KNOWLEDGE NOTE 3-1

CLUSTER 3: Emergency Response

Mobilizing and Coordinating Expert Teams, Nongovernmental Organizations, Nonprofit Organizations, and Volunteers
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In response to the Great East Japan Earthquake (GEJE), domestic and international assistance initiatives were launched by a large number of public and private sectors organizations; and various emergency teams were mobilized through national and international networks. The GEJE reminded us that civil society organizations play an indispensable role in disaster management. These organizations have the advantage of flexibility and speed in reaching and caring for affected communities. However, there were no coordination mechanisms in place that functioned properly on the ground. Because of the complexity of disaster response operations and the large numbers of actors involved, coordination mechanisms must be established in advance during normal times.

**FINDINGS**

**MOBILIZING THE GOVERNMENT’S EXPERT TEAMS**

Municipality and prefecture governments play a leading role in disaster response in Japan. However, because of the catastrophic consequences of the March 11 earthquake and tsunamis many of the local governments were unable to respond, so national agencies as well as prefectures and municipalities outside the affected region were quickly deployed (KN3-4). Organizations concerned had formed a variety of expert teams in light of the lessons learned from past disasters, in particular the Great Hanshin-Awaji (Kobe) Earthquake in 1995. The national government took action immediately by setting up a response office 4 minutes after the earthquake, and an Emergency Disaster Response Headquarters headed by the Prime Minister, within 30 minutes. Its mandate was to oversee and coordinate all response activities.

**Self-Defense Forces** The total number of personnel in operation reached some 107,000 with about 540 aircraft and nearly 60 vessels. SDF rescued approximately 19,000 disaster victims, or nearly 70 percent of those rescued in the GEJE event. The SDF provided transportation assistance to medical teams, patients and rescue units dispatched from various
countries, and livelihood assistance to disaster victims by providing water, food, and other necessities. The SDF also responded to the nuclear accident, engaging mainly in pumping water for cooling used fuel pools, decontaminating personnel and vehicles, and monitoring amounts of airborne radiation (figure 1).

**Emergency fire response teams** Following its experience with the Kobe Earthquake, the Fire and Disaster Management Agency created fire response teams to mobilize firefighting departments across Japan. At the GEJE, the emergency teams dispatched more than 30,000 firefighters from 712 fire departments in 44 prefectures nationwide over a period of 88 days ending on June 6. In cooperation with local fire departments, the emergency teams had rescued 5,064 people as of June 30, 2011. Most fire department in devastated areas had lost their radio equipment or base of communications. In light of this experience, the Fire and Disaster Management Agency has decided to provide the teams with additional mobile communications equipment and a larger supply of fuel so that they can operate effectively even over a wide areas and for a longer period of time.

### TABLE 1: Expert teams organized by the government

<table>
<thead>
<tr>
<th>Ministry/agency</th>
<th>Expert teams</th>
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<tbody>
<tr>
<td>Ministry of Defense</td>
<td>Self-Defense Forces</td>
</tr>
<tr>
<td>Ministry of Health, Labor and Welfare</td>
<td>Disaster Medical Assistance Team</td>
</tr>
<tr>
<td>Ministry of Land, Infrastructure, Transport and Tourism</td>
<td>Technical Emergency Control Force, Coast Guard</td>
</tr>
<tr>
<td>Fire and Disaster Management Agency and prefectural fire departments</td>
<td>Emergency fire response teams</td>
</tr>
<tr>
<td>National Police Agency and prefectural police agencies</td>
<td>Interprefectural emergency rescue units</td>
</tr>
</tbody>
</table>

[FIGURE 1: The SDF in action](https://example.com/figure1.jpg)

*Source: Ministry of Defense.*
Interprefectural emergency police rescue units

Interprefectural emergency rescue units are police units that have been set up in prefectures nationwide, based on the experience with the 1995 Kobe Earthquake. In response to the GEJE, these rescue units conducted such activities as search and rescue and securing emergency transportation routes. A total of 750,000 person-days were spent working on site, with as many as 4,800 personnel working per day (figure 2). A review of their operations during the GEJE revealed that the scale was so large that some units could not manage their operations on their own, while others had difficulty securing enough personnel. The Police Agency will enhance its response capacity by setting up emergency quick response teams and long-term response teams numbering 10,000 personnel.

Crimes such as theft were a major concern since many houses had been left vacant after residents fled to evacuation centers away from home. According to the National Police Agency, the number of crimes committed in the disaster-affected areas in the year after the disaster had decreased significantly compared to the previous year, while the number of burglaries had risen (table 2). Many ATM machines were also destroyed. Police teams were deployed to ensure safety in the disaster-affected areas.

Disaster Medical Assistance Team (DMAT)

DMAT is a specialized team of medical doctors, nurses, and operational coordinators trained to conduct emergency operations during the critical period, normally within 48 hours, after a large-scale disaster or accident. DMAT was established in 1995 after the Kobe Earthquake, when it was learned that 500 more people could have been saved if medical support had been provided more promptly.
In response to the GEJE, DMAT sent about 380 teams, 1,800 staff, from 47 prefectures for 12 days to provide support to hospitals and to rescue and transport patients. Because the tsunami damage was so extensive and local medical centers had been washed out by tsunamis, DMAT also had to provide care for people with chronic illnesses. Although DMAT’s operations usually take place within 48 hours after a disaster, they had to operate for a much longer time.

**Technical Emergency Control Force (TEC-FORCE)** The Ministry of Land, Infrastructure, Transport and Tourism (MLIT) established TEC-FORCE in 2008. The TEC-FORCE is a specialized group made up of ministry staff that helps disaster-affected municipalities to quickly assess damages, identify measures to prevent additional damage, and provide technical assistance for rehabilitation and emergency response activities. In response to the GEJE, more than 18,000 person-days of personnel were dispatched, together with disaster management equipment and machinery (figures 3 and 4). TEC-FORCE provided satellite communication vehicles, enabling them to connect to public lines and establish communications with other organizations concerned.

**The Japanese Red Cross Society (JRCS)** JRCS has mobilized relief resources to the affected area from the onset of the disaster. JRCS is designated as one of the public relief organizations by the disaster response law and the biggest humanitarian organization in Japan. Within 24 hours from the disaster 55 medical teams (out of which 22 teams as DMAT) were dispatched and subsequently 935 teams, or 6,700 personnel, in total were deployed during 6 months, treating 87,445 persons, along with provision of psychosocial support to affected population.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Total Crimes</td>
<td>42,102</td>
<td>51,305</td>
<td>–18</td>
</tr>
<tr>
<td>Felonious</td>
<td>187</td>
<td>245</td>
<td>–24</td>
</tr>
<tr>
<td>Violent</td>
<td>1,804</td>
<td>2,008</td>
<td>–10</td>
</tr>
<tr>
<td>Larceny</td>
<td>31,894</td>
<td>38,484</td>
<td>–17</td>
</tr>
<tr>
<td>Burglary</td>
<td>5,729</td>
<td>5,690</td>
<td>0.7</td>
</tr>
<tr>
<td>Vehicle</td>
<td>9,992</td>
<td>12,440</td>
<td>–20</td>
</tr>
<tr>
<td>Non-burglary</td>
<td>16,173</td>
<td>20,354</td>
<td>–21</td>
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<tr>
<td>Intellectual, white collar</td>
<td>1,150</td>
<td>1,905</td>
<td>–40</td>
</tr>
<tr>
<td>Moral, sexual</td>
<td>375</td>
<td>404</td>
<td>–7</td>
</tr>
<tr>
<td>Others</td>
<td>6,692</td>
<td>8,259</td>
<td>–19</td>
</tr>
</tbody>
</table>

*Source: National Police Agency.*
Mobilizing and Coordinating Expert Teams, Nongovernmental Organizations, Nonprofit Organizations, and Volunteers

Mobilization of Japanese NGOs and NPOs

Domestic nongovernmental organizations (NGOs) and nonprofit organizations (NPOs) have played a significant role in carrying out disaster management activities. As of January 20, 2012, there were 712 organizations participating in the Japan Civil Network for Disaster Relief in East Japan. There is no limitation either on the type of organization that can join the network, such as nonprofit, public-interest, or religious, or on budget size.

In a disaster, the role of NGOs and NPOs is to complement the government’s role. Since in Japan the government is indeed the primary agent obligated to initiate action in response to a natural disaster, NGOs and NPOs are responsible for filling in where governmental...
support is lacking. However, this by no means implies that NGOs and NPOs are government subcontractors; they have broad autonomy in deciding on their activities, and the relationship is one of equality, rather than the former being subordinate to the latter. Their roles and responsibilities are far-reaching, and they engage in a broad range of activities from awareness raising to fundraising, while also engaging directly in relief activities at the disaster sites.

The early responders can be categorized into two groups: Japan-based (mainly Tokyo-based) NGOs specializing in international relief operations even before GEJE, and Japanese NGOs and NPOs based in different parts of Japan that address domestic needs. The Japan Platform, a platform for international emergency humanitarian aid organization, mobilized funding for relief operations within 3 hours after the earthquake. Seven registered organizations carried out initial needs assessments with JPY15 million in funding, 5 organizations provided support to education with JPY450 million, 2 organizations provided health care and hygiene promotion with JPY210 million, 8 organizations engaged in rehabilitation work, 12 organizations provided food and nonfood support with JPY3.12 billion. These organizations, experienced in providing emergency humanitarian aid overseas, were able to leverage international standards and expertise. They played a pivotal role in mobilizing experts in specialized fields.

The Japanese NGOs and NPOs had been mainly involved in domestic emergency relief activities. Organizations based and operating in the disaster-affected areas made long-term commitments to sustaining activities such as assessing people-centered needs, and facilitating a seamless transition from emergency to recovery support.

The JRCS has been pulling together JPY307 billion in donations as of January 19, 2012, and its counterpart, the Central Community Chest of Japan, Red Feather Campaign, had garnered JPY38.8 billion in donations as of October 2011. A Central Grant Disbursement Committee was set up to ensure a fair allocation of the funds collected by the JRCS and the other designated fundraising organizations, to the affected prefectures. Each prefecture has established a prefectural-level grant disbursement committee that sets criteria for eligible recipients as well as for the amounts to be distributed by the municipal authorities who are responsible for identifying individual beneficiaries and distributing the cash.

