# PREPAREDNESS, RESPONSE, AND RESILIENCE TASK FORCE

Interim Task Force Report on Resilience

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> THE GEORGE WASHINGTON UNIVERSITY HOMELAND SECURITY POLICY INSTITUTE

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Founded in 2003, the George Washington University Homeland Security Policy Institute (HSPI) is a nonpartisan "think and do" tank whose mission is to build bridges between theory and practice to advance homeland security through an interdisciplinary approach. By convening domestic and international policymakers and practitioners at all levels of government, the private and non-profit sectors, and academia, HSPI creates innovative strategies and solutions to current and future threats to the nation.

HSPI's **Preparedness, Response, and Resilience Task Force** brings together experts from government, academia, and the private and non-profit sectors to consider contemporary policy issues facing the nation's homeland security, first responder, and emergency management communities. To this end, the Task Force convenes sessions with the nation's policymakers and publishes policy papers and reports with actionable policy recommendations for the future. The Task Force is predicated on the idea that a more nuanced approach to these policy issues can contribute to a greater level of resiliency for all levels of government, the private sector, and the public writ large.

Recent considerations of the Task Force include the meaning of resiliency; the critical junctures that exist between policy and implementation; the nexus between preparedness, response, and resilience; and the future of resiliency as it relates to a diverse and changing operational environment.

While consensus positions were sought and often achieved, the Task Force Co-Chairs take full responsibility for the opinions and recommendations herein.

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# PREPAREDNESS, RESPONSE, AND RESILIENCE TASK FORCE

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# Introduction

*Resilience* has recently become a buzzword among policymakers and homeland security experts. President Barack Obama called for the need to "enhance our resilience" in his 2010 National Security Strategy.<sup>1</sup> President George W. Bush had noted a need for "resilience of the system as a whole" in his 2007 National Strategy for Homeland Security.<sup>2</sup> The Quadrennial Homeland Security Review identified resilience as one of three key concepts that form the foundation for a comprehensive approach to homeland security.<sup>3</sup> Most recently, Presidential Policy Directive-8 (PPD-8): National Preparedness reiterated an emphasis on resilience.<sup>4</sup> And for the past several years much has been written about the need for resilience in our nation, businesses, and communities.<sup>5</sup> In short, there is general agreement that resilience is a good thing, but we lack a shared vision of how to achieve it.

The Task Force believes that the term resilience must be operationalized to be effective.<sup>6</sup> Otherwise, we run the very real risk of 'resilience' remaining a buzzword –

<sup>&</sup>lt;sup>1</sup> *The National Security Strategy of the United States* (Washington, DC: The White House, 2010) Available at <u>http://www.whitehouse.gov/sites/default/files/rss\_viewer/national\_security\_strategy.pdf</u>.

<sup>&</sup>lt;sup>2</sup> *National Strategy for Homeland Security* (Washington, DC: The White House, Homeland Security Council, 2007), 28. Available at <a href="http://www.dhs.gov/xlibrary/assets/nat\_strat\_homelandsecurity\_2007.pdf">http://www.dhs.gov/xlibrary/assets/nat\_strat\_homelandsecurity\_2007.pdf</a>.

<sup>&</sup>lt;sup>3</sup> *Quadrennial Homeland Security Review Report: A Strategic Framework for a Secure Homeland* (Washington, DC: The Department of Homeland Security, 2010). Available at <a href="http://www.dhs.gov/xlibrary/assets/qhsr\_report.pdf">http://www.dhs.gov/xlibrary/assets/qhsr\_report.pdf</a>.

<sup>&</sup>lt;sup>4</sup> *Presidential Policy Directive-8, National Preparedness* (Washington, DC: The White House, March 30, 2011). Available at <u>http://www.dhs.gov/xabout/laws/gc 1215444247124.shtm</u>. PPD-8 was unveiled at a Homeland Security Policy Institute event; see

http://www.gwumc.edu/hspi/events/PPD8 national preparedness302.cfm.

