

Atelier cendres volcaniques

Yaoundé – Cameroun

Juin 2025

Le rôle du VAAC en situation d'éruption volcanique

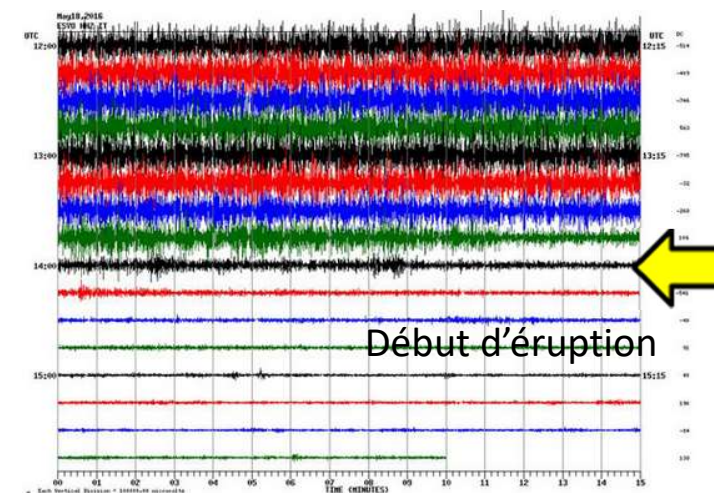
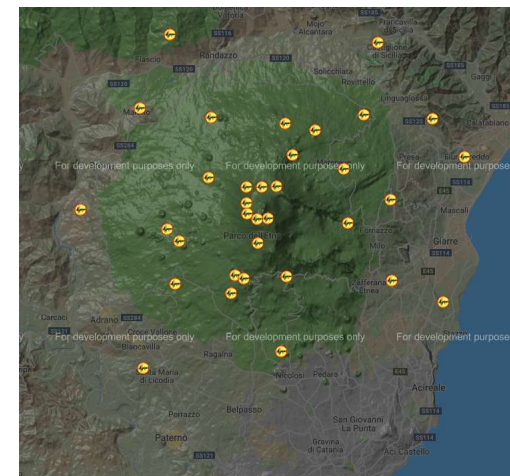
S.Puginier – VAAC Toulouse

Plan

- Volcano watch
- Action to be taken in case of eruption
- La veille de l'activité volcanique
- En cas d'éruption
- Collaborative decision analysis and forecasting between VAACs
- Coordination and transferts of responsibility between VAACs during volcanic ash events
- Backup between VAAC London and VAAC Toulouse

Volcano watch

- le rôle des SVO
- Les webcams
- Les images satellites
- Les volcans monitorés

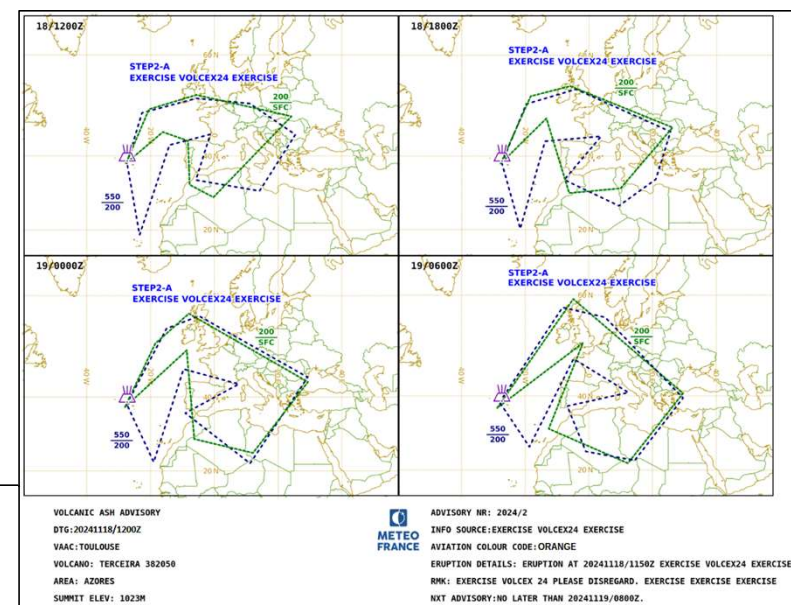


Action to be taken in case of eruption

As soon as VAAC detect an eruption or receipt ash information, it :

