



Strategic Foresight Initiative Toolbox

Learning Aid for SFI Video:

Thinking Seriously About the Future to Enhance Disaster Resilience

What is this tool?

This Learning Aid accompanies the SFI video: [Thinking Seriously About the Future to Enhance Disaster Resilience](#) to help you stimulate discussion in your organization or community around future emergency management challenges.

How can I use this tool?

We recommend that you play the SFI video twice for your group (it is less than nine minutes long): once through and then a second time using this Learning Aid. You could ask the Learning Aid questions as the video plays, pausing for each question, or you could ask all of the questions at the end of the video. The main objective is to spur dialogue and discussion on topics impacting emergency management practice now and in the future.

The Learning Aid includes both questions and potential answers, although you should not feel limited by our suggestions. The answers provided are merely representative and in no way inclusive. We hope that your group will uncover additional insights. The end of Learning Aid also includes a full transcript of the video with highlighted sections corresponding to the questions in the Learning Aid.

Questions/Comments?

If you have any questions about how to use this Learning Aid or comments for how we can improve this or other tools, please email us at FEMA-OPPA-SFI@fema.dhs.gov.

Learning Aid for SFI Video:

Thinking Seriously About the Future to Enhance Disaster Resilience

1. How is the world changing? (00:21 “the world is changing...”)

Potential discussion points:

- Technological innovation and dependence
- Changing role of the individual
- Universal access to and use of information
- Demographic shifts
- Climate change
- Global interdependencies/globalization
- Aging infrastructure
- Evolving terrorist threats

2. Based on what you answered for #1, what impacts do these changes have on our specific environment/community?

3. What is a Band-Aid fix? What are some examples? (00:26 “we can’t just keep applying those Band-Aid fixes”)

Potential discussion points:

- A Band-Aid fix is a hasty solution that covers up the symptoms but does little to mitigate the underlying problem.
- Examples of a Band-Aid fix include:
 - Deploying emergency response units without proper training
 - Decisions that fail to consider the lifecycle of an emergency through prevention, protection, mitigation, response, recovery

4. Are there any similar fixes we apply that may not truly be mitigating a problem? How can we approach these problems differently?

5. In what ways is disaster management changing? (00:38 “disaster management is changing...”)

Potential discussion points:

- Emergency responders are using the crowdsourcing concept of spontaneous reporting to enhance situational awareness by integrating different sources of information

- Due to the growth of and public preference for “anywhere, anytime, and on any device”, access to the Internet and virtual communities, people will expect government and first responders to communicate with the public through the Internet and social media. They also will expect authorities to conduct a dialogue with the public rather than using a traditional top-down information approach (e.g., press releases, public announcements). This may lead to a significant increase in transparency and accountability for government officials, including emergency managers.

6. What do you think are the biggest challenges we face? (01:28 “biggest challenges we face...”)

Potential discussion points:

- Cascading overlapping events in multi-hazard environments
- Segments of communities that are most susceptible to disasters are growing, including older Americans (e.g., with the “Baby Boom” age cohort now reaching its retirement years, the percentage of Americans who are considered elderly (65 years and older) could nearly double from 12 percent of total population in 2000 to 21 percent in 2050)

7. What ideas do you have for addressing these challenges?

8. What is your definition of resilience? What activities can help promote resilience? (01:40 “we have moved from response to actual resiliency...”)

Potential discussion points:

- One definition of resilience is ‘the ability to prepare for and adapt to changing conditions, and withstand and recover rapidly from disruptions including deliberate attacks, accidents, or naturally occurring threats or incidents’.¹
- Examples of resilience activities include developing a business continuity plan, having a generator for back-up power, or using building materials that are more durable

9. How do our communities respond every day? (02:18 “how do our communities respond everyday”...)

Potential discussion points:

- Citizens:
 - Know risks and danger signs
 - Purchase insurance, including flood insurance, which is not part of homeowner’s policy

¹ Presidential Policy Directive-21 “Critical Infrastructure Security and Resilience,” <http://www.whitehouse.gov/the-press-office/2013/02/12/presidential-policy-directive-critical-infrastructure-security-and-resil>

- Develop plans for what to do
- Assemble disaster supplies kit
- Volunteer to help others
- Localities:
 - Identify hazards and assess potential risks to the community
 - Enforce building codes, zoning ordinances, land-use management programs
 - Coordinate emergency plans to ensure quick and effective response
 - Establish warning systems
 - Stock emergency supplies and equipment
 - Assess damage and identify needs
 - Evacuate community members to safer locations
 - Take care of the injured
 - Shelter those who cannot remain in their homes
 - Aid in recovery efforts

10. What are some game-changing technologies? (05:02 “there exist some game-changing technologies that we can use to help our national security”...)

Potential discussion points:

- Through social media, emergency managers can train to disseminate timely, accurate, coordinated public information during emergencies
- Through the use of web-based geo-hazard maps, emergency managers can identify areas that are prone to natural disasters and map where roads were destroyed and pinpoint location of victims during emergencies

10. Have we capitalized on these technologies? If not, how can we change the way we work to take advantage of these advancements?

11. How can we build relationships in advance of disasters? (06:00 “how can we build relationships in advance...”)

Potential discussion points:

- Establish a centralized information hub for community updates and situational awareness
- Collaborate across agencies, including public and private entities
- Serve as a neutral broker to facilitate community collaboration
- Assist with catalyzing newly formed networks, groups, or institutions
- Cultivate community-led action
- Coordinate volunteer efforts in advance
- Map resources to community needs



Transcript to SFI Video: *Thinking Seriously about the Future to Enhance Disaster Resilience*

Below is the full transcript for the video with yellow highlighting corresponding to topics raised in the discussions questions above.

