



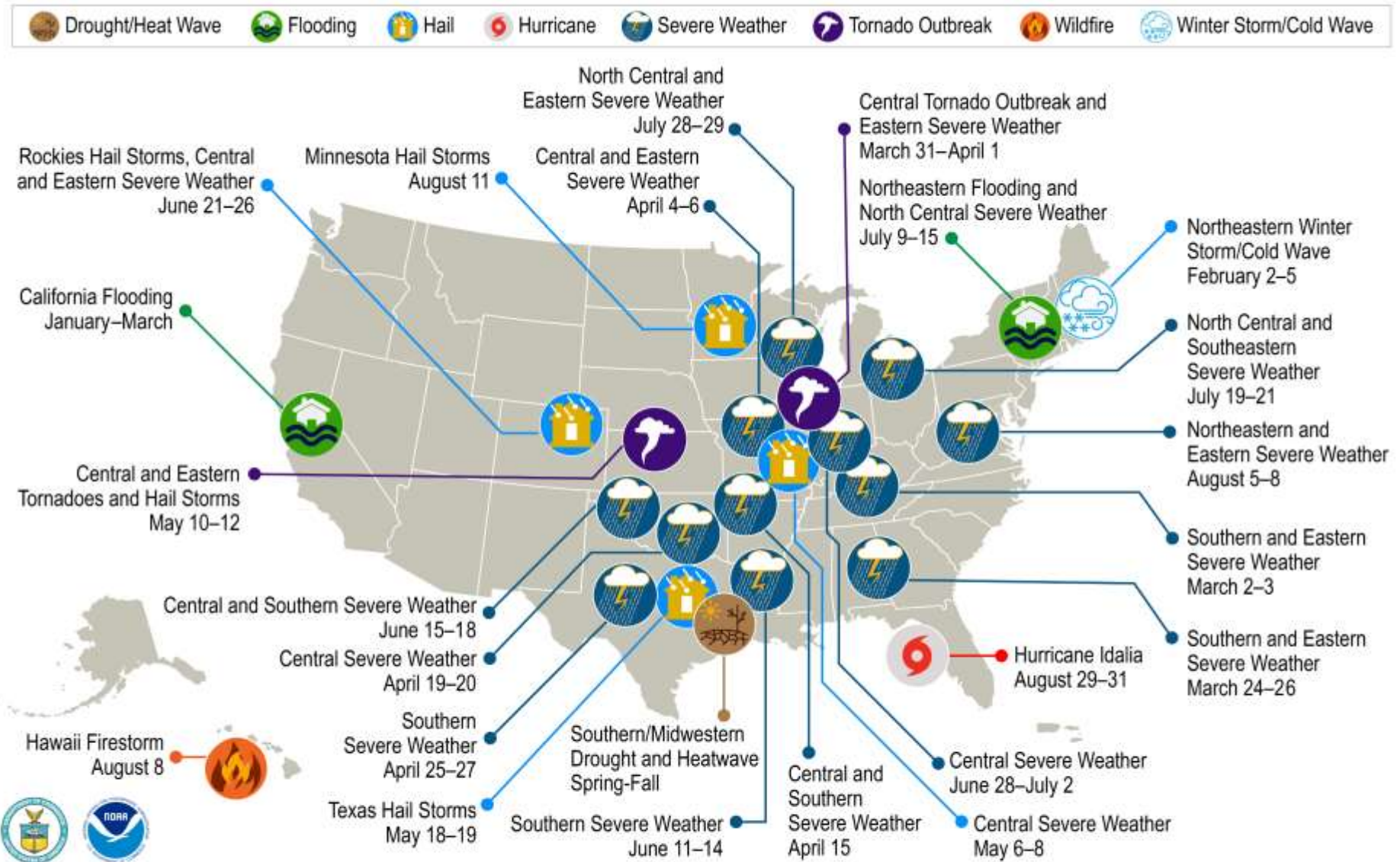
Lessons Learned From Auditing Disasters in the United States

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Framing

- The purpose of this presentation is to share lessons learned from GAO's experience auditing disaster preparedness, response, and recovery efforts.
- **Key theme**: While disasters are unexpected, you must prepare for them as if they are routine.

