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Research Report

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# Streamlining Emergency Management

## Issues, Impacts, and Options for Improvement

Emergency managers in the United States face a challenging operating environment characterized by more-frequent and -intense storms, extended or year-round wildfire seasons, multiple simultaneous disasters, and an ongoing global pandemic. The sheer magnitude and growing frequency of weather and climate disasters—there were 20 "billion-dollar disasters" in 2021 and 22 in 2020 (National Centers for Environmental Information, undated)—are straining the capacities, capabilities, and systems that enable the United States to prepare for, respond to, and recover from disasters. The Federal Emergency Management Agency's (FEMA's) 2022–2026 strategic plan notes that the number of annual disasters that FEMA has managed has tripled in the past ten years and highlights the pivotal moment that climate change and coronavirus disease 2019 (COVID-19) have created for the agency (FEMA, undated a, p. 3). The COVID-19 pandemic has challenged the U.S. emergency management system, requiring continuous disaster support and management at all levels of government and throughout the entire country (FEMA, undated b). Emergency managers are also increasingly taking lead roles in addressing novel

## KEY FINDINGS

- Stakeholders agree that integration among the set of constructs is a key issue.
- The volume and complexity of constructs create burdens on stakeholders.
- The frequency with which constructs are updated increases complexity and stakeholder burden.
- Stakeholders are uncertain about when and how to apply constructs.
- The overlap in construct purposes prevents measuring against a single standard.
- The overlapping, fragmented frameworks lack a unified approach to risk management.
- Risk assessments require duplicate effort.
- Lessons learned from exercises are not fully operationalized.
- Grants overlap in mission areas and beneficiaries.
- Stakeholders perceive overlap between core capabilities, community lifelines, lines of effort, and emergency support functions.

events, such as the response to the Flint, Michigan, water crisis; the resettlement of refugees from Afghanistan; and the response to COVID-19.

To manage the burden that these challenges pose, the emergency management community in the United States requires the most effective and efficient system possible. Emergency managers at all levels of government, in the private sector, and in voluntary organizations depend on assistance from one another and require support from federal agencies, such as the U.S. Department of Homeland Security (DHS), working largely through FEMA. To support the U.S. emergency management system, FEMA and other agencies and organizations have created constructs—programs, grants, assessments, doctrine, and coordination bodies.[1] These constructs were designed to serve many purposes, such as helping emergency managers assess preparedness; support disaster response and recovery actions; enhance state, local, tribal, and territorial (SLTT) capabilities through grant funding; and provide organizational concepts that can be used during response to emergencies.

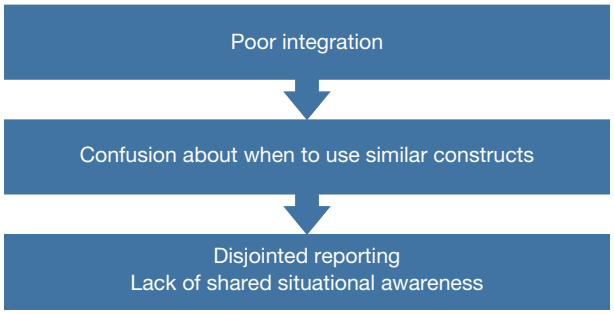
The wide variety of constructs currently in use were developed at different points in time, by various entities, and often in response to specific events or needs. Although constructs were developed to address particular needs, the overall number of constructs has grown, leading to a large group of them that requires that emergency managers have detailed familiarity with the relationships between the constructs. The resulting group of constructs is poorly integrated and not optimally structured for the current operating environment confronting emergency managers. As illustrated in Figure 1, poor integration can lead to negative impacts, such as increased burden on stakeholders or confusion about which con-

**Abbreviations**

| | |
|---|---|
| AAR | after-action review |
| BRIC | Building Resilient Infrastructure and Communities |
| CISA | Cybersecurity and Infrastructure Security Agency |
| COVID-19 | coronavirus disease 2019 |
| DHS | U.S. Department of Homeland Security |
| EMPG | Emergency Management Performance Grant |
| ESF | emergency support function |
| ESFLG | Emergency Support Function Leadership Group |
| FEMA | Federal Emergency Management Agency |
| FMA | Flood Mitigation Assistance |
| GAO | U.S. Government Accountability Office |
| GO | Grants Outcomes |
| HIRA | hazard identification and risk assessment |
| HMGP | Hazard Mitigation Grant Program |
| HMP | hazard mitigation plan |
| HSGP | Homeland Security Grant Program |
| ICS | Incident Command System |
| IT | information technology |
| LOE | line of effort |
| MitFLG | Mitigation Framework Leadership Group |
| NCF | national critical function |
| NDRF | National Disaster Recovery Framework |
| NIMS | National Incident Management System |
| NOFO | notice of funding opportunity |
| NPS | National Preparedness System |
| NRF | National Response Framework |
| NSC | National Security Council |
| OMB | Office of Management and Budget |
| PPD | presidential policy directive |
| PRA | Paperwork Reduction Act of 1980 |
| RAC | regional advisory council |
| RISC | regional interagency steering committee |
| RSF | recovery support function |
| RSFLG | Recovery Support Function Leadership Group |
| SCC | sector coordinating council |
| SHSP | State Homeland Security Program |
| SLTT | state, local, tribal, and territorial |
| SPR | stakeholder preparedness review |
| SRMA | sector risk management agency |
| THIRA | threat and hazard identification and risk assessment |
| UASI | Urban Area Security Initiative |

FIGURE 1

Poor Integration and Its Impacts Can Affect Emergency Management Services and Outcomes




struct to use, at a time when emergency management resources—including time, attention, and funding—might be stretched more thinly than ever. This can, in turn, affect the quality of emergency management services and contribute to the worsening of disaster outcomes.

Identifying opportunities to streamline the system and to better integrate the constructs could help leaders improve the effectiveness and efficiency of emergency operations and enhance investments in national preparedness and resilience. To support this goal, in 2021, FEMA asked the Homeland Security Operational Analysis Center, a federally funded research and development center that the RAND Corporation operates for DHS, to conduct a review of select components of the U.S. emergency management system to identify opportunities to streamline, simplify, and strengthen the system. FEMA's leadership identified potential poor integration of 31 specific emergency constructs as a key challenge for the emergency management and homeland security communities.

## Approach

In support of the overarching goal of streamlining the emergency management system, we examined the 31 constructs that FEMA selected. To analyze integration issues among the constructs, we employed the concepts of **overlap**, **duplication**, and **fragmentation**, as used by the U.S. Government Accountability Office (GAO) (GAO, 2015). We then evaluated the impacts that any construct overlap,

**The 31 Constructs Assessed in This Study**

- Building Resilient Infrastructure and Communities (BRIC)
- community lifelines
- core capabilities
- critical infrastructure sectors
- the Emergency Management Performance Grant (EMPG) program
- emergency support functions (ESFs)
- the Emergency Support Function Leadership Group (ESFLG)
- exercises
- the Flood Mitigation Assistance (FMA) program
- the Hazard Mitigation Grant Program (HMGP)
- hazard mitigation plans (HMPs)
- the Homeland Security Grant Program (HSGP), which includes the State Homeland Security Program (SHSP), the Urban Area Security Initiative (UASI), and Operation Stonegarden
- lines of effort (LOEs)
- the Mitigation Framework Leadership Group (MitFLG)
- national critical functions (NCFs)
- the National Disaster Recovery Framework (NDRF)
- the National Incident Management System (NIMS) and the Incident Command System (ICS)
- the National Mitigation Framework
- the National Prevention Framework
- the National Protection Framework
- the National Response Framework (NRF)
- Presidential Policy Directive (PPD) 44 ("Enhancing Domestic Incident Response")
- recovery support functions (RSFs)
- the Recovery Support Function Leadership Group (RSFLG)
- regional advisory councils (RACs)
- regional interagency steering committees (RISCs)
- sector coordinating councils (SCCs)
- sector risk management agencies (SRMAs)
- stakeholder preparedness reviews (SPRs)
- task forces
- threat and hazard identification and risk assessments (THIRAs).

duplication, or fragmentation might have on construct **implementation** and **outcomes** (GAO, 2015, Table 3). We employed these concepts in addressing three primary research questions:

- Where are instances of overlap, duplication, and fragmentation among the selected constructs?
- Where, why, and how do overlap, duplication, and fragmentation create significant negative impacts in implementation and outcomes for construct stakeholders?
- What strategies can FEMA implement to reduce problematic overlap, duplication, and fragmentation?

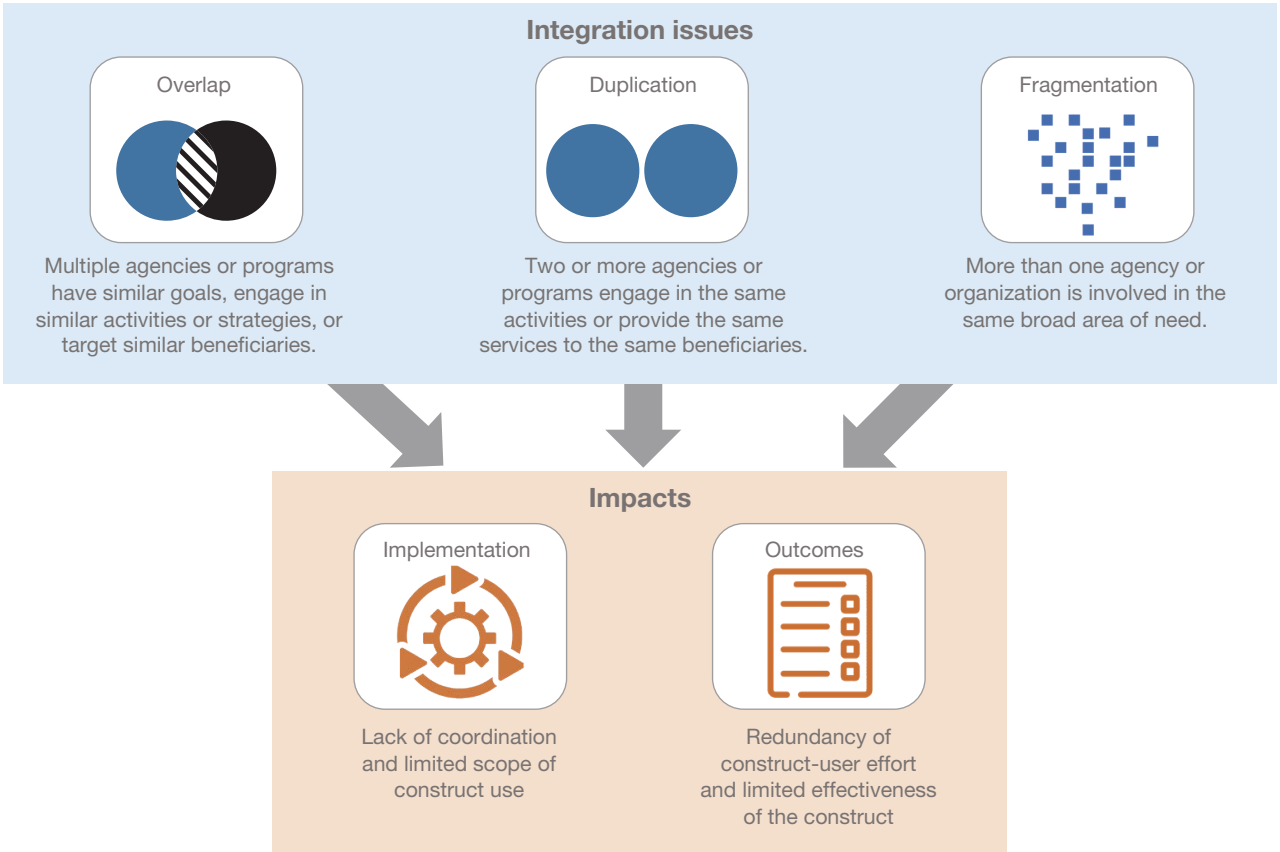
Figure 2 depicts the overall framework and defines terms.

In this report, we describe a variety of options for addressing the issues and impacts identified. Some options are designed to address specific impacts or individual constructs, while others propose broader solutions that would transform the emergency management policy landscape. Truly transformative changes generally require a broad consensus and engagement by multiple actors and would therefore likely be more difficult than smaller-scale changes to achieve. However, adoption of such options also offers the greatest opportunity for significant streamlining. Although we propose a variety of options for improvement, each has costs and unintended consequences, and we note some of these trade-offs in our discussions of the options. However, we do not provide a comprehensive review of such costs and consequences, and other options might be available to address the findings we identify. Therefore, FEMA could consider conducting additional stakeholder engagements and further analysis to more fully understand and estimate the effects that the proposed changes could have on stakeholders.

We employed a mixed-method approach, which we summarize in Table 1. This approach enabled us to triangulate findings from our docu-

FIGURE 2

Framework for Assessing Integration Issues and Impacts



ment and literature reviews, interviews, and visualizations. We used interviews to identify potential problems and conducted systematic analysis to validate problem areas. We also cross-referenced information from interviews with our own analysis of the research literature and of FEMA's written doctrine.

Evaluating the effects of poor integration on emergency management capabilities or disaster response outcomes was beyond the scope of this study. However, our discussion of the impacts of poor integration includes examples of consequences for disaster response and recovery, where such information was available in the literature or through interviews. Furthermore, our analysis was shaped by the data available to us and the scope of the project. We recognize that the constructs FEMA selected do not represent the totality of constructs that emergency managers use and were selected in part because of their perceived challenges. This could lead to either a potential overstatement of the significance of overall integration issues or an understatement of the problem (if important constructs with integration challenges were not included). It is also worth noting that the analysis focused on integration challenges from the perspective of FEMA and the emergency management profession, not the broader homeland security community. Finally, the Paperwork Reduction Act of 1980 (PRA) limited the number of SLTT stakeholders we could interview, leading to a larger number of federal stakeholders in our sample than SLTTs. Within the SLTT category, tribal and territorial stakeholders are underrepresented. We

TABLE 1
Overview of Our Approach

| Method | Description |
|---|---|
| Characterization of constructs | We characterized each construct through a scan of available programmatic documentation and discussion with subject-matter experts. We reviewed 191 documents across the 31 constructs. |
| Gathering of input from stakeholders | We gathered feedback from public- and private-sector stakeholders from the whole community,[a] using interviews to capture their experiences in adapting and implementing the constructs, including integrating them with each other. In two stages of interviews, we interviewed 120 people in federal and SLTT government, along with other emergency management subject-matter experts. |
| Visualization of construct relationships | We developed visualizations (i.e., illustrations, charts, and other images) of the relationships among constructs, both as presented in documentation and as described by stakeholders, and analyzed areas and instances of overlap, duplication, and fragmentation. |
| Literature review and analysis | We reviewed and analyzed relevant public policy literature and key policy documents. |
| Synthesis of ideas | We developed findings through the systematic review and structured extraction of crosscutting issues and construct-specific issues and impacts. |
| Validation of analysis | We validated interim findings and options for improvement through multiple briefings and workshops with FEMA officials and subject-matter experts. |
| Development of options for improvement | We used a structured process to develop, elicit, and provide supporting evidence for the options and assessed them against three criteria. |

[a] *Whole community* is a FEMA concept:

> Preparedness is a shared responsibility; it calls for the involvement of everyone—not just the government—in preparedness efforts. By working together, everyone can help keep the nation safe from harm and help keep it resilient when struck by hazards, such as natural disasters, acts of terrorism, and pandemics.
>
> Whole Community includes:
>
> - Individuals and families, including those with access and functional needs
> - Businesses
> - Faith-based and community organizations
> - Nonprofit groups
> - Schools and academia
> - Media outlets
> - All levels of government, including state, local, tribal, territorial, and federal partners
>
> The phrase "whole community" appears a lot in preparedness materials, as it is one of the guiding principles. It means two things:
>
> 1. Involving people in the development of national preparedness documents.
> 2. Ensuring their roles and responsibilities are reflected in the content of the materials. (FEMA, 2020b)

sought to address these limitations through our mixed-method approach.

