

BOX 1.1

Key Lessons Learned from the U.S. Response to Fukushima

1. Improve intra-government coordination for unusual events
2. Improve ways of sharing information and technical data
3. Define metrics for success and consequence management
4. Pre-define decision points that trigger drawdowns of overseas personnel and citizens

KEYNOTE ADDRESS

An All-of-Nation Approach to International CBRN Preparedness and Response

The U.S. government is making terrific progress with regards to international CBRN preparedness and response in building federal capabilities to support partner nations when they request our assistance following an event, began the Honorable Paul Stockton. However, U.S. state capabilities have not been fully brought to bear to provide similar support. Stockton explained that a large portion of DOD capabilities to conduct life-saving operations in the United States or in support of partner nations is in state National Guard² organizations ordinarily under the command and control of state governors, rather than the President of the United States.

One reason why state capabilities have not been tapped is the challenge of federalism regarding command and control, explained Stockton, adding that these challenges are eminently solvable. More difficult to overcome is the “tyranny of time and distance” in deploying supplies and people to an international location, which impacts how we mobilize state forces and then deploy them effectively abroad. Stockton suggested that one way forward is to support capacity building within foreign nations instead of relying exclusively on the U.S. ability to send assistance. From his perspective, the United States is not doing enough to bring to bear the potentially invaluable capabilities of the private sector in CBRN preparedness and response.

Stockton noted a paradox in how the U.S. government is improving national CBRN capabilities versus its ability to provide these same capabilities outside U.S. borders. Under the Obama administration, the federal government has made solid progress in building CBRN response capabilities. Since 2009, DOD has radically changed and strengthened the ability of troops, soldiers, and airmen to provide life-saving capabilities by distributing response capabilities across the nation; for example, every state has a civil support team to rapidly detect and characterize a CBRN event. Each of the ten Federal Emergency Management Agency (FEMA) regions has a homeland response force that can arrive at an event within six to twelve hours of occurrence. In addition to distributing CBRN response capabilities geographically, he continued, the United States has strengthened its focus on life saving within the different C-B-RN areas, such as in building the capacity for decontamination and search and rescue capabilities

² The National Guard is referenced throughout this report. More information can be found at their website: <http://www.ngaus.org/> and a summary of their roles and responsibilities can be found at: <http://www.ngaus.org/sites/default/files/pdf/primer%20fin.pdf>.

in a contaminated environment. However, Stockton cautioned, the distribution of capabilities and reliance on state National Guard forces could create challenges for gathering these capabilities together at the request of a foreign nation.

Stockton explained that public safety is the responsibility of the governors of the United States under our Constitution, not the President. This means that, although governors take this responsibility very seriously and partner with DOD to coordinate capabilities, homeland response forces are under the command and control of governors on a day-to-day basis. Within a given region, governors will often offer assistance to neighboring states, but a request from a foreign government through the DOS may not be as readily granted. Stockton posed several questions to illustrate the complications that can arise with a foreign request for assistance to a CBRN event. What if requested forces would reach their maximum lifetime radiological exposure limits during a deployment in a foreign country? What is the risk that their equipment will be contaminated and could not be returned to the United States? Stockton offered that there are likely solutions to these command and control questions if imaginative people work their way through these challenges to reach consensus.

A more difficult issue to solve, Stockton reiterated, is the tyranny of time and distance. The window to engage in serious life-saving activities following a large CBRN event is 72-96 hours. Domestically, the U.S. government has the capabilities to deploy response forces within the time frame needed to save lives on a large scale, and to provide search and rescue in a contaminated urban environment. Deploying those forces abroad, however, runs up against that 72-96 hour window. Stockton offered that there are valuable niche capabilities that can be rapidly deployed. In support of Operation Tomodachi in Japan, the U.S. government quickly sent teams to assist with characterizing the event and modeling the fallout plume. But in terms of life-saving capabilities, Stockton cautioned, there are limits to what a U.S. based force can accomplish internationally. A potential solution is to partner with foreign nations to build their capabilities and capacities.

Stockton recalled a recent statement by U.S. Defense Secretary Chuck Hagel that the U.S. military will retain vital capabilities, but at the same time the most sustainable and wisest approach to our security in the 21st century will be to help allies do more to contribute to their own security and our common interest. Stockton emphasized that this is especially true in the realm of CBRN response and preparedness, and suggested that the National Guard state partner program could be leveraged for this purpose; personnel from a given state could work with an international partner to help build that country's capacity. Several states, such as Colorado, already engage in capacity building activities for CBRN response through their state partner programs. From Stockton's perspective, these activities need to expand to more states and countries.

