAC to receive and promulgate Volcanic Ash Advisory information and for the Wellington MWO (same location) to issue SIGMET for volcanic activity within the area of responsibility. For the most part, the operation of VAAC has been accomplished without difficulty.

2.2 However, the Wellington VAAC and MWO have been fortunate that there has been little or no activity in the past in the more remote and data sparse eastern or southern parts of the VAAC and Auckland Oceanic FIR areas. There is significant volcanic potential in the southern region but very much less potential in the eastern region.

2.3 Occasionally the twice weekly flights from South America can venture as far as 78°S; routinely they bear close to 60°S. While these flights are theoretically supported by the Wellington MWO there are difficulties in fully supporting flights south of 60°S.

2.4 From a technical point of view, it is not practical to suggest that the MWO can provide services further south than 60°S. A reasonable SIGWX product can be supplied from the global data; however SIGMET issue is unsupported by other than forecast data, and largely unsupported by the extreme infrequency of AIREPS (or VARs). Further, satellite imagery of the area is largely confined to that available from geostationary platforms that do not provide sufficient resolution for the reliable detection of volcanic ash over the area.

2.5 There are active volcanoes in the Antarctic Islands and on the Antarctic continent that lie within the southern region of the Wellington VAAC and Auckland Oceanic FIR areas. The Wellington VAAC/MWO does not currently have access to timely volcanological information from these places, and for significant portions of the year there is very little human activity.

2.6 In the Antarctic, flight operations south of 60°S are conducted only by the New Zealand or United States military or their contractors. These operations do not call on the services of the Wellington MWO south of 60°S nor do they necessarily provide meteorological reports from that area.

2.7 The McMurdo sector of the Auckland Oceanic FIR (extending southward from 60°S 174°W and 73.30°S 131°W to the Pole) is covered by United States military operations during the Antarctic summer season. New Zealand does not routinely support these operations from the Wellington MWO. It is expected that the current situation of having no civilian/international operations in the McMurdo Sector or adjacent regions will continue for some time.

2.8 Very rarely there are emergency winter military flights to McMurdo Station by either the United States or New Zealand military. In these cases the Wellington MWO provides what information it can in the absence of the military meteorological aviation support systems.

3. Delimiting of New Zealand VAAC and MWO Southern Coverage

3.1 New Zealand is comfortable, that due to the absence of information in the extreme south of the Wellington VAAC area and the fact that there is extremely little civilian international flight operations in the area, that the current note in Table Met 3 – Volcanic Ash Advisory Areas, of the updated ASIA/PAC FASID document be retained.

3.2 For very much the same reasons and as set out above, New Zealand would prefer that the ASIA/PAC FASID Table Met 1B – Meteorological Watch Offices, be similarly amended with a note that Wellington MWO coverage of the Auckland Oceanic FIR (NZZO) is limited with a note that *coverage south of 60°S is not currently feasible*.

3.3 Finally, it is noted that the ASIA/PAC FASID Table Met 1B – Meteorological Watch Offices lists the MWO as Wellington/Wellington Intl. The MWO office is no longer located at Wellington International Airport.

4. Action by the Meeting

4.1 The meeting is invited to

(a) Note the content, and

(b) Exchange views on the various matters discussed in this paper.

Chart 1. Wellington VAAC Region and Auckland Oceanic FIR showing the McMurdo Sector.