

# Coastal Resilience on Virginia's Eastern Shore

**An unprecedented effort to reduce risks from sea-level rise and storms and identify nature-based solutions to enhance resilience.**

The Eastern Shore of Virginia lies within one of the nation's most threatened coastal regions. Sea levels here are rising at three to four times the global average and storms are expected to intensify, both linked, in part, to climate change. Tens of millions of dollars have been spent in the past on piecemeal and reactive approaches to address the mounting challenges of climate-related hazards. Often these efforts have exacerbated the area's vulnerability.

Founded in 2010, the Eastern Shore Climate Adaptation Working Group, coordinated by the Accomack-Northampton Planning District Commission, is addressing this challenge through education, outreach, and providing information to local communities to plan for sea-level rise, recurrent flooding, and storm surge. These efforts have resulting in achieving a major new milestone: The U.S. Department of Interior has awarded **\$1.96 million** from the Hurricane Sandy Coastal Resiliency Fund to The Nature Conservancy and Climate Adaptation Working Group partners **to equip coastal communities with the tools and information urgently needed to reduce the risks posed by climate-related hazards and enhance the area's natural resilience.** This will be accomplished through two major initiatives:



LANDSAT 7 TM image of the Delmarva Peninsula on the U.S. East Coast, 2009



Volunteers constructing oyster reef from Oyster Castles near Box Tree. Photo by Bowdoin Lusk

**1. Create Eastern Shore Coastal Resilience Planning Tool.** The *Coastal Resilience* tool will incorporate the best available science, data, and state-of-the-art analytical tools for assessing risks of coastal hazards on people, the economy, and the ecosystems of the Eastern Shore using local information. The novelty of this tool is that it will also enable identification of nature-based solutions like oyster and wetland restoration to mitigate risk and enhance resilience.

**2. Demonstrate Nature-Based Solutions.**

The Nature Conservancy and partners will restore a total of five oyster reefs, which will be used to demonstrate and quantify how natural infrastructure can dampen wave energy and mitigate coastal erosion. Three of these reefs will be restored along eroded roads at Chincoteague National Wildlife Refuge and two will be built fronting marsh near the Village of Oyster.

## Why the Eastern Shore

Though rural in character, the Eastern Shore is an important economic engine in the Mid-Atlantic. The region is home to the nation's largest clam aquaculture industry, a premier NASA rocket launch facility, and extensive public lands available for recreational and ecotourism activities, including Chincoteague National Wildlife Refuge. The activities are all possible because of the Eastern Shore's unparalleled natural riches and coastal wilderness. Along its seaside runs the world's longest expanse of a naturally functioning barrier island ecosystem. This critical habitat for migratory birds and marine life has been the site of intensive scientific research over the last three decades by the University of Virginia's Virginia Coast Reserve Long-Term Ecological Research Project, which is funded by the National Science Foundation.



Antares rocket launch from NASA-Wallops Flight Facility. Photo courtesy of NASA.



Shoreline at Franklin City. Photo by Gwynn Crichton

## The Future

Working together with the Eastern Shore Climate Adaptation Working Group, The Nature Conservancy, Accomack-Northampton Planning District Commission, and UVA's Long-Term Ecological Research Project have an unprecedented opportunity to apply best available science to develop planning tools and natural infrastructure solutions that have the potential to mitigate risks of sea-level rise and storms while enhancing the Eastern Shore's unique natural resilience now and for future generations.

***The Eastern Shore is not alone in its plight, yet it is poised to be a leader for communities facing similar challenges. The science and the support tools that emerge from this effort will transfer broadly to other coastal systems, transforming the Eastern Shore into a model of resilience for coastal communities around the globe.***

## For More Information

For project resources and information, please visit: [www.conservationgateway.org](http://www.conservationgateway.org) and enter "Virginia's Eastern Shore" in the search box.

For more information on the *Coastal Resilience* approach and tool, please visit: [www.coastalresilience.org](http://www.coastalresilience.org)

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