## Organization of This Report

The remainder of this report is organized into three sections:

- "Issues and Impacts" describes the issues and impacts we found through our analysis of the selected constructs.
- "Options for Improvement" provides 15 options for improvement that are designed to address the issues and impacts.
- "Conclusion" presents our conclusions.

## Issues and Impacts

In this section, we highlight issues and impacts relevant to construct integration that emerged through our analysis of construct characterizations, stakeholder interviews, and construct visualizations. We first describe crosscutting issues and impacts—integration challenges that were common to several, often diverse, constructs. We then discuss issues and impacts related to specific types of constructs and note what the real-world implications on the emergency management system might be.

### Crosscutting Issues and Impacts

#### Stakeholders Voiced Agreement That Integration Among the Set of Constructs Is a Key Issue

A diverse variety of interviewees—FEMA officials in different offices, in headquarters, and in the regions, non-FEMA senior federal officials, and SLTT emergency management officials from jurisdictions of varying size and capability—reported that integration of the entire set of constructs reviewed in this study is problematic. Stakeholders with whom we spoke suggested that there were too many constructs; that their purposes and relationships were often unclear; that they were duplicative and, in many cases, overly complex; and that our review of the documents and associated research literature supported this. One senior official noted that, by making the constructs so complex, the federal government had "professionalized emergency management and critical infrastructure protection so that you can only be fluent in it if you have been in D.C. for 20 years."[2] Several senior leaders within and outside of FEMA indicated that they did not use many of the constructs, including some that would seem to be relevant to their roles. Similar sentiments were reported in a GAO study, which found that several state emergency managers did not use the NDRF because they did not understand

**Different Factors Have Led to Poor Construct Integration**

Several factors have contributed to poor construct integration:

- **Constructs are regularly added without others being retired.** Several interviewees referred to the phenomenon as an "adding machine." This can occur because of the changing vision of a new administration or as a response to a specific incident or new and emerging issues. Although adding a new construct is not inherently bad, adding constructs without considering how they fit with existing constructs creates integration problems.
- **FEMA, the Cybersecurity and Infrastructure Security Agency (CISA), and DHS have not clearly articulated how the constructs relate to one another.** As one interviewee suggested, the inconsistency of the organizational structure prevents FEMA from recognizing whether it is *ballooning*, or disproportionately creating constructs in any individual area. One respondent noted that it was critical to establish "lanes" for the constructs and do a better job communicating how a construct contributes to FEMA's or DHS's strategic goals.
- **Neither FEMA nor DHS has created or controls all of the constructs in question, and neither has oversight of every construct. Some constructs might be directly tied to current statutory authority.** There are significant practical limitations on which of the 31 constructs FEMA can and cannot change and which aspects of those constructs FEMA has the authority to change.

**Grant Complexity Diverts Community Resources to Managing Applications**

The complexity of grant programs and their applications likely contributes to a well-documented trend of stakeholders using management costs to hire temporary staff and contractors to bolster their grant management capacity. For example, a national survey of state hazard mitigation officers found that states and territories frequently use funds to hire temporary staff (25 of 43 respondents, or 58 percent, reported this) to help address the significant burden associated with the HMGP grant management administration (Smith and Vila, 2020). This reliance on outsourcing aspects of emergency management consumes resources and discourages stakeholders from learning these processes and developing their own technical capacity.

aspects of it and how it related to other frameworks (GAO, 2016b). This has real-world implications in that achieving unity of effort across the whole community will be hindered if some stakeholders do not use constructs intended for them.

## The Volume and Complexity of Constructs Create Burdens on Stakeholders

The volume and complexity of constructs place additional burdens on stakeholders, who need to devote time and resources to understanding and using them. One official noted the overwhelming number of constructs an SLTT government needed to understand and interpret simply to access grant funding.[3] This finding is consistent with literature examining FEMA hazard mitigation assistance grants, which suggests that such grants are often "fraught by high program complexity, significant data requirements, and difficulty in obtaining access to financial resources and technical expertise, leading to lengthy project development and implementation timelines and an uneven distribution of assistance" (Smith and Vila, 2020).

Similarly, interviewees pointed to the significant burden posed by the volume of material associated with different constructs that they need to read. Figure 3 provides a stacked sand chart with the cumulative page count for documentation we assessed as being associated with the recovery mission area.

In addition, constructs tend to be written at a "difficult" reading level, based on standard readability tests.[4] The volume and complexity of constructs have multiple real-world implications for constructs, including

- stakeholders using resources intended for increasing preparedness to instead hire consultants to complete applications for those funds
- disproportionately burdening smaller communities
- consuming time and attention that could be devoted to core emergency management functions.

## The Frequency with Which Constructs Are Updated Increases Complexity and Stakeholder Burden

Frequent updates to the constructs add to the burden, requiring stakeholders to familiarize themselves with additions and changes. State and local interviewees pointed to changing grant priorities as a burden, with one noting that "every time a NOFO comes out for a grant, it's new and has new focuses." Literature on strategic planning notes that having too many or shifting priorities can hamper leaders' ability to communicate and employees' and stakeholders' ability to understand and act. It suggests reducing the number to improve focus and prevent the organization from becoming overwhelmed (Baskin, 2018). In addition, frequent changes in the constructs can burden stakeholders throughout a community. For example, one interviewee suggested that an SLTT government can take up to five years to institutionalize a newly created construct.[5]

Although FEMA constructs are intended to support and inform local emergency management, the frequency and timing of document updates can inadvertently create additional burdens on these stakeholders when they are already stretched thin. In Figure 4, we feature one notional representative example, the case of an emergency manager in Louisiana, to portray how the burden of emergency management has increased over time.

FIGURE 3

Our Assessment of Construct Documentation for State, Local, Tribal, and Territorial Recovery Efforts

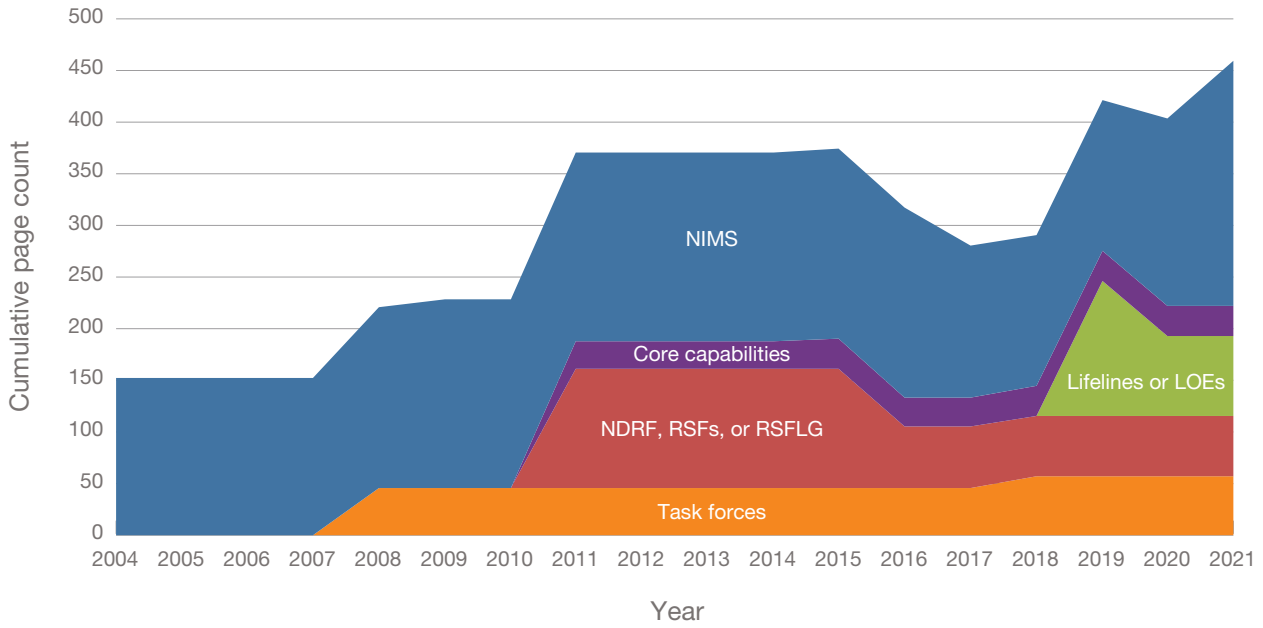



Figure 4 presents the active page count of relevant documentation for the recovery mission area (in orange), the timing of issuance of new recovery-relevant documentation, and the disasters that a local emergency manager in Louisiana would have experienced between 2016 and 2021. This is a heavy burden for a state that is frequently exposed to natural and other disasters. For example, in 2020, Louisiana had three distinct major disaster declarations, including one for the ongoing COVID-19 pandemic (FEMA, undated b).

## Stakeholders Are Uncertain About When and How to Apply Constructs

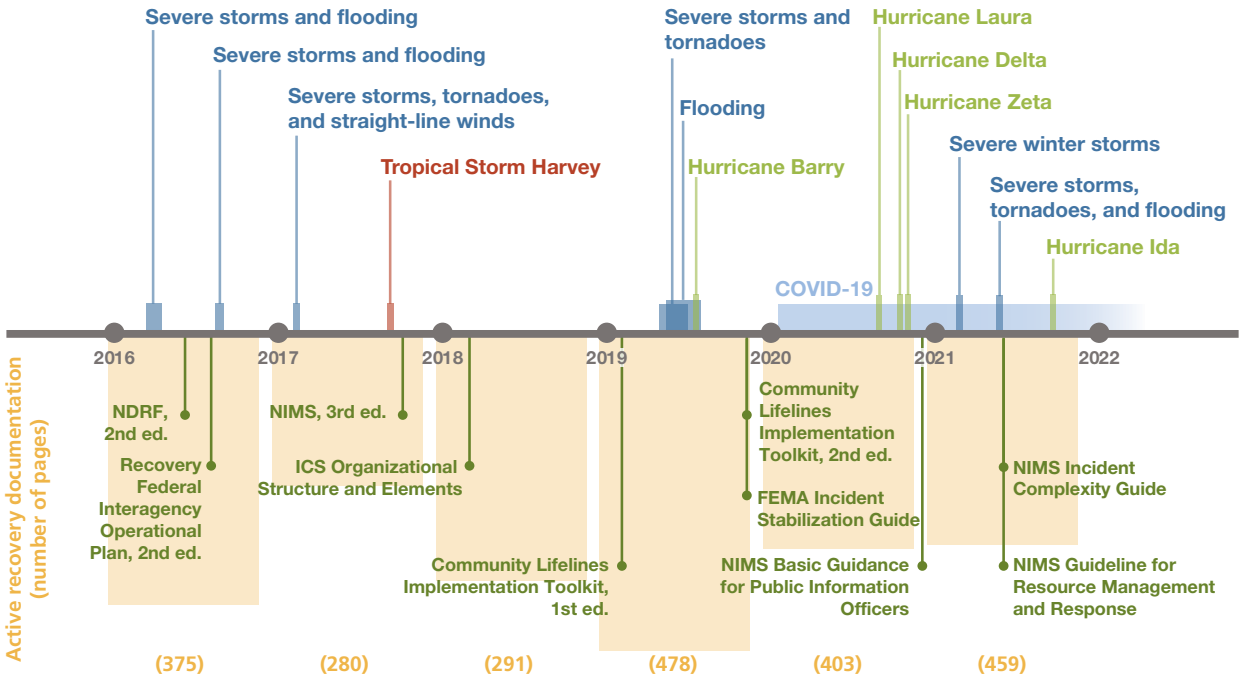
Both federal and nonfederal stakeholders expressed confusion about which constructs to apply in a given circumstance. In particular, interviewees noted the disconnect between constructs used before and during disasters, explaining that some constructs were intended to be used in only one phase of a disaster but were regularly applied in a different phase.

For example, in regard to the National Planning Frameworks, several interviewees expressed confusion about when and how to draw the line between the protection, prevention, and mitigation missions. One senior official suggested that a much simpler system of pre- and postdisaster (or "resilience" and "response") would be far more effective and efficient than relying on users to determine when to use the protection, prevention, and mitigation frameworks for a common purpose, such as building resilience.[6] Similar findings were reported from a GAO study evaluating the effectiveness of the NDRF, in which analysts found that several state emergency managers lacked a clear understanding of aspects of the construct, including how it related to other FEMA disaster response and recovery programs and how states should integrate it into their postdisaster recovery operations (GAO, 2016b).

In other cases, certain constructs are applied up until the moment a disaster occurs and are then replaced by a different set of constructs. For example, interviewees pointed to this challenge in the interaction of FEMA and CISA constructs. One person noted that the private sector uses CISA constructs until a disaster occurs but is then expected to report and respond using FEMA constructs. Another respondent indicated that the private sector "doesn't pay attention to FEMA constructs until there is a hurricane."[7]

FIGURE 4

## Louisiana Disasters and Recovery-Related Construct Burden




SOURCE: FEMA, undated b.

NOTE: The major disaster declarations were severe storms and flooding, March 8–April 8, 2016; severe storms and flooding, August 11–31, 2016; severe storms, tornadoes, and straight-line winds, February 7, 2017; Tropical Storm Harvey, August 28–September 10, 2017; severe storms and tornadoes, April 24–June 25, 2019; flooding, May 10–July 24, 2019; Hurricane Barry, July 10–15, 2019; COVID-19, January 20, 2020, and ongoing; Hurricane Laura, August 22–27, 2020; Hurricane Delta, October 6–10, 2020; Hurricane Zeta, October 26–29, 2020; severe winter storms, February 11–19, 2021; severe storms, tornadoes, and flooding, May 17–21, 2021; and Hurricane Ida, August 26–September 3, 2021.

### The Overlap in Construct Purposes Prevents Measuring Against a Single Standard

Too much overlap (e.g., providing two tools to measure one thing) can create problems. For example, multiple constructs are intended for or used to characterize the status of critical functions during a disaster (such as community lifelines, which FEMA uses; ESFs, which most state emergency management agencies use as an organizing principle; and NCFs, which CISA uses). This can lead to wasted time and slower response operations.

