

1 STRUCTURE AND INFRASTRUCTURE

Retrofit existing buildings and update utilities:

For every \$1 invested, avoid \$4 in losses.

Build new coastal homes 2 feet above the 1%-annual-chance flood level:

For every \$1 invested, avoid \$17 in losses.

After Hurricane Katrina, Jefferson Parish, LA used FEMA grants and other funds to elevate 23 homes. So far, the project has saved more than double its cost in avoided losses.

2 NATURE-BASED SOLUTIONS

Wetland and reef restoration:

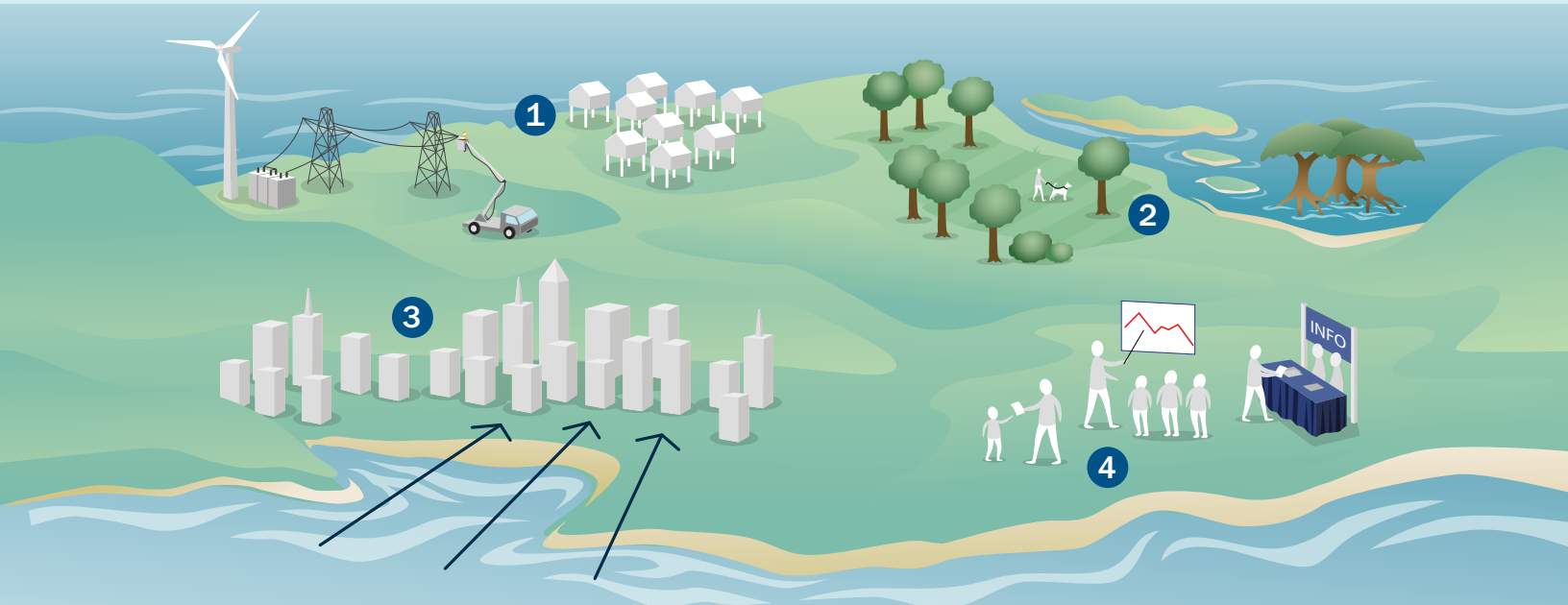
For every \$1 invested, avoid \$7 in losses.¹

A study found that

Wetlands prevented \$625 million in losses

just from Hurricane Sandy.

Natural shoreline protection on the North Carolina shore was not damaged by Hurricane Irene. In contrast, the storm damaged more than 76% of bulkheads.



3 PLANS AND REGULATIONS

Enforce the most recent IRC/IBC codes for new coastal buildings:

For every \$1 invested, avoid \$11 in losses.

Texas buildings built to meet building codes were stronger during Hurricane Harvey. Their insurance claims were half those of buildings built before the codes were adopted.

4 EDUCATION AND OUTREACH

The city and county of Honolulu found that, of 900 survey respondents,

more than 75%

wanted to see the government spend more money on resilience to the impacts of climate change.

Lots of people are interested in resilience, reducing the impacts of climate change, and/or community safety. Connect hazard mitigation to existing concerns and priorities.

Sources:

FEMA (2020). Building Codes Save: A Nationwide Study.

Multi-Hazard Mitigation Council (2019). Natural Hazard Mitigation Saves: 2019 Report. Porter, K. et al. National Institute of Building Sciences. Washington, DC.

Narayan, S., Beck, M.W., Wilson, P. et al. (2017). The Value of Coastal Wetlands for Flood Damage Reduction in the Northeastern USA. Sci Rep 7, 9463.

Reguero, B. et al (2018). Comparing the cost effectiveness of nature-based and coastal adaptation: A case study from the Gulf Coast of the United States. PLoS ONE 13(4)

¹ This study reviewed the Gulf of Mexico only.