



Welcome to the first Global Volcano Model newsletter, which will be produced every quarter. It's been a very busy and somewhat hectic period since the NERC funding started on 1st November 2011.

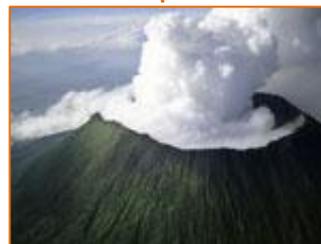
In the first few months there has been a lot of consultation with partners and work to develop the new web site, which we hope you like. We have also been planning the first GVM workshop to be held in Edinburgh on 30 April to 1 May. The response and enthusiasm for GVM has been tremendous and very encouraging.

It should be noted that GVM

aims to be a community effort, to be truly international and inclusive. As yet there are no mechanisms for either individuals or institutions to join GVM, but the intention is to welcome anyone or any organisation that wants to be involved.

One of the first tasks of the GVM Board and Steering Committee is to work together to develop such a mechanism. We want to get this right so we request your patience over this. In the meantime we encourage those who are interested to contact GVM with letters of interest. These should be sent to Sue Loughlin.

GVM is a growing international network project with Partners and Sponsors throughout the globe that aims to create a sustainable, accessible information platform on volcanic hazard and risk. GVM will provide systematic evidence, data and analysis of volcanic hazards and risk on global, regional and local scales, and will develop the capability to anticipate future volcanism and its consequences.



GVM PARTNERS

- BGS-NERC (British Geological Survey)
- CEV (Commission on Explosive Volcanism)
- EOS (Earth Observatory of Singapore)
- EPOS (European Plate Observing System)
- EVOSS (European Volcano Space Services)
- Geophysical Institute University of Alaska
- GNS (New Zealand)
- IAVCEI (International Association of Volcanology and Chemistry of the Earth's Interior)
- INGV, Italy (Istituto Nazionale di Geofisica e Vulcanologia)
- IVHHN (International Volcanic Health Hazard Network)
- Munich RE
- NGI (Norwegian Geological Institute)
- RMS (Risk Management Solutions)
- SI (Smithsonian Institution)
- SUNY at UB (University of Buffalo)
- UOB (University of Bristol)
- USF (University of Southern Florida)
- USGS (United States Geological Survey)
- USGS: VDAP
- VHUB
- Willis
- WOVO (World Organization of Volcano Observatories)

THE GLOBAL VOLCANOLOGY COMMUNITY



Volcanology is a truly international, highly multidisciplinary and very collegial community. We meet often in all sorts of places around the world with a deep sense of wanting to understand how volcanoes work and to use this knowledge to help communities under threat from volcanic activity. There are long-standing platforms

for volcanologists to share knowledge and networks to promote collaboration

The International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI) established in 1922 plays a critical function as the only international organisation that represents the volcanology community. Its meetings, commissions and journal (Bulletin of Volcanology) fulfils already many important functions. More than 40 years ago the far-sighted staff of the Smithsonian Institution, notably the visionary Tom Simkin, started the Global Volcanism Program to systematically compile data and information about

volcanoes and their eruption. The Smithsonian Institution's GVP remains a critical and highly valued facility. GVM builds on and complements these long-standing platforms for international volcanology, but with an explicit focus on volcanic hazard and risk.

Another role for GVM is to act as a mechanism to co-ordinate recent initiatives in volcanology, which include WOVOdat, vHub, VOBP and VOGRIPA.

**EDINBURGH WORKSHOP
30 APRIL - 1 MAY 2012**

**Global Volcano Model
First Meeting of the Steering
and Management groups
BGS, Edinburgh, UK**

See page two for details.



GVM requires long-term funding to become sustainable. Organisations and funding agencies interested in the objective of reducing volcanic risk around the world are encouraged to consider sponsorship.

WHY GVM?



How was the name Global Volcano Model chosen? Model means different things to different people and in different context. Here 'model' is meant to convey the idea of a holistic understanding of volcanism in the context of hazard and risk. Data on hazard, exposure, and vulnerability as well as methods to analyse such data in terms of risk and impact to inform decision-making and increase societal resilience to volcanism lie at the heart of GVM.

There are of course parallels with the now well-established Global Earthquake Model. GVM can mirror the aims of GEM to provide uniform and open standards for calculating and communicating volcanic risk. It seems likely that the concept of Global Models for each major natural hazard will catch on internationally. Sue Loughlin provides in this

newsletter an account of an initiative by the Global Science Forum to develop a Global Risk Modelling Organisation (GMRO) under the auspices of the OECD countries.

GVM is at an early stage in its development. There is plenty of scope for new ideas and for GVM to succeed it needs the support and involvement of the community. This newsletter includes brief accounts of some of the work that is starting or planned.

funded by the Smithsonian Institution with support from the US Geological Survey. WOVodat is supported by funds from Nanyang Technological University within the Earth Observatory of Singapore. The vHub project at the University of Buffalo is supported by the National Science Foundation. All partners are committed to providing resources to GVM including benefits in kind and human resources to meet the GVM mission.

GVM FUNDING

GVM is funded from multiple sources including a grant from the Natural Environment Research Council (NERC) of the UK which provides funds for the first three years of GVM via its international network fund. NERC also provides funds through the core funding of British Geological Survey. The VOLDIES project at the University of Bristol is funded by the European Research Council Bristol University and this supports GVM research on volcanic risk. Many of the partners within GVM are funded by internal and external funds in activities that are central to GVM. The Global Volcanism Program is

GVM WEBSITE



We very much hope that you like the new GVM web site, which was launched at the beginning of March. Clare Williams has done a magnificent job with its design and development. She of course will welcome comments and suggestions. It's important that the GVM web site is dynamic so please think about providing content.

