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June 20, 2023

The Honorable Maria Cantwell  
Chair  
Committee on Commerce, Science, and Transportation  
United States Senate

The Honorable Susan M. Collins  
Vice Chair  
Committee on Appropriations  
United States Senate

### Climate Change: Summary of GAO’s Work on Federal Climate Resilience Projects

[Limiting the Federal Government’s Fiscal Exposure by Better Managing Climate Change Risks](#) has been on GAO’s High Risk List since 2013.<sup>1</sup> The federal government has made some progress to limit federal fiscal exposure to climate change since then, but significant work remains. Specifically, the federal government can enhance its climate resilience efforts—planning and preparing for climate hazards now to reduce potential future losses—to help limit federal fiscal exposure and the need to take far more costly actions in the future.

You asked us to review information on the net economic costs of climate change to the federal government, to recommend how the federal government could fill gaps in localized economic cost and benefit data, and to provide information on how Congress could establish an organizational arrangement to prioritize federal climate resilience investments. As a first step toward a broader effort, we are providing in enclosure 1 a summary of our related published work and reports on climate resilience and the status of relevant recommendations we made to federal agencies and matters for congressional consideration. In response to your request, we also have ongoing work to examine the full range of these issues, including additional analysis of climate economics information available to characterize federal climate-related fiscal exposures.

The Council on Environmental Quality (CEQ), Office of Management and Budget (OMB), and Office of Science and Technology Policy (OSTP) within the Executive Office of the President provided technical comments, which we incorporated in the enclosure, as appropriate.

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As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies of this report and enclosure to the appropriate congressional committees, the Chair of CEQ, the

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<sup>1</sup>GAO’s High-Risk List identifies government operations that are vulnerable to fraud, waste, abuse or mismanagement, or in need of transformation. See GAO, *High-Risk Series: Efforts Made to Achieve Progress Need to Be Maintained and Expanded to Fully Address All Areas*, [GAO-23-106203](#) (Washington, D.C.: April 2023).

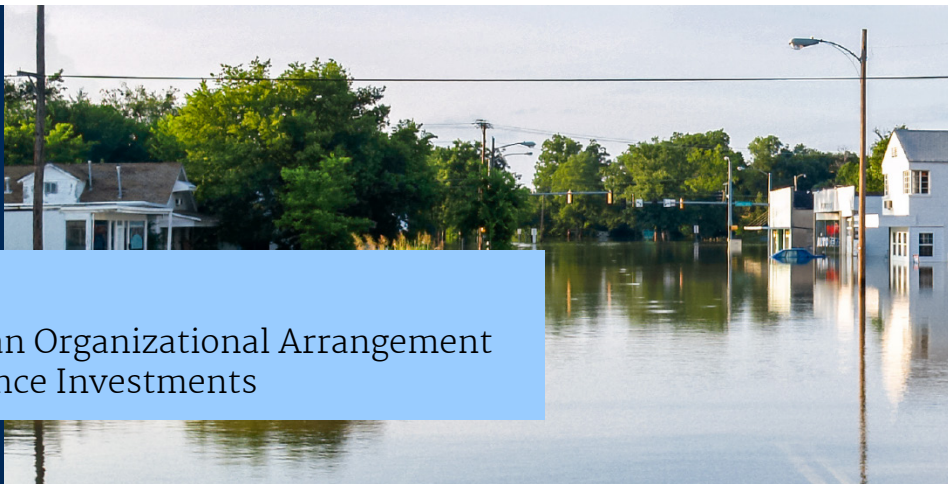
Director of OSTP, and the Director of OMB. In addition, the report and enclosure will be available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff members have any questions about this report or enclosure, please contact me at (202) 512-3841, or [gomezj@gao.gov](mailto:gomezj@gao.gov). Contact points for our offices of Congressional Relations and Public Affairs and contributors to this report may be found in enclosure 1.

A handwritten signature in black ink that reads "Alfredo Gómez". The signature is written in a cursive style with a large, stylized 'G'.

J. Alfredo Gómez  
Director, Natural Resources and Environment

Enclosure – 1



## Enclosure 1

Climate Change: Elements of an Organizational Arrangement  
for Prioritizing Federal Resilience Investments

GAO-23-106362 · June 2023

Changes in the Earth's climate are projected to cause [billions of dollars in economic damages](#) in the U.S., according to the [National Academies of Sciences, Engineering, and Medicine](#) and the [U.S. Global Change Research Program](#) (USGCRP). However, the federal government has not developed a national strategic approach to manage climate risks or prioritize resilience investments to reduce future damage.

