

The International Volcanic Health Hazard Network



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An IAVCEI Commission

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An IAVCEI Commission

Aka ... IVHNN, IVNHH, INVHH ...
(GVM Briefing Document ;-)



- Umbrella organization for all volcanic health-related work
- Founded in 2003
- Main aims:
 - Facilitate volcanic health research and education
 - Portal for public information during crises
 - Repository of data, guidelines and expertise
 - Forum for discussion
- 31 'expert' members; ~200 'corresponding' members
- Website visited by ~ 3000 unique visitors per month



Select Language ▾

IVHHN - The International Volcanic Health Hazard Network



The International Volcanic Health Hazard Network (IVHHN) is an umbrella organisation for all research and information on volcanic health hazards. IVHHN currently involves 31 expert members from 25 international institutions as well as corresponding members who are signed up to the mailing list. Expert members of IVHHN work in diverse scientific disciplines such as volcanology, epidemiology, toxicology, public health and physical chemistry with a common aim of trying to determine the health effects of volcanic emissions. IVHHN was

launched in 2003 and is an **IAVCEI** Commission.

Breaking News

Iceland Eruption

The UK Health Protection Agency have released a statement on the health hazard which can be viewed **on their website**. Please also see the health advice from Health Protection Scotland at: www.hps.scot.nhs.uk/news/spdetail.aspx



Latest News

We are proud to announce the publication of two pamphlets on volcanic ash fall hazards. They are designed for mass distribution at the onset of new eruptions. They are now available in English, Japanese, French Spanish, Portuguese and Swahili with Italian versions being available shortly. Please see our **Pamphlets** page for further information.



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Guidelines and databases

For scientists:

- Protocol for analysis of ash samples
- Protocol for grain-size distribution analyses
- Ash collection procedures
- Volcanic ash leachate database

For public, hazard/health agencies, NGOs, governments & scientists:

- Volcanic gas & particulate guidelines (including standards)
 - Recommended dust masks
 - Preparedness for ashfall
 - The health hazards of volcanic ash
- } Available as pamphlets
in 9 languages

GVM input ...

Capacity to anticipate consequences of future volcanism

- Assessment of respiratory health hazard carried out at ~ 11 volcanoes since 2008.



