Emergency Preparedness and Response

INTRODUCTION

After an unprecedented number of catastrophic events over the past three years, the field of emergency management has been thrust into the spotlight. From the continuing global COVID-19 pandemic and debilitating cyberattacks to weather extremes such as deadly heat waves, "100-year floods," raging wildfires, and more, together these shocks have stressed governments, businesses, communities, and individuals while raising fundamental questions about what is needed to prepare for and respond to future crises.

This chapter focuses on the complex and cross-cutting nature of disasters that do not respect geography, jurisdiction, political, or organizational boundaries. Emergency management should follow suit, recognizing that the key to success is the strength of the network before, during, and after a disaster. This chapter reflects on what governments can do in the near term to better prepare and respond to emergent situations. Recommendations and a host of associated action steps conclude this chapter.

Setting the Context

Disasters are complex and crosscutting by nature. They have no respect for geographic, jurisdictional, political, or organizational boundaries. Emergency management should follow suit. Preparedness and response cannot be the sole responsibility of one sector, one program, one agency, or one level of government. Rather, the key to success—and the root cause of many failures when absent—is the strength of the network before, during, and after a disaster through partnerships established between sectors, levels of government, and agencies. Simply put, radical horizontal and vertical problems cannot be solved in silos.

The pandemic highlighted serious weaknesses in the global supply chain, hampering government responses to life-threatening situations. When governments do respond by creating assistance programs to offset financial hardship resulting from economic impacts, these programs can increase exposure to fraud, waste, and abuse.

COVID-19 revealed the evolving and complex risks that government agencies confront. Yet as the pandemic recedes, this risk landscape will remain. Many risks—aging IT systems, cybersecurity threats, supply chain

vulnerabilities, impacts of climate shifts, workforce skills gaps, or program integrity—have the potential to disrupt government programs, mission support operations, and the ability of governments to conduct the business of government. Government resilience follows from the resilience of its institutions.[1]

Critical Components for Emergency Preparedness and Response

Emergency management is complex and nuanced, with contributions from a diverse set of stakeholders including the public, business community, civil society, and all levels of government. A vast body of research and literature informs the topic of emergency management. Below are some critical components of emergency preparedness and response and building resilience going forward.

- **Risk management and capability assessment.** Governments and agencies need an evolving understanding of potential risks and vulnerabilities, and how they may change over time. Understanding potential impact can inform a risk mitigation strategy. In addition, governments must be able to measure current capabilities at all levels—federal, state, provincial, local, tribal, etc.—to identify gaps and set realistic capability targets.

- **Precrisis planning, communication, and coordination.** The confusion and disorientation following the onset of a shock requires that much coordination is needed ahead of time to identify roles and responsibilities during an emergency response exercise. Coordinating at the interagency level as well as across borders poses challenges but is critical to successful response.

- **Testing.** Effective testing that provides accurate assessment of response capabilities, including first responder health and well-being, is needed. Insights gained from testing must result in plans-of-action to address and retest areas of deficiency.

- **Situational awareness and communication.** Real-time, quality information is difficult to obtain in times of crisis. Yet the quality of information matters greatly for quality decision making and effective response. Misinformation and disinformation further complicate the ability of decision makers and those at risk during a crisis to make sound judgments and take decisive action.

- **Transparency and trust.** The public must have trust in government agencies providing emergency response services. A large component of that trust involves sharing accurate information with the public at appropriate times. Distrust and a lack of trust can blunt the effectiveness of emergency responses, and disrupt coordination between responders and the public. Also, emergency response must also plan for and account for serving the most vulnerable of the population, whose safety can require unique capabilities and whose ability to move away from danger can be limited.

- **Learning and accountability.** Government agencies need to systematically gather and apply lessons learned. They must further be accountable to their citizens for maintaining public order and offering emergency responses.

Insights and Recommendations

What specific and practical steps can governments take in the near term to better prepare and respond? Insights from the Future Shocks initiative were provided by leaders from the U.S. Federal Emergency Management Agency (FEMA), the Organization for Economic Cooperation and Development (OECD), the International Association of Emergency Managers, the former Governor of Maryland and former Commandant of the Coast Guard, and a cross-section of experts from key stakeholder groups.

The following recommendations emerged from discussion with these leaders and associated research. These steps do not constitute an exhaustive list of actions, but rather reflect suggestions made by these experts.

Strengthen the emergency preparedness and response network

As the adage goes, the middle of a crisis is not the time to be exchanging business cards. Networks with clearly defined roles, responsibilities, leadership, and accountability must be built well before an event takes place.