U.S. 2023 Billion-Dollar Weather and Climate Disasters



This map denotes the approximate location for each of the **24 separate billion-dollar weather and climate disasters** that impacted the United States through September 2023.

- From fiscal years 2015 through 2022, selected federal appropriations for disaster assistance in the United States totaled **\$365** billion.
- From January through October of this year, there have been **24** weather/climate disaster events with losses exceeding \$1 billion each.

All Disasters in the U.S. Start Local



The number of federal disaster declarations and assistance \$\$ have gone way up in recent years. In 2020, there were over 300 federal declarations

Maui Fire Damage



Extreme Flooding in Norfolk, Virginia



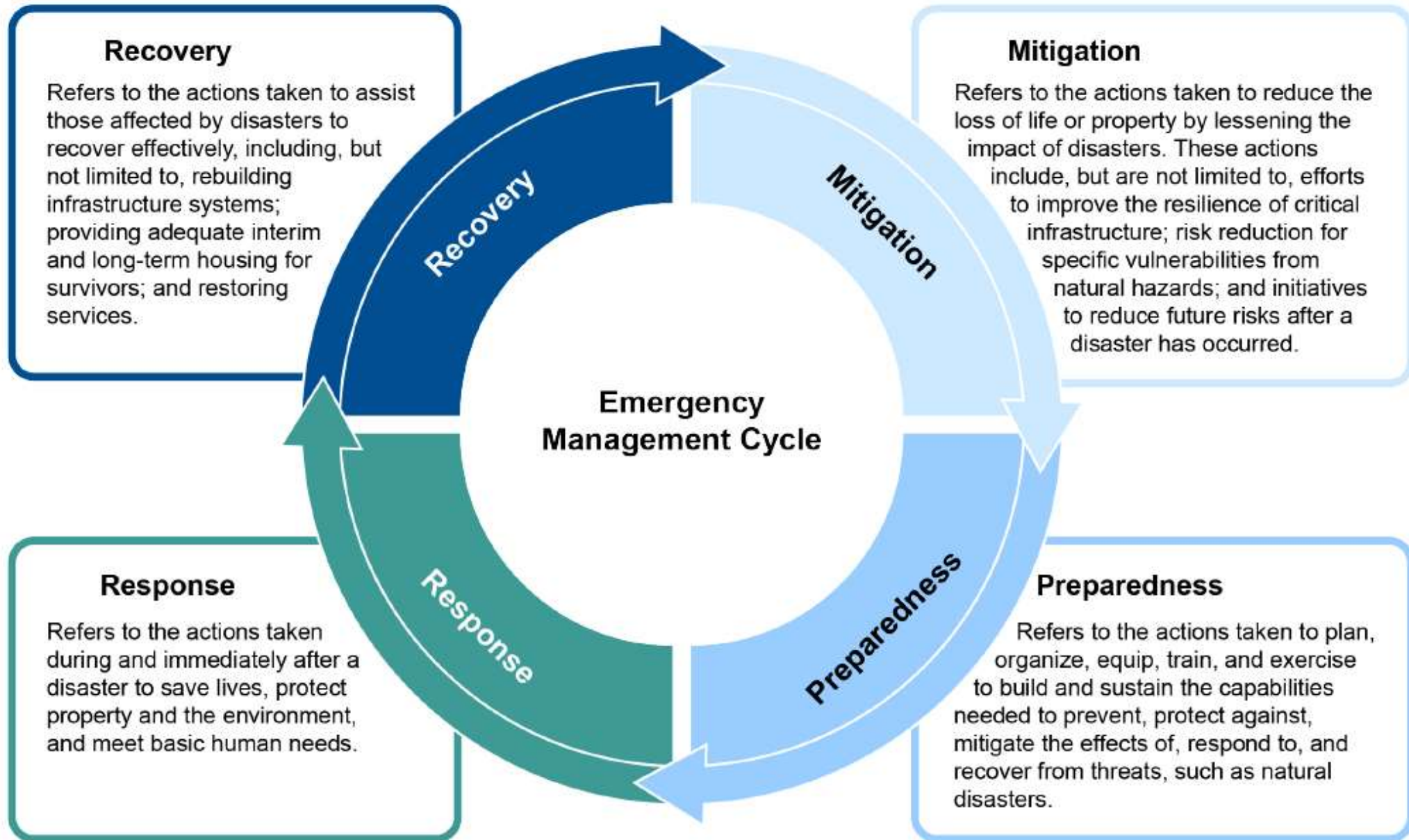
Source: U.S. Navy. | GAO-19-453

Hurricane Ian Damage



Source: GAO. | GAO-23-106544

Phases of Emergency Management



Background

- In the United States, the federal approach to disaster preparedness, response, and recovery is fragmented across more than 30 federal agencies.
- Some agencies have multiple disaster assistance programs and most of these are in the form of grants or loans to state and local levels of government.
- The Federal Emergency Management Agency (FEMA) – within the Department of Homeland Security – is the lead federal agency responsible for disaster preparedness, response, and recovery.

Disaster Failures in the U.S. Led to Policy Changes: Learn from our Mistakes!

- 1992: Hurricane Andrew in Florida showed gaps in response capabilities and building codes.
- 2005: Hurricanes Katrina and Rita exposed problems in federal coordination and authorities.
- To address gaps, Congress passed major legislation (the Post-Katrina Act) requiring federal agencies to develop a national preparedness system and assess national capabilities.
- 2008: FEMA issued its National Response Framework, codifying roles and responsibilities.
