

## **Governance | Individual communication**

### **IC - (20801) - EXPERIENCE WITH EXTREME WEATHER EVENTS AND ADAPTATION AND MITIGATION BEHAVIOURS IN A CONTEXT OF CLIMATE CHANGE AND GLACIAL RETREAT IN THE PERUVIAN ANDES**

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#### **Background and objectives**

Glacial retreat in the Peruvian Andes is causing a variety of extreme weather events, due to different geographical factors and anthropogenic actions that are negatively impacting the most vulnerable populations such as Peru (Poveda et al, 2020; Mark et al, 2010; Postigo, 2014). Therefore, studies aimed at understanding adaptation and mitigation behaviours in these scenarios are relevant (de la Riva, Lindner and Pretzsch, 2013; Smith, 2014). The objective of this study was to determine the relationship between experience with extreme weather events (storms, landslides, droughts and floods) and adaptation and mitigation behaviours.

#### **Process and methods (for empirical research)**

Using a quantitative research approach, a survey was designed using LimeSurvey software that makes use of online resources (tablets and cell phones) to conduct face-to-face interviews, thus, a sample of N=2024 participants was collected from the main communities of the Vilcanota river basin in Peru-Cusco. Sampling was by random route convenience criterion.

#### **Main results (or main arguments in the case of critical reviews)**

Results indicated that participants experienced each extreme event at least once in more than 14% of the sample and that willingness to adapt and mitigate was categorised as "very much" in more than 30% of participants. In addition, there was evidence of significant relationships between experiences with droughts, floods and then landslides with both adaptation and mitigation behaviours. On the other hand, storms were found to be less significant. The conclusion is that the greater the experience with extreme weather events, the greater the willingness to assume adaptation and mitigation behaviours in scenarios of glacial retreat and climate change.

#### **Implications for research and practice/policy | Importance and originality of the contribution**

It is suggested that future studies assess cultural aspects that could influence adaptation and mitigation processes, and identify potential water-social conflicts due to the proximity to tropical snow-capped mountains and land and water use (Huggel et al, 2020; Vilímek et al, 2014). The implications of the study for the design of climate change adaptation and mitigation programmes.

**Palavras-chave : extreme weather, adaptation, mitigation behaviours, climate change**