



Presenter

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Community-informed, Place-based Vulnerability Assessment for Regional Resilience to Climate Change

The greater Charleston Harbor region is highly susceptible to the projected impacts of climate change due to low lying geography, a disparate socioeconomic spectrum, and invaluable ecosystem services. In coordination with the City of Charleston, SC, I am developing a regional, place-based vulnerability and risk assessment model in order to build social, economic, and ecological resilience into the projected effects of climate change. Traditional vulnerability and risk assessments focus on quantifying the effect of an adverse impact while the incorporation of adaptive management practices as system resilience moves toward solution-based vulnerability and risk assessments.

In order to optimize climate change resilience within the greater Charleston Harbor region, communities must be empowered to self-modify and thrive in the face of potentially severe impacts of climate change-related events (e.g. sea-level rise, precipitation extremes, extreme heat, and hurricane intensities). My research assesses four climate change-related event (e.g. extreme heat) over community-identified endpoints of value and causality-linked impact metrics. This facilitated discussion will utilize inherent community knowledge to identify and prioritize adaptive management practices; community-selected control factors and tools will later be evaluated for implementation feasibility and efficacy within the place-based vulnerability and risk assessment model. The results of my research will support the value- and data-driven risk management that is necessary for Charleston to become a climate change resilient city.

The following questions will guide the discussion.

Given your network of influence and place-based knowledge (e.g. geographic, social, political, cultural, historical, and community), what adaptive management practices / policies should be implemented to mitigate the impacts of climate change specifically focusing on the impacts of sea-level rise, precipitation extremes, extreme heat, and hurricane intensities?

How do you envision your community thriving when projected climate change impacts are a reality?

What strengths does your community have now that need to be built upon?

What aspects need to be modified to enhance community resilience?

What current factors are counterproductive to a future resilient Charleston Harbor region and need to be re-imagined?