CIVIL-MILITARY LESSONS LEARNED IN THE RESPONSE TO THE 2011 GREAT EAST JAPAN EARTHQUAKE

Japan’s Cabinet Office highlights preparedness measures that helped save lives

Defense personnel describe Japan Self-Defense Forces’ largest joint operation

Australian and Swiss search and rescue teams share lessons about responding in a new environment

United Nations team leader calls for improvements to coordination procedures
LIAISON is a publication of the Center for Excellence in Disaster Management & Humanitarian Assistance (COE-DMHA) and serves to inform its diverse audience of current and emerging issues related to civil-military relations across the broad spectrum of disaster relief in order to enhance understanding among civilian and military practitioners and policy makers. LIAISON provides an open forum for stimulating discussion, exchange of ideas and lessons learned – both academic and pragmatic – and invites active participation from its readers.

The authors in this issue of LIAISON are entirely responsible for opinions expressed in their articles. These opinions are not to be construed as official or reflecting the views or policies of the COE-DMHA, any of its partners, or the U.S. Government.

In addition to the editorial staff and contributing authors, the Editor thanks the following people whose efforts made this publication possible: Alan Aoki, Daren Epstein, Colonel (Ret) Jim Welsh, Tom Dolan, Cheryl Mangum, Consul Shimpei Ara, Consul Takeshi Ogino, Terry Tonkin, Bobby Ray Gordon, Alia Chuck, Pervaiz Meer, Craig Jaques, Mara Langevin, Jamie Swan, Barry Howell, Major Kanai, Lieutenant Commander Mika Souma, Captain Bill Kearns, Lars Buchler, Dan Roek and Jon Ehrenfeld.

ISSN: 1527-7208

Lieutenant General Eiji Kimizuka, commanding general of Japan’s Joint Task Force-Tohoku, views imagery of the area affected by Japan’s earthquake and subsequent tsunami, in the Carrier Air Wing Intelligence Center aboard the aircraft carrier USS Ronald Reagan (CVN 76) on March 31, 2011. Kimizuka visited Ronald Reagan to tour operations supporting Japan’s earthquake and tsunami relief efforts.

Photo by Mass Communication Specialist 3rd Class Dylan McCord/U.S. Navy
# Table of Contents

**Foreword** .................................................................................................................................................. 4  
By Colonel Phillip Mead

**Index of acronyms** ...................................................................................................................................... 6

---

**Learning from the response to the Great East Japan Earthquake** ............................................................. 9  
By Cabinet Office (Disaster Management), Government of Japan

**Prioritizing disaster response** .................................................................................................................. 15  
The Japan Self-Defense Forces’ efforts to respond to requests for assistance following the Great East Japan Earthquake  
By Tetsuya Ito

**Military-public-private cooperation in disaster relief** .................................................................................. 21  
Lessons learned from the 2011 Great East Japan Earthquake  
By Colonel Nozomu Yoshitomi, Lieutenant Colonel Koichi Arie, Captain Shunei Tamura, Ms. Ritsuko Hirose, Lieutenant Colonel Eijiro Imamura, Colonel (Ret.) Daisaku Sakaguchi and Lieutenant Colonel Daisuke Saito

**Japan Self-Defense Forces’ response to the Great East Japan Earthquake** .............................................. 39  
Lessons learned from the soldier’s viewpoint  
By Captain Hiroyuki Terada

**Civil-military medical assistance cooperation after the Great East Japan Earthquake** .............................. 45  
Experiences and lessons  
By Keishi Ono

---

**Operation Tomodachi** ................................................................................................................................. 55  
Lessons learned in the U.S. military’s support to Japan  
By Center for Excellence in Disaster Management & Humanitarian Assistance staff in collaboration with U.S. Forces Japan and the Center for Naval Analyses.

**Responding in a new environment** ........................................................................................................... 61  
Lessons learned by an Australian Urban Search and Rescue team in Japan  
By Superintendent Brian Smart

**The Swiss search and rescue mission in Japan** ............................................................................................ 67  
An interview with mission leadership  
By Michael Fichter

**Creation of a tsunami disaster response system in the Republic of Korea using inundation maps** .......... 75  
By Sung Jin Hong
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japanese Red Cross cooperation with civilian and military responders in the Great East Japan Earthquake</td>
<td>81</td>
</tr>
<tr>
<td>By Francis Markus</td>
<td></td>
</tr>
<tr>
<td><strong>International response to the Great East Japan Earthquake</strong></td>
<td>85</td>
</tr>
<tr>
<td>Reflections on civil-military coordination</td>
<td></td>
</tr>
<tr>
<td>By Arjun Katoch</td>
<td></td>
</tr>
<tr>
<td><strong>The local connection in successful civil-military response</strong></td>
<td>89</td>
</tr>
<tr>
<td>An interview with the CEO of Peace Winds America</td>
<td></td>
</tr>
<tr>
<td>By Jessica Wambach</td>
<td></td>
</tr>
<tr>
<td><strong>A volunteer’s personal reflection on the disaster response</strong></td>
<td>95</td>
</tr>
<tr>
<td>By Mark Flanigan</td>
<td></td>
</tr>
<tr>
<td><strong>Putting lessons into practice</strong></td>
<td>99</td>
</tr>
<tr>
<td>A message from the Editor</td>
<td></td>
</tr>
<tr>
<td><strong>BOOK REVIEW</strong></td>
<td></td>
</tr>
<tr>
<td>Review of <em>Empire of Humanity: A History of Humanitarianism</em></td>
<td>101</td>
</tr>
<tr>
<td>By Victoria S. Hart</td>
<td></td>
</tr>
</tbody>
</table>
Few disasters in memory compare to the Great East Japan Earthquake in terms of its scale and complexity. The 9.0 magnitude earthquake that struck off the eastern coast of Japan’s main island of Honshu on the afternoon of March 11, 2011, generated a massive tsunami that minutes later swept as far inland as six miles (10 kilometers) in some areas and triggered an accident at the Fukushima Daiichi Nuclear Power Plant that resulted in the release of radioactive materials. This triad of disasters caused profound geographic and economic devastation and claimed nearly 16,000 lives, while more than 3,200 people remain missing, according to Japan’s National Police Agency.

As the contributors to this issue of Liaison point out, on their own, the earthquake, tsunami and nuclear disaster would each have been a destructive event; together they formed an unprecedented challenge to national and international disaster response frameworks. For the host nation, long considered a model for disaster preparedness, it put to the test improvements the government had made to its response mechanisms as a result of previous devastating earthquakes. It also marked the most joint effort in the Japan Self-Defense Forces’ history, drawing together all branches of service. For many of the foreign governments and organizations that eagerly offered assistance, this was their first time supporting an advanced nation that was capable of managing most aspects of the disaster on its own. The cold weather conditions and the threat of nuclear radiation exposure were first-time operating conditions for many, as well. Added to these variables were challenges that are always present in major disaster response operations, chief among them the struggle to harmonize civilian and military efforts to enable the most effective response.

The occurrence of a disaster in such unusual circumstances creates a learning opportunity. At the Center for Excellence in Disaster Management & Humanitarian Assistance, our mission is to enhance civil-military preparedness and response through collaborative partnerships, education and training, applied research, and the identification and sharing of lessons learned. We consider our academic journal, Liaison, one of our key tools in accomplishing the latter. By capturing civil-military lessons
learned in the response to the Great East Japan Earthquake, we hope to promote continued dialogue and action that will build on the successes as well as learn from the challenges in this disaster to strengthen civil-military coordination and enhance partner preparedness to respond to the next unthinkable event. In this issue, contributors are divided into the three groups of responders traditionally identified in disaster response coordination mechanisms – the affected state, assisting states and the humanitarian community.

We are fortunate to have contributions from the Japanese Cabinet Office, as well as representatives of multiple Ministry of Defense offices. Because Japan was so well-equipped to deal with this disaster, it required minimal on-the-ground assistance from foreign countries. The largest exception was support from the U.S. military, which had some 38,000 troops in the country at the time of the disaster. One article reflects on the lessons learned by U.S. Forces Japan and U.S. Pacific Fleet in what was known as “Operation Tomodachi.” Representatives of responding Urban Search and Rescue teams from Australia and Switzerland have also contributed to this issue, complemented by an article on how one of Japan’s neighbors, the Republic of Korea, is taking measures to enhance its own preparedness for tsunamis. Finally, we hear from a cross-section of humanitarian responders, including the leader of the United Nations Disaster Assessment and Coordination team in Japan. The Red Cross Red Crescent Movement also offers lessons learned, along with the chief executive officer of one of the many non-governmental organizations involved in the response, and a volunteer who reflects on his experience working side-by-side with soldiers and civilians from around the world.

These contributors by no means represent the full range of all of the countries, organizations and individuals involved in the response to the Great East Japan Earthquake. But from their experiences emerge common themes about some of the most pressing challenges facing civil-military response operations, and solutions for how to address them, which are summarized in the Editor’s letter at the end of this issue.

Unfortunately, it is increasingly clear that what happened in Japan is not likely to remain a unique scenario. The frequency and intensity of natural disasters and their corresponding secondary crises are growing around the world. No country is immune from such events, but some are certainly better prepared to deal with their consequences – Japan being among the very best. It is unsettling to think of what might happen if such a complex and powerful disaster were to occur elsewhere, but it is my hope that the lessons drawn from the contributors to this issue will help prepare all of us for more effective, coordinated civilian and military support to host nation-led disaster response operations.

Very respectfully,

COL Phillip A. Mead
Director (interim), Center for Excellence in Disaster Management & Humanitarian Assistance
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADF</td>
<td>Australian Defence Force</td>
</tr>
<tr>
<td>BCC</td>
<td>Bilateral coordination center</td>
</tr>
<tr>
<td>BCP</td>
<td>Business continuity plan</td>
</tr>
<tr>
<td>CA</td>
<td>Civil affairs</td>
</tr>
<tr>
<td>CBIRF</td>
<td>Chemical Biological Incident Response Force (United States)</td>
</tr>
<tr>
<td>CEO</td>
<td>Chief executive officer</td>
</tr>
<tr>
<td>CMOC</td>
<td>Civil-Military Operations Center</td>
</tr>
<tr>
<td>COP</td>
<td>Common operating picture</td>
</tr>
<tr>
<td>CRS</td>
<td>Catholic Relief Services</td>
</tr>
<tr>
<td>DMAT</td>
<td>Disaster Medical Assistance Team (Japan)</td>
</tr>
<tr>
<td>DOD</td>
<td>Department of Defense (United States)</td>
</tr>
<tr>
<td>DOE</td>
<td>Department of Energy (United States)</td>
</tr>
<tr>
<td>DOS</td>
<td>Department of State (United States)</td>
</tr>
<tr>
<td>DOD</td>
<td>Department of Defense (United States)</td>
</tr>
<tr>
<td>DOS</td>
<td>Department of State (United States)</td>
</tr>
<tr>
<td>EEW</td>
<td>Earthquake Early Warning</td>
</tr>
<tr>
<td>FRNSW</td>
<td>Fire and Rescue New South Wales (Australia)</td>
</tr>
<tr>
<td>HA/DR</td>
<td>Humanitarian Assistance and Disaster Relief</td>
</tr>
<tr>
<td>HAZMAT</td>
<td>Hazardous materials</td>
</tr>
<tr>
<td>ICRC</td>
<td>International Committee of the Red Cross</td>
</tr>
<tr>
<td>ICS</td>
<td>Incident Command System</td>
</tr>
<tr>
<td>ICU</td>
<td>International Christian University</td>
</tr>
<tr>
<td>IDP</td>
<td>Internally displaced person</td>
</tr>
<tr>
<td>IFRC</td>
<td>International Federation of Red Cross and Red Crescent Societies</td>
</tr>
<tr>
<td>INSARAG</td>
<td>International Search and Rescue Advisory Group</td>
</tr>
<tr>
<td>JASDF</td>
<td>Japan Air Self-Defense Force</td>
</tr>
<tr>
<td>JFCC</td>
<td>Joint Force Land Component Command-Forward (United States)</td>
</tr>
<tr>
<td>JGSDF</td>
<td>Japan Ground Self-Defense Force</td>
</tr>
<tr>
<td>JMA</td>
<td>Japan Meteorological Agency</td>
</tr>
<tr>
<td>JMAT</td>
<td>Japan Medical Association Team</td>
</tr>
<tr>
<td>JMSDF</td>
<td>Japan Maritime Self-Defense Force</td>
</tr>
<tr>
<td>JRCS</td>
<td>Japanese Red Cross Society</td>
</tr>
<tr>
<td>JSDF</td>
<td>Japan Self-Defense Forces</td>
</tr>
<tr>
<td>JSF</td>
<td>Joint Support Force (United States)</td>
</tr>
<tr>
<td>JTF-519</td>
<td>Joint Task Force-519 (United States)</td>
</tr>
<tr>
<td>JTF-TH</td>
<td>Joint Task Force-Tohoku (Japan)</td>
</tr>
<tr>
<td>MEU</td>
<td>Marine Expeditionary Unit (United States)</td>
</tr>
<tr>
<td>MOD</td>
<td>Ministry of Defense (Japan)</td>
</tr>
<tr>
<td>MOFA</td>
<td>Ministry of Foreign Affairs (Japan)</td>
</tr>
<tr>
<td>MSF</td>
<td>Medecins Sans Frontieres</td>
</tr>
<tr>
<td>NATO</td>
<td>North Atlantic Treaty Organization</td>
</tr>
<tr>
<td>NBC</td>
<td>Nuclear, biological and chemical</td>
</tr>
<tr>
<td>NDA</td>
<td>National Defense Academy of Japan</td>
</tr>
<tr>
<td>NDMI</td>
<td>National Disaster Management Institute (Korea)</td>
</tr>
<tr>
<td>NDMS</td>
<td>National Disaster Management System (Korea)</td>
</tr>
<tr>
<td>NEMA</td>
<td>National Emergency Management Agency (Korea)</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-governmental organization</td>
</tr>
<tr>
<td>NSWTF/1</td>
<td>New South Wales Task Force 1 (Australia)</td>
</tr>
<tr>
<td>OCHA</td>
<td>United Nations Office for the Coordination of Humanitarian Affairs</td>
</tr>
<tr>
<td>OFDA</td>
<td>Office of United States Foreign Disaster Assistance</td>
</tr>
<tr>
<td>OSOCC</td>
<td>On-Site Operations Coordination Centre</td>
</tr>
<tr>
<td>PACFLT</td>
<td>United States Pacific Fleet</td>
</tr>
<tr>
<td>PWA</td>
<td>Peace Winds America</td>
</tr>
<tr>
<td>PWJ</td>
<td>Peace Winds Japan</td>
</tr>
<tr>
<td>SCU</td>
<td>Standing Care Unit</td>
</tr>
<tr>
<td>SHA</td>
<td>Swiss Humanitarian Aid</td>
</tr>
<tr>
<td>TEPCO</td>
<td>Tokyo Electric Power Company</td>
</tr>
<tr>
<td>THW</td>
<td>German Federal Agency for Technical Relief</td>
</tr>
<tr>
<td>UNDAC</td>
<td>United Nations Disaster Assessment and Coordination</td>
</tr>
<tr>
<td>UNHCR</td>
<td>United Nations High Commissioner for Refugees</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>USAR</td>
<td>Urban Search and Rescue</td>
</tr>
<tr>
<td>USFJ</td>
<td>United States Forces Japan</td>
</tr>
<tr>
<td>USMC</td>
<td>United States Marine Corps</td>
</tr>
<tr>
<td>USPACOM</td>
<td>United States Pacific Command</td>
</tr>
</tbody>
</table>

Map of the Great East Japan Earthquake epicenter.
About a year and a half has passed since the Great East Japan Earthquake. Since immediately after the disaster occurred, the Cabinet Office has been working to analyze and learn from the experiences of the Great East Japan Earthquake. Based on what has been learned, the Cabinet Office is now in the process of reexamining and revising the country’s Basic Disaster Management Plan as well as making legal changes to improve preparedness for disasters which may occur in the future, such as Tokyo Inland Earthquakes (earthquakes that occur beneath metropolitan areas), or a massive earthquake along the Nankai Trough off of Japan’s southeast coast, for example.

The following describes the Japanese government’s immediate and ongoing response to the Great East Japan Earthquake. For additional information regarding the activities of the Japan Self-Defense Forces (JSDF), please refer also to reports by the Ministry of Defense (MOD).
Emergency response to the Great East Japan Earthquake

The fourth most massive earthquake in the world since 1900 and the tsunami which resulted from it occurred during severe cold weather on March 11, 2011. In coastal areas, inundation and fire caused by the tsunami spread over an area covering 561 square kilometers (217 square miles). The earthquake was felt across a wide region, and the destruction of buildings and infrastructure and liquefaction occurred not only in the Tohoku region but also in the Kanto region, which includes Tokyo. As a result, it was extremely difficult to conduct rescue operations and transport relief supplies, and communication was also interrupted.

In Japan, it is primarily the responsibility of local governments (cities, towns and villages) to conduct disaster response, and they can request support from prefectures or from the national government if needed. However, in this situation many of the affected local governments were unable to perform this function since they lost administrative capacity, and sufficient information did not reach the government due to disruptions in communication. Within the first day after the disaster, the national government dispatched the Government Investigation Team and started providing support, including through the application of the Disaster Relief Act and issuing of the Designation of Extremely Severe Disaster. Relief activities were advanced with all concerted efforts from across the country, although it was not immediately possible to enter certain areas to begin disaster relief operations, such as the area where the tsunami caused the accident at the Fukushima Daiichi Nuclear Power Station. Some examples of efforts which took place immediately after the occurrence of the Great East Japan Earthquake are discussed below.

Restoration of roads
Immediately after the disaster occurred, work to restore the transportation network began. This was indispensable in enabling the dispatch of rescue teams and the transportation of relief supplies. Although the Tohoku Expressway in the stricken area sustained serious damage from the earthquake, as a result of quick restoration work this major national expressway was restored by April 1, three weeks after the earthquake, with the exception of the section that was restricted due to the nuclear power plant disaster. Restoration of roads contributed not only to relief and recovery activities, but also to the revival of the Japanese economy.

