Georgetown Climate Adaptation Project: Custom Role Playing Simulations for South Carolina

Project Location

Georgetown County, South Carolina

Project Duration

October 2017 to July 2019

Project Leads

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Project Type

Science Transfer – Promoting the use of science

Project Partners

- Carolinas Integrated Sciences & Assessments, University of South Carolina
- Coastal Carolina University
- Consensus Building Institute
- North Inlet-Winyah Bay National Estuarine Research Reserve, South Carolina
- Georgetown RISE

Project Webpage

http://www.nerrssciencecollaborative.org/project/Plunket18

Overview

In recent years, communities in Georgetown County, South Carolina have been dealing with the impacts of thousand-year rainfalls and Hurricanes Matthew and Florence, along with rising sea levels. The resulting flooding has damaged houses, roads, and habitats, caused schools and business to close temporarily, and created a sense of urgency to develop new strategies for managing the effects of climate change. However, like many rural counties in the U.S., Georgetown is challenged by financial limitations and burgeoning infrastructure needs, making it difficult to focus on climate adaptation and mitigation planning.

This project developed and implemented a novel approach to climate adaptation planning, following a model used in New England. The project team created a customized role-playing simulation that was used in workshops to immerse community members and municipal officials in a fictional, but realistic, climate planning process. A series of workshops helped set the stage for local government action on climate adaptation by gathering diverse perspectives on challenging decisions and allowing leaders to try out collaborative methods for decision-making.

Project Approach

This project emphasized the consensus building and collective risk management approaches used in the New England Climate Adaptation Project. The project team began by creating local projections for future precipitation and temperature based on climate model simulations generated by researchers in the Carolinas Integrated Sciences and Assessments program. Local climate projections were combined with information gathered through interviews with a range of community members, allowing the team to create a role-playing scenario that felt realistic and aligned with the region's geography and culture.

The new role-playing activity was used in a series of workshops in four different communities and two schools. Workshop participants received background information describing their stakeholder role in a fictional county in the southeastern United States, and were then asked to work collaboratively to prioritize actions that could help the community manage flooding risks. Workshops provided opportunities for collective learning, policy recommendation development, and incorporation of climate risk management into local decision-making processes.

In total, nearly 300 community members participated in role-play simulation workshops and debrief discussions. Findings from workshop discussions and participant surveys were presented to Georgetown County Council, helping leaders better understand community perspectives on flooding risks.

Products

- Custom role-play simulation materials based on climate change concerns and stakeholder dynamics that are common throughout the southeastern US coast.
- An instruction guide with teaching notes, learning goals, and tips for correctly implementing the role-play simulation.
- A briefing document for community leaders that summarizes findings from project workshops and participant surveys, and offers recommendations for next steps.
- A Georgetown Climate Adaptation Project webpage that provides an overview of the project background, importance, and results.
- Multiple local news stories featuring community workshops helped to increase local awareness of climate concerns.

Benefits

- Participants reported that the workshops increased their knowledge of climate risks. They found that the experience helped demystify the role of government in hazard planning and allowed them to better see the tradeoffs in making adaptation decisions.
- Two mayors and other municipal officials participated in the workshops, and several town and county councils were briefed on findings. Community leaders gained accurate, localized climate data and survey results on attitudes with suggestions for adaptation planning, and got to experiment with stakeholder engagement in decision-making.
- Twenty-eight partners, including a number of town and county government personnel, received training on how to facilitate the role-playing simulation and conduct debriefing discussions.
- The project enabled greater community dialogue on climate planning and led to specific recommendations for the County Comprehensive Plan

What's Next

- Recommendations and climate data from this project are expected to inform Georgetown County's next update to their Comprehensive Plan.
- This project has helped catalyze a subsequent National Science Foundation-funded project that is further exploring the social networks that can support climate adaptation.
- Building off the success of project workshops, North Inlet Bay Reserve staff have led three customized training modules for Georgetown Public Services Department staff. The trainings and additional assistance for the Department's strategic planning process incorporate local climate projections and promote more explicit planning for climate resilience within a key government office.

About the Science Collaborative

The National Estuarine Research Reserve System's Science Collaborative supports collaborative research that addresses coastal management problems important to the reserves. The Science Collaborative is managed by the University of Michigan's Water Center through a cooperative agreement with the National Oceanic and Atmospheric Administration (NOAA). Funding for the research reserves and this program comes from NOAA. Learn more at nerrssciencecollaborative.org or coast.noaa.gov/nerrs.