A second opportunity is training, Stockton continued. U.S. training and exercise activities could support partner nations who want to take advantage of U.S. expertise. Stockton underscored that joint training activities between foreign and U.S. forces would help meet the challenges of interoperability by providing a shared understanding of how the response to CBRN events can be successfully executed. An additional component to improve interoperability, he continued, is the development of common international decontamination and exposure standards.

Stockton stated that the open frontier in terms of CBRN response capability is developing partnerships with the private sector. The private sector in many cases has excellent preparation against natural hazards, he explained. Every big company and many medium and small-sized companies have plans for continuity of operations; for example, to protect critical infrastructure

and supply chains against earthquakes and other natural hazards. Many large companies maintain emergency operation centers. However, Stockton acknowledged, the private sector's resilience to the emerging CBRN-type hazards needs strengthening. He added that adversaries that would launch a CBRN attack on the United States want to kill Americans, but their objectives are political and this means inflicting economic damage. Helping the private sector strengthen its continuity-of-operations plans for a CBRN event helps mitigate economic damage and makes launching an attack less attractive.

Stockton proposed that an additional opportunity to build private sector resilience to CBRN events is through the insurance industry. A properly structured insurance environment would allow policies to be made available to those companies that had taken the required steps to prepare for CBRN events. Stockton suggested that different premiums might depend on a company's level of preparedness. Insurance for chemical, biological, radiological, and nuclear events does not currently exist, with rare exceptions and with good reason, he added. The difficulty in assessing the frequency and magnitude of the impacts from these events makes it nearly impossible to price insurance using the traditional actuarial approach. Stockton referred to the insurance market for explosive events, and suggested that it could be used as an example of how to provide insurance for CBRN events. He cited the Terrorism Risk Insurance Act (TRIA)³ that passed after the terrorist attacks on September 11, 2001. The enormous costs incurred following the 9/11 attacks caused insurance companies to be hesitant to offer coverage for a future event. Through TRIA legislation, the federal government ensured a backstop for coverage of losses under circumstances related to a terrorist act that allowed for the creation of an insurance market. Stockton envisioned that TRIA legislation, which expires in 2014, could be reauthorized and expanded to include all CBRN-related events.

Question and Answers

Lauren Alexander Augustine of the National Research Council asked why addressing CBRN events was important. Stockton advised that the CBRN threat was growing and required a better understanding of how to address the potential consequences. He cited the example of a long-term power outage on a power or nuclear facility, pointing to the cascading effects that would result on the nation and noting that current plans are targeted only for short and mid-length power outages. Long-term outages, whether due to a natural event such as the New Madrid Earthquake or a manmade threat such as a cyber attack on U.S. power infrastructure, would create a seriously disrupted environment for weeks or months. To be ready requires planning in advance.

A participant from the Oak Ridge National Laboratory suggested expanding partnerships beyond the private sector to include non-profits, non-governmental organizations (NGOs), and the community. Stockton agreed and pointed to an objective that FEMA Administrator Craig Fugate has often cited, to treat citizens not simply as passive victims of disasters, but as active contributors to their own resiliency. Stockton raised the recent Fukushima nuclear accident as an example, noting that the absence of information on whether to flee or shelter in place led to fear

³ Terrorism Risk Insurance Act of 2002: <http://www.gpo.gov/fdsys/pkg/PLAW-107publ297/html/PLAW-107publ297.htm>.

and confusion among Japanese citizens. Clear communication lines with the public help dissipate that fear, particularly for nuclear and radiological events. He added that working with partner nations to build that type of community resilience would be extremely valuable.

A question was asked about metrics for measuring success and the perception of what the United States can do in response to an international CBRN event compared to what the United States is actually able to accomplish. Stockton responded that, given limited resources, the federal government could only do so much in terms of building federal capacity, and pointed to the importance of the sub-IPC interagency process that is being directed by Major General Bentz. Stockton proposed that engaging more partners like the American and International Red Cross, United Way, and faith-based organizations is the best way to expand the resource base. For example, the U.S. government needs to support these types of organizations ability to operate in a contaminated environment, as CBRN disasters are very different events from which they traditionally prepare. A participant suggested leveraging connections with regional security organizations such as the African Union, Organization of American States, or the Organization for Security and Co-operation in Europe to further the conversation with private organizations in those regions. Another participant referred to a recent DOS workshop on corporate volunteerism that involved large corporations such as IBM, HP, and Citibank, suggesting that as another type of venue for expanding private partnerships in the CBRN arena.

