

WMO OMM

WEATHER CLIMATE WATER
TEMPS CLIMAT EAU



World Meteorological Organization
Organisation météorologique mondiale
Organización Meteorológica Mundial
Всемирная метеорологическая организация
المنظمة العالمية للأرصاد الجوية
世界气象组织

Secrétariat

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Ref.: 23444/2018-1.18 WDS/AEM

Our ref.: 23444/2018/WDS/AEM/VAAC-BP-VASAG

3 September 2018

Annexes: 3 (available in English only)

Subject: Conjoint event of the WMO Volcanic Ash Advisory Centre (VAAC) Best Practice Workshop and the WMO/IUGG Volcanic Ash Scientific Advisory Group (VASAG) meeting, 5-9 November 2018, Wellington, New Zealand

Action required: WMO Secretariat to be notified by **17 September 2018** whether your expert will attend the meeting

Dear Sir/Madam,

I have pleasure in informing you that a conjoint event of the sixth WMO VAAC "Best Practice" workshop (VAAC BP/6) and the eighth WMO/IUGG Volcanic Ash Scientific Advisory Group (VASAG) meeting (VASAG/8) will be held from 5 to 9 November 2018 inclusive in Wellington, New Zealand. The Government of New Zealand has kindly offered to host this event using a combination of facilities available at the Civil Aviation Authority of New Zealand and the Meteorological Service of New Zealand Ltd. (MetService). Accordingly, this invitation is being sent to WMO Members hosting a Volcanic Ash Advisory Centre (VAAC) and to members of VASAG.

The aim of the conjoint meeting is to exchange information between managers/representatives of the nine VAACs and the scientific expert community on the current operational practices in monitoring/detecting volcanic eruptions, observing and forecasting volcanic ash in the atmosphere as well as recent scientific and technological advancement and research-to-operations scenarios, in order to identify collaborative opportunities that will lead to a more harmonized model of quality service delivery to aviation stakeholders in the context of the International Civil Aviation Organization's (ICAO) international airways volcano watch (IAVW) which is facilitated by the National Meteorological and Hydrological Services (NMHS) of a number of WMO Members.

Please find attached herewith the Provisional Programme (Annex 1), Information Note for participants (Annex 2) and list of current VAAC managers and VASAG members (Annex 3).

It would be appreciated if notification of attendance of your expert could be sent to the WMO Secretariat, Mr Greg Brock (GBrock@wmo.int) and Ms Adriana Oskarsson (AOSkarsson@wmo.int), **not later than 17 September 2018**.

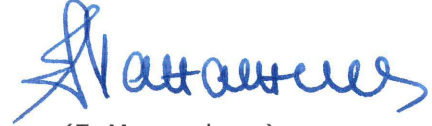
To: Permanent Representatives of members of the WMO/IUGG Volcanic Ash Scientific Advisory Group and of WMO Members hosting a Volcanic Ash Advisory Centre: Argentina, Australia, Canada, France, Germany, Japan, Iceland, Italy, New Zealand, Spain, United Kingdom and United States of America (limited distribution)

cc: Members of the WMO/IUGG VASAG (by e-mail)
Managers of Volcanic Ash Advisory Centres (by e-mail)

It is hoped that the expenses for the participation of your expert will be borne by your Government or Service. However, if this is not possible, WMO could consider, upon request, providing limited financial support (lump sum) to some VASAG members.

I would like to express my sincere appreciation for your continued support to these important activities and I look forward to the success of this event.

Yours faithfully,



(E. Manaenkova)
for the Secretary-General



SIXTH WMO VAAC "BEST PRACTICE" WORKSHOP AND EIGHTH WMO/IUGG VASAG MEETING

WELLINGTON, NEW ZEALAND

5 TO 9 NOVEMBER 2018

PROVISIONAL PROGRAMME

Main topics to be addressed include the following. (Relevant VAAC "Best Practice" Workshop outcomes and VASAG Meeting actions indicated where applicable¹.)