- 2012: Hurricane Sandy in New York shifted the focus from response to strengthening resilience before disasters strike.
- 2017: numerous concurrent hurricanes In the Caribbean and Southeast (and western wildfires) led to further legislation to ensure resilient rebuilding and focus on equity in disaster assistance.

Preparedness

- The U.S. National Preparedness System sets forth 32 core capabilities across 5 areas.
- This is the foundation for measuring national preparedness, identifying gaps, and allocating resources. All levels of government accept this system and practice it.
- 5 areas are:
 - Prevention
 - Protection
 - Mitigation
 - Response
 - Recovery

Examples of Hazard Mitigation Projects



Culvert with a protective headwall that prevents erosion and allows water to pass under a road



Watertight enclosure to prevent floodwater damage



Structure elevation to mitigate flood damage

Source: GAO. | GAO-22-106046

Preparedness: Lessons Learned

- Preparedness involves changing the mindset from: this *might* happen to this *will* happen and taking steps to ensure you are ready.
- You must identify and test leadership roles, responsibilities, and authorities before.
- It's important to identify gaps in emergency preparedness through exercises and other assessments such as after-action reports.
- Governments often identify gaps in emergency preparedness but do not always follow-up to address these weaknesses leading to problems during an actual emergency.
- Identifying solutions to address preparedness gaps includes planning and budgeting to allocate resources to close these gaps.
- Identifying staffing capacity challenges early and often can help prevent shortages and workforce management issues throughout the entire emergency cycle.

Response

Disaster response activities focus on short and medium-term priorities like saving lives, search and rescue, power restoration, protecting property and the environment, and providing for basic human needs after a disaster.