- Provide a first VAA of observation , without forecast
- Initiate the volcanic ash dispersion model
- review satellite images/data , any observations (VONA, pilot report...)
- provide VAA with observation and forecast of ash cloud
- Real time, location and forecast of ash cloud T+06,T+12, T+18
- Updated at least every 6 hours

- VAA format :
 - alphanumeric
 - IWXXM
 - Graphical (png)
- Broadcast to
 - MWOs
 - ACCs/FIC
 - WAFC London and Washington



ETNA - 2025-02-17 21:00 utc

VA ADVISORY

DTG: 20250217/2100Z

VAAC: TOULOUSE

VOLCANO: ETNA 211060

PSN: N3744 E01500

AREA: ITALY

SUMMIT ELEV: 3330M

ADVISORY NR: 2025/20

INFO SOURCE: SAT IMAGERY, INGV, WEBCAMS

AVIATION COLOUR CODE: RED

ERUPTION DETAILS: ERUPTION AT 20250216/1111Z EXPLOSIVE ACTIVITY ONGOING

OBS VA DTG: 17/2100Z

OBS VA CLD: VA NOT IDENTIFIABLE FM SATELLITE DATA WIND FL100/F150 280/20KT

FCST VA CLD +6 HR: 18/0300Z SFC/FL130 N3748 E01457 - N3748 E01626 - N3727 E01618 - N3738 E0

FCST VA CLD +12 HR: 18/0900Z SFC/FL130 N3748 E01500 - N3718 E01606 - N3703 E01554 - N3738 E

FCST VA CLD +18 HR: 18/1500Z NO VA EXP

RMK: VA NOT DETECTABLE DUE TO CLOUD MASK.

NXT ADVISORY: NO LATER THAN 20250218/0300Z=

Action to be taken in case of eruption

Concentrations charts (Ash cloud)

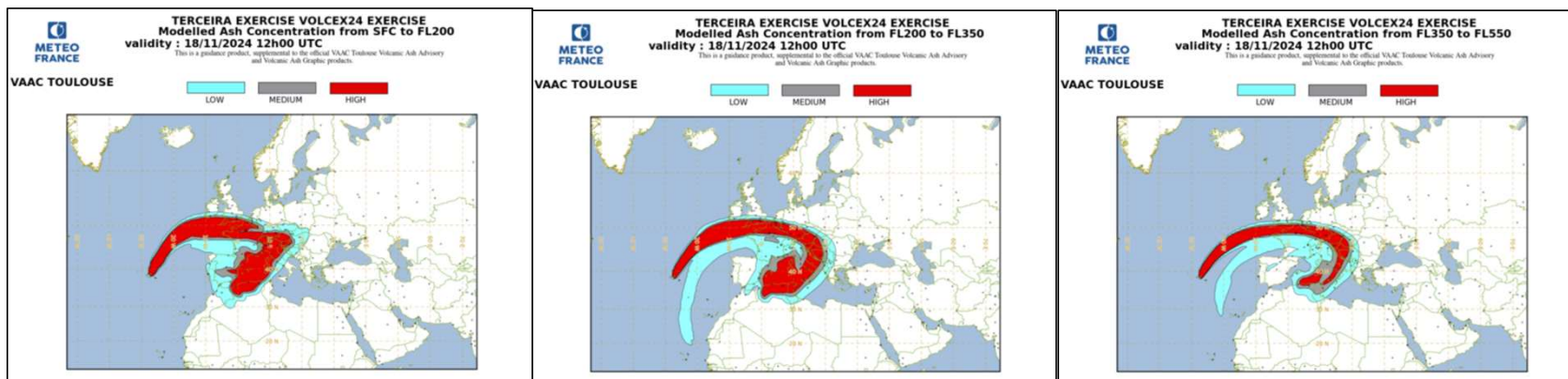
- Special feature of the EUR/NAT navigation : provision of concentration charts (Toulouse and London VAACs only)
- Real time, location and forecast of ash cloud T+06,T+12, T+18
- Possibility of updated charts every 6 hours
- Layer of 150 to 200 FL thickness
- 3 concentration thresholds : 0,2 / 2 / 4 mg/m³