Supply and distribution of relief goods
Many people were obliged to live in shelters immediately after the disaster occurred. While the JSDF bore the main responsibility for the quick and smooth delivery of relief supplies to shelters, private enterprises also contributed greatly. A certain transportation company established a disaster management office in its headquarters and branch within the stricken area on the very day the earthquake occurred. It delivered 6,840 truckloads of relief supplies in March and April, and also provided blankets for stranded people even in Tokyo on the day of the disaster. Moreover, 193 food production companies cooperated to provide food, baby formula and drinks to the shelters, supplying 1,280,000 servings per day at the peak.

Provision of means of communication
Satellite communication vehicles were dispatched to local governments in areas where the means of communication were lost due to the earthquake and tsunami, and satellite cellular phones were loaned to local governments for free. There were also instances in which the satellite communication circuit was utilized for information gathering by the local governments in areas that suffered a great deal of damage. There was one case in which data received from a land-observing satellite was used for implementation of recovery operations by the national and local governments.

Coordination of international disaster relief
Beginning immediately after the disaster, Japan received warm support from all over the world, including at least 163 countries and localities, and 43 organizations. It is well known that support, such as the U.S. military’s “Operation Tomodachi,” provided a big and timely contribution to recovery from the disaster. Details about this assistance can be found in reports from the MOD.

However, it was difficult to efficiently coordinate the assistance offered by rescue teams from overseas. One of the causes of delay in coordinating their help was the difficulty of determining the extent of damage and specific needs in stricken areas amid the confusion ensuing immediately after... [the] disaster.”
Given that information about the needs in stricken areas changed on a daily basis, it was also difficult to distribute the variety of goods sent from many countries to the most suitable locations in a timely manner. Based on these experiences, in the future it will be necessary to deliberate for better coordination of support from overseas.

Removal of disaster waste
The Great East Japan Earthquake, and especially the resulting tsunami, generated a huge quantity – almost 18,800,000 tons – of disaster waste in Iwate, Miyagi and Fukushima prefectures. In order to remove the disaster waste promptly and dispose of it appropriately, a system was created by which the processing of disaster waste was undertaken by the national government, instead of by the local governments that had suffered damage.

Response to the nuclear power station disaster
On March 11, the tsunami which was generated by the earthquake caused an accident at the Fukushima Daiichi Nuclear Power Station, and so the same day the government established a Nuclear Disaster Management Headquarters and announced a Declaration of Nuclear Emergency Situation. In order to resolve the accident in an organized manner, Tokyo Electric Power Company (TEPCO) released the “Roadmap towards Restoration of the Accident at Fukushima Daiichi Nuclear Power Station” on April 17. The radiation dose had declined by July 19, and the nuclear reactors were brought to a condition equivalent to a “cold shutdown” state on December 16. Since then, the government and TEPCO have been working together toward the decommissioning of the power station. Monitoring of the environmental radioactivity level continues and information about the results is being provided on the government’s portal website (http://radioactivity.mext.go.jp/en/).

Examples of successful countermeasures against natural disasters
The following are some examples of countermeasures against natural disasters in Japan that had been taken before March 11, 2011, and functioned well in this calamity.

Earthquake Early Warning
When an earthquake occurs, the preliminary tremor, called a P-wave, is usually detected before what is known as the S-wave, which produces strong tremors. By detecting the P-wave and predicting the scale and focus of an earthquake, an early warning system can send out a warning several to tens of seconds before the disruptive S-wave arrives. The Japan Meteorological Agency (JMA) began operating an Earthquake Early Warning (EEW) system that follows this model nationally in 2007. When it is predicted that an earthquake has occurred with a magnitude greater than 5 on the JMA seismic intensity scale, an EEW is issued. Warnings are sent not only through television or radio, but also by mobile phone. There are technical limits to the EEW system, and information may not arrive on time at the place near the epicenter of the earthquake. In the Great East Japan Earthquake, there were some areas where information did not arrive on time, and areas in which information was not delivered due to disruptions in communication capabilities. However, the EEW system was utilized even during the aftershocks that occurred frequently after the major earthquake.

“Restoration of roads contributed not only to relief and recovery activities, but also to the revival of the Japanese economy.”

from the Accident at Fukushima Daiichi Nuclear Power Station” on April 17. The radiation dose had declined by July 19, and the nuclear reactors were brought to a condition equivalent to a “cold shutdown” state on December 16. Since then, the government and TEPCO have been working together toward the decommissioning of the power station. Monitoring of the Early Earthquake Detection System of the Shinkansen
The Tohoku Shinkansen (high-speed bullet train) line passes through an area where the shaking from the Great East Japan Earthquake was very intense. Twenty-seven trains were active in commercial service on the line at the time of the earthquake on March 11, and among
them 19 trains were in operation. Due to a warning received from the railway’s Early Earthquake Detection System, while power transmission to the trains stopped automatically, the emergency brakes still operated. None of the 27 trains was derailed and there were no casualties. This was the result of advances in earthquake-proofing and having made the Shinkansen Early Earthquake Detection System highly efficient as the result of experiences in the Great Hanshin-Awaji Earthquake (also known as the Kobe Earthquake) in 1995 and the Niigata-ken-Chuetsu Earthquake in 2004.

Earthquake-proofing of schools
Since school facilities are the center of children’s activities and also serve as emergency evacuation areas for local residents when a disaster occurs, it is important to maintain the safety of those facilities. Although the earthquake-proofing rate of public elementary and junior high school institutions in Japan was 44.5 percent in 2002, it had risen to 67 percent in 2009 and 84.8 percent in 2012, according to statistics released by the Ministry of Education, Culture, Sports, Science and Technology. In the Great East Japan Earthquake, damage occurred at unreinforced school facilities, but there were no reported deaths resulting from the collapse of a school building. As a result of this experience, there is a renewed awareness of the importance of schools as emergency evacuation areas.

Designation of Tsunami Evacuation Buildings
In locations in which tsunamis are presumed likely to occur and difficult to escape due to reasons such as geographic conditions or a lack of available time between the occurrence of an earthquake and the arrival of a tsunami, government-designated Tsunami Evacuation Buildings are vital temporary escape facilities. In the Great East Japan Earthquake, many buildings suffered flood damage caused by the massive tsunami, but cases were reported of lives being saved by taking refuge in buildings designated as Tsunami Evacuation Buildings. For example, many residents ran up into an eight-story tsunami refuge building in Kamaishi city, Iwate Prefecture, and although the tsunami rolled into the third floor, residents who had gathered above were protected from it. Also in the case of the four-story, town-owned residence designated as the Tsunami Evacuation Building in Minamisanriku town, Miyagi Prefecture, residents who had taken refuge on the roof were safe in spite of the fact that the massive tsunami reached nearly that high.

Disaster reduction education
Not all countermeasures against calamities involve costly technical items and equipment. In Japan, disaster reduction drills to prepare for earthquakes and fires are regularly conducted in schools. In the Great East Japan Earthquake, there was a good example of students surviving due to the disaster reduction education they received in school. In Kamaishi city, students had been prepared by disaster reduction education especially focused on response to tsunamis. Although the Kamaishi Higashi Junior High School was flooded by the March 11 tsunami, the knowledge cultivated in disaster drills and education about disasters took effect, so all of the students who had gone to school that day took refuge in high places and were able to survive. Since the students had been taught to not only take refuge but also help other people around them on their own initiative, they helped the elderly people in the neighborhood and the children of a nearby elementary school to find refuge on that day as well. From such examples, the importance of disaster reduction education is appreciated anew.

“Not all countermeasures against calamities involve costly technical items and equipment.”

Students and residents evacuate Kamaishi city, Iwate Prefecture, on March 11, 2011, just before the tsunami reached the area.

Photo courtesy of Kamaishi Higashi Junior High School
Inheriting lessons learned

In areas that have suffered tsunami damage frequently in the past, stone monuments have been built and the fear of tsunamis has been handed down to later generations. One of the photographs in this article is a stone monument in Aneyoshi district in Iwate Prefecture, which was built at a previous tsunami run-up point. It is inscribed with the words, “Don’t build a house on ground lower than this level.” People who obeyed this instruction were able to survive the recent tsunami without damage. The passing along of past lessons learned is important for the mitigation of future disaster damage. The Cabinet Office has been trying to educate the public with information from studies of various disasters of the past. New lessons learned from the Great East Japan Earthquake are being incorporated in this information and distributed through various educational activities inside and outside of Japan.

Development of business continuity plans

When a large-scale disaster occurs and business activity becomes stagnant, it not only impacts the individual companies, but also deals a blow to employment and the economy in the surrounding area. The Cabinet Office has promoted implementation and operation of business continuity plans (BCPs) since 2003. According to a study conducted by the Cabinet Office in November 2011, more than 70 percent of major companies in Japan had completed or were developing BCPs, compared to 58 percent in 2009 and 35.3 percent in 2007. Among mid-ranking companies, 35 percent had or were developing plans, compared to 27.2 percent in 2009 and 15.8 percent in 2007. In the Great East Japan Earthquake, there were companies that, in spite of having suffered serious damage, resumed business quickly with the help of BCPs they had already formulated.

Conclusion

Japan is a country that is prone to natural disasters, including not only earthquakes or tsunamis, but also volcanic eruptions, typhoons, heavy snowfall, etc. On the other hand, Japan is also a rich country which has various seasons and receives benefits from its beautiful and abundant natural resources, such as the sea, mountains and farmland. Mitigation of disaster damage has been a challenge for many years in Japan, and various measures have been taken so far. However, old assumptions were called into question by the experience of the Great East Japan Earthquake, which caused broad and serious damage, and made reassessment of past approaches an urgent requirement.

If a large-scale disaster, such as a massive earthquake along the Nankai Trough, a major volcanic eruption, or extensive flooding in a metropolitan area, were to occur in the future, we are concerned that there could be serious damage equivalent to or exceeding that caused by the Great East Japan Earthquake. While the Japanese government continues strengthening countermeasures against such disasters inside Japan, it also promotes measures to share experiences and lessons learned from the disaster with the international community in order to contribute to disaster risk reduction throughout the world.

About the author: This article was written by Cabinet Office (Disaster Management), Government of Japan. The Cabinet Office supports the affairs of the Japanese Cabinet. In 2001, the post of Minister of State for Disaster Management was established in the Cabinet Office to integrate and coordinate disaster reduction policies and measures of Japanese government ministries and agencies. The Cabinet Office (Disaster Management) manages the Central Disaster Management Council, chaired by the Prime Minister, which formulates and promotes comprehensive countermeasures related to disaster management. For more information about the Cabinet Office, please visit http://www.cao.go.jp/index-e.html.

Photos courtesy of NEXCO East

March 11, 2011

March 17, 2011

Restoration of the Joban Expressway, which links the Tohoku district with Tokyo.
Prioritizing disaster response
The Japan Self-Defense Forces’ efforts to respond to requests for assistance following the Great East Japan Earthquake

By Tetsuya Ito

The Japan Self-Defense Forces (JSDF) learned many lessons in the response to the Great East Japan Earthquake. Clarifying the relationship between JSDF activities and civilian activities is the biggest theme among these lessons. The JSDF’s main function in disaster relief is to cooperate with civilians leading relief activities as much as possible, but in reality this is not a simple arrangement. When the Great East Japan Earthquake occurred, I was the Deputy Director of the Defense Operations Division of the Operational Policy Bureau in the Ministry of Defense (MOD). Immediately after the disaster, the JSDF was one of the most reliable organizations involved in the response, as many civilian organizations had been affected and had fallen into confusion. As a result, the JSDF received many requests for assistance. Particularly in the first week, sometimes I spent almost a whole day on the telephone addressing these requests. For example, other ministries and on-site government headquarters would ask for assistance transporting personnel and relief supplies, or for additional manpower to augment their overstretched staffs. Cooperation is ideal and the civilian and military sectors should collaborate as best they can, but in this case the JSDF could not fulfill all requests because the damage was huge and widespread. The JSDF had limited manpower and capability, and in the first three days after the earthquake there were few cases when we were able to do what a caller requested.

The response to the Great East Japan Earthquake highlighted the importance of regular civil-military coordination and mutual understanding of roles and capabilities in a disaster response. In this article, I will explain the relationship between JSDF and civilian activities and highlight some of the lessons that the JSDF has learned about improving cooperation. First, I will explain the JSDF’s rescue activities immediately after the earthquake. I will then address transport assistance, relief activities, infrastructure rehabilitation assistance and the response to the nuclear disaster.
Rescue activities

I believe search and rescue are among the most important disaster relief activities for the JSDF. If we fail in these efforts, we become targets of criticism. After the Great East Japan Earthquake, the JSDF initially allotted all of its efforts to search and rescue operations. Dispatched units cooperated with the police, fire departments, Japan Coast Guard and others in rescuing a large number of disaster survivors from collapsed buildings and other places. In areas that had been isolated due to submersion, rescue helicopters, transport helicopters and other modes of transportation were utilized to assist the evacuation of tens to hundreds of survivors. Aircraft and ships were also mobilized as much as possible to carry out search and rescue operations in the seas neighboring the disaster-stricken areas. The JSDF was able to rescue approximately 19,000 survivors, which accounts for nearly 70 percent of all those rescued. The JSDF earned very high public esteem from these operations.

The background for these positive results was the JSDF’s application of lessons learned from the Great Hanshin-Awaji Earthquake in Kobe in 1995. Following that disaster, the JSDF formulated and improved its disaster relief plans and actively participated in local government disaster drills. It has continued efforts to strengthen cooperation with local governments, which include enhancing liaison arrangements and seeking consistency among disaster control plans. There are approximately 193 retired JSDF officers working as liaisons with local governments on disaster prevention in 44 prefectures and 103 municipalities throughout the country. Using experienced JSDF personnel as liaisons has proven to be a very effective method to improve cooperation with local governments. Through drills, the JSDF also gets to know the staff of local governments who are responsible for managing disasters.

The MOD and JSDF also believe that carrying out specific efforts, such as the following, is important in order to conduct rescue operations in support of local governments more effectively during disasters:

Securing staging areas and heliports

In order for JSDF units to carry out operations, space is required for the staging of materials. As vehicle operations are often limited during disasters, a heliport is required near the affected area for
transporting emergency patients and materials as well as for helicopters used for fighting fires. Relations with municipalities are being strengthened on a continual basis through such means as promoting the identification of staging areas and heliports in regional disaster prevention plans. It is necessary to clearly delineate staging areas and heliports from evacuation areas, and make the local populace aware of these locations.

Arranging for equipment and resources
It is important to prepare a disaster prevention map which indicates the location of evacuation areas, heliports, etc., so that they can be used by all disaster management organizations. Furthermore, the maintenance of firefighting equipment for aerial firefighting by helicopter and the securing of water resources, such as reservoirs, are required. Municipalities are moving forward with the preparation of these measures.

Marking building numbers
In order to efficiently carry out operations such as the gathering of data and transportation of people and materials by aircraft, it is useful to mark numbers on the rooftops of facilities, such as prefectural offices and schools, to identify buildings important for rescue and relief activities.

Securing facilities for liaison and coordination
In order for JSDF liaison personnel to carry out coordination smoothly during disaster dispatches, it is necessary to secure space in the local municipality for liaison personnel to conduct their operations and communications. Through cooperation between JSDF and local municipalities, 13 cities and prefectures are currently taking the necessary measures to include the securing of facilities for JSDF liaisons in their regional disaster prevention plans. All of these measures will help improve readiness for rescue operations in any disaster. Clarifying basic response plans in advance and ensuring the awareness of concerned parties is another effective way of responding more promptly and appropriately. For this purpose, in 2000 the JSDF developed a response manual for various types of disasters which compiled specific issues to be noted for each type of disaster. Copies of this manual were distributed to relevant organizations and local public bodies.

Cooperation with local governments in disaster response is important, but there are some emergencies in which the local government is incapacitated. To prepare for such scenarios, the JSDF has made plans and established standards that allow JSDF to dispatch units without the request of local governments. The importance of this was illustrated in the Great East Japan Earthquake, in which there was a municipal government whose chief passed away in the disaster.

Another very difficult problem during the rescue phase of the 2011 response was the burial of dead bodies. Because the functioning of local governments and private-sector businesses was weakened by the disaster, in many cases dead bodies were not buried appropriately. Some local governments requested JSDF assistance in transporting dead bodies to burial sites, and the JSDF did assist in some urgent cases. But the JSDF also had to conduct search and rescue activities, so it was difficult to decide on priorities. After extensive negotiation it was decided that the private sector would transport dead bodies.

Transport and distribution assistance
Among the calls the MOD received for JSDF help after the disaster, requests for transportation assistance were the most common. Thus another major role for the JSDF was the provision of transport assistance for medical teams, patients and rescue units dispatched from various countries. The JSDF also positioned forces to promptly and strategically transport large amounts of relief supplies to the disaster area utilizing C-130H and C-1 airplanes and other air transport capabilities, while also positioning maritime transport capabilities. But there were challenges related to the distribution of the supplies to the various area shelters in accordance with their respective needs. The traditional way of thinking of the Japanese government was that the Headquarters for Emergency Disaster Response in the Office of the Prime Minister should coordinate this
kind of distribution in response to needs-based requests from local governments, and the Headquarters would then ask the JSDF or other groups to transport the supplies to the shelters. But this terrible disaster weakened the functioning of local governments across a wide area, so the Headquarters for Emergency Disaster Response, which did not have enough staff itself, did not know the needs at each local shelter and so could not arrange distribution of the supplies properly.

For this reason, under MOD guidance the JSDF accumulated relief supplies provided by local governments and the private sector across Japan at various JSDF camps, where they were later transported to airports in the Tohoku region by ground, maritime and air JSDF units under the command of the Joint Staff. Under this scheme the supplies were delivered to the disaster area after passing through transfer stations established in Iwate, Miyagi, and Fukushima prefectures. A division called the livelihood assistance cell was established at the Japan Ground Self-Defense Force’s (JGSDF) headquarters in the Tohoku region to oversee the coordination of the transport and distribution of relief supplies to shelters. In order to distribute supplies, JSDF wanted to know how many shelters were in the affected area, how many people lived in each shelter, what kinds of problems displaced persons had and what kinds of supplies were needed. In cases where local governments could not answer such questions, efforts were made to assess the specific needs as best as possible by dispatching JSDF units to make individual visits to shelters.