Aircraft Dropping Fire Retardant on Wildfire



Source: RCK/stock.adobe.com. | GAO-23-105292

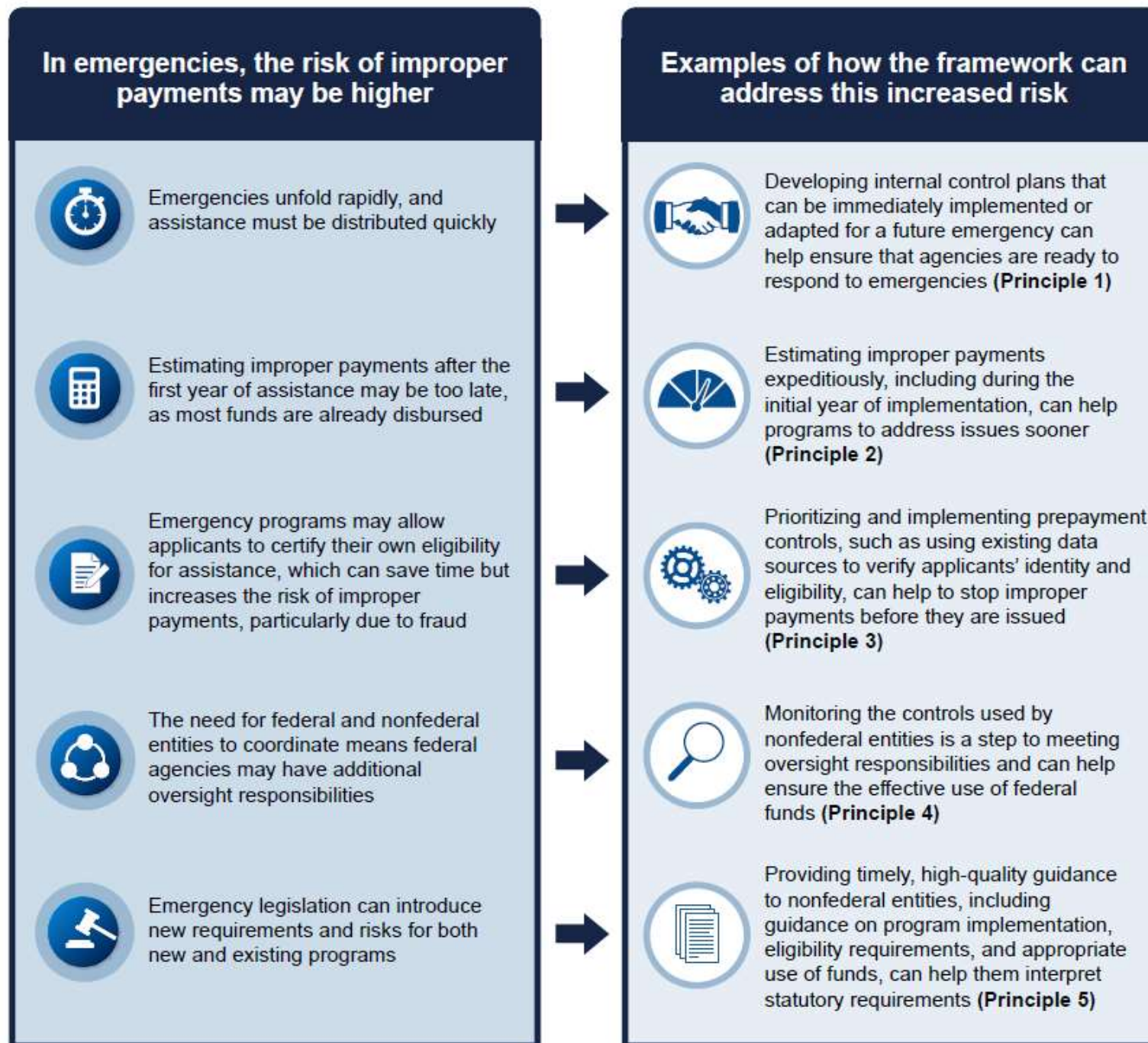
Response: Lessons Learned

- There needs to be a designated chain of command for disaster response so roles and responsibilities are clear. This can help eliminate officials taking actions outside of their delegated authority or not fulfilling their responsibilities.
- Have advance plans and guidance for entering contracts to obtain life-saving goods and services from the private sector. This can help governments expeditiously obtain needed goods and services with consistency and can eliminate confusion and missed opportunities. Also helps eliminate waste and fraud.
- Have clear procedures and controls related to allowable disaster-related spending and recordkeeping. Once a disaster hits it can be difficult to establish and communicate such procedures and controls.
- Involve finance and administration officials, not just emergency managers!

