



The BUZZ

A Quarterly Newsletter

The BUZZ is a forum for Silver Jackets teams' successes, opportunities and resources.

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Yazmin Seda-Sanabria Appointed Acting Deputy Chief USACE Office of Homeland Security

By Katie Noland, USACE IWR

The USACE Office of Homeland Security is pleased to welcome Yazmin Seda-Sanabria as the acting deputy chief. Ms. Seda-Sanabria is on temporary assignment for the next three months. She will oversee matters related to Flood Risk Management, Emergency Management, and Critical Infrastructure Protection and Resilience. Ms. Seda-Sanabria is the national program manager of the Office of Homeland Security's Critical Infrastructure Protection and Resilience Program at USACE Headquarters. In this role, she provides oversight for program development, execution, and implementation of risk management strategies for enhancing the security and resilience of USACE's Civil Works critical infrastructure projects.

In 1994, Ms. Seda-Sanabria joined the U.S. Army Engineer Waterways Experiment Station – now U.S. Army Engineer Research and Development Center (ERDC) – as a research structural engineer in the Geosciences

and Structures Division, Geotechnical and Structures Laboratory. While at ERDC, she was involved in multiple research and development programs related to analysis and design of concrete hydraulic structures, as well as rapid load capacity assessment of bridges. She joined USACE Headquarters in 2006 as the Executive Direction and Management, general expenses program manager in the Civil Works Program Integration Division. In 2007, Ms. Seda-Sanabria joined the Office of Homeland Security in her current position.

Ms. Seda-Sanabria holds a bachelor's degree and master's degree in Civil Engineering from the University of Puerto Rico at Mayagüez. She earned a Master of Science degree in Engineering Mechanics from Mississippi State University. In 1998, she received the American Society of Civil Engineers' Young Government Civil Engineer National Award in recognition of her public and professional service achievements. In 2002,



she received the Women of Color Government and Defense Award for Technical Innovation in recognition for her efforts leading to the development and implementation of innovative technologies for rapid load capacity assessment of bridges. She has authored more than 30 publications, including peer-reviewed journal and conference papers, invited articles, and technical reports. She is a member of various professional engineering organizations, including the American Society of Civil Engineers, the Association of State Dam Safety Officials, the U.S. Society on Dams, and the Sigma Xi Research Society.

Coastal app identifies coastal protection value of existing reef and wetland habitats and allows users to design restoration solutions.

Coastal App Wins Global Disaster Resilience App Challenge

By Zach Ferdaña, The Nature Conservancy

Esri and the U.N. Office of Disaster Risk Reduction (UNISDR) announced the Coastal Resilience decision [support tool](#) as the winner of the best professional and scientific app for disaster risk reduction in September, 2014. As part of the Global Disaster Resilience App Challenge, the winning Coastal Defense app is a module of the Coastal Resilience tool platform. The app identifies the coastal protection value of existing reef and wetland habitats and allows users to design restoration solutions. The UN recognition of this app as supporting

disaster resilience issues can be found on the [UNISDR website](#).

Coastal Resilience is a web-based tool that provides local, state and national planners with a step-wise process to guide decisions to reduce the ecological and socio-economic risks of coastal hazards. The tool works nationwide and globally to assess risk and identify risk reduction solutions and operates at multiple scales for more detailed planning in more than a dozen states and numerous communities. A core feature of the tool is the open source applications that integrate coastal hazards with social, ecological, economic, and coastal engineering in identifying solutions. The [Coastal Defense app](#) helps to: (1) identify areas that may be at risk of coastal erosion and inundation from wave action and storm surge, (2) examine interactively the role of coastal habitats in attenuating wave height and energy, and (3) determine appropriate adaptation strategies that incorporate green (habitats) and grey (seawalls and other man-made structures) infrastructure trade-offs. The app has been deployed in Puget Sound, Washington (tidal marshes), Mobile Bay, Alabama (oyster beds), and in Southeast Florida (coral reefs, mangroves, and underwater

artificial structures) and is actively being used to make on-the-ground adaptation, conservation, and restoration decisions.

In Mobile Bay the app is supporting The Nature Conservancy and a coalition of partners in restoring coastal Alabama one mile at a time. Called *100-1,000 Restore Coastal Alabama*, the project intends to build 100 miles of oyster reefs that will create the conditions needed to plant, support, and promote more than 1,000 acres of coastal marsh and seagrass. There are ten recently constructed sites that are actively being monitored in Mobile Bay, projects that bring communities together to discuss and plan for the future of the Bay. The sites range in size from 15 to 1,500 meters in length and total approximately 3,600 meters or approximately two miles. The location and design of these emerging oyster reefs are determined through stakeholder engagement, partnership development, and the use of the app to project potential future scenarios as the reefs grow.