The Japan Platform, an organization that manages funding from various sources for international emergency humanitarian aid projects, had received JPY6.7 billion from private companies as of July 2011, the Japan Foundation received JPY2.4 billion, the Central Community Chest of Japan received JPY2 billion, and the Japan National Committees for UNICEF received JPY3.6 billion as of January 16. The line separating fundraising organizations from private companies has narrowed as private companies actively collect funds and work in parallel with emerging NGOs like Just Giving Japan, which uses the Internet to solicit donations.

Another important responsibility of NGOs and NPOs is coordination of relief efforts. A designated agency, in most cases a UN agency, would function as the cluster lead international relief operations. However, no central agency was assigned for overall coordination in Japan. The prefectural offices or the disaster response headquarters at the prefecture levels were the first bodies to be assigned to disaster response, but they did not function as a coordinating body for all NGO and NPO relief operations. The newly established
prefectural cooperation recovery centers functioned as networking hubs, and grew into a spontaneous coalition for coordination. The Tokyo-based NGO—the Japan NGO Center for International Cooperation (JANIC), which had already created a network of NGOs, functioned as a provider of pooled information.

The third role of NGOs and NPOs in disaster response is enrollment and management of volunteers. The Ministry of Health, Labor and Welfare named the Japan National Council of Social Welfare, Tasukeai Japan, the 3.11 Reconstruction Aid Information Portal in cooperation with the Reconstruction Agency and Japan Civil Network, as the main contact points for people to apply for volunteering. Over 280,000 people joined in the disaster response as volunteers in the two months after the earthquake.

SUPPORT IN FUKUSHIMA

Apart from the national budget, Fukushima prefecture received JPY7.2 billion in donations, which were used for activities such as school reconstruction, support for children, and improvement of temporary shelters. JPY1.3 billion was received and used to provide for disaster orphans. In collaboration with the governmental funds, the Japan Platform supported 8 projects in Fukushima, funding 5 organizations with JPY1.8 billion. Apart from the Japan Platform there are several other organizations working separately on relief activities. However, the number of NGOs working in Fukushima is much smaller than in the Miyagi and Iwate prefectures. According to JANIC, between March and June 2011, the number of NGOs working in the Fukushima Prefecture was 17, whereas in Miyagi it was 40 and in Iwate is was 33. The contrast is made clearer by the number of projects provided by NGOs: In the Miyagi prefecture there were 292 projects, 179 in Iwate, and 60 in Fukushima. In the early stages, those concentrated on delivering emergency kits including food and nonfood items. Following emergency activities, these organizations faced difficulties in supporting rehabilitation program, which is completely new and unknown operation for them. The experiences and lessons learned in Fukushima should be passed on and shared with the broader international aid community. The Japanese NGO community should conduct timely and objective evaluations and studies of their 3.11 operations.

VOLUNTEERS

The Japan National Council of Social Welfare set up volunteer centers in the affected municipalities. The social welfare councils in municipalities nationwide sent more than 30,000 person-days of staff to operate the volunteer centers.

As of January 2012 more than 900,000 person-days have been used in doing volunteer work through the volunteer centers in the 3 prefectures of Tohoku (figure 5). Considering that more than 1 million volunteers were mobilized in the first month after the Kobe Earthquake in 1995, the number of volunteers mobilized during GEJE was relatively small. Some reasons for this are that the affected areas were far from large cities, and were rural coastal communities dispersed over a wide area, making it difficult for the volunteers to gain access.
INTERNATIONAL ASSISTANCE

As of November 1, 2011, 163 countries and regions and 43 international organizations had offered aid and relief. Emergency assistance squads, medical teams, and reconstruction teams had been dispatched from 24 countries and regions along with expert teams from 5 international organizations. In regards to material and monetary support, the Japanese government accepted relief supplies and donations totaling over JPY17.5 billion, from 126 countries and regions. By May 17, 43 overseas NGOs from 16 countries had arrived in Japan. The scale of assistance has been larger than for the Kobe Earthquake in 1995, when 67 countries and regions provided aid and relief; and the U.K., Switzerland, and France dispatched emergency teams.

The JRCS received financial support from 95 sister Red Cross and Red Crescent national societies from all over the world, which amounted some 700 million USD, plus additional 400 million USD from the State of Kuwait and EURO 10 million from the European Commission’s ECHO. According to a survey conducted by the Brookings Institute, Japan received US$720 million from other countries, which accounts for almost half of the global humanitarian disaster funding in 2011 and some 0.4 percent of the planned reconstruction budget of the Japanese Government.

The U.S. dispatched approximately 16,000 military personnel under “Operation Tomodachi (Friends).” They provided a variety of assistance, including search and rescue efforts, the transport of supplies and people, and the recovery and reconstruction of the devastated
areas. At the peak of the action, approximately 140 aircraft and 15 vessels took part in the operation along with the Japanese SDF.

**COORDINATION**

There was no functioning coordinating mechanism among the various government organizations, civil society, and the private sector, to help avoid duplication and confusion in relief and response activities. Coordination was required at all levels and all phases. On the ground, these organizations must coordinate with community-based organizations, and with each other, to assess victims’ needs and to carry out activities smoothly and effectively. The SDF and NGOs did coordinate emergency food distribution to the evacuation shelters.

Coordination with municipal governments is crucial, since the municipalities have the primary responsibility for disaster management. Since the municipal governments have quite limited experience in working with CSOs, linkages between the municipalities and CSOs could not be easily established. Municipalities can provide support to evacuees in transition shelters, but not in their homes. This function was instead carried out by CSOs. Coordination was also lacking between the private sector and local governments outside the affected areas; and the overall coordination of international assistance was a challenge.

Coordination is required at all phases of recovery since victims’ needs change as recovery progresses. While water and foods delivery are key at the emergency phase, needs become more diverse including sustaining livelihoods, education, and improving the living conditions at evacuation shelters or in transition housing.

Good practices could be found at specific sectors at some sites. Ishinomaki Red Cross Hospital coordinated all medical teams from JRCS and other agencies at the 330 evacuation centers throughout the Ishinomaki city. The hospital organized survey teams to gather medical and non medical conditions, including water and sanitation over a one month. These formed the basis for planning and implementing response activities by various organizations including local governments.

**LESSONS**

- National networks should be used to mobilize experts, including search and rescue teams, medical teams, and engineers. Organizations should prepare these teams during normal times, such as compiling rosters and conducting training.

- The teams came from outside need to independently engage in activities in the disaster field without support, often for long-term. Communication and transport equipment, fuel, food and water should be stocked.

- At megadisaster, like GEJE, expert teams are expected to engage in activities for longer terms than frequent disasters that require response activities for a few days. Since enormous number of various public facilities are damaged, expert teams are required to develop capacities for long-term activities, one month or more.
• Since enormous numbers of different types of organizations are involved in disaster management, coordination mechanisms are essential. There was no functional coordination mechanism in the GEJE. This is why megadisasters overstretch capacities of local governments, and damage government staff and facilities at devastated areas. In developing countries, UN cluster systems serve as coordinating mechanisms. Considering the difficulties faced by the local governments in the GEJE, similar mechanisms should be established in the central government or under some umbrella organization of civil society organizations.

RECOMMENDATIONS FOR DEVELOPING COUNTRIES

Prepare response teams. Specialized agencies, such as the police, fire departments, public works, and hospitals should prepare during normal times for the mobilization or response teams. The following activities are required:

• Clarify the chain of command
• Designate a secretariat function
• Prepare a roster of emergency team members
• Conduct emergency drills
• Keep the necessary equipment in stock

Develop capacity. Expert teams are required to develop capacities for working independently for long-term. Stan-by or rotating teams, communication and transportation should be arranged.

Establish coordinating mechanism. Various types of organizations from inside and outside the country engaged in response and recovery activities. Government agencies often have problems coordinating the enormous numbers of organizations carrying out a broad range of activities. Megadisasters stretch the capacities of local governments; and local government staff and facilities suffer. Once disaster happens specific teams came from outside the devastated areas and start coordination among all organizations. The following actions are required:

• Preparedness: establishing face-to-face relationships during normal times facilitates coordination in times of disaster.
• Networking: information, experts and private sector personnel should be networked to share information, to effectively collaborate each other, and to mobilize diversified resources.
• Consideration of vulnerable groups: special care is required for vulnerable groups, such as the disabled, the elderly, and children. These groups are easily marginalized (KN3-6).
KEY REFERENCES

AAR Japan, Campaign for the Children of Palestine, Good Neighbors Japan, Japan Asian Association and Asian Friendship Society (JAFS), JEN, NICCO, PARCIC, JPF HP. http://w3.japanplatform.org/area_works/tohoku/action/03.html.


Huma, NICCO, JPF HP. http://w3.japanplatform.org/area_works/tohoku/action/03.html.

Japan Civil Network HP. http://www.jpn-civil.net/about_us/group/.


KnK, Peacebuilders, Save the Children Japan, Shanti Volunteer Association, ADRA Japan, JPF HP. http://w3.japanplatform.org/area_works/tohoku/action/03.html.


Syakaifukusikyogikai HP. http://www.shakyo.or.jp/saigai/torikumi_01.html.

The Great East Japan Earthquake (GEJE) caused immense damage and congestion in telephone infrastructure, including 1.9 million fixed-line services and 29,000 mobile phone base stations. Government radio communication infrastructure was also seriously damaged. Voice messages were widely used to confirm whether family members and relatives were safe, and satellite phones played a crucial role in emergency communication during the response stage. Social media was extensively used for search and rescue, as well as for fundraising. Social media and community radio reach two distinct age groups: social media for the younger generation and community radio for the older generation.

**FINDINGS**

Communication infrastructure is indispensable in securing government functions and protecting lives and property during disasters. Communication systems are used to disseminate warnings to the public, to enable search and rescue organizations to communicate among themselves, and to confirm the safety of family members and relatives. Social media was extensively used for search and rescue, as well as fundraising. Community radios can provide local information such as times and locations where emergency water and food supplies or relief goods will be delivered.

**TELEPHONE**

*Damage and subsequent restoration of fixed-line, mobile, and broadband services.* The Great East Japan Earthquake (GEJE) caused immense damage to both fixed-line and mobile phone infrastructure, including flooding of exchange facilities, damage to underground cables and conduits, destruction of telephone poles and overhead cables, destruction and loss of mobile phone base stations, and draining of backup batteries during the long power outages. In the Tohoku and Kanto regions, an estimated 1.9 million fixed-line services from NTT East Japan, KDDI and SoftBank Telecom were rendered inoperable,
including subscriber lines, ISDN and FTTH, while 29,000 mobile phone and PHS base stations also stopped functioning.

