

## **Climate Change Risk Perceptions and Household–Level Adaptive Capacity of Citizens in a Landlocked City in North Carolina**

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There exist research biases in the vulnerability and climate change perceptions literature to study areas perceived to be of higher threat, such as coastal communities. This bias can further perpetuate the notion that only coastal communities are at risk, and that those citizens perceive a higher level of threat from climate change. Most perceptions literature also illustrates that those living closer to floodplains and the coast perceive more threat from climate change than those living in less hazard prone communities. These personal and scientific biases are the reasons this study investigates climate change perceptions in a landlocked city.

The public's perception of climate change can impede the translation of mitigation policy as well as accelerate it by influencing the opinions of stakeholders and policy makers. This is why understanding those perceptions is important because they shape climate change adaptation and mitigation policy responses. Local policy responses also have a larger effect by acting as a "laboratory" for testing policy ideas before applying them at state or federal scales. Additionally the scale of this research is important since climate change can be thought of as a cumulative result of local and individual choices.

This study attempts to investigate location to threat in determining perception of threat, by studying this phenomenon in an environment perceived to be low risk. We assess perceptions of climate change threat among citizens with varying levels of social vulnerability in a landlocked city in North Carolina. In addition to climate change perceptions, this study also looks at the level of adaptive capacity of Raleigh households through the use of a household–level survey instrument. This instrument attempts to assess total adaptability through the use of the livelihoods frame work and the five capitals; social, natural, human, financial, and physical. These survey results were gathered in order to find demographic predictors of adaptive capacity and climate change perceptions, as well as to spatially assess, through the use of geospatial interpolation, the most adaptable communities in Raleigh, NC.

Initial results indicate that most respondents believe climate change will affect them personally (64.4%) and that it will also affect non–coastal communities (85.2%). Binary logistic regression results show that as education increases one unit, the probability of belief in climate change goes up by about 69% ( $p=0.0223$ ). Males (~65%) are also more likely than females (~35%) to not feel personally affected by climate change ( $p=0.0408$ ) and the probability of not feeling personally affected goes down by about 27% for every increase in education ( $p=0.0078$ ). Additionally, the initial spatial interpolation analysis shows that low adaptability neighborhoods coincide with high social vulnerability neighborhoods, as indicated by the Social Vulnerability Index (SOVI) developed by Cutter et al.