

Abstract

Extreme weather from climate change poses an escalating threat to vulnerable coastal communities. Understanding the factors shaping public perceptions of extreme weather risks is crucial for improving preparedness and resilience. While advances in hazard models are essential for informing protective actions, less focus has been devoted to investigating the factors influencing risk perceptions and mechanisms to enable decision-making that account for multiple dimensions of vulnerability. Our research applies innovative approaches to explore this issue, including 3D computer graphics visualization, narrative techniques, role-play, and an “ethical matrix” (EM) deliberative tool that elicits diverse perspectives from stakeholders’ lived experiences. Combining climate science with these visualization and social science approaches offers new ways to foster engagement and preparedness in at-risk communities. We will do this by enhancing our existing network in the New York City region to test our ideas using two workshops and surveys attached to those workshops. This work will help us apply to the growing number of grant opportunities in this research area.