In addition, the existence of different standards for assessing preparedness and response without a crosswalk between them means that FEMA and the communities it serves do not have a single standard of preparedness against which to measure—and invest. Similarly, the constructs intended for or used to measure preparedness prior to a disaster differ from those used to assess—or manage—response. For example, a FEMA interviewee noted that, although FEMA expects SLTTs to use the 32 core capabilities to assess and increase their preparedness, during an emergency, SLTTs rely on the Emergency Management Assistance Compact (EMAC) resource-typing system to ensure the efficient flow of mutual aid. However, EMAC-typed resources are not used as a core preparedness measure.[8] In this context, the existence of multiple constructs means that the United States lacks a single metric that can be used for investing in preparedness and then validated and adjusted as a result of real-world performance in emergency responses, which is ultimately the reason for these investments.

## Issues and Impacts Involving Integration Between Specific Constructs

We found that, in the relationships between specific constructs, some constructs faced similar issues and impacts, demonstrating poor integration and contributing to a variety of effects. Table 2 summarizes them, and we describe them in more detail in the rest of this section.

### The Overlapping, Fragmented Frameworks Lack a Unified Approach to Risk Management

The National Preparedness Goal defines the five mission areas as "[g]roups of core capabilities, including Prevention, Protection, Mitigation, Response, and Recovery," that "serve as an aid in organizing our national preparedness activities and enabling integration and coordination across core capabilities" (DHS, 2015, pp. 4, A-2). PPD-8 requires the National Planning Frameworks as part of the National Preparedness System (NPS).

We found overlap between the National Prevention, Protection, and Mitigation Frameworks. The Protection and Prevention Frameworks overlap in the common focus on terrorism, while the Protection Framework overlaps with the Mitigation Framework in the common focus on reducing the impact of disasters. Stakeholders also pointed to issues with the NDRF and the NRF, noting that coordination between the response function and the recovery function was not always clear. See Figure 5.

Several interviewees suggested that the Protection and Prevention Frameworks can be confusing to SLTT stakeholders, in addition to not being strictly used by all federal partners, and therefore might not be used to support the mission areas. For example, a FEMA interviewee asked, "To what extent do the IC [intelligence community] and law enforcement community actually use these? Doubt they use the Prevention and Protection Framework."[9] The real-world implication of having frameworks that are not understood or are not used is that they will not serve their intended coordination function and could be wasting efforts—by, for example, being updating but not widely used. Furthermore, a lack of guidance on the relationship between response and recovery can lead to inadequate integration between the mission areas. For example, although both the NRF and the NDRF discuss the importance of coordination, neither construct describes the coordination process between the agencies responsible for leading the ESFs and those responsible for leading the RSFs.

The five frameworks also provide an inconsistent and fragmented approach to risk management. The frameworks do not use consistent risk management language from the DHS *Risk Management Fundamentals* document (DHS, 2011) and other sources of federal risk management policy. PPD-8 notes that "[t]he frameworks shall be coordinated under a unified system with a common terminology and approach." Although the frameworks map to risk management concepts from these other policy documents, the terminology used differs. This lack of a common vocabulary could lead to confusion in other federal agencies or SLTTs when interfacing with FEMA. It also obscures the linkages between DHS activities on threats or hazards and the Prevention Framework; vulnerabilities and the Protection Framework; and consequences and the Mitigation Framework. By obscuring these connections, the differences in terminology could limit potentially useful connections between other federal agencies that use the DHS risk management language and the corresponding FEMA construct. Furthermore, the risk language used in the existing frameworks is not consistent. The term *risk* in particular is used in a variety of ways throughout the frameworks.

### Risk Assessments Require Duplicate Effort

FEMA established the THIRA/SPR and HMP processes in part to help SLTTs assess the risks their jurisdictions face and their related capabilities to manage these risks. Through the THIRA/SPR process, jurisdictions identify the threats and hazards that pose realistic worst-case scenarios, identify capability gaps, and provide approaches to closing these gaps. Through the HMP process, a jurisdiction conducts a hazard identification and risk assessment (HIRA) to identify its high-probability natural hazard risks (but not risk from terrorism) and vulnerabilities; it then develops strategies for mitigating these risks.

TABLE 2

## Summary of Construct-Specific Issues and Impacts

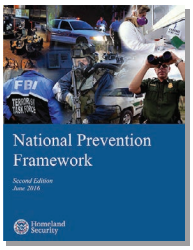
| Constructs Involved | Issue: Overlap | Issue: Fragmentation | Impact |
|---|---|---|---|
| • National Mitigation Framework<br>• National Prevention Framework<br>• National Protection Framework<br>• NDRF<br>• NRF | x | x | • The National Prevention Framework and the National Protection Framework might be underutilized.<br>• The lack of coordination between response and recovery results in duplication of effort. |
| • THIRA/SPR process<br>• HMPs | x | | • SLTTs find the dual processes (THIRA and HMP) burdensome.<br>• The THIRA/SPR process and HMPs draw on different constructs as inputs for their analyses. |
| • Exercises | | x | • The lessons learned from exercises are not fully operationalized by other constructs. |
| • BRIC<br>• EMPG<br>• FMA<br>• HMGP<br>• HSGP | x | | • The overlap in grant programs creates burdens for beneficiaries.<br>• Grants use other constructs inconsistently, creating burdens for SLTT stakeholders. |
| • Community lifelines<br>• Core capabilities<br>• ESFs<br>• LOEs | x | | • Stakeholders are confused about when and how to operationalize these constructs. |

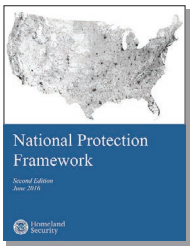
FIGURE 5

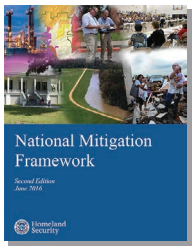
## Overlap of and Fragmentation in National Frameworks

### Overlap

Few stakeholders could distinguish between the National Prevention Framework, the National Protection Framework, and the National Mitigation Framework, which could indicate underuse of all three.



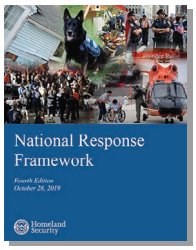



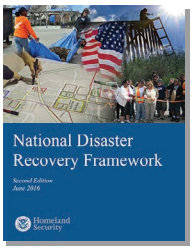




"I have a hard time . . . explaining the difference between prevention and protection [and] protection and mitigation." —senior federal official

### Fragmentation

Few stakeholders were certain about when a response function becomes a recovery function, confusion that could lead to inefficient transition from response to recovery.




"There isn't a clear line demarcating response and recovery. . . . In a hurricane, for the first three or four days, we're heavily in response. But we may also start deploying Public Assistance [and] Individual Assistance work."—FEMA official

We found that the THIRA/SPR and HMP processes include similar participants and processes, which can be burdensome for stakeholders—particularly because the two constructs rely on different inputs despite their similar purposes. To apply for both mitigation and preparedness grants, a stakeholder must complete both the THIRA/SPR and HMP processes.

One documented challenge involves resource and funding limitations for completing HMPs, which can require significant technical expertise and extensive community engagement. This can particularly affect SLTT governments, many of which have insufficient resources and might have difficulties finding hazard mitigation assistance grants to support the planning process. Consequently, as noted in FEMA's *Summary of Stakeholder Feedback: Building Resilient Infrastructure and Communities (BRIC)* (FEMA, 2020a), the quality of risk assessments has decreased over time, and the HMPs become less meaningful if jurisdictions are unable to allocate sufficient technical resources and prioritize their development (FEMA, 2020a).

## Lessons Learned from Exercises Are Not Fully Operationalized

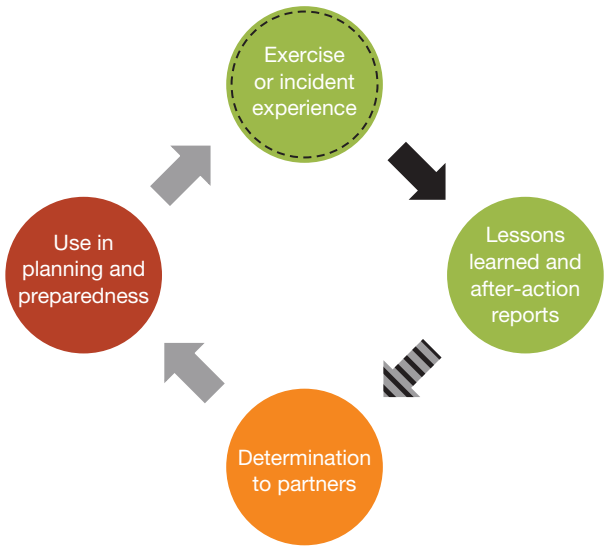
FEMA and its partners conduct exercises to identify progress toward objectives and priorities from the National Preparedness Goal's five mission areas—prevention, protection, mitigation, response, and recovery—and a community's THIRA/SPR process (DHS, 2020a, pp. v, 6-3). Additionally, FEMA preparedness grants, including SHSP, UASI, and the EMPG program, are partially aimed at closing the kinds of gaps identified by exercises and associated after-action reviews (AARs) (GAO, 2020, highlights, pp. 12–13). One type of exercise, national-level exercises, stands out as a key component of FEMA's efforts to support and improve the country's preparedness. Exercises are rich in experiential learning opportunities, but memorializing lessons learned through AARs is key both to acting on those lessons and to disseminating knowledge gained to those who did not participate directly.

Issues with the dissemination and use of exercises contribute broadly to their isolation from other relevant constructs. Lessons learned from the conduct of exercises could be better disseminated and used in planning and preparedness, according to stakeholders. This fragmentation was noted in particular from FEMA headquarters and state and territory government official interviewees. GAO and Congressional Research Service documents suggest that FEMA is not fully operationalizing the lessons learned from disasters by adequately sharing and following up on lessons from postdeployment AARs through exercises with other federal or SLTT partners (GAO, 2020; Stienstra, 2021).

For exercises, the impacts of poor integration are mostly in the lack of information-sharing, which has kept other constructs from fully operationalizing the lessons. Ideally, the information gleaned from an exercise or incident would be recycled through planning and preparedness to reduce the impact of future incidents and improve the effectiveness of exercises. However, as Figure 6 shows, the fragmentation of information flow (green circles) can result in incomplete dissemination of lessons learned to exercise or incident partners (orange and red circles). Information gained from an exercise or incident (represented by the arrows) is not being distributed efficiently (striped arrow) to partners or not distributed at all (solid arrows) to enhance planning or preparedness.

FIGURE 6

Consequences of Having a Fragmented Information Flow



## Grants Overlap in Mission Areas and Beneficiaries

FEMA administers several preparedness and mitigation grants, including five programs selected for review in this project. The EMPG program and the HSGP are preparedness grants, and the BRIC program, the FMA program, and the HMGP are mitigation grants. Preparedness grants help SLTT entities and, in some instances, nonprofit organizations in building capabilities across all the mission areas. Mitigation grants support projects and activities that address long-term risk from natural hazards and their effects.

Our analysis documented overlap among the five grant programs that FEMA selected for review, specifically in terms of their eligible beneficiaries, which include SLTTs for each, and mission areas (Table 3). For example, the EMPG program and the HSGP can fund activities in each mission area, and all five of the programs can fund activities in the mitigation mission area.

Because of this overlap, similar project types can be funded through different programs. For example, the mitigation grants—BRIC, FMA, and HMGP—aim to reduce or eliminate long-term risk to people and property from natural hazards and their effects. BRIC and FMA are focused on predisaster projects, while HMGP is activated following a disaster. Despite this timing difference, there is overlap in the types of projects funded. For example, FMA focuses narrowly on reducing flood damage to structures insured by the National Flood Insurance Program, but BRIC and HMGP funding can also be applied to flood-related projects. Several stakeholders we interviewed noted this overlap. For example, some FEMA staff pointed to the overlapping purposes of these grants but also noted that they differ in requirements and implementation.[10]

TABLE 3

Overlap in Mission Areas Across Grant Programs

| Mission | BRIC | EMPG | FMA | HMGP | HSGP |
|---|---|---|---|---|---|
| Prevention | | x | | | x |
| Protection | | x | | | x |
| Mitigation | x | x | x | x | x |
| Response | | x | | | x |
| Recovery | | x | | x | x |

Overlap across the grant programs leads to burdens on beneficiaries—who need to familiarize themselves with voluminous grant guidance documenting a variety of federal requirements and use multiple systems for the application process and other aspects of grant management. As one FEMA interviewee explained, contractors charge

> a lot of money to write grants and submit applications, which is not ideal from an equity point of view, but we lend ourselves to that. We have all of these overlapping demands, asking different questions, having different priorities. If we could simplify it to a single grant program, states would be less confused.[11]

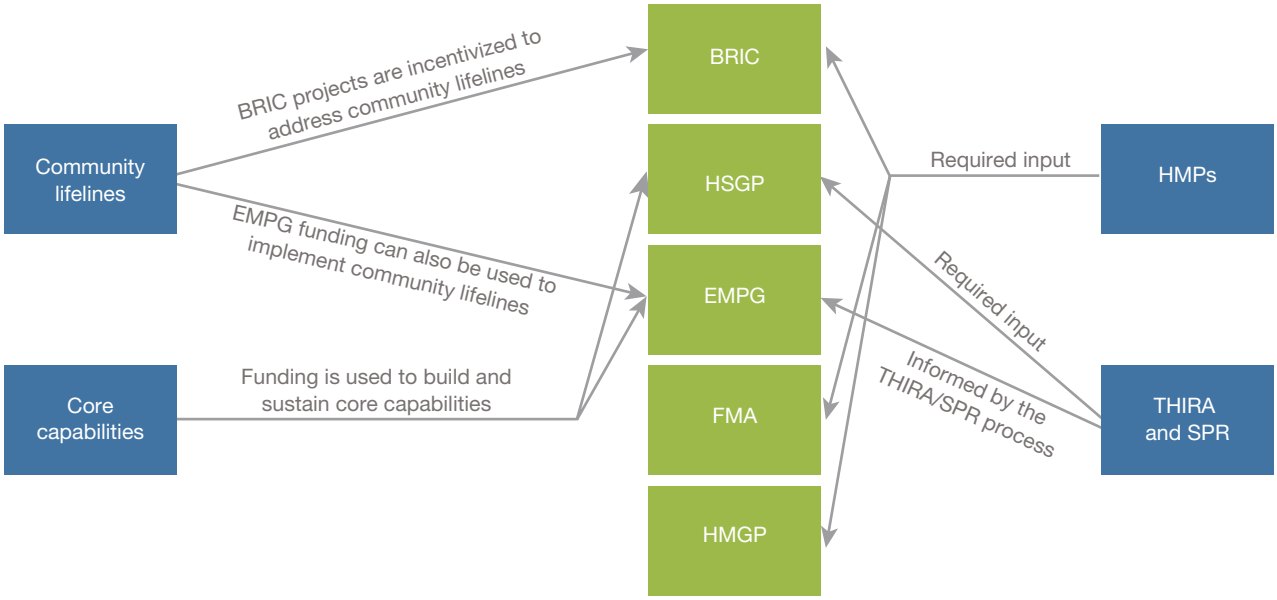
The online application process also creates further burdens for applicants in the complexity of applying for grants, providing required reporting documentation, and accepting disbursement. For example, an SLTT or other applicant must register with multiple federal websites before it can apply for a grant (Grant Programs Directorate, 2021, p. 11). Furthermore, the grants sometimes draw on different constructs as inputs and for reporting, as shown in Figure 7. For example, the HSGP uses the core capabilities, while BRIC encourages the use of the community lifelines. This can create confusion for beneficiaries and exacerbate burden.