Telecommunications carriers initially deployed mobile power supply vehicles and mobile base stations to those areas with no commercial power supplies, and set about re-building damaged facilities as quickly as possible. The rapid response effort saw full service restored to almost all affected areas, with some exceptions, by the end of April 2011 (Figures 1, 2, and 3).

**Voice messaging and other services.** The sharp increase in voice call traffic immediately after the earthquake caused significant congestion. Carriers restricted fixed-line traffic by as much as 80-90 percent and mobile services by as much as 70-95 percent in order to allow emergency calls and other critical communications to go through. Mobile phone packet communication services such as email were generally not restricted.* Even when carriers did impose restrictions, they were generally no more than about 30 percent and were only temporary. Thus, packet communications provided considerably easier access than voice services.

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* A data stream is divided into packets, or units, that are separately routed to a destination where the original message is then reconstituted.
Telecommunications carriers set up emergency messaging services so that people could check on the safety and whereabouts of their families, relatives, and other relevant people (figure 4). These services were used some 14 million times following the GEJE. Because of these emergency messaging services, traffic congestion was cleared up on the same day the earthquake struck, in contrast to the Hanshin-Awaji Earthquake in 1995 when congestion continued for five days.

Some mobile phone carriers introduced an emergency messaging service whereby the terminal device converted voice recordings into voice files that could then be sent via packet transmission. Other mobile phone carriers are planning to follow suit.

**DISASTER MANAGEMENT RADIO COMMUNICATIONS**

The disaster management radio communications networks of national and local governments are generally considered to be more robust and resilient than public fixed networks. In the GEJE, however, many towns and villages, particularly those located along the Pacific coastline, suffered various levels of damage to their radio communications systems, including both community announcement systems with loud speakers and mobile systems.
FIGURE 3: Damage of NTT East and NTT Docomo

FIGURE 4: Disaster emergency message traffic and comparison with Kobe Earthquake
on emergency vehicles. The main causes were damage to or loss of radio transmission equipment from the earthquake and tsunami as well as loss of electric power during sustained blackouts.

In the aftermath of a megadisaster like the GEJE, a key issue is how to deliver relevant information such as public warnings and evacuation instructions across wider areas in a timely and reliable manner. Local governments are looking at advancing and multiplying ways to deliver emergency information to residents, and improving their disaster resilience.

SATELLITE COMMUNICATIONS

Compared to terrestrial communication infrastructures, satellite phones and satellite communication systems were less vulnerable. These systems had the advantage of being available for quick deployment in any region including regions with no land-based communication infrastructure, as well as in marine areas. Satellite phones, in particular, played a vital role in emergency communication among local governments and rescue organizations.

Satellite mobile phones. This system provided voice and internet communication capabilities for disaster management organizations, evacuation shelters, and staff working on infrastructure rehabilitation, among others. This was also the case for local governments and communities isolated by typhoons and heavy snowfall. In preparing for disasters, batteries and equipment should be stored for rapid deployment.

VSAT (Very Small Aperture Terminals). VSAT provides voice and internet communication capability by enabling accesses from multiple mobile terminals via wireless LAN technology. They were also used to provide connection through portable and truck-mounted mobile phone base stations for rapid restoration of communication infrastructure, and to provide a temporary communication network for disaster relief organizations.

Portable and truck-mounted satellite earth stations. These were used by disaster relief organizations and media entities to transmit video images from disaster sites. The Heli-Sat system, which enables video transmission through satellite, will be introduced in the future.

Marine earth stations. This provided communication for rescue and recovery activities by seagoing vessels in cases where land routes were disrupted.

RESPONSES IN DISASTER INFORMATION BROADCASTING

After the earthquake occurred, broadcasting companies including NHK (Japan’s public broadcasting corporation) and local operators interrupted regular programming to provide disaster-related information. For example, NHK delivered emergency earthquake warnings, followed by news reports on a continuing basis starting 2 minutes after the earthquake occurred. These were carried on the company’s 8 channels including its general programming channel, the educational channel, and its radio channels. The general programming channel continued to provide news reports and programs related to the earthquake and tsunami for 12 days up until March 22; and the total time devoted to disaster-related news and reports was about 254 hours. People were able to watch many of those programs on
their mobile phones in areas where the electricity supply had failed. The programs were delivered by one-segment broadcasting.†

As many as 120 television relay stations stopped functioning because of the loss of commercial electricity during the initial period of the disaster, and as many as 4 radio relay stations shut down. Master stations continued broadcasting by generating their own power. All the stations within the area had been restored by the end of May 2011 except for one radio station within the evacuation zone around Fukushima Daiichi nuclear power station. This station was restored by March 2012. After the March 11 events, the Ministry of Internal Affairs and Communications (MIC) requested the NHK, the National Association of Commercial Broadcasters (NAB) in Japan, and the radio stations in the affected areas to increase broadcasting disaster information; and on April 1, 2011 MIC requested that NHK and NAB be able to provide accurate and detailed information as quickly as possible to the public.

**SOCIAL MEDIA**

Social media are a set of applications and services that use the Internet to connect people. They combine dynamic, collaborative Internet-based tools, social networks, computers and, increasingly, mobile devices. Social media consist of social networks such as Twitter and Facebook that connect users, as well as websites and computer applications that enable users to collaborate and create content, such as the Wikipedia and YouTube websites.

Social media were used extensively during the GEJE for various purposes, such as search, rescue, and fundraising. Table 1 summarizes how they were used to meet different types

<table>
<thead>
<tr>
<th>TABLE 1: Dominant information types and how they were used</th>
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<tbody>
<tr>
<td>General disaster information</td>
</tr>
<tr>
<td>Safety confirmation</td>
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<tr>
<td>Fundraising</td>
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<tr>
<td>Infrastructure status notification/ regional facility status</td>
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<tr>
<td>Housing provision</td>
</tr>
<tr>
<td>Goods provision</td>
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<tr>
<td>Moral support</td>
</tr>
<tr>
<td>Resource saving</td>
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<tr>
<td>Volunteer recruitment</td>
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<tr>
<td>Special needs support</td>
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</tbody>
</table>

† A mobile terrestrial digital audio video and data broadcasting service in Japan. People can watch TV programs on mobile phone.
Emergency Communication

of information-sharing needs during the disaster. A questionnaire survey was carried out to learn about the uses of social media by 250 different types of responders: information senders, volunteers, managers of media groups, and so forth (figure 4).

Social media and the Internet were found to be highly reliable regardless of the users’ role, location, or the extent to which they were affected by the disaster. Users found social media to be extremely beneficial in general to an overwhelming degree. For directly affected individuals and people in the affected areas, the strongest reasons for using social media were convenience and their mass dissemination capacity. The Google Person Finder let people enter an inquiry about a missing person or provide information for interested parties. In total over 600,000 person names were registered.

All users experienced problems with the trustworthiness of information to a high degree. Users feel, to a particularly high degree, that the information shared through social media needs to be more accurate and reliable, especially information about infrastructure. Support for government use of social media in disasters is extremely high and was highest among directly affected individuals, individuals in disaster-stricken areas, and those involved in disseminating information to groups.

The higher the level of participation in sharing information through social media, the more likely an individual is to receive and share large amounts of information, and believe that the information comes from credible sources.

EMERGENCY FM RADIO

Emergency FM radio also played a crucial role in providing information to local residents. In the Tohoku area, 25 emergency broadcasting stations specializing in disaster information were set up. Immediately after the disaster, the communication systems developed by
local governments did not work because of power failures and a lack of emergency backup power supply. MIC distributed 10,000 portable radio receivers to evacuation shelters, and requested equipment manufacturers such as Panasonic and Sony, to distribute over 40,000 portable radio receivers.

FM radio provided locally customized information, such as information about aftershocks, or the availability of local services and activities related to people’s everyday needs. This kind of information was beneficial immediately after the disaster, while different information was required as reconstruction progressed. Some entertainment programs were presented 6 to 9 months after the disaster (box 1).

Several problems were identified. Ensuring sufficient human resources is a key issue. Immediately after the disaster, a significant number of volunteers provided the radio stations with different kinds of help, but over time the number decreased. A sustainable funding source is needed to continue radio broadcasting either in the form of emergency radio or community radio. FM radio users in Natori city are keen on having local residents continue to participate in broadcasting activities, and on gradually changing over to community FM with funding from communities and subsidies from local governments.

BOX 1: Ringo (Apple) Radio of Yamamoto Town, Miyagi Prefecture

FM Radio was used as a temporary emergency station in Yamamoto. It is located inside the Yamamoto town hall and was set up with the help of FM Nagaoka of Nagaoka city, Niigata prefecture. Ringo FM started broadcasting on March 21, and is on the air from 7:00 am to 7:00 pm. At first, it only announced information such as bathing times and food rationing information for those living in the town. Later the content became less about daily life than about supporting and comforting the residents. According to the coordinator, “We will never be able to completely eliminate the sadness of the victims, but we would like to provide them with encouragement from the bottom of our heart.”
LESSONS

- To reduce telephone network congestion, packet communications and emergency message services should be expanded. MIC is raising public awareness about using these services in times of disaster.

- The GEJE reminded us that resilient and redundant communication systems should be established. Backup systems are needed and batteries and generators with enough fuel should be acquired and stored in higher locations to avoid flooding.

- Social media and FM radio have played a crucial role in providing information to local communities; they reached two distinct age groups: while the former was used more by the younger generation, the latter is used mainly by the older generation.

- The way in which social media and FM radio are used changes over time—from sharing information about the safety of family and friends, to disseminating information about relief goods and services, and gradually to livelihood-related information.

- To enhance the use and effectiveness of social media in emergencies, city and local governments should use them for regular communications related to city news and events. In Japan, the Prime Minister’s Office launched a new twitter site after the disaster.

- For FM radio, sustainability is a key issue. Off-air activities, in which communities participate in producing radio programs, should be strengthened, so that communities will be invested in supporting the continuation of FM radio.

