

# Volcanic ash experience by South Africa

Douala, Cameroon: 4-8  
September 2017

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# Intro-ICAO strategic approach

- ICAO Council approved the **GASP** and the **GANP** as high-level policy documents intended to **guide complementary and sector-wide air transport progress** over the **15 years or more**.
- These are **complementary plans** are intended to assist States and other aviation stakeholders **realise the safe, sustainable growth, increased efficiency and responsible environmental stewardship** that **societies and economies worldwide demand**.
- Following intensive **collaboration** with **States and other key aviation stakeholders**, as part of the new edition of the GANP, ICAO has now embarked on an **Aviation System Block Upgrade (ASBU) methodology**.
- The ASBUs will enable the aviation community to realise **global harmonisation, increased capacity and improved environmental efficiency** that modern air traffic growth now demands **in every part of the world**.

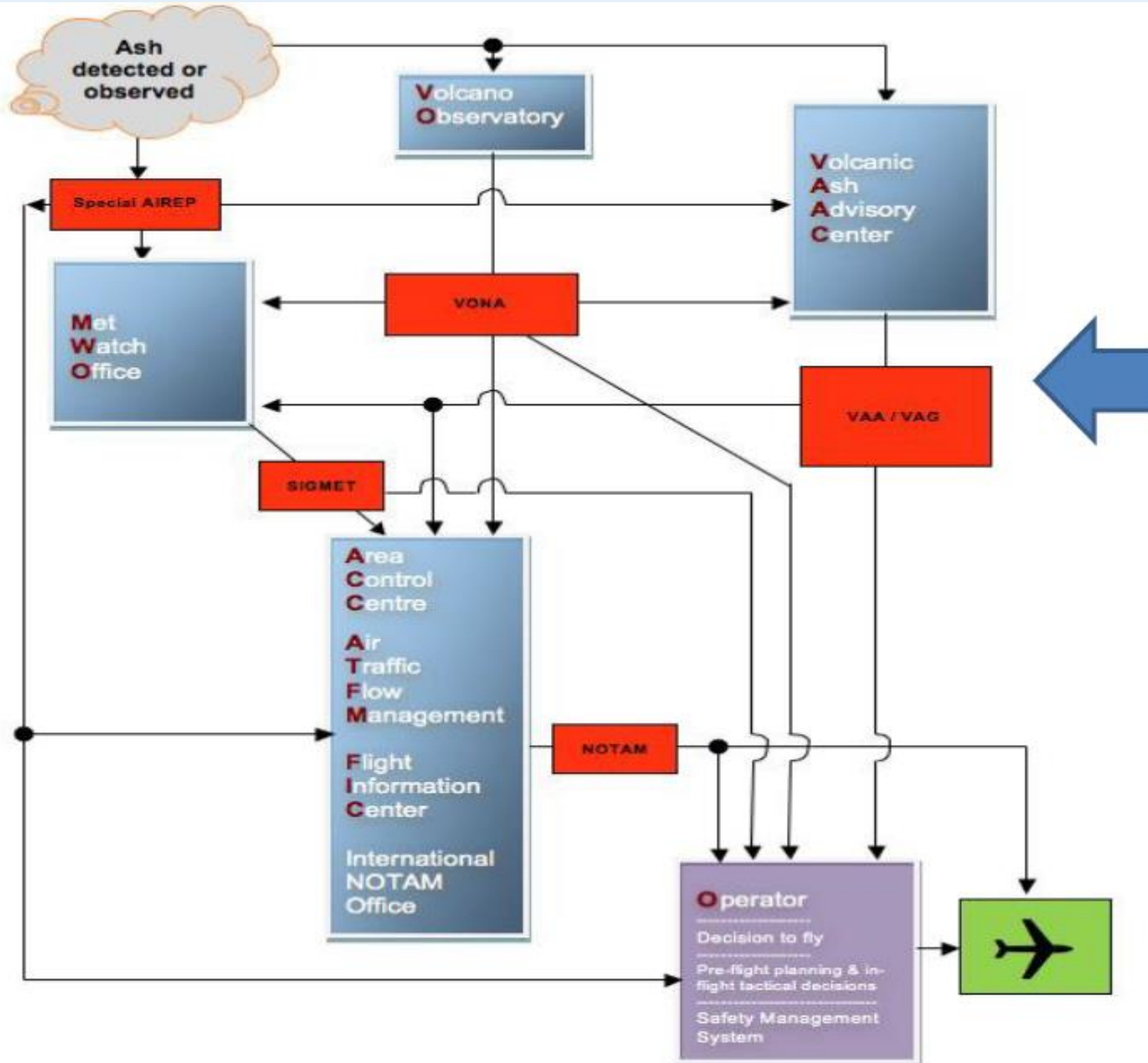
=Requires coordination by all ATM community