The establishment of such a posture allowed for the speedy and efficient transport of relief supplies that were particularly lacking in the disaster area, including kerosene, light oil, gasoline, water, food, clothing, blankets, powdered milk, disposable diapers and portable toilets. It should be noted that even with these efforts, it is difficult to know the needs at each shelter immediately after a disaster, so it is important to speedily transport some of the supplies that would traditionally be necessary so as not to delay assistance. As already mentioned, although conditions in each shelter and achieved great success by paying attention to detailed needs.

This disaster happened in the winter and in cold areas of the country, so the lack of fuel was a serious problem. The JSDF provided free fuel that had been stocked at camps and bases to municipal government offices, hospitals, shelters and other facilities. In addition, the JSDF made it possible to fuel emergency vehicles, such as police vehicles, ambulances and fire trucks, at fueling stations established and operated at the camps of dispatched units. The JSDF also assisted in transporting fuel to temporary service stations set up at shelters and other locations.

**Infrastructure rehabilitation assistance**

Roads, airports and ports are vital to reconstruction activities and to the restoration of normal life in disaster-affected areas. Directly following the disaster, and in consideration of the needs of local governments, dispatched units assisted with the removal, transport and disposal of rubble at collection points so that local governments and citizens could smoothly carry out reconstruction activities. The JSDF received many requests to remove and transport rubble, but of course it could not manage all of it. So the JSDF made a basic rule that it would deal with rubble which blocked public facilities like roads, airports and municipal buildings. Priority was given to the clearing of sites necessary for life-saving activities and making facilities used as bases usable again. With the cooperation of the U.S. Armed Forces, the JSDF worked to restore the functioning of the Sendai Airport and several ports.
Since the disaster, local governments and residents have commenced restoration and reconstruction activities in earnest. Dispatched JSDF units continue to provide long-term assistance while coordinating with local governments, including cooperating with private-sector enterprises on the removal and disposal of rubble generated from collapsed houses.

Response to the nuclear disaster

A state of nuclear emergency was declared after a nuclear reactor at Tokyo Electric Power Company’s (TEPCO) Fukushima Daiichi Nuclear Power Station in Fukushima Prefecture lost adequate cooling capacity due to the earthquake and tsunami. In response to a request from the government’s Nuclear Emergency Response Headquarters, the MOD issued a nuclear disaster relief dispatch order, and a JSDF team composed mainly of the JGSDF’s Central Nuclear Biological Chemical Weapon Defense Unit responded.

The JSDF nuclear disaster relief dispatch system was created in 1999 and the Japanese government, including JSDF, had been conducting nuclear disaster preventive exercises every year since 2000. The JSDF provided transport support, assistance for evacuating residents, and monitoring of airborne and seaborne radiation levels in these exercises. But the exercises did not include scenarios in which a nuclear power plant would become uncontrollable and the JSDF would have to react to such a situation. In the initial response, JSDF did not understand the condition of the nuclear power plant, which caused great hardships. To remedy the lack of understanding, the JSDF dispatched a liaison to the joint headquarters of the government TEPCO, as well as to
the on-site coordination office in Naraha town, located near the Fukushima Daiichi Nuclear Power Station, where several specialists from TEPCO, JSDF and police and fire units gathered. Thanks to those excellent liaisons, the JSDF’s situational awareness improved, demonstrating that it is critical to have liaisons in the headquarter meetings.

The JSDF unit that responded to the affected power station mainly engaged in pumping water to cool the used fuel pools, decontaminating personnel and vehicles, and monitoring amounts of airborne radiation as well as temperature changes in the reactors. On March 20, nine days after the earthquake, the Prime Minister ordered that water pumping and other on-site activities be coordinated by the JSDF after coordination with related government bodies and TEPCO. The JSDF thus maintained primary management over the implementation of these activities. This order was significant as prior to the order being issued, there had been no clear chain of command at the on-site headquarters in Naraha, so activities were inefficient.

In responding to the nuclear disaster, we learned several lessons about assistance for residents around nuclear power stations. In order to ensure the safety of disaster survivors, the JSDF assisted with the transport of hospitalized patients and individuals requiring nursing care who resided in evacuation areas designated by the chief of the Nuclear Emergency Response Headquarters, the Prime Minister. Residents living within a 20- to 30-kilometer (12- to 19-mile) radius of Fukushima Daiichi Nuclear Power Station were not ordered to evacuate, but were told to remain indoors. However, most of these residents were still worried about radiation. Many civilian workers stopped working and closed shops or transporta-

“One of the things we have learned is to keep in touch with our counterparts through more regular exercises, and make clear to all parties what the JSDF can and cannot do.”

... in pumping water to cool the used fuel pools, decontaminating personnel and vehicles, and monitoring amounts of airborne radiation as well as temperature changes in the reactors... governments could not access, and visiting homes to survey health conditions and residents’ willingness to evacuate. How to share the burden of civil-military activities in areas where radiation levels are a concern remains a big challenge. Although this is a complicated problem, it seems that in the future the civil sector should take on more of the activities than it did in this case, particularly given that radiation levels turned out not to be as serious as it thought it was.

Conclusion

The above-mentioned impressions are my personal views based on my experience at JSDF headquarters in Tokyo during the disaster. These are not the opinions of MOD or JSDF. In this disaster there were many situations in which JSDF was able to solve problems in the same way as we had practiced in exercises. But there were also many matters that we had to address for the first time. On any given occasion, we analyzed the situation, took steps to deal with it and found a way out of trouble. Many of the government staff who called on me requesting JSDF assistance after the disaster had not known me before that time. One of the things we have learned is to keep in touch with our counterparts through more regular exercises, and make clear to all parties what the JSDF can and cannot do. In the future, I think we should assume these types of scenarios may occur again and assign roles to stakeholders in advance so as to ensure a thoughtful, practiced response. Adequate preparation and division of responsibilities are critical to the effective management of complex disasters.

About the author: Tetsuya Ito is the Director of the Strategic Planning Office of the Defense Policy Division in the Japan Ministry of Defense’s (MOD) Bureau of Defense Policy. When the Great East Japan Earthquake occurred, he was the Deputy Director of the Defense Operations Division in the MOD’s Bureau of Operational Policy. Mr. Ito can be reached at itoutet@mod.go.jp.

Photo courtesy of Japan Joint Staff Office
Military-public-private cooperation in disaster relief
Lessons learned from the 2011 Great East Japan Earthquake

By Colonel Nozomu Yoshitomi, Lieutenant Colonel Koichi Arie, Captain Shunei Tamura, Ms. Ritsuko Hirose, Lieutenant Colonel Eijiro Imamura, Colonel (Ret.) Daisaku Sakaguchi and Lieutenant Colonel Daisuke Saito

Preface

During the disaster relief operations after the Great East Japan Earthquake, the Japan Ministry of Defense (MOD) and Japan Self-Defense Forces (JSDF) cooperated with various domestic and foreign military, public and private actors. The Great East Japan Earthquake was the most serious disaster the MOD and JSDF had ever experienced. The range of cooperation with various entities was beyond their expectation and achieved excellent results because of hard work by all parties. However, from the MOD and JSDF perspective, many lessons were learned related to the need for better cooperation. These lessons learned are essential to preparing for and dealing with future disasters at home and abroad.

This report is the result of research by seven faculty members in the School of Defense Sciences at the National Defense Academy of Japan (NDA) and was subsidized by the Scholarship and Education Foundation of the NDA. This report also could not have been completed without the invaluable support of The Boeing Company. All views presented in this paper belong to the contributors.

Lieutenant General (Ret.) Noboru Yamaguchi
Professor and Director for International Programs
National Defense Academy of Japan

Introduction

By Colonel Nozomu Yoshitomi

Motivation and research objectives

The Great East Japan Earthquake, which occurred on March 11, 2011, was a complex disaster that included a massive earthquake, an enormous tsunami and large-scale radiation leaks from the Fukushima Daiichi Nuclear Power Plant. It was one of the most serious natural or man-made disasters in the history of Japan.

On the occasion of this tragic disaster, various military, public and private actors from inside and outside of Japan engaged in disaster relief. These included JSDF, U.S. forces, the Australian Defence Force and others from the military side, government ministries, local governments, police forces, fire departments and Japan Coast Guard from the public sector, as well as domestic and international assistance organizations, non-governmental organizations (NGOs), private companies and private-sector volunteers. These diverse actors conducted various activities and made remarkable accomplishments. However, it should be noted that numerous survivors endured immense suffering, chaos and deprivation in the affected areas. The authors of this report wondered whether the domestic and international military, public and private actors responded to the urgent needs of the survivors as quickly and effectively as possible. This question was the basic motivation for our research.

We have tried to identify solutions and ideas for conducting effective disaster relief in close cooperation between various military, public and private (trilateral) actors. The objective of our research was to clarify the realities of how trilateral cooperation played out during this disaster and to find lessons learned. We hope our research might give suggestions for more effective trilateral cooperation for future disaster relief – both inside and outside of Japan.

Many of the trilateral actors are now conducting their own research about lessons learned as well and will issue their final documents after completing their research. This means our research is unavoidably based on fragmentary and imperfect data. Still, we believe our research has value as the first comprehensive assessment of the cooperation of trilateral actors during the relief activities that followed the March 11 disasters.
Effective cooperation with public and private actors. Therefore, the focus of our research is trilateral cooperation from the point of view of the MOD/JSDF. We focused on the early stage of disaster relief, approximately the first month after March 11, when many instances of such cooperation occurred. It should be acknowledged that many military, public and private actors participated in the disaster relief operations, but not all are mentioned here.

Research methods
Our research was based on relevant documents, interviews and research discussions. However, several actors were still examining their lessons learned when we completed our report, and it was sometimes difficult to obtain documents. Therefore, we depended heavily on interviews as material for this research. Some interviewees did not allow us to include their comments because their organizations’ reports had not yet been publicly released. Accordingly, we could not annotate certain sources and their comments.

I. COOPERATION BETWEEN JSDF AND FOREIGN FORCES

Bilateral coordination between JSDF and U.S. forces
By Colonel Nozomu Yoshitomi

Just after the Great East Japan Earthquake on March 11, JSDF launched its largest ever domestic disaster relief operation. The strength of the dispatched forces was 107,000 personnel, 60 naval vessels and 540 aircraft at peak. In order to deal with the aftermath of the earthquake and tsunami, the MOD put units from the Japan Maritime Self-Defense Force (JMSDF) and Japan Air Self-Defense Force (JASDF) under the command of Northeastern Army/Japan Ground Self-Defense Force (JGSDF) and established Joint Task Force-Tohoku (JTF-TH). This constituted the largest JTF in JSDF’s history, and was the first JTF in Japan created for a disaster relief mission. As for the disaster relief related to the nuclear accident, the JGSDF’s Central Readiness Force (CRF) was the lead body, and some units from JMSDF and JASDF also took part.

The U.S. Government accepted a rescue assistance request from the Government of Japan and U.S. forces conducted a large-scale disaster relief operation named “Operation Tomodachi.” The U.S. military response was initially commanded by Lieutenant General Burton Field, Commander of U.S. Forces Japan (USFJ). On March 18, U.S. Pacific Command established the Joint Support Force (JSF) to lead Operation Tomodachi and later placed it under the command of Admiral Patrick Walsh, then the Commander of U.S. Pacific Fleet and Joint Task Force-519 (JTF-519). The strength of the JSF was 16,000 personnel, 15 naval vessels and 140 aircraft at peak. The JSF conducted various relief operations in cooperation with JSDF. JSDF and U.S. forces have years of experience in bilateral exercises for combat operations, but it was the first time for both forces to conduct disaster relief operations together in Japan. Therefore, JSDF and the JSF faced some challenges in bilateral coordination, which mainly took place in three bilateral coordination centers (BCCs) at the MOD at Camp Ichigaya, the headquarters of the JSF at Yokota Air Base and the headquarters of JTF-TH at Camp Sendai. Several lessons learned about the bilateral coordinating structure and coordinating methods between U.S. forces and JSDF are discussed here.

Coordinating structure
Immediately after the earthquake on March 11, BCC (Ichigaya) and BCC (Yokota) were established. BCC (Ichigaya) was organized with 20 Japanese staff led by a JGSDF major general and 15 U.S. staff led by a brigadier general of the U.S. Marine Corps (USMC). BCC (Yokota) was organized with 10 Japanese staff led by a JGSDF major general and 300 U.S. staff.
BCC (Sendai) was established on March 16 and was organized with 45 Japanese staff led by a JGSDF colonel and 50 U.S. staff led by a USMC colonel. The overall picture of the relationship between JSDF, U.S. forces and the BCCs is illustrated in Figure-1.

The MOD issued Lessons Learned in the Disaster Relief Operation after the Great East Japan Earthquake (Midterm Report) in August 2011. This report said that the BCCs contributed to comprehensive coordination concerning Operation Tomodachi. However, based on the Guidelines for Japan-U.S. Defense Cooperation, BCCs are to be established only in the case of aggression against Japan and in cases of emergencies in areas surrounding Japan. Therefore, the official status of the BCCs in disaster relief operations was ambiguous during Operation Tomodachi. The Midterm Report recognized the necessity to clarify the status of BCCs in disaster relief operations. Additionally, there was an opinion that the governments of Japan and the United States should make an agreement on mutual support in disaster situations and review the agreement continuously.

The Midterm Report also stated that the BCCs’ capabilities were inadequate to deal with the widespread coordination required for this disaster, and not all BCCs had a clear division of roles. Based on these insights, the Midterm Report highlighted two measures to enhance the BCCs’ capabilities. One is to reinforce the BCCs with more staff and more clearly defined functions. Another is to facilitate information sharing and coordination by improving the alignment of JSDF and U.S. BCC counterparts.

The Joint Staff Office, Ground Staff Office, Maritime Staff Office and Air Staff Office in Tokyo all immediately dispatched representatives to BCC (Ichigaya) and BCC (Yokota). Most of them were familiar with bilateral coordination with U.S. forces at this regional army headquarters. Additionally, the Northeastern Army Headquarters had huge responsibilities and demands commanding four divisions and nine brigades from JGSDF, and dispatching JMSDF and JASDF units as part of a Joint Task Force. In addition, there was also a tremendous amount of work in coordinating with local governments. Accordingly, the Northeastern Army Headquarters could not afford to involve itself with bilateral coordination. Consequently, the commander of the Northeastern Army/JTF-TH had to organize the BCC (Sendai) with staff called from Tokyo, and it took time to activate it.

JSDF and U.S. forces have a basic procedure for establishing BCCs after an event. However, in order to activate BCCs as soon as possible, both forces need to prepare before an event occurs. A solution to this preparedness problem may be the establishment of a permanent, standing BCC that would consist of a small staff from both forces and would be engaged in information sharing, planning and so on before an event. A permanent BCC could coordinate the initial response immediately after an event occurs. By reinforcing the staff after an event, the functions of the BCC would expand to full scale, and the coordination in the BCC would be more seamless.

During the disaster response, BCC (Ichigaya) and BCC (Yokota) took charge of coordination at the operational level. On the other hand, BCC (Sendai) took charge of tactical-level coordination. The

“A solution to this preparedness problem may be the establishment of a permanent, standing [bilateral coordination center] that would consist of a small staff from both forces and would be engaged in information sharing, planning and so on before an event.”

Figure-1: Overall picture of the relationship between JSDF, U.S. forces and the bilateral coordination centers.
relationships among these BCCs were ambiguous, and it seemed there were some frictions about the role of each BCC because there was no experience or plan for establishing BCCs in disaster relief. Therefore, JSDF and U.S. forces should clarify the functions of each BCC based on various scenarios, including disaster relief.

There were also gaps in the alignment of U.S. and JSDF command counterparts. As Figure-1 shows, the Japan Joint Chief of Staff and the JSF commander appeared to be equal counterparts at the operational level. On the other hand, the counterpart of the JTF-TH commander at the tactical level was ambiguous. Additionally, the JSDF divided the functional command roles for disaster relief between the JTF-TH commander, who took charge of operations related to the aftermath of the earthquake and tsunami, and the CRF commander, who was responsible for operations related to the nuclear accident. But there was no corresponding functional commander in the JSF charged with these specific roles. Both BCC (Ichigaya) and BCC (Yokota), operational-level counterparts, had joint coordination capabilities. As for the tactical level, BCC (Sendai) and the Joint Force Land Component Command-Forward (JFLCC-Forward) were counterparts. However, the JFLCC-Forward did not have enough joint coordination authority. At the same time, the joint nature of BCC (Sendai) was a mere formality because the like branches of service – JGSDF and the U.S. Army and USMC; JMSDF and the U.S. Navy; and JASDF and the U.S. Air Force – showed strong tendencies to coordinate with each other rather than as a whole. The separate coordination was effective when it came to the detailed activities of each service, but it caused difficulty regarding information sharing and coordination among JSDF counterparts.

In summary, JSDF and U.S. forces should have routine discussions and exercises to clarify coordination relationships at the operational and tactical levels during various types of operations, including disaster relief. Both forces should accelerate developing joint coordination capabilities at the tactical level.

**Coordinating method**

The Midterm Report recognized that coordination via BCCs could be a model for coping with various types of emergencies. On the other hand, coordination between JSDF and the JSF in the response to the Great East Japan Earthquake was largely based on trial and error because both forces used unfamiliar coordinating methods during the disaster relief operation. Two important lessons were noted in the *Midterm Report* regarding coordinating methods. First, both forces needed time to clarify their respective roles, missions and capabilities and this delayed effective cooperation. Second, the *Midterm Report* noted that there was a problem in the alignment of U.S. and JSDF command counterparts.

