

MITIGATION

Focused on reducing loss of life and property by lessening the impact of disasters through increasing risk awareness and leveraging mitigation products, services, and assets across the whole community



Highlights

- Severe drought continues to affect much of the western United States, but new tools and guidance are available to assist states in improving their drought plans.
- The Nation faces growing risks associated with climate change, but Federal agencies and states are taking steps to adapt to those risks.
- The Federal Government is studying how green infrastructure projects that harness natural processes can reduce damage from natural disasters.
- The whole community is increasingly using resilience competitions to spur innovations that will strengthen disaster preparedness nationwide.
- The National Flood Insurance Program continues to face challenges to its long-term financial sustainability.

Frameworks in Action

The *National Mitigation Framework* (the Mitigation Framework) builds on the seven

mitigation core capabilities identified in the Goal and describes 88 critical tasks to support their execution. The Mitigation Framework employs a risk-based approach to reduce loss of life and property and increase community resilience. By reducing risk, mitigation activities reduce the resources needed to respond to and recover from disasters.

As shown in Figure 1, effective mitigation begins with **risk identification**, in which a community identifies the threats and hazards it faces and the likelihood of their occurrence. The community then conducts a **vulnerability assessment** to understand the effects that these threats and hazards would have if they occurred. Based on this understanding of risk, a community can choose one or more **risk management strategies**, including:

- *Risk avoidance* – Preventing exposure to an event (e.g., using zoning laws and other standards to prevent the construction of homes in high-risk areas);
- *Risk reduction* – Minimizing vulnerabilities (e.g., retrofitting buildings to be more resistant to earthquakes);
- *Risk transfer* – Eliminating or limiting financial liability, without reducing vulnerability (e.g., purchasing insurance); and
- *Risk acceptance* – Tolerating any remaining risk and liability (e.g., agreeing to pay a deductible).

Efforts to improve resilience after Hurricane Sandy demonstrate how the Mitigation Framework guides the whole community in employing the Mitigation core capabilities. The President established the Hurricane Sandy



Core Capabilities in the Mitigation Mission Area

- Community Resilience
- Long-term Vulnerability Reduction
- Operational Coordination
- Planning
- Public Information and Warning
- Risk and Disaster Resilience Assessment
- Threats and Hazard Identification

Rebuilding Task Force (the Task Force) to improve rebuilding and develop a comprehensive set of recommendations that cover every component of effective mitigation.

Risk Identification & Vulnerability Assessment: The Task Force recognized the need to identify risks associated with rising sea levels and incorporate them into future vulnerability assessments. Acting on the Task Force’s recommendation, NOAA, FEMA, the U.S. Global Change Research Program, and the U.S. Army Corps of Engineers (USACE) coordinated to develop a sea level–rise calculator and an interactive web-based map to identify risks posed by sea level rise. The mapping tool combines the best available data from peer-reviewed, global sea level–rise scenarios with existing FEMA National Flood Insurance Program maps to estimate where the 100-year floodplain boundaries will be in the future. The interactive web-based map translates data into actionable information by allowing users to see how vulnerable their properties are to the risk of rising sea levels.

Risk Management: The majority of the Task Force’s recommendations focus on improving risk management. The Task Force embraced both risk-avoidance and risk-reduction strategies in its green infrastructure recommendations. For example, the U.S. Department of the Interior’s (DOI’s) Coastal Resilience/Green Infrastructure projects restored 147 acres of floodplains, helping jurisdictions avoid future flood risk by removing existing structures from floodplains and preventing new structures from being built in those locations. Additionally, by freeing the floodplain land to absorb water, jurisdictions have likely reduced the risk of flooding in surrounding communities.

Effectively transferring risk is also critical, as adequate insurance provides policyholders with funds to rebuild quickly after an event. Acting on Task Force recommendations to promote insurance coverage, FEMA has begun clarifying its insurance requirement for obtaining Public Assistance under the Stafford Act and is seeking to incentivize increased levels of private insurance coverage. In addition, the National Academy of Sciences is examining how to make the National Flood Insurance Program more affordable.

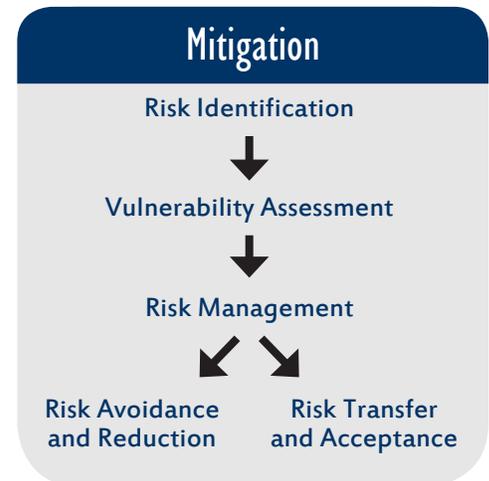


Figure 1. Multiple steps are necessary to conduct effective mitigation.