# ASBU MET MODULE

- Module B1-AMET -Enhanced Operational Decisions through Integrated Meteorological information

Full ATM-MET integration is needed to ensure that:

- MET information is included in decision making process and the impact of the MET conditions to determine change in capacity
- Information enables the identification of solutions when forecast or observed meteorological conditions impact aerodromes or airspace.



High-level formation flow diagram between the users Collaborative Decision Analysis and Forecasting (CDAF) source: METDIV/14 Report

# South African Experience

- On 04<sup>th</sup> June 2011, Puyehue-Cordon Caulle volcano in the Andes erupted, having been inactive for 51 years



# Effects of the volcanic ash over South Africa

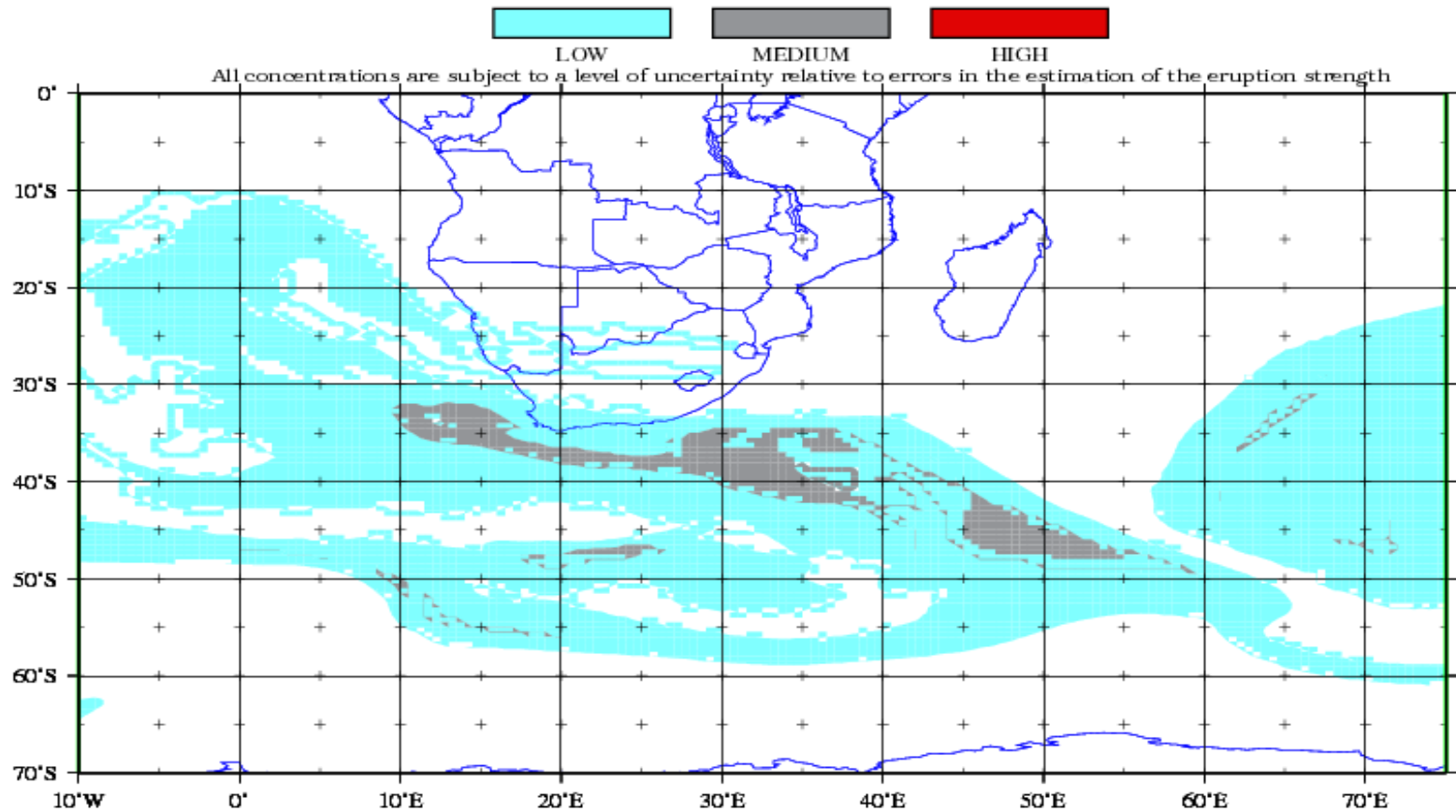
- The ash cloud remained suspended above our FIR for 9 days
- The ash cloud floated well above the extreme southern parts of South Africa, including above Cape Town
- Most of the ash floated to the south of the continent
- Reports from ATNS - there were no diversions to and from Cape Town

