



The National Coastal Zone Management Program

Measuring Performance: Coastal Hazards



The National Coastal Zone Management Program

The National Coastal Zone Management (CZM) Program is a voluntary partnership between the National Oceanic and Atmospheric Administration (NOAA) and 34 coastal states and territories. Established under the Coastal Zone Management Act (CZMA) in 1972, the program seeks to protect, restore, and responsibly develop our nation's diverse coastal communities and resources.

The Importance of Coastal Hazards

Coastal communities are home to more than 160 million people and generate more than half of the U.S. economic output. However, coastal areas are susceptible to a number of natural hazards, including coastal storms, flooding, coastal erosion, tsunamis, and sea level rise, which will be exacerbated by climate change. These hazards threaten lives, property, infrastructure, the natural environment, and, ultimately, economies. Each year, coastal hazards result in hundreds of millions (sometimes billions) of dollars in damage and associated costs.

Mitigating Coastal Hazards

The National CZM Program minimizes state and community risk to coastal hazards by helping to identify high-risk areas, promoting development decisions that protect lives and property, and improving hazard understanding and awareness. The program developed several metrics to track and assess its performance in achieving the hazard goals of the CZMA. The metrics focus on the National CZM Program's role in enhancing coastal communities' resilience to coastal hazards and educating and training community members about hazards and how to reduce hazard risk.

Putting It into Context...

16.4 million people

Approximate population residing in coastal floodplain in 2010 (5% of the population)

58% economic output

Percentage of the U.S. economic output that comes from coastal areas in 2010

\$527 billion

Value of assets insured by the National Flood Insurance Program in the coastal floodplain in 2011

\$24 billion

Total losses, in billions, paid out by the National Flood Insurance Program in the coastal floodplain between 1978 and 2011

Source: NOAA's State of the Coast. www.stateofthecoast.noaa.gov.

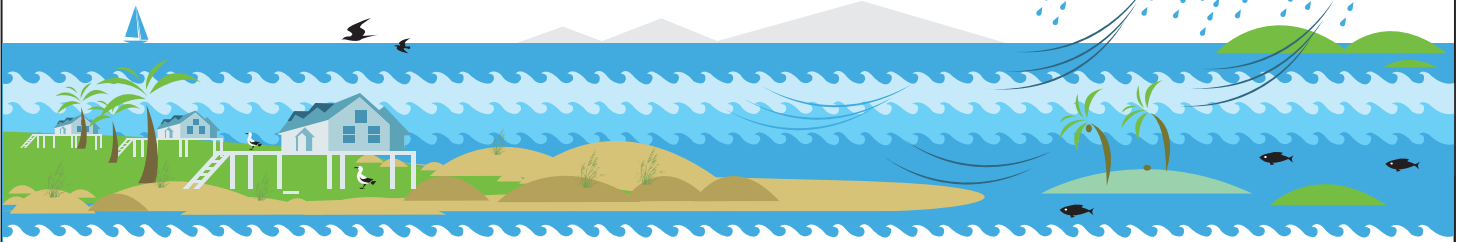
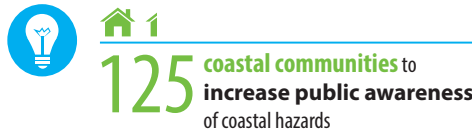
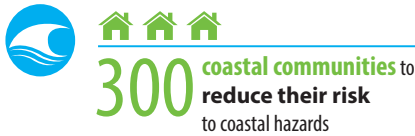
COASTAL HAZARDS

Between 2008 and 2011

Goal: Increase the percentage of coastal communities implementing management practices to improve resilience and increase public awareness

Getting Results

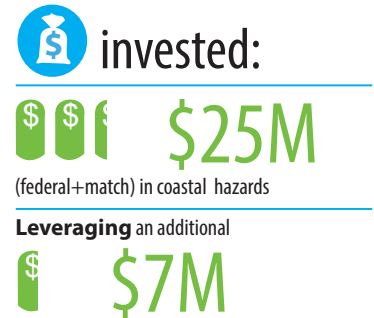
The National CZM Program worked with:



Increasing Capability



Putting Funding to Work



=100 communities =1,000 people = \$10 million

Spotlight: National CZM Program Makes Maryland Coastal Communities More Resilient

With rising sea levels and naturally occurring land subsidence, Maryland is one of the most vulnerable states to climate change. As part of the National CZM Program, Maryland launched the CoastSmart Communities Initiative to provide communities with the information and resources they need to protect lives, property, public infrastructure, and important habitats from coastal hazards and climate change. As part of the initiative, the Maryland Coastal Management Program provides training and direct technical assistance to local decision makers, and competitive funding to help coastal communities. Since the initiative began in 2008, the program has awarded over \$500,000 to support projects in nine communities. For example, the Maryland Coastal Management Program worked with Dorchester County to develop a comprehensive technical guide to respond to sea level rise. As a result, the county recognized that many of its properties

would be vulnerable to more frequent flooding and amended its building code to ensure that new and redeveloped structures would be elevated to accommodate sea level rise and more frequent flooding. Thanks in part to assistance from the National CZM Program, a total of over 50 Maryland communities have now amended their building codes to further elevate structures, protecting lives and property. For more information on the CoastSmart Communities Initiative, visit www.dnr.state.md.us/CoastSmart/.



Credit: Wanda Cole

"Without support from the coastal [management] program, Queenstown and . . . other small municipalities wouldn't have the necessary tools to help local communities prepare for future storm events and shoreline change."

—Kathy Boomer, Member, Queenstown Planning Commission