

Managing Foreign Assistance in a CBRN Emergency

The U.S. Government Response to Japan's "Triple Disaster"

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Responding to a major disaster is invariably time-critical, complex, and difficult. Supporting a foreign government engaged in a disaster response adds an additional layer of logistical, linguistic, cultural, and organizational challenges. The tsunami caused by the March 11, 2011, earthquake in Japan killed more than 19,000 people and destroyed coastal settlements along a massive swath of Japan's eastern coast. Responding to a natural disaster of such magnitude would prove a monumental task for any country. Japan, through its extensive community level training and significant investment in disaster preparedness, is as experienced and capable as any nation in coping with nature's hazards. However, as the grave situation at Fukushima Daiichi Nuclear Power Plant unfolded in the days following the tsunami, the Japanese government confronted a crisis of unprecedented and daunting complexity.

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Commanding generals of III Marine Expeditionary Force and Japan Ground Self-Defense Force discuss progress of disaster relief mission at Uranohama Port

U.S. Marine Corps (Brennan O'Lowrey)

To understand the threats to Japan posed by the cascading sequence of breakdowns at the plant, and to undertake the actions required to halt the disaster's progression, the Japanese government had to knit together information, assessments, and capabilities from a wide array of government and private sector actors, many of whom do not normally work together. To support Japan in its efforts to respond to the complex and rapidly unfolding crisis, the U.S. Government similarly required disparate agencies that do not often interact to quickly establish a close, collaborative working relationship in the midst of an emergency.

This first large-scale U.S. response to a complex disaster including a chemical, biological, radiological, or nuclear (CBRN) element required a number of organizational adaptations over the course of the crisis. The U.S. Government has established detailed procedures for responding to such incidents under the rubric of Foreign Consequence Management (FCM). Yet in managing the situation, U.S. officials engaged in the response within Japan found that existing guidance was vague and undefined with respect to interagency organizational processes and structures needed to absorb additional personnel sent forward and to execute the foreign assistance aspect of the FCM function. The government of the affected state has primary responsibility for responding to CBRN events within its territory. Some indeterminacy exists, however, within the U.S. Government as to the lead agency role during a foreign assistance effort in response to a CBRN emergency.¹ Within the affected country, responsibility falls to the Chief of Mission, in this case U.S. Ambassador to Japan John Roos, to coordinate the activities of the various agencies involved in the disaster response. Over time, both the Japanese and the U.S. governments' organizational mechanisms evolved in response to the complex demands of supporting the Japanese government through its management of the nuclear emergency. The lessons of the crisis response warrant review and consideration, as future responses to a natural or manmade disaster abroad that include a CBRN aspect—whether an epidemic; an attack with a radiological dispersal device, or “dirty bomb”; or a terrorist attack with a biological agent—would also necessitate rapid integration of disparate but vital capabilities from both inside and outside government.

The U.S. Government Approach to Disaster Assistance

The U.S. Government possesses a well-developed and proven system for responding to natural disasters abroad, with the U.S. Agency for International Development (USAID) and its Office of U.S. Foreign Disaster Assistance (OFDA) playing the lead role. The Foreign Assistance Act of 1961 created USAID and delegated disaster assistance authority to the USAID administrator. Yet OFDA's predecessor office was not created until 1964–1965 after clear failures in interagency coordination during a disaster response in Macedonia drove congressional pressure for a more robust coordinative structure. Consideration was given within Congress at the time to assigning the lead

provides a standardized approach to managing on-scene activities, with staffing support concentrated in five central areas: command, operations, planning, logistics, and finance/administration.⁴ The ICS organizational structure is not unlike the staffing model used by the U.S. military and is designed to be put in place rapidly when required, as well as to integrate a broad spectrum of outside agencies and organizations. The Department of Homeland Security has incorporated the ICS construct under NIMS as the foundational structure used in its National Response Framework (NRF), the primary document guiding U.S. domestic disaster response planning and execution. The NRF seeks to provide “scalable, flexible, and adaptable coordinating structures” for use in responses ranging from

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role to the Department of Defense (DOD); however, by assigning the role of lead Federal agency in an international disaster response to USAID and OFDA, the United States has maintained a primarily civilian face for its disaster assistance efforts and has provided a mechanism for coordination of DOD and other governmental and nongovernmental actors involved in disaster relief.² Given the wide array of actors involved in a disaster response—a number that only continues to grow in present day emergencies—effective disaster relief coordination poses a constant challenge for OFDA and for the humanitarian relief community, especially when significant numbers of military or other Federal Government personnel are involved.

