

Barclay, J., K. Haynes, T. Mitchell, C. Solana, R. Teeuw, A. Darnell, H.S. Crossweller, P. Cole, D. Pyle, C. Lowe, C. Fearnley, and I. Kelman. 2008. "Framing volcanic risk communication within disaster risk reduction: finding ways for the social and physical sciences to work together". Chapter, pp. 163-177, D.G.E. Liverman, C.P.G. Pereira, and B. Marker (eds.), Communicating Environmental Geoscience, Geological Society of London Special Publications, Geological Society of London, London, U.K.

Abstract:

Sixteen years have passed since the last global volcanic event and more than 25 since a volcanic catastrophe that killed tens of thousands. In this time, volcanology has seen major advances in understanding, modelling and predicting volcanic hazards and, recently, an interest in techniques for reducing and mitigating volcanic risk. This paper provides a synthesis of literature relating to this last aspect, specifically the communication of volcanic risk, with a view to highlighting areas of future research into encouraging risk-reducing behaviour. Evidence suggests that the current 'multidisciplinary' approach within physical science needs a broader scope to include sociological knowledge and techniques. Key areas where this approach might be applied are: (1) the understanding of the incentives that make governments and communities act to reduce volcanic risk; (2) improving the communication of volcanic uncertainties in volcanic emergency management and long-term planning and development. To be successful, volcanic risk reduction programmes will need to be placed within the context of other risk-related phenomena (e.g. other natural hazards, climate change) and aim to develop an all-risks reduction culture. We suggest that the greatest potential for achieving these two aims comes from deliberative inclusive processes and geographic information systems.