

EDITORIAL

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# The role of multidisciplinary research and collaboration for improving the resilience of communities to volcanic risk

Professor David Johnston

Significant portions of the world's population are at risk from the impacts of volcanic activity. While the timing of eruptions may be unknown or uncertain, their impacts and long term effects can be assessed. Recent eruptions have demonstrated the devastating impacts of volcanic activity on nearby landscapes and communities. The 2010 Eyjafjallajökull eruptions, although small by world standards, highlighted the vulnerability of the modern day global society to minor eruptions. Volcanic crises must be planned for using a comprehensive risk management approach that links mitigation, preparedness, response and recovery activities. Over the last few decades it has been recognized that integrated multi-disciplinary research is needed to provide an understanding of the social, economic and cultural factors that influence the development of strong communities that are resilient to the impacts of volcano hazards and able to respond effectively when events occur.

A number of global initiatives are seeking to promote these concepts. The Integrated Research for Disaster Reduction (IRDR) <http://www.irdrinternational.org/> is a decade-long integrated research program co-sponsored by the International Council for Science (ICSU), the International Social Science Council (ISSC), and the United Nations International Strategy for Disaster Reduction (UN-ISDR). It is a global, multi-disciplinary approach to dealing with the challenges brought about by natural disasters, mitigating their impacts, and improving related policy-making mechanisms. The IRDR Program endeavors to bring together the natural, socio-economic, health and engineering sciences in a coordinated effort to reduce the risks associated with natural hazards.

The International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI) has a number of commissions working towards reducing volcanic

risk. The Cities and Volcanoes Commission <http://cav.volcano.info/> aims to provide a linkage between the volcanology community and emergency managers, to serve as a conduit for exchange of ideas and experience between "volcano cities", and promote multi-disciplinary applied research, involving the collaboration of physical and social scientists and city officials. The Commission also aims to develop a close link with the International Volcanic Health Hazard Network (IVHHN) and the World Organization of Volcano Observatories (WOVO).

This new journal also aims to play its part in supporting multi-disciplinary research and collaboration for improving the resilience of communities to volcanic risk.

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