## Stakeholders Perceive Overlap Between Community Lifelines, Core Capabilities, Emergency Support Functions, and Lines of Effort

Several of the constructs—community lifelines, core capabilities, ESFs, and LOEs—support operations, coordination, and reporting of various types, including, perhaps most critically, in incident response operations. Community lifelines and core capabilities are used primarily for outcome-oriented reporting and preparedness assessment, respectively. ESFs are a coordinating and implementing construct for emergency response operations because both federal and SLTT departments and agencies have assigned responsibilities to interagency partners to conduct operations in

FIGURE 7

Required Constructs for Grant Applications and Reporting




accordance with incident action plans. LOEs are a construct for organizing operations and reporting.

Although each of these constructs is intended to serve a distinct purpose, the introduction of community lifelines into response efforts with the creation of LOEs has led to questions for stakeholders across the whole community about how community lifelines relate to core capabilities and ESFs, as well as how ESFs and other response stakeholders use LOEs to stabilize community lifelines. These questions have arisen from a perception of overlap in the purpose or intended audience for each construct. This perception of overlap is the result of

- the relative age of and stakeholder familiarity with these constructs, particularly for community lifelines and LOEs
- inconsistent guidance materials and terminology
- overlapping parts within these constructs, such as LOEs and the critical tasks within core capabilities
- expansion of the use of these constructs beyond their initial usage, to other FEMA mission areas, before authoritative documents in these other mission areas are updated (for example, application of community lifelines across mission areas).

These factors have created a perception of overlap between these constructs that contributes to confusion about their use and utility, particularly during incident response. Stakeholders explained that these issues lead to difficulties in distinguishing among these constructs and when to use them. Furthermore, both FEMA and SLTT interviewees noted that it might not be practical to employ community lifelines, ESFs, and LOEs during a response operation. For example, a FEMA interviewee commented that "having multiple lenses to examine incidents is useful, but the time-sensitivity constraints make it harder to use multiple approaches."[12] An SLTT interviewee explained that they felt that community lifelines rearranged the ESFs, and the interviewee expressed concern about the constantly evolving nature of FEMA constructs, surmising that, "in a few years, something [else] will come around to rearrange the lifelines."[13]

## Conclusion

This section has summarized issues affecting the integration of emergency management constructs and documented the negative impacts of poor integration. In particular, our research suggests that there are too many constructs, that their purposes

and relationships are often unclear, that the constructs are sometimes duplicative, and that many are overly complex. In some cases, constructs might appear to overlap but might be intended for different purposes, although users do not always understand those purposes very well. These issues can have real-world implications for achieving a coordinated national emergency management system. In the next section, we propose options for better addressing these issues and impacts; in the final section, we provide a road map for implementation and transformation.

## Options for Improvement

We developed 15 potential options for improvement for FEMA and other key federal entities and assessed each option against three criteria. Table 4 summarizes these criteria.

We discuss these options within three broad categories of action, as shown in the left column in Table 5:

- The first set of actions focuses on developing a **construct hierarchy and a set of rules**—in other words, clearly defining the emergency management ecosystem and developing procedures and practices for managing that system. These actions could establish both (1) guidance and guardrails to identify additional areas for streamlining and (2) a system to prevent future integration issues.
- The second set of actions focuses on **enhancing education, communication, and stakeholder support**. These actions could lead to better understanding of when and how to use constructs, reduce burden on stakeholders grappling with the growing demands of emergency management, and lead to enhanced use of constructs over time.
- The third group of actions focuses on **streamlining risk assessment and emergency management**. These options aim to achieve greater integration among the constructs by directly addressing the issues contributing to poor integration.

### Actions to Develop Construct Hierarchy and Rules

We identified three options for improvement focused on developing construct hierarchy and rules:

- Formally define and organize a system of constructs.
- Establish rules to reduce the number and complexity of constructs.
- Implement a clear and transparent update process for community lifelines, core capabilities, ESFs, and LOEs.

TABLE 4
Criteria for Assessing Options for Improvement

| Criterion | Measure | Assessment Level |
|---|---|---|
| Impact on integration | Whether the proposed solution addresses the issue (fragmentation or overlap) or the issue's adverse impacts[a, b, c] | • Improves construct integration: Addresses an identified area of fragmentation or overlap<br>• Reduces the impacts of a lack of integration: Addresses an identified impact of fragmentation or overlap |
| Level of transformation | How transformative a proposed solution could be in the emergency management policy landscape. Truly transformative changes generally require a broad consensus and engagement by multiple actors.[d] | • Major: Major changes or paradigm shifts in institutions, laws, financing, or governance<br>• Moderate: Moderate changes in institutions, policies, financing, or practices<br>• Minor: Minor changes in institutions, policies, financing, or practices |
| Ease of adoption | The relative administrative and policy ease of implementing an option for improvement[a, b] | • High: Requires a FEMA policy change, with implications within FEMA<br>• Moderate: Requires one or more of the following:<br>– FEMA policy change and SLTT coordination<br>– FEMA policy change and interagency coordination<br>– other DHS federal agency policy change<br>• Low: Requires changes to law, regulations, or White House directives or orders or some combination of these |

[a] Patton, Sawicki, and Clark, 2012.

[b] Mintrom, 2011.

[c] Knopman, Zmud, et al., 2015.

[d] Knopman and Lempert, 2016.

TABLE 5
Categories of Action for Options for Improvement

| Category of Action | Option for Improvement | Type of Construct Addressed |
|---|---|---|
| Develop a construct hierarchy and a set of rules. | Formally define and organize a system of constructs. | Crosscutting |
| | Establish rules to reduce the number and complexity of constructs. | Crosscutting |
| | Implement a clear and transparent update process for community lifelines, core capabilities, ESFs, and LOEs. | Operations, coordination, and reporting |
| Enhance education, communication, and stakeholder support. | Create a customer-experience office or function. | Crosscutting |
| | Improve communication with construct users. | Crosscutting |
| | Create a new lessons-learned information system. | Assessments |
| | Provide lessons-learned assistance to SLTTs. | Assessments |
| | Develop processes and planning actions to help stakeholders with transition to FEMA GO. | Grants |
| | Enhance education, training, and communication for community lifelines, core capabilities, ESFs, and LOEs. | Operations, coordination, and reporting |
| Streamline risk assessment and emergency management. | Consolidate the five frameworks into two: risk mitigation and consequence management. | Frameworks |
| | Adopt a common risk lexicon for the frameworks. | Frameworks |
| | Develop an integrated risk assessment. | Assessments |
| | Consolidate FEMA's preparedness and mitigation grants into two programs. | Grants |
| | Expand the use of core capabilities to include mitigation grants. | Grants |
| | Ensure that community lifelines and core capabilities remain aligned to their intended purposes. | Operations, coordination, and reporting |

NOTE: GO = Grants Outcomes.

## Formally Define and Organize a System of Constructs

There is currently no formal system of organizing the constructs, which contributes to overlap, redundancies, and confusion about when and how to operationalize them during incidents. To address this, FEMA could develop a formal title and definition for *constructs*, identify the universe of relevant constructs, and establish a formal organization or system of constructs. Such a system could make clear how the constructs are linked to one another and intended to work together to attain strategic objectives and goals. Ideally, this organizational system would be based on a set of simple, intuitive relationships that would not require substantial explanation. Any such system could be conceived more broadly than just the 31 constructs analyzed for this study. Implementing this option would also—to borrow the terms

TABLE 6
Assessment: Formally Define and Organize a System of Constructs

| Criterion | Assessment | Description |
|---|---|---|
| Impact on integration | Improves construct integration | Would directly address the lack of integration across constructs |
| Level of transformation | Moderate | Might require significant changes to some constructs |
| Ease of adoption | Moderate | Requires a FEMA policy change with implications within FEMA |

used by one FEMA interviewee—provide FEMA with a means of determining when the agency has "ballooned" the number of constructs under one mission area and when constructs could be cut or merged. It would also set a standard for the consistent use of constructs across missions.

The primary barriers to creating this system lie in the number and complexity of constructs, the variation in their nature and scope, and their overlapping purposes and authorities. Although this option could be implemented without having direct impacts on individual constructs, it is likely, and perhaps even preferable, that organizing the constructs into a system will require significantly modifying some constructs. Although a PPD is not strictly required to achieve this option, the most binding implementation would involve a PPD on the overall organization of the national emergency management system.

Creating a system of constructs could work counter to the purpose of the option—and of this study—by creating additional bureaucracy, rules, and constructs. However, these risks can be managed, and we anticipate that the benefits of reducing burden and complexity and creating a more streamlined, efficient, and effective system will outweigh any potential risks.

Another consideration is that it is unclear exactly which constructs should be included in a system. Several constructs outside FEMA's control are likely to be relevant, including some that were not part of this study. FEMA might find that the list of 31 constructs selected for this study is not the exact set that should ultimately be organized into a system. Furthermore, creating a hierarchy of constructs could prove difficult, and stakeholders might perceive any such system as "yet another" construct that adds confusion to their work. FEMA should include engagement with SLTT stakeholders as part of any effort to create a hierarchy of constructs.

### Establish Rules to Reduce the Number and Complexity of Constructs

In conjunction with developing a structure for the constructs, FEMA could

- establish a set of rules to reduce the number and complexity of constructs
- adopt rules for writing constructs that adhere to the requirements of the Plain Writing Act of 2010 and develop a process to govern how and when constructs are changed
- identify a set of objectives for the constructs and design rules governing the constructs to achieve these objectives (e.g., limiting the number of constructs overall, reducing complexity in the language of how constructs are written, establishing rules and a public schedule for how often a construct can be updated).

This option would address three issues we heard from interviewees:

- There are too many constructs overall.
- Constructs sometimes change too frequently.
- Some constructs are too complex.

Overall, a simplified system should facilitate more-effective and -efficient achievement of the objectives of the individual constructs and the system as a whole. Establishing a clear set of rules would reduce the likelihood that new leaders and administrations will attempt to "tweak" the system frequently. Recognizing that real-world events might provide valuable lessons learned or other evidence that a construct should be changed,

TABLE 7

Assessment: Establish Rules to Reduce the Number and Complexity of Constructs

| Criterion | Assessment | Description |
|---|---|---|
| Impact on integration | Improves construct integration | Would directly address the stakeholder burden that results from the volume and complexity of constructs |
| Level of transformation | Minor | Would require minor changes in FEMA policies and practices and the resources to support this |
| Ease of adoption | Moderate | Requires coordination with other construct owners |

FEMA could establish procedures to allow for out-of-cycle changes while setting the bar high for such changes. Finally, this option is intended to help ensure that, once FEMA has streamlined the constructs and improved construct integration, there is a system in place to prevent the universe of constructs from reverting over time to the conditions that prompted FEMA to request this study.

This option could affect every construct in some way—including other FEMA constructs not included in this study—because every construct would be subject to review at some point and would need to adhere to a set update cycle, be redrafted to conform to new plain-language requirements, and comply with any other rules FEMA might choose to establish.

A significant barrier to this option is that FEMA does not control all the constructs included in this study or those that might be relevant to a more formal system of constructs. Implementation of this option would be an ongoing process because FEMA could continue to test and refine rules over time.

Implementing this option could also have the unintended effect of creating additional rules and bureaucracy, adding to rather than reducing existing problems, such as complexity and confusion. In addition, establishing rules to govern the constructs could create additional burden for FEMA staff that could slow the development of new constructs or changes to existing ones. This could limit responsiveness and create administrative costs. In addition, other entities besides FEMA might create or change constructs in ways that undermine any improvements that FEMA makes. Establishing rules could lead to more standardization among constructs, possibly eliminating differences between the constructs that make them more effective.

### Implement a Clear and Transparent Update Process for Community Lifelines, Core Capabilities, Emergency Support Functions, and Lines of Effort

Separate FEMA offices manage community lifelines, core capabilities, ESFs, and LOEs, and each is subject to its own revision time frames, planning, and management. Because the benefits of these constructs are fully realized only when they work together across the emergency management system, FEMA could implement a clear and transparent update process for all four constructs that requires alignment and coordination among construct owners.

The updates should reduce unnecessary overlap and duplication of effort and streamline FEMA's emergency management and incident response efforts over time. By developing a collaborative process that works across the Office of Response and Recovery and the Resilience office, FEMA can facilitate enhanced synchronization of these constructs moving forward. The formal update and maintenance of these constructs should also adhere to best practices in emergency management—chiefly, the importance of a simple organizational structure (Bennet, 2011).

This option would require that owners of each of these constructs within FEMA remain committed to collaborating over time and have the resources to do so. Adoption of this option could also require continued leadership support and an internal FEMA process to adjudicate construct modifications if constructs overlap. Requiring realignment of the constructs could also have

TABLE 8

Assessment: Implement a Clear and Transparent Update Process for Community Lifelines, Core Capabilities, Emergency Support Functions, and Lines of Effort

| Criterion | Assessment | Description |
|---|---|---|
| Impact on integration | Improves construct integration | Would ensure that overlap between community lifelines, core capabilities, ESFs, and LOEs in response and preparedness does not reemerge in the future |
| Level of transformation | Minor | Constitutes a minor change in FEMA policies and procedures |
| Ease of adoption | High | Would require ongoing FEMA action but mostly internal coordination |

unintended negative consequences by requiring changes to the constructs that inadvertently eliminate beneficial aspects of them.

Ideally, this option would be implemented in concert with maintaining alignment and consistent implementation of community lifelines and core capabilities (discussed under "Actions to Streamline Risk Assessment and Emergency Management," later in this report) to their intended purposes. This option would primarily affect constructs that have a role in disaster response, planning and grants, and doctrine, such as the NRF.

## Actions to Enhance Education, Communication, and Stakeholder Support

The next six options for improvement focus on opportunities to enhance education, communication, and stakeholder support:

- Create a customer-experience office or function.
- Improve communication with construct users.
- Create a new lessons-learned information system.
- Provide lessons-learned assistance to SLTTs.
- Develop processes and planning actions to help stakeholders with the transition to FEMA GO.
- Enhance education, training, and communication for community lifelines, core capabilities, ESFs, and LOEs.