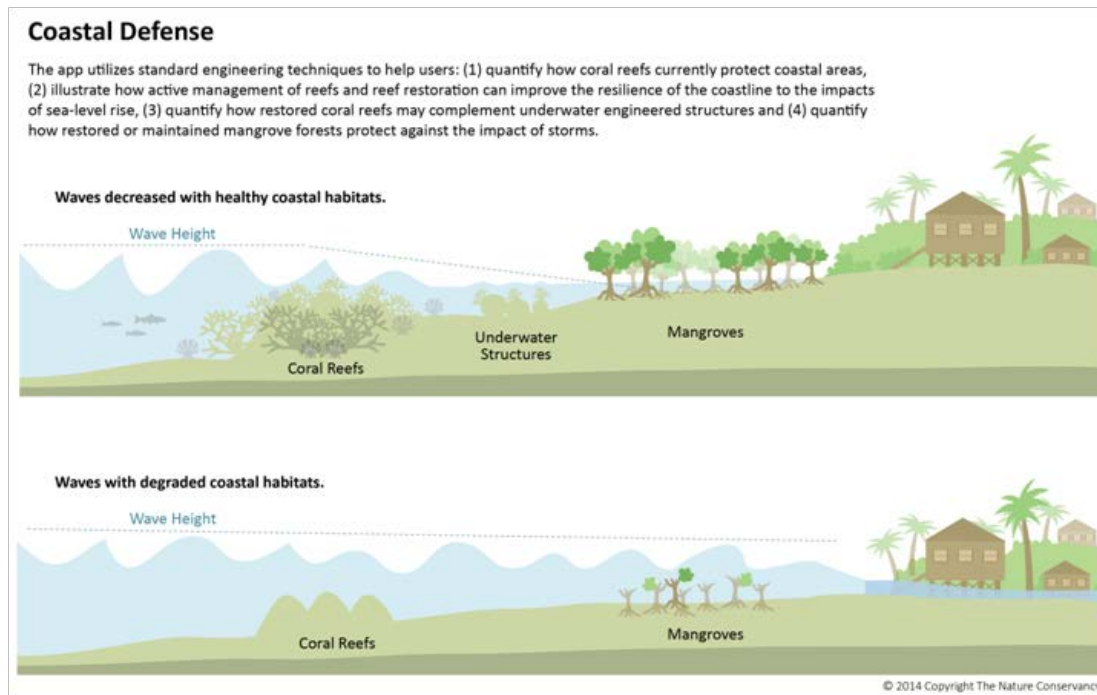
In the coming year, the app is being expanded to include all of South Florida as well as New Jersey, North Carolina, Virginia, the Caribbean, and other sites in the Gulf of Mexico. The development



Oyster reef restoration in Mobile Bay, AL, as part of the Restore Coastal Alabama project.

of Coastal Resilience and the Coastal Defense app has led to many important local partnership opportunities, as well as global ones, including being the first environmental partner for the Rockefeller Foundation's 100 Resilient Cities Initiative, providing technical support on natural infrastructure.

"Recently we've seen how people and local economies have suffered during the different hurricanes and storms that have hit the country and around the world. The severity is in part because we have let our coastal habitats degrade and in some cases disappear. Looking forward, along with increased community awareness and preparation, we need tools to understand and clearly communicate how our natural resources increase coastal resilience," Greg Guannel, coastal engineer and modeler at The Natural Capital Project, said. "Coastal Defense helps fill this gap by providing non-technical audiences access to complex socio-ecological models and giving stakeholders the power to create and visualize the consequences of different habitat management options. We hope that this will support our communities to make more informed adaptation and restoration decisions."



Coastal Resilience has been rapidly expanding and now includes 12 U.S. coastal states, (Alabama, California, Connecticut, Florida, Louisiana, Mississippi, New Jersey, New York, North Carolina, Texas, Virginia, Washington), four countries in Latin America (Mexico, Belize, Guatemala, Honduras), and in three island nations in the Caribbean (Grenada, St. Vincent and the Grenadines, and the U.S Virgin Islands). There are also U.S. national and global web maps that together form the Coastal Resilience network.

The Nature Conservancy, Natural Capital

Project, NOAA, USGS, UC Santa Cruz, and the University of Southern Mississippi have developed the Coastal Defense app collaboratively. More information can be found on the [Coastal Resilience website](#). The new Coastal Defense app will be released in February as part of the Southeast Florida Coastal Resilience project.

Coastal Resilience has been previously featured in The Buzz: July 2013 "Engaging Communities to Address Natural, Climate-Related Hazard Mitigation through Hazard Visualization," and October 2013 "Announcing New Coastal Resilience Tools."

App provides non-technical audiences access to complex socio-ecological models to visualize the consequences of different habitat management options.