

Community Adaptation to Sea-Level Rise and Inundation (CASI)

*Improving Communication for Better Decision Making
through Data Visualization and Deliberative Polling*

While research on societal responses to climate change has grown rapidly over the past decade, few resources have been developed to broadly engage local citizens in evaluating place-specific policies for coastal climate change adaptation. Coastal communities in the United States will confront substantial risks from climate change due to sea-level rise and inundation, in combination with rising temperatures and increased hydro-meteorological hazards. Located in a region of the United States experiencing high rates of land subsidence in conjunction with rising sea levels from climate change, the mid-Atlantic coast of the United States is particularly vulnerable.

CASI Research Partnership

George Mason University,
Dewberry, U.S. Naval Academy,
Center for the Study of Local
Issues at Anne Arundel
Community College

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As communities contend with loss of coastal lands from rising sea levels and increased occurrences of flooding during storm events, one of the largest challenges for decision makers is engaging stakeholders and building broad support for actions that will increase long-term community resilience within healthy coastal ecosystems.

The “Community Adaptation to Sea-Level Rise and Inundation” project – termed CASI – will test a model of public engagement to evaluate its efficacy in creating the conditions for the development of community preferences for policies that address sea-level rise and inundation using theoretical models of risk perception, and individual and collective policy preference formation. The project will employ online visualization of local sea-level rise impacts, and public deliberation on policy responses in conjunction with polling of local citizens. The demonstration project will be conducted in Anne Arundel County, Maryland, which is currently assessing its vulnerability to sea-level rise and policies to minimize impacts and protect resources. Between 2,200 to 6,900 acres along Anne Arundel County’s shorelines are threatened by inundation from sea-level rise.

The project has been funded with a grant from Mid-Atlantic Sea Grant, and will extend from November 2011 to October 2012. George Mason University serves as the lead institution, with team members from the Department of Environmental Science and Policy, the School of Public Policy, and the Department of Communication. Faculty from the U.S. Naval Academy and the Center for the Study of Local Issues at Anne Arundel Community College, and scientists and engineers from Dewberry, are also participating in the project.

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