



Sixth Meeting of CNS/MET Sub-Group of APANPIRG

Bangkok, Thailand, 15 – 19 July 2002

Agenda Item 12: Implementation of International Airway Volcano Watch (IAVW)

RECENT ACTIVITIES OF JAPAN FOR IAVW

(Presented by Japan)

SUMMARY

This paper provides information about the recent activities of Japan for IAVW.

1. Introduction

1.1 The Japan Meteorological Agency (JMA) is a unique governmental organization that is responsible for geological hazard monitoring as well as meteorological services. JMA has been providing aviation authorities and companies with information on volcanic activities since late 1970s.

1.2 In response to recommendation of ICAO, Tokyo VAAC started its operations on volcanic ash advisories in March 1997 at Tokyo Aviation Weather Service Center. Since then, JMA has been improving Tokyo VAAC operations including the expansion of the area of responsibility from 100E to 90E in April 2001.

2. A new regime for volcano services in JMA

2.1 JMA had been monitoring activities of an active volcano at the nearest weather station since the beginning of modern volcanic observations in the middle of 1960s. In March 2002, JMA started a new regime for volcano services including the establishment of four Volcano Observations and Information Centers, which operate 24 hours a day, 7 days a week. Each of the Centers has the responsibility to observe volcanic activities of 15-30 volcanoes out of about 80 active volcanoes in Japan with seismometers, microphones, cameras, GPSs and to issue volcano information as necessary. It immediately provides Tokyo VAAC with information of a volcanic eruption with a telegram through an internal communication network of JMA.

3. A new products of Tokyo VAAC – Low-level VAA for volcanic activities in Japan

3.1 Tokyo VAAC issues Volcanic Ash Advisory when a volcanic plume rises over 5,000m (15,000ft) above sea level for international flights at higher levels. However, as eruptions of Usuzan or Miyakejima affected lower level domestic flights, JMA decided to provide low level volcanic ash advisories if a plume rises over 1,500m (5,000ft) ASL from April to August 2000 for Usuzan and from July 2000 for Miyakejima, respectively.

3.2 Based on these experiences, Tokyo VAAC commenced low-level volcanic ash advisories for users of domestic organizations concerned in Japan from 27 March 2002 regardless of plume height if an eruption occurs at a volcano in Japan. The new information contains time and a plume height of an eruption, and wind speed and direction above the summit of the volcano in a plain

text message. Graphical information is also included if the plume in a satellite image is confirmed. (see attached figures) The information will be automatically issued one time receiving a telegram notifying an eruption of a volcano in Japan from a Volcano Observations and Information Center through an internal communication network of JMA.

3.3 Tokyo VAAC has a plan to provide forecast information on low-level volcanic ash clouds from autumn in 2002. We are evaluating its accuracy at present.

4. **International assistance of the Government of Japan for volcano watch -**
Improvement of observation network in the Philippines

4.1 In order to improve capability of earthquake and volcano observations of the Philippine Institute of Volcanology and Seismology (PHIVOLCS), which is the responsible organization in the Government of the Philippines, the Government of Japan decided a new grant aid project. The project includes 29 new unmanned seismic stations through the nation adding to the existing 34 stations, and small array network systems for six active volcanoes out of twenty-two, namely Pinatubo, Kanalaon, Taal, Mayon, Hibok-Hibok and Bulusan. The project will be completed by the end of March 2004.

4.2 The improvement of earthquakes and volcanic activities observation network will enable the PHIVOLCS to make earlier notification of unrest of volcanic activities and/or volcanic eruptions to Tokyo and Darwin VAACs.

5. **Action by the meeting**

5.1 The meeting is invited to note the information in this document.

Figure 1 Sample message of Low-level VAA in a plain text

VAGJ Tokyo VAAC
Volcanic Ash Graphic
Observed: 1832UTC 10 JUL 2002
Issued: 0143Z/TC 11 JUL 2002
Source: GMS-5

SUWANOSEIMA
29.6N 129.7E
799m(FL26)

TOP: FL100

Shaded Area : Ash Cloud
TOP : Top of Ash Cloud
MOV : Moving dir. and Vel.
→ : Moving direction
☐ : Volcanic Eruption

INDICATED AIRWAYS ARE FOR REFERENCE ONLY.

Figure 2 Sample image of Low-level VAA in a graphical format

Graphical information will be issued if a volcanic plume is confirmed in a satellite image.