Lance Corporal Brandon McCormick, left, and Sergeant Tony Hinds set up a satellite system on March 14 as part of the humanitarian assistance center established by the U.S. III Marine Expeditionary Force in the affected area to assist the Government of Japan-led relief efforts.
in the bilateral coordination framework among relevant actors.  
JSDF and U.S. forces had not adequately considered the possibility of bilateral disaster relief operations in Japan. Therefore, JSDF had insufficient understanding about U.S. forces’ capabilities in intelligence, transportation, medical service, etc, in disaster relief operations. JGSDF especially had little understanding about the capabilities of the different U.S. military branches of service. Consequently, JSDF did not utilize the U.S. forces’ capabilities quickly and effectively. In addition, JSDF did not understand the objective of U.S. forces’ engagement in foreign disaster relief. Generally speaking, the engagement of U.S. forces needs to fulfill the national interests of the United States. Thus it was important for this U.S. engagement to meet strategic goals, such as demonstrating the quick deployment and sophisticated joint operations of its forces, as well as the humanitarian goal of assisting the Japanese people in this time of need. Considering this condition and the benefits for Japan of a strong alliance with the United States, JSDF should have provided the JSF with more opportunities to show its remarkable work to the Japanese public, regional countries and U.S. taxpayers who may have questioned the scale of the U.S. response in Japan.

The JSF also lacked knowledge about the basic Japanese system for domestic disaster relief, such as the authority of local governments and JSDF’s generally passive status. Moreover, U.S. forces had great experience in disaster relief in developing countries but they did not have enough experience in advanced nations such as Japan. Fortunately, the JSF consisted mainly of U.S. forces based in Japan. They generally demonstrated great cultural awareness during Operation Tomodachi, which was appreciated by survivors. However, it was reported that some frictions occurred because of a lack of consideration towards survivors or JSDF personnel at the tactical level.

In order to clarify roles, missions and capabilities, JSDF and U.S. forces should deepen mutual understanding by expanding exchanges of personnel and conducting substantial exercises involving various scenarios, particularly including disaster relief.

In terms of enhancing cooperation between BCCs and relevant actors, the Midterm Report said that the Joint Staff Office and JTF-TH handled the requests to U.S. forces for disaster relief assistance. This means that government ministries and local governments, the source of the requests for disaster relief, did not contact the BCCs directly. The reason for this process was that in the Japanese disaster relief system, government ministries and local governments have leading authority and they decide whether to make requests of the JSDF. Also, the JSF’s basic posture was to support JSDF, as opposed to accepting direct requests from the government. However, this might have created...
a gap between the government’s requests and activities by U.S. forces. Additionally, the Midterm Report mentioned the necessity of having meetings between relevant Japanese and U.S. actors. The background for this comment might be awareness of insufficient cooperation among Japanese and U.S. trilateral actors.

U.S. forces usually establish a Civil-Military Operations Center (CMOC) during foreign humanitarian assistance operations. A CMOC coordinates various public and private actors, such as government ministries, local governments, international organizations, NGOs, private companies and so on, with the military. It also facilitates the clarification of requests from the affected people and links them with the capabilities of those providing aid. A CMOC could be a considerable benefit in enhancing the cooperation between BCCs and relevant actors in Japan. In the reconstruction operation at the seriously damaged Sendai Airport after March 11, JSDF, U.S. forces, airport officials and private companies met together and facilitated rapid coordination. It is said that such meetings were one of the reasons why Sendai Airport reopened in such a short time.10

In addition, the U.S. Army and USMC have a function called civil affairs (CA), which is necessary in civil-military cooperation. CA provides the military commander with expertise on the civil component of the operational environment.11 CA personnel and units play key roles in various military operations by promoting civil-military cooperation. JSDF should also consider developing a CA capability to facilitate cooperation among various military, public and private actors.

“In the future, the Japan MOD should anticipate that U.S. forces will react quickly to support Japanese efforts both during wartime or peacetime disaster relief operations...”
Disaster relief provided by U.S. forces
By Lieutenant Colonel Koichi Arie

Upon the occurrence of the disaster, U.S. President Barack Obama stated that his country “stands ready to help the Japanese people,” and Japanese Foreign Minister Takeaki Matsumoto officially requested help from U.S. Ambassador John Roos that evening. In the wake of the earthquake and tsunami, USFJ swiftly reacted and conducted massive, long-term support operations in cooperation with JSDF. Military forces from the Army, Navy, Air Force and Marine Corps participated in this mission. By March 24, U.S. forces had been organized into the JSF and were augmented by JTF-519.

Among the U.S. forces’ activities in the affected areas, U.S. Navy helicopters transported emergency food and other supplies from ships to land. The 31st Marine Expeditionary Unit (31st MEU) in Okinawa was dispatched aboard the USS Essex to transport and provide support materials to people in need. The 31st MEU conducted recovery operations on Oshima Island, while Marines from Task Force Fuji (from Camp Fuji in Gotemba, Japan) led the restoration of Sendai Airport in cooperation with the U.S. Army and U.S. Air Force. Later, U.S. Army units were employed to remove debris along Japan Railways’ Senseki Line, which provided rail access to the coastal areas of Miyagi Prefecture and was heavily damaged by the tsunami. The U.S. Air Force transported personnel and materiel by air. In total, the JSF provided approximately 280 tons of food, 7.7 million liters of water and 450,000 liters of fuel, and transported 3,100 tons of cargo. Moreover, the JSF conducted three time-intensive recovery operations for missing persons along stricken coastal areas from April 1-26. Throughout the operations they cooperated with JMSDF and found a total of 289 bodies.

As for the response to the accidents at the Fukushima Daiichi Nuclear Power Plant, U.S. forces provided two fire engines to cool nuclear reactors, 100 anti-radiation protection kits, two barges loaded with fresh water, and other supplies. They also provided the Japanese government with imagery information, which was gathered by U.S. Air Force Global Hawks (unmanned surveillance aircraft) and other platforms. Approximately 150 personnel of the USMC’s Chemical Biological Incident Response Force (CBIRF) flew from the U.S. mainland to Yokota Air Base. Several lessons learned were observed about this extensive cooperation between the U.S. military and the Japanese during Operation Tomodachi.

Quick reaction of U.S. forces
U.S. forces, as well as JSDF, quickly commenced relief operations upon the occurrence of the disaster. The docking landing ship USS Tortuga, at anchor in Sasebo, Japan, and the amphibious assault ship USS Essex, which had arrived in Malaysia for disaster training, readied to depart for the disaster-affected areas on the evening of March 11. The USS Blue Ridge, the flagship of the U.S. Seventh Fleet, was in Singapore and prepared to depart on March 12. The USS Ronald Reagan carrier strike group, at sea in the western Pacific on its way to Korea, changed its course to Japan and commenced an airlift of relief supplies to the affected areas as early as March 13.

It has been said that JSDF was so focused on organizing its own forces for the disaster response that it may not have been adequately prepared to accept support from U.S. forces at the same time. In the future, the Japan MOD should anticipate that U.S. forces will react quickly to support Japanese efforts both during wartime or peacetime disaster relief operations, and should conduct extensive planning for incorporating U.S. support into JSDF efforts in order to make the alliance more effective.

Reassurance of the deterrent of the U.S.-Japan alliance
In the response to the Great East Japan Earthquake, the U.S. and Japanese military forces conducted bilateral disaster relief operations for the first time. These operations reassured the deterrent value of the U.S.-Japan alliance and conveyed an implicit signal to foreign countries surrounding Japan, while highlighting the importance of USFJ to the Japanese people.

There is a view that the successful bilateral operations between the U.S. forces and JSDF after the March 11 disaster could increase the credibility of the U.S.-Japan alliance deterrent for Japan and the Asian region. Therefore, the Japan MOD must confirm that alliance and devise the means with which to strengthen it through a deepened practical consultation with the U.S. Office of the Secretary of Defense.

Practical joint operations of U.S. forces
In peacetime disaster relief situations, the U.S. forces operate jointly in the same way as in wartime. For example, regarding joint operations of the USMC and the U.S. Army, the Marines came first into the disaster areas and were later replaced by the Army in the same way they would be in an amphibious landing operation. Also, the USMC and the Navy operated jointly in the amphibious resupply of Oshima Island off the coast of Kesennuma on March 27. Deployed off that coast, the USS Essex launched Landing Craft Utility to land 40 Marines of the 31st MEU at
Moreover, Global Hawks of the U.S. Air Force also supported operations beginning March 13, flying from Guam to northeastern Japan. The Japan MOD needs to study more deeply how U.S. forces conduct joint operations and apply the results of this study, not only to the higher echelons, but also to the unit level of the JSDF in the form of intensive training.

Caution of U.S. forces in dealing with nuclear accidents

U.S. forces never committed any units or soldiers to deal with the Fukushima Daiichi Nuclear Power Plant accidents, except for the Marine CBIRF nuclear specialists who were dispatched to Yokota as a reserve in case of unforeseen contingencies. U.S. forces lent fire engines and other equipment without operators, leaving their operation to JSDF. Furthermore, the U.S. forces distanced their units from the nuclear plants immediately after the accidents. This requirement may have been levied because of the U.S. experience planning for nuclear contingencies during the Cold War era. On March 15, the Ronald Reagan carrier strike group moved away from the downwind area of the Fukushima plants to avoid radiation that leaked from those plants. The next day, the USS Essex, with the 31st MEU onboard, entered the Sea of Japan to commence support from Japan’s west coast. This was due to concerns about radiation levels closer to the Fukushima nuclear site. In this regard, the Japan MOD must increase its own forces’ preparedness for nuclear disaster contingencies, as well as nuclear terrorism and nuclear attacks.

Information sharing with the U.S. Department of Defense

Lastly, the Japan MOD needs to consider how it can better share necessary information with the U.S. Department of Defense (DOD). When the author interviewed some of the U.S. Army officers (mostly majors) at the Pentagon, they pointed out the lack of necessary information on the Great East Japan Earthquake. They needed military information which could not be acquired from ordinary TV news. Therefore, the MOD should explore how to keep such DOD officers informed of Japan’s military situation, particularly during contingencies.

Assistance from foreign forces besides the United States

By Captain Shunei Tamura

Following the Great East Japan Earthquake, Australia, Israel, the Republic of Korea, Thailand, France and other countries also offered military assistance to Japan. Their support included medical assistance, donation of relief supplies and transportation. What follows is a brief description of these countries’ military assistance and a few lessons learned about foreign military cooperation.

The Australian Defence Force (ADF) assisted Japan through humanitarian assistance and disaster relief operations that it labeled “Operation Pacific Assist.” ADF supplied three C-17A Globemaster aircraft, which during 12 days of airlift operations made 23 flights within Japan to transport vital stores and equipment. The ADF moved 450 tons of cargo, including 41 vehicles and 135 passengers, mostly from the 15th Brigade of JGSDF. After the ADF C-17A deployed to Yokota Air Base, some Australian personnel were involved in coordinating with U.S. forces and JSDF through the U.S. 13th Air Force Movement Control Center. In spite of this being the first airlift mission for ADF in Japan, it carried out its mission effectively because it was able to obtain knowledge from U.S. forces about cooperating with JSDF. During the response to the tsunami and earthquake, general officers from JASDF and ADF exchanged e-mails a couple of times a day. This made the support more effective.

The Israel Defense Forces dispatched a medical team that conducted medical examinations in Minamisanriku, Miyagi Prefecture, from March 29 to April 10. This was the first medical team that was dispatched by foreign forces to the affected area. Sixty doctors, nurses, pharmacists and translators from the Israel Defense Forces were involved in providing medical assistance.

An SH-60B helicopter flies over the city of Sendai to deliver more than 1,500 pounds of food to survivors. The citizens of Ebina city, Japan, donated the food.
The Republic of Korea used three Air Force C-130 aircraft to transport 102 rescue workers, doctors and translators, together with relief supplies, between Japan and the Republic of Korea.25 The Royal Thai Armed Forces also used two C-130s to transport 1,000 sleeping bags, 44 boxes of supplies, 9,000 cans and 1,300 survival kits on March 19. The C-130s flew to Yokota Air Base via Kadena Air Base on Okinawa.26 Singapore and Malaysia planned to dispatch C-130 aircraft, but were unable to do so because the Japanese did not have sufficient infrastructure or capability to support them at the time.

The French Air Force used Airbus planes to transport 140 rescue personnel. Additionally, the French Ministry of Defense donated 1,000 sets of radiation protective clothing to the Japan MOD in order to assist JSDF in their response to the nuclear power station accident. These clothes were received by JGSDF.27

Lessons learned
Among the lessons learned from accepting assisting from foreign forces was the need to establish close cooperation with these forces prior to future disasters. Japan has been strengthening mutual cooperation and collaboration, and has endeavored to further the smooth implementation of disaster relief activities through participation in exercises such as Cobra Gold and Pacific Partnership. However, this was not adequate preparation to coordinate swiftly and appropriately in the case of a severe incident such as the Great East Japan Earthquake. More activities and exercises are required to clarify means of communication, roles, missions and capabilities with Japan’s counterparts, and to establish an effective coordination mechanism. Moreover, Acquisition and Cross-Servicing Agreements are needed with friendly nations in order to make prior arrangements for the provision and use of supplies and services such as water, food, fuel and transport.

There were cases during the response to the March 11 disasters when it took time to receive assistance from foreign militaries because of differences in equipment and standards.28 Japan needs to better understand the capabilities and equipment of foreign forces. Moreover, it should properly compile and store this information so that it is readily available and usable for all parties in the event of a disaster.

The Midterm Report published by the Japan MOD said that there were problems in matching relief needs, managing the activities of foreign militaries and providing information on JSDF activities.29 Thus, it is necessary for JSDF to establish a coordination center where it can coordinate with foreign militaries, decide on appropriate roles and activities, and manage information under integrated leadership and management.

II. COOPERATION BETWEEN MOD/JSDF AND THE PUBLIC SECTOR

Interagency cooperation
By Ms. Ritsuko Hirose

The MOD/JSDF accepted a wide variety of requests from, and worked together with, other Japanese government ministries and agencies responding to the Great East Japan Earthquake. This section discusses the facts and lessons learned about interagency cooperation based on MOD press releases, press information and interviews with MOD officials. In the early stages, the MOD/JSDF closely collaborated with the Office of the Prime Minister, the Headquarters for Emergency Disaster Response and other ministries and agencies, including the Ministry of...
Economy, Trade and Industry, the Fire and Disaster Management Agency, the National Police Agency, the Ministry of Agriculture, Forestry and Fisheries, the Ministry of Education, Culture, Sports, Science and Technology and the Ministry of the Environment.

A Headquarters for Emergency Disaster Response, a Nuclear Emergency Response Headquarters and an Emergency Response Team were established just after the earthquake by the Prime Minister. Participating members from various government organizations made requests for JSDF assistance to the Director General of the MOD Bureau of Operational Policy, followed by specific coordination with the MOD.

The concrete details of water pumping and other on-site activities at Tokyo Electric Power Company’s (TEPCO) Fukushima Daiichi Nuclear Power Station were conducted according to orders given by the Prime Minister and were coordinated by JSDF after coordination with related governmental bodies and TEPCO. JSDF also maintained primary management over the implementation of these activities. JSDF was heavily engaged in decontaminating personnel and vehicles, monitoring operations and transporting fuel.

JSDF also cooperated with the police, fire departments, Japan Coast Guard and others in rescuing a large number of disaster victims. Based on requests from local governments, JSDF provided assistance in transporting dead bodies to burial sites as needed. Since local governments are responsible for the treatment of unidentified bodies, Minister of Defense Toshimi Kitazawa requested that Minister of Health, Labour and Welfare Ritsuo Hosokawa urge local governments to order private-sector entities to manage the care of bodies in order to allow JSDF to focus on disaster relief operations, including the transportation of relief goods.

There were a variety of other ways in which JSDF cooperated with other agencies to enhance the effectiveness of the response. Directly following the earthquake, the MOD and the Ministry of Internal Affairs and Communications cooperated to allocate radio frequencies for JSDF operations that would be free from interruption. JSDF’s liaison section in the Cabinet Office smoothly coordinated with other government agencies in the area of livelihood assistance activities.

In the early stages of the response, ministries and agencies also asked for JSDF assistance transporting relief goods. JSDF accumulated relief supplies provided by ministries and transported the supplies to shelters. JSDF also coordinated the smooth transportation of relief supplies with the MOD liaison officers dispatched to the Headquarters for Emergency Disaster Response. After the earthquake, in response to official requests, JSDF immediately transported the Prime Minister, Chief Cabinet Secretary and other senior officials to disaster areas using JSDF airplanes.

“However, due to the flood of requests and JSDF’s posture and practical constraints, JSDF could not respond to all requests.”

Lessons learned

Interagency cooperation was generally successful because participating members of the Emergency Response Team from government agencies made requests through the Director General of the Bureau of Operational Policy, followed by specific coordination with the MOD. Members of
the MOD, namely the Minister himself, shared the basic policy that JSDF should make every effort possible to respond to requests from other ministries and agencies. The Minister of Defense even conducted direct coordination with other ministers on matters considered to be important. However, due to the flood of requests and JSDF's posture and practical constraints, JSDF could not respond to all requests. Nevertheless, interagency partners expressed their appreciation for the cooperation conducted by the MOD/JSDF, as the MOD/JSDF made every effort to respond to requests when possible and to explain why they could not answer some specific requests.

In order to further cooperation in the future, several lessons can be learned based on the assumption that ministries and agencies will make a large number of requests for JSDF assistance in the case of another great earthquake. Ministries should make lists of tasks to be executed in general priority in case of a large disaster, and these lists should be shared among ministries. Priorities should be quickly determined based upon the actual situation in the event of an earthquake. Cooperative agreements should be created between the MOD and each ministry, if necessary, and interagency exercises should be carried out under those agreements.

Cooperation with local governments
By Lieutenant Colonel Eijiro Imamura

In the Great Hanshin-Awaji Earthquake of 1995 in Kobe, problems were experienced such as a delay in the initial dispatch of JSDF units and a lack of cooperation between JSDF and local governments. This led to significant revisions in the laws regarding JSDF’s role in disaster relief. Subsequently, in the Great East Japan Earthquake such problems were not observed. But there were challenges with the regional information gathering and sharing network, which was in a catastrophic condition after the Great East Japan Earthquake. The initial information gathering system, particularly for gathering data about the affected people, had serious problems. As time passed during the disaster response, the relationship between JSDF and local governments changed subtly. In the early days of relief activities, local governments had a common understanding that the mission of JSDF was to rescue victims. However, due to the changing needs of the affected people, there later came to be some differences in how local governments viewed JSDF’s proper role and activities, which prevented a common understanding among local governments.