OFDA drew on the very successful “incident management system” concept developed by the U.S. Forest Service to create its Disaster Assistance Response Team (DART) model, through which OFDA organizes responses to the most serious disasters abroad. Domestically, the Department of Homeland Security's National Incident Management System (NIMS) provides a well-understood organizational structure that readily incorporates contributions from external actors, is tailored in size to the situation at hand, and can be replicated at the local, state, or national level.³ A key mechanism within NIMS is the Incident Command System (ICS), which

those at the local level “to large-scale terrorist attacks or catastrophic natural disasters.”⁵

The DART team model used by OFDA represents a similar organizational logic distilled over time through lessons learned during DART-led responses to many disasters abroad. The organizational commonality between the U.S. systems for domestic and international disaster response has proved useful, as several recent major disasters have led the U.S. Government to draw on significant domestic disaster response capacity to augment response efforts overseas. For example, Federal Emergency Management Agency (FEMA) Administrator Craig Fugate traveled with USAID Administrator Rajiv Shah to Port-au-Prince soon after the January 2010 earthquake in Haiti, and FEMA personnel were deployed to the U.S. Embassy in Port-au-Prince to work alongside colleagues from OFDA who led the response under a DART structure. The DART also coordinated the activities of several Department of Health and Human Services Disaster Medical Assistance Teams that were deployed to Haiti, but primarily focuses on domestic disaster response.⁶

DARTs are often led by OFDA regional advisors who live and work in their areas of responsibility, and are thus familiar with the geography, governments, and issues that affect disaster responses in those regions. Richard Stuart Olson, in studying the OFDA DART

system, noted that “One of the singular advantages of deploying a DART is that it automatically clarifies who is in charge, which avoids the usual problem of leadership and reporting confusion when multiple [U.S.] agencies go into the field. This clarity even extends to the U.S. military when [it is] involved in a response.”⁷⁷ Substantial progress has been made over the past decade in clarifying and systematizing coordination between USAID and DOD in particular. USAID development advisors and OFDA humanitarian assistance advisors have been stationed in each of the DOD geographic combatant commands, and an Office of Military Affairs (now the Office of Civilian-Military Cooperation) was created within USAID in 2005. While occurring in very different contexts, both the 2010 U.S. disaster response in Haiti and the 2011 response in Japan involved substantial numbers of military personnel, placing a premium on both interagency and multinational coordination.

The Initial Response to Japan’s Humanitarian Crisis

The collaborative effort between Japan and the United States in the wake of

the March 11 Great East Japan Earthquake represents the largest cooperative military undertaking in the history of the U.S.-Japan alliance. To confront the crisis, the Japan Self-Defense Forces (JSDF) mobilized more than 100,000 personnel, establishing the first joint task force in its history and calling up reserve forces to active duty for the first time. More than 24,000 U.S. troops supported Japan’s disaster response through Operation *Tomodachi*, working closely with USAID, the U.S. Nuclear Regulatory Commission (NRC), the U.S. Department of Energy (DOE), and a host of other U.S. Government agencies. Indeed, the response to the March 11 “triple disaster” represented an unprecedented whole-of-government effort by both Japan and the United States.

Immediately after receiving reports of the massive damage and loss of life caused by the tsunami, USAID mobilized and deployed a DART to coordinate U.S. assistance to the Japanese government. USAID Administrator Shah, after assessing reports from the region in consultation with senior officials from across the U.S. Government, made a timely decision, within 24 hours of the earthquake,

to include representatives from the NRC in the original composition of the DART. This decision ensured that U.S. nuclear power expertise, and reachback to U.S.-based colleagues, was available from the early days of the unfolding crisis. The ability to rapidly fund and support interagency colleagues from relevant agencies is one of the key advantages of the DART construct, and the short-notice deployment of these experts reflects the value of close interagency consultation and information-sharing in the immediate wake of a major disaster.

