AN INNOVATIVE TOOL FOR CLIMATE CHANGE EDUCATION AND ADAPTATION

Stay in touch

The NERRS Science Collaborative is committed to sharing information about the projects we fund in the most effective way we can. Updates about this project will be communicated through nerrs.noaa.gov, webinars, conferences, and meetings.

If you would like to stay in touch with this project, contact our program coordinator:
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What's happening?

The Massachusetts Institute of Technology Science Impact Collaborative is working with four National Estuarine Research Reserve (NERR) sites, and the Consensus Building Institute to test an innovative way to help coastal communities understand and prepare for the potential impacts of climate change. With a $637,023 grant from the NERRS Science Collaborative, the team will engage four at-risk New England towns in testing the use of role-play simulations as a means to educate the public about climate change threats and to help communities explore ways of decreasing their vulnerability and enhancing their resilience.

The findings of this project will provide valuable insights into techniques for engaging communities in public learning, risk management, and collaborative decision-making around science-intensive public disputes. They also will inform the development of a model approach that communities in New England and elsewhere can use to address climate change.

Why this project?

Climate change has the potential to impact coastal communities in a variety of ways, including increased flooding; saltwater intrusion in marshes, farmlands and wells; erosion; and damage to infrastructure and property. While it is not possible to forecast exactly how and where these

A view over Barnstable, Massachusetts, one of the project's four partner towns.

impacts will occur, stakeholders can make investments and policy changes that will reduce their vulnerability to these risks, while supporting the health of local environments and the communities that depend on them for quality of life.

Making such decisions requires that scientists and stakeholders work together to identify and address local climate change risks. Further, it demands that communities work across diverse interests and opinions to invest in infrastructure and policies that truly reduce local vulnerability. For this to occur, at-risk communities need a process by which stakeholders can absorb and meaningfully discuss complex scientific concepts and build consensus across competing perspectives about what should be done.

Role-play simulation workshops are an innovative approach to engaging and educating the public on climate change. This team will model and evaluate this approach with four New England towns located near NERRS sites—Barnstable, Massachusetts; Dover, New Hampshire; Wells, Maine; and Cranston, Rhode Island.

Participants playing a climate change adaptation role-play simulation in New Bedford, Massachusetts.

About the funder

The NERRS Science Collaborative puts Reserve-based science to work for coastal communities coping with the impacts of land use change, stormwater, non-point source pollution, and habitat degradation in the context of a changing climate. Our threefold approach to connecting science to decision making includes:

- Funding: We award an average of $4 million annually to projects that incorporate collaboration and applied science to address a coastal management problem.

- Transfer of knowledge: We are committed to sharing the knowledge generated by the local, place-based research we fund. If you're interested in following this project, contact cindy.tufts@unh.edu

- Graduate education: We sponsor two fellowships in TIDES, a Master's of Science program at UNH that provides the skills needed to effectively link science to coastal decision making.

The program operates by a cooperative agreement between the University of New Hampshire (UNH) and the National Oceanic and Atmospheric Administration.

Learn more at....

nerrs.noaa.gov/ScienceCollaborative.aspx

How will this project work?

In each of the four communities, the team will prepare risk assessments that highlight critical vulnerabilities and opportunities to enhance resilience. These will inform stakeholder assessments that allow the team to understand how these possible impacts might affect different members of the community, existing stakeholder views on climate change adaptation, and potential barriers to action.

Based on these assessments, the team will design multi-stakeholder negotiation role-play simulations, tailored for each community and its priority threats and interests. These workshops will engage local officials, leaders, and residents. Participants will assume roles that reflect the key interests of their community and engage in mock negotiations focused on how their community would respond to different climate-related threats given limited resources, diverse and/or conflicting perspectives, and high levels of uncertainty.

The project team will use post workshop surveys and in-depth interviews with participants and public debriefings with key stakeholders to analyze the effectiveness of these workshops in creating a shared understanding about climate change and a direction for local action.

At the same time, they will work to spark further interest in climate change adaptation within each community and to help town officials and residents collaboratively think through adaptation planning.

The team also plans to develop resources that can be used by NERRS sites to catalyze similar efforts in other communities. These include an interactive website, an online forum for discussion between researchers and NERR staff, press releases, role-play workshops with students and teachers at local secondary schools, and publishing research findings for academic and non-academic audiences.

Narragansett Bay National Estuarine Research Reserve in Rhode Island, one of the four partner NERR sites.