Coordination conducted by JSDF with local authorities was strained in part because local governments were dysfunctional due to earthquake casualties, and there were multiple parties with whom coordination was necessary. In some cases, the proper party with whom to coordinate was unclear. The main factors in the confusion were related to the structure of local governments, such as navigating the difficulties of a vertically integrated administration, trouble securing and optimizing resources in the transition to a crisis management posture, and friction with those local governments that assumed the principle of the Disaster Countermeasures Basic Act, which states that municipal governments have the lead responsibility in dealing with disasters.37

Some of the challenges in coordination between JSDF and municipalities were due to the latter’s adherence to the norms of equality and fairness in the provision of services to the public. The basic job of the administrators of local governments is to distribute goods and services to those in need. However, available resources are not unlimited and must be distributed properly and efficiently. Therefore, local governments, in order to achieve equality and fairness, take a great interest in pre-assessment of needs. Local governments also make a point of democratic procedures so as to obtain the consent of the majority and not cause a sense of injustice among the population. But democratic procedures and thorough pre-assessments take a long time. The JSDF had to make immediate decisions and conduct operations immediately under unclear circumstances. Thus JSDF and local governments had different senses of speed and urgency in responding to the emergencies.

“JSDF and local governments had different senses of speed and urgency in responding to the emergencies.”

Lessons learned
From these difficulties can be drawn several lessons for enhanced cooperation between the military and local governments in future disasters. A friendly environment that promotes cooperation is dependent on information being processed and flowing effectively and efficiently. A mechanism that allows information sharing and communication freely between organizations at any time is essential to building cooperation. JSDF had earlier established good relationships for sharing and communicating information with local governments. However, in this earthquake, new challenges occurred that needed to be addressed at an early stage. These included the need to restore relationships between JSDF units and debilitated local governments that were adversely affected by the disaster, as well as the need to build new relationships between local governments and reinforcements from outside the disaster area. In addition, increased frequency of unofficial communication during the disaster led to misunderstandings and misinterpretations that caused potential distrust among stakeholders.

One of the recommended improvements is the introduction of an emergency command system, such as the...
The Japanese Red Cross Society (JRCS) depended on JSDF for assistance. However, because their coordination was ad hoc, the joint activities were susceptible to disorganization and inefficiency.

As JRCS is a proven aid organization with an established record, it operates independently. Unfortunately, there was only limited cooperation between JSDF and JRCS during the Great East Japan Earthquake. The JRCS branch office of Chiba Prefecture dispatched one aid section to Miyagi Prefecture on March 12, and it requested that JSDF transport...
the team by helicopter because the road to the area was closed. As a result, a JSDF helicopter airlifted JRCS personnel from Narita Airport to JGSDF’s Fukushima Station.

Moreover, the JRCS Chiba Prefecture branch office distributed 7,650 blankets to the afflicted people and collaborated with JGSDF.42 In the disaster-stricken area, since means of transportation and communication were limited, JRCS depended on JSDF for assistance. However, because their coordination was ad hoc, the joint activities were susceptible to disorganization and inefficiency. As a remedy, transportation trainings are now frequently being held between JSDF and each JRCS branch. In the future, JSDF and JRCS need to make legislative preparations to conduct organizational joint activities in disaster-stricken areas.

Cooperation with private companies and NGOs

By Lieutenant Colonel Daisuke Saito

JSDF worked not only with other ministries and provincial governments during the response, but also with private companies and NGOs. In the relief phase, public welfare was a priority for JSDF’s activities, which included providing rescue, medical and transportation assistance, and working to prevent epidemics. The aim of these activities was to give a feeling of reassurance to the suffering survivors, but they were also influenced by the principles of JSDF engagement in disaster relief: urgency, public nature, and non-substitutability.

Cooperation with private companies

The main activity for which JSDF cooperated with private companies was transportation assistance. This involved the transportation of aid to the affected areas per the direction of the livelihood assistance cell that was established in JTF-TH, which was based with the Northeastern Army. The cell was an ad-hoc organization which helped citizens along with the existing systems of the Northeastern Army. Although it was one of the sections in JTF-TH, the cell personnel came from staffs outside JTF-TH who were dispatched from the Ground Staff Office. The cell addressed needs that were identified by officials who were dispatched to affected areas to gather information.

The livelihood assistance cell set up a transportation scheme to replace or assist the logistics system that had collapsed in the earthquake in order to transport goods that were urgently needed in the affected areas using the transportation assets of JSDF garrisons or bases. Sometimes the gap between the terminal areas of JSDF support and the destination shelters was filled by private transportation companies such as Sagawa Express Co., Ltd. or Yamato Transport Co., Ltd. JSDF was responsible for the core transportation effort, and the private companies were responsible in their respective areas. This is an example of useful JSDF cooperation with private companies during the earthquake relief operations. According to the MOD, the construction of this transportation framework helped address the urgent needs in the affected areas for items such as kerosene, diesel, petrol, water, food, clothing, blankets, baby formula, diapers and portable toilets, and offered “fast and efficient transport of fine-grained relief based on the needs of the shelter.”43

In addition to transportation support, JSDF was also asked to assist with the burial of bodies, in cooperation with the private sector, in order to help with the prevention of epidemics. This support was necessary due to the disruptions that the disaster caused to the functioning of private companies and local governments.

JSDF also cooperated with telecommunications companies to restore facilities damaged by the earthquake. These efforts were made to ensure communications support for relief activities. The recovery of communication networks also helped survivors obtain information and contact their family members, friends and relatives.

Cooperation with NGOs

More than 40 national and international NGOs, such as Peace Winds Japan and Asian Community Trust, were in the affected areas. These organizations distributed goods and provided kitchens, medical services, mental health assistance,
child care, education and information services to restore support systems. They also assisted with clean-up efforts in Iwate, Miyagi, Fukushima and Ibaraki prefectures. There was little direct cooperation between JSDF and NGOs, but some informal, indirect cooperation was conducted through local governments. In certain areas, activities such as site clearing and rubble cleanup were transferred directly from JSDF to the NGOs. JGSDF carried out transportation and disposal of rubble and other debris depending on the needs of local governments. This effort continued later in the form of cooperation with the private sector and NGOs even after the transition to full-fledged recovery and reconstruction efforts led by local governments and residents.

In this disaster, JSDF cooperation with private companies and NGOs was historically different from previous experiences in Japan. The purpose of disaster relief is to provide support for the civilian population, while in the past, the Japanese Army’s dealings with private companies and other private organizations were intended to facilitate military action. These efforts are quite contradictory. JSDF’s military missions have been formulated in the centralized command and control organization, and led by orders or directives of the National Command Authority. In contrast, JSDF’s cooperation with the private sector after March 11 was led by decentralized requirements from civilians such as NGOs, private companies and survivors.

To help build a cooperative relationship, it is necessary to consider the precise and essentially different natures of these respective organizations. Also, when it comes to military cooperation with the private sector and NGOs, it should be recognized that the “mutual influential relationship was maintained for the mutual independence of the organizations.”44 It is also necessary to recognize the differences among the organizations, and to accept that their cooperation should be complementary and based on those differences.

**Lessons learned**

During the disaster relief operations, as permitted by law and regulation, JSDF used flexibility in dealing with the private sector and NGOs. The main problem was how JSDF should go about cooperating with organizations that have quite different natures and characteristics. Ultimately, JSDF and private-sector organizations both contribute to public welfare. In emergencies such as this earthquake, it is necessary to cooperate closely. The MOD expressed the need “to ensure that this cooperation and the specific activities have clear business priorities” under a situation of severe national financial constraints.45 Additionally, it was necessary to pay attention to matters “such as effective use of the private sector, paying careful attention to financial circumstances, and striving for increasing efficiency and streamlining of personnel and labor costs.”46 In this regard, it was critical to recognize that there was a limit to what could be done to meet disaster recovery needs.

Given these points, two major ideas emerge about enhancing cooperation in the future. The first is to strengthen JGSDF’s ability to adapt to situations in order to respond to various contingencies with military capabilities. One type of decentralized command philosophy that has been adopted in many countries is known as “mission command” or “mission orders.” Mission command gives subordinates the initiative to operate under the commander’s intent rather than demanding overly centralized direction. The prototype for this command philosophy, “Auftragstaktik,” was put forth in the doctrine of the Prussian Army. In this framework, the commander identifies the end state, or the ultimate objective to be achieved, while the ways and means of its realization are left to the subordinates.47 A shared framework of thinking by all military members is essential to tie this approach together. This is a methodology for a professional military and has produced spontaneous actions that yielded good results on many occasions. Adopting this method of placing authoriy with the front-line troops could allow flexibility in cooperation with NGOs and private companies and still be effective in meeting the demands of a disaster relief scenario. In a mission command framework, commanders at all levels can use their own judgment as to how to respond in a given situation, rather than relying on the senior commander’s perception of needs at all sites in the operating area. Unfortunately, the mission command construct is not intrinsic in JGSDF.

The second idea for enhancing cooperation is to have private business organizations form something like the livelihood assistance cell that JTF-TH had established to coordinate relief activities between JSDF and civil organizations, rather than give JSDF the main responsibility of responding to all local requirements. It is more desirable for JSDF to support this standing cell indirectly, with private businesses and others leading the initiative. This would make it possible to respond to the diversity of needs of the private sector without compromising the expertise of JSDF. This would be in line with the concept for employing JSDF that is described in Japan’s National Defense Program Outline. Also, if such a cell were set up, it would lead to closer relationships among private-sector organizations, which could further increase collaboration. As discussed here, it is essential to draw conclusions on improving cooperation between JSDF and the private sector based on a clear understanding of the natures of private-sector entities and organizations.

**Conclusion**

*By Colonel Nozomu Yoshitomi*

Following the March 11 Great East Japan Earthquake, the JSDF conducted disaster relief operations mainly in the prefectures of Iwate, Miyagi and Fukushima. JSDF completed its disaster relief operations on December 26 based on each prefectural governor’s request for withdrawal of troops. During the response, JSDF personnel worked a total of 291 days.48 JSDF operations in this disas-
ter response were widely varied compared to past relief operations. As a result, the MOD and JSDF learned to cooperate with a variety of internal and international military, public and private actors in disaster relief.

This research summarized individual studies concerning the state of affairs and lessons learned regarding trilateral cooperation from the viewpoint of the MOD and JSDF. First, it was discovered that there is considerable room for improvement in Japan-U.S. bilateral and joint operations in the event of large natural disasters, even though they have a half-century record of collaboration under the Japan-U.S. alliance. Collaboration with the ADF also took place and was well integrated with the coordination with U.S. forces. Further consideration of trilateral cooperation among the United States, Japan and Australia is necessary. Concerning other foreign military forces, it is recommended that a framework for cooperation be constructed.

The MOD and JSDF received varied and complicated requests for assistance and required a framework to facilitate efficient cooperation with other Japanese government agencies. Collaboration with local governments produced many lessons. Although local governments should assume a leading role in disaster response, in some cases damage caused by the disaster kept them from exercising their normal disaster relief functions. This led to a dramatic increase in the volume of aid needed and demands on local organizations following the Great East Japan Earthquake. JSDF conducts disaster relief operations at the request of local governments, and these local authorities have a major role in determining whether JSDF carries out its mission well. This paper recommends a fundamental readjustment of the crisis management and disaster relief functions of local authorities.

The MOD and JSDF have not focused in the past on cooperation with the private sector. Collaboration with domestic and international aid organizations and NGOs was also previously limited. However, experience in the response to the March 11 disasters indicates that constructing a framework for collaboration between JSDF and the private and aid sectors is necessary in order to properly prepare for the next large earthquake. On the positive side, close relationships were established with private companies in terms of transportation and communication. The reason for this success was that both the JSDF and private companies showed admirable flexibility. They must now prepare standard operating procedures for future cooperation in a variety of foreseeable cases.

In conclusion, thinking of the many people who served admirably in relief operations following the Great East Japan Earthquake, we may seem to have been very critical of some actions and decisions. However, we did this based on our belief that we must learn from this experience in order to be well-prepared for the next large natural disaster. I hope that our research will set a precedent for the study of lessons without taboo.

---

Notes

10. Mr. Kasamatsu, a man who managed public officials and civilians of both Japan and the U.S., President (July 18, 2011), 166-169.


26. Interview with Japan Ministry of Foreign Affairs Southeast and Southwest Asian Affairs Department personnel, by telephone, January 10, 2012.


32. Ministry of Defense officials, interview by author, November 29, 2011. For those requests which were considered to be the responsibility of organizations other than JSDF, Mr. Sakurai, Director General of the Bureau of Operational Policy, asked relevant government organizations to take the appropriate measures or consider making requests for assistance from the private sector.


36. The Ministry of Agriculture, Forestry and Fisheries and the Ministry of Economy, Trade and Industry requested that JSDF transport food and fuel, respectively.

37. Disaster Countermeasures Basic Act (Japan), Act No. 223, November 15, 1961. Articles 4 and 5 of the Disaster Countermeasures Basic Act stipulate that the responsibility for dealing with disasters belongs to municipalities. The responsibility of the prefecture is to support the business conducted by the municipal governments within the area, and to perform comprehensive support and oversight.


46. Ibid., 16.

47. Antulio J. Echevarria, II, After Clausewitz: German Military Thinkers before the Great War (Kansas; University Press of Kansas, 2000), 38-42.


About the authors: Colonel Nozomu Yoshitomi (Japan Ground Self-Defense Force/JGSDF) is a professor in the Department of National Defense Studies in the School of Defense Sciences at the National Defense Academy of Japan (NDA). Prior to his current assignment, he served as the Commander of the 1st Surface to Ship Missile Regiment, JGSDF. He also served as a Councilor of the Cabinet Intelligence and Research Office. He graduated from NDA in 1983 with a major in International Relations. He attended the Command and General Staff Course and Advanced General Staff Course at the JGSDF Staff College. He received a master’s degree in International Security Studies from the Graduate School of Takushoku University in 2006. Colonel Yoshitomi can be reached at tomi@nda.ac.jp.
Lieutenant Colonel Koichi Arie (JGSDF) is an associate professor in the Department of Strategic Studies in the NDA’s School of Defense Sciences. He graduated from NDA in 1984, majoring in International Relations, and received his master’s degree in Sociology from NDA’s Graduate School of Security Studies in 2001. In 2004 he was dispatched to the Multi-National Division (South East) headquarters in Iraq, where he worked as a JGSDF liaison officer. He received his Ph.D. from Takushoku University, Tokyo, in 2011. Lieutenant Colonel Arie can be reached at arinko@nda.ac.jp.

Ms. Ritsuko Hirose is the chief of the Office of Environmental Countermeasure Management, Administrative Coordination Division, Minister’s Secretariat, Japan Ministry of Defense. Prior to this post she was a professor in the Center for Security and Crisis Management Education at NDA. She graduated from Kyusyu University in 1990, majoring in Law, and received a master’s degree in Political Science from Fordham University in 1996. She is currently a Ph.D. candidate in International Relations at the National Graduate Institute for Policy Studies in Japan. Ms. Hirose can be reached at ritz@b-star.jp.

Captain Shunei Tamura (Japan Air Self-Defense Force) is currently the planning and coordination officer of the School of Defense Sciences at NDA. He graduated from NDA in 2001 with a major in Public Administration. After training as a rescue pilot, in 2007 he was assigned to be the group leader of an intelligence section at the headquarters of the 5th Air Wing. He completed a four-month tour to Kuwait as an intelligence officer as part of the reconstruction assistance mission for Iraq. He earned a master’s degree in Asia-Pacific Studies program at Waseda University in 2011. Captain Tamura can be reached at jstamura@nda.mod.go.jp.

Lieutenant Colonel Eijiro Imamura (JGSDF) is an associate professor in the Department of National Defense Studies in NDA’s School of Defense Sciences. He graduated from NDA in 1988 with a major in International Relations. He received his master’s degree in National Security from NDA’s Graduate School of Security Studies in 2004. Lieutenant Colonel Imamura has experience working as a member of the Japan Joint Staff’s International Cooperation Office. He can be reached at Imamura@nda.ac.jp.

Colonel (Ret.) Daisaku Sakaguchi (JGSDF) is a professor in the Department of Strategic Studies in the School of Defense Sciences at NDA. He graduated from NDA in 1984 with a major in International Relations, matriculated at the JGSDF Staff College, and received a master’s degree in Sociology from NDA’s Graduate School of Security Studies in 2000. He also earned a Master of Public and International Affairs degree from the University of Pittsburgh Graduate School of Public and International Affairs in 2005. Professor Sakaguchi can be reached at dsakaguchi8@gmail.com.

Lieutenant Colonel Daisuke Saito (JGSDF) is an associate professor in the Department of Strategic Studies in NDA’s School of Defense Sciences. He graduated from NDA in 1995, majoring in International Relations, and received his master’s degree in Security Studies from NDA’s Graduate School of Security Studies in 2010. He was educated in the Command and General Staff Course. He is also a paratrooper and commanded a company of the 1st Airborne Brigade. In 2006 he was dispatched to the 10th Iraqi Reconstruction Group as an executive officer of a guard company. His concentration of study is military thought and operational art. Lieutenant Colonel Saito can be reached at saitod@nda.ac.jp.
Japan Self-Defense Forces personnel travel to a rescue operation site. It was still cold and even snowing in mid-March in the Tohoku region, which is located in the northern part of Japan.
Japan is a country rich in natural disasters and has been damaged by typhoons, earthquakes and tsunamis time and time again in history. It is no wonder, therefore, that the Japan Self-Defense Forces (JSDF) have been frequently engaging in disaster relief operations since their establishment in 1954. However, the Great East Japan Earthquake, which happened on March 11, 2011, was an exception to the typical disaster. In both its scale and complexities this earthquake was far beyond the JSDF’s expectation.

The earthquake struck Tohoku, one of the areas of Japan that was best prepared against tsunamis, with miles of anti-tsunami bunkers and other countermeasures. However, since the scale of the earthquake was far beyond anticipation, none of the countermeasures worked properly. The gigantic tsunami devastated the area and the lines of bunkers were wiped away in a matter of seconds, instantly costing hundreds of people their lives. The nuclear power plant accident further complicated the problem. This article addresses the challenges and lessons learned by JSDF during the disaster response from the point of view of a soldier.

