



## **Can environmental conditions affect smallholders' climate change perception? Evidence from an aridity gradient in the Gobi desert.**

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There is a growing interest in smallholders' climate change perception (CCP). Understanding what people perceive in relation to the climate they endure supports national climate change adaptation policy especially relevant to uncertain and resource-scarce environments. Most research so far focused on the accuracy of CCP compared to observed climatic data. However, the potential effect of factors influencing peoples' perceptions remains largely unstudied. This research tests two hypotheses in a desert environment; first, that CCP varies along an aridity gradient, and, second, that respondents are more consistent (answers less far apart) in their CCP when facing more climate shocks, which supports the first hypothesis. A semi-structured survey was conducted among nomadic (Mongolia) (n=180) and semi-nomadic (Inner Mongolia-China) (n=180) herders, to analyse perception along an aridity gradient (proxied by Normalised Difference Vegetation Index) covering an array of climate change issues in the Gobi. Results suggests that environmental conditions have a significant effect on CCP but only in terms of experienced climate shocks. The CCP for other climatic variables (rain, season length) is more diffused and can poorly be predicted by the surrounding environment smallholders live in. Institutional contrasts between China and Mongolia explain marginally differences of perception. Further research is needed to validate these results among smallholders on other environmental gradient types, for examples along altitudinal biome stratification in mountain environments.