ABSTRACT

Land Use Planning for Volcanic Hazards in St. Vincent

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Volcanic hazards have resulted in the loss of thousands of lives in the Eastern Caribbean during the twentieth century. To a large extent, the planning statutes of Caribbean Small Island Developing States (SIDS) do not speak to volcanic hazards. This study addresses the question "what are the main factors which would influence people's willingness to adopt land use planning strategies for volcanic risk reduction in SIDS?" A topical debate in the literature is the use of structural versus the use of non-structural risk reduction measures. Many authors purport that physical risk reduction measures are difficult and expensive to put in place and maintain. The literature supports this with respect to Caribbean SIDS, hence the usefulness of land use planning strategies.

The methodology for this study was tested on the island of St. Vincent and comprises the collection of both secondary and primary data. The secondary data involved the analysis of land use, settlement structure and integrated volcanic hazard maps of the study area. The primary data were gleaned a structured interview (questionnaire) for residents of the study area using a stratified random sample. The questionnaire gathers relevant socioeconomic data and respondents' level of knowledge regarding volcanic hazards and their opinions concerning the roles of land use planning and other methods of hazard risk reduction. Semi-structured interviews were done with planners and residents' focus group discussion.

A key finding is that planners, in particular, think that land use zoning is a viable option for SIDS. Both planners and residents conclude that persons must also perceive the risks associated with volcanoes to be higher than the socioeconomic gains to be derived from being located near to the volcano in order to comply with land use planning measures to reduce volcanic risk. The following factors, in order of significance, were all found to be influential regarding whether persons may adopt land use planning measures for volcanic risk reduction: an individual's level of education; age; hazard experience; and his or her land tenure arrangement.

Keywords: Allanson Cruickshank; volcanic risk reduction; land use planning; SIDS; La Soufrière volcano; St. Vincent and the Grenadines; volcanic hazards