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



Hazards mapping in Latin America and the aftermath in decision-making and society's response

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Volcanic hazard assessments and the development of hazard maps are crucial to reducing volcanic risk. For the last three decades, Latin American countries have shown an increase in the amount of volcanic hazard maps available as well as in the different methodologies applied to produce such maps. Most of them are based on a strong geological basis; some of them have been intuitive due to a lack of resources or support for carrying out geological studies at volcanoes. Along the last decades, several models for simulating volcanic processes have also been included for the making of hazard maps. The increasing application of computer models has caused a proliferation of hazard maps, sometimes in a way that geological studies and observations have been left aside with the consequence of some authorities cutting financial resources for geological studies at volcanoes. In the year 2005 several members of the volcanological community working on hazards mapping gathered in Mexico City for discussion on which methodologies would be better to apply. Another meeting of the Latin American community was held in Puerto Varas, Chile in 2007 for a thorough discussion on the hazards mapping. A report with suggestions on best practices was the product of this meeting. More recently, in the years 2013 and 2015, during the International Forum on Hazards held in Arequipa, Perú more discussion on mapping took place but broaden to include hazards mapping and crises management in which the maps are crucial. This contribution shows the development and progression of ideas regarding the hazards mapping along the last decades from the perspective of academic groups and from the viewpoint of the observatories and authorities in charge of decision –making.