Topic area	VAAC BP outcome	VASAG action	Item lead
Monitoring, detection and observation			
Eruption source parameter database for restless volcanoes	—	6/6	Mastin/Engwell
VONA and aviation colour codes	VW5-O-04	7/3 & 7/4	Schneider, Witham & Barsotti
Discernible VA and strength of evidence checklists	VW5-O-07	7/1	Bear-Crozier, Ito & Pavolonis
Aircraft VA encounters database/severity index and engine/airframe impacts	—	7/5	Schneider
'Ash'/'No ash' reporting	VW5-O-06	—	Jansons
Volcanic hazard monitoring and observing capabilities, including satellite and other remote sensing techniques, in-situ observations and infrasound technologies	VW4-O-16	6/10	To be determined (Barsotti)
Comparisons by VAACs between old and new generation of satellite products	VW5-O-08	—	Bear-Crozier & Ito
Advances in satellite capabilities including multi-/hyper-spectral and multi-sensor approaches	—	—	To be determined (Pavolonis)
Re-suspended VA	VW5-O-09	—	Ito/Imamura
Volcanic sulphur dioxide (SO ₂)	VW5-O-14	7/6	To be determined (Witham/Hort)
Forecasting and service delivery			
VAAC collaboration tools	VW5-O-01	—	Bensimon
VA atmospheric transport dispersion modelling techniques including model inter-comparisons of plume dynamics, probabilistic methods for VA detection, automated data assimilation and inverse modelling techniques	VW4-O-03	—	Witham/Hort
VAAC forecaster education, training and competency	—	—	Lisk/Muscat
Forecast verification techniques and VAAC key performance indicators	VW5-O-05	—	Muscat
Concentration charts / quantitative volcanic ash contamination information and forecasts	VW5-O-13	7/2	Lisk/Muscat & Mastin
IWXXM implementation for VA products	VW5-O-02 & VW5-O-03	—	Simon & Bensimon
Other relevant considerations			
International workshop on volcanic ash (IWVA) concept	—	7/7	Tupper & Mastin

¹ The reports of previous VAAC BP workshops and VASAG meetings are available at:
<https://www.wmo.int/aemp/Final-Reports>

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AND EIGHTH WMO/IUGG VASAG MEETING**

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Publications and outreach	—	6/2 & 6/7	Tupper & Baklanov
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SIXTH WMO VAAC "BEST PRACTICE" WORKSHOP AND EIGHTH WMO/IUGG VASAG MEETING

WELLINGTON, NEW ZEALAND

5 TO 9 NOVEMBER 2018

PROVISIONAL SCHEDULE

November 2018	Monday 5 th	Tuesday 6 th	Wednesday 7 th	Thursday 8 th	Friday 9 th
Morning	Joint meeting (VAAC BP & VASAG combined)	Separate meetings (VAAC BP & VASAG in parallel)	Separate meetings Venues: CAA & MetService	Thematic presentations/ demonstrations / joint discussions (with aviation user representatives)	Thematic presentations/ demonstrations / joint discussions (with aviation user representatives)
Afternoon	Venue: CAA	Venues: CAA & MetService	Joint meeting Venue: CAA	Venue: CAA	Venue: CAA

Notes:

- (1) Monday to Wednesday will be limited only to VAAC Managers (or Representatives) and VASAG Members. Thursday and Friday will be open to other stakeholders such as members or advisors of the ICAO Meteorology Panel (METP) Working Group on Meteorological Operations Groups (WG-MOG) and Working Group on Meteorological Information and Service Development (WG-MISD), and representatives of IATA and IFALPA.
- (2) The thematic presentations/demonstrations/joint discussions on Thursday and Friday will explore several topics in greater detail, such as:
 - (a) VAAC forecaster education, training and competency;
 - (b) Quantitative volcanic ash contamination information and forecasts; and
 - (c) Volcanic sulphur dioxide.
- (3) The meetings will be conducted in English and mainly in the form of presentations and demonstrations.
- (4) The meetings will be facilitated by the chair of the VAAC BP and co-chairs of the VASAG.
- (5) The secretariats of WMO and ICAO will be available throughout.

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Ref.: Z3460/2018-1.1 WDS/AEM

INFORMATION NOTE FOR PARTICIPANTS

1. VENUE OF THE MEETING

The conjoint sixth WMO Volcanic Ash Advisory Centre (VAAC) "Best Practice" workshop (VAAC BP/6) and eighth WMO/IUGG Volcanic Ash Scientific Advisory Group meeting (VASAG/8) will be held in Wellington, New Zealand.

To conduct business, the conjoint meeting will use a combination of facilities available at the Civil Aviation Authority of New Zealand (CAA) and the Meteorological Service of New Zealand Ltd (MetService). The addresses of these venues are as follows:

Civil Aviation Authority of New Zealand	MetService
Asteron House	30 Salamanca Road
55 Featherston Street	Kelburn
Wellington 6011	Wellington 6012
New Zealand	New Zealand

The conjoint meeting will open at the offices of the **Civil Aviation Authority** at 09:00 on Monday 5 November 2018 and will close at approximately 17:00 at the same location on 9 November 2018.

2. REGISTRATION OF PARTICIPANTS

To register for the conjoint meeting, please inform:

Local organizers:	Mr James Lunny (James.Lunny@metservice.com) Mr Peter Lechner (Peter.Lechner@caa.govt.nz)
WMO Secretariat:	Mr Greg Brock (GBrock@wmo.int) Ms Adriana Oskarsson (AOSkarsson@wmo.int)

3. WORKING LANGUAGE

The working language will be English **only**.

