



Cities on Volcanoes 9
November 20-25, 2016
Puerto Varas, Chile

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



Embodied Uncertainty: living with complexity and volcanic hazards

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Key words: Uncertainty, long-duration eruption, subjective experience, Soufriere Hills Volcano, natural hazards

This paper explores the multiple dimensions of uncertainty and risk in the context of volcanic and other natural hazards, drawing attention to the complex and heterogeneous nature of uncertainty itself. The concept of embodied uncertainty embraces complexity and promotes the acceptance, rather than reduction, of uncertainty. It highlights the need for greater recognition of uncertainty as a subjective experience for those living with volcanic risk. Embodied uncertainty is distinguished from objective uncertainty by the nature of its internalisation at the individual level, where it is subjective, felt and directly experienced. We draw from experiences of living with the long-lived eruption of Soufriere Hills Volcano, Montserrat, as well as other natural hazard contexts to explore the ways in which individual characteristics, social identities and lived experiences shape interpretations of volcanic risk. Understanding the embodiment of uncertainty at the individual, collective, organizational and institutional levels, at multiple scales, through a variety of natural hazards, and through processes over time, allows a pathway for multiple meanings to be understood, and new understandings to be constructed. This opens-up ways of thinking, and approaches for addressing, uncertain volcanic situations. These approaches promote the co-production of knowledge, and embrace multiple interpretations and solutions. This is particularly important where perspectives about risk management priorities may vary considerably between individuals, communities, science advisors, and officials involved in a volcanic unrest setting. Further, embodied uncertainty shapes interpretation and action in the context of volcanic risk, and can become embedded with time, thus further shaping decision-making and action. Improved understanding of uncertainty as a lived experience, rather than solely as an objective entity, establishes a fruitful field of study that has the potential to increase our understanding of the behaviours and decisions of actors in uncertain and dynamic volcanic situations.