# Progress of the volcanic cloud



CORDON\_CAULLE Accident  
Modelled Ash Concentration from SFC to FL200  
12/06/2011 18h00 UTC

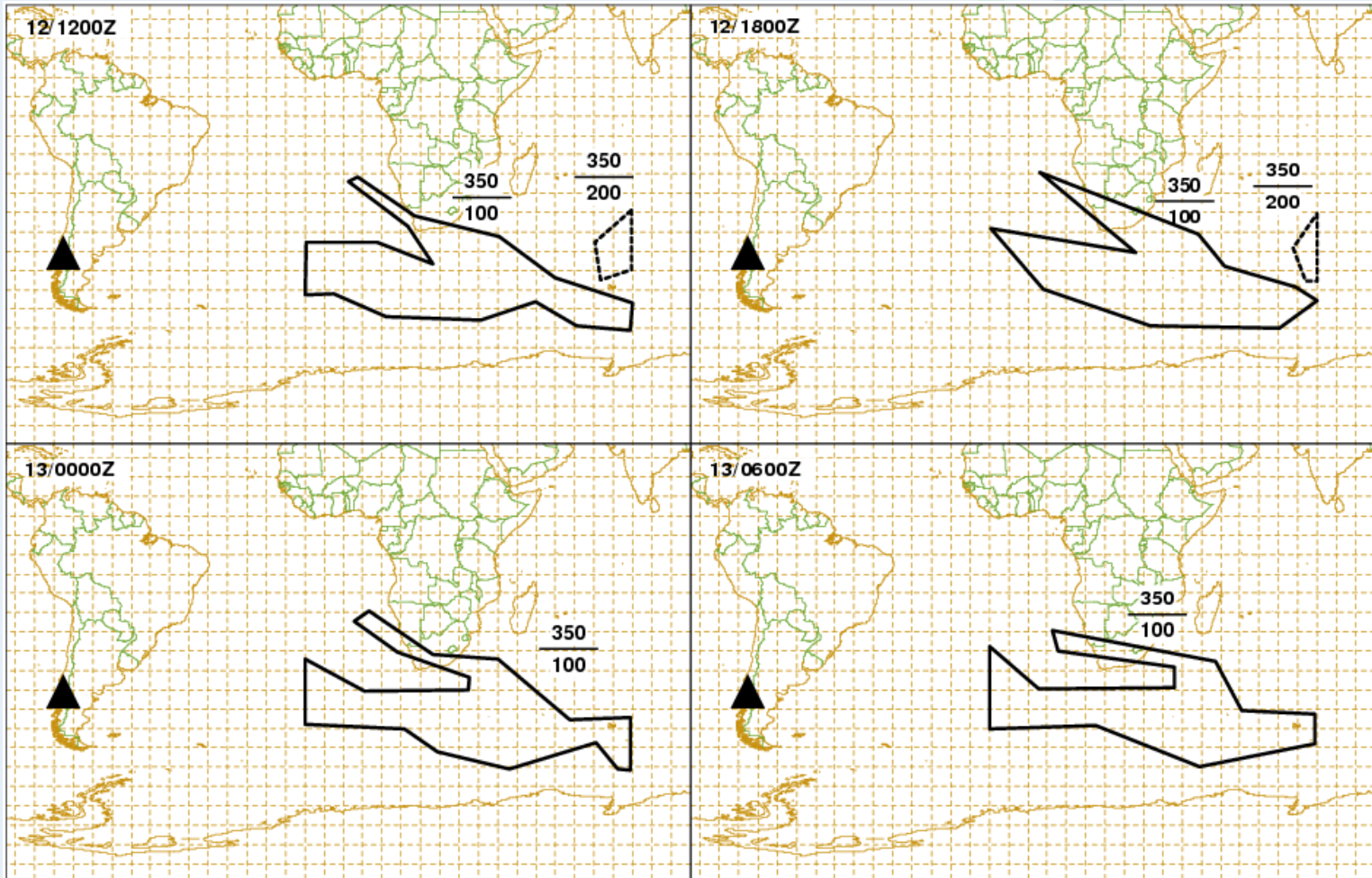
This is a guidance product, supplemental to the official VAAC Toulouse Volcanic Ash Advisory and Volcanic Ash Graphic products.  
Issue time: 2011061212