### Create a Customer-Experience Office or Function

FEMA could establish a customer experience office or function to better determine how to structure the constructs so that they are meeting the needs of key stakeholders. Although the White House's Office of Management and Budget (OMB) considers FEMA to be a high-impact service provider (OMB Circular A-11), with FEMA's Individual Assistance and Federal Insurance and Mitigation Administration programs, and FEMA has an internal informal customer-experience group, it does not currently have an official agencywide office or function dedicated to customer experience. Customer experience is not the same as customer service. Customer experience encompasses a customer's entire involvement with an agency, whereas customer service is more narrowly focused on specific transactions. Although SLTTs and other stakeholders would continue to interact with the same entities they do now, including regional administrators and individual FEMA offices, a customer-experience office would help FEMA monitor and work to improve holistic customer experience across the FEMA enterprise. In this context, *customer* refers to an SLTT stakeholder, whereas FEMA more typically uses the term to refer to a disaster survivor. This option does not include a focus on disaster survivors' needs, although a customer-experience office could be configured to include all types of customers.

A key tenet of customer experience is human-centered design, which the U.S. General Services Administration defines as "a problem-solving framework that brings together designers and stakeholders to reimagine systems, products, or services, and how they can become more relevant and emotionally resonant to the people who use

TABLE 9
Assessment: Create a Customer-Experience Office

| Criterion | Assessment | Description |
|---|---|---|
| Impact on integration | Reduces the impacts of lack of integration | Would directly address the stakeholder burden that results from the volume and complexity of constructs |
| Level of transformation | Moderate | Constitutes a moderate change in FEMA's internal structure and functions |
| Ease of adoption | Moderate | Would require the establishment of a new office and, potentially, coordination with DHS |

them" (U.S. General Services Administration, 2021). Executive Order 14058 called on agencies to "to design experiences with the Federal Government that effectively reduce administrative burdens, simplify both public-facing and internal processes to improve efficiency, and empower the Federal workforce to solve problems."

Creating a new office within FEMA could require a substantial effort, including identifying funding and staffing, and creating such an office could lead to additional processes that burden FEMA employees and hinder agency responsiveness. However, institutionalizing the customer-experience function in a dedicated office might be more likely to ensure that the option is fully implemented than having the function carried out in a decentralized structure.

By design, this action would affect all constructs because all involve FEMA's interactions with external stakeholders in some way. Establishing the boundaries of the office's authority, and how to enforce them, could be difficult, even when drawing on successful models in other entities. The magnitude of the impacts will vary with the specific construct, as well as who the customers are. Another important consideration is that the PRA limits federal agencies' ability to conduct customer surveys without OMB approval. In implementing this option, FEMA could consider pursuing a PRA exemption that allows the agency to conduct surveys of its customers more frequently.

Given the broad scope of the constructs, the office might not be able to provide sufficient technical expertise to adequately satisfy stakeholder needs, and such an office might divert stakeholders away from existing resources. In addition, some stakeholders could gravitate to the customer-experience office to address issues unrelated to the constructs; although this might be beneficial to FEMA and the emergency management community, it would diminish the office's ability to address issues related to the constructs.

### Improve Communication with Construct Users

FEMA could take steps to systematically improve communication with external stakeholders about the constructs. This could involve taking a more proactive approach to the constructs through national or regional calls and workshops to help introduce the constructs to users and address key aspects when releasing new constructs or updating existing ones. Additionally, FEMA could create shorter, distilled core curricula or "recommended reading" lists for stakeholders to emphasize the key features and uses of each construct. This could improve their accessibility and minimize the amount of information that key stakeholders need to absorb to use the construct effectively. Improving communication and distilling the core concepts needed to understand the most-critical aspects of the constructs would reduce burden, lessen the potential for stakeholder confusion, and improve constructs' accessibility to their intended users.

This option would require additional resources to bolster FEMA's communication and outreach efforts and develop additional core curriculum materials. Creating new materials and engagement approaches could require substantial resources from FEMA (i.e., time, attention, funding, staffing) and thereby take resources away from other objectives. If not done effectively, distilling key aspects of complex constructs and the services FEMA provides also runs the risk of confusing stakeholders.

TABLE 10

Assessment: Improve Communication with Construct Users

| Criterion | Assessment | Description |
|---|---|---|
| Impact on integration | Reduces the impacts of lack of integration | Would directly address stakeholder confusion about how and when to use constructs |
| Level of transformation | Minor | Constitutes a minor shift in how FEMA communicates key elements of constructs to stakeholders |
| Ease of adoption | High | Would require changes in how FEMA communicates constructs to stakeholders |

Increased engagement and interaction with stakeholders could also invite questions and requests that are not within the mandate of this option, further dissatisfying stakeholders. In addition, the target audience of stakeholders for this effort is vast. Many might be unlikely to take new training or access new materials referenced without significant incentives, and, at a minimum, a variety of alternative communication modalities should be considered. Finally, there could be significant costs to training personnel in headquarters and FEMA's regional offices and deployed personnel, given their role in interfacing with SLTT partners.

Implementing this option is not expected to have a direct impact on the constructs themselves but could indirectly lead to changes in the constructs as opportunities are identified through augmented communication with stakeholders to improve or streamline individual constructs.

## Create a New Lessons-Learned Information System

To address the identified issues in the propagation of lessons learned from conducted exercises, FEMA could develop a usable version of its previous Lessons Learned Information Sharing system. A GAO report showed that FEMA had previously implemented the U.S. Department of Defense's Joint Lessons Learned Information System but abandoned its use because it "was not user friendly" (GAO, 2020, p. 36). Projects to develop future iterations should explore ways to ensure that the system is designed to facilitate use, looking to implementations of similar systems, such as the National Aeronautics and Space Administration's Lessons Learned system (National Aeronautics and Space Administration, undated).

The most-obvious barriers to the successful implementation of this option are

- the resource needs of the exploratory and design work needed to build a lessons-learned information system that meets FEMA's needs without duplicating past failures of usability
- the procedural burden it might place on users.

The design and deployment of a new information technology (IT) infrastructure solution would represent a significant financial cost for FEMA, even beyond such expected expenses as training, updates, and maintenance.

Additionally, external exercise participants must turn to the system both to contribute their own lessons and to pull relevant information that partners capture. This option also carries the possibility of burdening users both within FEMA and within partner agencies or entities. This possibility is magnified if the lessons-learned information system deployed does not adequately address usability concerns found in previous attempts to build similar systems. In addition, without energetic leadership support and proactive efforts to push stakeholders to use such a system, implementation of this option could experience some of the same barriers that have caused past systems to fail.

## Provide Lessons-Learned Assistance to State, Local, Tribal, and Territorial Entities

To address the issues identified in the propagation of lessons learned from conducted exercises, FEMA could disseminate guidance and support

TABLE 11

Assessment: Create a New Lessons-Learned Information System

| Criterion | Assessment | Description |
|---|---|---|
| Impact on integration | Reduces the impacts of lack of integration | Would create a mechanism to better capture lessons learned and ensure that the exercise construct is put to full use. |
| Level of transformation | Minor | Although such a system might entail significant resource allocation, does not require a transformational shift in or understanding of constructs |
| Ease of adoption | Moderate | Would require a funding outlay and procedural dedication, potentially taking resources from other mission sets |

TABLE 12

Assessment: Provide Lessons-Learned Assistance to State, Local, Tribal, and Territorial Entities

| Criterion | Assessment | Description |
|---|---|---|
| Impact on integration | Reduces the impacts of lack of integration | Would build a mechanism to better capture lessons learned and ensure that the exercise construct is put to full use; would address the administrative burden that requirements to capture and memorialize the lessons learned from exercises place on partners and shift some of that burden to FEMA |
| Level of transformation | Minor | Although such a system might entail significant resource allocation, does not require a transformational shift in or understanding of constructs |
| Ease of adoption | High | Especially after the dissemination of prepared guidance, would likely leverage existing partnerships |

to SLTT partners following exercises to help them build the capacity to more adequately capture lessons learned themselves. Such assistance would standardize lessons-learned work through the propagation of templates and tools, reducing burden on partners while creating consistency in format that can facilitate easier tracking and dissemination of these lessons. Improving and standardizing the capture of lessons learned following exercises ensures that the capability validation inherent in these activities can be spread beyond exercise participants and improves the implementation of other constructs—notably, assessments, such as the THIRA.

This option inherently recognizes the resource constraints on both FEMA and its SLTT partners and aims to leverage the former's expertise and scope to reduce burden on the latter without the outlay of significant resources or entirely new procedures. The option also recognizes that many exercise participants are primarily technical actors who might not be familiar with the recognition and recording of lessons learned in a format that is useful to other partners.

Given this option's simplicity and narrow scope, we envision few barriers aside from those inherent to funding and staff time allocation. However, this option carries the possibility of unnecessary burden on stakeholders if the standardized lessons learned are not effectively disseminated to relevant parties. Potential negative effects associated with this option include the time and resources required to implement it. Furthermore, should FEMA implement this option, the agency should ensure that the technical assistance meets SLTT needs. FEMA should also consider engaging stakeholders to ascertain their workflows and preferences.

## Develop Processes and Planning Actions to Help Stakeholders with the Transition to Grants Outcomes

In 2015, FEMA began the implementation of GO to modernize and streamline the grant application process as part of the Grants Management Modernization program. Over time, FEMA has expanded its grantmaking efforts, leading to disparate management systems and administrative and reporting requirements for more than 40 grant programs (GAO, 2019, pp. 6–7). FEMA expects to complete the integration of grants into FEMA GO by 2023 and retire the other grant application programs by 2025.[14] However, to be successful, FEMA must adopt best practices for rolling out a new IT system, especially for communication with internal and external stakeholders.

To ensure a seamless transition to FEMA GO for grant application and management, FEMA could develop communication processes to consolidate application materials and adequately communicate changes to relevant stakeholders. Additionally, these materials should be stored in a centralized repository for ease of access.

The most-significant potential negative effects associated with the option are the time and resources required. The implementation of a centralized repository and the development of improved communication documents require

TABLE 13

Assessment: Develop Processes and Planning Actions to Help Stakeholders with the Transition to Grants Outcomes

| Criterion | Assessment | Description |
|---|---|---|
| Impact on integration | Reduces the impacts of lack of integration | Would directly address grant program's impacts through stakeholder engagement |
| Level of transformation | Minor | Constitutes no change in federal policies and procedures or in FEMA policy; however, could ease the transition to FEMA GO, resulting in more-rapid transformation |
| Ease of adoption | High | Would require the development of communication materials and updated practices for information-sharing via a centralized repository but does not require policy changes within or external to FEMA |

resources, including time and money. This option's impacts on the other constructs we studied would be limited, given that this option specifically addresses communication materials about the grant programs. FEMA could also consider the benefits of a centralized repository for communication guidance in addition to the other options relevant to grant management. This would ensure that grant recipients have easy access to guidance documents as FEMA transitions to FEMA GO.

### Enhance Education, Training, and Communication for Community Lifelines, Core Capabilities, Emergency Support Functions, and Lines of Effort

Community lifelines and LOEs use terminology similar to that used by core capabilities and ESFs but have distinct purposes. However, given the constructs' similar goals, confusion about when and how to employ each was prevalent among interviewees. Much of this confusion could be addressed with additional education, training, assistance, and communication on community lifelines, core capabilities, ESFs, and LOEs to improve understanding and better socialize the constructs, their implementation, and their differences for construct users. Stakeholders could also benefit from additional education and training on these constructs' purposes, their roles in response, and when and how to operationalize them.

Many of the options described in this report should be coordinated and time-phased with others to avoid wasted effort and additional confusion. Before such efforts are undertaken, the doctrinal applications of community lifelines, core capabilities, and (especially) LOEs (if any) must be fully understood and embraced. This option would also require modest additional resources to develop new training materials and outreach mechanisms, train trainers, and monitor outreach to ensure that the messaging is consistent over time and updated as needed. Finally, this option could be enhanced to include a process that incorporates feedback from the field about the quality and utility of the guidance materials and outreach. More-effective and -efficient use of these constructs could have implications for others used in response, such

TABLE 14

Assessment: Enhance Education, Training, and Communication for Community Lifelines, Core Capabilities, Emergency Support Functions, and Lines of Effort

| Criterion | Assessment | Description |
|---|---|---|
| Impact on integration | Reduces the impacts of lack of integration | Would address stakeholder burden and confusion about how community lifelines, core capabilities, ESFs, and LOEs relate and are used in preparedness and response |
| Level of transformation | Minor | Constitutes a minor change in FEMA policies and procedures |
| Ease of adoption | High | Would require ongoing FEMA action, as well as the participation of construct users |

ESFs, and improve the efficiency of response efforts more generally.

## Actions to Streamline Risk Assessment and Emergency Management

The final six options for improvement focus on streamlining risk assessment and emergency management:

- Consolidate the five frameworks into two: risk mitigation and consequence management.
- Adopt a common risk lexicon for the frameworks.
- Develop an integrated risk assessment.
- Consolidate FEMA's preparedness and mitigation grants.
- Expand the use of core capabilities to include mitigation grants.
- Ensure that community lifelines and core capabilities remain clearly aligned and consistently applied to their intended purposes.

### Consolidate the Five Frameworks into Two: Risk Mitigation and Consequence Management

A more streamlined system for national risk and emergency management, via the National Planning Frameworks, could simplify risk mitigation and align it with other federal risk management approaches, as well as better connect and integrate response and recovery to manage consequences once a risk is realized. To do so, the system of National Planning Frameworks could be based on two, rather than five, components: risk mitigation and consequence management. FEMA would develop a proposal with its interagency partners for consideration by the National Security Council (NSC) for consolidation of the frameworks. Because the current structure of the frameworks is required by PPD-8, the NSC would need to consider updating or replacing the PPD. Streamlining the National Planning Frameworks, as shown in Figure 8, could deliver operational and functional efficiencies while reducing construct users' confusion.

There are significant barriers to implementation of this option. The main barrier would be the need for external (NSC) action to develop a proposal to consolidate the frameworks. Because the current structure of the frameworks is required by PPD-8, the NSC would need to consider updating or replacing the PPD—a complicated and time-consuming interagency process. Federal stakeholders, such as the Federal Bureau of Investigation and the rest of the U.S. Department of Justice, would need to be full partners with this vision.

