

Living with Volcán Tungurahua: the dynamics of vulnerability during prolonged volcanic activity

Roger Few¹, Maria Teresa Armijos¹, Jenni Barclay¹

¹University of East Anglia, UK

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For the people that live around many of the world's volcanoes, the effects of eruptive activity on livelihoods and wellbeing are seldom experienced as a one-off event. Not only do volcanoes commonly enter long-lived phases of activity, during which the physical hazards they create alter in characteristics, but the way exposure to such hazards generates impacts on society and shapes responses by people and institutions also modifies and evolves. Within this dynamic process, the behaviour of the volcano provides the framing, but social, economic and political changes interact to shape unfolding patterns of vulnerability. The research presented in this paper explored this complexity of impact and social change for the case of Volcan Tungurahua in Ecuador, which has been in eruptive phase since 1999. Focusing on the people who live adjacent to the volcano and in resettlements, the study used interview and survey evidence to examine changing knowledge about eruptions and how people have experienced the effects of the volcano over time on their economic livelihoods, mobility, residence patterns, and access to services and infrastructure. Crucially, this meant recognising that the existence of a threat from hazards had societal implications regardless of whether or not the volcano was actually in a state of high activity. These implications played out differently for different sections of the neighbouring population, with the strongest contrast emerging between the urban and rural populations, though the complexity of the case defies a simple binary comparison. The research underlines the importance of building a longitudinal element into analysis of the impacts of prolonged eruptions.