## The Big Picture

The federal government faces increasing fiscal exposure to climate change in its role as a provider of disaster assistance and insurance programs and as property owner. According to the Office of Management and Budget (OMB), climate-related impacts, such as damage to coastal property, have [cost the federal government billions of dollars](#). OMB projects that these costs will likely rise in the future. In 2017, GAO reported that information on the [economic effects of climate change](#) in the U.S. is imprecise but offers some insights into the regions and economic sectors that could be most affected.

Since 2013, GAO has included [Limiting the Federal Government's Fiscal Exposure by Better Managing Climate Change Risks](#) on its High Risk List. This list identifies government operations that are vulnerable to fraud, waste, abuse or mismanagement, or need transformation to address effectiveness challenges.

## Hurricane Michael Damaged Tyndall Air Force Base



Source: U.S. Department of Defense/U.S. Air Force Staff Sgt. R. Conroy. | GAO-23-106362

Investments in enhancing climate resilience—planning and preparing for climate hazards now to reduce potential future losses—can help limit federal fiscal exposure and the need to take far more costly steps in the future.

## What GAO's Work Shows

GAO's work shows how Congress and federal agencies can enhance climate resilience by developing an organizational arrangement with five elements to periodically identify and prioritize key climate resilience projects for federal investment:

## 1. Climate Change Strategic Plan

In 2023, GAO reported that a [national climate change strategic plan](#) would help the federal government target resources to reduce climate-related risks.

- **We recommended** in 2009 that the Executive Office of the President (EOP) develop a national [strategic plan](#) to adapt to climate change.
- **We recommended** in 2011 that entities within EOP establish [federal climate change priorities](#).

The Council on Environmental Quality (CEQ) within EOP has [begun to better organize climate resilience efforts](#), and EOP has established a [National Climate Task Force and a Climate Policy Office](#). However, EOP has not developed a national strategy.

## 2. National Climate Information System

Federal, tribal, state, local, and private-sector decision makers may be unaware of what climate information exists or may be unable to use it.

- **We recommended** in 2013 that USGCRP identify and [update the best available climate-related information for infrastructure planning](#).
- **We recommended** in 2015 that EOP create an operational [national climate information system](#).

The Office of Science and Technology Policy (OSTP) within EOP has [taken some actions](#), such as

developing a [guide for federal agencies](#), but EOP [has yet to develop a national climate information system](#).

### 3. Expanding the Use of Climate Economics Information

In 2017, GAO reported that methods used to estimate the potential [economic effects of climate change](#) in the U.S. have limitations but can provide insight into potential damages across sectors.

➤ **We recommended** that entities within EOP use [information on the potential economic effects of climate change](#) to help identify and respond to climate risks facing the federal government.

OMB within EOP has taken [some action](#) in response to this recommendation and a 2021 [executive order](#) requiring certain agencies to report on climate-related financial risk, including issuing [reporting guidance](#). However, federal agencies still need assistance [identifying and managing](#) these risks.

### 4. Prioritizing Climate Resilience Investments

In 2019, GAO reported that the federal government had invested in projects that may enhance climate resilience but did not have a [strategic approach to guide climate resilience investments](#).

➤ **We suggested** that Congress establish a [federal organizational arrangement to identify and prioritize climate resilience projects](#) for federal investment.

GAO has also [reported](#) on potential climate resilience strategies and [agency adaptation efforts](#). For example, in 2021, GAO reported on how the U.S. Department of Transportation could [enhance the climate resilience of federally funded roads](#).

### 5. Community-Driven Climate Migration Pilot Program

In 2020, GAO reported that few U.S. communities had considered [climate migration](#) as a resilience strategy and noted that federal programs provide limited support for climate migration efforts.

➤ **We suggested** that Congress establish a [climate migration pilot program](#) with leadership from a federal organizational arrangement.

The federal government has [taken some action](#) in response to this suggestion but has yet to establish a climate migration pilot program.

#### Neighborhood in Santa Rosa, California, after a 2017 Wildfire



Source: G. Crutsinger, Scholar Farms. | GAO-23-106362

## Challenges and Opportunities

- Limited climate economics data on sectors and geographical impacts exist to help federal agencies identify and manage fiscal exposures.
- Methods used to estimate the potential economic effects of climate change are complex, developing, and produce limited results. However, they can provide useful insights into broad themes about potential climate damages.
- The [Infrastructure Investment and Jobs Act](#) and the [Inflation Reduction Act of 2022](#) provided funding for programs to invest in climate resilience projects.

## Agency Comments

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

## More from GAO's Portfolio

Enhancing Federal Resilience: [GAO-22-106061](#)

Oversight of Emissions Reductions: [GAO-22-106062](#)

GAO prepared this enclosure in response to a request from the Honorable Maria Cantwell, Chair, Committee on Commerce, Science, and Transportation, United States Senate; and the Honorable Susan M. Collins, Vice Chair, Committee on Appropriations, United States Senate. This is a first step in a broader, ongoing GAO climate economics effort.

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