

A non-governmental organization's impact on community hazard perceptions and disaster preparedness: Santa Ana (Ilamatepec) volcano, El Salvador



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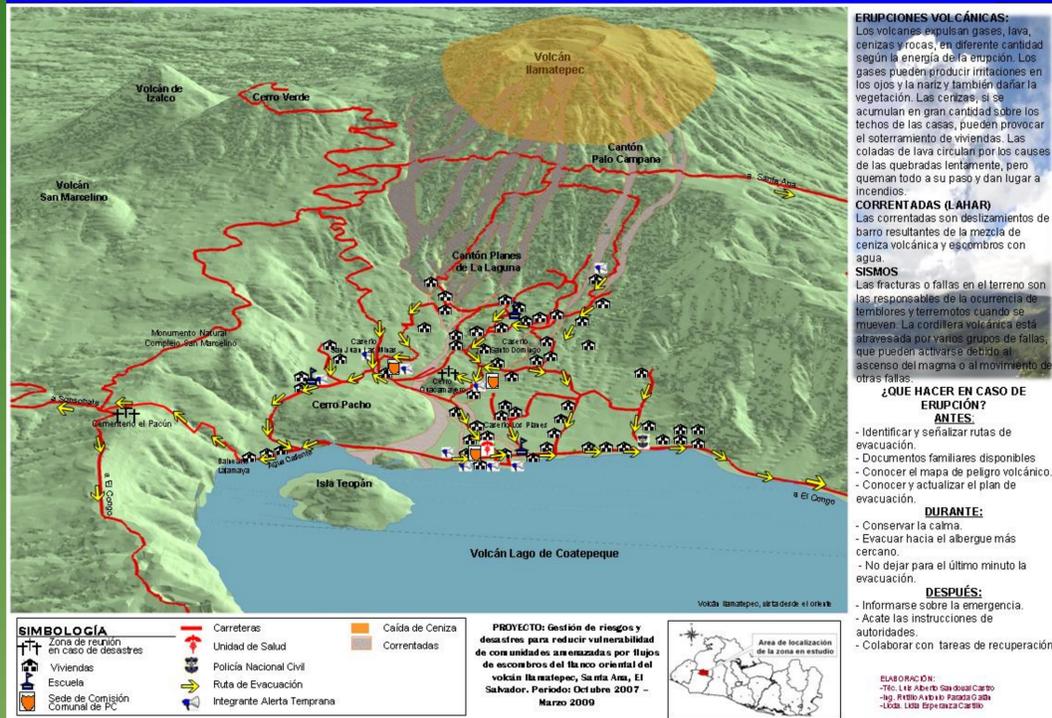
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Abstract

Recent years have seen an expanding array of studies by volcanologists and social scientists to not only characterize volcanic risk more accurately, but also to characterize hazard and risk perception among peoples residing in potentially hazardous areas (Volcanic Risk Perception and Beyond, JVGR 2008). Risk perception studies to date, however, are predominantly quantitative and of relatively short-term duration. These studies are valuable in that they can compile large amounts of data into statistical generalizations providing an overview of vulnerability in at-risk communities and help decision-makers to design and apply appropriate mitigation efforts. However, some intricacies of community dynamics can be missed when using strictly quantitative methods, especially when trying to take into account the response from outside organizations, such as NGOs, and their effects on communities while working to mitigate hazards.

This poster presents results from a five-month-long study conducted in Los Planes de La Laguna, El Salvador—a community impacted in October 2005 by the eruption of Santa Ana (Ilamatepec) volcano. This research, carried out between January and June 2009, investigated the degree to which hazard mitigation strategies implemented by an NGO affected community hazard perceptions and overall preparedness. In order to capture individual experiences and perceptions, the study used qualitative methods; namely participant observation and 35 in-depth interviews with community members and officials. Contrary to the desired project outcomes in which several infrastructure improvements, educational campaigns, and community-organizing efforts were designed, this research highlights several problems beginning almost immediately after the withdrawal of the NGO. Broader implications show the value of a careful evaluation of NGO strategies used to communicate hazard information and highlight the contribution that qualitative data gathering methods can have in understanding ever-changing volcanic hazard perceptions.

MAPA POPULAR DE PELIGRO VOLCÁNICO DEL FLANCO ORIENTAL DEL ILAMATEPEC, EL SALVADOR



Methodology

Semi-structured interview format

- 35 digitally recorded and transcribed interviews
- Participants with varying background

Participant Observations

- Listen to oral histories
- Gain trust, create relationships
- Participate in community activities
- Observe and evaluate NGO events

Objectives

- 1) Learn from peoples' experiences, points of view, opinions, and local priorities
- 2) Record a comprehensive oral history of the 2005 eruptive event
- 3) Analyze methods used by NGO
- 4) Understand how NGOs evaluate themselves and how communities perceive the results
- 5) Help to empower communities; promote local vigilance and the exchange of ideas
- 6) Develop ideas and sustainable solutions to improve preparedness within the target area

A community-based hazard map: one example of evaluating preparedness efforts

The NGO created a new hazard map to help local people within the high-risk zone identify local resources and evacuation routes in preparation for a possible future crisis. The map was posted in each house within the NGO target area.



- Two months after map distribution, 13 interviews were conducted to determine overall effectiveness.
- Three of the 13 families still had maps in their houses. Of those three families, one child was able to demonstrate where the family's house was located. The other families did not have the map or could not effectively read/interpret it.
- This is one example of a "completed" project that had unexpected results.

Lessons Learned

- 1) One cannot assume that a map is necessary and that local people will use it.
- 2) People in Los Planes did not understand the purpose of the map.
- 3) Local people should be included in the development of the map.
- 4) After a map is created, one must make certain that the users understand how to effectively interpret the map.
- 5) In order to encourage some degree of sustainability, maps should be placed in visible places and follow-up training should be made available on a regular basis.

Hazard Mitigation Projects

Surface water drainage system



Improvement of Two-track roads



Evacuation Route signs



High-risk zone signs



Retaining walls



Risk and Resource Maps



Community Participation...

- Helps to create bridges and encourage genuine dialogue between local people, experts and other actors to help promote a respectful environment
- Shows that locals have unique experiences and knowledge about hazards that scientists and risk communicators might not have and vice versa
- Allows "outsiders" to become familiar with community priorities
- Helps to explore new ideas and dynamic solutions to problems
- Is necessary in order to attain sustainable results in disaster risk reduction efforts

Conclusions

Though some NGO efforts helped to improve disaster preparedness in Los Planes, many might have achieved greater levels of success and sustainability had community members been allowed to more meaningfully participate in the decision-making process throughout the 18 month-long project. The qualitative approach used in this study allowed the documentation of community attitudes and perceptions toward the NGO and the hazards they were trying to mitigate. If the dilemmas faced by one NGO can be better recognized, the overall strategies for disaster risk reduction might be improved.

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