Blue/green	LOW	0.2 mg/m ³
Grey	MEDIUM	2 mg/m ³
Red	HIGH	4 mg/m ³

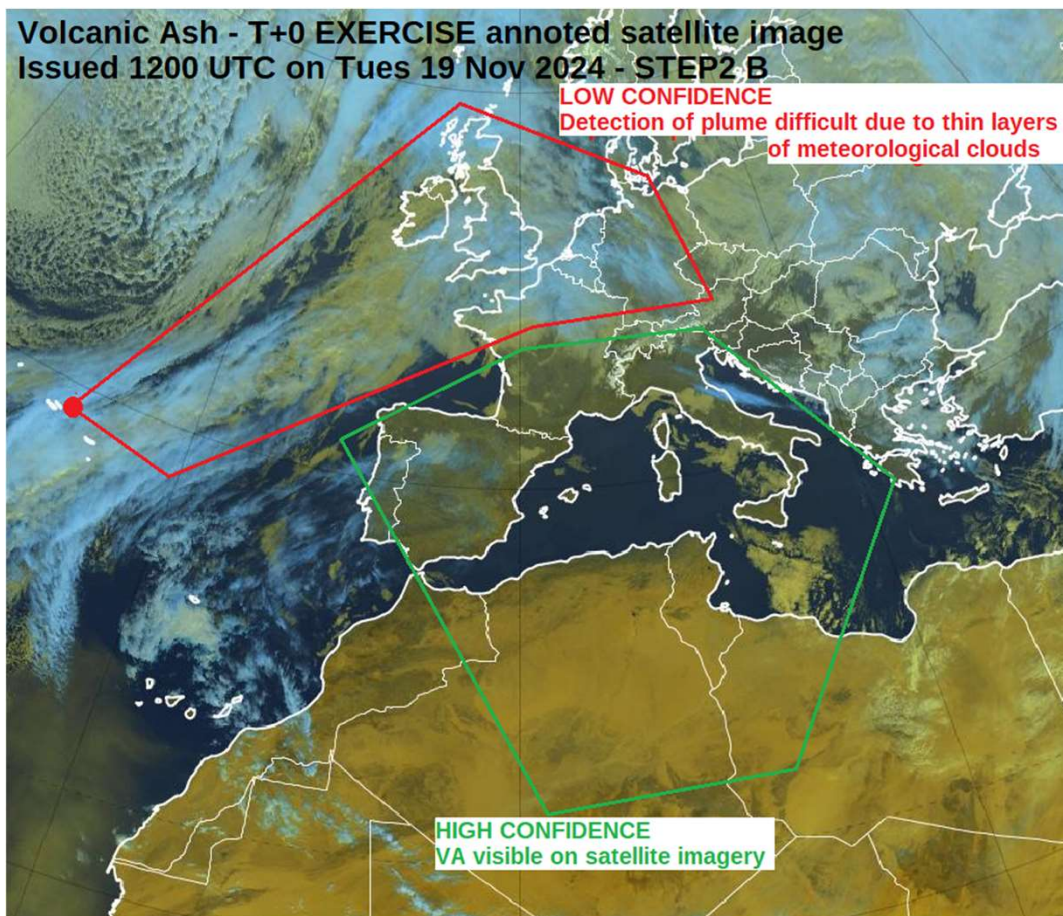
SFC-FL200

FL200-FL350

FL350-FL550



Current VAAC provision : Satellite picture with comments



Not mandatory

Action to be taken in case of eruption

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Recommended for VAACs in a position to do so and recommended for all VAACs from November 2026.
VAACs in a position to do :



If the volcanic ash cloud is considered significant

VAAC prepare and issue quantitative volcanic ash concentration information (QVA)

- in gridded (available on Metgate, french aeronautical API)
- IWXXM format.

