

GAO Highlights

Highlights of [GAO-24-106937](#), a report to congressional requesters

Why GAO Did This Study

The effects of climate change have cost the federal government billions of dollars, and these costs will likely increase in the future, according to the National Academies of Sciences, Engineering, and Medicine and the U.S. Global Change Research Program. The federal government will face fiscal exposure from climate change no matter the outcome of domestic and international efforts to reduce emissions. This is in part because greenhouse gases already in the atmosphere will continue altering the climate system for many decades, according to the National Academies of Sciences, Engineering, and Medicine and the U.S. Global Change Research Program.

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, are in need of transformation to address economy, efficiency, or effectiveness challenges. GAO 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.

View [GAO-24-106937](#). For more information, contact J. Alfredo Gomez at (202) 512-3841 or gomezj@gao.gov.

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CLIMATE RESILIENCE

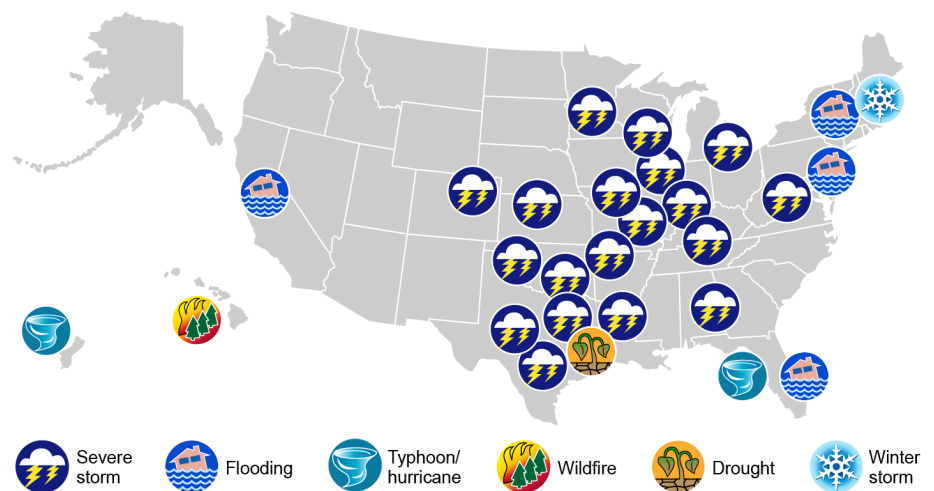
Congressional Action Needed to Enhance Climate Economics Information and to Limit Federal Fiscal Exposure

What GAO Found

Climate economics is an emerging field of study. According to prior GAO work, models that estimate the economic effects of climate change are based on developing research. A small but growing number of researchers have focused their efforts on estimating the economic impacts of climate change. More recent studies have employed frameworks to compare the economic impacts across different sectors and regions within the U.S. These studies produce imprecise results due to modeling and data limitations. However, the available information provides useful insights into the economic costs and benefits estimated to be incurred by the federal government as a result of climate change.

Available estimates indicate significant projected costs to the economy and the federal government as a result of climate change. For example, in 2020, the Congressional Budget Office projected, economy-wide, that climate change will decrease average annual real U.S. gross domestic product growth by 0.03 percentage points from 2020 to 2050. In addition, economy-wide damage information is available for natural disasters in the U.S. The National Oceanic and Atmospheric Administration reported that the U.S. sustained 28 climate-related weather events and natural disasters that cost over \$1 billion in 2023, resulting in \$94.1 billion in total costs (see fig.).

Billion-Dollar Disasters in the U.S. in 2023



Sources: U.S. National Oceanic and Atmospheric Administration; GAO (icons); Map Resources (map). | GAO-24-106937

Available climate economics information also indicates that potential climate damages will be costly for the federal government. For example, according to the *Fifth National Climate Assessment*, climate change may cause tax revenues to decrease and expenditures in some areas to increase. For example, the assessment found that federal disaster response from hurricanes could lead to an increase of \$5.2 billion to \$36 billion in 2050 annual expenditures.