David Kaufman: "The simple reality is that **the world is changing.**"

[Music starts]

Michele Weslander-Quaid: "We **can't just keep applying those Band-Aid fixes.**"

Admiral Thad Allen: "I think **disaster management is changing** in ways that we've never seen before, and a lot of has to do with the complexity of the world we live in right now."

Kaufman: "Many of those changes have very direct, very material effects on the operational challenges that we face and on the environment within which we conduct our operations."

Adm. Allen: "We're adapting to climate change. We're seeing greater densities of populations. We're seeing a greater concentration of the built-out environment interacting with the natural environment."

Kaufman: "And, those include changes in the nature of the technology that we use, changes in the availability of information, in the way that information is employed in civil society, in the role of individuals in the public, and in the ways in which non-traditional actors are coming to the table and taking action."

Weslander-Quaid: "**Some of the biggest challenges I think we face as a country** are investment in critical infrastructure, in critical communications in that **we have moved from response to actual resiliency.**"

Adm. Allen: "One of the real challenges is having the narrative and a conversation that lays out the risks associated with future events and how those risks could be dealt with in advance if we really think strongly about resiliency and what we want to do to make our citizens, our infrastructure, and our environments much more strong."

Kaufman: "Humans react in crisis in much the same way that they're used to reacting under normal conditions. Communities, in many respects, operate in the same way. They default to those pathways. I think the **most fundamental challenge to all of us is to understand, in fact, how our communities work every day.** I think Sandy is particularly instructive in two respects. Number one, it reminds us of our limitations. And related to that, it highlights for us where there are points of strategic capacity in the system, if you will, that may or may not be fully integrated into organized response."

Adm. Allen: "The difference in Sandy as compared to Katrina was scale. If you look at the east coast shore line, and the population densities and the infrastructure densities, what created the expansive amount of damage and impact from Sandy was the density and concentration of people and infrastructure. So, when

we think about maximum events, you need to think about, 'What is the environment and the context in which the event is occurring? And, where do you have vulnerable populations, vulnerable infrastructures, and how much of that do you have?'"

Adm. Allen: "One particular lesson we learned from Hurricane Sandy was a vulnerability of supply chains of fuel. And, it's very unique in and around New York, Connecticut, and New Jersey. There are a lot of refineries there, but a lot of those refineries depend on transporting those fuels by barges. When the winds increased to 40 knots and the Coast Guard closed the port, the barge shipments stopped. I don't think there was a good understanding of the supply chain of fuel and what response actions did to that."

Kaufman: "The global supply chain looks nothing like it did 30 years ago. And, yet, it is instrumental to everything about our daily life. How do we work effectively when supply chains are really degraded, or potentially even destroyed?"

Adm. Allen: "On the human side, we need to think about developing human capital. And, that's capability and capacity in individuals, communities, and families to take care of themselves for a period of time, to take care of their neighbors."

Kaufman: "I think the biggest game-changers when it comes to disaster resilience are in the way in which civil society and the private sector can play a role in what are often thought of as problems that government needs to take the lead in solving."

Weslander-Quaid: "There are definitely some game-changing technologies that we can use to help our national security, help improve the lives of our citizens, and help us be more resilient."

Adm. Allen: "We know now that social media plays a huge role in disaster response because of self-reporting communications, the ability to aggregate and produce social behaviors when you're not in each other's presence, where you can make problems known. In the case of the Boston bombings, the ability to bring information in, create a common operating picture and get clarity on what happened."

Weslander-Quaid: "Like we saw crowd-sourcing in response to Haiti, or crowd-sourcing in response to Sandy, is here's where you need to go to get water, here's where you need to go to get gas, and here's where you can find medical facilities."

Adm. Allen: "We're never going to have another major disaster again where there won't be public participation. And, the reason that's going to happen is there's no barrier to entry. So, you can let it just happen or you can bring that in as part of your response talk and understand how it can add value and how you want to use it."

Weslander-Quaid: "How can we build those relationships in advance, virtually across the community with people of common interests? Allow them to meet each other, share data, have a situational awareness that when an event happens people have those established relationships. They're going to use tools they use in their everyday lives, that they have a platform they can use to share that information, create a shared situational awareness and respond together."

Weslander-Quaid: "I firmly believe we must have sense of urgency and have a bias for action."

Adm. Allen: "The issue of resiliency should be important to every American because our ability to get through one of these events, kind of reestablish some new sense of normalcy, then mitigate the causes of that disaster to the extent that we can is very, very important to the successful future of this Nation."

Kaufman: "Yeah, there are very hard problems. There are very real limitations. They represent opportunities to fundamentally reinvent how we deliver public service, how we make positive contribution to society as a whole, and how we support our citizens and our communities in times of crisis when they need that support the most."

Weslander-Quaid: "So many times you see a national crisis is really a unifying event. America comes together and does heroic efforts, but so many times afterwards, we don't step back and look at that and say, 'Well, we had a heroic effort, but maybe we don't need that much heroism. Maybe we need to make an investment now for the long-term.'"

Kaufman: "There are phenomenal shifts occurring around us. We have to pay attention to those changes. We have to look at the directional shifts that are going on around us, then, understand from those shifts-- not in an effort to predict what will be--but, in an effort to gain insight into how the demands being placed on us are changing and may continue to change and what we can do to position effectively for those to be successful now and in the future."