<sup>&</sup>lt;sup>5</sup> Stephen E. Flynn, *The Edge of Disaster: Rebuilding a Resilient Nation* (New York: Random House, 2007). Yossi Sheffi, *The Resilient Enterprise: Overcoming Vulnerability for Competitive Advantage* (Cambridge, MA: MIT Press, October 2005). Charlie Edwards, *Resilient Nation* (London: Demos, 2009). Available at <u>http://www.demos.co.uk/files/Resilient Nation - web-1.pdf?1242207746</u>;

<sup>&</sup>lt;sup>6</sup> We define "operationalizing" resilience as the implementation of policy that leads to action. For a technical (rather than policy) treatment of the topic see: Homeland Security Studies and Analysis Institute, *Concept* 

something that is ubiquitously mentioned in academic papers and Federal policy documents, but that is not sufficiently tangible to drive decisions on government priorities and resources, or meaningfully influence the behavior of the American public. The recent tornado and flooding disasters remind us of the utility of effective resilience policy, and the nuclear emergency in Japan demonstrates how even a resilient nation can be severely affected when all interdependencies are not thoroughly considered as part of a comprehensive vision for resilience. By creating a shared – and actionable – vision for a resilient America, policymakers will ensure that all sectors and the public writ large are unified in their efforts towards helping America prepare for, respond to, and recover from the next disaster.

This interim report represents the Task Force's initial findings based on meetings with federal officials, a review of applicable policies, and discussions among task force members. The target audience is Federal policymakers, but findings should be applicable to a broad array of other stakeholders as well.

## Moving From Definitions to Shared Vision

A panoply of definitions for resilience has emerged over the last several years in

academic papers and policy documents.<sup>7</sup> The Obama Administration's definition of

http://www.homelandsecurity.org/hsireports/Resilience Task 09-01.pdf.

<sup>7</sup> Brad Allenby and Jonathan Fink, "Toward Inherently Secure and Resilient Societies," *Science* 309 (2005): 1034-1036. Available at <u>http://www.sciencemag.org/content/309/5737/1034.full</u>. T.D. O'Rourke,

"Engineering for the Threat of Natural Disasters: Critical Infrastructures, Interdependencies, and Resilience," *National Academy of Engineering, The Bridge* 37, no. 1 (Spring 2007): 24-31. Available at <a href="http://www.nae.edu/Publications/Bridge/EngineeringfortheThreatofNaturalDisasters/CriticalInfrastructureInterdependenciesandResilience.aspx">http://www.nae.edu/Publications/Bridge/EngineeringfortheThreatofNaturalDisasters/CriticalInfrastructureInterdependenciesandResilience.aspx</a>. Homeland Security Advisory Council, *Report of the Critical* 

*Development: An Operational Framework for Resilience* (Arlington, VA: HSI, August 2009), HSI Publication No. RP09-01.03.02.12-1. Available at

resilience in its 2010 National Security Strategy is "the ability to adapt to changing conditions and prepare for, withstand, and rapidly recover from disruption."<sup>8</sup> PPD-8 reframes the definition somewhat as: "the ability to adapt to changing conditions and withstand and rapidly recover from disruption due to emergencies."<sup>9</sup> Notably absent from the definition offered by the Preparedness Directive is the word "prepare." Perhaps, as we hope, this is done to emphasize that resilience is distinct from other pre-existing concepts, such as preparedness.

However, we should not focus too much attention on definitions but rather focus on a shared vision for a resilient nation that will help galvanize the national mindset. A shared vision is not simply a new name for existing efforts. As Peter Senge notes, a shared vision is more than just words or thoughts: "It may be inspired by an idea," he writes, "but once it goes further – if it is compelling enough to acquire the support of more than one person – then it is no longer an abstraction. It is palpable. People begin to see it as if it exists."<sup>10</sup>

Infrastructure Task Force (January 2006), p. 5. Available at

http://www.dhs.gov/xlibrary/assets/HSAC CITF Report v2.pdf. Homeland Security Studies and Analysis Institute, *Risk and Resilience: Exploring the Relationship* (Arlington, VA: HSI, November 22, 2010), pp 7-11 and Appendix A. HSI Publication Number RP10-01.03.06-01. Available at <a href="http://www.homelandsecurity.org/hsireports/Risk-">http://www.homelandsecurity.org/hsireports/Risk-</a>

Resilience Report Final public%20release%20version%20 Task 10-17 29-Nov-2010.pdf.

<sup>8</sup> *The National Security Strategy of the United States* (Washington, DC: The White House, 2010) Available at <u>http://www.whitehouse.gov/sites/default/files/rss\_viewer/national\_security\_strategy.pdf</u>.

