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'Understanding volcanoes and society: the key for risk mitigation'



Volcanic risk through the ages: social factors influencing volcanic risk on St Vincent, Lesser Antilles from a historical perspective

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Our research has focused on how societies come to co-exist in a volcanically active environment. Here we explore the concept that volcanoes are not only agents of change, but also impact on societies, by encouraging them to continuously adapt to volcanic eruptions through identified responses, coping strategies, hazard mitigation and recovery methods. St Vincent is an appropriate location to demonstrate this, as three eruptions have occurred at distinct periods of societal development: during slavery, post-emancipation and, on the eve of Independence. The complexity of volcanic risk lies in understanding various environmental, social, cultural, economic and political factors, the volcanic hazard phenomena and the interconnectivity between vulnerability and resilience. It also requires the acknowledgement that these factors change through time. However, how volcanic risk has evolved in conjunction with societal development is not well understood. Here, we show the impact of volcanic eruptions on St Vincent's agriculture, the country's most important industry, and how social, political and economic development influenced the impacts. We found that the agricultural sector was influenced by the topography of the island, conflict between the indigenous population and colonists, peasants and large estate owners, and fluctuations in the global market demand. The volcanic eruptions caused temporary disruption to the industry, and in the instance of one eruption, changed focus from one commodity to another. Recovery and reconstruction were influenced by existing social capital and political pressure on the government. Assistance was more favourable towards the white elite due to political pressures on the government, whilst for the rest of the society; recovery relied on existing and fostered social capital. We anticipate that our research will open up discussion on how investigating the impacts of historical eruptions can inform us of present day volcanic risk and, the different ways in which volcanic eruptions have influenced societal change.