VAACs may also provide supplemental QVA graphics

Website : <http://vaac.meteo.fr>



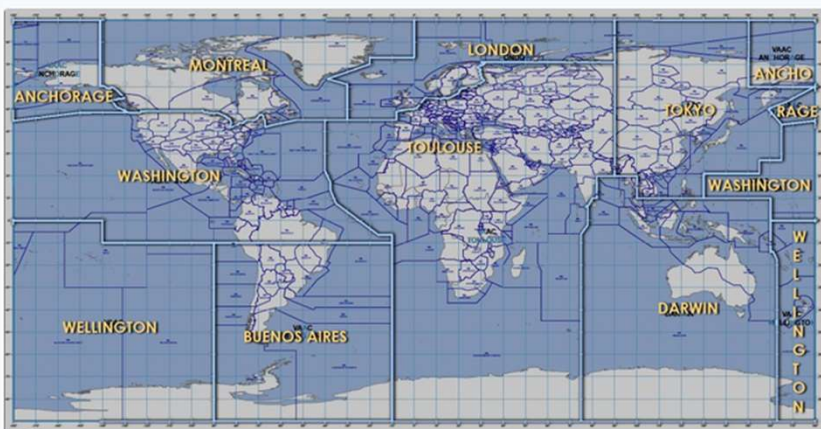
Toulouse Volcanic Ash Advisory Center

● LAST UPDATE: JUNE 12, 2025 AT 08:25 UTC

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The nine VAACs (Volcanic Ash Advisory Centers), have been designated by the International Civil Aviation Organization to provide their expertise to civil aviation in case of significant volcanic eruptions.

They are a basic part of the IAVW. (International Airways Volcano Watch).



The VAAC zones.

[Anchorage](#) [Buenos Aires](#) [Darwin](#) [Montreal](#) [London](#) [Tokyo](#) [Wellington](#) [Washington](#)

Latest OPER VAA

- TERCEIRA.3 - 2025-06-12 07:47 UTC
- ETNA.61 - 2025-06-02 15:22 UTC
- ETNA.60 - 2025-06-02 14:22 UTC
- ETNA.59 - 2025-06-02 13:00 UTC
- ETNA.58 - 2025-06-02 10:00 UTC

Latest EXER VAA

- TERCEIRA.4 - 2025-06-05 13:45 UTC
- TERCEIRA.3 - 2025-06-05 12:00 UTC
- TERCEIRA.2 - 2025-06-05 09:55 UTC
- TERCEIRA.1 - 2025-06-05 08:54 UTC
- VULCANO.5 - 2025-05-22 15:50 UTC

Volcanoes

[Chaine Des Puys](#) [Ertu Ale](#) [Etna](#)
[Nyamuragira](#) [Piton De La Fournaise](#)
[Salton Buttes](#) [Santorini](#) [Stromboli](#)
[Tenerife](#) [Terceira](#) [Unknown](#)
[Vulcano](#)

States



[Dr Congo](#) [Ethiopia](#) [France](#)
[Greece](#) [Italy](#) [Portugal](#) [Spain](#)
[United States](#) [Unknown](#)

Years

[2024](#) [2025](#)

Ongoing eruption

Website : QVA access

Toulouse Volcanic Ash Advisory Center

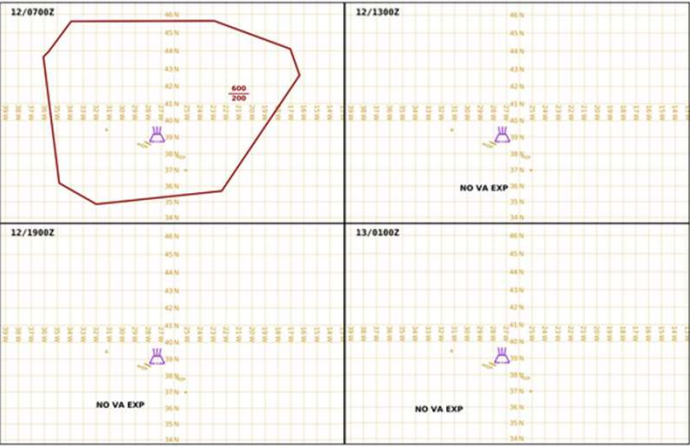
LAST UPDATE: JUNE 12, 2025 AT 08:30 UTC

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TERCEIRA.3 - 2025-06-12 07:47 utc

Quantitative Volcanic Ash: **Determinist** Low Medium High Very High

Advisories



VOLCANIC ASH ADVISORY

DTG: 20250612/0747Z

VAAC: TOULOUSE

VOLCANO: TERCEIRA 382950

AREA: AZORES-TERCEIRA RIFT VOLCANIC PROVINCE

SUMMIT ELEV: 1823M

ADVISORY NR: 2025/3

INFO SOURCE: ESSAI

AVIATION COLOUR CODE: RED

ERUPTION DETAILS: ERUPTION AT 20250612/0600Z ESSAI

RPK: NIL

NXT ADVISORY: NO FURTHER ADVISORIES.