RECOMMENDATIONS FOR DEVELOPING COUNTRIES

When disasters strike, communications infrastructure should be used to disseminate warnings to the public, to enable communication among search and rescue organizations, and to confirm the safety of family members and relatives. Immediately after the disaster, however, communications systems often break down because of power failures, damage to infrastructure, and congestion.

**Improve the reliability of communication networks.** The following actions are required:

- **Reducing damage** by developing backup systems, such as batteries, generators, and backup trunk lines.

- **Mitigating congestion** by increasing the capacity of facilities such as switching equipment.

- **Restoring service** by deploying emergency facilities, such as portable switching equipment and portable satellite stations.
Utilize social media. The increasingly higher levels of mobile phone penetration in developing countries can allow for the effective use of social media during disasters, provided they are also used during normal times. Social media can also provide information to communities outside the disaster-stricken area, and facilitate the acquisition and appropriate allocation of aid and assistance. Starting with the Haiti Earthquake of 2010, the use of social media during disasters has significantly increased in other countries. There is a strong potential for cultivating the use of social media among different groups and for developing a social media-based platform designed for emergency situations.

Improve accessibility. Local accessibility is a key issue in many developing countries. Using mobile networks and social media can help in collecting and disseminating local information before and during disasters.

Enhance reliability of social media. The trustworthiness of information is extremely important for social media. Local government or relevant national government agencies should consider using social media in their public relations activities during normal times. When disasters occur, those social media channels can be used to share disaster-related information with the public.

Utilize radio to share information in communities. FM radio is commonly used in developing countries to share information in communities. Community radio is a rather low-cost and effective means of reaching small groups that are usually not served by the national and international media. Radios can provide information such as times and locations for provision of emergency water and food supplies or distribution of relief goods in the immediate aftermath of a disaster, and then gradually shift to providing different information for daily living or to help lift the spirits of people in the local communities. Radio is also appreciated by the elderly who may not have access to internet-based information.

Enlist community participation to ensure sustainability. For FM radio to be effective, there needs to be a balance between on-air and off-air activities. Community participation is the key to the long-term survival of FM radio, and therefore, off-air community activities, such as workshops, are very important. These activities can also be linked to local schools and educational system for greater sustainability.

KEY REFERENCES


KNOWLEDGE NOTE 3-3

CLUSTER 3: Emergency Response

Logistics Chain Management for Emergency Supplies
In response to the Great East Japan Earthquake (GEJE) disaster, relief goods were distributed and delivered through prefectural- and municipal-level depots. This delivery system faced several problems including fuel shortages, interruption of telecommunication services, and supply and demand mismatches, resulting in stockpiling of the goods in depots and delayed delivery to the people in need. Several measures can be taken to address these issues, including prior surveys of depot facilities, estimating in advance the quantities of emergency goods that will be required, enlisting the support of professional logistics specialists, and promoting logistics information management in unaffected areas, among others.

**FINDINGS**

The damage from the earthquake and tsunami was enormous; over 120,000 houses were totally damaged, and more than 470,000 people had to leave their home and evacuate to over 2,400 shelters.

Delivery of relief goods was planned to be executed through depots at two levels—prefectural and municipal. Especially in the first two weeks, fuel shortages made downstream deliveries from prefectural depots very difficult. Also, manpower shortages and the inconvenient building specifications of depots were the main causes of unnecessary stockpiling in depots. Telecommunications disruptions furthered mismatches between real needs and supplies. But the professional support of logistics specialists was effective in relieving the bottlenecks in depots.

**THE RELIEF GOODS DELIVERY SYSTEM IN JAPAN**

In Japan delivery of relief goods is the responsibility of the prefectural governor, who responds to requests from the municipalities. According to the postdisaster plan, delivery of relief goods was to be executed using depots at two levels: prefectural and municipal, as shown in figure 1. As illustrated in green in the figure, the national government
FIGURE 1: Information and transportation flows in the official relief goods delivery system
FIGURE 2: Badly organized inventory in an initially assigned depot (Iwaki Civic Hall, March 23, 2012)

(cabinet office) was also included in the plan to facilitate nationwide distribution. By April 20, the national goods distribution component had mobilized 26 million meals, 8 million bottles of beverages, and 410,000 blankets using 1,900 trucks, 150 aircraft, 5 helicopters, and 8 ships.

Delivering several kinds of goods, such as food, drinking water, clothing, and bedding, either to people’s homes or to more than 2,000 shelters, was a challenge, especially in the first several weeks when fuel was in short supply. This was especially true for the smaller local transport companies that did not have their own storage facilities. By the end of June, 1,800, 1,400, and 2,400 trucks were dedicated to transporting goods from prefectural depots to municipal depots in Iwate, Miyagi, and Fukushima, respectively. Fuel shortages combined with power outages and telecommunications failures hampered local government efforts to meet emergency needs.

Although many believe that transportation problems were the critical factor, several other forces were at play. The workload spiked at the same time that many staff were being lost to the disaster. Moreover, while the disaster countermeasure manuals state that the economic or industrial support branch of the local government is responsible for the delivery
system, workers in that section did not have enough knowledge or experience with logistics and supply chain management. They simply stored the goods in public buildings, with no logistics management plan, so the space was quickly filled (as shown in figure 2).

The building specifications and design of the depots was also a contributing factor. The depots require large storage and handling capacity as well as easy access to expressways, especially prefectural depots. Privately owned warehouses would have been ideal if they had not been damaged. The space under viewing stands in athletic fields, race courses, and indoor gymnasia also served well as depots (figure 3). In Miyagi Prefecture, large warehouses located near Sendai Port were severely damaged by the tsunami.

Neither Yume Messe Miyagi, the convention complex at Sendai Port, nor the Miyagi Prefectural Sports Park could be used as depots since they had already been designated as mortuaries.

**TELECOMMUNICATIONS DISRUPTIONS AND INFORMATION BOTTLENECKS**

The disaster disrupted business operations such as information aggregation; meanwhile, the failure of some communications systems hampered the evacuation of people to safe areas. Very little of the real-time information that was needed to ensure timely and accurate procurement of goods was available: including the location of the shelters, the correct addresses of the recipients of goods, or information about the type and amount of assistance that communities needed. Information about whether relief goods had actually been received could not be easily communicated among depots for several weeks after the earthquake.

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**BOX 1: The negative effect of goods sent with goodwill**

The demand for different kinds of emergency supplies continued to change over time. There were many instances where in a certain area emergency goods were in high demand one day, and no longer needed after a few days.

Relief goods resulting from a spontaneous outpouring of goodwill but sent without making any prior arrangements with the recipient municipal bodies and without clearly marked declarations of contents did not meet people’s needs and further burdened an already strained distribution network with dead stock and inventory.

Unpacking and sorting the emergency supplies sent by goodwill alone was an enormous amount of work. As these kinds of donations mounted, they clogged and undermined the efficiency of the distribution depots.

Many such goods arrived in Onagawa City, in Miyagi Prefecture. Used clothing was sent to the temporary shelters; however, 80 percent of the clothes, or 200 cartons, were returned to the gymnasium of the junior high school, which was the distribution center. About 7.7 tonnes of donated goods had to be recycled.
LESSONS

- Suitably designed depots with cargo-handling equipment such as forklifts are needed, along with the support of logistics professionals.

- Information on arrival times at each depot is crucial for planning storage and location management.

- Prior quantitative estimates of urgently needed goods should be carried out based on regional demographic statistics. This helps arrange “push delivery”, supply-driven deliveries, in the first few days after the disaster.

- Emergency delivery systems should be closed down as soon as feasible to allow normal commercial distribution systems to take over. They are capable of serving a variety of consumers, and are more flexible and demand driven.

- At the intermediate stage, logistics management is best delegated to designated municipal authorities in unaffected areas.

THE NEED FOR SPECIALIZED SUPPORT

As stated earlier, local government officials without sufficient knowledge, training, or experience in logistics management performed the specialized functions of receiving, sorting,
and dispatching emergency supplies at distribution depots. This resulted in confusion and massive congestion of the delivery networks.

In large-scale disasters, local government staff are called upon to discharge a variety of functions related to emergency management. The government should enlist business logistics professionals and draw on the capacity of the private sector as much as possible, to ensure properly integrated management of the distribution depots. Many local public bodies hesitated to hire private companies for relief goods distribution and management because they were not sure that they would be able to pay them under the Disaster Assistance Law. In future, a case can be made for putting in place agreements and contracts with the private sector for specialized logistics management services.

GETTING INFORMATION FROM UPSTREAM

For distribution depots to operate smoothly, local decision makers need to have real-time information about the kinds of goods being transported and the timing of shipments. This information enables them to arrange for the personnel and space needed to accommodate consignments. In normal times, this information can be obtained from, for example, point of sales (POS) systems.

In the aftermath of the disaster, this kind of information about the emergency goods ordered by the national government was not available to prefectures and municipalities in time. In addition, relief goods often arrived unexpectedly from various private companies, nonprofit organizations, and individuals with no prior information, which seriously reduced the processing capacity of distribution depots.

PREPARING A “PUSH” LOGISTICS PLAN

Since it is impossible immediately after disaster to collect information about affected populations and the extent of damages and loss, it is helpful to design simulations of different scenarios to generate data on the expected number of victims, including data on vulnerable groups such as the elderly, disabled, women, children, and so on. Based on these simulations, contingent emergency stocks of basic goods—packages of water, food, household goods (such as tableware, kitchen wrap, tissues, towels, toothbrushes, masks, and blankets) and emergency medicines for the first three days following the disaster should be stored locally, typically at community-level schools and centers.

Since the initial disaster response is invariably carried out rapidly without geographical or population information from the affected areas, data need to be gathered or forecast in advance and stored in databases to implement “push delivery” of first-response aid.

SWITCHING BACK TO COMMERCIAL SYSTEMS

National and local governments should use supply chain and logistics management as they respond to victims’ changing needs. As many victims move from shelters into temporary housing, and as normal distributors such as shops, supermarkets, and convenience stores
gradually recover, national and local governments should facilitate the return to normal commercial supply.

More specifically, the early restoration of commercial demand and supply chains, the rapid restoration of market dynamics, and the speedy distribution of donations to increase local purchasing power and liquidity should be a priority for municipal and local authorities. Job creation and conditional or unconditional cash transfers are highly effective short-term post-disaster measures, and are often more important than continuing the supply and distribution of relief goods by public agencies.

