

Exploring the communication of risk during a volcanic crisis: A case study of Montserrat, WI.

Katharine Haynes

September 2005

A thesis submitted for the degree of Doctor of Philosophy
to the School of Environmental Sciences
of the University of East Anglia

© This copy of the thesis has been supplied on the condition that anyone who consults it is understood to recognise that copyright rests with the author. No quotation from the thesis, nor any information derived therefrom, may be published without the author's prior written consent.



ABSTRACT

This thesis explores the risk communication process during a period of volcanic activity on the Island of Montserrat in the West Indies. Montserrat was selected as the case study for this research because of the ongoing volcanic crisis which has had a dramatic impact on the population and the island. The risk communication problems associated with volcanic eruptions or indeed with any type of natural hazard are a relatively under-examined topic within the risk communication field. However, volcanoes, unlike other natural hazards, can have a prolonged impact on the social, economic and physical surroundings, producing a number of different hazards. The challenging relationships which develop between the stakeholders involved and the discovery of a correct risk discourse balance can often dictate the human cost of a volcanic crisis.

A mixed methodology approach was used in this research to provide a comprehensive account identifying how the process operates, where the problems lie, and what improvements can be made. Data were collected through qualitative semi-structured interviews, quantitative surveys, and participant observations. The views, feelings and attitudes of the full range of actors involved (the public, government and civil authorities and scientists) were obtained. An exploratory map comprehension study was also conducted, utilising both qualitative and quantitative techniques to examine the utility of volcanic risk maps.

This thesis finds that the risk communication process on Montserrat between 2003-2004 is not a simple process of communicating to the public, or even a two-way process with the incorporation of feedback mechanisms, but is a multidimensional process. Various attitudes held by groups served to attenuate or amplify the message. Levels of individual risk tolerability, competing messages and different worldviews in relation to co-operation with authority were the dominant audience characteristics affecting the impact of risk information. This social amplification and attenuation of the risk messages through a complex web of influences and filters must be recognised as an inevitable part of the process incorporated into the risk communication design. The map study identified that topographic map comprehension was poor but that the use of oblique aerial photographs for the communication of spatial hazard and risk information is a dramatically improved method. These findings have implications for risk communication on Montserrat.

UEA Print Thesis

The full text of this thesis is not currently available
in the repository

Please contact

lle.helpdesk@uea.ac.uk

to request access to the print copy