ISO 9001 Certified Organisation



# Advisory from Toulouse



**VOLCANIC ASH ADVISORY**

DTG: 20110612/1200Z

VAAC: TOULOUSE

VOLCANO: CORDON CAULLE 1507-141

AREA: CHILE-C

SUMMIT ELEV: 1798M



ADVISORY NR: 2011/22

INFO SOURCE: BUENOS AIRES VAAC, METEOSAT IMAGERY DUST

AVIATION COLOUR CODE: RED

ERUPTION DETAILS: CONTINUOUS EMISSION

RMK: VAG LIMITED TO VAAC TOULOUSE AREA W010-E075

NXT ADVISORY: 20110612/1800Z

# SAWS, AMC and ATNS Coordination

**SAWS** has got a procedure which guides the forecaster on duty on what process to follow when advisory is received from advisory centre

In this case, there was an advisory and it the ash cloud was also observed. SAWS Forecaster followed the procedure and issued SIGMET

**ATNS** developed a draft contingency plan

**AMC** is a platform that is used to ensure collaboration with all ATM stakeholders in the event of hazardous weather

(AMC: ATNS-CAMU, SAWS, AIRLINES, OPERATORS, HANDLERS Etc)

# The MWO issued the VA SIGMET

On the 12 June 2011, the volcanic ash entered Cape Town Area Control Centre, picked up by MSG dust channel

## 1st VA bulletin

- FAJS SIGMET A1 VALID 120300/120600 FAJS-  
FAJA JOHANNESBURG FIR VA CLD CORDON CAULLE OBS WI  
S3012 E01512 - S3036 E01630 - S3036 E01518 - S3012 E01512 FL100/350  
MOV SE=

## Last VA bulletin

- FAJS SIGMET A1 VALID 200000/200600 FAJS-  
FAJA JOHANNESBURG FIR VA CLOUD CORDON CAULLE FCST WI  
S3048 E01506 - S3048 E01818 - S3054 E02200 - S3112 E02348  
- S3112 E02812 - S3136 E02936 - S3300 E03200 - S3054 E03330  
- S2930 E02918 - S2912 E02200 - S2830 E01706 - S2736 E01506  
- S3048 E01506 SFC/FL200=
- 26 were issued –

**MET services are required to provide volcanic ash information to airline operators and ANSPs who then pass the information to aircraft and pilots**

# Volcanic Ash contingency by ATNS

## Adjacent ACC actions during pre-eruption phase

- Re-clear flights to which services are being provided out of the danger zone
- Suggest re-routing if one or more routes are affected
- Initiate plotting of the affected area

## Originating ACC actions during eruption phase

- Ensure NOTAM is originated
- Maintain close liaison with SAWS
- ATFM measures should be devised
- Encourage PIREPS and disseminate to appropriate stakeholders

# Importance of collaboration

To ensure the success of ICAO strategic plan at national level it is critical that:

- there is a need to develop a co-ordinated working relationship with various organizations(MET, ATSU, Airport Management, CAA, DoT, etc.), service providers and users of services
- Encourage collaboration on agreed targets and monitor performance
- Enhancement of Working Relationships amongst the ATM community that will encourage safety and efficiency

# THANK YOU

Doc Ref no: VA- Coordination-Sep 2017