<sup>9</sup> Presidential Policy Directive-8, National Preparedness (Washington, DC: The White House, March 30, 2011). Available at <u>http://www.dhs.gov/xabout/laws/gc\_1215444247124.shtm</u>. PPD-8 was unveiled at the Homeland Security Policy Institute on April 8, 2011. See

http://www.gwumc.edu/hspi/events/PPD8 national preparedness302.cfm

<sup>&</sup>lt;sup>10</sup> Peter M. Senge, *The Fifth Discipline: The Art and Practice of the Learning Organization* (New York, NY: Doubleday, 2006), 192.

Consider the Federal government's efforts as an example. Early on, the Obama Administration consolidated the offices that had overseen preparedness, protection, and response policy issues at the White House into the *Resilience* Directorate of the National Security Staff.<sup>11</sup> Similarly, there are indications that the Department of Homeland Security (DHS) is seeking to identify itself with the term, with the proposed renaming of the National Protection and Programs Directorate as the Infrastructure Protection and *Resilience* Directorate. Time will tell if these efforts represent a step toward operationalizing resilience or are simply renaming exercises consistent with resilience's buzzword status.

The character of resilience will change based upon the economic, social and political impacts of any given disaster. Therefore, the focus for policymakers should be on creating a common vision, shared by stakeholders in and out of government, of what a successfully resilient America looks like, and, where possible, fostering the creation of actionable and measurable elements of resilience in local communities. Local officials, after all, have pressing day-to-day concerns far removed from policy statements and definitions coming out of Washington. As one fire chief put it:

We're talking about the various iterations of the National Response Plan, the National Response Framework, Homeland Security Presidential Directives and Presidential Policy Directives. What does it all matter? Frankly, I could absolutely care less. About all of them. It means absolutely nothing to me. We

<sup>&</sup>lt;sup>11</sup> Spencer Hsu, "Obama Integrates Security Councils, Adds New Offices: Computers and Pandemic Threats Addressed," *The Washington Post*, May 26, 2009, 4. Available at http://www.washingtonpost.com/wpdyn/content/article/2009/05/26/AR2009052603148.html

can barely get fire trucks to fires. We can barely get medic units to basic EMS calls.

To be sure, there is great benefit to discipline-specific definitions and operational frameworks, and we do not advise scrapping them and starting over. Without aligning the definitions and frameworks in a manner that will motivate more tangible behaviors and actions, however, resiliency will remain an abstract concept reserved for policy directives and academic papers. Thus we now turn to what might comprise a resilient nation. Resilience policy in this context should address both the "hard" and "soft" elements of a resilient society. The "hard" elements include aspects of critical infrastructure, emergency response, and risk management, while the "soft" elements focus on psychological and societal components.

## Critical Infrastructure

The greatest challenges associated with protecting critical infrastructure and rapidly restoring it following a failure are identifying the infrastructure at issue, ranking the types and spectrum of potential impacts of assessed risks, prioritizing investments, and fostering partnerships between the government and with the private sector firms that own the overwhelming majority of the nation's critical infrastructure.<sup>12</sup> Disruptions occur every day – anyone who takes public transportation, drives in rush hour traffic, or is a frequent flier knows how to deal with the minor hiccups that plague our transportation systems. Treating every piece of

<sup>&</sup>lt;sup>12</sup> US Government Accountability Office, *Critical Infrastructure Protection: Progress Coordinating Government and Private Sector Efforts Varies by Sectors' Characteristics* (October 2006). Available at <a href="http://www.gao.gov/new.items/d0739.pdf">http://www.gao.gov/new.items/d0739.pdf</a>.

infrastructure as "critical" dilutes the concept and sets up unrealistic goals of absolute protection (everywhere, all the time). Establishing investment priorities and acknowledging tradeoffs requires open and honest dialogue with the American public which can be difficult when general risk perceptions are low.