GAO was asked to review the economic costs of climate change to the federal government and to provide detail on how Congress might establish an organizational arrangement to prioritize federal climate resilience investments. This report examines (1) available information on the projected economic costs and benefits estimated to be incurred by the federal government as a result of climate change, (2) the extent to which the federal government has developed the capacity to acquire economic data to help understand federal climate-related financial risks, and (3) what key elements should be included in a federal organizational arrangement to prioritize climate resilience projects for federal investments.

GAO reviewed agency documents and conducted literature reviews to identify and interview 13 experts about key elements of an organizational arrangement. GAO also interviewed staff from the Executive Office of the President's (EOP) Council on Environmental Quality (CEQ), OMB, Office of Science and Technology Policy (OSTP), and the Federal Accounting Standards Advisory Board.

What GAO Recommends

GAO is making four Matters for Congressional Consideration. Specifically, GAO recommends that Congress consider:






1. establishing a federal organizational arrangement to prioritize climate resilience projects for investment. Such an organizational arrangement could be designed for success by authorizing the five key elements GAO identified in this report;
2. designating a federal entity to develop a national climate resilience strategic plan;
3. establishing and maintaining a national climate information system; and
4. designating a federal entity to develop and support agency use of information on the potential economic costs of climate change.

CEQ, OMB, and OSTP provided technical comments that GAO incorporated, as appropriate.

Through recent executive orders and Office of Management and Budget (OMB) guidance, federal agencies have been directed to report climate-related financial risks. However, federal agencies have little capacity to report their climate-related financial risks and improve their reporting about those risks. GAO found that agency financial reports from fiscal years 2022 and 2023 contain little and varied information on climate-related financial risks. However, some agencies have reported information on climate-related financial risks. For example, the U.S. Department of Defense (DOD) reported that climate change has the potential to disrupt operations, pose danger to DOD property and personnel, and necessitate additional funding to support response and recovery efforts. In 2023, DOD reported spending more than \$54 million on contingency preparedness related to climate change.

According to past GAO work and experts GAO interviewed, Congress and federal agencies can enhance climate resilience by developing an organizational arrangement with five key elements that are interdependent (see fig.). Congress and the executive branch have taken steps to develop these elements, but further congressional action is needed to implement them.

Five Key Elements of an Organizational Arrangement to Prioritize Climate Resilience Investments and to Limit Federal Fiscal Exposure to Climate Change

 National climate resilience strategic plan	Federal climate change efforts should be coordinated in a strategic plan toward common goals, such as climate resilience.
 National climate information system	The federal government should identify and update the best available climate information.
 Expanding the use of economics information	Sponsoring or conducting research on the potential economic effects of climate change could help identify significant risks.
 A consistent approach for prioritizing climate resilience investments	The federal government should periodically identify and prioritize climate resilience projects for federal investment.
 Community-driven climate migration pilot program	Assisting communities that express affirmative interest in relocation should be used as a climate resilience strategy.

Source: GAO; GAO (icons). | GAO-24-106937

Over time, GAO has observed variable progress and prioritization for each element individually. GAO has made recommendations and matters related to these key elements in prior reports. Congressional action would ensure consistent and complementary policies and procedures across relevant federal funding mechanisms and engage nongovernment partners in limiting fiscal exposure. All 13 experts GAO interviewed generally agreed that congressional action is needed to establish authority or funding for an organizational arrangement to prioritize climate resilience investments and limit federal fiscal exposure. A federal organizational arrangement would be better positioned to invest in federal climate resilience projects with the highest priorities if it had all five elements working together as a system. This organizational arrangement would help limit federal fiscal exposure by prioritizing climate resilience investments toward the areas of greatest risk. Until Congress acts to establish these five key elements and the overarching organizational arrangement, climate resilience efforts may vary significantly and lack coherence to maximize impact over time.