

Community Hazard Mapping: Buenos Aires Case Study, at the Santa Ana (Ilamatepec) Volcano

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Santa Ana (Ilamatepec) Volcano (13.853, -89.63, 2381m) is the tallest composite volcano located in the Apaneca Volcanic Field located in western part of El Salvador, Central America. It is one of six active volcanoes monitored by the Direccion General del Observatorio Ambiental in El Salvador. 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 1st, 2005, the volcano erupted after a months of increased fumarolic and seismic activity. It generated an estimated 10 km high steam and ash plume. Ash was deposited to the western and north-western part of the country, following the typical wind patterns for the region. Small pyroclastic density currents and major lahars were observed in the eastern part. Following the eruption, volcanic mitigation projects were conducted in the region, but the communities had little or no part on them. This project aims to create a new volcanic hazard map for the northern part of the volcano incorporating the community's knowledge with the work currently done by scientists. The work with the community took place during the first two weeks of May. At that time several meetings took place where the community members recounted past events such as the 2001 earthquake of magnitude 7.7, the 2005 eruption, and several debris flows and lahars which have destroyed the road, leaving them incommunicated for several days during the 2010 and 2011. They were asked to map the outcomes of those events using either a hillshade relief map with a topographic map of the area overlay on top of it, an image from Google Earth, and a blank paper poster size. These maps have been used to identify hazard areas, the formation of new Barrancas and Quebradas, and they will be used for model validation.