PLANNING FOR SEA LEVEL RISE IN FLORIDA

HELP US HELP YOU

This project runs from November 2011 to August 2014. Your input is critical to ensure it remains focused on relevant sea level adaptation planning questions and that the resulting information and tools are useful in your work.

Fall 2012: Project members will present sea level rise vulnerability assessments to stakeholder representatives and receive input at focus group meetings.

Fall 2013: Diverse stakeholder representatives will jointly identify sea level rise adaptation scenarios during facilitated meetings.

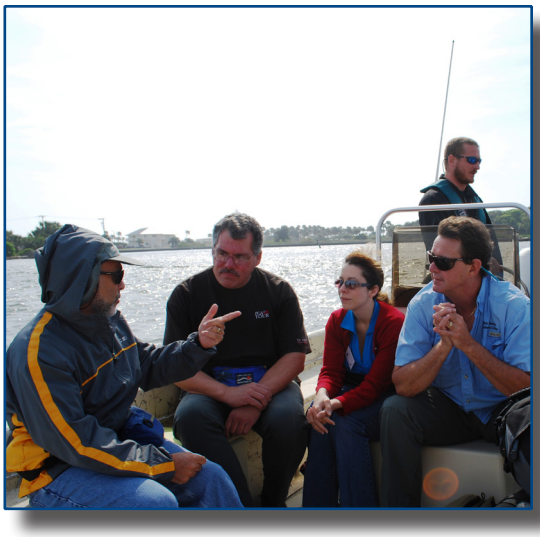
Summer 2014: The public and other interested persons will participate in a regional sea level rise adaptation planning workshop that will showcase the project's accomplishments and set the stage for future planning.

For questions about the collaborative process being used to generate knowledge relevant to intended users, contact Dawn Jourdan at the University of Oklahoma: dawnjourdan@ou.edu

What's happening?

Florida's Guana Tolomato Matanzas National Estuarine Research Reserve (GTMNERR) and the University of Florida have received a grant to work with Matanzas Basin stakeholders to plan for sea level rise in a way that protects communities and the environments they depend on for quality of life and commerce. Follow what's happening on the project at: planningmatanzas.org

The team is using a structured collaborative process to work with planners, property owners, and scientists to identify areas of conflict and agreement related to sea level rise, develop land use scenarios to illustrate the results of different planning decisions, and communicate these scenarios to the general public. Ultimately their goal is to develop a balanced, stakeholder-driven process of planning for sea level rise that can be used throughout the state and serve as a model for other regions.



Investigators from this project discuss coastal management issues with local stakeholders in Florida's Matanzas Basin.

Why this project?

Even small increases in sea level rise can damage infrastructure and property, threaten public health and safety, impact local economies, and alter habitats. A common response to this threat is to armor the shoreline with structures like bulkheads and dikes, and eventually, to retreat to higher elevation. For the commercially and biologically important animals that currently thrive in Florida's estuaries, survival depends on access to natural corridors for retreat.

Yet in Florida's low lying and vulnerable coastal communities, strategies to protect people and wildlife from sea level rise are not well integrated into the planning and decision-making process. This lack of coordination is due, in part, to the high level of uncertainty about sea level rise and its impacts. It is also influenced by state law, which only requires counties to prepare plans with time horizons of 10 years.

The 100,000-acre Matanzas Basin presents a unique opportunity to develop a model process for longer-term sea level rise planning that balances the needs of communities and ecosystems. Only ten percent of this highly threatened and valued coastal area is developed; the rest is given over to natural areas. This provides local communities with more flexibility to develop plans and land use scenarios that integrate natural systems.

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GUANA TOLOMATO MATANZAS NATIONAL ESTUARINE RESEARCH RESERVE
UF UNIVERSITY of FLORIDA
National Estuarine Research Reserve System Science Collaborative
NOAA
University of New Hampshire

Left: Pellicer Creek Aquatic Preserve. Right: Pellicer Creek and uplands. A large percentage of uplands in the Matanzas basin are working forests, where ongoing silvicultural activities bringing biological and economic concepts together to prescribe and apply treatments to help reach land management objectives.

About this project

This project is a collaboration of Florida's Guana Tolomato Matanzas National Estuarine Research Reserve (GTMNERR) and partners from the College of Design, Construction & Planning at the University of Florida. Intended users of this science and the planning tools include public officials, land-owners, local residents, and other NERRS sites.

For more information

Visit the project's web site: planningmatanzas.org.

For questions about the applied science aspects of this project, contact Kathryn Frank from the University of Florida's College of Design, Construction & Planning: kifrank@ufl.edu

For questions about the collabortive process being used to generate knowledge relevant to intended users, contact Dawn Jourdan from the University of Oklahoma: dawnjourdan@ou.edu

For questions about the GTMNERR's role in this project, contact Reserve Manager, Mike Shirley: michael.shirley@dep.state.fl.us

About the funders

This project is supported by the National Estuarine Research Reserve System Science Collaborative, a partnership of the National Oceanic and Atmospheric Administration and the University of New Hampshire. Projects sponsored by this program bring intended users of science into the research process so that their perspectives can inform problem definition, research implementation, and ultimately, the practical application of research results to help manage coastal environments, protect human health and property, and support coastal economies.

For more information, visit: nerrs.noaa.gov/sciencecollaborative.aspx

How does this project work?

The project team is using a structured collaborative process to engage stakeholder input at three levels: 1) a steering committee including representatives of northeast Florida counties, city planners, land owners, and residents who provide input to help shape planning scenarios, visualizations, and communication products; 2) focus groups comprised of broader sets of land-owners, residents, planners, and officials who provide another layer of input; and 3) a regional workshop that allows the general public to learn about, and provide reactions to, the tools developed for sea level rise planning in the Matanzas Basin.

From this broad base of stakeholder input, the project team and partners are developing and testing a process for sea level rise adaptation that integrates ecological and built environments and prioritizes areas where habitat migration corridors are viable. As part of this process, they identify the behavioral, social, and institutional factors that influence the willingness and ability of stakeholders, planners, and public officials to conduct habitat vulnerability assessments and apply adaptive conservation designs.

The resulting model process will be packaged as a "guidebook" to help other planners and stakeholders address the technical and collaborative aspects of sea level rise adaptation planning.

It will include techniques to identify and negotiate local land use conflicts, strategies to conduct "readiness assessment" for further adaptation planning, and an approach to transition these efforts into policy.

Ultimately, the model process guidebook, methodologies, and best practices developed through this project will be evaluated to ensure robustness and transferability to the NERR System, state planning and natural resource management agencies, and other coastal areas.

Aerial image of the town of Marineland and the Intracoastal Waterway within the Matanzas Basin. Located on the coastal strand, the town and surrounding marshes may be vulnerable to impacts from sea level rise.