The speed and manner of the transition from public to private supply logistics should be determined by how dependent the affected population is on relief supplies, and on the robustness and speed with which the private sector networks can restore commercial operations. In the case of the GEJE, delivery of relief goods lasted for 40 to 50 days after the disaster. Commercial businesses reappeared in about a month.

**RECOMMENDATIONS FOR DEVELOPING COUNTRIES**

- Public facilities, such as gymnasium and community halls, can be used as logistics depots as they are well designed with strong-enough floors, wide-enough entrances and exits, and good accessibility for cargo handling.

- Prior agreements can be put in place between the government and logistics companies specifying the terms and conditions and payment methods for hiring logistics professionals, machinery, and depot facilities.

- There should be prior identification and training of local government staff who will be tasked with responding to large-scale disasters.

- There should be prior formulation of a list of goods and a standard format for shipments and orders for smooth and seamless activation of the disaster response.

**PLANNING PUBLIC FACILITIES**

Building specifications for new public facilities, such as gymnasium and meeting halls, should take into account their possible use as relief goods distribution depots. Floor strength, entry and exit widths, accessibility for cargo handling, as well their geographical locations should be assessed. If private sector warehouses already exist in the region, agreements for diverting their use in case of disaster, as well as for the provision of labor and for allocating costs, should be signed in advance.

**BUILDING A RESILIENT INFORMATION SYSTEM**

Information on the needs of affected populations must guide procurement agents in purchasing the right goods and quantities to be delivered to distribution depots. In the wake of a disaster, communication must be maintained between municipal offices, prefectural
offices, and the national government. Communication networks can be made more resilient by using satellite communication systems and on-site power generation equipment. Communication networks also need to support two-way connectivity between distribution depots and those facilities that can be used as evacuation shelters.

With respect to reliable road transportation, road status information gathered by probe cars linked to a global positioning system (GPS) is very helpful in determining delivery routes. To provide real-time information for emergency administrative and service-truck drivers, a system should be designed to integrate road status information from probe vehicles, road opening status from each road management authority, and traffic regulations from the police.

**MULTIPLE EXECUTION SYSTEMS AND PAIRED ADMINISTRATIONS**

In the aftermath of the GEJE, the national government formed a special team to take charge of the logistics of relief supplies. Ideally, every disaster response unit—at the national, prefectural, and municipal levels—should do the same.

Since the affected regions cannot be expected to provide sufficient information after large-scale disasters, municipalities outside the disaster area should initiate the information management functions for relief logistics. When municipalities are matched up in predetermined pairs based on their disaster profiles and spatial distribution, there are more chances of success.

**THE NEED FOR INFORMATION SHARING AND COORDINATION**

Information about goods, such as the volume, size, and weight of unit packages; number of individual items packed in a unit package; and the need for temperature control is indispensable for logistics managers to calculate the type and number of trucks required and to determine where and how to store the cargo in the distribution depots. Thus, it is important to create a mechanism for responsible parties to properly collect and share this essential information.

There is an equal case to be made for adopting universal definitions of various items and ensuring accurate and smooth information exchange about logistics by determining corresponding units among national and local government agencies, logistics operators, providers of goods, and so forth. As the first step, standard order forms, transportation request forms, and cargo transportation certifications should be prepared and adopted across the board.

In each region, the division of roles, cost-sharing arrangements among the related organizations, as well as appropriate workflow should be discussed in an interdepartmental council. In addition, training in logistics management should be conducted regularly to make sure that the workflow is smoothly implemented in the wake of disaster.
KEY REFERENCES

KNOWLEDGE NOTE 3-4

CLUSTER 3: Emergency Response

Supporting and Empowering Municipal Functions and Staff
A megadisaster can destroy government offices and kill public officials. In the Great East Japan Earthquake, many municipalities in Tohoku suffered serious damage to their office buildings and incurred considerable staff losses, which hampered their disaster response timing and effectiveness. To compensate for this, many kinds of partnership arrangement were formed between localities in the affected areas and their counterparts in unaffected areas. Formalizing these partnership arrangements and building local government capacities to deal with emergency situations are key success factors for developed and developing countries alike.

FINDINGS

OFFICE DAMAGES AND STAFF LOSSES

A disaster can destroy government offices and undermine government functions. Local governments are expected to play a critical leading role in disaster response and relief activities. In the case of the Great East Japan Earthquake (GEJE), many affected municipalities suffered serious damage to their offices and lost many of their public officials, which initially prevented them from undertaking relief activities in a timely manner.

A total of 62 municipalities in six prefectures (Aomori, Iwate, Miyagi, Fukushima, Ibaraki, and Chiba) in northeastern Japan were affected by the GEJE tsunami. Among them, 28 municipalities in the three worst-affected prefectures (Iwate, Miyagi, and Fukushima) suffered at least partial damage to their office facilities. Sixteen of them had to relocate their administrative functions to other buildings or temporary offices. Furthermore, computer servers in some of these municipalities were seriously damaged or destroyed, resulting in a loss of information on residents, and other data critical to providing municipal services.

Fukushima’s case was slightly different. Nine municipalities near the crippled Fukushima Daichi nuclear power plant had to relocate their offices relatively far from the plant (mostly within the same prefecture), because of concerns about radiation levels in their jurisdic-
tions, even in cases where the physical damages from the earthquake and the tsunami were very limited.

To make matters worse, many municipalities in the hardest-hit areas lost their public officials: a total of 221 officials are dead or missing from 17 municipalities in the three hardest-hit prefectures. In particular, the town of Otsuchi in the Iwate prefecture lost its mayor and 32 officials including seven managers, out of a total of 139 staff (figure 1). The town was left without a mayor for 5 months. Rikuzentakata city, also in Iwate prefecture, lost 68 officials out of a total staff of 295; while the town of Minami-Sanriku in the Miyagi prefecture lost 39 officials out of 240 staffs.

Evolving Partnerships among Localities

One of the most interesting developments after March 11 was that a variety of partnership arrangements evolved between local governments affected by the disaster and those that were unaffected. Many prefectures and municipalities outside Tohoku took the initiative to quickly send a large number of their own public officials to the disaster-affected areas to help them with post-disaster relief activities and other emergency operations.
According to Japan’s Internal Affairs and Communications Ministry, some 79,000 local government officials were dispatched to the affected prefectures and municipalities from all over Japan between March 11, 2011 and January 4, 2012. After a year, many are still serving there in every possible field, from civil engineering and urban planning to social work and finance. In FY 2012, at least 1,200 officials from local governments around Japan will spend a significant period working in the three hardest-hit prefectures as part of the reconstruction effort.

Most of the local governments outside Tohoku did this out of altruism, but they also considered it an opportunity for their officials to gain experience in dealing with post-disaster situations. So it is a win-win arrangement. The following sections describe the different kinds of partnership arrangements.

**RIKUZENTAKATA WAS ADOPTED BY NAGOYA**

Rikuzentakata city lost about one fourth of its officials in the disaster. This was a huge loss. Then, Nagoya city, one of the biggest cities in central Japan, came to the rescue and “adopted” Rikuzentakata. Soon after March 11, Nagoya started exploring how it could best help the disaster-affected areas of Tohoku, and decided to target primarily one of the most affected cities, Rikuzentakata.

Nagoya has so far sent 143 officials to Rikuzentakata, for a maximum term of one year, and about 30 officials from Nagoya are still working there. Nagoya sent a variety of experts such as urban planners, public health specialists, and statisticians. Rikuzentakata plans to gradually recruit more staff and to become self-sufficient by 2014. Until then, Nagoya will continue to help and to send officials to Rikuzentakata but on a declining basis.

**TONO AS A HUB FOR TSUNAMI RELIEF**

The inland city of Tono, in the Iwate prefecture, is located within 50 kilometers of many of the hardest-hit coastal cities and towns in Iwate, such as Miyako city, Yamada town, Otsuchi town, Kamaishi city, Ofunato city and Rikuzentakata city. Tono is about an hour by car from any one of these, and only 15 minutes by helicopter. Taking advantage of its strategic location, Tono established itself rapidly and effectively as a hub for tsunami relief by making the city’s 144 facilities (schools, community centers, public parks, and so forth) available for logistics supply and other relief activities. As a result, 3,500 emergency relief workers from the Japan Self-Defense Force (JSDF), police, and fire departments based themselves in Tono within ten days of the disaster and started their relief operations from there. Furthermore, about 250 organizations and agencies used Tono as a base for their relief activities, coordinated and supported by Tono city. Tono’s initiative was possible because the city had been discussing this kind of support mechanism with the tsunami-prone coastal cities since 2007, and Tono’s officials were trained and well prepared for disasters.
Disaster Relief Agreements

During the past couple of decades, more and more local governments in Japan have signed disaster relief agreements with one another. A typical agreement involves two localities, located far enough apart so that both are not affected by the same disaster; and if either party is affected by a disaster, the other is supposed to help. As of April 2010, 1,571, or 89.8 percent of all municipalities, had signed such an agreement, of which 820 signed with a municipality outside their own prefectures. Various kinds of support were provided to the municipalities affected by the GEJE based on these agreements.

The Union of Kansai Governments

In the wake of a megadisaster like the GEJE, mutual support among local governments within the same region may not work out if the entire region is severely affected, and therefore local governments in unaffected regions may play a bigger role.

A coalition of prefectural governments in western Japan called The Union of Kansai Governments (UKG) quickly stepped in after the GEJE to help the three most affected prefectures in Tohoku in an organized fashion. To distribute UKG’s support equitably, each UKG member prefecture was assigned to assist only one of the hardest-hit prefectures (table 1). After being assigned a prefecture to support, the UKG prefecture dispatches its personnel to gather information, identify needs, and coordinate relief activities.

This is a Japanese version of the Twinning Arrangement that was used in China during the recovery from the Sichuan Earthquake of 2008. This type of partnership is efficient and effective because it is facilitated by local governments that have a better grasp of the needs of their disaster-affected counterparts.

Among the advantages of this Twinning Arrangement are that it avoids overlapping of support, clarifies responsibilities, and is likely to achieve efficiency, speed, continuity, and accountability.

