



Climate Change: Enhancing Federal Resilience

GAO-22-106061 · September 2022

To reduce federal fiscal exposure to climate change, the federal government needs a cohesive, strategic approach, with strong leadership and the authority to manage risks.

Accessible Version

The Big Picture

Between fiscal years 2015 and 2021, selected appropriations for disaster assistance totaled \$315 billion. Disaster costs are projected to increase as certain extreme weather events like drought or extreme rainfall become more frequent and intense because of climate change, according to the U.S. Global Change Research Program and the National Academies of Sciences, Engineering, and Medicine.

[Limiting the Federal Government's Fiscal Exposure by Better Managing Climate Change Risks](#) has been on GAO's High Risk List since 2013. This list identifies government operations that, among other things, need transformation to address effectiveness challenges. Managing climate change is on the list in part because of concerns about the increasing costs of disaster response and recovery efforts.

We identified five areas in which government-wide action is needed to reduce federal fiscal exposure to climate change. These areas include the federal government's roles as (1) insurer of property and crops, (2) provider of disaster aid, (3) owner or operator of infrastructure, (4) leader of a strategic plan to coordinate federal efforts, and (5) provider of data and technical assistance to decision makers.

Federal fiscal exposure to climate change can be limited by enhancing climate resilience—that is, taking actions to reduce potential future losses by planning and preparing for potential climate hazards.

What GAO's Work Shows

Congress and federal agencies can enhance climate resilience by pursuing opportunities related to the three guiding principles of GAO's [Disaster Resilience Framework](#)—information, integration, and incentives.

GAO's Disaster Resilience Framework Principles

Principle:



Information

Accessing information that is authoritative and understandable can help decision makers to identify current and future risk and the impact of risk-reduction strategies.



Integration

Integrated analysis and planning can help decision makers take coherent and coordinated resilience actions.



Incentives

Incentives can help to make long-term, forward-looking risk-reduction investments more viable and attractive among competing priorities.

Source: GAO. | GAO-22-106061

GAO has made numerous recommendations related to these principles. The examples highlighted below have not been addressed as of September 2022.

1. Information

Congress and federal agencies can help decision makers access climate information that is authoritative and understandable to identify current and future risks and the impact of risk-reduction strategies. A government-wide approach is needed to provide decision makers with the best available climate-related information.

➤ We recommended:

- Designating a federal entity to develop and update climate information and to create a [national climate information system](#)

The federal government also needs a comprehensive approach to improve the resilience of the facilities it owns and operates and the land it manages.

➤ **We recommended:**

- Incorporating climate resilience into agency [infrastructure and facility planning](#), and natural hazards and climate change into agency [risk management programs](#)
- Working with relevant professional associations to incorporate climate change information into [structural design standards](#)

2. Integration

Congress and federal agencies can help decision makers integrate analysis and planning to take coordinated action to enhance climate resilience.

➤ **We recommended:**

- Developing a [strategic plan](#)—with clear priorities, roles, and responsibilities—to guide the nation’s efforts to adapt to climate change
- Using information on potential [economic effects from climate change](#) to help identify significant climate risks and to craft appropriate federal responses

In some instances, congressional action is necessary to enable the federal government to invest in projects to enhance climate resilience and help communities prepare for climate change.

➤ **We also suggested that Congress consider:**

- Establishing a federal organizational arrangement to periodically [identify and prioritize climate resilience projects for federal investment](#)
- Establishing a pilot program on [climate migration](#) to identify and provide assistance to for communities interested in relocation as a climate resilience strategy

Federal infrastructure projects, like this system in New Orleans, help protect against coastal storms and flooding



Source: United States Army Corps of Engineers. | GAO-22-106061

3. Incentives

Congress and federal agencies can enhance federal climate resilience by making long-term, forward-looking risk-reduction investments more viable and attractive among competing priorities.

➤ **We suggested that Congress consider:**

- Requiring incorporation of climate resilience into the planning of all [drinking water and wastewater projects](#) that receive federal financial assistance

Challenges and Opportunities

The federal government faces increasing fiscal exposure from climate change, in part because of the complicated crosscutting nature of the issue. GAO’s work shows that opportunities exist for the federal government to develop an approach to manage climate change risks by building resilience into every federal program. In this regard, Congress has taken some actions, like creating programs for water, wastewater, transportation, and electric grid infrastructure resilience projects, in the Infrastructure Investment and Jobs Act.

More from GAO’s Portfolio

Climate Risks to National Security: [GAO-22-105830](#)

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Contact Us:

For more information about this Snapshot, contact: J. Alfredo Gomez, Director, Natural Resources and Environment, GomezJ@gao.gov, (202) 512-3841.

A. Nicole Clowers, Managing Director, Congressional Relations, ClowersA@gao.gov, (202) 512-4400.

Chuck Young, Managing Director, Public Affairs, YoungC1@gao.gov, (202) 512-4800.

Contributors: Joe Thompson (Assistant Director), Holly Halifax (Analyst-in-Charge), Zoe Need, Cynthia Norris, and Dan C. Royer.

Source (cover photo): U.S. Department of Defense, Staff Sgt. Daniel J. Martinez.