The meeting will include presentations and discussions on a range of topics from hazards databases, risk, standardisation of data and methods, national, regional and international initiatives in hazard and risk, insurance industry perspectives, progress of GEM and synergies of GEM with GVM.

The meeting will collate opinions on a range of matters including governance, engagement of individuals, institutes, countries and private companies, funding, infrastructure, outreach and working groups and develop a strategy for GVM.

BGS-NERC/Bristol Kick-off Conference, Edinburgh 24 November 2011

The kick-off conference at the BGS in Edinburgh was the first joint meeting for Bristol and BGS NERC to confirm their respective roles and to look at VOGRIPA, data architecture for the database and GIS and websites.



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BGS Offices
Edinburgh, Scotland, UK



EDINBURGH WORKSHOP 30 APRIL - 1 MAY 2012

Global Volcano Model First Meeting of the Steering and Management groups BGS, Edinburgh, UK

The first meeting of both the GVM Steering Group and Management Group will take place in Edinburgh, UK at the end of April.

GLOBAL RISK MODELLING ORGANISATION

OECD Global Science Forum
Expert Group on
Global Risk Modelling
Workshop, 9-10 February 2012, Brussels,
Belgium

The Expert Group has been established to evaluate a) the needs of stakeholder communities in multi-hazard/risk modelling related to a variety of natural and technological hazards, and b) the rationale for new international collaboration. Of particular interest are the relationships between different hazards, the way they interact, how they can be compared, and how existing knowledge can be better employed to create a more holistic view of the hazards our society is facing.

The workshop was organised to review and agree on the gaps and demands from both the scientific and user communities in global multi-hazard/risk modelling, and to investigate the opportunities for improved international cooperation (whether or not a new international initiative should be set up in this field).

The workshop comprised a series of presentations and short discussion sessions. A series of recommendations were made but basically, the participants agreed that an international initiative with two strands is required:

1. Assessment of the risk of cross-border large-scale events that cannot be dealt with by a single country, assessment of domino/cascading effects, socio-economic consequences and reduction of vulnerability.
2. Development of the best standards and methods for use at a local level to facilitate consistency and interoperability of data and models.

FIRST WORKSHOP OF ASIA PACIFIC REGION GLOBAL EARTHQUAKE AND VOLCANIC ERUPTION RISK MANAGEMENT

(G-EVER1)
20-24 February 2012, AIST Tsukuba, Japan

The objective of the workshop was to discuss how to prevent natural hazards from



producing national and international disasters. Participants acknowledged and were

saddened by recent disasters in the region from Sumatra to Christchurch and Tohoku, but believe that increased collaboration in the region and beyond can advance the science and reduce risks from earthquakes, tsunami and volcanic eruptions.

There were 179 participants representing 12 nations and 56 national and international institutions. There was a series of presentations, discussions sessions and a field trip to Mount Fuji. At the end of the workshop, ten recommendations were made that will be communicated to Asia-Pacific research institutes and organisations, and their parent governments and international organisations. These recommendations were agreed and unanimously endorsed by participants to make the 'G-EVER1 Accord'.

There will in future be a G-EVER workshop every two years in Asia-Pacific countries. The G-EVER1 Accord, workshop presentations and additional information will be made available in due course.

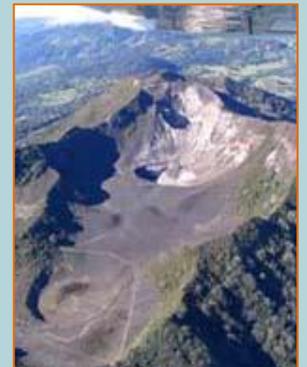
Brussels, Belgium



Hekla, Iceland



Turrialba, Costa Rica



Mount Etna, Sicily



VOLCANIC HAZARD DATABASES

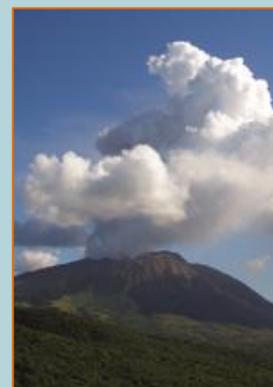
One of the high priority tasks for GVM is to develop databases on the major volcanic hazards. The vision is to have databases on all types of volcanic hazard that are connected with one another to enable global, regional and local data on hazards to be compiled, synthesized and analysed to inform volcanic hazard and risk assessments. In this respect GVM has got off to a running start by building on the VOGRIPA project, which has involved the creation of a database of large magnitude explosive eruptions (LaMEVE). This database contains over 1800 explosive eruption records of Magnitude 4 or greater extending back to the start of the Quarternary. Data includes eruption dates along with the dating technique used, erupted volumes, rock types, magnitudes and intensities. All this data is stored in a relational database that will be made fully accessible online

from early summer 2012.

There is of course a great deal to do. Databases need to be developed for all the major hazards and these need to be internally consistent and robust, but also linked to one another. GVM databases will be designed to be consistent and complementary to the databases of the Smithsonian Institution, for example, by having the same volcano ID and making sure that information on locations and volcano names are the same. The databases also need to be designed with maximum flexibility to enable users to extract data in different forms. There are also many issues of standardisation, protocols and algorithms that arise in constructing databases. There will be more in depth discussions of these issues in future newsletters and GVM forums.

At this early stage we are interested in any work that is going on in the community on developing databases. GVM can help to co-ordinate such efforts and invites members of the community to let us know of your work or plans. The principal contact person in these regards is Sian Crowweller (Sian.Crowweller@bristol.ac.uk).

Soufrière Hills, Montserrat



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