**General principles of the JSDF’s role in humanitarian assistance and disaster relief**

Although JSDF’s main purpose is to protect our country and independence,
many Japanese have appreciated JSDF for its contribution to humanitarian assistance and disaster relief (HA/DR) operations. In a January 2012 opinion poll, 82.9 percent of Japanese named HA/DR as the JSDF’s raison d’être.¹

In principle, JSDF’s disaster dispatch is carried out at the request of the prefectural governor and other officials. When a disaster strikes, the local governor in the affected prefecture will issue a JSDF aid request through a local military unit. Upon receiving the request, the unit will conduct disaster response operations itself, and/or forward the request to other units and branches, depending on the scale of the disaster.

When the Hanshin area of western Japan was hit by a massive earthquake in 1995 (known as the Great Hanshin-Awaji Earthquake or Kobe Earthquake), local JSDF units completed the preparation for expected response operations just after the disaster. However, governors in the affected areas were not quick enough to issue the request to JSDF units, delaying the issue of the JSDF operation order as the situation deteriorated. Based on lessons learned from this case, the Government of Japan established the legal framework of “discretionary dispatch,” which enables JSDF units to deploy to affected areas for initial response operations without a request from a governor under emergency circumstances when there is no time to wait.²

**JSDF’s response to the Great East Japan Earthquake**

The Great East Japan Earthquake was a magnitude 9.0 ocean trench earthquake off the coast of Japan that occurred at 14:46 local time on Friday, March 11, 2011, with the epicenter approximately 70 kilometers (43 miles) east of the Oshika Peninsula. The earthquake triggered powerful tsunami waves that reached heights of up to allegedly 40.5 meters (133 ft) in Miyako city in Iwate Prefecture, and which in the Sendai area traveled up to 10 kilometers (six miles) inland. The tsunami caused meltdowns in three reactors at the Fukushima Daichi Nuclear Power Station complex. The creation of associated evacuation zones affected hundreds of thousands of residents.

The JSDF response to this earthquake was unprecedented in many respects. First, it was the largest JSDF operation ever executed. At the peak, JSDF had about 107,000 personnel, 550 aircraft and 60 ships deployed to the operation. The total number of personnel mobilized corresponds to almost half of the JSDF’s total manpower. Second, the JSDF was required to deal with a complex disaster, namely an earthquake, tsunami and nuclear disaster (and fire following the earthquake on a minor scale). The JSDF carried out simultaneous operations to manage the earthquake and tsunami devastation and established Joint Task Force-Tohoku (JTF-TH). The nuclear accident portion of the disaster was handled by JSDF’s Central Readiness Force.³ Third, this was JSDF’s first operation conducted in a radioactive environment. Fourth, the tsunami left a vast number of missing persons, which necessitated a focused search and rescue operation throughout an expansive area over a long period of time. JSDF rescued approximately 19,000 victims of the disaster and uncovered almost 9,500 bodies. As a part of relief support for victims, JSDF distributed food and water and provided bathing facilities. The bathing facilities were extremely popular and proved to be one of the most appreciated elements of JSDF support. JSDF units also cleared 300 kilometers (186 miles) of roadways, which had been unusable due to extensive debris.

JSDF also carried out operations in support of the nuclear disaster. In the immediate aftermath of the disaster, JSDF personnel assisted efforts to keep nuclear reactors and spent fuel pools cool.

---

**Photo courtesy of Japan Ministry of Defense**

---

Japan Self-Defense Forces personnel conduct search and rescue operations in an area that was inundated by the tsunami. In places such as this where the water was shallow, rescue personnel waded in the water and searched for disaster victims by hand.
helicopters dropped water and fire engines sprayed water over damaged facilities. After a 20-kilometer (12-mile) radius evacuation zone was established around the power plant, JSDF provided safe passage and helicopter support to victims to ensure they could leave the area safely. The JSDF helicopters were used for monitoring flights over nuclear power stations, as well. Chemical units of the Japan Ground Self-Defense Force (JGSDF) also conducted radiation measurement and decontamination activities.

In addition, U.S. forces implemented assistance activities on a massive scale in the disaster area in support of JSDF, at their largest mobilizing approximately 16,000 personnel, 15 vessels and 140 aircraft. The U.S. “Operation Tomodachi” further enhanced the Japan-U.S. alliance. Coordination with U.S. forces was tremendously important in terms of search and rescue activities, and also in securing the safety and livelihoods of disaster victims. To facilitate close coordination, bilateral coordination centers were established at the Ministry of Defense (Ichigaya, Tokyo), U.S. Forces Japan (Yokota Air Base) and at the headquarters of JTF-TH (Sendai). All proved to be very effective.

Coordination challenges in HA/DR

In general the need for civil-military cooperation in all military activities is increasing. The essence of war has changed and one of the keys to successful military operations is to win the hearts and minds of people. The needs for hearts and minds operations is even greater in HA/DR. To these ends it is now indispensable for militaries to cooperate with non-military organizations. As the opinion poll mentioned above demonstrates, the role JSDF plays in disaster situations is well supported by the Japanese public. The JSDF activities in response to the Great East Japan Earthquake included not only providing goods and services for rescue and support operations, but also providing relief to individual victims of the disaster. JSDF’s contribution to relief activities seemed to help improve morale, as well. The relationship between the military and the affected people, therefore, is not a problem in Japan; the challenge is rather in coordination and cooperation with other bodies in relief activities, such as other ministries, local governments and non-governmental organizations (NGOs).

Civil-military lessons learned

Information sharing

Life-saving is the priority matter in the initial phase of relief operations. However, obtaining situational awareness as soon as possible is also important in order to facilitate relief operations. In particular, the affected population’s specific needs should be well understood by relief units. JSDF established JTF Headquarters in Sendai, the capital city of Miyagi Prefecture, and sent liaisons to Prefectural Disaster Response Headquarters and on-the-spot
response headquarters throughout the disaster zone. In the field, soldiers visited shelters and affected local communities to inquire after missing persons or to find out about actual needs. This proved to be quite effective in ensuring that aid material was distributed to the right places.

However, there were some shortfalls from the information-sharing viewpoint. Interagency information-sharing means and procedures were not clearly defined or sufficient. Also, destruction of the communication network in the disaster disturbed operations. To avoid this in the future, the framework, procedures and means of communication should be prepared and agreed to by related authorities in advance. One of the options would be placing post-military or retired military personnel in local governments’ disaster prevention sections as liaisons. Integration of communication among agencies is also key. The military, local authorities, the private sectors and NGOs all possess communications capabilities. In an emergency, impromptu networks encompassing all parties should be swiftly established.

**Appropriate tasking**

Military forces are often referred to as the last resort in routine crises that civilian governments can normally handle. However, in situations beyond the normal capacity of the government that require major HA/DR operations, the military is expected to be one of the first responders. The military is self-sufficient by nature, well-equipped and organized to operate in harsh environments. Therefore, military units are often expected to exercise their maximum capabilities in the very first phase of rescue operations. Also, they are expected to withdraw from the area at the earliest possible stage, handing over responsibilities to the civilian and private sectors. JSDF’s three principles for disaster relief dictate that it can respond to disasters that are urgent, public in nature and for which its services are not substitutable.

As host nations’ military capabilities are not unlimited, it is essential to utilize private and partner-nation resources, as well. For instance, transportation capacity was a serious bottleneck for the deployment of JSDF units to the affected areas following the March 11 disasters. Private ferryboats and C-17 transport aircrafts operated by U.S. and Australian forces both facilitated the rapid deployment of units from remote areas such as Hokkaido and Okinawa. Another example was the reopening of Sendai Airport, which had been badly flooded by the tsunami. The reopening of the airport was quite important as it was expected to be utilized as a hub for the overall relief operation. JSDF and U.S. units deployed and worked with the airport authority and construction companies, coordinating closely to prepare the airport for reopening. Generally, the key to civil-military cooperation success is mutual understanding among players who have diverse national and corporate cultures. In the case of the reopening of Sendai Airport, all the parties understood their respective roles and share of the work.

However, the civil-military cooperation process admittedly did not always go smoothly. People working in the field were under pressure and could not always afford to empathize with other people’s circumstances. This situation often
caused friction among soldiers, authorities and private volunteers. In some areas JSDF units were viewed as all-powerful, with the myth that the military could do everything asked by the people. This, of course, was not always possible. Appropriate task-sharing in HA/DR should be guided by clear perceptions of the capabilities and natures of others. This should be emphasized in and mitigated by peacetime exchanges, including joint exercises.

**Whole-of-government response**

Civil-military task-sharing is essential to HA/DR operations; this applies to interagency tasking as well. This role was taken by the Emergency Response Headquarters in the Crisis Management Center of the Prime Minister’s office, where representatives from crisis-related ministries worked on an around-the-clock basis. When the Fukushima Daiichi Nuclear Power Station was damaged by the tsunami, the Government of Japan found that the response to the accident needed interagency coordination. The cooling of reactors, protection and evacuation of residents, monitoring of radiation, safety of farm and marine products, coordination with other countries, as well as airspace control, security measures, and many other tasks demanded the integration of all of the capabilities of Japan.

Total confusion had prevailed in the aftermath of the disaster at the Fukushima Daiichi Nuclear Power Station. Response teams from various organizations gathered at the off-site center, but coordination among units with diverse cultures and procedures was not easy. Some form of framework was needed. The Prime Minister issued a special directive that JSDF units in the field would take unitary control of all works, such as water spraying and monitoring. In other words, JSDF was placed at the heart of the operation, through the coordination with other bodies such as the Fire and Disaster Management Agency, the Nuclear and Industrial Safety Agency, and Tokyo Electric Power Company. This mechanism worked quite well, and it demonstrated that a systematic response by the government could be the basis of smooth coordination between the military and the public and private sectors.

**Conclusion**

The Japanese military is expected to play a greater role in HA/DR in the future, so should maintain its readiness accordingly. Civil-military and public-private sector coordination underpinned by government response planning is essential. This applies in an international context, as well.

JSDF carried out unprecedented HA/DR operations in the response to the Great East Japan Earthquake and is now reviewing its disaster relief operations plans based on the lessons learned during the response. Since seismology is a relatively new study, we are not yet able to predict all possible disasters. However, earthquakes have been occurring at an increasing scale around the world in recent years. Therefore the JSDF should be prepared on the assumption that even larger scale disasters may happen in the future.

Japan Ministry of Defense, Defense of Japan 2011, Ministry of Defense (August 2011), 241. Unit commanders may make a dispatch in the event that 1) intelligence gathering is necessary in order to provide information to relevant organizations and bodies, 2) it is deemed impossible for the prefectural governors to make a dispatch request and immediate rescue measures are required, or 3) life-saving rescue operations occur, or a fire or disaster occurs in the vicinity of Ministry of Defense facilities.

Japan Ministry of Defense, Defense of Japan, 169. The Central Readiness Force (CRF) is the main mobile unit of the Japan Ground Self-Defense Force. Established in 2007, CRF plays a central role in preventing the expansion of various emergency situations domestically, and also in the case that Japan rapidly and continuously dispatches forces for use in international peace operation activities. CRF has the Central Nuclear Biological Chemical Weapons Defense Unit under its command, which served as the core operating unit in response to the Fukushima Daiichi Nuclear Power Plant disaster.


National Police Agency of Japan, “Damage situation and police countermeasures associated with 2011 Tohoku district – off the Pacific Ocean Earthquake,” National Police Agency of Japan, http://www.npa.go.jp/archive/keibi/biki/higaijokyo_e.pdf (accessed March 18, 2012). Miyagi Prefecture was the area most affected by the Great East Japan Earthquake, where 9,516 persons were killed (out of the total 15,858 killed) and 1,581 are still unaccounted for (out of a total of 3,021 missing).

About the author: Captain Hiroyuki Terada is an active Japanese Naval Officer commissioned in 1990. After being qualified as a submariner, he spent most of his time underwater in the first 10 years of his career. He has had several command and staff assignments, which include serving as the Commanding Officer of JS Narushio (SS-595) from 2004 to 2005, and the Defense Attaché in the United Kingdom from 2007 to 2010. He holds a master’s degree in social science from the National Defense Academy of Japan. Captain Terada is currently serving as Commander, 3rd Submarine Division, Japan Maritime Self-Defense Force. Prior to his current post he was the Chief of the International Policy and Planning Section in the Joint Staff. This section’s main responsibility is defense exchange and cooperation between Japan and other countries. During the Japan Self-Defense Forces’ response to the Great East Japan Earthquake, he functioned as a spokesperson for defense and service attaches in Tokyo.
At 14:46 local time on March 11, 2011, the whole of Japan was rocked by a magnitude 9.0 earthquake whose epicenter was 373 kilometers (232 miles) northeast of Tokyo, or about 130 kilometers (81 miles) off the eastern coast of the island of Honshu. This was the largest earthquake in recorded history in Japan. Soon after that, a post-quake tsunami inflicted additional damage to the area. According to the National Police Agency, approximately 15,900 are dead, 2,900 are still missing and the Cabinet Office estimates the economic damage may reach, at worst, as much as 2.5 trillion yen (more than US$30 billion). It is officially named the Great East Japan Earthquake, and civil-sector medical staff and the Japan Self-Defense Forces (JSDF) medics put all their power in to saving the survivors. Their effort is highly appreciated by the local people; however, some lessons were learned in the cooperation between the two sectors during the rescue operation. Some of these lessons are briefly introduced in this article in hopes of further improvement of civil-military medical cooperation.
Medical disaster relief system in Japan

The disaster relief system in Japan is legally based on the Disaster Countermeasure Basic Law (1961), which was legislated as a lesson from the Ise-wan Typhoon (1959), or Super Typhoon Vera (international designation: T5915). It reached peak intensity with winds of 190 miles per hour (306 kilometers per hour) and a low air pressure of 896 hectopascals (hPa). As the result of it approximately 5,000 people were killed. (By comparison, Hurricane Katrina [2005] in the United States peaked with winds of 175 miles per hour [282 kilometers per hour] and a low pressure of 902 hPa, while it killed around 2,000 people.) The Basic Law designates a prefectural governor or a municipal mayor as the head of each disaster countermeasure headquarters. The police, the fire department, JSDF and other organizations conduct disaster control and relief operations under the instruction of the headquarters. The Great Hanshin-Awaji Earthquake (1995, commonly called the Kobe Earthquake) provided many more lessons for disaster medical care. In the post-disaster review, it was pointed out that there was a delay in establishing an early stage medical assistance system. A specialist group organized by the Ministry of Health, Labour and Welfare to review the relief operation reported that if normal emergency care had been supplied, about 500 people, or around 10 percent of the casualties, could have been saved.

The necessity for a government-led systematic response to urgent medical needs right after a disaster was recognized, and consequently the Japan Disaster Medical Assistance Team (DMAT) system was established in 2005. Not only do DMATs provide medical services in the disaster area, but they also support restoration of damaged hospitals and transport patients out of the affected area. The primary objective of DMATs is to deal with sudden trauma and crush syndrome in the super-acute phase (48 hours after the disaster strikes), and their operational period is generally less than five days. As another lesson of the Great Hanshin-Awaji Earthquake, a major hospital in each medical district, which is composed of several municipalities, is designated as a “disaster medical care base hospital,” which is supposed to become a medical relief base and be financially supported by the national government to upgrade its facilities for this purpose.

In a disaster, the Japanese Red Cross Society (JRCS) also plays an important role in medical assistance. The history of JRCS’s disaster relief goes back to the Mount Bandai eruption in 1888; it was one of the first Red Cross peacetime operations in the world. JRCS is regarded as a designated public institution in the Disaster Countermeasure Basic Law, and it prepares approximately 500 medical response units (7,000 staff) throughout Japan for disaster relief activities. In a disaster, JRCS dispatches medical response units (each unit is composed of six people – doctors and nurses) and the medical instruments to set up temporary medical care sites. They circulate through shelters to provide examinations and services, including mental care. JRCS has substantial experience in disaster relief, and its medical response units are typically deployed in time for the acute phase (three to seven days after the disaster).

In Japan, since the creation of the civil sector-led medical assistance system for disaster response, JSDF medics have generally not been needed as much in disaster relief. However, when the Great Hanshin-Awaji Earthquake occurred, victims faced a severe lack of medical assistance, therefore the JSDF mobilized the full potential of its medics. JSDF Hanshin Hospital (200 beds), located near Kobe, worked as a JSDF medical relief base,

"Thanks to the lessons of the Great Hanshin-Awaji Earthquake, the gap between demand and supply for medical services after the Great East Japan Earthquake was quickly filled."

Japan Ground Self-Defense Force soldiers remove rubble
while JSDF medics set up 18 temporary medical care sites and conducted circulating examinations, including operations using field hospital wagons. Likewise, JSDF pharmacists were put to work classifying the immense amount of medicine brought to the afflicted area as relief supplies. In order to prevent the worsening of sanitary conditions, JSDF buried the dead and disinfected raw garbage that was left untreated due to the collapse of municipal administrative services.

**Challenges to medical assistance after the Great East Japan Earthquake**

Thanks to the lessons of the Great Hansin-Awaji Earthquake, the gap between demand and supply for medical services after the Great East Japan Earthquake was quickly filled. JRCS dispatched a total of 397 medical response units by March 28. Meanwhile 33 DMATs were working in the disaster area as of March 16, when their operations were scaled down because they are primarily used in the super-acute phase of response. The Japan Medical Association also organized 129 assistance teams (Japan Medical Association Teams...
or JMATs) to take over medical activities after the withdrawal of the DMATs. JMATs are intended for the acute phase and were deployed for 10 days beginning March 16. This quick launch of medical assistance showed great improvement from the response to the Great Hanshin-Awaji Earthquake, for which it took three weeks to reach the maximum number of medical assistance personnel.