Latest OPER VAA

- TERCEIRA.3 - 2025-06-12 07:47 UTC
- ETNA.61 - 2025-06-02 15:22 UTC
- ETNA.59 - 2025-06-02 14:22 UTC
- ETNA.59 - 2025-06-02 13:58 UTC
- ETNA.58 - 2025-06-02 10:00 UTC

Latest EXER VAA

- TERCEIRA.4 - 2025-06-05 13:45 UTC
- TERCEIRA.3 - 2025-06-05 12:00 UTC
- TERCEIRA.2 - 2025-06-05 09:55 UTC
- TERCEIRA.1 - 2025-06-05 08:54 UTC
- VULCANO.5 - 2025-05-22 15:50 UTC

Volcanoes

- Chaine Des Puy
- Eta Ale
- Etna
- Nyamuragira
- Piton De La Fournaise
- Saltan Buttes
- Santorini
- Stromboli
- Tenerife
- Terceira
- Unknown
- Vulcano

States

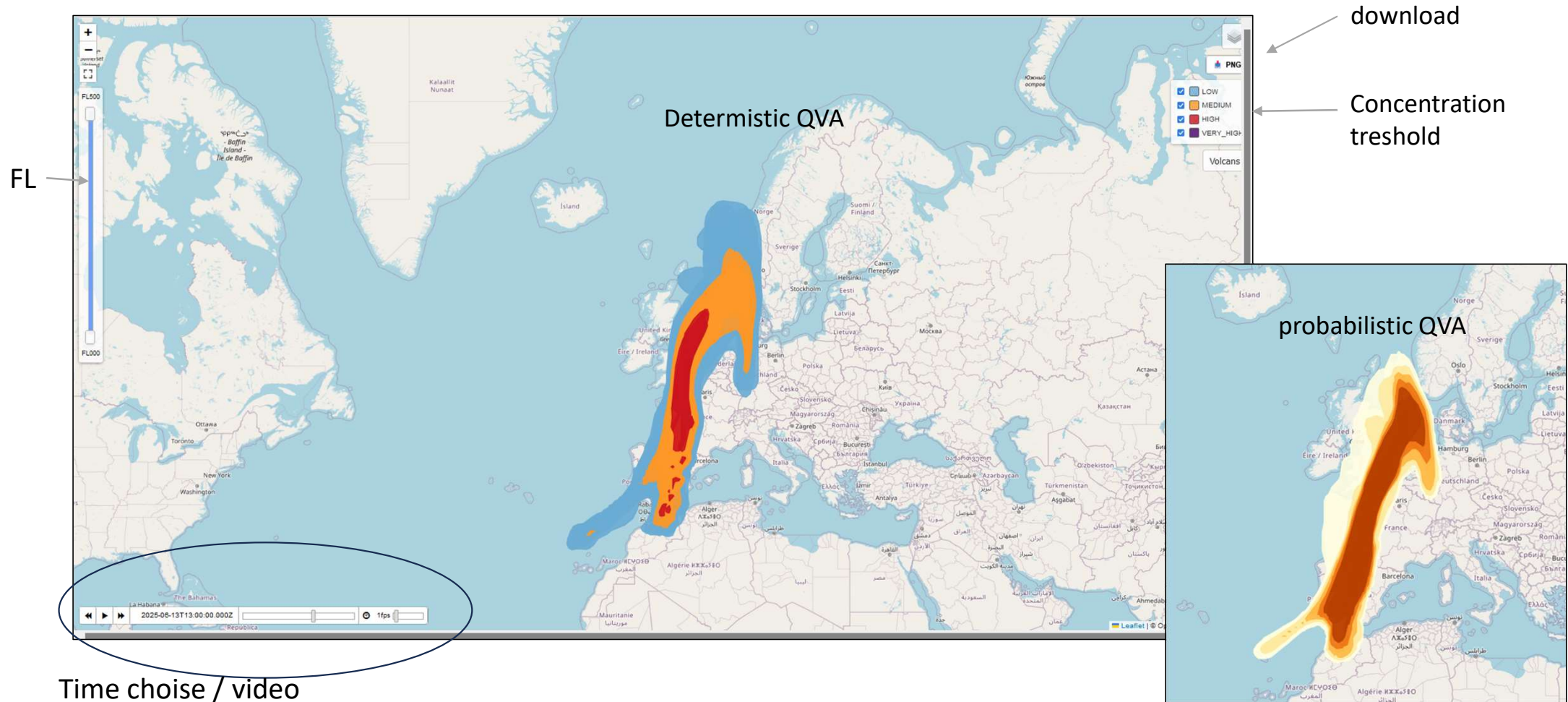
- Dr Congo
- Ethiopia
- France
- Greece
- Italy
- Portugal
- Spain
- United States
- Unknown