Lesson Learned: Avoiding Improper Payments

- Implementing new emergency assistance programs quickly or significantly increasing funding disbursed through existing programs increases the risk of improper payments and fraud.
- There are practices to limit improper payments **before** an emergency:
 - Developing emergency internal controls in advance
 - Identifying data-sharing opportunities
 - Assigning clear roles and responsibilities
 - Implementing open recommendations related to improper payments
 - Applying lessons learned from past emergencies

How can applying GAO's Framework for Managing Improper Payments in Emergency Assistance Programs help address increased risk during emergencies?

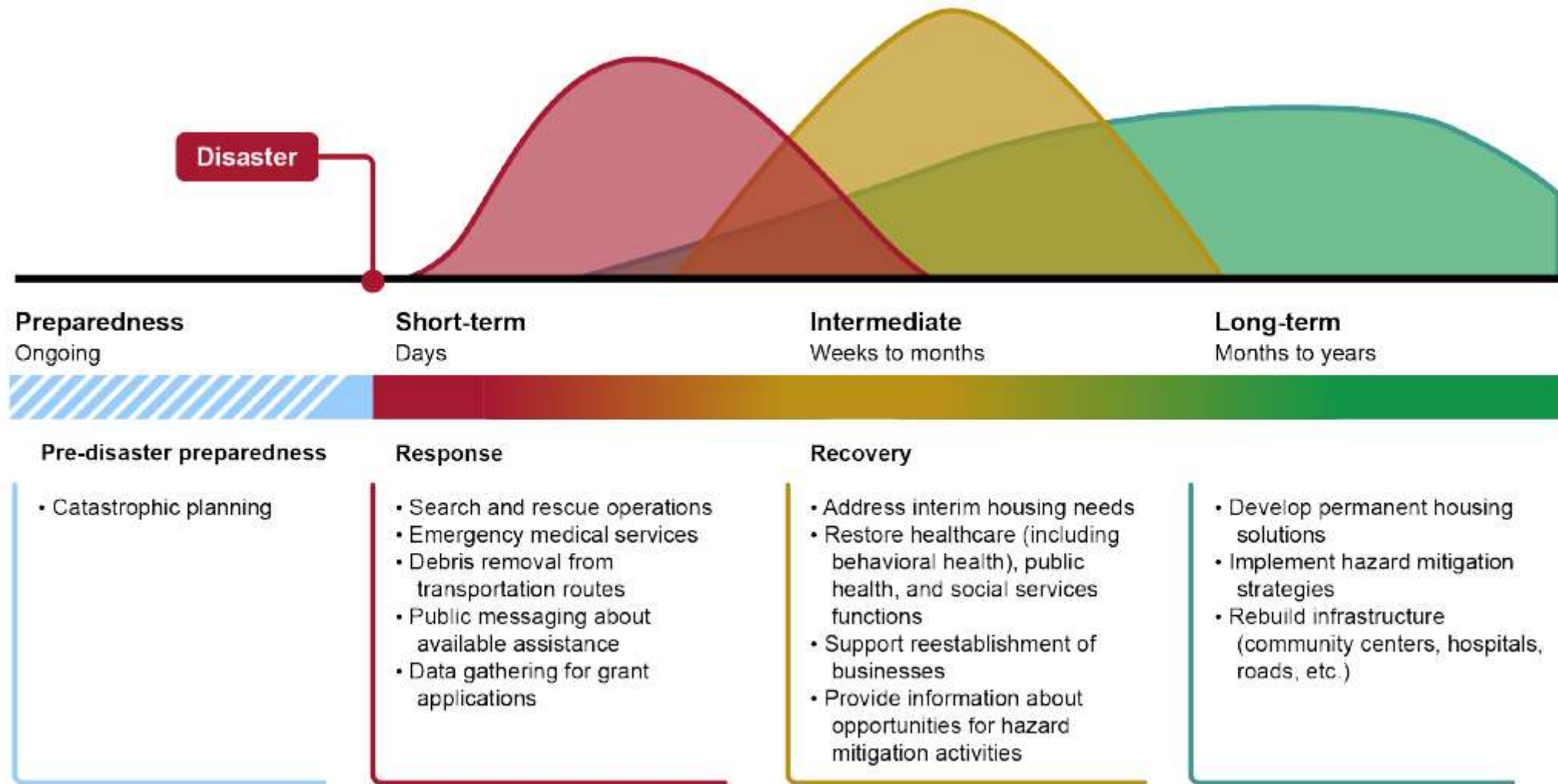


Recovery

- The recovery phase is the longest, most expensive, and most critical to plan for.
- Disaster recovery activities include short and long-term efforts to rebuild communities both physically and economically.