However, the damage anticipated by the medical assistance personnel following the March 11 disasters was largely different from the actual situation. According to the National Police Agency, the approximate number of victims of the Great Hanshin-Awaji Earthquake was 6,400 dead and 43,800 injured; the figures for the Great East Japan Earthquake were 15,900 dead and 6,100 injured, according to the Cabinet Office. The ratio of dead to injured victims was inversed between the two earthquakes. Based on their experience, medical experts dispatched after the 2011 earthquake thought they would have many surgical patients as a result of the earthquake. On the day of the Great Hanshin-Awaji Earthquake in 1995, more than 90 percent of the patients at the Red Cross hospital in Kobe were surgical, and this figure was still 63 percent on the following day. But the situation was different after the Great East Japan Earthquake. In Ishinomaki, a city that suffered heavy damage from the post-earthquake tsunami, according to the records of the Ishinomaki Red Cross Hospital, only 23 percent of “red (serious)” triaged patients were surgical. Thirty-two percent of them were chronic and 26 percent were hypothermic. The reason for the low percentage of surgical patients is believed to have been that a lot of people who were injured in the earthquake and would have been surgical patients were likely drowned by the tsunami. Some skilled surgeons were more than willing to rush to the affected areas with high-tech medical instruments. Many advanced personnel sought in vain patients who needed such high-quality medical care. What was more needed was medical attention for chronic illnesses and infections that required relatively low-key effort. Thus in spite of the post-quake medical assistance surge, there was a mismatch of demand and supply in each specialty.

Another problem was distribution of medical assistance personnel gathered from around Japan. It has been reported that some devastated areas did not have enough medical assistance, and a few of them had to wait a long time before the
arrival of assistance. One of the reasons for this was the collapse of municipal governance; there was no mechanism to monitor the needs for medical assistance. The Disaster Countermeasure Basic Law specifies that municipal mayors are supposed to supervise disaster relief operations, however, many municipal offices and city halls were swept away, and staff could barely control relief activities. Another reason was that the traffic network was paralyzed because the earthquake and tsunami destroyed infrastructure. Though many DMATs arrived in Sendai, the largest city in the peripheral area of the afflicted zone, they were hardly able to proceed to the ruined sites. Only a few of the DMATs and JRCS medical response units had their own vehicles, none of which were the off-road type, and they also had refueling problems. As a result, what DMATs ended up needing from JSDF was not medics’ assistance, but transportation by high-mobility vehicles or helicopters. Given such expectations, the DMATs (civil-sector medical staff) may have been more turf-conscious toward JSDF medics than they otherwise would have been.

As time passed, hospitals came to be used as evacuation sites, and that had not been anticipated by medical personnel. Only a doctor legally can certify death in Japan, so all of the discovered bodies were transported to hospitals to get the certification. As crematoriums were also damaged, bodies accumulated at hospitals and it caused hygiene problems. Moreover, because hospital buildings are designed to be quake-absorbing structures, their damage was relatively limited as long as they were safe from the tsunami. Therefore, hospital buildings attracted evacuees, and many patients whose houses were collapsed kept staying at the hospitals even after the completion of their treatment. Evacuees not only became obstacles to hospital operations but also consumed water, food and fuel that were stored there for medical treatment and hospitalized patients. However, since most evacuees also had some wounds and were in poor health, hospitals could not force them to leave. As a result, what DMATs expected from JSDF was not medics’ assistance, but transportation by high-mobility vehicles or helicopters. Given such expectations, the DMATs (civil-sector medical staff) may have been turf-conscious toward JSDF medics.

Lessons learned

Medical activities are, in principle, carried out in a hierarchic structure, in which patients are sorted according to their severity. The same applies for medical assistance in disaster relief. The hierarchy of medical facilities in disaster relief is generally composed of “circulating examination teams and temporary medical care sites,” a “front-line base hospital” and a “backward base hospital.” The former two are located in the damaged area, whereas the third one is usually located elsewhere. If a municipal government loses functioning due to an earthquake or post-quake tsunami, the front-line base hospital is required to succeed its role to manage medical assistance in the stricken area. As demonstrated above by their response to the Great East Japan Earthquake, DMATs, JRCS medical response units, JSDF medics and other support units and teams are able to arrive at the devastated zone relatively quickly. However, without a hierarchy of medical facilities, they are not able to work effectively. To improve civil-military coordination for effective medical response despite the paralysis of municipal governance, such a hierarchy should be adopted by all relevant actors for use in disaster response operations in Japan. JSDF’s self-contained emergency response capabilities lend it to
taking the initial leadership of this hierarchy until the civil sector is prepared to assume coordination and control responsibility. The ideal civil-military cooperation arrangement for medical response is discussed in the next section.

The recovery of the core hospital in an affected area has to be placed as a priority. In Japan, many hospital buildings are quakeproof and only a few of them have been completely or seriously destroyed by an earthquake. For example, only two hospitals totally collapsed and 10 partially collapsed out of 112 hospitals in Kobe in the Great Hanshin-Awaji Earthquake. In addition, as of February 3, 1995, two weeks after that earthquake, of the 69 emergency hospitals in Kobe 56 (81 percent) were accepting emergency patients, 50 (72 percent) were accepting inpatients and the operating rooms were workable in 47 hospitals (68 percent). Still, medical assistance teams were required to help restore damaged hospitals in addition to performing medical examinations.

Another lesson of the post-Great East Japan Earthquake medical response was that the number of emergency patients did not decrease even after the acute phase. The number of surgery patients decreased over time, however, infection patients increased due to bad sanitary conditions in shelters. Therefore, enhancement of the circulating medical examination teams is essential, as these teams are supposed to supervise the hygiene management of shelters as well as provide clinical examinations. The difficulty in this response was that almost all of the medical support units and teams were prepared only to provide medical services at fixed locations. Going around to shelters to provide treatments was not an easy task for them because many roads were blocked. Furthermore, the DMATs’ main mission was treatment of sudden trauma. Most of them withdrew within five days and thus, could no longer be responsible for these services after the acute phase. Currently, the DMAT headquarters (National Hospital Organization Disaster Medical Center, Tokyo) is reviewing the DMAT operations guidelines along with the lessons learned in the earthquake. Another thing that has to be kept in mind is that if medical assistance lasts long, the need for prescriptions for chronic diseases increases, whereas the number of pharmacists is relatively small compared with other medical personnel typically working in disaster response.

Information management is also an inevitable factor for effective medical support. Medical support units and teams generally stay in the damaged area only for several days, and this means information maintenance and handover is vital for seamless succession. JSDF has an advantage in information gathering because of its reconnaissance and communications capabilities. The challenge, however, is how to modify, sort and filter the huge volume of information that contains the locations of shelters, their medical characteristics, sanitary conditions, details of drug stocks, specialties of each support unit or team, as well as the rehabilitation progress of damaged hospitals, etc. What is more, the information constantly changes and has to be updated frequently.

In the case of the Great East Japan Earthquake, Google Japan undertook this job as a part of its assistance. However, Google followed a policy of collecting all information, regardless of its credibility, priority or usability. Processing such an information database should be done by information professionals in compliance with medical personnel requirements. When medical experts participate belatedly as database users after the data has been collected and the information has been inputted, the credibility, priority and usability of each record become problems, and the utility of the information is compromised.

The most important lesson learned is that medical support units and teams must recognize that they are no more than supporters or bridges of support until local medical services are able to recover. They have to follow the direction of local medical leadership. Medical

“In order to more effectively utilize the advantages that JSDF medics can have, they should not be separated from other military services.”
support units typically operate on a rotating scheme, but patients generally stay in the same facilities in the same areas. Though treatment and medical support from outside the devastated area might be better skilled with more sophisticated equipment, responding medical teams should have a high regard for the ways of local doctors. It is reported that after the Great East Japan Earthquake, some medical support units and teams did not follow the instructions of local medical leadership, and as a result they became obstacles for post-disaster medical treatment. It is ironic that these experienced units and teams whose purpose is to provide medical support would impede the recovery of local medical services. If local doctors direct the medical support, they will be able to coordinate outside assistance and local service recovery. However, some local doctors confessed that the effectiveness of foreign medical staff was limited in cases where there were language barriers.

**Ideal civil-military medical coordination in disaster relief**

In Japan, should a municipality lose its functioning in a disaster, its prefectural government takes over the responsibility for disaster relief in the region. In spite of this, when the Great East Japan Earthquake occurred, the prefectures could not control disaster relief operations appropriately for a while because communications were suddenly shattered. They were not able to grasp the disaster situation until JSDF set up communication posts at the prefectural office buildings and its reconnaissance units reported the damage to the governors. Only JSDF could search and approach shelters through debris. Therefore after a large-scale disaster, the following division of responsibility among medical support units and teams is desirable: civil-sector medics respond to accessible areas, while JSDF medics respond to inaccessible areas. To this end, JSDF medics should engage in disaster relief operations together with those who provide other JSDF services like reconnaissance, transport, communications, intelligence, material, etc. In order to more effectively utilize the advantages that JSDF medics can have, they should not be separated from other military services.

In addition to horizontal cooperation among JSDF services, what is necessary is vertical coordination within JSDF units by building a medical hierarchy with the JSDF Central Hospital (500 beds, can be expanded to 1,000 beds in an emergency) at the top. In other words, the above-mentioned hierarchy structure of circulating examination teams and temporary medical care sites, front-line base hospital and backward base hospital should be established within the JSDF medical structure soon after a disaster strikes. A circulating examination team should be composed of JSDF medics working in the affected area, and the nearest JSDF hospital should serve as a front-line base hospital. If there is no JSDF hospital in the area, JSDF should install a field hospital with a tent-like shelter and a mobile medical kit. JSDF Central Hospital or other JSDF hospitals should be ready as backward base hospitals, which could bring great relief to medical staff in the devastated region who typically suffer from a lack of everything: staff, medical supplies, facilities, electricity, water, time, etc. During the relief operations for the Great East Japan Earthquake, Tohoku University Hospital (1,308 beds), the largest hospital in the region, worked as a backward base hospital. If backward base hospitals have been immediately set up by some major civilian hospitals, JSDF medics do not necessarily need to perform this function.

Through the already stated advantages of horizontal cooperation with other military services, JSDF medics are able to organize the discussed medical hier-
archy much more easily and quickly than civil-sector medical institutions. In this hierarchy, the circulating examination team and the front-line base hospital have to be under the control of the local medical coordinator. Moreover, a JSDF circulating examination team should be generally intended for shelters that are inaccessible without JSDF’s mobility. A JSDF front-line base hospital should be a temporary substitute for recovering civilian hospitals, which traditionally play that role. The characteristics of civil-military medical cooperation in a disaster response will change as time passes from a JSDF medics-led hierarchy. During this process, JSDF medics should focus on the treatment of inaccessible patients.

Besides the horizontal and vertical cooperation in the JSDF, another role to be played by its medics is support for front-line Standing Care Units (SCU-front) that serve as the base in the affected area for long-distance patient transportation. The target patients for transportation are as follows: those who need advanced treatment immediately, persons requiring dialysis (in damaged areas water supply is likely disrupted), and mildly ill patients in order to vacate beds of hospitals in the disaster zone. From each shelter, temporary medical care site or hospital, patients should be carried by ambulances or helicopters of the emergency medical service, the fire department, the police, JSDF, etc, to the front-line transportation base. The long-range transportation from the SCU-front should be conducted by JSDF airlift fleets. Since JSDF air bases will also serve as front-line transportation bases, patients’ long-range transportation should be controlled by JSDF. Furthermore, from the point of view of maintaining a seamless connection between medical examinations and transportation, it may be better for SCUs-front to also be operated by JSDF medics. JSDF field medical equipment, such as hospital tents and field surgery units, is convenient to establish SCUs-front at airstrips. Hyuga class (19,000 tons full load) flattop helicopter carriers of the Japan Maritime Self-Defense Force or new class flattops that are under construction (27,000 tons full load) may be utilized as floating SCUs when coastal areas are hit by a tsunami too severely to be able to establish SCUs onshore. These vessels can operate many helicopters at a time and have medical facilities (operating rooms, Intensive Care Units, X-ray rooms, dental operatories, etc.) and beds (JDS Hyuga has 35 beds).

Conclusion

The advantages of JSDF medics lie in their ability to be self-sustaining, especially when they are accompanied by mobile, reconnaissance and communications capabilities that are the most important functions in managing disaster relief operations when devastated municipalities lose them. Having JSDF medics lead at the very first stage of a relief operation may seem rather confusing because civil-sector medical support will soon arrive at the devastated site. However, as mentioned above, civil-sector medical support units and teams cannot always cover all the devastated area nor collect information about shelters. JSDF-led operations in the early phases can fill the gap. As the civil-sector-led support framework is being prepared, coordination and control responsibilities should be transferred.

In autumn 2008, JSDF organized the large-scale disaster rescue drill Michinoku Alert 2008, in which local governments, JRCS, DMATs and other organizations took part. The number of participants was approximately 18,000 in total. The Michinoku area (Miyagi and Iwate prefectures) was exactly the place most damaged by the Great East Japan Earthquake, and this exercise was an invaluable experience for tackling the earthquake and tsunami disaster in 2011. Nonetheless, most of the disaster relief drills conducted by the national or local governments throughout Japan, including Michinoku Alert 2008, last only one day or two days at the longest. For effective disaster relief and to minimize preventable deaths, smooth transitions from a JSDF-led medical hierarchy to a civil-sector-led hierarchy and transformation of civil-military medical cooperation over time are required. Role-sharing within the civilian medical sector also changes as time goes on after a disaster. In order to simulate such complicated operations and clarify the questionable points, the duration of drills should cover the super-acute phase through the acute phase, or three to five days at least.

*Note: As one Japanese citizen, the author would like to express his deepest gratitude for direct and indirect assistance from across the world after the Great East Japan Earthquake.

About the author: Keishi Ono is the head of the Defense Economics and Post-Conflict Reconstruction Program at the National Institute for Defense Studies, the core policy research arm of Japan’s Ministry of Defense (MOD). His current research is focused on the role of private security companies in maritime security and post-conflict reconstruction, mobilization of child soldiers, and civil-military cooperation in disaster relief operations. He has published several papers on these topics and made a volume of academic presentations. Mr. Ono also serves as a lecturer in development economics for the MOD’s Defense Intelligence Headquarters. He holds a B.A. in Economics from Kyoto University, an M.A. from Aoyama Gakuin University and an M.Sc. in Development Economics from the School of Oriental and African Studies, University of London. He can be reached at ono-k@nids.go.jp.
ASSISTING STATES
The United States offered immediate support to Japan following the 9.0 earthquake and tsunami on March 11, deploying a U.S. Agency for International Development (USAID) Disaster Assistance Response Team and activating U.S. military forces operating in and near Japan within hours. The U.S. military response to the Government of Japan’s request for assistance would be labeled “Operation Tomodachi,” encompassing operations from March 11 to June 1, 2011. In addition to the typical difficulties inherent in responding to a large, devastating foreign disaster, the U.S. military response to the Great East Japan Earthquake was faced with some unique challenges. With the disabling of primary and secondary cooling systems of multiple reactors within the Fukushima Daiichi Nuclear Power Plant and the accompanying release of radioactive materials into the environment, U.S. forces experienced their first large-scale deployment in a radiologically contaminated environment. Furthermore, in addition to putting a large Japanese populace at risk, the release from the Fukushima Daiichi plant, ap-
proximately 150 miles (241 kilometers) from Tokyo, posed a potential threat to the estimated 104,000 U.S. Department of Defense (DOD) personnel – half of them dependents of uniformed personnel – living in Japan for which the U.S. military’s Pacific Command (USPACOM) was responsible.

U.S. forces developed three major lines of operation: the provision of humanitarian assistance and disaster relief (HA/DR), the military-assisted departure of U.S. citizens known as “Operation Pacific Passage,” and consequence management operations related to mitigating the effects of the release of radioactive materials. U.S. forces provided logistical support and supplies, conducted search and rescue operations and helped to restore critical infrastructure, all while maintaining high-level coordination with the Government of Japan through the U.S. Embassy and the Japan Self-Defense Forces (JSDF). Major military assets were also deployed to the area, including the USS Ronald Reagan carrier strike group.

At the peak of Operation Tomodachi, some 24,000 personnel, 189 aircraft and 24 Navy ships were involved in relief efforts.

Commander, U.S. Forces Japan (USFJ), based at Yokota Air Base near Tokyo, provided the initial leadership and served as the headquarters for the USPACOM-established Joint Support Force (JSF) throughout the operation. As the situation grew more complex, USPACOM decided to activate a contingency response Joint Task Force (JTF) led by the Commander of U.S. Pacific Fleet (PACFLT), based at Pearl Harbor, Hawaii, to augment the JSF in Japan and exercise command and control for an expanded response.

The following are summaries of some of the lessons learned identified by USFJ and PACFLT, drawn from materials provided by each command.

“Although not staffed and configured to support operational-level command and control, USFJ maintained essential coordination mechanisms and daily working relationships with both the U.S. Embassy in Tokyo and JSDF senior leadership.”

U.S. Forces Japan

The U.S.-Japan Treaty of Mutual Cooperation and Security (1960) allows for U.S. troops to be stationed in Japan, and obliges the United States to defend Japan and cooperate with JSDF for defense and disaster response operations, among other missions. During peacetime, USFJ’s responsibilities include maintaining and operating
port facilities and a series of logistics installations, and providing base and logistic support across Japan. U.S. uniformed military personnel, numbering around 38,000 and representing all branches of services, are stationed at 85 facilities across Japan and regularly participate in bilateral planning and training exercises with their JSDF counterparts, including for HA/DR.  

When the Great East Japan Earthquake occurred, USFJ was in the unique position of being in very close proximity to the unfolding disaster. Although not staffed and configured to support operational-level command and control, USFJ maintained essential coordination mechanisms and daily working relationships with both the U.S. Embassy in Tokyo and JSDF senior leadership. On March 11, USPACOM designated USFJ as the supported command for all U.S. military efforts under Operation Tomodachi. U.S. forces were able to quickly coordinate with the Government of Japan and U.S. troops, and military assets were deployed within 24 hours. As the response grew rapidly and the JSF was established, USFJ Commander Lieutenant General Burton Field was appointed its first commander. A few key lessons learned by USFJ during Operation Tomodachi are described here, as drawn from a presentation by USFJ Deputy Commander Brigadier General William Crowe at the 2012 Humanitarian Assistance and Disaster Relief Conference in Seoul, Republic of Korea, and from correspondence with senior USFJ staff.

Bilateral training and exercises prepare forces to work together effectively in disaster response.

Bilateral information and intelligence sharing are essential to relief efforts.

