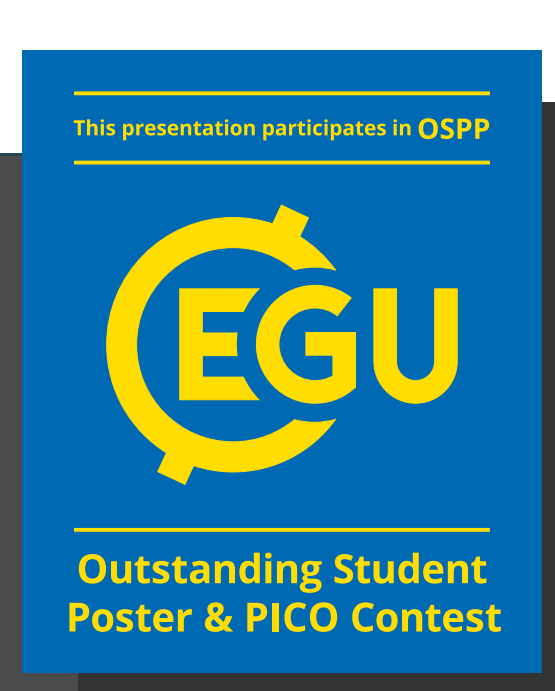


# A longitudinal approach to explore changes in hydrological risk awareness and preparedness



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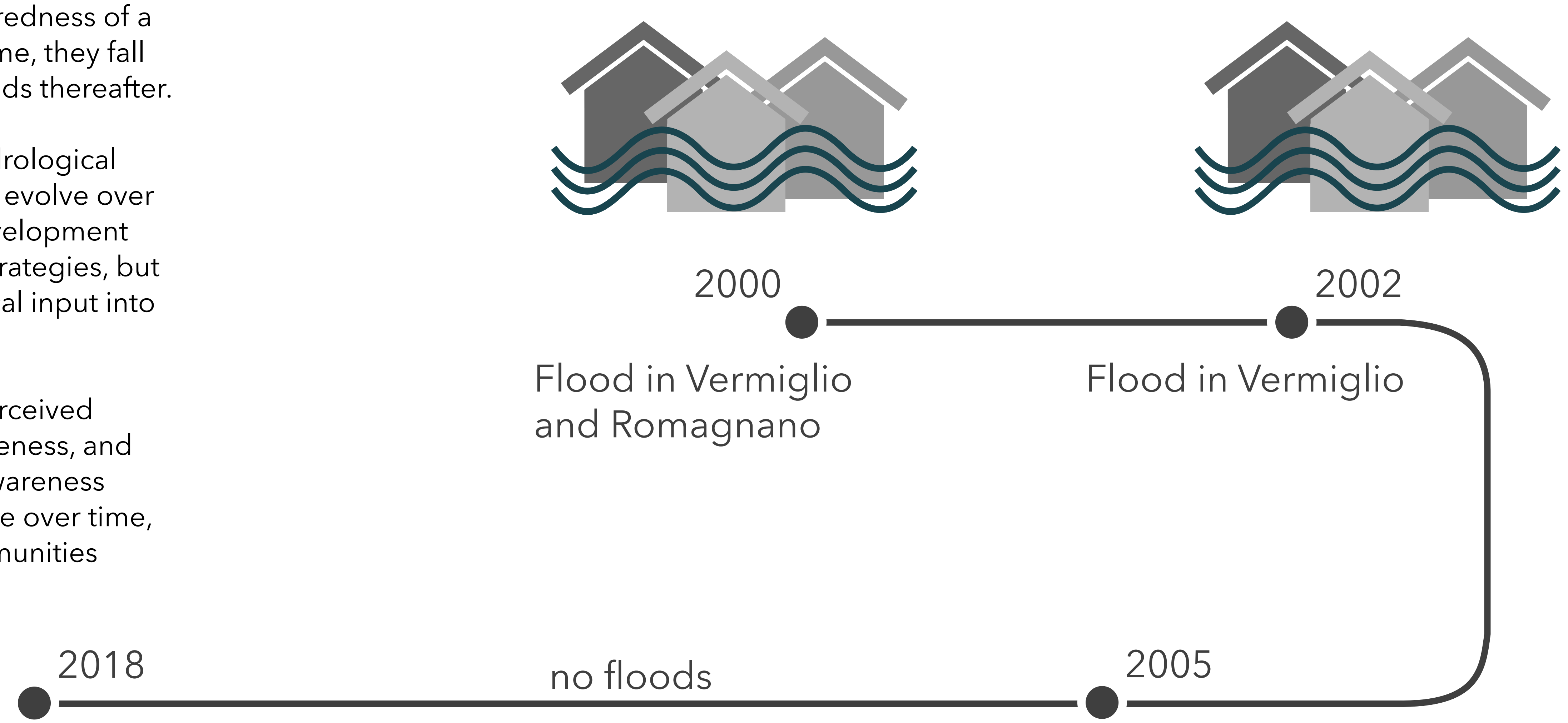
## 1 Background