Crucially, achieving resilience transcends the protection and physical survivability of critical infrastructure. Effective resilience policy will recognize that some infrastructure will inevitably be damaged during an event. Therefore key is the ability to withstand the impact of an incident without losing the ability to function, or at least maintaining the ability to rapidly resume core services after an incident. The public will define success based upon how quickly and effectively these services, such as transportation, utilities, and access to lifelines like food and water, are restored. Doing so quickly requires a shared vision of resilience both within the government and with the private sector entities that own and operate critical infrastructure. Policy guidance must be updated to reflect an emphasis on resilience, rather than only protection.<sup>13</sup>

# Presidential Policy Directive-8

By effectively preparing for potential disasters we can enhance our national resilience. How, then, do we build capabilities at all levels of government such that responders are able to deal not only with the disasters that can be reasonably predicted,

<sup>&</sup>lt;sup>13</sup> Homeland Security Advisory Council, *Report of the Critical Infrastructure Task Force* (January 2006). Available at <u>http://www.dhs.gov/xlibrary/assets/HSAC\_CITF\_Report\_v2.pdf</u>.

but also "Black Swan" events that are not anticipated?<sup>14</sup> As one member of the Task Force suggested, "Passing out 10,000 meals-ready-to-eat is not resiliency; it's making up for the fact that we're not resilient."

PPD-8 represents an initial step in the right direction.<sup>15</sup> The directive describes a concept of national preparedness. It calls for the Secretary of Homeland Security to develop a National Preparedness Goal and an associated National Preparedness System which is "designed to help guide the domestic efforts of all levels of government, the private and non-profit sectors, and the public to build and sustain the capabilities outlined in the National Preparedness Goal (NPG)."<sup>16</sup> It also calls for an annual National Preparedness Report based on the NPG. However, many of PPD-8's core components existed prior to PPD-8. The National Preparedness Goal is a vestige of the Bush Administration.<sup>17</sup> And the National Preparedness Goal, National Preparedness

<sup>&</sup>lt;sup>14</sup> The term "Black Swan" refers to an event that is unexpected, significantly impactful, and retrospectively justified. It was coined by Nassim Nicholas Taleb in his book *The Black Swan: The Impact of the Highly Improbable* (New York: Random House, 2007).

<sup>&</sup>lt;sup>15</sup> PPD-8 replaces the Bush-era Homeland Security Presidential Directive-8 and is "aimed at strengthening the security and resilience of the United States through systematic preparation for the threats that pose the greatest risk to the security of the Nation, including acts of terrorism, cyber attacks, pandemics, and catastrophic natural disasters."

<sup>&</sup>lt;sup>16</sup> PPD-8

<sup>&</sup>lt;sup>17</sup> HSPD-8 called for the development of the National Preparedness Goal (NPG); see *Homeland Security Presidential Directive-8: National Preparedness* (Washington, DC: The White House, December 13, 2003) Available at: <u>http://www.fas.org/irp/offdocs/nspd/hspd-8.html</u>. The first version developed was the interim National Preparedness Goal; see: U.S. Department of Homeland Security, *Department Of Homeland Security Releases Interim National Preparedness Goal* (Washington, DC: April 1, 2005). Available at <u>http://www.dhs.gov/xnews/releases/press\_release\_0648.shtm</u>. The name of document was subsequently changed to National Preparedness *Guidelines* [italics added] for its final release in 2007. U.S. Department of Homeland Security, *Homeland Security Presidential Directive-8, National Preparedness Guidelines* (Washington, DC: September 13, 2007). Available at <u>http://www.dhs.gov/xlibrary/assets/National Preparedness Guidelines.pdf</u>.

Report, and the National Preparedness System already exist in statute, as a result of the Post-Katrina Emergency Management Reform Act of 2006.<sup>18</sup>

New additions to PPD-8's preparedness system are its "integrated national planning frameworks" that address "prevention, protection, mitigation, response, and recovery" aspects of preparedness, and agency-specific and interagency operational plans that support the frameworks.<sup>19</sup> The frameworks and plans have the potential to synchronize the nation's preparedness efforts, thereby enhancing national resilience. The real challenge now is operationalizing the directive in a unified way. The frameworks will need to be developed by relevant Federal departments and agencieswith the participation of state and local stakeholders—and approved through the Federal interagency process. State and local officials understand best the implications of the frameworks to their communities, and they will likely challenge a cookie-cutter approach. If the Federal officials leading the implementation of the frameworks include the participation of Federal, State and local stakeholders from the outset, they will help ensure the frameworks are useful across all levels of government, the nonprofit and private sectors, and aimed towards a shared vision for national preparedness.