OFDA maintains agreements with Fairfax County (Virginia) and Los Angeles County (California) to provide rapidly deployable Urban Search-and-Rescue (USAR) teams. On March 13, USAR teams arrived in Japan aboard a commercial aircraft chartered by OFDA, and the equipment cache arrived via U.S. Air Force C-17s, pursuant to a formal USAID request for DOD support. With Misawa Air Base providing invaluable logistics, mapping, and other support, these USAR teams focused their efforts on the areas of Ofunato and Kamaishi on the heavily damaged Iwate coast. The DART quickly



U.S. military and Japanese officials discuss deployment of water pumping station for Fukushima Daiichi Nuclear Power Plant during Operation *Tomodachi*

U.S. Air Force (Stane A. Cuomo)

assigned a humanitarian assistance advisor to the military at the headquarters of U.S. Forces–Japan (USFJ) at Yokota Air Base to assist with civil-military coordination and the vetting of requests for U.S. military assistance received from the Japanese government.

OFDA uses a system called the Mission Tasking Matrix (MITAM) to receive, assess, validate, and prioritize requests for military assistance during a disaster. This system has been successfully used to facilitate civil-military coordination in numerous disaster response efforts, and the MITAM system is

Because the Japanese government organizes its disaster relief efforts at the prefectural level—roughly analogous to that of a U.S. state—it does not maintain a national civilian agency specifically focused on disaster relief, as FEMA does in the United States. The JSDF thus plays an especially important role in large-scale disaster relief within Japan. As such, the close working relationship and long history of combined exercises between the U.S. and Japanese militaries proved extremely valuable throughout the course of Operation *Tomodachi* and in the disaster response more

disaster environment. Military officers on both sides who could work in both Japanese and English were especially valuable to the disaster response effort and in high demand to facilitate communication and coordination at all levels, from boots-on-the-ground roles to policy-level coordination in Tokyo. These included foreign area officers in various U.S. commands within Japan, officers with language training stationed at the Embassy, as well as others, such as officers enrolled in foreign war college and exchange billets with the JSDF.

A large number of outside augmentees from a variety of organizations joined permanently stationed USFJ personnel. Augmentation of existing U.S. military capacity in Japan included the deployment of a joint task force led by Admiral Patrick Walsh, commander of the U.S. Pacific Fleet. Admiral Walsh served during his forward deployment to Japan as overall joint task force commander at the augmented headquarters and led what was designated the Joint Support Force (JSF). Command of the JSF was then passed to Lieutenant General Burton Field, USAF, the USFJ commander. The military's joint task force construct is a key mechanism through which a staff can be built or augmented in response to the needs of a particular situation and represents a well-understood and frequently exercised process that can quickly absorb and channel the activities of supplementary personnel arriving during a contingency or crisis. This process was key to enhancing USFJ's capacity to cope with the massive demands of executing Operation *Tomodachi*, coordinating with other U.S. agencies, and supporting the JSDF in their crisis response efforts.

Confronting the Nuclear Emergency

U.S. Embassy Tokyo and civilian U.S. Government agencies involved in the disaster response faced similar challenges and the need for additional staff and resources as the severity of the crisis became clear. As DART personnel were arriving to carry out the U.S. humanitarian response in the days following the earthquake and tsunami, the situation at Fukushima Daiichi Nuclear Power Plant became a prime focus of U.S. officials as they sought to support the Japanese government and safeguard the well-being of the large community of American citizens living and working in Japan.

The NRC personnel who initially deployed with the DART team were soon



Marine Corps CBRN specialists remove radioactive contamination from Army generator during Operation *Tomodachi*

U.S. Navy (Matthew M. Bradley)

thoroughly briefed to U.S. military participants in the Joint Humanitarian Operations Course taught by OFDA personnel. During the Operation *Tomodachi* relief effort, USFJ successfully used a related process named the Joint Requirements Review Board to assess requests brought forward by the MITAM system and to determine whether those requests could be supported based on the joint task force commander's priorities and the resources available. USFJ also positioned Bilateral Crisis Action Teams with the Japanese government at the Japanese joint task force headquarters in Sendai and at the Ministry of Defense headquarters in Ichigaya, where the USFJ deputy was stationed. USFJ also hosted a JSDF general officer and numerous other JSDF officers at USFJ headquarters at Yokota Air Base.

broadly. Through Operation *Tomodachi*, the U.S. military delivered approximately 189 tons of food, 87 tons of relief materials, and 2 million gallons of potable water to support Japan's relief efforts.