A participant from the Israeli Home Front Command pointed out that because DOS is the lead agency on international CBRN event response, DOD has limited authority to engage in pre-event planning to assist foreign partners in foreign consequence management. He asked if, given the tyranny of time and distance, there is a way forward that would give DOD and the National Guard enhanced authority to engage in activities that improve their ability to assist. Stockton responded that DOD has been comfortable supporting FEMA, the DOS, and other federal agencies in responding to a particular event. He acknowledged that, with international incidents, combatant commanders face additional concerns with requests for assistance, such as force protection issues. Although command and control might be better aligned with a request for assistance, Stockton advised that improved coordination efforts should be built into the current system.

A question was raised about the possibility of stockpiling antibiotics and other materials needed to respond to a large-scale biological attack in other countries so that the United States would not have to use its domestic supply to support foreign responses. Stockton replied that progress was being made to build a partnership approach to pandemics. Major General Bentz added that the White House is undertaking a big effort to apply lessons learned from the H1N1 outbreak to the current H7N9 coronavirus. A member of the steering committee offered that there is already an established system run by the United Nations Office for the Coordination of Humanitarian Affairs⁴ (UNOCHA) that addresses natural and manmade disasters, including biological events. It is highly developed, includes infrastructure in developing countries, and has been used hundreds of times in the past 25 years. He added that it is worth distinguishing nuclear and radiological events from biological events, but did not advise establishing parallel response systems. Instead, the existing system for responding to biological events, including decision-making processes and organizational structures could be expanded to include nuclear and radiological incidents. He cited a successful program run by USAID that trains first

⁴United Nations Office for the Coordination of Humanitarian Affairs, <http://www.unocha.org/>.

responders in Latin America to bolster their effectiveness in responding to large disasters. As a result, USAID now only needs to provide assistance for very large disasters in Latin America.

A participant from the National Institute of Standards and Technology (NIST) asked what preparedness might look like in the future in terms of basic capabilities of a system overseas, whether it is a knowledge base, equipment base, or other. Stockton suggested that it would likely be an information base, pointing out that an established, carefully planned strategic communication agenda is necessary to provide reliable information during and after a CBRN event, and the only way to counter misinformation in the age of social media.

There are certain types of events that, while rooted in biology, do not fit the traditional pandemic model, posed another participant; for example, a massive area denial due to an anthrax incident would require the ability to operate in a contaminated environment. These are unique characteristics that put a biological event into a similar category as nuclear or radiological incidents. Stockton reiterated that standards are essential to determine an acceptable level of decontamination.

PANEL DISCUSSION

Capabilities Needed for Effective Response to an International CBRN Event

Moderator, Dr. Gerry Galloway, chair of the workshop steering committee, indicated that the panel would focus on capabilities needed for an effective response to an international CBRN event. The panel was framed around the following questions: (a) what capabilities are needed for effective response to a CBRN event? How are these different from responding to all hazards?, (b) from the U.S. government perspective, what capabilities are unique to responding to a CBRN event in a partner nation?, and (c) what are gaps in capabilities for coordinating CBRN response with partner nations? The panelists were Mr. Brian Lewis of the U.S. Department of State, Dr. Martin Cetron from the Centers for Disease Control and Prevention, and Mr. Chad Gorman from the Federal Emergency Management Agency.

Desired End States for an Effective CBRN Response Overseas

Brian Lewis, Deputy Director of Technical Programs at the Bureau of Counterterrorism for the U.S. Department of State (DOS) provided a strategic level perspective on outreach and preparation for responding to international CBRN events. He began with three components of an effective CBRN response. First, the local government needs the technical capability to rapidly identify a CBRN event has occurred, and then quickly communicate accurate information about the incident to the United States and other international partners; the faster the communication, the more lives can be saved. While natural hazards such as an earthquake, tsunami, or volcanic eruption are self evident, there may be no visual evidence of a CBRN event. If the local government does not declare an event has occurred, the United States may not detect it. The second component, Lewis indicated, is clear communication of needs by the local government; in the midst of a crisis, this can present a challenge. This means more than simply saying “send help” because it is difficult for outside governments to know how to respond. In the absence of clear communication, the U.S. government and other allies can only speculate on what is needed. Lastly, Lewis noted the importance of pre-identifying interagency CBRN response leadership