Location of volcanoes studied

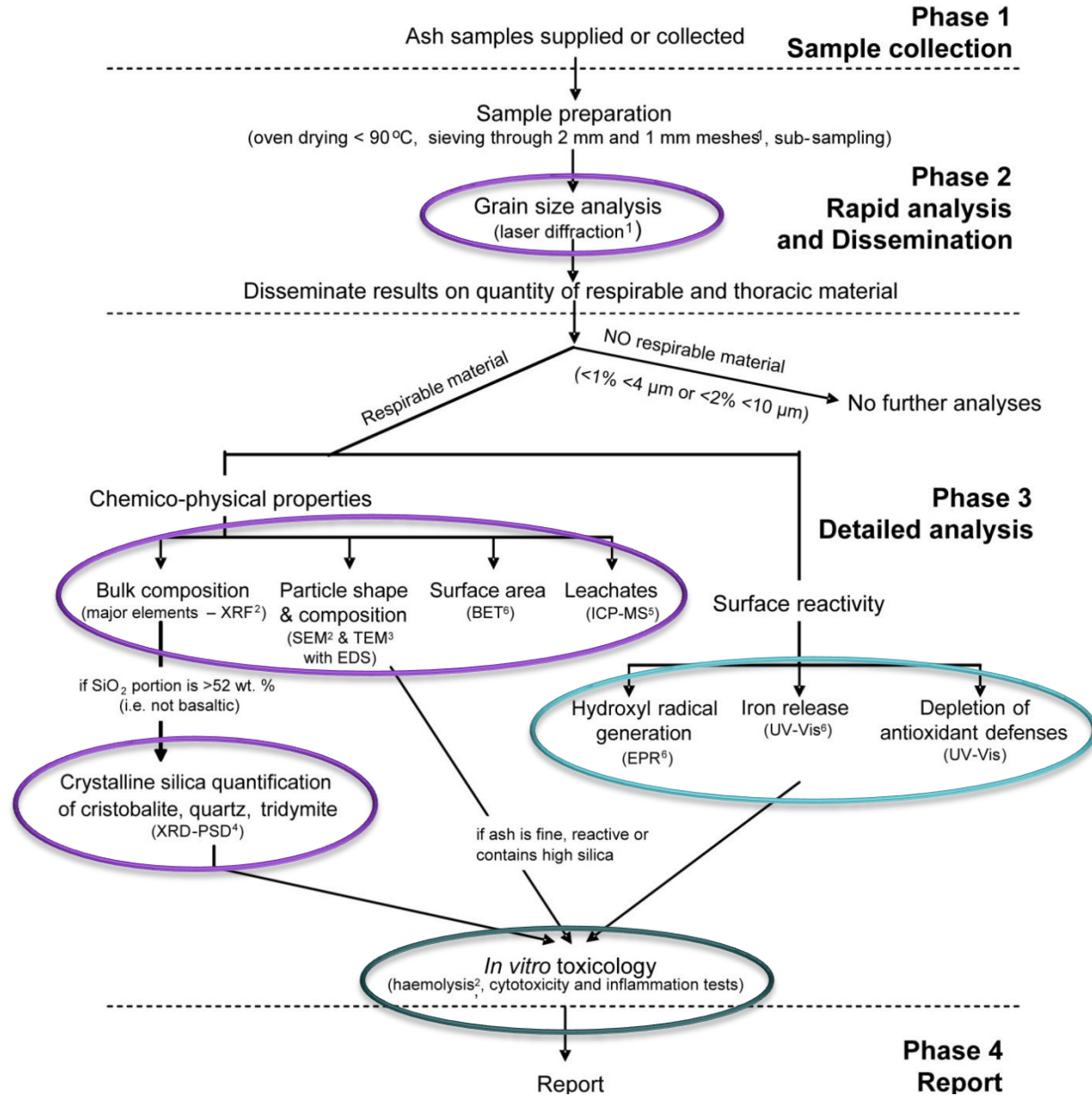


- ▲ Eruption crisis
 - ▲ Archive samples
 - ▲ Single sample/analysis
- } Full studies

GVM input ... Data?

- Assessment of respiratory health hazard carried out at ~ 11 volcanoes since 2008.
- According to protocol for mineralogical and toxicological analyses.





GVM input ...

Capacity to anticipate consequences of future volcanism

- Assessment of respiratory health hazard carried out at ~ 11 volcanoes since 2008.
- According to protocol for mineralogical and toxicological analyses.
- Large dataset gathered.



GVM input ...

Capacity to anticipate consequences of future volcanism

- Assessment of respiratory health hazard carried out at ~ 11 volcanoes since 2008.
- According to protocol for mineralogical and toxicological analyses.
- Large dataset gathered.
- Allowing predictions of likely health outcomes without medical studies.



Reporting of data

- Reports direct to hazard managers/agencies/NGOs
- Reports on website
- Academic publications:
 - Damby, D. E. *et al.* The respiratory health hazard of tephra deposited through various emplacement mechanisms during the 2010 Centennial eruption of Merapi. *J Volcanol Geotherm Res* **In review** (2012).
 - Hillman, S. E. *et al.* Sakurajima volcano: a physico-chemical study of the health consequences of long-term exposure to volcanic ash. *Bulletin of Volcanology* **In Press** (2012).
 - Horwell, C. J. *et al.* Respiratory health hazard assessment of the ash from the 2010 eruption of Eyjafjallajökull volcano, Iceland. *Environmental Research* (In prep.).
 - Horwell, C. J., Le Blond, J. S., Michnowicz, S. A. K. & Cressey, G. Cristobalite in a rhyolitic lava dome: Evolution of ash hazard. *Bulletin of Volcanology* **72**, 249–253 (2010).
 - Horwell, C. J. *et al.* A physico-chemical assessment of the health hazard of Mt. Vesuvius volcanic ash. *J Volcanol Geotherm Res* **191**, 222-232 (2010).
 - Le Blond, J. S. *et al.* Mineralogical analyses and in vitro screening tests for the rapid evaluation of the health hazard of volcanic ash at Rabaul volcano, Papua New Guinea. *Bulletin of Volcanology* **72**, 1077-1092. (2010).

GVM input ...

Capacity to anticipate consequences of future volcanism

- Assessment of respiratory health hazard carried out at ~ 11 volcanoes since 2008.
- According to protocol for mineralogical and toxicological analyses.
- Large dataset gathered.
- Allowing predictions of likely health outcomes without medical studies.
- Could predict hazard from eruption style alone ... but more work needed ... How?



IVHHN funding

- 2003-2006 UK Leverhulme Trust
- 2007-2010 UK Royal Commission for the Exhibition of 1851
- 2011 Institute of Hazard, Risk & Resilience (Durham)
- Urgency studies:
 - 2 funded by NERC
 - 1 funded by WHO (no staff costs)
 - Partial funding from:
 - Durham University
 - PhD/MSc research funds
 - IVHHN/Personal funds
 - Free lab. time ...