Years

- 2024
- 2025

Deterministic and probabilistic QVA

Website : QVA access



Website : access to Concentration Charts

VA ADVISORY
 DTG: 20250612/0747Z
 VAAC: TOULOUSE
 VOLCANO: TERCEIRA 382050
 PSN: N3843 W02719
 AREA: AZORES-TERCEIRA RIFT VOLCANIC PROVINCE
 SUMMIT ELEV: 1023M
 ADVISORY NR: 2025/3
 INFO SOURCE: ESSAI
 AVIATION COLOUR CODE: RED
 ERUPTION DETAILS: ERUPTION AT 20250612/0600Z ESSAI
 OBS VA DTG: 12/0700Z
 OBS VA CLD: FL200/600 N4339 W03606 - N4357 W03538 - N4539 W03357 - N4539 W02254 - N4406 W
 FCST VA CLD +6 HR: 12/1300Z NO VA EXP
 FCST VA CLD +12 HR: 12/1900Z NO VA EXP
 FCST VA CLD +18 HR: 13/0100Z NO VA EXP
 RMK: NIL
 NXT ADVISORY: NO FURTHER ADVISORIES=

[VAA \(txt\)](#)
[VAG \(png\)](#)
[VAG \(csv\)](#)
[Concentration maps \(png\)](#)
[Concentration maps \(csv\)](#)

[Concentration maps SFC-FL200 \(pdf\)](#)
[Concentration maps FL200-FL350 \(pdf\)](#)

[Concentration maps FL350-FL550 \(pdf\)](#)
[VAAC Remarks](#)
[QVA det \(json\)](#)
[QVA low \(json\)](#)

[QVA medium \(json\)](#)
[QVA high \(json\)](#)
[QVA very high \(json\)](#)

Action to be taken in case of eruption

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VAAC continue to issue updated advisory information to MWOs, ACCs/FICs and operators concerned, along with QVA information for significant volcanic ash clouds, as necessary.

Volcanic ash information should be issued

- at a minimum of 6-hour intervals,
- until such time as it is considered that
 - the volcanic ash cloud is no longer identifiable from observations,
 - no further reports of volcanic ash are received from the area and
 - no further eruptions of the volcano are reported

Collaborative decision analysis and forecasting between VAACs

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- Maintain regular contact with other VAACs.

In the specific case of reception of information regarding an aircraft encounter with volcanic ash, the information should be sent to

- the Smithsonian Institution Global Volcanism Program
- and to ICAO

in order to keep up to date the database for encounters between aircraft ash clouds

The following e-mail address should be used: gvp@si.edu.

- undertake a collaborative decision analysis and forecasting process
when volcanic ash is approaching an adjacent VAAC's area of responsibility;

Coordination and transferts of responsibility between VAACs during volcanish ash events

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in cases where a volcanic ash cloud is expected to approach within 300 NM of the boundary of another VAAC area of responsibility,
the first (primary) VAAC will initiate the operational procedures for the coordination and may request transfer of responsibility between VAACs for volcanic ash events.

The primary VAAC will coordinate with the neighbouring VAAC(s) to produce a coordinated product covering both areas of responsibility (using tools such as chat rooms, virtual web meeting...)

The primary VAAC may produce a single product covering both areas of responsibility or both (all) VAACs may agree to produce seamless products covering their own areas of responsibility.

In such a case, a message in the remarks section of the volcanic ash advisory would advise users of who has the responsibility

Backup between VAAC London and VAAC Toulouse

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- VAAC Toulouse and London are back-up each other.
- Back-up sites should have the full capability of the primary site, that is,
 - the ability to monitor ash dispersal,
 - run atmospheric dispersion models,
 - produce and distribute the volcanic ash advisory,
 - and where capable, quantitative volcanic ash concentration information (QVA);
- Back-up site should maintain up-to-date contact and distribution (AFS and e-mail) lists as per the initial VAAC;
- In the event of the back-up site becoming operational, VAA will contain information in the RMK section (and in metadata for IWXXM back-up VAA, and – if provided – in metadata for QVA) giving the origin of the message 'Issued by VAAC nnnnn on behalf of VAAC nnnnn'; and
- The back-up arrangements should be tested at least annually.

THANK YOU FOR YOUR ATTENTION