Under this arrangement by the UKG, the Hyogo prefecture has been assigned to assist the Miyagi prefecture. The Hyogo prefecture extended the following support:

<table>
<thead>
<tr>
<th>Beneficiary prefectures</th>
<th>Supporting prefectures</th>
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<tr>
<td>Iwate</td>
<td>Osaka, Wakayama</td>
</tr>
<tr>
<td>Miyagi</td>
<td>Hyogo, Tottori, Tokushima</td>
</tr>
<tr>
<td>Fukushima</td>
<td>Shiga, Kyoto</td>
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• Provision of relief supplies (clothes, food, water, and so forth),

• Dispatch of its own officials (54,589 as of December 1, 2001) and

• Acceptance of evacuees. Recognizing that continuing support is needed in the affected areas, the Hyogo prefecture is now developing a mid- to long-term support plan. This plan includes assigning technical officials such as urban development specialists, as well as those who can share lessons from the experience of the Great Hanshin-Awaji Earthquake of 1995.

STAFF IN FUKUSHIMA

While municipalities in the Iwate and Miyagi prefectures mainly receive as many officials as they ask for from the unaffected areas, municipalities in the Fukushima prefecture had difficulty filling their staffing needs because of concerns about the radiation risks. According to the Fukushima Prefectural Government, the number of additional staff requested by its 21 disaster-hit municipalities was 178 for FY 2012, but only about 40 percent of that demand has been met.

MUNICIPAL DATA PROTECTION

In addition to the office damage and staff losses, some of the Tohoku municipalities lost residential information and other critical data because their computer servers were damaged. One of these municipalities, the town of Otsuchi, which lost its on-site computer server, considered adopting cloud backup solutions for storing vital information and other key data. Cloud server backup solutions allow data to be transferred to an offsite location for secure storage, reducing the risk of losing data in times of disaster.

LESSONS

• City halls and municipal offices should be focal points for disaster response initiatives; and they play a critical leading role in relief activities. Therefore, they must be located in safer areas, or built or retrofitted to be disaster-resistant.

• Japan’s experience shows that partnership arrangements between localities in disaster-affected areas and their counterparts in unaffected areas are effective. Some of these arrangements were based on formal agreements, but others were based on good will. It is advisable, before disasters strike, to formalize these mechanisms among local governments, obtaining the necessary legal backing and clarifying cost-sharing arrangements. Right after the GEJE, the Japanese Central Government decided to shoulder the cost of dispatching local officials to disaster-affected areas, which was believed to be instrumental in promoting the emerging partnerships among localities.

• When it comes to disaster relief agreements, it is essential that partnering prefectures and municipalities be geographically distant or in different regions.
Agreements within the same region may not be effective, for example, in a large-scale disaster like the GEJE that damaged virtually the entire region.

- In a large-scale disaster, it is important to allocate the support fairly and equitably to the affected areas. The UKG’s initiative to assign its member prefectures to each support different individual localities was exemplary in this regard.

- Disaster preparedness by local governments should include a plan to minimize the damage to their information systems and to protect critical databases so that they can continue to function and provide emergency services to disaster victims and residents.

**RECOMMENDATIONS FOR DEVELOPING COUNTRIES**

- The roles that local governments must play in the aftermath of a disaster can be critical. But clear roles and responsibilities must first be assigned to each tier of government, specifying what needs to be done by which level in case of a disaster, and to strengthen their capacities accordingly.

- In disaster-prone developing countries, the locations of municipal offices should be reviewed along with their vulnerability to disasters. Consider relocating or retrofitting them if necessary so that municipalities can continue to perform their roles in the wake of a disaster.

- Partnerships among localities for emergency relief activities could work in many developing countries, particularly in relatively large countries. However, they are unlikely to work effectively if carried out in an ad-hoc manner. Formalizing these agreements and building the emergency response capacities of local officials are the keys to successful partnerships. Cost sharing under the partnership also needs to be clarified upfront.

- Municipalities in developing countries should be aware of the risk of losing their digital information and databases in a disaster, and need to come up with a cost-effective solution to minimize that risk.

**KEY REFERENCES**


Evacuation Center Management
Evacuation Center Management

A megadisaster will result in an enormous number of evacuees staying in evacuation center for a significantly long time. This note describes how Japan managed its evacuation centers after the Great East Japan Earthquake. It highlights important management issues, including: shortages of essential supplies and services, successful self-management practices initiated by the affected people themselves, good management practices by local governments, and the sensitivity required to accommodate diverse groups of evacuees with special needs.

FINDINGS

After the Great East Japan Earthquake (GEJE), nearly 2,500 evacuation centers were established in the disaster-affected Tohoku region; additional centers were also located outside of Tohoku. At peak occupancy, more than 470,000 people were staying at these centers. Most facilities, such as schools and community centers, were publicly owned and had been designated as evacuation centers even before the GEJE. Right after the GEJE, however, a number of private facilities such as hotels and temples were also enlisted as the need for centers far exceeded expectations; and a number of evacuees stayed with their relatives or friends. Evacuees gradually moved out of the centers as the construction of transition shelter progressed. Within four months after the disaster, about 75 percent of evacuation centers were closed, although some centers in Tohoku stayed open as long as nine months.

The evacuation pattern in Fukushima, where the nuclear accident occurred after the GEJE, was very different from other disaster-affected areas in Tohoku. In Fukushima, many people had to relocate from one center to another, moving farther from the crippled nuclear power plant as information became available on the risk of radiation exposure. More than 10,000 people had to change evacuation centers three or more times, with some people moving as many as ten times.

This knowledge note will focus mainly on management of publicly owned centers, since collecting information on the private centers has been difficult.
NOT ENOUGH SUPPLIES

Given the magnitude of the disaster and the number of evacuees, most evacuation facilities lacked sufficient supplies of food, water, clothes, and blankets. In the first days and weeks following the disaster, transporting these essentials to the centers was hampered by damaged roads and the shortage of vehicles and fuel. This problem was exacerbated by the fact that the many temporary facilities were not formally designated centers and therefore had not been stocked with essentials.
LACK OF WATER AND POWER

Furthermore, water and power supply systems were damaged in most of the disaster-affected areas, and in some places had not been restored even after one month. These problems made life miserable for the evacuees. For example, they had difficulty using the toilets without water for flushing. It has also been reported that the cold weather in northeastern Japan, and no electric heating in the facilities, made many evacuees sick, especially the elderly. As the evacuation period became prolonged, the inability to bathe was also a serious issue.

People could not stay in their high-rise apartments because of water and power failures. Since they could not continue to carry water and food upstairs to the higher stories, they moved to evacuation centers until public services were restored.

SELF-MANAGING BY EVACUUEES

Although managing evacuation centers is a municipal responsibility, most municipalities in the disaster-affected areas suffered badly from the loss of staff, seriously weakening their capacity to cope with the emergency. At the beginning, most facilities were supported by local teachers, volunteers, and other civil society groups. As the evacuation period became extended, evacuees themselves started taking a number of initiatives. At many shelters, a self-governing body emerged, with leaders and members of various committees selected by the evacuees themselves.

For example, evacuees at the Ofunato Junior High School in the Iwate prefecture organized themselves into eight groups: for nursing, sanitation, food, facilities, supplies, and heating. At one school in Minami-Sanriku in the Miyagi prefecture, evacuees divided themselves into 20 groups, based on the communities they came from before the disaster, and assigned themselves roles and responsibilities for day-to-day activities.
An event hall called the Big Palette in Koriyama, Fukushima prefecture, admitted more than 2,000 evacuees mainly from Tomioka town and Kawauchi village, both affected by the nuclear disaster. These evacuees established a volunteer center at the hall, where volunteers and the evacuees themselves helped organize activities such as opening three cafes, starting an FM radio station, organizing a gardening event, and undertaking a summer festival. The volunteer center provided opportunities for the evacuees to help themselves and to engage in productive activities in an otherwise depressing life at the evacuation center.

**GENDER SENSITIVITY**

One of the problems cited at many of the centers was the lack of gender sensitivity (KN 3-6). There simply wasn’t enough privacy for anyone, but particularly not for female evacuees, many of whom did not have private spaces where they could change their clothes or breast-feed their babies. Many centers eventually installed partitions, but it was often too late. It has also been reported that relief goods delivered to these centers were biased in

**FIGURE 4: Evacuation center at the Ofunato Junior High School**

*Source: Inabe City, Mie Prefecture.*
Evacuation Center Management

WELFARE SHELTERS FOR THOSE WITH SPECIAL NEEDS

Many experts have pointed out that evacuees tended to suffer from tremendous stress, and would therefore need special mental healthcare and counseling services as the evacuation period grew longer. This was especially true for children. However, the availability of such services varied from center to center.

Taking care of the elderly and those who needed special attention was another big challenge. At many centers, all the special needs groups had to share the facilities with the other evacuees. However, Sendai City in Miyagi prefecture had about 30 special centers called “welfare shelters” that provided nursing and other care for the elderly, the disabled, and other groups. About 250 people and their families were transferred to these from other centers.

MANAGING WITH A HUMAN FACE

A close relationship should be established early on between evacuees and the local officials who are responsible for managing the centers. A good practice in this regard came from Hachinohe city in the Aomori prefecture. Right after the GEJE, there were about 120 families at eight evacuation centers in Hachinohe. The city government assigned two officials to every seven or eight evacuated families with whom they could consult on any issue. For example, they had questions about subsidies for future housing and livelihood recovery.

Keeping evacuees informed is not only critical to their well-being but also comforting. In Rikuzentakata, in the Iwate prefecture, one of the city government’s public relations officers continued to publish a special edition of the city’s newsletter on a daily basis between March 18 and May 7, 2011 except for one day when a power cut prevented him from printing it. He continued publishing it five times a week for a few more months after May 8. About 2,400 copies were printed every day and distributed to evacuees in more than 70 evacuation centers in the city.

The newsletter initially contained information that evacuees really needed, such as procedures to get a disaster victim certificate or to be able to receive donations, the locations of temporary public offices and medical facilities, schedules of school events, new public transportation routes and timetables, and so forth. The type of information in the newsletter changed over time to meet the evacuees’ changing needs. Reading the newsletter became a routine at evacuation centers in Rikuzentakata, and evacuees looked forward to it every day.

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The relationship established with the officials at the evacuation centers continued even after the evacuees had resettled in private or public rental houses. Although this arrangement was possible because of the relatively small number of evacuees in a relatively big city with more than 2,000 officials, the city should nevertheless be commended for its initiative.