## National Level Exercise 2011

A shared vision for resilience must also encompass our ability to manage

incidents of varying size and scope as they occur. People are habituated to the more

<sup>&</sup>lt;sup>18</sup> PL 109-295, Title V—National Emergency Management, Subtitle C—Comprehensive Preparedness System, Chapter 1—National Preparedness System (October 4, 2006) Available at <u>http://frwebgate.access.gpo.gov/cgi-</u>

bin/getdoc.cgi?dbname=109\_cong\_public\_laws&docid=f:publ295.109.pdf.<sup>19</sup> PPD-8.

routine disasters that affect their respective parts of the country every year. The Midwestern states, for example, are often subjected to blizzards in the winter and flooding in the summer. Regularly faced with such hazards, these communities have become more resilient to these threats than other parts of the country. However, these same communities may also be less resilient to the hazards they do not regularly experience. Surely, there is a level of "all-hazards" preparedness that enhances resilience for all types of disasters, but challenging assumptions developed that were based on experience with "normal" disasters is critical for resilience in the wake of a catastrophic event. A major exercise has the potential to do that.

The National Level Exercise 2011 (NLE 2011), which simulates a catastrophic earthquake along the New Madrid Seismic Zone in the center of the country, is a step in the right direction because it pushes responders to address a scenario where they have little history to guide them.<sup>20</sup> Linking the major exercise with last month's Great Central U.S. Shakeout, which encouraged members of the public to hold their own earthquake drills, was also a positive step, as it increased community awareness of the possibility of an earthquake in the central U.S., thereby enhancing resilience.<sup>21</sup>

By raising the possibility of a catastrophic earthquake – something that is likely not on the minds of many Midwesterners – the NLE can have the dual positive effect of pushing responders beyond their traditional mindsets and alerting the public at-large of

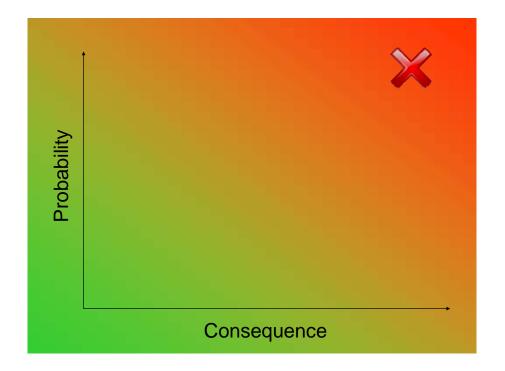
 <sup>&</sup>lt;sup>20</sup> U.S. Department of Homeland Security, FEMA, *National Level Exercise 2011* (Washington, DC: May 2011). Available at <u>http://www.fema.gov/media/fact\_sheets/nle2011\_fs.shtm</u>
<sup>21</sup> "The Great Central U.S. Shakeout." Available at <u>http://www.shakeout.org/centralus/</u>

the risk. But ideally the exercise would go even further, by highlighting the reality that certain catastrophic events will exceed government capabilities. Therefore individuals will need to take responsibility to fill the gap between their needs and the capabilities of government. While this may not be the primary objective of large scale exercises, we would be foolish not to take the opportunity to increase the nation's societal resilience as we concurrently look to enhance the ability of responders to manage emergencies.

#### **Risk Management**

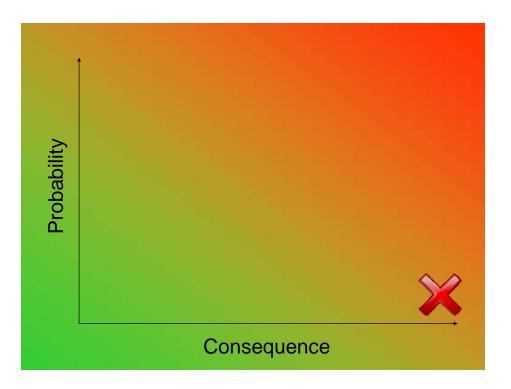
Consideration of risk must be at the heart of any shared vision for resilience policy.<sup>22</sup> Take the traditional cornerstone of risk management: the probabilityconsequence graph, as shown on the next page. The further to the top right quadrant an event is, the more risk associated with it and the more willing we are to take action collectively and spend the dollars needed to mitigate the risk and ensure resilience.

