Volcanic Ash Advisories

Information on volcanic ash is initially issued by Volcanic Ash Advisory Centres (VAACs) in the form of Volcanic Ash Advisory (VAA) messages. Volcanic ash SIGMET messages are prepared by the relevant Meteorological Watch Offices (MWO) from the information contained in the VAA. All Australian Volcanic Ash SIGMETs are issued by the Bureau’s MWO in Melbourne.

The Bureau of Meteorology operates VAAC Darwin out of Melbourne. The VAAC Darwin is staffed by meteorologists who are specially trained in the detection and forecast movement of volcanic ash. The VAAC Darwin is responsible for the area that encompasses the active volcanic regions of Indonesia, Papua New Guinea and the southern Philippines, and extends southwards to the pole. This area encompasses the active volcanic regions of Indonesia, Papua New Guinea and the southern Philippines. The other VAACs are Anchorage (US), Buenos Aires (Argentina), London (UK), Montreal (Canada) Tokyo (Japan), Toulouse (France), Washington (US) and Wellington (NZ). The various areas of responsibility are shown in the following diagram:

Message Structure

**WMO Header**
The World Meteorological Organization header is included to facilitate the international exchange of messages.

**VA Advisory**
The message type is identified as VA (volcanic ash) ADVISORY.

**Status Indicator** (optional)
This is a conditional element and will not appear in operational advisories. Used only when the message issued indicates that a test or an exercise is taking place. When used the element will contain ‘TEST’ or the abbreviation ‘EXER’.
Date/Time (of issue) Group (DTG)
Year, month, day and time of issue followed by the letter Z (universal time coordinated, UTC).

DTG: 20191109/0020Z

VAAC
Name of issuing office (the Volcanic Ash Advisory Centre).

VAAC: DARWIN

Volcano Name and Number
The volcano name is followed by the IAVCEI (International Association of Vulcanology and Chemistry of the Earth’s Interior) reference number for the erupting volcano.

VOLCANO: MERAPI 263250

Volcano Position
Volcano position is given by latitude and longitude in degrees and minutes.

PSN: S0733 E11027

Area
Gives the State, or region if the VA is not reported over a State, within which the ash is located.

AREA: INDONESIA

Summit Elevation
Gives the volcano’s summit height above sea level, in metres and/or feet.

SUMMIT ELEV: 2968M

Advisory Number
Each volcano has its own numbering sequence, giving the number of advisories issued for that volcano in the current calendar year. Given in the format YYYY/N.

ADVISORY NR: 2019/9

Information Source
Describes the means (e.g. pilot reports, satellite imagery, vulcanological authority) by which the VAAC was notified of the volcanic ash.

INFO SOURCE: HIMAWARI-8, CVGHM

Aviation Color Code
The aviation colour code is an alert level developed by the IAVW (International Airways Volcano Watch) and recommended for use by vulcanological agencies to report volcanic activity information for inclusion in VAA (and NOTAMS). See left column for the four levels of alert.

AVIATION COLOUR CODE: ORANGE

Eruption Details
Gives a summary of the details of the eruption as provided by the information source.

ERUPTION DETAILS: VA TO FL150 AT 08/2321Z

Observation Date/Time Group
Gives the day of the month and the time (UTC) of the observation in the format DD/HHMMZ.

OBS VA DTG: 09/0020Z

Observed Ash Cloud
Gives horizontal and vertical extent of the observed or estimated ash cloud, if known, plus an indication of the movement of the cloud.

OBS VA CLD: SFC/FL150 S0734 E11031 - S0750 E11023 - S0734 E11008 - S0728 E11028 MOV SW 10KT
Forecast
Gives the horizontal and vertical extent of the ash cloud at +6, +12, and +18 hours from the time of the observed cloud.

| Forecast VA CLD +6 HR: 09/0620Z SFC/FL150 S0743 E11031 - S0820 E11002 - S0755 E10929 - S0730 E11015 |
|---------|-----------------|-----------------|-----------------|
| Forecast VA CLD +12 HR: 09/1220Z SFC/FL150 S0802 E11027 - S0841 E10954 - S0754 E10912 - S0738 E10953 |
| Forecast VA CLD +18 HR: 09/1820Z NO VA EXP |

Remarks
Includes any further pertinent information, e.g. identifying what has changed if the message is a correction.

RMK: CVGHM REPORT DISCRETE ERUPTION TO FL150 AT 08/2321. VA OBS TO FL150 ON SAT IMAGERY. VA EXPECTED TO DISSIPATE BY 08/1820Z. VA HEIGHT AND MOVEMENT BASED ON CVGHM GND REPORT, SATELLITE IMAGERY AND MODEL GUIDANCE.

Next Advisory
Gives the approximate date/time of the next advisory issue. The normal frequency of issue is every six hours, but will be more often if significant new information becomes available. However, under certain circumstances such as when precautionary advisories are being issued, or when regular information is being received indicating an eruption is ongoing and ash is not evident on satellite imagery, advices may be issued every twenty four hours.

Will also indicate if the ash cloud is expected to move into an adjacent VAACs area of responsibility.

NXT ADVISORY: NO LATER THAN 20191109/0120Z

Volcanic Ash Advisory Example

VA ADVISORY
DTG: 20191109/0020Z
VAAC: DARWIN
VOLCANO: MERAPI 263250
PSN: S0733 E11027
AREA: INDONESIA
SUMMIT ELEV: 2968M
ADVISORY NR: 2019/9
INFO SOURCE: HIMAWARI-8, CVGHM
AVIATION COLOUR CODE: ORANGE
ERUPTION DETAILS: VATO FL150 AT 08/2321Z
OBS VA DTG: 09/0020Z
OBS VA CLD: SFC/FL150 S0734 E11031 - S0750 E11023 - S0734 E11008 - S0728 E11028 MOV SW 10KT
FCST VA CLD +6 HR: 09/0620Z SFC/FL150 S0743 E11031 - S0820 E11002 - S0755 E10929 - S0730 E11015
FCST VA CLD +12 HR: 09/1220Z SFC/FL150 S0802 E11027 - S0841 E10954 - S0754 E10912 - S0738 E10953
FCST VA CLD +18 HR: 09/1820Z NO VA EXP
RMK: CVGHM REPORT DISCRETE ERUPTION TO FL150 AT 08/2321. VA OBS TO FL150 ON SAT IMAGERY. VA EXPECTED TO DISSIPATE BY 08/1820Z. VA HEIGHT AND MOVEMENT BASED ON CVGHM GND REPORT, SATELLITE IMAGERY AND MODEL GUIDANCE.
NXT ADVISORY: NO LATER THAN 20191109/0120Z
Volcanic Ash Advisory Graphic (VAG)

Advisory messages for volcanic ash are also issued in graphical format whenever a text product is issued. The VAG uses all the information from the VAA, and displays the OBS VA CLD and FCST parts of the Volcanic Ash Advisory as polygons in four panels. Different line styles are used to distinguish between the different layers of ash.