

ONCE UPON A DECISION SUPPORT SYSTEM: COMMUNICATING COASTAL RESILIENCE SCIENCE AND TOOLS THROUGH DIGITAL STORIES

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As the risk of rising seas and more frequent storms looms over many coastal communities, private and public organizations clamor to develop tools to help support decisions that reduce ecological, social, and economic impacts. Unfortunately, this can result in a seemingly endless influx of similar tools that can overwhelm communities just trying to get started. Thus, investment in a decision support system needs to be coupled with an investment in its delivery and training to target audiences.

The Nature Conservancy's (TNC) Coastal Resilience is an approach and online mapping tool that guides decisions to reduce the risks of coastal hazards and identify nature-based solutions. A critical component of Coastal Resilience is making sure that community stakeholders and decision makers understand the value of both the approach and the tool so they can customize it to suit their needs while contributing to its growth. To accomplish this, the Coastal Resilience team is working with local practitioners to build a library of "digital stories" that are focused on communicating how the decision support system was used in a planning process and how it led to action. The goal of these short videos is to walk audiences through how the approach, science, and tool(s) were used by a community to identify nature-based solutions, guide investments in adaptation and restoration, or influence local policy.

This presentation will focus on the creation and implementation of several digital stories from across the Coastal Resilience Network. The town of Old Saybrook, Connecticut used multiple Coastal Resilience applications to identify 214 acres of open space parcels that are suitable for future wetlands. Their digital story is being used to guide acquisition and progressive land management strategies. Another story illustrates how stakeholders in Southeast Florida are using the Coastal Defense app to inform the Southeast Florida Regional Climate Compact as they examine nature-based solutions to reduce risk and improve the resilience of coastal communities. Lastly, TNC partnered with the Environmental Systems Research Institute's (Esri) ArcGIS Pro software team to develop a groundbreaking 3D video that highlights the science and hydrodynamic modeling behind an innovative coral reef breakwater project. This video demonstrates how restoring a coral reef ecosystem helps protect the small fishing town of Grenville, Grenada, from coastal erosion and flooding. Digital stories help empower project teams to communicate their vision of nature-based solutions with decision makers, funders, development and tourism sectors, and make the case for similar solutions in other geographies.

Decision support systems are powerful in that they bring disparate stakeholders together and give local planners the power to make more informed decisions about their community's future. However, filtering through the plethora of online tools available can be daunting for many communities. Digital stories are a creative way to help planners understand the tools at their disposal and how others have successfully used them. These videos help planners visualize how Coastal Resilience can inform their own planning processes and ultimately give them the opportunity to make a more compelling case for

funding, permitting projects, and policy changes.