<sup>&</sup>lt;sup>22</sup> For a technical treatment of the subject see: Homeland Security Studies and Analysis Institute, *Risk and Resilience: Exploring the Relationship*, (Arlington, VA: HSI, November 22, 2010). HSI Publication Number RP10-01.03.06-01. Available at <u>http://www.homelandsecurity.org/hsireports/Risk-Resilience Report Final public%20release%20version%20 Task 10-17 29-Nov-2010.pdf</u>



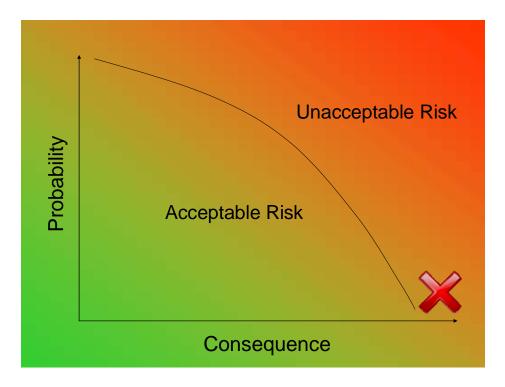
Some low probability events, however, are extremely high consequence as shown in the graph on the next page. Yet public misperception distorts the actual risk and pushes these potential incidents outside the scope in which the public is willing to invest. The Fukushima Daiichi nuclear power plant in Japan was in an area prone to catastrophic earthquakes and tsunamis. In hindsight we can imagine that increased investments in safety measures at the plant would have reduced the impacts of the disasters. However, the last catastrophic earthquake and tsunami combination took place in 869.<sup>23</sup> Was that so long ago that the Japanese were willing to accept the risk associated with radiation release? Or was the perception of that risk distorted for some other reason?

<sup>&</sup>lt;sup>23</sup> "Expert: Japan nuclear plant owner warned of tsunami threat," *CNN*, March 28, 2011, <u>http://www.cnn.com/2011/WORLD/asiapcf/03/27/japan.nuclear.disaster/index.html?iref=allsearch</u>



The challenge, then, is identifying, with some level of precision, where the thresholds of acceptable risk lie, including in cases of low probability/high consequence events. If the risk is below that threshold, we accept the risk and move on. If it is above the threshold, we invest in ways to mitigate that risk in an effort to prevent unacceptable loss of life and property, and ensure an effective response can be mounted and that core services are restored. Society tends to be fairly resilient to high probability events because collectively we are accustomed to dealing with them. We learn ways to adapt to the temporary disruption; through experience we have informed expectations of the effort and time involved with restoring core services and returning to normal operations. But we tend to be much worse at displaying resiliency towards low probability/high consequence events. Governments, private institutions, and individuals get caught off guard in the face of these Black Swan events — and society

struggles long after the event to "bounce back." In hindsight, the risk associated with these events was well beyond the acceptable threshold. So why weren't we focused on building resilience towards it during the preparedness phase?



When discussions do turn to those low probability events that are retrospectively "beyond the threshold," perhaps our biggest mistake is the lack of a candid, systematic conversation about measuring priority outcomes in the place of more common political conversations that measure specific inputs which may have little or no impact on the end for which we are aiming. As one Task Force member from the private sector suggested:

The end state we're trying to achieve is essentially a return to normalcy as quickly as possible with the least cost, whether we're making a decision at the individual level, as an organization, or as a nation. So it comes back to decision-making. And we're often making these decisions in the absence of information. So we make bad ones.

Resilience is a powerful concept because it can—and should—cause us to look at risk and mitigation through a systematic, whole-of-community, all-of-nation lens rather than narrowly. Too often our investments are tied to inputs, and not outcomes. Said one Task Force member:

The fact that FEMA and the DHS Office of Infrastructure Protection can't work together to evaluate risk and come up with a composite approach to driving down risk is a function of institutional anomalies; it has nothing to do with how we solve problems. I think we have a lot of the tools here, but what we haven't done is integrate those tools to engineer resilience. It comes down to being able to look at relative risk and evaluate the relative costs of different types of mitigation efforts and make an informed choice. And the thing we have real difficulty doing in this country is that we just aren't candid about those risks.

A shared vision of resilience will ensure that officials at all levels of government, and the private and non-profit sectors, will aim towards the same point when they are conducting their discipline-specific work. This requires cross-sector dialogue regarding risk thresholds.

