STREVA BULLETIN

Issue 1 July 2012

STREVA sets off

Welcome to the STREVA project and to the first edition of STREVA's quarterly news bulletin. These updates will summarise the latest inter and intra-work package news, project progress and upcoming events.

A press release about STREVA has been published today and sent to all UK institutions involved in the project. The statement recognises STREVA as the first major UK-funded study to integrate the experience of communities at risk with the approaches of natural and social scientists to find new and achievable ways to reduce risk. This collaborative, interdisciplinary project aims to develop new risk analyses which can be used to generate plans to reduce the negative consequences of volcanic activity on people and assets.

STREVA Team

Our Project Partners

We will collaborate with those responsible for monitoring, preparing for and responding to those threats and through them with the communities facing volcanic threats including disaster managers and policy makers.

Montserrat Volcano Observatory (MVO); **Instituto Geofisico Escuela Politecnica Nacional de Ecuador** (IG-EPN); **Servicio Colombiano Geological** (formerly INGEOMINAS), **Seismic Research Centre**, University of the West Indies; **Disaster Risk Reduction Centre,** University of the West Indies; **Vhub**; **Corporación OSSO**; **CaribRM; European Volcano Observatory Space Service**s (EVOSS); the **CASAVA** project; the **National Centre for Earth Observation** (NCEO); **VOLDIES** (Global Volcanic Risk) ; **Climate and Development Knowledge Network**; **Global Volcano Model**; **Volcanic Unrest in Europe and Latin American Countries** (VUELCO); **University of Iceland; Icelandic Department for Civil Protection.**

STREVA's Case Study Volcanoes

STREVA will examine three well monitored, active volcanoes **(Soufrière Hills, Montserrat; Galeras, Colombia, and Tungurahua, Ecuador)** to analyse what happened during several volcanic emergencies; including how well activity was forecast and the community and policy responses. These are STREVA's *forensic volcanoes*.

Using this analysis we will develop:
(i) better methods for forecasting the start of eruptions and changes in activity during eruption;
(ii) better ways to predict areas at-risk (the "footprint") from different volcanic hazards;
(iii) an understanding of the factors that make people and their assets more vulnerable to volcanic threats;
(iv) an understanding of institutional constraints and capacities and how to improve incentives for risk reduction

We will then integrate these new data and methods to develop a new dynamic risk assessment framework. This will be further tested at three high-risk volcanoes where monitoring and understanding is less advanced **(Soufrière St Vincent, St Vincent; Cerro Machin, Colombia, and Cotopaxi, Ecuador).** These are known as STREVA's *trial volcanoes*.

Work Package Summaries (continued overleaf)

Work Package One: Assessing hazard through forecasting
Lead: David Pyle (Oxford) Deputy: Juliet Biggs (Bristol)
Using real-time data, WP1 will develop deterministic and probabilistic forecasting tools to produce operational alerts for volcanic hazards.

Work Package Two: Assessing hazard footprints
Lead: Jerry Phillips (Bristol) Deputy: Steve Sparks (Bristol)
WP2 will improve spatial and temporal forecasting of volcanic hazard footprints, with particular emphasis on lahars.

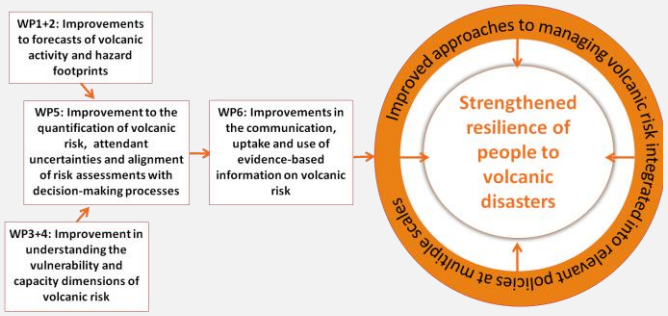
Work Package Summaries (continued)

Work Package Three: Assessing and analysing vulnerability
Lead: Roger Few (DevCo/UEA) Deputy: Anna Hicks (UEA)
WP3 pilots and implements innovative social science approaches to the analysis of vulnerability to volcanic hazards.

Work Package Four: Assessing and analysing capacity
Lead: Tom Mitchell (ODI) Deputy: Emily Wilkinson (ODI)
WP4 will examine: a) institutional capacity to manage risk effectively, b) the circumstances under which political will is created and policy reform takes place, and c) different types of risk governance.

Work Package Five: Risk analysis framework
Lead: Sue Loughlin (BGS) Deputy: Jenni Barclay (UEA)
WP5 will improve and integrate structured numerical statements of risk through Quantitative Risk Analysis, Scenario Planning and Simulation Exercises at the trial volcanoes.