After consultations with the Japanese government, U.S. forces cleared the debris-covered runway at Sendai Airport sufficiently to allow a C-130 aircraft to land on March 16, only 5 days after the tsunami. The opening of the airport allowed the Japanese government and relief agencies to fly massive quantities of supplies into the area. The rapid opening of the airport was accomplished by hard-working men and women of the U.S. military and made possible by close communication and cooperation between U.S. commanders and the JSDF. Communication is of paramount importance in a post-

augmented by senior NRC management and additional NRC staff. The NRC team set its base of operations within the Embassy and worked closely with senior Embassy staff, USFJ, and officials from other agencies who arrived to assist the response effort. The DOE augmented the Energy Attaché's office in the Embassy with officials from the DOE National Nuclear Security Administration and other DOE personnel to advise on the response to radiological contamination, the status of the accident as it progressed, and subsequent stabilization and cleanup activities. DOE soon partnered with U.S. Pacific Command (USPACOM) and USFJ to undertake airborne measurements of ground deposition of radioactive elements and shared the results of those assessments with the Japanese government. This capacity was later transferred to the Japanese government, and the measuring equipment was then flown on aircraft operated by the JSDF.

One of the most critical challenges faced by Ambassador Roos and Embassy staff was communicating with the substantial community of U.S. citizens in Japan regarding the rapidly evolving emergency at the nuclear plant. Ultimately, social media proved an especially useful tool for engaging with the community of U.S. citizens in Japan, and the Embassy Public Affairs staff used Twitter, YouTube, and Facebook to provide updates on the situation and to distribute information on response measures, such as recommendations on protective measures including evacuation zones around the plant.

One of the core challenges in managing a CBRN emergency is to understand and acknowledge the uncertainty and fear that arises among potentially affected citizens and to address public concerns through timely and transparent communication. A risk communication expert from the Centers for Disease Control, along with subject matter experts from multiple agencies, engaged directly with the community of U.S. citizens in several forums to answer questions and help explain the practical effects of some of the complex technical issues associated with the crisis. Visiting experts from the Food and Drug Administration helped assess the effects of the radiological release on the food chain, a radiation oncologist from the National Cancer Institute provided expert views on potential health effects on the population, and officials from the National Oceanic and Atmospheric Administration drew lessons learned from

fisheries management during the *Deepwater Horizon* oil spill crisis to help inform officials engaged in managing the crisis in Japan.

The U.S. Civilian Response Corps deployed personnel to Embassy Tokyo via the USAID Office of Civilian Response to augment civilian capacity in support of the response effort.

Ultimately, some 145 additional personnel arrived at U.S. Embassy Tokyo to augment the 270 direct-hire personnel normally stationed there. This number does not include the many U.S. military augmentees who were assigned to USFJ headquarters in Yokota and other locations throughout Japan and the

Japanese government inquiries regarding potential U.S. assistance. A government in the throes of managing such a complex crisis has limited capacity for addressing requests for information and other inquiries amid the many other activities involved in managing the crisis. Recognizing the large number of information channels between the U.S. and Japanese governments, the Japanese government, in consultation with U.S. officials, established an effective mechanism for centralizing intergovernmental dialogue under the oversight of Goshi Hosono, then special advisor to Prime Minister Naoto

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numerous U.S. officials who visited Japan for shorter periods for meetings with Japanese officials and Embassy colleagues. Thus, the U.S. Ambassador and U.S. officials supporting the Japanese government faced two key challenges: to structure and facilitate dialogue with the Japanese government through the course of the disaster response, and to effectively organize and manage the additional U.S. civilian personnel arriving in support of the response effort.

Structuring Bilateral Dialogue

A broad array of information channels, often directly from offices in Washington, DC, to Japanese counterparts and vice versa, presented a challenge to those on the ground in Japan seeking to grasp the breadth of U.S. Government activities associated with the unfolding crisis. In contrast to the longstanding communication paths between USFJ and the Ministry of Defense/JSDF, the ad hoc dialogues between the many other U.S. agencies involved and relevant Japanese ministries reflected the intensity and risk presented by the crisis, the sheer number of agencies and actors involved within both governments, and the dauntingly complex nature of the challenges being faced. The Japanese and U.S. governments both grappled with the herculean task of managing information flows between agencies and offices inside and outside of government, many of whom do not often interact under normal circumstances.⁸

The conversations occurring between U.S. and Japanese government agencies frequently involved U.S. requests for information on the evolving situation and the

Kan, and later designated the minister in charge of managing the nuclear crisis. This mechanism, formally known as the Joint Crisis Management Coordination Group, but generally referred to by U.S. officials as the "Hosono Process," structured and enhanced communication between the two governments on issues related to the crisis, particularly regarding U.S. support to the Japanese government. Furthermore, the focused dialogue at the Hosono Process meetings spurred interagency coordination on both sides. On the U.S. side, a need became increasingly apparent as the crisis continued into April for an interagency organization internal to the Embassy, specifically focused on supporting U.S. engagement in the Hosono Process, and capable of absorbing and integrating the efforts of additional personnel sent to the Embassy from various agencies in response to the crisis.