**DISASTER RELIEF AGREEMENT**

In 2006, two cities in the Fukushima prefecture entered into a Disaster Relief Agreement: Naraha city, which was affected by the nuclear disaster, and Aizu-Misato city, located relatively far from the crippled plant, which was not. When the nuclear disaster happened, most evacuees from Naraha city went to evacuation centers in Aizu-Misato city that were managed by local officials. This was a rare example of successful cooperation between two municipalities because of their long-standing friendly relationship. In Fukushima, most evacuees had to go beyond the prefecture’s jurisdictional boundaries because of radiation risks. In most cases, however, the evacuation centers were managed by the evacuees’ municipalities rather than by the host’s.

**LESSONS**

- While it may not be possible to be perfectly prepared for a megadisaster like the GEJE, it is nonetheless essential to designate evacuation centers in safe locations and equip them with as many emergency supplies as possible. Many prefectures and municipalities all over Japan are conducting ex-post evaluations to assess the locations and number of evacuation centers and the adequacy of supplies at these centers.

- Since a megadisaster is likely to interrupt essential services such as water and power, it is critical to install alternatives such as portable toilets and power generators. Sendai City is planning to equip its designated facilities with renewable energies, such as solar panels, as a back-up power source.

- Evacuees should take part in managing activities and services at evacuation centers. They are not guests who are simply receiving foods and materials, but enough capable in managing evacuation centers.

- Evacuees consist of diverse groups of people who have different needs and wants: women and children, the elderly, the disabled, and sometimes even foreigners. Those in charge of managing evacuation centers should be sensitive to this diversity; and it is critical to include women in management and leadership positions at these facilities.

- Some local governments have come up with innovative arrangements for managing evacuation centers and supporting evacuees. These governments should share their experiences and learn from each other so that good practices may be replicated in the future.
• Providing the information that disaster victims need is not only critical to their well-being but also comforting. It is important to listen to evacuees to understand what kinds of information they need and want, and to continue listening since their needs may change over time.

RECOMMENDATIONS FOR DEVELOPING COUNTRIES

Most of the lessons described above are applicable to developing countries. Evacuation centers are needed after most natural and industrial disasters, including not only earthquakes and tsunamis but also floods, landslides, and volcano eruptions, and so forth.

In disaster-prone developing countries, evacuation centers should be safely located. Schools and community centers should be designed and built to also serve as evacuation centers; and they should also be stocked with essential supplies such as food and drinking water, and equipped with emergency power generators. In developing countries, rainwater harvesting systems in schools and other public facilities, and renewable energies such as solar panels may also serve well in emergency situations. Political and financial support for pre-disaster investment in evacuation centers and supplies should be mobilized.

One of the biggest challenges in managing evacuation centers in developing countries is weak local government capacity. Evacuees should, therefore, get organized to help themselves as illustrated by the Japanese experiences. In many developing countries this effort could perhaps be supported by NGOs.

Gender sensitivity and serving diverse groups of evacuees are required in any country. Communication among these groups and governments should be established at the evacuation centers. Developing countries should plan to manage this issue better than it was dealt with in Japan, especially with respect to gender.

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Ensuring Protection in Response and Equity in Recovery
Prepared by Yoko Saito, Disaster Reduction and Human Renovation Institution; International Recovery Platform; Hironobu Shibuya, Save the Children Japan; and Margaret Arnold and Mikio Ishiwatari, World Bank.

Valuable contributions were also provided by Emi Kiyota, Ibasho; and Akiko Domoto and Hiroko Sue Hara, Japan Women’s Network for Disaster Reconstruction and Gender.
As in every disaster, certain groups were more vulnerable than others to the effects of the Great East Japan Earthquake (GEJE). Two-thirds of those who lost their lives were over 60 years old. Response efforts to the catastrophe also affected social groups differently and reflected existing inequities, particularly with respect to women. Children, the elderly, and the disabled also have special needs, which were not always met. These “vulnerable” groups should also be engaged in the planning, design, and implementation of relief and recovery activities to ensure a more effective and efficient recovery, and contribute to more sustainable and resilient communities in the longer-term.

IMMEDIATE IMPACT OF THE DISASTER

Vulnerability to the impacts of natural hazards normally varies by social and demographic group, and the GEJE was no exception, with the elderly proving to be the most vulnerable. Two thirds of the deaths occurred among the elderly—people over 60 years old—who accounted for some 30 percent of the total population in the affected areas. They are physically weaker than other groups, and could not run fast enough to reach higher ground.

Seven hundred and twenty-seven children and young people (0-19 years old) lost their lives in the GEJE. As of October 31, 2011, 1,327 children had lost one parent and 240 children had lost both their mother and father. Of these, 160 were adopted by relatives. A survey conducted by Ashinaga, (“Daddy-Long-Legs,” a scholarship organization for orphaned students) revealed that households with disaster-affected children, in particular female-headed ones, face difficulties in livelihood. The details are as follows:

• Half of affected children are in female-headed households.

• Forty-five percent of the heads of households have permanent full-time jobs, while 30 percent are unemployed or looking for work.
Among female-headed households, 24 percent are employed full-time, while 47 percent are unemployed or looking for work.

Seventy percent of their houses were damaged; 30 percent are living in their own homes, with the remainder living with relatives (29 percent) or in evacuation centers or transition centers.

**RESPONSE AND EARLY RECOVERY**

**GENDER**

Women in Japan do not have the same socioeconomic status as men, participate less in decision making, and have less access to social and economic opportunities. The relative poverty rate of women is higher than that of men (28.1 percent vs. 22.9 percent in 2007). The average hourly wage rate in 2008 for female full-time workers was 69 percent of the rate for male workers, and the proportion of women in positions equivalent to or higher than section manager in private corporations is 6.5 percent. The prefectures affected by the event belong to a medium range of gender equality in Japan: The ranks of gender equality index of Iwate, Miyagi, and Fukushima prefectures are 11th, 27th, and 17th, respectively out of 47. The GEJE relief and response efforts reflected and reinforced these preexisting inequalities. Most evacuation centers were managed by men. In fact, throughout Japan, 96 percent of the leaders of residents’ associations, who also served as the leaders of evacuation centers, are men.
Privacy and security. Privacy for women was rarely available at evacuation centers, which added greatly to their stress. A survey conducted by the Cabinet Office in April 2011 revealed that only 26 percent of the centers had private spaces for women; at many centers women had to change their clothes under blankets or in a toilet.

Women were hesitant to voice their needs to the male leadership of the centers. Basic needs related to hygiene were overlooked or handled in an insensitive manner. For example, in one center, male staff distributed a sanitary napkin to each woman and said: “If you need another one, please let me know.” In centers where women were engaged in management, those items were made readily available in bathrooms. Male leaders at evacuation centers considered skin lotions and other cosmetic items to be luxury goods, while for women they contributed to a sense of normality. When a cosmetic company sent make-up kits to several centers, women were able to put on make-up for the first time since the disaster, which raised their spirits and encouraged them to be more active.

In May 2011, there were two reported cases of rape confirmed in the three affected prefectures after the disaster, compared to nine reported incidents at the same time in 2010. There were thirteen reported cases of forcible indecency compared to thirty-two cases in the previous year. The Minister of State said these incidents did not occur in the affected areas. It is difficult, however, to obtain verifiable numbers of sexual harassment incidents since they can take many forms—from sexual taunting to physical harassment—and often go unreported. At evacuation centers, personal alarms were distributed to protect women and children, and they were cautioned to avoid going to the outdoor toilets alone, especially at night.

FIGURE 2: An evacuation center, one month after the earthquake
In one center, a grievance desk was set up; however, since there were no partitions in the facility, everyone could see and hear who was registering a complaint. This made women reluctant to report any concerns or incidents. In another center, a private, soundproof space was set up where women felt more confident about reporting grievances.

Domestic violence is also difficult to track, as it is typically considered a family matter and seldom discussed or reported. Of the cases that police responded to in the three affected prefectures from March 11 to December 31, 2011, 98 were recognized as having a clear linkage to the disaster. Many of these involved violent acts by husbands who had increased their alcohol consumption after the disaster.

The Gender Equality Bureau of the Cabinet Office recognized that gender perspectives were not sufficiently considered in managing evacuation centers, and on March 16, 2011 issued an ordinance on “Disaster response based on the needs of women and women with children” to provide guidance to relevant agencies. They also initiated consultation services for women dealing with distress or violence. However, conditions on the ground made it difficult to reach the evacuees and people managing the centers.

At the Fukushima Big Pallet, a major evacuation center accommodating more than 2,000 evacuees, spaces for women were set up in collaboration with local women’s organizations. The organizations provided advice to women and referred them to experts when necessary. They provided a safe space for women to gather and share their thoughts and concerns with others, and also held events such as cooking and handicraft classes. Women said that they felt relaxed and comfortable in these spaces.

**Maternal care.** Many nursing mothers did not have privacy for breastfeeding. Some went outside in the cold in search of privacy and others gave up nursing and changed to powdered milk. A number of maternal care clinics and hospitals offered temporary evacuation facilities free of charge for families with pregnant women and infants. However, the Japan Primary Care Association reported that many pregnant women refused to move to these places because they were concerned that their neighbors would no longer consider them to be community members if they moved to a separate place.

The Japan Primary Care Association set up several programs to support pregnant women and families with infants, and sent an obstetrician and gynecologist to the affected area.

**Workload and livelihoods.** Women in many evacuation centers were requested to prepare meals for the evacuees three times a day, in addition to taking care of the elderly and children while the men were out looking for work. This placed a heavy burden on them. In some centers, a rotation system was established to alleviate the pressure on any specific person or group. Moreover, while men were engaged in cash-for-work programs cleaning up debris from the disaster, women were not compensated for their work in the centers.

**Men’s needs.** Integrating a gender-sensitive approach in relief and recovery efforts means understanding and addressing the needs of men and boys in addition to those of women and girls. While data still needs to be collected in the affected area, there are indications of a need for counseling for men to deal with alcoholism and domestic violence. Moreover, men may need special counseling for child rearing if they have become single parents or if they have lost their livelihood.
Ensuring Protection in Response and Equity in Recovery

BOX 1: Single Father Japan

Single Father Japan was established before the GEJE to support single fathers. The organization requested the Japanese Government to extend bereavement pensions for men who had lost their wives in the event. Their main activities are providing counseling and open lectures, awareness raising, and research on single-parent families. See http://zenfushiren.jp.