By the Numbers

- \$1.4 billion** In October 2014, USDA announced the availability of \$1.4 billion in loan guarantees to support projects that improve rural electrical infrastructure in 21 states.
- 1,000 organizations** NOAA has recognized nearly 1,000 organizations under its new Weather-Ready Nation Ambassador™ initiative to build community resilience in the face of increasing vulnerability to extreme weather and water events.
- 43 cents** For every dollar that FEMA spent on Public Assistance in New York for Hurricane Sandy recovery, 43 cents supported mitigation activities. The program’s national average is six cents.

Resilience Innovations

- USGS’s [Coastal Change Hazards Portal](#) is an interactive mapping product that shows shoreline change, extreme storms, and sea level rise. It supports planning and preparedness to enhance coastal resilience.
- A partnership of Federal agencies developed the [U.S. Climate Resilience Toolkit](#), which provides scientific tools, information, and expertise to help people manage their climate-related risks.
- NOAA completed construction of the [National Water Center](#), which will serve as a catalyst for [Integrated Water Resources Science and Services](#), enabling NOAA to work with Federal partners to deliver state-of-the-art analyses and forecasts for floods and droughts.
- DOE published a [study](#) of four major metropolitan areas that offer a flexible and scalable approach to identify energy facilities potentially at risk for flooding from rising sea levels through the year 2100.

Whole Community Accomplishments

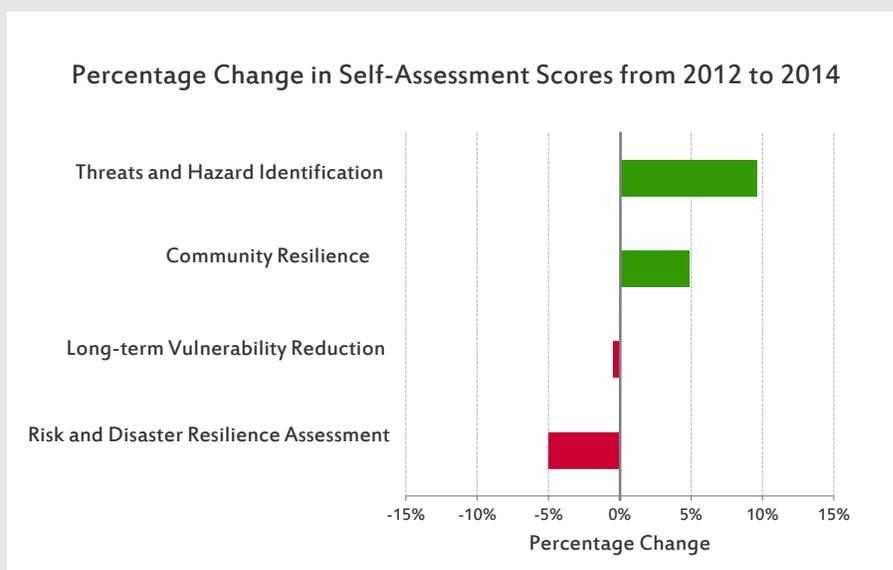
Los Angeles and Long Beach, California In 2014, the cities of Los Angeles and Long Beach, California, working with the State of California and DHS, invested nearly \$6 million for 125 new seismic stations across the region, which advance the capacity to provide early earthquake warnings.

Washington State Washington State is partnering with the University of Washington, FEMA, NOAA, and USGS to build the first tsunami-resistant building in North America. Construction began in 2014.

Nevada Nevada Division of Forestry led an effort that resulted in all counties in Nevada developing plans to provide communities with a prioritized list of hazards and step-by-step recommendations to protect people, infrastructure, and resources from wildfires.

State Perspectives on Preparedness 2014 State Preparedness Report Results

- From 2012 to 2014, the percentage of proficient ratings for Threats and Hazard Identification increased by 9.6 percentage points, second only in progress to Operational Coordination. In contrast, Risk and Disaster Resilience Assessment experienced the third-worst decline in performance among all 31 core capabilities.
- On average, when comparing performance among planning, organization, equipment, training, and exercises, Mitigation core capabilities achieved the highest ratings for planning. Sixty-four percent of states and territories assessed themselves as proficient for planning under Threats and Hazard Identification—an increase of nearly 20 percentage points since 2012.



Note: The chart and statements do not include contributions from the three common core capabilities—Planning, Operational Coordination, and Public Information and Warning.