4. HOTEL INFORMATION

A wide selection of hotels is available in Wellington. Hotels within easy access of CAA and MetService include:

James Cook Hotel Grand Chancellor, 147 The Terrace, Wellington. Telephone: +64 4 499 9500. Website: <https://www.grandchancellorhotels.com/james-cook-hotel-grand-chancellor>

Rydges Hotel Wellington, 75 Featherston St, Pipitea, Wellington 6011. Telephone: +64 4 499 8686. Website: <https://www.rydges.com/accommodation/new-zealand/wellington>

Ibis Wellington, 153 Featherston Street, 6011, Wellington. Telephone: +64 4 496 1880. Website: <https://www.accorhotels.com/gb/hotel-3049-ibis-wellington/index.shtml>

A cable car operates between Wellington city centre (where most hotels are located) and the Kelburn suburb allowing easy access to/from MetService. Information is available at:

<https://www.wellingtoncablecar.co.nz>

5. LOCAL TRANSPORTATION

Information on access between Wellington International Airport and Wellington city centre is available at:

<https://www.wellingtonairport.co.nz/transport/>

6. ENTRY VISA REQUIREMENTS

Some participants may require an entry visa. Please confirm with your nearest New Zealand embassy. It is strongly recommended that visa applications are processed well in advance. Information is available at:

<https://www.immigration.govt.nz/new-zealand-visas>

7. CURRENCY EXCHANGE

New Zealand currency is the New Zealand Dollar. Currencies can be exchanged at banks and in foreign exchange offices. Exchange rate is available at:

<https://www.xe.com/currency/nzd-new-zealand-dollar>

Cash dispensing machines (ATMs) are available at the airport and in the Wellington city centre.

8. LOCAL CLIMATE IN NOVEMBER

The mean weather conditions in Wellington in November are as follows:

Mean daily maximum	:	17.5 °C
Mean daily minimum	:	11.4 °C
Mean total precipitation	:	74.8 mm
Number of days with gusts ≥ 33 kt	:	16.8

9. USEFUL INFORMATION

Local time in New Zealand in November is UTC+13 hours.

Electricity in New Zealand is 230 V / 50 Hz.



10. LOCAL ORGANIZER

Mr James Lunny (MetService) and Mr Peter Lechner (CAA) are the local organizers. Their contact details are as follows:

James Lunny

Tel.: +64 4 470 0782 (Direct) or
+64 4 470 0700 (Main switchboard)

E-mail: James.Lunny@metservice.com

Peter Lechner

Tel.: +64 4 560 9593 (Direct)

E-mail: Peter.Lechner@caa.govt.nz



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WELLINGTON, NEW ZEALAND

5 TO 9 NOVEMBER 2018

LIST OF VAAC MANAGERS AND VASAG MEMBERS

(as of 04/09/2018 11:33)

1. VAACs MANAGERS (or Representatives)

AFFILIATION	NAME	E-MAIL
ANCHORAGE	OSIENSKY, Jeff	jeffrey.osiensky@noaa.gov
BUENOS AIRES	CALLE, Ximena	xcalle@smn.gov.ar
DARWIN	BEAR-CROZIER, Adele	adele.bear-crozier@bom.gov.au
LONDON	MUSCAT, Anton	anton.muscat@metoffice.gov.uk
MONTREAL	BENSIMON, Dov	dov.bensimon@ec.gc.ca
TOKYO	IMAMURA, Yuichi	y_imamura@met.kishou.go.jp
TOULOUSE	HEREIL, Philippe	philippe.hereil@meteo.fr
WASHINGTON	KIBLER, Jamie M.	jamie.kibler@noaa.gov
WELLINGTON	ROUX, Marcel	Marcel.Roux@metSERVICE.com

2. VASAG MEMBERS

AFFILIATION	NAME	E-MAIL
AUSTRALIA	TUPPER, Andrew	andrew.tupper@bom.gov.au
GERMANY	SCHLAGER, Hans	Hans.Schlager@dlr.de
ICELAND	BARSOTTI, Sara	sara@vedur.is
ITALY	NERI, Augusto	augusto.neri@ingv.it
SPAIN	FOLCH, Arnau	arnau.folch@bsc.es
UNITED KINGDOM	LISK, Ian	ian.lisk@metoffice.gov.uk
UNITED KINGDOM	WITHAM, Claire	claire.witham@metoffice.gov.uk
UNITED STATES	MASRIN, Larry	LGMastin@usgs.gov
UNITED STATES	SCHNEIDER, David	djschneider@usgs.gov
UNITED STATES	PAVOLONIS, Michael	Mike.Pavolonis@noaa.gov