CHILDREN

The GEJE left children feeling frightened, confused, and insecure. The number of incoming calls to “Childline,” a free counseling service for children, increased fourfold in the Fukushima, Miyagi, and Iwate prefectures following the event. The government made plans to deploy some 1,300 mental health counselors to all public schools in affected areas.

The government expanded its support to foster parents caring for relative’s orphans; and recommended that the child’s previous connections with friends and with the child’s home region should be maintained. Governments and various organizations, such as Ashinaga and the Fund for the Future of Children affected by the GEJE, started providing financial support or scholarships to orphans.

Because of the accident at the Fukushima Daiichi Nuclear Plant, children in the Fukushima prefecture have stopped playing outside or swimming in pools, and have suffered from the stress of remaining indoors. In 74 percent of Fukushima households, children have decreased the time they play outdoors to 13 minutes per day to avoid the effects of radiation. These children demonstrate signs of increased stress through acting-out twice as often as other children. The government organized a few days of “refresh camp” where children can play sports and engage safely in outdoor activities. Some 6,000 children participated in the program.

OLDER PEOPLE AND THE DISABLED

A lesson learned from the Great Hanshin-Awaji (Kobe) Earthquake in 1995 was that special centers should be established for older people and the disabled. In 2008, the Ministry of Health and Welfare issued guidelines stating that Welfare Evacuation Centers for special care needs should be established within seven days of a disaster emergency. However, only 20 percent of municipal governments in the three affected prefectures prepared special evacuation centers in response to the GEJE. Many disabled people faced challenges accessing evacuation centers; and there were some reports of mentally ill and autistic people leaving centers because they were not properly cared for.

People over 60 make up 30 percent of the population in the affected area, but local authorities were unprepared to respond to their needs. Evacuation for elderly people with dementia and their family members was challenging. While long-term care facilities organize regular
evacuation drills, local government had limited knowledge about the elderly with dementia who lived in their communities and were not well prepared to support them. Older people also faced accessibility issues at evacuation sites and temporary housing sites. A number of older people in need of soft food and diapers went with their needs unmet. Older people are prone to withdrawal when disconnected from friends and family; this is an issue for many people in temporary housing who have lost their social networks.

The elderly residents in care facilities that were damaged in the GEJE were relocated to evacuation centers such as school gymnasia, where they faced difficulties living without nursing care. Finding nursing care staff was a challenge because many of them had suffered from the GEJE: 52 out of 1,165 eldercare facilities in the Iwate, Miyagi, and Fukushima prefectures were damaged by the event, and 173 staff members are dead or missing. In April 2012, the Ministry of Health, Labor and Welfare (MHLW) issued an ordinance to local governments to prepare for large disasters by: arranging for evacuation of the elderly living in care facilities; support for staff who are sent to devastated areas; and support for the elderly who need care at home.

One eldercare facility became an evacuation site by default. Designed as a group home for 20 people, the building was equipped with an accessible kitchen, bathrooms, bedrooms, and a living room for individuals with physical and cognitive impairment. While large-scale multilevel eldercare facilities could not function without electricity and running water because of the GEJE, this small-scale group home was able to provide basic services and an accessible environment for over 100 people of all ages from the community.

Coordination challenges among agencies may have hindered the collection of data and the provision of support to disabled people affected by the GEJE. For example, DRM staff at a local government’s could not have access to information on the disabled in the affected area because of privacy policies; and a housing facility that provided income-generation activities for disabled people did not fall under the purview of MHLW so did not receive assistance. Such “bureaucratic mismatches” resulted in certain groups falling through the cracks.

In an effort to ease the burden on vulnerable groups, MHLW temporarily suspended the collection of national insurance system premiums for long-term nursing care. They also simplified procedures for claims; and allowed affected people to receive services without showing their insurance identifications cards, and reduced or waived service fees.

EMPOWERING MARGINALIZED GROUPS FOR LONG-TERM RECOVERY

Recognizing its importance, a number of groups have acted to enable marginalized groups to participate meaningfully in medium and longer-term recovery efforts.

The first meeting of the Government’s Reconstruction Design Council was held on April 11, 2011. No mention was made of gender or of issues related to the disabled in the Council’s reconstruction principles, and only one woman was appointed to the 15-member Council. This is a nationwide problem, reflected in the following figures:
• In the National Disaster Prevention Council, only 1 out of the 25 committee members is a woman.

• At disaster prevention councils at the prefectural and municipal levels, the participation rate of women is only 4 percent.

In response to the GEJE, there was an appeal led by several women leaders, including Akiko Domoto, former governor of the Chiba prefecture, and Hiroko Sue Hara of Josai International University, to establish the Japan Women’s Network for Disaster Reconstruction and Gender. In June 2011, on the three-month anniversary of the disaster, the network held a symposium on gender equality in the GEJE reconstruction process. The network’s advocacy efforts have been successful, and have contributed to the inclusion of the following text in the Basic Act on Reconstruction in response to the GEJE which was passed on June 20, 2011: “…opinions of the residents in the disaster-afflicted regions shall be respected and opinions of a wide range of people including women, children and disabled persons shall be taken into account.” There were also accompanying guidelines issued on promoting the participation of women, children, and the disabled in all aspects of the reconstruction process. The real challenge in the coming months will be the implementation of the law and guidelines, as so far the capacity and will to engage and address the needs of vulnerable groups and women has been quite limited.

A number of UN and civil society organizations are also supporting children. Four organizations: UNICEF, Save the Children, General Research Institute of the Convention on the Rights of the Child, and Childline have established a Network for Supporting Children at the GEJE, with the objective of coordinating among governments, CSOs, experts, and the private sector. Through the network, information is shared on support activities, damages incurred, and the progresses of recovery; children’s messages are issued to the public;

**BOX 2: Save the Children**

One key lesson Save the Children has learned over many years of responding to emergencies is that while children are more adversely affected by disasters, they also have a great capacity to recover quickly, provided they are given the proper support and directly engaged in supportive dialogues. Children can inform families, school officials and local officials of their needs, and of how they can help their communities recover. When asked about what would be of most support to them, children generally expressed their desire to return to normal routines and living situations—and to help their communities recover. Save the Children surveyed more than 11,000 children in the affected area on what type of role they would like to play in the recovery process, and how they would like to see their towns rebuilt. Close to 90 percent said they wanted to contribute in some way to rebuilding their communities. Save the Children is strengthening children’s participation in the recovery process by ensuring their views are part of the planning for rebuilding their towns and communities, and assisting children to convey their thoughts and ideas to their communities and to local and national government officials.
and recovery policies are recommended. As of November 2011, 29 organizations were participating in the network.

UNICEF is providing assistance to the children of Japan for the first time in nearly half a century with a budget of JPY4 billion. The assistance covers emergency support supplies; health and nutritional support; educational support; psychosocial support (psychological care); protecting children in harsh environments, such as being orphaned, in need, or in impoverished families; and child-friendly reconstruction plans.

Older people are more often thought of as a vulnerable group in need of care rather than as a resource to support younger generations. When marginalized, elders lose opportunities for interaction and the ability to contribute to society, and young people lose the wisdom and talents that elders can offer. After the GEJE, an NGO, called Ibasho, focusing on issues of aging societies, visited the affected area and heard many stories about elders who saved younger people’s lives by instructing them on where to escape to or by teaching them how to survive with extremely limited resources. Older people also expressed a great deal of gratitude for all the foreign aid they had received, and wanted to give back. “I want to be useful to others but I do not know how,” was heard numerous times.

To empower elderly survivors of the GEJE, Ibasho is building a café adjacent to a large temporary housing site in Ofunato Iwate, which is expected to open before the end of 2012. The Ibasho café is being designed in partnership with the community as a place where people of all ages can gather and share conversation and refreshments in an informal setting. It is envisioned that elders will plan, manage, and operate the café. Everyone—including people with physical disabilities or cognitive illnesses such as dementia—will be encouraged to participate to their fullest ability. It is hoped that this intergenerational exchange and interaction will create stronger social capital in the community, resulting in strengthened resilience to natural hazards and the risks associated with the rapid growth of an aging population.

LESSONS

Lessons learned from the GEJE include:

- Data collection disaggregated by gender and age, and including the disabled is needed to understand the relief and recovery needs of all affected people, and particularly those groups that have special needs. It would be worth looking into arrangements and agreements that can be made between agencies for accessing data in case of an emergency.

- Once an emergency occurs it is already too late to start advocating for gender-sensitive perspectives. A gender perspective must be included in center management at normal times to ensure women’s privacy and safety. It is crucial to involve women in center management.

- The livelihoods of women also need to be supported; opportunities for income generation during relief and recovery should be provided to them as they are to men.
• Children are in particular need of support that will provide them with a certain sense of security and normality; they can also be meaningfully engaged in rebuilding their communities.

• When planning evacuation sites, it may be beneficial to reexamine how care facilities for the elderly and disabled are designed and integrated into neighborhood and city planning.

• Engaging marginalized groups actively in the design and implementation of recovery efforts contributes to their recovery and to the future resilience of the community.

RECOMMENDATIONS FOR DEVELOPING COUNTRIES

• The needs and impacts of different groups can be quite varied. Assess and understand the different needs of women, girls, boys, men, the elderly, disabled, ethnic groups, the very poor, and other marginalized groups in order to respond effectively. Those working in the informal economy may face particular difficulties, for example, where the loss of housing also means the loss of workplace, tools, and supplies. It is important to formally recognize and compensate those working in informal economy.

• Rights-based approaches should be adopted. Women should be encouraged to participate in disaster management committees, camp management, and risk assessment. National and local disaster management policies and strategies should be reviewed from a gender perspective.

• Establish specific monitoring mechanisms (for example, Continuous Social Impact Assessments) to ensure that women and children can access recovery resources, participate publicly in planning and decision making, and organize to sustain their involvement throughout the recovery process.

• Sexual harassment and domestic violence comes in various forms. It is necessary to create safe and secure spaces for women, children, and other marginalized groups. Protection shelters and consultation services for victims should be established in collaboration with NGOs, governments, and the police.

• For longer-term recovery, support can be designed to help upgrade the living standards of the poor, to enable the most marginalized to participate, and to establish mechanisms that promote an inclusive, more resilient society. Supporting marginalized groups requires a solid understanding of the broader societal and policy context (e.g., labor market practices).

KEY REFERENCES


