



## A challenge for land and risk managers: differents stakeholders, differents definitions of the risks

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In developing countries, mountain populations and territories are subject to multiple risks and vulnerabilities. In addition, they face even greater challenges than developed countries due to lack of knowledge, resources and technology. There are many different types of actors in society that manage risk at various scales and levels (i.e. engineers, geologists, administrators, land use planners, merchants and local indigenous and non-indigenous people). Because of limited resources and possibilities to reduce all types of risk, these different actors, or 'risk managers' have to choose and compete to prioritize which types of risks to address. This paper addresses a case study from San Cristobal Altaverapaz, Guatemala where a large landslide "Los Chorros", a catastrophic collapse of 6 millions cubic meters of rock, is affecting several communities and one of the country's main west-east access highways. In this case, the government established that the "primary" risk is the landslide, whereas other local stakeholders consider the primary risks to be economic. This paper, situated at the cross section between political science, geography and disaster risk management, addresses the social conflict and competition for priorities and solutions for risk management, depending on the group of actors based on the on-going Los Chorros, Guatemala landslide mitigation process. This work is based on the analysis of practices, (Practical Science), policies and institutions in order to understand how the inclusion of multiple stakeholders in determining risk priorities can lead to more sustainable risk management in a given territory.

The main objective of this investigation is first to identify and understand the juxtaposition of different readings of the risk equation, usually considered the interface between vulnerability, exposure and hazards. Secondly, it is to analyze the mechanisms of actions taken by various stakeholders, or risk managers. The analysis focuses on the various solutions proposed for reducing vulnerabilities (and consequentially their risks). To resolve a post-disaster situation, the actors prioritize one main type of vulnerability to address a set of vulnerabilities (in a multi-vulnerability context). With this choice, they define their own acceptable risk limits and the type of action that is most relevant. In doing so, they have to determine what elements can be changed and improved and which elements must be considered essential and preserved or the priority variables. These may include: equipment, production facilities, networks, services, modes of production and organizations, etc. or various economic and social capitals upon which individuals and groups rely for recovering from a post-disaster situation. Depending on the actor, certain factors will be will be emphasized over others and these may change over time. Linked with this political, institutional and geographical analysis of risk management, this work also questions who are the legitimate actors and the right criteria to prioritize risk reduction actions using public funds criteria and finally, which motivations are satisfied. In this sense, the challenge for managers of natural hazards is to move from risk management in the strict sense, which focuses mainly on hazards only, to a broader risks management, taking into consideration what is important for society and for the functioning of systems (what have not be vulnerable in a territorial system). In a context where risk and risk management is produced and managed by both formal and informal stakeholders, the main issue is how to engage the various stakeholders and evaluate different priorities of risk in order to determine which actions are best suited for a more balanced approach to risk management.

This case study demonstrates that reducing landslide risk is subject to interpretation depending on the stakeholder and the result of priorities, providing on the role of each actor, their needs and range of action with a territory.