Exploring Changes in Hydrological Risk Awareness and Preparedness over Time: A Case Study in the North-eastern Italian Alps

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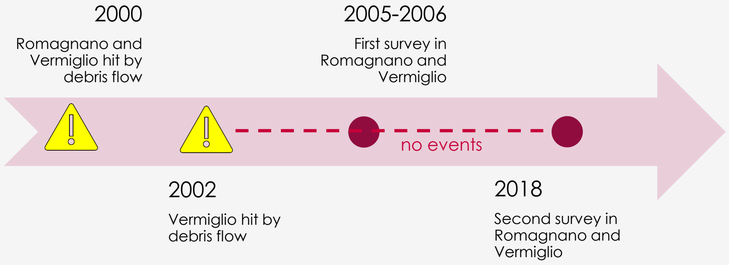
MAIN HYPOTHESIS

Risk awareness and preparedness decay over time in absence of events

1 Background

This **sociohydrological** study aims at understanding how risk awareness and preparedness evolved over ~20 years in two locations in the North-eastern Italian Alps:

- Romagnano – urban
- Vermiglio – alpine



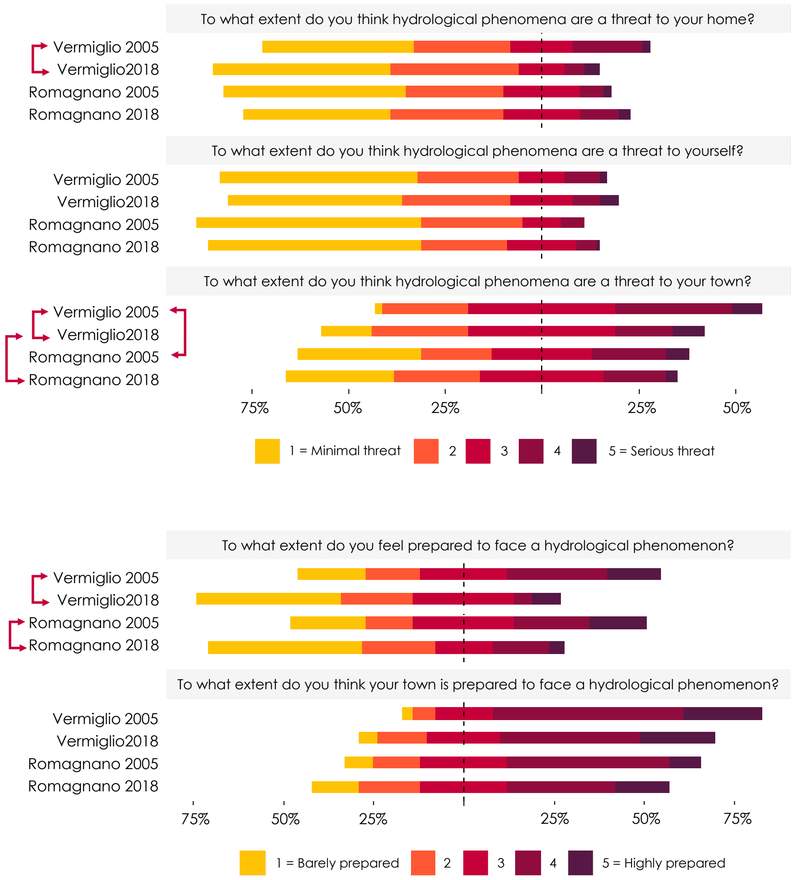
2 Methods

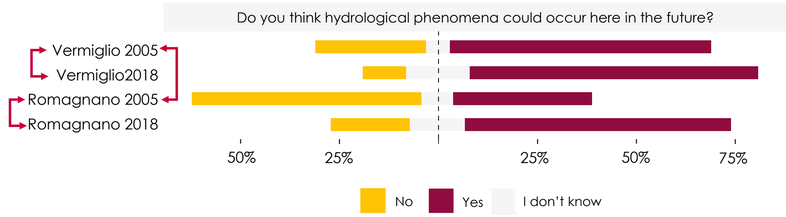
Longitudinal approach → the same community was surveyed twice over a period of 13 years (in 2005 and 2018).

Both surveys assessed the following variables:

- **Feeling of danger** deriving from hydrological risk
- **Awareness** of hydrological risk
- Reported level of **preparedness** to face hydrological risk

= statistically significant difference between the two groups





3 Results

- In the alpine area, **less people think hydrological hazards are a threat**, compared to 2005 (in relations to their home and their town)
- In both areas, **more people now think hydrological phenomena are likely to occur**, compared to 2005
- In both areas, **less people feel prepared now**, compared to 2005

Potentially due to *availability heuristic:* participants were exposed to **media coverage** of hydrological phenomena occurring in neighbouring areas (e.g. flash flood in Moena, TN) just a month before being interviewed!

4 Practical applications

- **Risk communication**: empirical evidence that memory and feelings of danger decay over time, but if correctly stimulated can be kept at a high level
- **Sociohydrological modelling**: longitudinal data can be used to feed and calibrate sociohydrological models, substituting assumptions

Relevant references

De Marchi, B. et al. (2007) 'Risk construction and social vulnerability in an Italian Alpine Region', *Integrated flood risk analysis and Management methodologies*, pp. 1–359

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