



Volcanic Impact Study Group (VISG*) update



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** VISG is a subcommittee of the Auckland Lifeline Group*

Auckland
Lifelines



VISG Objectives

- To **collate and advocate existing knowledge** about the impacts of volcanic hazards (e.g., volcanic ash) on, and mitigation measures for, **lifeline infrastructure**.
- To **facilitate and support research** on the impacts of volcanic hazards on lifeline infrastructure and the development of appropriate mitigation measures.
- To provide a **vehicle for two-way exchange** of relevant research information between the research and lifeline infrastructure community.
- To **facilitate reconnaissance investigations**, and/or advocate lifeline representation on reconnaissance investigations, to active volcanic areas where this would add to our knowledge about volcanic impacts on infrastructure.
- To provide a **national focal point** for volcanic impacts work on lifeline infrastructure.

VISG activities since November 2015

- **Reviewed and revised VISG charter**
 - Updated to reflect current practices
 - Section added to specify what is out of scope
 - Does not have an operational role during a crises
 - Does not consider health or agricultural impacts
 - Available on ALG website
- **2015 annual seminar focused on lessons from overseas reconnaissance trips and laboratory experiments designed to understand impacts**
- **Published quarterly newsletters**
- **Volcanic ash impact posters translated to web format, hosted on GNS webpage**
 - <http://gns.cri.nz/Home/Learning/Science-Topics/Volcanoes/Eruption-What-to-do/Ash-Impact-Posters>

VISG newsletter feature stories



November 2015

- Ash impacts on roads: lessons from Kagoshima, Japan (Daniel Blake, UC)

March 2016

- “Mt Ruauumoko”: Exploring consequences of an Auckland Volcanic Field eruption (Natalia Deligne and Daniel Blake)

June 2016

- Clean-up of the urban environment after volcanic eruptions (Josh Hayes, UC)

September 2016

- New volcanic ashfall advice for the public (Carol Stewart, JCDR)



Jacobacci, Argentina following the 2011 Cordón–Caulle eruption

Select VISG achievements of past year



- **Ash impact posters used in Cape Verde volcanic crises in August 2016**
 - Posters have now been used in New Zealand, Alaska, South America & Africa
- **Numerous studies published in leading scientific journals, over half a dozen in the works**
 - Tephra fall clean-up in urban environments (Josh Hayes)
 - Road marking coverage by volcanic ash: an experimental approach (Daniel Blake)
- **Presentations nationally and internationally**
 - NZTA Skid-Resistance Technical Advisory Group (Daniel Blake)
 - Presentations in UK, Italy, Belgium, and elsewhere
- **Contributors to international projects**
 - Updated Volcanic Ash Impacts & Mitigation website hosted by USGS
 - Global Facility for Disaster Reduction and Recovery “ThinkHazard!” online tool
 - International Atomic Energy Agency report *Volcanic Hazard Assessments for Nuclear Installations: Methods and Examples in Site Evaluation*

Ongoing/upcoming projects

- **Laboratory work understanding generator vulnerability to volcanic ash**
 - Seed funding from ALG, co-funding from EDF
- **2 week impact assessment trip to Chile & Argentina**
 - Recent eruptions & longitudinal studies
- **Auckland Volcanic Field scenario development**
 - Builds on ARC work in 1990s and DEVORA findings
 - Several eruption sites across AVF
- **Exploring volcanic eruption debris clean-up**
- **Understanding lava flow impacts to built environment**

2015 Calbuco eruption © Carolina Barría Kemp



Final thoughts



- **A lot happening in VISG space**
 - Exciting time for NZ volcanic impacts research, despite the lack of recent mainland eruptions
- **World-class team – involved in numerous international projects**

Encourage you to:

- **Subscribe to our quarterly newsletter (only 4 emails a year!)**
- **Contact VISG with research questions / ideas**
- **Annual seminar this Friday, ask me for details**

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