



# COASTAL RESILIENCE

COASTALRESILIENCE.ORG

Coastal Resilience is a program led by The Nature Conservancy to examine nature's role in reducing coastal flood risk. The program consists of an approach, a web mapping tool, and a network of practitioners around the world supporting hazard mitigation and climate adaptation planning.

## APPROACH

The approach consists of four critical steps:



**1. Assess Risk and Vulnerability** to coastal flood hazards including current and future storms and sea level rise



**2. Identify Solutions** for reducing flood-related risk across social, economic and ecological systems



**3. Take Action** at priority conservation and restoration sites to help communities identify and implement nature-based risk reduction solutions



**4. Measure Effectiveness** to ensure that efforts to reduce flood risk while increasing community and ecosystem resilience are successful

**Coastal Resilience projects around the U.S., encompassing 17 coastal states, in the Caribbean, across Mexico and Central America, and a global effort enable planners, government officials, and communities to develop risk reduction, restoration and resilience strategies.**



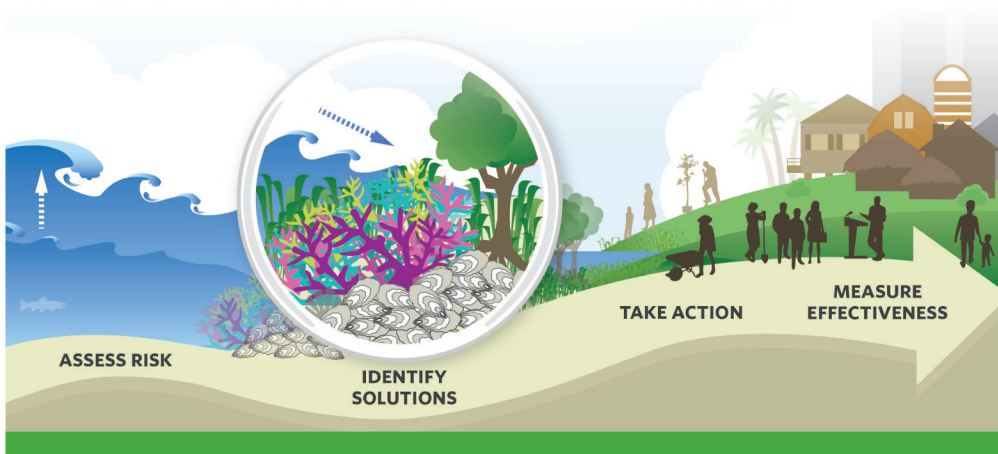
The program has trained and supported over 100 communities around the world on the uses and applications of Coastal Resilience, focusing on the identification of nature-based adaptation and risk mitigation solutions.

## SOLUTIONS & ACTIONS

The best solutions may depend less on modern infrastructure, and more on rethinking how we value existing natural resources. By providing information on coastal hazards, socio-economics, habitats and ecosystems, Coastal Resilience explores nature-based solutions in:

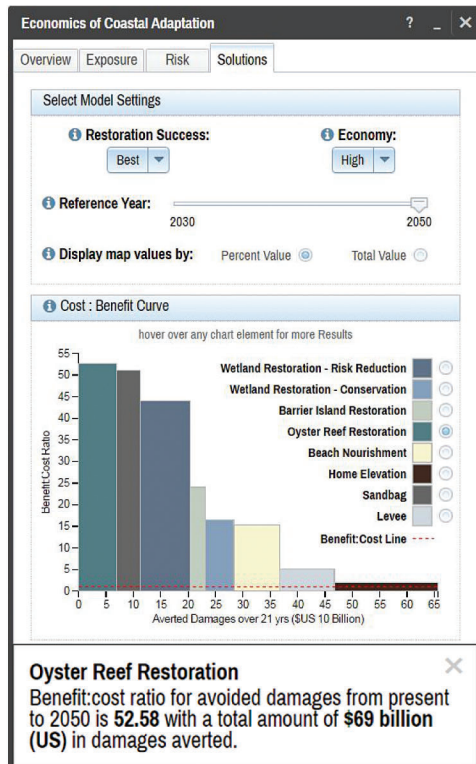
- protecting or restoring habitats as buffers to flooding in front of coastal communities
- developing hybrid approaches that link natural and built defense structures
- accommodating the landward movement of tidal marshes and mangroves as sea levels rise
- designing restored oyster and coral reefs as breakwaters that reduce wave height and power
- removing incentives to build in high-risk areas

**The science of nature-based solutions in reducing coastal flood risk is growing rapidly; a Coastal Resilience communication and decision support tool examines when and where they are most effective.**



## MAPS & APPS

An innovative web-mapping tool consists of a data-viewing platform and web apps designed to engage key stakeholders and provide decision support.



The Coastal Resilience tool allows users to:

- view potential impacts of sea level rise, surge from storms and hurricanes, and inland flooding
- combine coastal habitat and exposure with socio-economic data to identify where habitat management may most reduce risks
- examine natural and built coastal defense strategies
- compare risk and vulnerability indicators across countries



**Web apps are customized to meet a specific need, whether a coastal management policy, post-storm disaster decision-making, community assessment, hazard mitigation plan or cost effectiveness evaluation.**

## NETWORK

Coastal Resilience practitioners are collaborating with engineering firms, the reinsurance sector, aid groups and multi-national institutions to find viable nature-based solutions to climate change, for instance:

- guiding Connecticut's sea level rise policy
- developing a cooperative agreement with the U.S. Navy to actively manage strategic retreat of a naval base in Southern California
- assessing social-ecological vulnerability and prioritizing mangrove and coral reef restoration with the Red Cross in Grenada
- determining the costs and benefits of natural and built infrastructure with SwissRe in the Gulf of Mexico

Contact us at [coastalresilience@tnc.org](mailto:coastalresilience@tnc.org), discover the tool at [maps.coastalresilience.org](http://maps.coastalresilience.org), and follow us @CoastResilience

## PARTNERS INCLUDE:

