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



## **Integrating Community Knowledge to Hazard Mapping**

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Santa Ana (Ilamatepec) Volcano (13.853, -89.63, 2381m) is an active composite volcano located in the Apaneca Volcanic Field in the western part of El Salvador, Central America. The volcano is surrounded by rural communities in its proximal areas and the second (Santa Ana, 13 km) and fourth (Sonsosante, 15 km) largest cities of the country. On October 1, 2005, after months of increased activity, the volcano erupted, generating an estimated 10 km high plume. Ash was deposited to the western and north-western part of the country. Small pyroclastic density currents and major lahars were observed in the eastern part. Following the eruption, NGOs conducted volcanic mitigation projects in the region, but the communities had little or no input on them. This project aims to create a new volcanic hazard map for the northern part of the volcano incorporating the community's knowledge. The work with the community consisted of several meetings in which community members recounted past events like the 2001 earthquake of magnitude 7.7, the 2005 eruption, and several debris flows and lahars that destroyed roads and left them isolated for days during 2010 and 2011. Participants were asked to map the outcomes of those events using either a hillshade relief map with a topographic map of the area overlaid on top of it, an image from Google Earth, or a blank paper of poster size. These maps have been used to identify new hazard areas, the formation of new barrancas and quebradas, and for model validation.