# Individual and Community Preparedness

Individual and community preparedness efforts can enhance resilience in the wake of a disaster. For those in Washington, many remember the snowstorm and ensuing traffic jam earlier this year that stranded some drivers in their cars overnight. Following that incident, elected leaders should have used the incident to reinforce the need to undertake preparedness actions. In such a scenario it may well make more sense to shelter in place (in one's office, for example) than to evacuate (to commute home) that evening. But today such preparedness guidance has challenges tied to awareness and logistics. First, how many Washingtonians now realize that there may be circumstances where staying in the city for the night may be the only option? And second, how many individuals are now prepared to spend the night in their office, or at the home of a nearby friend or relative?

Public communications, too, is crucial to enhancing resilience. The reality is that there is a large and widening gap between the way government communicates with the public and the way the public communicates with itself. As the public collectively continues to find new ways to harness the power of the internet and social media, most notably via Twitter and Facebook, many local jurisdictions are far behind. Social media has utility not only to disseminate messages to the public, but also to gather situational awareness from the field. It can be a powerful tool to augment already existing methods of communication.<sup>24</sup>

# Social and Political Implications

A critical step for policymakers is to engage in a frank dialogue with the American public about identifying thresholds of risk.<sup>25</sup> This conversation will strengthen our ability to generate investment priorities, and will educate the public about associated risks – which will increase both "hard" and "soft" resilience. After all, there is a limit to what even the most resilient governments can do in the face of

<sup>24</sup> U.S. Senate Homeland Security and Governmental Affairs Ad Hoc Subcommittee on Disaster Recovery and Intergovernmental Affairs, "Understanding the Power of Social Media as a Communications Tool in the Aftermath of Disasters" May 5, 2011. Available at: <u>http://hsgac.senate.gov/public/index.cfm?FuseAction=Hearings.Hearing&Hearing\_ID=E928EFFC-4BFD-</u> 4024-9017-130BB45B4ED4

<sup>&</sup>lt;sup>25</sup> This is a component of what is popularly known as "risk communication."

catastrophe, and the more aware the public is of the gap between governmental capabilities and survivors' needs, the more likely people are to understand that they, too, have a responsibility to provide for themselves and their neighbors during emergencies. This can be challenging as individuals have pre-existing perceptions of risk, and those vary with such factors as culture and historical experience. Government officials too often struggle to define and communicate the specific risks a region faces. Florida officials are well aware of the risks associated with major hurricanes, and they can collectively identify the areas where they are willing to channel dollars in an effort to reduce risk. "In other places in the country," one Task Force member said, "it's very difficult to artificially inseminate the perception of risk where it doesn't exist. We're dancing around that reality."

We also recognize the political and practical limitations: "No elected official is going to stand up and say that 1,000 lives lost is an acceptable level of risk," acknowledged one Task Force member. Indeed, conventional wisdom does not hold that raising seemingly improbable or unfamiliar risks is a good way to win favor with constituents, especially when other issues appear to be more urgent (even though they may be far less important in hindsight).

Nevertheless, the public must be made aware of the risks associated with low probability/high consequence events so that policymakers can identify palatable risk thresholds and increase the level of societal resilience. It will take forward thinking, tactful, disciplined and courageous leaders with the ability to articulate the risks in such a way that fosters the creation of and agreement on tangible investment priorities without instilling unnecessary fear in the public or causing political fallout for themselves.

## Conclusion

The release of PPD-8 coupled with recent disasters in the United States and abroad creates an opportunity. We should work to convert existing momentum into a common vision that is operationalized through actionable steps and communicated throughout all sectors and with the public in such a way that all stakeholders understand their roles in achieving American resilience. "My fear is that this is going to evaporate; that this is going to go into the 'too hard to do' category, unless we break it down into some manageable bites," said a Task Force member. That will be the challenge for policymakers going forward – how to foster an understanding and acceptance of a cogent concept of resilience sufficient to catalyze meaningful action, while concurrently and systematically creating realistic output measures that will be useful for local responders and ultimately increase the nation's ability to be resilient to disasters.

If policymakers recognize PPD-8 as another step along the path towards building resilience, and not an end in and of itself, the nation may achieve real progress. Achieving resilience is not a destination, but a journey on which we must lead all citizens. Doing so will require investments – and not just financially, but politically as well. For the effort to be successful, the nation needs to begin an honest conversation about the risks the country faces and our collective limitations. Doing so would be the best evidence that resilience is finally shedding its buzzword status.

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