The DART served this role in part through the end of April, as the NRC representatives were themselves members of the DART, and the DART coordinated closely with the Embassy's Emergency Action Committee, the Joint Support Force, and other organizations involved in supporting the Japanese government. The DART concept is a well-honed method for deploying civilian capacity to a foreign country to assist local crisis-affected citizens, typically basing operations in the U.S. Embassy, and coordinating U.S. Government relief efforts with the host country government under the authority of the U.S. Chief of Mission. Yet while the military joint task force construct serves to organize and manage personnel and resources in



Members of USAID and Fairfax County Urban Search and Rescue team meet in Ofunato, Japan, after earthquake and tsunami

U.S. Marine Corps (Vernon T. Weekins)

support of a military contingency operation, no analogous coordination mechanism exists to absorb and structure civilian personnel sent to a U.S. Embassy to support crisis management in the case of a CBRN emergency that affects Americans abroad and/or has domestic impacts.⁹

Organizing for Interagency Collaboration

As the humanitarian needs in the region affected by the tsunami became less acute toward the latter part of April, the DART assessed that an appropriate time had been reached to stand down its humanitarian response function. Yet because of the ongoing need for support and bilateral dialogue on matters relating to the nuclear emergency, a follow-on body was needed to help bring together the various stakeholders involved in providing support to the Japanese government in the consequence management sphere. In cooperation with DART leadership, and in consultation with involved offices in Washington, DC, Ambassador Roos convened an organizational mechanism entitled the Bilateral Assistance Coordination Cell (BACC) to support U.S.

engagement in the Hosono Process. The BACC included representatives from OFDA and all of the relevant Embassy offices, as well as other stakeholder organizations such as the NRC, DOE, Defense Threat Reduction Agency, USPACOM, and USFJ. The BACC reached back to parent agencies in Washington as well as to the private sector through the U.S. Department of Commerce's Foreign Commercial Service. NRC also facilitated technical dialogue with the Institute of Nuclear Power Operators on behalf of the BACC.

The BACC received requests for assistance from the Japanese government via the Hosono Process at multiple venues: in higher level meetings, at action officer-level working groups chaired by the Japanese Cabinet Secretariat, and in a radiological monitoring subworking group hosted by the Japanese Ministry of Education, Culture, Sports, Science, and Technology. Each of these meetings involved representatives from numerous Japanese and U.S. organizations involved in supporting the crisis response. Assistance requests were added to a tracking matrix that was developed by the DART and managed bilaterally between the Japanese Cabinet

Secretariat and U.S. Embassy. The BACC tasking matrix essentially applied to bilateral coordination of nuclear-related foreign assistance the proven MITAM system used by the DART for civil-military coordination, providing a single tool for listing all requests for U.S. assistance, tracking progress toward their accomplishment, and recording the U.S. and Japanese personnel responsible for vetting and responding to the requests.

Using the shared matrix, members of the BACC team were able to interact effectively with Japanese counterparts in a working-level support group that was established to inform and implement decisions reached through the Hosono Process. Formal requests for material assistance were categorized as to their priority, and requests for information and technical assistance were included in a separate section. As requests were either completed or withdrawn, they were moved to the end of the BACC matrix. The matrix was exchanged between the U.S. and the Japanese prior to Hosono Process meetings, with additions and modifications made collaboratively in advance. This collaborative system proved extremely useful in enabling timely and

efficient responses to requests for assistance by the Japanese government, created a single, streamlined vehicle for communication between the two governments, and represented a successful adaptation of the proven DART MITAM system for use in a bilateral context to support a host nation in managing a CBRN emergency abroad.