While cross-sectional studies inform us on the level of awareness and preparedness of a community at a certain point in time, they fall short in indicating how both unfolds thereafter.

However, understanding how hydrological risk awareness and preparedness evolve over time not only can support the development of effective risk communication strategies, but can also provide valuable empirical input into sociohydrological models.

We used perceived threat and perceived likelihood as proxies for risk awareness, and we hypothesised that both risk awareness and preparedness would decrease over time, in absence of events, in two communities hit by floodings.

## 2 Methods



**Vermiglio**  
N = 122  
52% females  
48% males

**Romagnano**  
N = 135  
53% females  
47% males

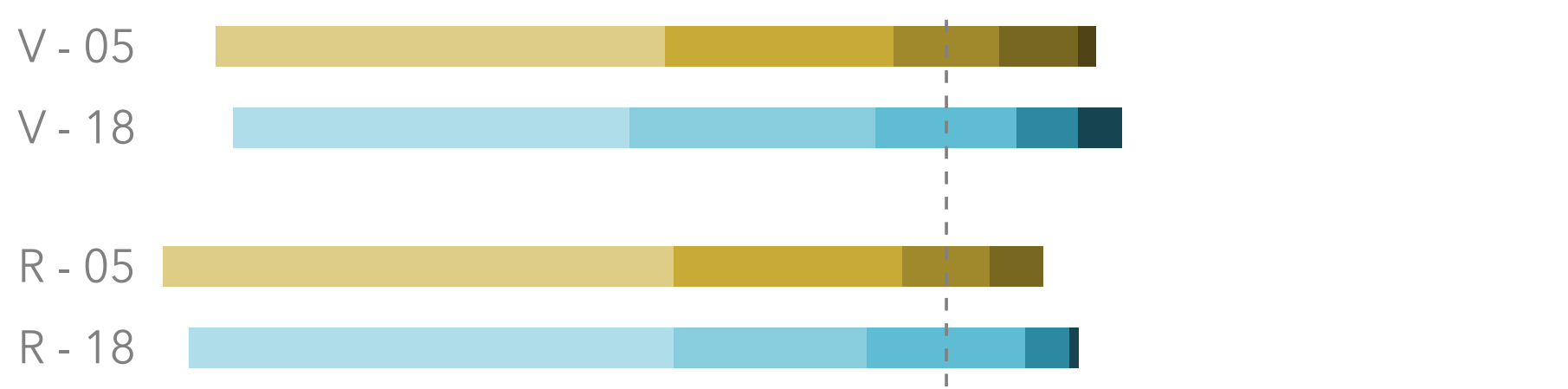


**Vermiglio**  
N = 100  
54% females  
46% males

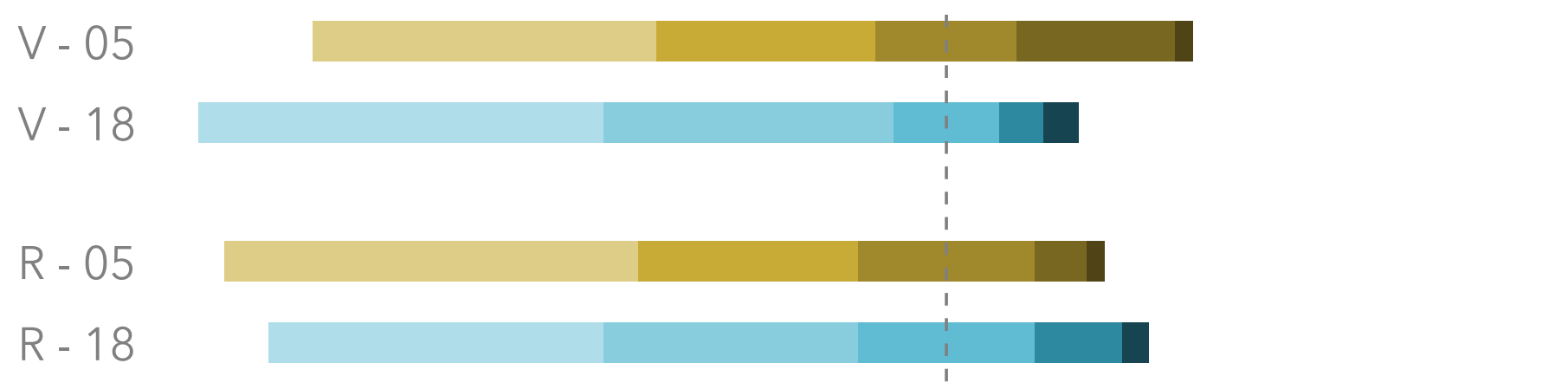
**Romagnano**  
N = 100  
55% females  
45% males

## 3 Results

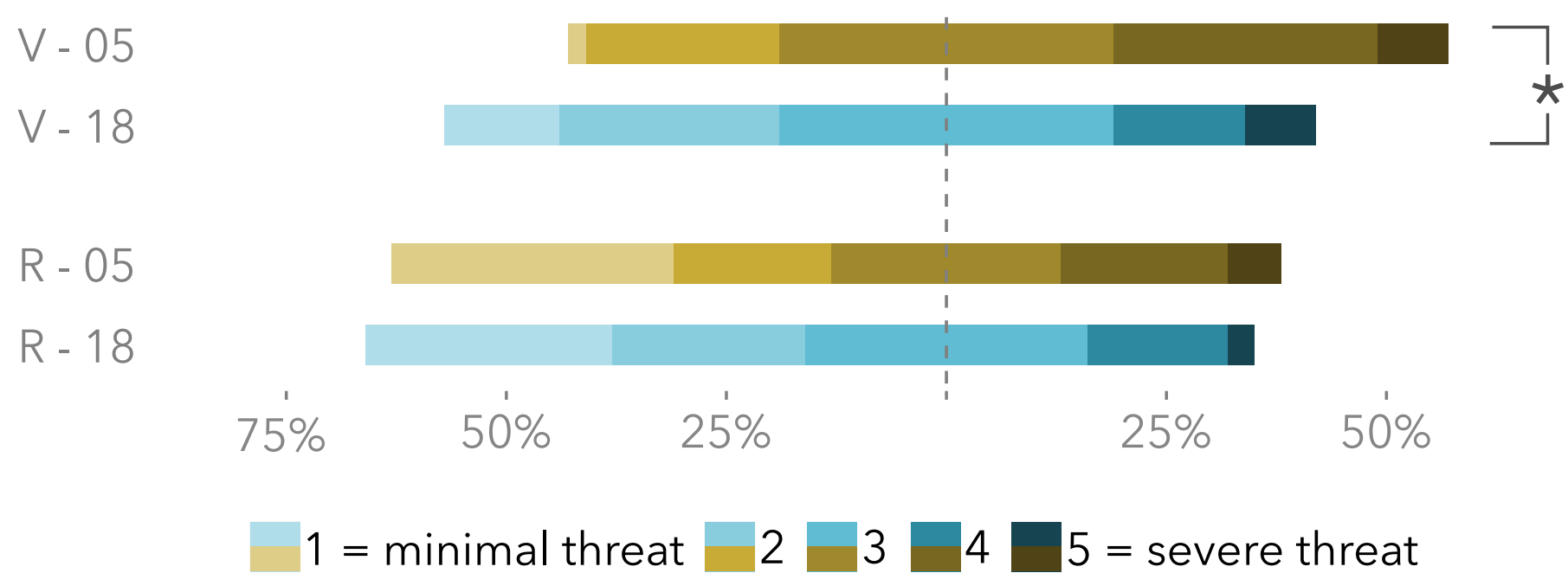
To what extent do you think hydrological hazards are a threat to yourself?