In addition, implementing this option would be very challenging and time-consuming. Once adopted, it would have substantial impacts and would require updates and revisions to a wide variety of programs and activities—such as training and communications—planning documents, and the general language that the emergency management and homeland security communities have been using. The cascading impacts of integrating the National Planning Frameworks would be far-reaching within FEMA and throughout the homeland security and emergency management communities. Integrating these constructs would change the homeland security mission areas, resulting in the restructuring of all other constructs connected to them and potentially requiring additional time for stakeholder groups to learn and adapt to new frameworks. The constructs most likely to be

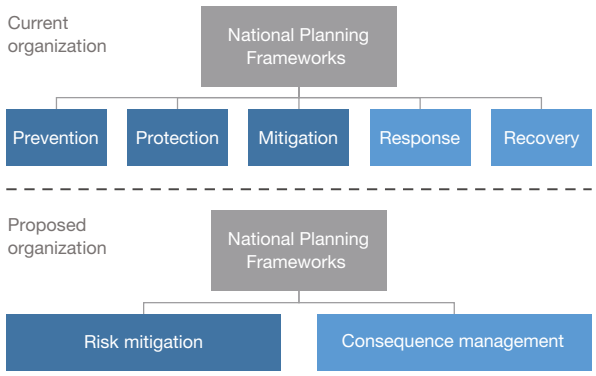
TABLE 15

Assessment: Consolidate the Five Frameworks into Two

| Criterion | Assessment | Description |
|---|---|---|
| Impact on integration | Improves construct integration | Would directly address overlap by combining related frameworks |
| Level of transformation | Major | Constitutes a major change in the orientation of the existing frameworks |
| Ease of adoption | Low | Would require interagency action and potential changes to PPD-8 and have cascading impacts on SLTTs |

FIGURE 8

Proposed Consolidation of the National Planning Frameworks




affected would be either those directly related to response and recovery (e.g., community lifelines, ESFs, RSFs) or those supporting preparedness activities at the SLTT level (e.g., core capabilities, exercises) because these concepts are discussed at length in the frameworks. A variety of programs outside the scope of this study that rely on the current mission areas, such as training, would also be affected. Furthermore, multiple statutes currently reference the NRF and incorporate content from that framework into other requirements. Changing the structure of the frameworks would have many downstream impacts on other statutory requirements.

## Adopt a Common Risk Lexicon for the Frameworks

A careful rewriting of the five National Planning Frameworks to harmonize the risk language could help reduce the likelihood of confusion, especially about the use of the term *risk*. Furthermore, because these frameworks are intended to support the whole community, ensuring the use of language that is consistent with DHS doctrine (for example, *Risk Management Fundamentals* [DHS, 2011]) and the federal government more broadly is important for efficient and effective interagency communication and coordination. To support the adoption of consistent risk language across these frameworks, FEMA could provide a proposal to the NSC for the interagency to consider a common risk lexicon across the five frameworks.

An update to the frameworks that includes a singular standard on which to base the risk management language would align with communication best practices in the field of risk management. At a practical level, employing risk language that is more consistent with that of other DHS components and the federal government, such as *Risk Management Fundamentals* (DHS, 2011) or OMB Circular A-123, would make the frameworks more accessible across the interagency and reduce confusion about how the five frameworks work and fit together.

Making changes to the frameworks would be a significant undertaking, and this proposed change would most likely be made in conjunction with other updates. FEMA personnel and other emergency management officials who have substantial experience with the current language might be less comfortable with the DHS risk management language, and widespread adoption would both take time and require significant change management.

A single, authoritative risk management approach could have implications for other constructs and efforts within FEMA that utilize risk language or align with aspects of risk management. For example, a different definition of *risk* might affect how communities present risk in grant appli-

TABLE 16

Assessment: Adopt a Common Risk Lexicon for the Frameworks

| Criterion | Assessment | Description |
|---|---|---|
| Impact on integration | Reduces the impacts of lack of integration | Would reduce the inconsistent use of risk language among the existing frameworks and bring it into alignment with other DHS doctrine and best practices in risk management |
| Level of transformation | Minor | Is a small change to text |
| Ease of adoption | Moderate | Could be implemented as part of the next revision of the frameworks but would require coordination across DHS and other federal agencies |

cations or how risks are identified in the THIRA/SPR process.

Any revisions to the existing frameworks would require significant interagency coordination and partnership from federal agency stakeholders, such as the Federal Bureau of Investigation, the Department of Justice overall, and CISA. An externally validated risk analysis approach (such as OMB Circular A-123 on risk management) could be the basis for a common approach but might still require effort to be applied in this context (Donovan, 2016). Furthermore, the impact of adopting consistent risk language would be substantial. It would require updating and revising a wide variety of documentation of programs and activities and the general language in use by the emergency management and homeland security communities.

### Develop an Integrated Risk Assessment

FEMA could consolidate the THIRA and the risk assessment component of the hazard mitigation planning process—the HIRA—to create a single, all-hazards risk assessment. This consolidated assessment should meet the requirements necessary for capability assessment and mitigation planning—specifically, the SPR and HMPs. In doing so, FEMA should first review the existing needs of the SPR and HMPs to identify opportunities for alignment and the elimination of unnecessary requirements. FEMA would then develop a new assessment process and conduct a pilot program with different types of jurisdictions to identify and correct implementation challenges before adopting the new assessment.

An integrated, all-hazards risk assessment would simplify the current processes, reducing the redundancy and burdens associated with overlapping assessments that rely on similar participants and activities. This integration would allow FEMA to align terminology, tools, and timelines, reducing complexity for SLTT partners as they manage their risk assessment responsibilities and communicate their findings to FEMA. They would then be able to align their efforts toward a more complete and unified picture of the risks facing their respective jurisdictions, rather than duplicate effort on separate assessments focused on overlapping hazard types. The output of the assessment would then feed into existing processes, with the SPR used to identify capability gaps and HMPs used to prioritize mitigation efforts.

SLTTs might find the adoption of a single risk assessment burdensome in the short term because they would need to learn how to implement it, especially considering that stakeholders had to adapt to revisions to the THIRA process as recently as 2018. Furthermore, adopting a single cycle of three or five years for all THIRA and HIRA components might pose challenges. Interviewees mentioned that the timescale necessary to maintain an accurate picture of existing capabilities is much shorter than the timescale necessary to assess funding's impact on capability development.[15] Another potential barrier comes in the form of legal requirements. For example, 44 C.F.R. § 201.6 lists detailed and explicit requirements for local HMPs and their associated risk assessments. Any integration that requires changes to those requirements would also require that FEMA engage in the rulemaking process. Similarly, changes to the THIRA/SPR process might require revisions to 6 U.S.C. § 752(c) on state preparedness reporting. Developing a new assessment process could prove challenging and time-intensive, given the barriers that previous efforts have experienced. Should FEMA opt to engage the rulemaking process to

TABLE 17

Assessment: Develop an Integrated Risk Assessment

| Criterion | Assessment | Description |
|---|---|---|
| Impact on integration | Improves construct integration | Would decrease the number of assessments required of certain jurisdictions |
| Level of transformation | Moderate | Would still require similar information and feed into the same processes |
| Ease of adoption | Low | Would likely require changes to existing regulations and to SLTT partners' operations |

pursue more-dramatic changes, it would add a significant amount of time to the development process.

Creating an integrated, all-hazards risk assessment process would most directly affect the constructs that HIRA and THIRA currently inform—HMPs and the SPR. Furthermore, the adoption of this option would likely require review of the current mitigation core capabilities and their target language. Because funding for several grant programs is tied to the outputs of the THIRA/SPR process and HMPs, a new risk assessment process would affect them and potentially lead to reduced complexity and streamlining because jurisdictions would be able to use a single risk assessment process to meet grant requirements. Although THIRA and HIRA are similar, they are not identical, and this consolidation might result in the loss of data and analysis.

In addition, SLTTs might find the adoption of a single risk assessment burdensome in the short term because they would need to learn the change and implement it, especially considering that stakeholders had to adapt to revisions to the THIRA process as recently as 2018. This option could also result in greater administrative burdens for SLTTs if not well implemented.

### Consolidate FEMA's Preparedness and Mitigation Grants

For this option, FEMA, in concert with the White House, could provide a proposal for consolidation to Congress; this option would require congressional approval for implementation, which is a significant step. Two consolidation methods exist, according to GAO (GAO, 2014, p. 8):

- First is the consolidation into block-grant programs—in this case, one with a focus on preparedness and the other with a focus on mitigation.
- The second is a hybrid or blended approach.

Either option could reduce the burden on SLTT applicants and overlap between the grant programs. Moreover, either option could also provide SLTTs with avenues for projects that are larger in scope and scale.

Through the establishment of separate block grants for preparedness and mitigation, burden could be reduced for SLTT applicants by limiting the number of applications and reports they must submit and consolidating the number of additional requirements they must fulfill. We propose, as an alternative, that FEMA consider options to blend similar grant programs to streamline their management and improve outcomes. GAO considers blended funding options as a best practice for consolidating federal grant programs (GAO, 2014). The Association of Government Accountants notes that, under blended funding, "financial assistance is combined under a single set of reporting and other requirements, and resources contributed from each individual funding stream lose their original award-specific identity" (Work Group on Blended and Braided Funding, 2014, p. 6).

The primary barriers to this option pertain to its adoption: Both the George W. Bush administration (mitigation) and the Obama administration (preparedness) recommended consolidating certain grant programs via a block-grant option, but Congress did not accept either of these proposals. The current Congress might not be amenable to the consolidation of preparedness or mitigation

TABLE 18
Assessment: Consolidate FEMA's Preparedness and Mitigation Grants

| Criterion | Assessment | Description |
|---|---|---|
| Impact on integration | Improves construct integration | Would directly address programs' overlap related to similar applicant pools and types of projects funded |
| Level of transformation | Major | Constitutes a major change in federal policies and procedures, resulting in a vastly different customer experience for SLTTs |
| Ease of adoption | Low | Would require congressional action, with significant impacts on FEMA policy and procedures |

### The U.S. Environmental Protection Agency Has Used Blended Grants to Improve Integration

A useful example of blended funding is the U.S. Environmental Protection Agency's (EPA's) Performance Partnership Grant (PPG) program. Because environmental problems are multifaceted, grants focused on specific problem areas created artificial silos and limited effective and efficient grant projects and grant management. Beginning in the mid-1990s, EPA worked with state and tribal stakeholders and Congress to identify 19 grant programs that could be combined into a single, blended grant agreement. PPGs consolidate budgets, encourage systematic planning for multiple projects, reduce administrative and cost-sharing burden on recipients, and provide states flexibility in execution, but they do require statutory approval (Work Group on Blended and Braided Funding, 2014, pp. 8–11).

grants in this manner. However, consolidation via blending has not previously been considered for these programs and might not face the same challenges. Under this option, all the current grant programs would continue to exist, which might make proponents of the current programs more open to change. However, given the significant barriers to adoption of either of the proposed consolidation options, FEMA might wish to pursue administrative changes within its control that can achieve some of the benefits of consolidation—such as GAO's 2021 recommendation to allow flexible funding mechanisms between its mitigation grant programs (GAO, 2021). Furthermore, the cross-cutting option to create a customer-experience function at FEMA could help to maintain a more customer-oriented approach to the grants that reduces complexity and burden.

If either option for separate preparedness and mitigation block grants or a blended grant program were approved, FEMA would have to update its grant management policies, procedures, and processes, including IT systems, such as FEMA GO. Each of those efforts would require significant investments of time and money and prioritization from FEMA and DHS leadership. References to revised grant programs would also require updates in any of the National Planning Frameworks.

The possibility of some additional negative impacts must also be considered. In the block-grant method, FEMA might lose the ability to tailor program priorities as congressional and presidential priorities shift. This extends to niche or other specific aims, such as terrorist risks, which the HSGP prioritizes. Another element to consider is how the grant programs are initiated. EMPG, the HSGP, BRIC, and FMA are non–disaster related, and the application period begins with the publication of a NOFO; the HMGP is activated following a qualifying Stafford Act declaration.[16] This difference in mechanisms might prevent a full consolidation of similar grant programs.

## Expand the Use of Core Capabilities to Include Mitigation Grants

FEMA's use of different constructs for administering its grants creates burdens for recipients and challenges for consistent measurement across programs because different constructs are used for this purpose. To address this, FEMA could expand the use of core capabilities—currently in use for FEMA preparedness grants, such as SHSP and UASI within the HSGP—to its mitigation grants. In doing so, FEMA would first review the exist-

TABLE 19

Assessment: Expand the Use of Core Capabilities to Include Mitigation Grants

| Criterion | Assessment | Description |
|---|---|---|
| Impact on integration | Reduces the impacts of lack of integration | Would reduce burden on stakeholders caused by use of different constructs for different grant programs |
| Level of transformation | Minor | Would expand an existing FEMA construct to a broader set of the agency's grant programs |
| Ease of adoption | High | Would require internal policy changes by FEMA |

ing core capabilities to ensure that they capture the breadth of the mitigation mission and would finalize capability target language as appropriate. FEMA would then conduct a pilot program to identify potential implementation challenges before adopting the expansion.

Expanding the use of the core capabilities to the mitigation grants would enable communities to better capture this funding's impact on their mitigation capabilities for their SPRs. Furthermore, expanding the use of core capabilities to these grants would reduce the burden on these communities by applying a consistent construct across grant programs—one with which some communities are familiar from their experience with FEMA's preparedness grants. This option could also allow FEMA to track the alignment of projects to core capabilities across a wider variety of grant programs and provide consistent reporting to Congress and other stakeholders.

The adoption of this option would require FEMA to update its policies and procedures for its mitigation grants, which would require some investment of resources. Furthermore, should FEMA adopt this option, the agency might consider reviewing and updating the current mitigation core capabilities and their target language to ensure that they capture information the agency needs for application decisions and reporting. FEMA might also need to update its IT systems and other processes used for grant applications and reporting to allow the inclusion of the core capabilities for the mitigation grants. Finally, SLTTs might face some initial challenges in implementing this change because they would be applying the core capability construct to a new area. FEMA should consider conducting the pilot program over the grants' life cycle to identify potential challenges with using the core capabilities during the application and reporting processes and in other aspects of grant management.

### Ensure That Community Lifelines and Core Capabilities Remain Clearly Aligned and Consistently Applied to Their Intended Purposes

Core capabilities were designed to ensure that the emergency management community has the abilities needed to perform the necessary tasks to accomplish a mission, function, or objective, while community lifelines were designed for reporting and situational awareness of the status of essential services to enable prioritization and communication during response efforts. However, stakeholders noted confusion about when and how to use these constructs, along with ESFs and LOEs, in disaster response. Furthermore, over time, the application and communication of these constructs have expanded from their intended purposes, particularly for community lifelines and with the introduction of LOEs, which are described as the operationalization of core capabilities.

FEMA could more clearly explain and communicate the gaps and issues that each of the constructs is designed to address for each mission. In addition, ensuring that these constructs remain aligned with their primary purposes would help maintain operational clarity on the specific role, purpose, and utility of each in supporting emergency response and preparedness. Not only would this be useful for communication; it would also help simplify and ensure operational certainty, thereby reducing stakeholder confusion, in what has become a complex set of constructs that sup-

TABLE 20

Assessment: Ensure That Community Lifelines and Core Capabilities Remain Clearly Aligned and Consistently Applied to Their Intended Purposes

| Criterion | Assessment | Description |
|---|---|---|
| Impact on integration | Improves construct integration | Would directly address overlap between community lifelines, core capabilities, ESFs, and LOEs in response and preparedness |
| Level of transformation | Moderate | Constitutes a moderate change in FEMA policy because it ensures adherence to a construct's intended purpose |
| Ease of adoption | Moderate | Would require limited FEMA action and consistency in the use of constructs |

port planning for and conducting operations during disaster response. To carry this option out, FEMA's National Preparedness office and Response office could agree on the bounds of each construct; ensure that these constructs maintain alignment, as needed, within these bounds; and ensure that the bounds established are adhered to and the constructs are consistently communicated moving forward. FEMA could also consider eliminating the LOEs, although the resulting gains in simplifying the system would need to be balanced against the loss of any benefits that the LOEs provide to users.