Lessons from the Response

Numerous lessons arose during this complex disaster response that could help shape the U.S. and Japanese governments' approaches to future emergencies, especially any that might involve a CBRN element. Over the course of the crisis, it became apparent that across both governments, agencies focused primarily on domestic disaster response possess limited familiarity and experience working with agencies focused on international disaster response, and vice versa. In the United States, the National Response Framework, shaped in part by lessons learned through the response to Hurricane Katrina in 2005, enables all response partners to collaboratively plan, train, and respond to domestic disasters and emergencies with a unified national response. One of the important lessons identified after the U.S. response to the January 2010 earthquake in Haiti was that an analogous International Response Framework (IRF) might help domestic and internationally focused U.S. Government agencies better understand each others' organizations, capabilities, and procedures.¹⁰ Vexing issues such as donor coordination and staffing augmentation, along with agency roles in responses to complex disasters involving a CBRN element such as radiological events, biological threats, or epidemics—scenarios that are covered in planning annexes in the NRF—could thus be addressed in the international sphere. An IRF would help provide a better forum for whole-of-government planning, improving conditions for future disaster response efforts.

By working and planning together on disaster risk reduction and in contingency planning exercises, organizations can build familiarity and establish cooperative routines that enable a more rapid, coherent response to complex disasters. However, no two disasters are alike, and unforeseen challenges will always require some degree of adaptation and innovation by those engaged in the response. The Japanese government's initiation of the Hosono Process represented a useful mechanism for managing foreign assistance

in a complex disaster response, an approach that may also prove useful in the unfortunate event of a future complex crisis.

Lastly, because no established organizational structure was readily available for use in foreign consequence management at the Embassy level, Embassy Tokyo worked with DART experts to adapt OFDA best practices to the ongoing requirement to provide support to the Japanese government's consequence management activities. The BACC structure and processes were the outcome of this collaboration and reflected an adaptation of established DART processes, such as the MITAM system, and the well-developed organizational logic of the Incident Command System. U.S. Government officials managing foreign assistance in a future CBRN emergency might find that a similar Embassy-based structure could help absorb and channel arriving personnel capacity, augmenting staff support for the U.S. Chief of Mission and enhancing U.S. Government assistance to the affected state. **JFQ**

NOTES

¹ See Defense Threat Reduction Agency (DTRA), *Foreign Consequence Management Legal Deskbook* (Washington, DC: DTRA, January 2007), available at <www.dtra.mil/documents/business/current/FCMLegalDeskbook.pdf>. This document states that “unless the President directs otherwise, [the Department of State] has been designated as the Lead U.S. Federal Agency (LFA) in responding to requests for [foreign consequence management] assistance from a foreign government” (1-6). Also see Department of State, *Guidance for Responding to Radiological and Nuclear Incidents*, fact sheet, available at <http://travel.state.gov/travel/tips/health/health_1184.html>. This document states, “the Department of State is not the lead government agency on radiological or nuclear incidents. . . . At present, there is no one government agency that has taken the lead responding to nuclear or radiological incidents.”

² Richard Stuart Olson, *The Office of U.S. Foreign Disaster Assistance (OFDA) of the United States Agency for International Development (USAID): A Critical Juncture Analysis, 1964–2003: Final Report* (Washington, DC: USAID, February 21, 2005), available at <http://transition.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/publications/ofda_cjanalysis_02_21-2005.pdf>.

³ Department of Homeland Security, “National Incident Management System,” available at <www.fema.gov/emergency/nims/>.

⁴ *Ibid.*

⁵ Department of Homeland Security, “National Response Framework,” available at <www.fema.gov/pdf/emergency/nrf/nrf-core.pdf>.

⁶ The lessons learned review commissioned by USAID in the wake of the response to the January 2010 earthquake in Haiti notes many of the challenges that the Federal Emergency Management System and the Department of Health and Human Services, both organized primarily for domestic disasters, faced through the course of their response activities in Haiti. The report also examines the role of the first-ever Office of the Response Coordinator, led by a former Ambassador, in assisting with interagency and multinational coordination of relief activities. The report also notes some of the challenges posed by unclear and undefined organizational relationships within the Embassy during the response. See *Independent Review of the U.S. Government Response to the Haiti Earthquake: Final Report* (Washington, DC: USAID, March 28, 2011), available at <pdf.usaid.gov/pdf_docs/pdacr222.pdf>.

⁷ Olson.

⁸ See Yoichi Funabashi and Kay Kitazawa, “Fukushima in Review: A Complex Disaster, a Disastrous Response,” *Bulletin of the Atomic Scientists* 68, no. 2 (March/April 2012).

⁹ See Robert S. Pope, “Interagency Task Forces: The Right Tools for the Job,” *Strategic Studies Quarterly* 5, no. 2 (Summer 2011).

¹⁰ *Independent Review*, 86.