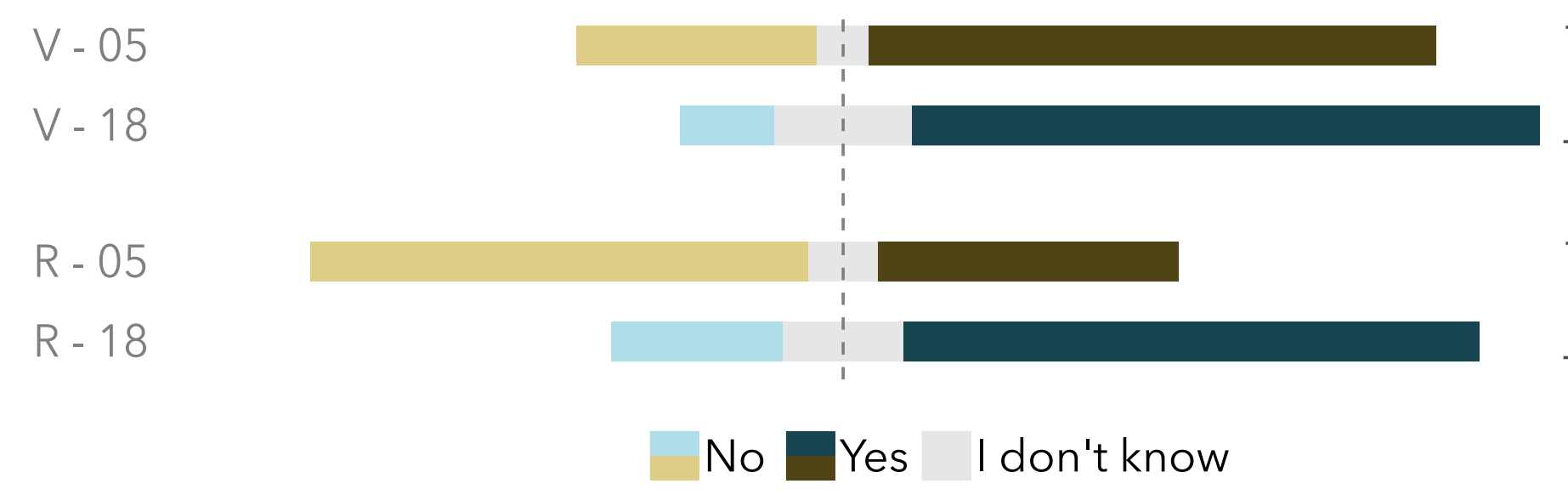
To what extent do you think hydrological hazards are a threat to your home?



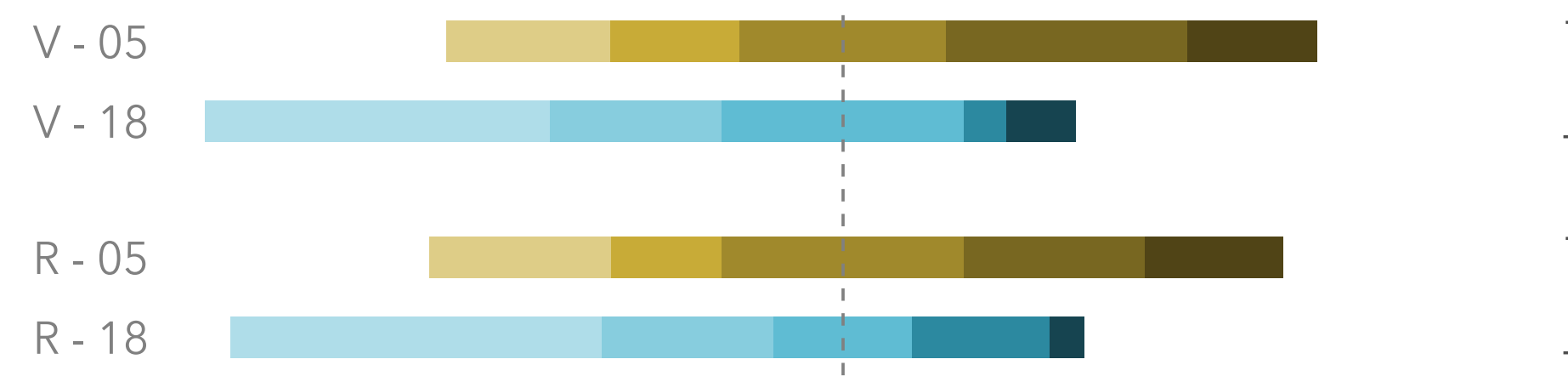
To what extent do you think hydrological hazards are a threat to your town?