The main barriers to implementing this option lie in the fact that these constructs were developed and are managed separately and that, at a minimum, two groups in FEMA would need to agree on this option and work together to implement it. Clarification or changes to community lifelines and LOEs, which are not integrated into operations at the SLTT level to a great extent, should be easier than changes to core capabilities, which are a more established construct. Over time, the need to communicate and "enforce" each construct's intended purpose and appropriate application would take resources and require ongoing coordination and commitment to avoid the misuse of constructs. Realignment of constructs could add some short-term confusion and frustration among stakeholder groups, which could be mitigated with an aggressive, consistent communication strategy. Formal guidance documentation, online resources, and other materials would have to be revised and provided in a timely manner. Furthermore, outdated material would have to be archived quickly to reduce opportunities for confusion. Additional resources would be required to update the documentation for all affected programs, and a coordinated release process might have to be established.

### Conclusion

As FEMA seeks to improve disaster management and promote efficient investment to address threats and hazards, understanding the challenges associated with the integration of different constructs will be essential. Poor integration—that is, overlap, duplication, and fragmentation—can lead to a variety of negative impacts, such as burden on stakeholders and operational confusion. In turn, these impacts can affect the provision of emergency management services and contribute to poor disaster outcomes across the United States.

In this section, we described 15 options for streamlining and improving emergency management constructs. In the next section, we provide a road map of our options for addressing these challenges, and we close with concluding observations.

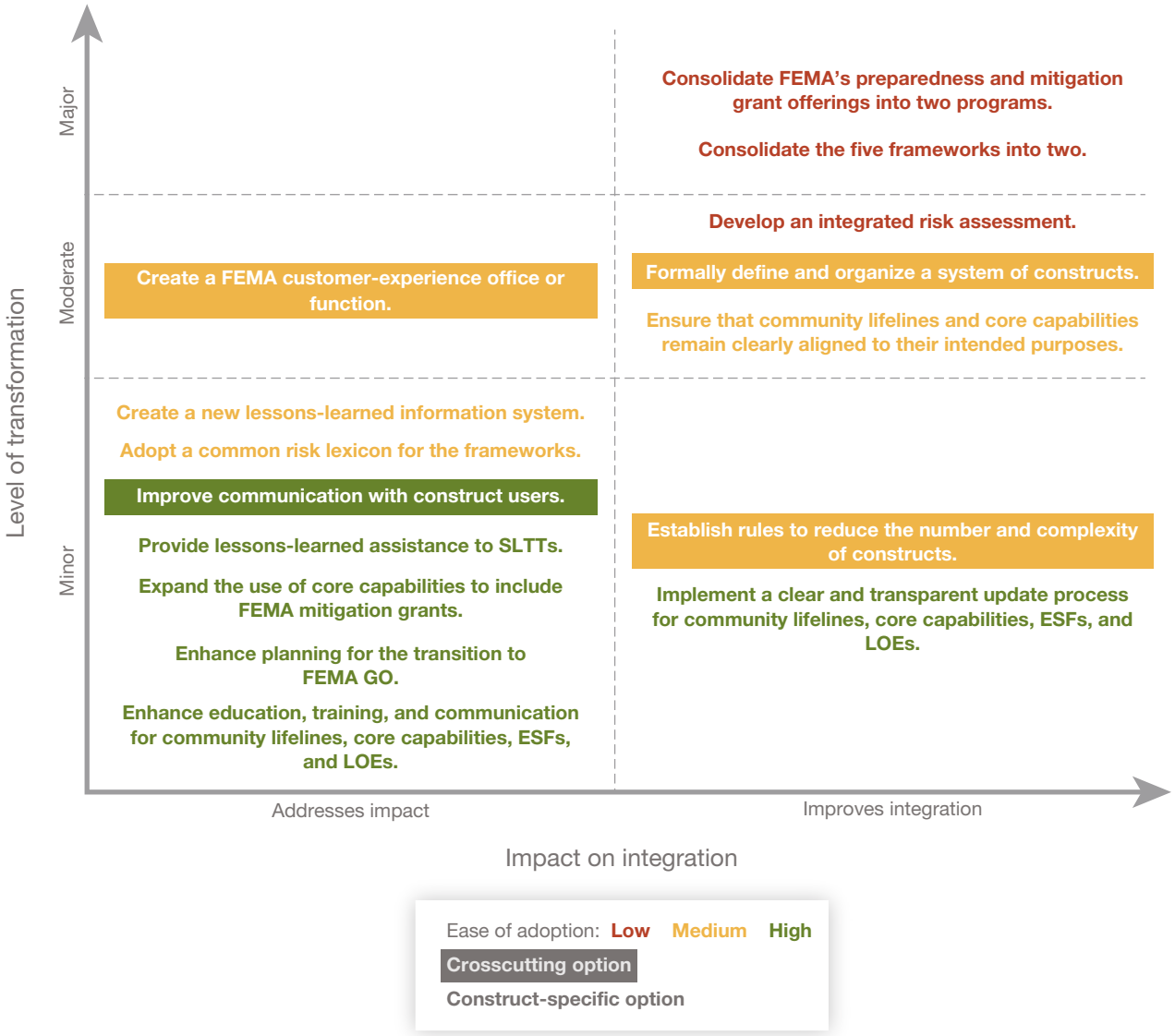
## A Road Map of Options for Improvement

To support FEMA in mapping a way forward, we assessed the impact, ease of adoption, and level of transformation for each of the options, as shown in Figure 9. In general, the greater the level of transformation, the harder the option is to adopt. The horizontal axis focuses on the options' impact on integration. Those options that address specific impacts identified in our analyses are shown in the left portion of the figure, and those options that directly address broader integration issues are shown in the right portion. The vertical axis focuses on the options' ease of adoption and level of transformation. Options depicted in green are those with a high ease of adoption, in orange are those with a medium ease of adoption, and in red are those with a low ease of adoption. This information can help shape decisions on how to implement the options.

One method for sequencing the options would be to implement those that are rated with a high ease of adoption first because they represent easier improvements in integration. We rated six of the 15 proposed options as having a relatively high ease of adoption—that is, they primarily need FEMA action or policy change for their implementation. Of these, one option would directly improve integration and require only minor changes to existing FEMA policy and procedure, shown in green in the bottom right box of Figure 9: Implement a clear and transparent update process for community lifelines, core capabilities, ESFs, and LOEs. The remaining five constructs shown in green (bottom left box of Figure 9) are activities or actions that could be carried out to address the impacts, rather than the root cause, of an integration issue. Still, these could create significant benefits for FEMA,

FIGURE 9

Options for Improvement in Relation to Transformation and Impact

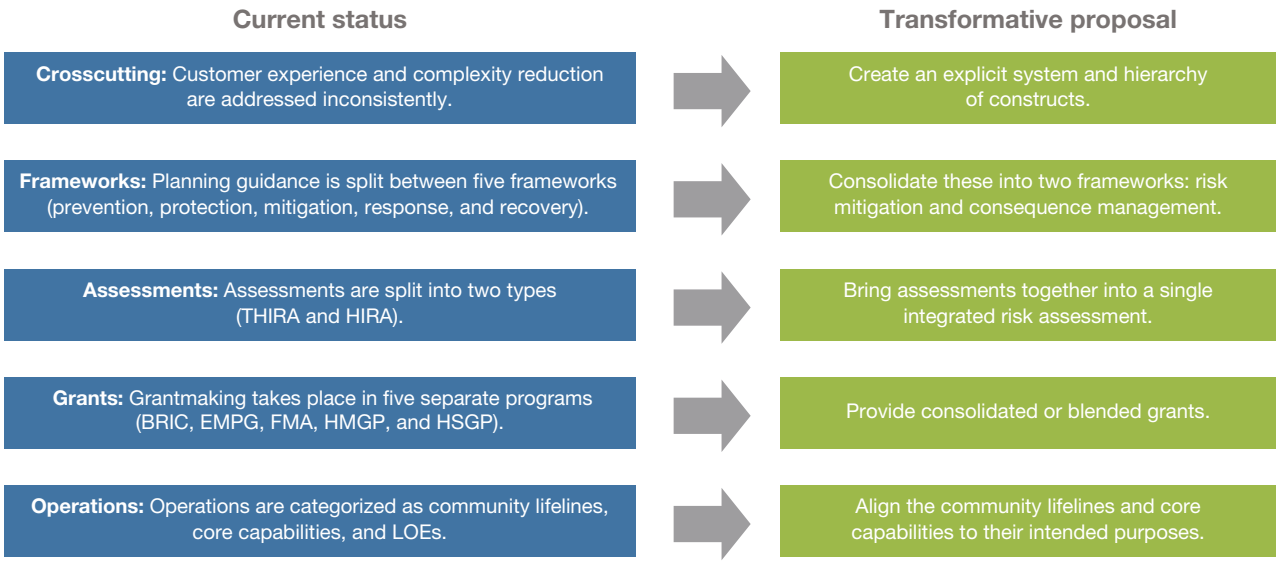



SLTTs, or other construct stakeholders and could be implemented in the short term.

The options rated as having moderate or low ease of adoption (shown in Figure 9 in orange or red) might take longer to implement or require more resources than the high-ease-of-adoption options but generally should produce more-transformative changes to FEMA and other federal policies and procedures. Those options shown in the upper right box of Figure 9 would likely take the most time to implement but would result in transformative change for emergency management and would directly address issues identified in this report. Finally, many of these options for improvement would be most effective when implemented together; these include formally defining and organizing a system of constructs and establishing rules to reduce the number and complexity of constructs. Similarly, community lifelines and core capabilities must remain clearly aligned to their intended purposes, and a clear and transparent update process must be implemented for community lifelines, core capabilities, ESFs, and LOEs. These requirements indicate the need for changes to the set of constructs and a process for ensuring that those changes are maintained over time.

FIGURE 10

Transformative Options Could Contribute to Significant Streamlining




## Moving Toward a Streamlined System

Individually, the options provided in the road map offer potential steps for addressing the issues and impacts associated with poor integration of specific constructs under review. Each option would affect integration either by addressing a specific instance of overlap or fragmentation or by mitigating their impacts, such as stakeholder burden or complexity.

Taken together, the options in the road map also offer the opportunity for more than incremental improvements. As shown in Figure 10, adoption of the most-transformative options could lead to significant streamlining—with fewer constructs and a set of policies focused on maintaining a simpler system. Moreover, as FEMA considers implementing these options and examines their potential cascading effects, it will face opportunities for additional streamlining. For example, the integration of the five National Planning Frameworks into two focused on risk mitigation and consequence management could lead to revisions of the core capabilities as the NSC and FEMA consider which capabilities are necessary. Similarly, FEMA might consider reorganizing the different forums that align with the current mission structure, such as the ESFLG, MitFLG, and RSFLG.

This streamlined system—with less complexity and fewer opportunities for confusion and stakeholder burden—would offer a potentially significant change in how emergency management is implemented at the national level. Customer experience and the reduction of complexity would be at the forefront. The hierarchy of constructs could help order the system and ensure that any newly introduced constructs cohere with it. The risk mitigation and consequence management frameworks would align with federal risk management standards and language, and new frameworks would provide the context for an integrated risk assessment addressing all hazards. Risk assessment could be less burdensome and complex, and consolidated or blended grants could reduce administrative hurdles. Ensuring that community lifelines and core capabilities remain aligned to their intended purposes could help reduce confusion about their use.

As FEMA and its federal partners consider these types of transformative changes, they should also review the foundational documents that helped create the current system—such as PPD-8. Issued in 2011, PPD-8 directed the creation of the National Preparedness Goal and the NPS to achieve it—one that includes integrated National Planning Frameworks, core capabilities, and a comprehensive assessment approach. Streamlining the current system through the options for

improvement proposed here would require revisiting PPD-8 and rethinking its requirements. For example, PPD-8 dictates the current structure of the National Planning Frameworks, requiring one for each of the five mission areas. Consolidating them into two frameworks—as we propose—would require an update to the PPD. Should the NSC, FEMA, and other federal stakeholders consider such an update, they should also review and update constructs derived from PPD-8 that are not included in this study, such as the National Preparedness Goal and the NPS. Furthermore, a revised PPD should take into consideration (1) the need for a system that works for the whole community and (2) the resources of its members.

As this report shows, SLTTs and other stakeholders often find facets of the current system confusing, overly complex, and, sometimes, more burdensome than helpful. As the United States faces increasing emergency management challenges, it should aim to do so with a new system—one that is streamlined and accounts for today's risk and the needs and capabilities of the whole community.

## Appendix. Construct Descriptions

**Building Resilient Infrastructure and Communities (BRIC):** BRIC provides mitigation funding for SLTT entities "with a recognition of the growing hazards associated with climate change, and of the need for natural hazard risk mitigation activities that promote climate adaptation and resilience with respect to those hazards" (FEMA, 2019a; FEMA, 2021h, p. 3).

**Community lifeline:** Community lifelines are defined as "the most fundamental services in the community that, when stabilized, enable all other aspects of society" (FEMA, 2019b, slide 9). There are seven lifelines:

- safety and security
- food, water, and shelter
- health, security, and medical
- energy
- communications
- transportation
- hazardous materials.

**Core capability:** The core capabilities identify the critical elements necessary to achieve the National Preparedness Goal. The core capabilities derive from PPD-8, which requires the development of a National Preparedness Goal that identifies core capabilities. The National Preparedness Goal identifies 32 core capabilities broken out by each of the five mission areas (prevention, protection, mitigation, response, and recovery), with three that cut across each mission area and are overarching (DHS, 2015).

**Critical infrastructure sector:** A critical infrastructure sector is a logical collection of assets, systems, or networks that provide common functions to the economy, government, or society. DHS and other designated federal departments and agencies organize and execute many vital missions according to the sector structure. One such mission is coordinating with interagency and industry partners through the sector structure to facilitate cross-sector coordination to address cybersecurity risks and incidents (PPD-21).

**Emergency Management Performance Grant (EMPG):** The EMPG program provides "funds to assist state, local, tribal, and territorial (SLTT) emergency management agencies to implement the National Preparedness System (NPS) and to support the National Preparedness Goal (the Goal) of a secure and resilient nation" (FEMA, 2021b, p. 5). The program helps fund SLTT investment efforts to close capability gaps or sustain efforts focusing on all-hazards emergency preparedness.