Work Package Six: Framing the programme to increase resilience
Lead: Jenni Barclay (UEA) Deputy: Sue Loughlin (BGS)
WP6 will cultivate effective communication both across the programme and also with stakeholders. This WP will also evaluate the impact of STREVA *in practice* on capacities for resilience.



Forensic Workshop No. 1

Our first forensic workshop is taking place in Montserrat in September. This meeting will also act as a project kick-off and a chance for the STREVA team to discuss management of work packages and the project as a whole.

The theme of the workshop is, 'Is Montserrat a resilient society?' and will include plenary sessions, break-out group discussions and charettes. The aim of the workshop is to understand better the factors that have led to changes in the resilience of Montserrat over the last 17 years. Workshop delegates will discuss the evidence for drivers of change and the triggers or 'tipping points'. We will also discuss the relative importance of the drivers - were they social, economic, political, or scientific? Finally we will discuss the implications of the findings for strengthening resilience in the future (both on Montserrat and elsewhere) as well as the ways in which disaster risk is assessed.

Summary of workshop schedule:

25th September: Field Day

26th September: STREVA meeting - working together (investigators and project partners)

27th September: Workshop

28th September: Workshop (w/ public)

29th September: STREVA intra and inter-work package discussions (investigators and project partners)

The public session on the afternoon of the 28th will begin with plenary talks under the theme, 'Crisis Moments on Montserrat 1995-2012'. A question and answer session will follow, plus facilitated discussion acknowledging points raised earlier in the workshop and from public interaction. This session will be a chance for Montserratians to share their views.

In addition to the UK-based STREVA team, workshop participants will include members of the STREVA Advisory Board (see next page) and project partners from: the University of the West Indies Seismic Research Centre (SRC) and their Disaster Risk Reduction Centre (DRR), Instituto Geofisico de la Escuela Politecnica Nacional (IG-EPN), Servicio Geológico Colombiano (SGC), the Foreign and Commonwealth Office (FCO), DfID and from the VUELCO, VHub and Casava projects. We also hope to have delegates present from OSSO, CaribRM, and the Executive Director for Integrated Research on Disaster Risk (IRDR). Thanks to Paul Cole and colleagues in Montserrat, we will be inviting over 40 Montserratians to both workshop days. The public will be invited to the afternoon session on the 28th September.

A full list of delegates will be published next month.

Local boy observing the eruption of Soufriere Hills, Montserrat. Photo courtesy of Jon Stone, UEA

STREVA Advisory Board

We are delighted to announce the members of STREVA's advisory board:

Kathy Cashman (University of Oregon/Bristol)

Cynthia Gardner (USGS; former Director of the Cascades Volcano Observatory)

Warner Marzocchi (Instituto Nazionale Geofisica e Volcanologica, Italy)

Ian Burton (University of Toronto & Meteorological Service of Canada). Ian was the author of 'Forensic Disaster Investigations in Depth: *A New Case Study Model*'.

STREVA comms

STREVA will have an online presence, with a website, Facebook and Twitter (@STREVAProject) account. As one of our project partners, we will be using Vhub as a base for data management and sharing. All STREVA-related documents, relevant publications and other reading material will be housed there. We hope to have a data manager and website developer on board shortly to handle this. Group email lists will also be published soon.




Work Package Updates

- The STREVA team have hit the ground running with UK investigators involved in work packages 1 and 2 meeting before the official start date. Relevant outputs will be circulated in due course. Work package 3, 4 and 6 researchers will be meeting in July, prior to the Risk Analysis Workshop (WP5) (date of workshop tba).
- From our reviewer feedback we are going to have to work hard to make sure we make the most effective use of the STREVA project money, in particular we have to think carefully about how we will analyse both quantitative and qualitative aspects of risk and how we will get the most from the 'forensic' volcanoes and apply it in the 'trial' settings.
- PDRA's will be joining work packages through the autumn and early 2013.

In other news....

- STREVA investigator Vern Manville is currently advertising a new fully-funded NERC studentship (only eligible students can apply) for a project entitled, 'Initiation processes of rain-triggered lahars'. The studentship is available from 1st October 2012 for 3.5 years. www.see.leeds.ac.uk/admissions-and-study/research-degrees/essi/manville
- Check out some of the STREVA team on 'Volcano Live', a new BBC documentary series which runs as four parts, starting on July 9th, on BBC2.
- If people are willing to share their volcano photos, particularly from forensic and trial sites, please could you forward to Anna at a.hicks@uea.ac.uk. These will be very useful for future press statements and STREVAweb. Acknowledgements will be given.

Any suggestions?

Keeping a large, interdisciplinary group informed is tricky. If you have any suggestions as to how we can do this better – please tell us! Contact Anna at a.hicks@uea.ac.uk.