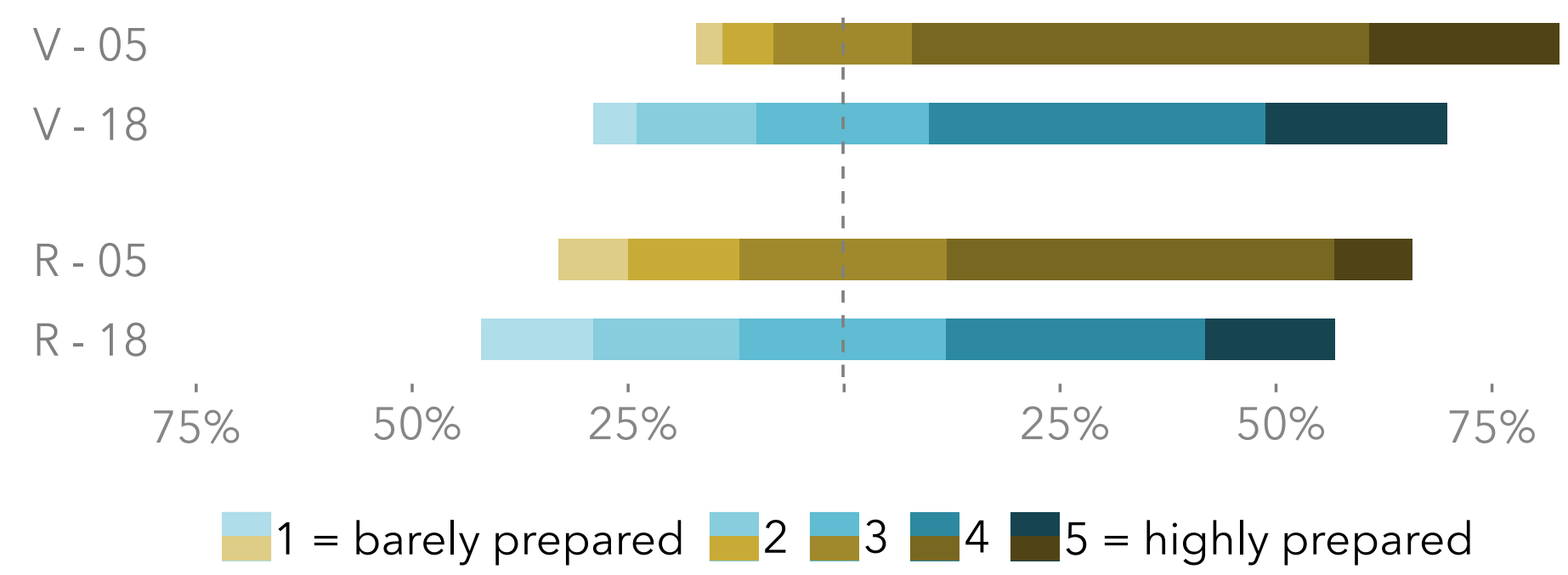
Do you think hydrological phenomena could occur again here in the future?



To what extent do you feel prepared to face a hydrological phenomenon?



To what extent do you think your town is prepared to face a hydrological phenomenon?



\*statistically significant difference  
V = Vermiglio  
R = Romagnano

## 4 Conclusions

In both years, respondents show optimistic bias when it comes to feeling threatened by hydrological hazards - more people report higher levels of threat for the town than for themselves.

Less people feel threatened by hazards, but more people think they are likely to occur, compared to 2005. This is likely due to availability heuristic, as a flooding event occurred in a municipality nearby shortly before the second round of surveys and may have affected the responses.

Finally, sociohydrological models should keep the dynamics of awareness and preparedness separated, as they are influenced by different factors, or even the same factor may have opposite effects on the two.

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