**Emergency support function (ESF):** Federal ESFs group federal and certain private-sector resources and capabilities into functional areas most frequently needed in the federal response to a disaster or emergency (DHS, 2019b, p. 3):

> ESFs are the primary, but not exclusive, response coordinating structures at the federal level. Communities, states, regions, and other tribal, territorial, insular area, and federal departments and agencies may use the ESF construct, or they may employ other coordinating structures or partners appropriated to their location, threats, or authorities. (MitFLG, 2019, p. 21)

There are currently 15 federal ESFs.

**Emergency Support Function Leadership Group (ESFLG):** The ESFLG is a senior-level interagency policy coordination body that provides a forum for federal departments and agencies and other stakeholders to address key issues in preparedness and response. As described in the NRF, the ESFLG promotes federal unity of effort through the exchange of information and coordinated decisionmaking during disaster response (DHS, 2019b). FEMA leads the ESFLG and is responsible for coordinating steady-state and operational activities. ESFLG membership includes department and agency senior officials who represent the coordinating, primary, and support agencies for the 15 ESFs. The ESFLG serves as a standing subinteragency policy committee.

**Exercise:** Exercises enable whole-community stakeholders to test, examine, and validate plans and capabilities and to identify both capability gaps and areas for improvement. FEMA and DHS have exercise programs that are carried out as part of the National Exercise Program and are administered by FEMA's National Exercise Division. Exercises, broadly, support the NPS and National Preparedness Goal. Through the use of the Homeland Security Exercise and Evaluation Program, as well as the National Exercise Program, the exercises are implemented and the whole community

can develop, execute, and evaluate exercises that address preparedness priorities (DHS, 2020a).

**Flood Mitigation Assistance (FMA):** The FMA program is a

> grant program that provides funding to states, local communities, federally recognized tribes and territories to reduce or eliminate the risk of damage to buildings from floods. Funds can be used for projects that reduce or eliminate the risk of repetitive flood damage to buildings insured by the National Flood Insurance Program. (FEMA, 2022)

**Hazard Mitigation Grant Program (HMGP):** The HMGP "provides funding to state, local, tribal and territorial governments so they can rebuild in a way that reduces, or mitigates, future disaster losses in their communities" (FEMA, 2021f). These rebuilding measures can include retrofitting buildings and infrastructure, rebuilding structures at higher codes, building barriers to protect structures, relocating structures away from flood zones, and similar projects that reduce long-term risk and damage to people and property.

**Hazard mitigation plan (HMP):** SLTT governments use HMPs to reduce the loss of life and property by minimizing the impact of disasters. In an HMP, an SLTT government identifies natural hazard risks and vulnerabilities in its area. It then develops mitigation strategies to address the various risks and vulnerabilities within the planning area that can be implemented using a wide variety of public and private resources (FEMA, 2021a; FEMA, 2021c).

**Homeland Security Grant Program (HSGP):** The HSGP is part of a comprehensive set of measures authorized by Congress and implemented by DHS to help strengthen communities against potential terrorist attacks. It includes three grant programs:

- **State Homeland Security Program (SHSP):** SHSP funds SLTT initiatives to build, sustain, and deliver capabilities related to preventing, preparing for, protecting against, and responding to terrorism.
- **Urban Area Security Initiative (UASI):** UASI provides prevention, preparation, protection, and response funding to high-density urban areas at high risk of being targeted in terrorist attacks.
- **Operation Stonegarden:** Operation Stonegarden funds enhanced coordination and cooperation between SLTT law enforcement agencies, U.S. Customs and Border Protection, and U.S. Border Patrol to secure the United States' land and water boundaries (Grant Programs Directorate, 2021).

**Line of effort (LOE):** LOEs provide the specific mission sets (i.e., the solutions, functions, and activities) that must be performed to achieve community lifeline stabilization targets and recovery outcomes. *Community Lifelines Implementation Toolkit* further notes, "FEMA executes Lines of Effort (LOE) to operationalize the Core Capabilities (the ways) for response and recovery planning and operations" (FEMA, 2019b, slide 7).

**Mitigation Framework Leadership Group (MitFLG):** MitFLG is a coordinating structure or framework that federal agencies and SLTT partners use to coordinate federal mitigation efforts and to assess mitigation capabilities across the country (DHS, 2016b). MitFLG is charged with integrating federal efforts to deliver these capabilities.

**National critical function (NCF):** The NCFs

> are functions of government and the private sector that are so vital to the United States that their disruption, corruption, or dysfunction would have a debilitating effect on security, national economic security, national public health or safety, or any combination thereof. (CISA, undated a)

**National Disaster Recovery Framework (NDRF):** The NDRF provides guidance to recovery leaders and stakeholders on

- principles for successful recovery
- roles and responsibilities for SLTT and federal support
- a whole-of-community approach to recovery
- pre- and postdisaster recovery planning (DHS, 2016a).

**National Incident Management System (NIMS) and Incident Command System (ICS):** NIMS guides all levels of government, nongovernmental organizations, and the private sector to work together to prevent, protect against, mitigate, respond to, and recover from incidents. NIMS

provides stakeholders across the whole community with the shared vocabulary, systems, and processes to successfully deliver the capabilities described in the NPS. NIMS defines operational systems, including the ICS, emergency operations center structures, and multiagency coordination groups, that guide how personnel work together during incidents. NIMS applies to all incidents, including traffic accidents, major disasters, and planned events (FEMA, 2017).

**National Mitigation Framework:** The National Mitigation Framework focuses on building a culture of preparedness, which centers on risk and resilience:

> [T]he document provides context for how the whole community works together and how mitigation efforts relate to all other parts of national preparedness.
>
> Focusing on the mitigation aspect of preparedness, the Framework addresses how the nation will develop, deploy, and coordinate mitigation core capabilities to reduce loss of life and property by lessening the impact of disasters. (DHS, 2020b)

**National Prevention Framework:** The National Prevention Framework provides guidance to the whole community on how the prioritization and collaboration of terrorism-prevention efforts can occur (DHS, 2016c, p. i). The prevention mission area focuses on the necessary capabilities to avoid, prevent, or stop a threatened or actual act of terrorism.

**National Protection Framework:** The National Protection Framework describes how "the whole community safeguards against acts of terrorism, natural disasters, and other threats or hazards" (DHS, 2016d, p. i). The framework provides guidance to the whole community on supporting and delivering core capabilities in the protection mission area, and it identifies guiding principles for doing so: resilience and scalability, risk-informed culture, and shared responsibility (DHS, 2016d, pp. 4–5).

**National Response Framework (NRF):** The NRF "provides foundational emergency management doctrine for how the Nation responds to all types of incidents" (MitFLG, 2019, p. ii). The NRF identifies roles and responsibilities, as well as scalable, flexible, and adaptable coordinating structures that support coordination across the whole community. The NRF allows "for a scaled response, delivery of specific resources and capabilities, and a level of coordination appropriate to each incident" (MitFLG, 2019, p. ii). The NRF includes ESFs that describe federal coordinating structures that group resources and capabilities into functional areas most frequently needed in a national response.

**Presidential Policy Directive 44 ("Enhancing Domestic Incident Response"):** PPD-44 is a federal policy intended to improve federal coordination when addressing complex and unique incidents for which law or policy does not identify a lead federal agency. Under PPD-44, when such an incident occurs, a lead federal agency and senior official will be designated either by direction of the President or by agreement among the relevant agencies.

**Recovery support function (RSF):** The RSFs are intended to enhance the effectiveness of recovery assistance programs in the event of a disaster declaration and an interagency recovery effort. RSFs serve as the coordinating structure for key functional areas of assistance in the NDRF. There are six RSFs: Community Planning and Capacity Building, Economic Recovery, Health and Social Services, Housing, Infrastructure Systems, and Natural and Cultural Resources (DHS, 2016a, p. 36).

**Recovery Support Function Leadership Group (RSFLG):** The RSFLG serves as an interagency leadership group designed to "improve the effectiveness and unity of effort of coordinated federal recovery responsibilities, as well as to resolve operational, resource, and policy issues related to interagency recovery actions at the national level" (RSFLG, undated). Additionally, the RSFLG is intended to be the key coordinating structure for the coordinating federal agencies that manage the RSFs.

**Regional advisory council (RAC):** RACs advise regional administrators on issues and priorities and focus on preparedness, response, recovery, and mitigation across all hazards. They coordinate with regional stakeholders, but the exact activities vary across regions (GAO, 2016a, highlights).

**Regional interagency steering committee (RISC):** RISCs are used for coordinating interagency and intergovernmental efforts, with a focus on "provid[ing] a forum for senior DHS officials to enhance emergency management and homeland security for all hazards through a collaborative, regional approach involving federal, state, local, tribal, nongovernmental organization and private sector partners" (GAO, 2013, p. 12).

**Sector coordinating council (SCC):** SCCs are coordination structures that serve as self-organized and self-governed councils to facilitate coordination among owners and operators, trade associations, and other industry representatives associated with the critical infrastructure sectors (CISA, undated b).

**Sector risk management agency (SRMA):** SRMAs collaborate with other federal agencies and critical infrastructure operators and owners and provide a federal interface for sector activities (CISA, undated c).

**Stakeholder preparedness review (SPR):** The SPR is an annual three-step self-assessment of an SLTT jurisdiction's capability levels based on the capability targets identified in the THIRA. It helps answer four questions:

- What are our current capability levels and how have our capabilities changed over the last year?
- What gaps exist between the capabilities we want to achieve and the capabilities we currently have?
- What do we need to do to close the capability gaps or sustain the capabilities?
- What impact did different funding sources—including grants—have on building or sustaining the capabilities assessed by the capability targets over the last year? (DHS, 2018, p. 23)

**Task force:** Task forces consist of different kinds and types of resources to support a specific mission or operational need. The establishment of task forces is an approach to organizing the ICS resources under the operations section of an incident management team or incident management assistance team (FEMA, 2017).

**Threat and hazard identification and risk assessment (THIRA):** SLTT governments use the THIRA process to identify their threats and hazards, the associated risks, and the capabilities required to address those threats and hazards (DHS, 2018, p. 10). The THIRA is a three-step risk assessment process that helps communities understand their risks and what they need to do to address them by responding to three questions:

- What threats and hazards can affect our community?
- If they occurred, what impacts would those threats and hazards have on our community?
- Based on those impacts, what capabilities should our community have? (DHS, 2018, p. 10)

The outputs of the THIRA inform the SPR, which identifies capability gaps (DHS, 2018).

## Notes

[1] *Construct* is a term that FEMA and DHS use in their publications and work. See, for example, DHS, 2019a, and DHS, 2019b.

[2] Author interviews with federal personnel between June 2021 and September 2021.

[3] Author interviews with FEMA personnel between June 2021 and September 2021.

[4] We tested the readability of three constructs: the NRF, the current FMA notice of funding opportunity (NOFO), and the THIRA and SPR. We selected these as representative samples of constructs that would be read outside FEMA. We tested them using the Fry method and the Simple Measure of Gobbledygook method, both of which are recommended as part of a toolkit for clear writing aimed at a federal audience (CMS, 2021). Under both methods, the average grade level for all three constructs was ages 17 and up, suggesting that a reader would likely need education beyond college to comprehend the material.

[5] Author interviews with FEMA personnel between June 2021 and September 2021.

[6] Author interviews with FEMA personnel between June 2021 and September 2021.

[7] Author interviews with federal personnel between June 2021 and September 2021.

[8] EMAC resource types are organized in a detailed taxonomy of resources with specific definitions (for example, an ambulance strike team might specify four ambulances and a supervisor). By *measure*, we mean that FEMA uses constructs, such as core capabilities, for measuring preparedness; in the real world, when an SLTT is overwhelmed, what it calls for is measured in additional EMAC-typed resources, not in additional core capabilities.

[9] Author interviews with FEMA personnel between June 2021 and September 2021.

[10] Author interviews with FEMA personnel between June 2021 and September 2021.

[11] Author interviews with FEMA personnel between June 2021 and September 2021.

[12] Author interviews with FEMA personnel between June 2021 and September 2021.

[13] Author interviews with SLTT stakeholders between June 2021 and September 2021.

[14] Author interviews with FEMA personnel between October 2021 and December 2021.

[15] Author interviews with FEMA personnel between June 2021 and September 2021.

[16] The Disaster Relief and Emergency Assistance Amendments of 1988 (Pub. L. 100-707) amended Public Law 93-288, the Disaster Relief Act of 1974, by (among other things) giving it a new short name: the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The 1974 law is codified at 42 U.S.C. Chapter 68; collectively, this body of law is commonly referred to as *the Stafford Act*. A qualifying declaration would be a disaster declaration or emergency declaration that complies with the requirements in 42 U.S.C. § 5189f.

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## About This Report

Emergency management agencies in the United States face a growing array of hazards—more-frequent and -intense storms; extended or year-round seasons for previously seasonal events, such as wildfires; multiple events occurring simultaneously; the ongoing threat from coronavirus disease 2019 (COVID-19); and increasing responsibility for novel events for which an emergency management entity is the most logical lead agency. The U.S. Department of Homeland Security, largely through the Federal Emergency Management Agency (FEMA), has created programs, grants, assessments, doctrine, and coordination bodies (*constructs*) to support its mission and the U.S. emergency management system. In many cases, these constructs were developed at different points in time, often in response to specific problems or needs, and for an operating environment that differs from today's. As a result, they are, in some cases, poorly integrated—demonstrating overlap, duplication, and fragmentation. This can lead to a variety of negative impacts on implementation and outcomes. These negative impacts, such as burdens on stakeholders, confusion, and inconsistency in use, often lead to poor implementation and outcomes. FEMA's leadership requested that the Homeland Security Operational Analysis Center (1) evaluate the extent to which a selection of constructs could better integrate with one another and (2) provide options for improvement. This report addresses this request, identifying problems with integration among the constructs and providing options for addressing them.

This research was sponsored by FEMA and conducted within the Disaster Research and Analysis Program of the Homeland Security Operational Analysis Center federally funded research and development center.


## Acknowledgments

We would like to thank several people from our Federal Emergency Management Agency (FEMA) sponsor office for their support and encouragement throughout this effort: Deanne Criswell, Robert J. Fenton, Jr., Joel Doolin, Chad Payeur, Scott Rienbolt, Anthony Battaglia, and Benjamin Redmond. We would also like to extend our appreciation to the many FEMA staff who participated in interviews, as well as members of the broader emergency management and homeland security community for their participation.

We would also like to thank our colleagues in the Disaster Research and Analysis Program of the Homeland Security Operational Analysis Center—in particular, Jessie Riposo and Shelly Culbertson for their support and encouragement throughout this effort and Paige Rudin, Kristin Sereyko, and Stephanetta Bingley for shepherding the report through the review and editorial processes. We would also like to thank Libby May for her skillful editing. Finally, we would like to extend our sincere thanks to William Carwile, Steve Sharro, Bernd McConnell, and David Fukutomi for reviewing draft material and providing advice and subject-matter expertise.

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This research was published in 2022.



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