In September 2020, a wildfire destroyed over 80% of the structures in Malden, Washington, including all government buildings. This photo shows recovery progress towards a new Town Hall taken in September 2023.



Source: GAO analysis of Department of Homeland Security policy. | GAO-23-104956

- Recovering from a disaster is the longest and most costly phase of a disaster and yet is the phase entities are least prepared for.
- For example, as of July 2022, FEMA had 494 open disasters dating back to 2004, meaning these disasters were still receiving some level of federal support.

Puerto Rico Demonstrates How Long Recovery Can Last

- In September 2017, Hurricanes Irma and Maria severely damaged Puerto Rico's electricity grid, causing the longest blackout in U.S. history (11 months).
- \$3.9 billion was awarded for temporary repairs and \$10 billion has been committed to fund longer-term grid recovery.
- Six years later, the recovery efforts in Puerto Rico are not where they need to be, with reconstruction of thousands of projects not even underway.

Damaged Power Lines in Puerto Rico in November 2017, after Hurricane Maria



Recovery: Lessons Learned

- Plan for the recovery phase long before recovery is even on the horizon.
- Invest in an overarching coordination structure and guiding principles for disaster recovery to help governments leverage and focus on existing resources, programs, projects, and activities to promote effective recovery.
- Consider how fragmentation across disaster recovery programs can affect the recovery—leading to delays, duplication of efforts, and confusion about eligibility—and how this can be addressed.
- Develop a way to comprehensively identify and assess the risks to recovery and help governments develop contingency plans to avoid risk.

Disaster Resilience

- The ability to prepare for anticipated hazards, adapt to changing conditions, and with-stand and recover rapidly from disruptions.
- Investments in disaster resilience are a promising avenue to address fiscal exposure because such investments offer the opportunity to reduce the overall impact of disasters.
- GAO's [Disaster Resilience Framework](#) is written for a U.S. federal audience, but is broadly applicable. It lays out 3 broad principles to guide decision makers:



Disaster Resilience Framework



Federal tools for facilitating action:



Policy tools

The federal government can create laws, regulations, and directives that require specific actions for enhancing disaster resilience.



Financial tools

The federal government can use financial assistance such as grants, cooperative agreements, loans, and special tax considerations to provide incentives to individuals, corporations, localities, and states.



Direct action

The federal government can help realize national resilience in the actions it takes as the owner of certain critical infrastructure and property, as a purveyor of information, and in provision of technical assistance or direct services.

Examples of disaster resilience decision makers:

- Federal executives and policymakers with immediate responsibility for protection of infrastructure and ecosystems
- Federal executives and policymakers with responsibility for programs and regulations that promote risk-reduction decisions by nonfederal entities
- State executives and policymakers with responsibility for programs and regulations that promote risk-reduction decisions by jurisdictions within their boundaries
- Local policymakers, managers, and planners with responsibility for land use planning, building code adoption and enforcement, and design decisions
- Private sector owners and operators of critical infrastructure with responsibility for design decisions
- Small business and residential property owners with responsibility for design decisions
- Private financial market actors with the ability to partner with other decision makers to stimulate and leverage risk-reduction investment and enhance loss protection
- Non-governmental organizations with responsibility for establishing and supporting adoption of standards

Resilience: Lessons Learned

- Don't wait until after a disaster occurs to assess the resilience of a community – assessing, monitoring, and improving resilience should be an ongoing process in every community.
- Investing in resilience early and often can greatly reduce the need for more costly future assistance.
- Have communities research available grants prior to a disasters to avoid missed funding opportunities for resilience-building projects.



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