FEMA offers one example of a network philosophy for emergency response. The agency strives to adopt a whole community approach that "attempts to engage the full capacity of the private and nonprofit sectors—including businesses, faith-based and disability organizations, and the American public—in conjunction with the participation of state, local, tribal, territorial, and federal governmental partners."[2]

This complex approach can be difficult to execute. The nature of the U.S. intergovernmental system can create tension between the federal government and the states. Relationships can also be strained among states and their cities and localities. While structural issues are unlikely to ever be fully resolved, leaders need to untangle differing authorities, priorities, and demands to limit misunderstandings and confusion during a crisis. Using Memoranda of Agreement (MOAs), continuous training, and tabletop exercises, agencies can define and reinforce roles, responsibilities, and working relationships across levels of government. Ultimately, successful emergency response networks result from preexisting organizational and—at least as important—personal relationships. In building the network, planners should also recognize that private and nonprofit involvement is not just helpful or additive—it can determine the success of the response.

These organizations collectively bring resources, community relationships, capacities, and agility that governments lack. They need to be involved as central partners in preparedness planning.

Strengthening the emergency preparedness and response network requires a cultural change for many organizations. Working across sectors with differing values, attitudes, operating models, and accountability mechanisms is not easy. Organizations are typically more comfortable operating within existing programmatic boundaries than working within a broader network, as one participant among many and not directing efforts or being in full control. As an example, FEMA and the U.S. Department of Housing and Urban Development could transfer responsibilities more smoothly as emergency response transitions into the longer-term recovery phase. Recognizing and pursuing the value that can be delivered through partnerships is critical to the strength of the network.

ACTION STEPS

- Clearly define the roles and responsibilities of organizations within the emergency response network.

- Tap into private and nonprofit resources as part of preparedness planning.

- Evaluate organizational culture for openness to working with partners.

Build local capacity

Local governments and agencies sit on the frontline of most crises, facing unique threats, economic and social contexts, and capacities to respond.

Local governments can position themselves to respond better in several specific ways, including conducting risk-based, all-hazard preparedness planning, working with the private sector, and accessing and managing intergovernmental assistance—especially when receiving recovery funds, the point when local governments assume even greater responsibility in the aftermath of a disaster.

Jointly coordinated capacity development among localities, mutual aid agreements, regional compacts, and financial incentives for localities to build their capacity can also facilitate the abilities of local governments to respond. Additionally, they can use online learning environments to share experiences and identify and exchange successful practices. Finally, as Baby Boomers continue to exit the workforce, local governments can recruit and retain the public-spirited Millennial and Gen Z generations.

ACTION STEPS

- Build partnerships with the private sector to expand response capacity.

- Extend reach with regional partnerships.

- Evaluate emergency management plans to determine if they apply to a wide range of disasters.

Put community engagement and meeting diverse needs at the center of preparedness efforts

With distrust the default emotion in nearly 60 percent of people surveyed by Edelman in their annual trust barometer, building trust with constituents becomes even more critical to effective emergency response.[3]

This begins with recognizing that different parts of a community have vastly dissimilar needs and capabilities during an emergency. For example, physical or financial barriers, pressing medical needs, disabilities, and fears of relocating are among the reasons people may not evacuate from harm's way. An emergency preparedness and response network must address the diverse needs and abilities of all segments of a community well before a disaster occurs, and tailor planning and response efforts accordingly.

Emergency planners can leverage robust and inclusive public participation programs to create informed planning and response strategies that reflect the needs of the local community. These programs also help to ensure public understanding and acceptance of the resulting decisions.

Communication strategies must also be adapted to reach the different populations, considering what information is communicated, how it is communicated, and by whom. This entails identifying and working closely with trusted voices in the community to establish confidence and understanding. As seen with the COVID-19 pandemic response and evacuation orders for impending weather disasters, it can be difficult to convince some individuals to act, even given clear and imminent danger. Trusted voices from the community can help overcome this challenge.

ACTION STEPS

- Establish programs to involve the public in response planning.

- Identify the factors that affect the ability of people within a community—particularly hard-to-reach communities—to react to significant events.

- Identify the voices that constituents trust and ways to partner with them to share key messages.

Dedicate sufficient and flexible resources

The most devastating aspect of disasters involves harm inflicted on people and communities, including injuries and loss of life. But disaster response and recovery are also exceedingly expensive.

Since 1980 for the U.S. alone, the cumulative costs of disasters, where damages reached or exceeded $1 billion in cost, is well over $2 trillion.[4] However, as an expert who contributed insights to the Future Shocks initiative astutely observed, "If you think responding to a disaster is costly, try doing that without upfront preparation." While certainly correct, most governments face competing priorities for funding, with insufficient attention given to events considered rare and not entirely predictable—even though it appears they are growing more frequent and more catastrophic.

As the nature and prevalence of emergencies increase—especially those related to climate change—the operational and response burden on agencies at each level of government has grown significantly as well. Simultaneous disasters strain budgets and stress organizations and staff. For the short-term, two actions are recommended:

- First, establish flexibility in funding streams within each level of government and across levels of government, so that funds can move quickly across organizations to respond to a crisis. Political leaders have an understandable desire for spending transparency and accountability. The puzzle is how to achieve those important values while also rapidly and seamlessly assisting people in need, and minimizing administrative burdens resulting from funding silos and assistance requirements.

