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Global Volcano Model

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Over 600 million people live close enough to active volcanoes to be affected when they erupt. Volcanic eruptions cause loss of life, significant economic losses and severe disruption to people's lives, as highlighted by the recent eruption of Mount Merapi in Indonesia. The eruption of Eyjafjallajökull, Iceland in 2010 illustrated the potential of even small eruptions to have major impact on the modern world through disruption of complex critical infrastructure and business. The effects in the developing world on economic growth and development can be severe. There is evidence that large eruptions can cause a change in the earth's climate for several years afterwards. Aside from meteor impact and possibly an extreme solar event, very large magnitude explosive volcanic eruptions may be the only natural hazard that could cause a global catastrophe.

GVM is a growing international collaboration that aims to create a sustainable, accessible information platform on volcanic hazard and risk. We are designing and developing an integrated database system of volcanic hazards, vulnerability and exposure with internationally agreed metadata standards. GVM will establish methodologies for analysis of the data (eg vulnerability indices) to inform risk assessment, develop complementary hazards models and create relevant hazards and risk assessment tools. GVM will develop the capability to anticipate future volcanism and its consequences. NERC is funding the start-up of this initiative for three years from November 2011.

GVM builds directly on the VOGRIPA project started as part of the GRIP (Global Risk Identification Programme) in 2004 under the auspices of the World Bank and UN. Major international initiatives and partners such as the Smithsonian Institution - Global Volcanism Program, State University of New York at Buffalo - VHub, Earth Observatory of Singapore - WOVOdat and many others underpin GVM.