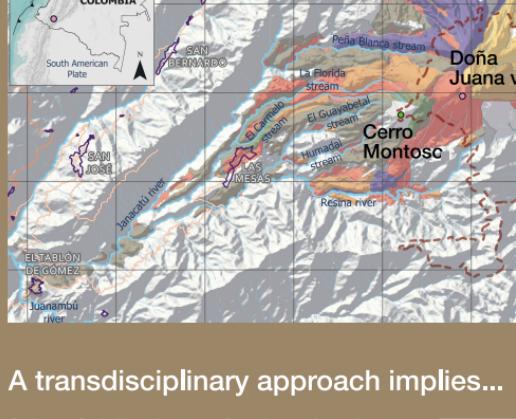


Resilience to natural hazards like mass-movements requires an understanding of human and more-than-human relationships, promoting their mutual coexistence and growth. We believe this can be achieved through a collaborative knowledge construction, involving the complex and dynamic socio-ecological systems with their abilities and resources.

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Doña Juana & Montoso

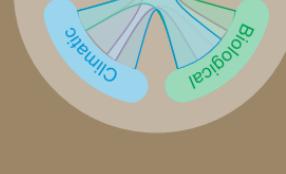
Cerro Montoso is located on the western flank of the Doña Juana volcanic complex, Colombia. In its recent history, several mass-movements like landslides, rockfalls, and debris flows have occurred with an increased frequency (2008, 2014, 2017, 2019).

The ultimate perturbation of soil, water bodies, landscape, and atmosphere pose a latent threat to the communities in the nearby rural settlements and the nearest town of Las Mesas, by affecting their ecological and economical dependencies. However, the archaeological record and the local social memory suggest that ultimate responses rarely consider total abandonment.



A transdisciplinary approach implies...

Acknowledging that a volcanic territory hosts the complex interactions of multiple interdependent systems (e.g., biological, climatic, geological, social)



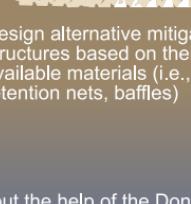
An event with a predominant action in one system will have interdependent and multidimensional effects on the other systems

The mitigation strategy aims at

Empowering the local organizational capabilities, here known as *La Minga*



Identify their ecological and economical risk and balance them with their local capabilities (e.g., natural materials, wickerwork)



Natural ropes *Mikania micrantha*

Design alternative mitigation structures based on their skills and available materials (i.e., natural retention nets, baffles)

Propose a system for a periodic assessment of the community needs towards the mitigation system

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