- Second, explore ways to align a greater understanding of risks to budget processes. The Biden administration has acted in this regard with a directive to quantify climate-change-driven risks to the federal budget.[5] This initiative could be expanded to different levels of government.

ACTION STEPS

- Identify and remove the barriers that are blocking smooth transfers of funds among response organizations within the network.

- Initiate risk quantification within budget processes.

- Identify ways technology can facilitate more cost-effective emergency responses.

Establish a data strategy well before disaster strikes

Decision makers across governments, businesses, and the public require high quality and credible data to guide organizational and personal decisions.

In fact, data feeds the effective communication techniques discussed earlier. Both clarity of message based on evidence and rapid response to disinformation are essential in crisis communications. Unfortunately, the complex nature of most emergencies and the plethora of communications channels typically result in multiple "sources of truth," leading to confusion, a lack of trust, and disjointed decision making.

Emergency preparedness and response networks should agree on key data elements well before an emergency occurs. For example, they can define data elements consistently across the network, agree on data needed in real time and how it will be collected, and identify how to make data available to those who need it in formats they can readily use. The network's data strategy also should include an assessment of the technology needed to gather and report data in real time as well as initiatives to fill any technology gaps, such as distributed analytics built on hybrid cloud networks and the use of artificial intelligence to rationalize large data stores rapidly.

ACTION STEPS

- Tap into data analytics to fuel more efficient crisis management and more effective crisis communications.

- Identify and implement a technology infrastructure that supports data sharing across a network of emergency responders.

- Implement data management programs that facilitate high-quality data for sharing while aligning with data privacy requirements.

Establish workforce strategies to meet current, surge, and future needs

U.S., state, and local governments lost more than 600,000 workers between the start of the pandemic and June 2022, affecting their ability to maintain basic services as well as respond to critical situations.[6]

Challenges in acquiring and retaining mission-critical skills can be particularly acute for agencies involved in emergency preparedness and response. The diversity of the skill sets required, the need for surge capacity during emergencies, and the evolving missions of organizations to accommodate the overlapping nature of emergencies create additional staffing problems for preparedness and response across all levels of government.

Important work on how to tackle the talent deficit can offer some direction. For example, the National Academy of Public Administration's "No Time to Wait" reports provide a roadmap focused on changing the human capital culture from one of compliance to a "promise of performance."[7] The report recommended the establishment of a competency-based talent management model that:

• Identifies the core competencies of occupational and professional groups

• Trains employees in the competencies they will need, and certifies them (with credentials or "badges") for the skills they bring

• Creates flexible teams that match the competencies needed with the teams' missions

• Establishes communities of practice among occupations and professional groups to foster continuous learning about the skills employees need

• Devises a plan for reskilling the government's workforce to match mission requirements with employees' skills

• Helps ensure that employees' skills keep up with hyper-fast changes in mission

Agencies do not just need more people with specific skills. For community engagement and equity to reside at the center of response efforts, governments need to make sure their employees reflect the diversity of the communities they serve. A diverse and inclusive staff recruitment, hiring, and development program is vital to achieving this.

The overwhelming stress faced by frontline workers and first responders—who in many cases are survivors of the disaster—underscores the importance of attention to burnout as well as the physical and mental health and well-being of staff. Numerous reports from hospital nurses and other frontline medical workers during COVID-19 vividly illustrated the enormous emotional toll from being at the center of a long-term emergency response.[8] While awareness is important, action to address the welfare of employees is an imperative. This could include developing rapid assistance networks for the well-being of first responders, as well as discussions to develop an understanding of accessible mental health services.

ACTION STEPS

- Identify opportunities to streamline or automate processes using technology.

- Establish training programs to retrain and reskill current workers, aligning skills with mission requirements.

- Work with experts to cultivate a culture focused on employee well-being.

LOOKING FORWARD

As evidenced by the past few years, response to crisis events requires collaboration—within communities, and across federal, state, local, and country jurisdictions. From building the response and community networks, to defining communication and data sharing strategies, to addressing budget and workforce challenges, these approaches offer a starting point—a valuable set of practical and actionable ideas that governments can employ to better support their citizens and employees confronting more frequent and more destructive disasters.

In the end dedicating time and resources can create mechanisms and capacity with the goal of being better prepared for future disruptive events. As observed in the IBM Center report, *Managing the Next Crisis: Twelve Principles for Dealing with Viral Uncertainty*, governments confront a cascade of "unknown unknowns" (the category of unknowable events that tend to be the difficult ones), for which anticipatory measures can take years or decades to develop.[9]

Indeed, the nation will likely face far more uncertainty in the future, making effective responses more important. This new operating reality affords government leaders an opportunity to reflect, learn, and build organizations that are more agile, adaptive, innovative, and able to mobilize swiftly and operate in new ways. Now more than ever, government leaders can take a holistic view of the managing of risk and building resiliency, prioritizing what they do know and preparing for what they don't.

Endnotes
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