Sharing information is essential to effective bilateral or multilateral operations. This applies not just to information needed for situational awareness, but also for the protection of personnel. In the case of the Great East Japan Earthquake, sharing information such as lessons learned about how responders could be affected by traumatic stress, for example, enhanced all parties' abilities to operate in this complex joint environment. It is important to create and socialize bilateral information management standard operating procedures. One way to do this would be to create a bilateral mission network as a foundation for bilateral information sharing and collaboration. As a critical activity in cataloguing successes and failures in joint operations, after action reports should also be shared among partners.

A common operating picture should be established for use by all stakeholders.

A common operating picture (COP) that can be shared among all parties is essential to help synergize relief efforts when multiple stakeholders are involved. Although U.S. forces and JSDF communicated well and exchanged liaison officers in the response to the March 11 disasters, this was not enough to build a fully adequate picture of the operational environment. Critical information, such as the activities, status and whereabouts of United Nations agencies, non-governmental organizations (NGOs) and the private sector, was not readily available to USFJ. To build an effective COP that meets the needs of all parties, there must be a common understanding of the information needed by the host nation responding agencies, foreign militaries and governments, local communities and the humanitarian community and private sector. The COP should be made available to a wide audience on unclassified networks. Furthermore, one step that could be taken to enhance common understanding is to increase interaction among host nations, militaries and the humanitarian community prior to disasters. Measures to accomplish this include
maximizing participation in civil-military HA/DR conferences and workshops, increasing HA/DR planning and activities during exercises, and enrolling military staffs in trainings such as USAID’s Joint Humanitarian Operations Courses and U.N. Humanitarian Civil-Military Coordination Courses.

The U.S. military must continue to prepare to support HA/DR operations. The U.S. military’s primary focus remains the defense of the United States, thus time and resource budgets understandably favor preparing for war-fighting as a priority over humanitarian assistance or disaster response operations. But as the military’s role in supporting HA/DR is refined, it must continue carrying out efficient and cost-effective training and exercises that enhance its professionalism in this field and ensure that personnel clearly understand their support role in such operations. As was well demonstrated in the response to the Great East Japan Earthquake, the U.S. military must be prepared to support the host nation through authorized channels of support. Under Department of State (DOS) and DOD policy, the host nation should always remain the lead in disaster response operations. The USAID Office of U.S. Foreign Disaster Assistance (OFDA) is the U.S. lead agency for HA/DR support to foreign countries. The use of U.S. military support should be limited to the leveraging of its unique capabilities, such as logistical and air support, engineering and trauma medicine.

Host nation preparedness is the best way to avert greater catastrophe. The response to the March 11 disasters clearly demonstrated that HA/DR in a developed country is different than in a developing country. In Japan, strict building codes and regular disaster drills were among the factors that limited the damage and deaths caused by the earthquake. Furthermore, the country had the capacities required to deal with the unprecedented disaster. Japanese military preparations allowed for rapid response by JSDF and effective coordination with USFJ, and the Japanese Ground Self-Defense Force conducted the majority of the relief efforts. The Japanese private sector and local communities have done the bulk of the work in recovery and reconstruction, and many Japanese NGOs that normally serve abroad have remained in Japan to support domestic recovery efforts.

“Organizationally, the big thing that we learned in working with the Japanese is that we have to work harder on our information, in this case information sharing. That requires a lot of effort and it requires some changes in the way that we have in policy and in the systems that we employ.”

-Lieutenant General Burton M. Field, then Commander of U.S. Forces Japan, remarks at the Air Force Association’s 2011 Air and Space Conference and Technology Exposition

U.S. Pacific Fleet/Joint Task Force-519

Within a week after the earthquake and tsunami, the disaster had increased in complexity and U.S. military support to Japan had grown to include multiple lines of operation. On March 18, USPACOM activated JTF-519, a command designed for contingency response and operational-level planning functions, with orders to augment USFJ as part of the JSF. On March 24, USPACOM assigned JTF-519’s commander, PACFLT Commander Admiral Patrick Walsh, to lead the JSF. JTF-519 led the establishment of a command and control system for combined HA/DR and consequence management operations in support of the Government of Japan. On April 12, as the pace of crisis response activities began to subside, USPACOM ordered the JTF to stand down and USFJ assumed command of the JSF and Operation Tomodachi until it formally ended on June 1.

Lieutenant (junior grade) Jaden Risner, assigned to the Black Knights of Helicopter Anti-Submarine Squadron 4 embarked aboard the aircraft carrier USS Ronald Reagan (CVN 76), speaks with Japanese citizens during a humanitarian assistance mission in Oshima, Japan, on March 21, 2011. Ronald Reagan was operating off the coast of Japan providing humanitarian assistance as directed in support of Operation Tomodachi.
In an effort to record an accurate historic account, capture key insights and share knowledge with future commanders operating in similar circumstances, PACFLT commissioned CNA’s Center for Naval Analyses, a Federally Funded Research and Development Center that serves U.S. defense agencies, to complete two reports on Operation Tomodachi, one reconstructing the timeline of significant events and the other focusing on the specific challenges of operating in a radiologically contaminated environment. The following lessons learned reflecting PACFLT’s experiences are extracted from the Center for Naval Analyses reports:

**Standard tools and guidance for operating in radiologically contaminated environments should be developed for use in future disasters.**

Following the accident at the Fukushima Daiichi Nuclear Power Plant, it took the JSF several weeks to develop adequate mechanisms for real-time situational awareness and then test decision-support tools specific to this situation. These tools included a bilateral crisis notification plan to help the host nation and the United States recognize and respond decisively to indications of a large release of radioactive materials should one occur. The U.S. DOS and DOD should consider developing similar tools in other countries with a large U.S. military footprint where chemical, biological, radiological and nuclear incidents are a strong possibility. Working with host nations in advance to accomplish this may help to align U.S. and host nation standards in order to minimize confusion over issues such as the United States and the host nation implementing different evacuation zones for their respective personnel, as was the case initially following this disaster.

The need to translate a plethora of technical data and information about the situation in Fukushima and the spread of radiation into material that could support decision-making was a significant challenge for the JSF. Issues like the use of different standards to determine what could be considered “safe” levels of exposure to radiation, or the reasons for the use of different measurement units were frequently debated and not always understood. Although it may be difficult to translate this complex science into practical guidance, the ability to do this is as important as the availability of the technical data itself. The Center for Naval Analyses recommends the development of a primer on radiological issues to familiarize personnel with measurements, terms, exclusion zones, etc. It also advocates development of a framework for a radiological COP concept based on the type of decisions that the COP can be expected to support and the changing set of information that is likely to be available over the course of a response.

**The United States needs a formal framework for coordination of federal agencies in support of international disaster response operations.**

The DOS, and within it USAID and OFDA, has the lead for coordinating U.S. international disaster responses. However, the response to the Great East Japan Earthquake and the accompanying disasters challenged the traditional approach to coordination because it required support from multiple U.S. federal (ie, national-level) agencies not typically involved in a disaster response outside the United States. For example, the JSF commander noted that there was no protocol for him to request assistance and mobilize support from other agencies to address problems such as the need to measure and model the effects of radioactivity in the sea – a capability that was limited within the U.S. military. Likewise, some U.S. agencies did not have means in place to respond to requests for such overseas assistance and, more importantly, it was not clear how these agencies should have organized their efforts in support of the DOS.

The Center for Naval Analyses recommends that the U.S. Government consider drafting an international response framework to guide U.S. inter-

“In Japan, strict building codes and regular disaster drills were among the factors that limited the damage and deaths caused by the earthquake.”
the measures that worked effectively was the establishment of direct lines of information sharing between U.S. forces and JSDF. Examples include the exchange of U.S. and Japanese liaisons between the JSF headquarters and the Japan Joint Staff, and the creation of a direct line between the JSF commander and the Chief of the Japan Joint Staff. Also, nearly all Operation Tomodachi materials were unclassified, and the deliberate decision to give the Japanese open access to U.S. military unclassified systems facilitated information sharing and enhanced transparency. In addition, U.S. forces did their best to use technology for planning, tasking and information sharing that was accessible to all stakeholders, including U.S. Government agencies, the Government of Japan and JSDF.

Strong bilateral relations facilitate smooth central coordination in times of emergency.

Their historic alliance and established relationships allowed the United States and Japan to coordinate activities at a high level and facilitated the quick provision of assistance by the United States. Transparency was key to maintaining these relationships throughout the complex disaster response. Initially, the U.S. military components coordinated directly with their JSDF counterparts. But after the initial shock of the disaster, the two forces worked toward centrally coordinated response operations. An effective process for consolidating, validating and coordinating requests with the U.S. Embassy had to be established through Japan’s national response mechanism. Combined crewing of maritime survey flights, the exchange of liaisons, and a central system of tracking requests for HA/DR support are examples of the transparent methods by which the U.S. and Japanese forces collaborated to improve efficiency. U.S. forces followed the Japanese lead, and correctly anticipated that Japan would quickly reach the point where it could manage relief activities on its own and would request cessation of U.S. HA/DR support.

JTF-519’s organization and practices were adaptable to support complex contingency operations.

Prior to the disaster, USFJ’s primary role was the maintenance of the U.S.-Japan military relationship, which was invaluable in positioning the command to coordinate quickly and effectively with the U.S. Embassy and the JSDF Joint Staff. But USFJ was not manned or equipped to serve as an operational command center for a major disaster under the JTF construct. The deployment of JTF-519 to lead the JSF from late March through April 12 was the JTF’s first application in command of forces for large and complex real-world operations. According to the Center for Naval Analyses’ reports, JTF-519’s command and control framework was adaptable to the situation and facilitated the simultaneous management of multiple lines of operations in an uncertain environment. The combination of JTF-519’s organization and USFJ’s relationships with the host nation made the JSF successful in providing significant support to Japan.

“There is nothing that can replace relationships…To have those established relationships, whether working with logistics or communications or armed forces working side by side, to have insight into what each other’s capabilities are, as well as what each other’s needs are, is very, very, important.”

–Admiral Patrick M. Walsh, then Commander of U.S. Pacific Fleet and Joint Task Force-519, in an interview with the American Forces Press Service.

Notes
2. Brian Walsh, Matthew Grund and Barry Howell, Operation Tomodachi: A Reconstruction Timeline (CNA’s Center for Naval Analyses, June 2012), 8.
5. Walsh, Grund and Howell, 23.
6. The Humanitarian Assistance and Disaster Relief Conference was held in Seoul, Republic of Korea, from May 8-10, 2012, and was designed to foster regional civil-military collaboration to address disasters that are large enough to require international assistance. It was organized by the Korean non-governmental organization Council for Overseas Cooperation and supported by USPACOM’s Center for Excellence in Disaster Management & Humanitarian Assistance, the Korean Ministry of Foreign Affairs and Trade, Ewha Womans University and U.S. Forces Korea.
8. Walsh, Grund and Howell, 1.
9. Walsh, Grund and Howell; Matthew Grund, Brian Walsh and Barry Howell, Operation Tomodachi: Analysis of Selected Topics Related to Operations in a Contaminated Environment (CNA’s Center for Naval Analyses, June 2012).
The first three months of 2011 will be remembered as the busiest period in the history of New South Wales Task Force 1 (NSWTF/1), one of two Australian internationally deployable heavy Urban Search and Rescue (USAR) teams. The mission to Miyagi Prefecture in Japan in March of 2011 came on the back of a six-week period during which we deployed a 54-person USAR team to assist with the flood crisis in Queensland, Australia, and a 72-person team to respond to the earthquake in Christchurch, New Zealand. We also provided a large number of personnel for a second multi-jurisdictional team that went to Christchurch to assist with bridging the gap between the response and recovery phases for the community with tasks such as ensuring that damaged buildings were made safe for residents and other occupants.

Although many international USAR teams that had responded to Christchurch were placed in the same position as we were, the quick turnaround fully tested the capabilities and resources of a Task Force with minimal history of overseas deployment. One of the primary outcomes of these events occurring within such a short time frame was that there was little opportunity to collate information from one deployment to the next and no real chance to implement lessons learned from the Christchurch experience or develop improved deployment procedures prior to departure for Japan. Fortunately, many of the Task Force members who went to Japan had also been on one of the aforementioned deployments, so while practices may not have been formally amended there was a high degree of first-hand, practical knowledge available within the team regarding the previous deployments.

The term “lessons learned” often suggests the making of horrendous mistakes and ensuring that these errors are not repeated. While there is no doubt that we should strive not to repeatedly make the same mistakes, the value of recognising procedures that are proven to be successful under pressure should not be underestimated. The true test of any plan comes from how it performs under the pressure of activation and while improvements are almost always possible, the successful components of the operation should be emphasised to ensure that they are not lost. NSWTF/1 is managed by Fire & Rescue New South Wales (FRNSW) and embraces the lessons learned principles that FRNSW utilises. This commences with detailed record-keeping throughout the event, including ongoing briefing and debriefing processes while on deployment. Upon return home separate operational and critical incident debriefs are conducted, and a comprehensive post-mission report is produced and disseminated. The final step is the implementation of recognised measures that will improve future deployments by all stakeholders within the Task Force.

Both prior to the deployment and once NSWTF/1 arrived in country, there were several issues specific to the Japan mission.
that we have been able to reflect upon as learning experiences:

**Training to international guidelines**

As a team that has been registered with the United Nations International Search and Rescue Advisory Group (INSARAG) since 2001 and is preparing to be classified as an INSARAG heavy USAR team (the classification designated for the most difficult and complex search and rescue operations), NSWTF/1 is aligned with and closely follows the INSARAG Guidelines. Maintaining these standards helped make operations, liaison and cooperation with other international USAR teams and the local emergency management authorities successful. This proved to be of significant importance during the Japan deployment, and a number of the positive
lessons learned in Japan reinforced the importance of the guidelines for an effective deployment.

**Risk management**

Due to extensive open-source media reporting on the disaster as it was taking place and in the immediate aftermath, an intelligence brief on the extent of the disaster and the secondary risk posed by damage to nuclear power reactors and other major infrastructure was able to be conducted by Task Force management well before the response orders were received. This information was reinforced by the release of the first U.N. Office for the Coordination of Humanitarian Affairs situation report on March 12. As a result, the Task Force management team was able to implement an environmental assessment of the disaster area and adequately prepare for the potential risks that the team could expect to encounter.

One of the major outcomes of conducting the environmental risk assessment prior to departure from Australia was the decision that changes had to be made to the cache inventory to ensure the safety of the Task Force members. Although the cache contained a significant capability for dealing with hazardous materials (HAZMAT), it did not include the required radiation detection and monitoring equipment. The Task Force was able to source this from within FRNSW prior to its departure, which bridged the capability gap and ensured the ongoing safety of the Task Force despite the consequences associated with potential radiation contamination. The well-established and exercised relationships between FRNSW and the Australian Radiation Protection and Nuclear Safety Agency and the Australian Nuclear Science and Technology Organisation also proved invaluable, not only prior to departure, but also for information sharing and collaboration throughout the deployment and upon return to Australia. The Task Force also utilised the existing radiation management policy and procedures that are in place within the New South Wales emergency management arrangements and well-known to all agencies represented.

“The ability to draw on additional HAZMAT specialists was vital to the success of the deployment to Japan.”
within the Task Force.

Additionally, the benefit of the Task Force leaders having a robust risk management process, in conjunction with excellent intelligence and information gathering systems, enabled operations to continue safely in a high-risk environment. The specific risk management process was based on ISO 31000, a framework that involves a five-step process of establishing context, and then identifying, analysing, evaluating and treating the risk. Throughout the process it is essential to both communicate and consult with partners, and to monitor and review any treatment measures that are implemented. Strict adherence to the risk management process throughout was integral to the success of the operation. By utilising such a systematic approach, the safety of Task Force members could be maintained in a difficult working environment that included numerous aftershocks and the constant threat of building collapse or tsunami.

**Deployment planning**

Australian USAR teams will not deploy unless a formal request has been received by the Australian government from the affected country. The request from the Japanese government to deploy a heavy USAR Task Force was received on March 12, and mobilisation of NSWTF/1 commenced on that day. Australian USAR teams almost always deploy overseas using Australian Defence Force (ADF) aviation assets. Transporting NSWTF/1 to Japan proved problematic for a number of reasons within and outside our control. Consequently, it was recognised during the debrief process that we could improve our load plans and work in collaboration with ADF personnel to ensure a smoother process in the future. Something that we had failed to fully capitalise on prior to deploying to Japan was the fact that we were likely to use only a limited number of types of aircraft to deploy the Task Force overseas. In our pre-planning up to that point, we had not developed comprehensive load plans of our cache specifications. Since the deployments of early 2011, we have been committed to collaborating with ADF personnel to develop and exercise load plans that are able to be adapted to each specific air platform for heavy and medium USAR deployments, inclusive of requirements for transportation of dangerous goods. While the cache manifest may vary slightly with each deployment, resources are now in place to produce the required documentation within an efficient and acceptable time frame.

**Task organization**

An important component of preparing a USAR Task Force for a successful deployment is having flexibility within the Task Force structure when initially selecting the members best suited for the expected conditions, and subsequently when the team commences operations in country. NSWTF/1 is primarily composed of and led by FRNSW personnel, but also contains personnel from five other agencies. The ability to draw on additional HAZMAT specialists was vital to the success of the deployment to Japan. Training both HAZMAT technician firefighters and paramedics to the same USAR standards as rescuers allowed for internal flexibility of personnel throughout the period of operations.

“It is a fact, though, that modern society has an expectation of receiving real-time data on events and as such, it is important to establish an effective media strategy at an early stage to control information.”
Weather

The weather conditions that the Task Force encountered in Japan were beyond anything that the Australian team had previously experienced. Australia has relatively mild winters, and the chances of personnel working in conditions of snow are normally minimal. However, during the deployment to Japan the team was exposed to temperatures that reached as low as -17 degrees Celsius (1 degree Fahrenheit) during the night. The management team attempted to address this by reverting from the usual 24-hour operations to daytime-only operations. While some elements of equipment such as the cold-climate clothing issued during mobilisation proved adequate in the circumstances, other aspects such as sleeping bags and tents proved to be less than ideal for such conditions. Another issue that arose due to the cold conditions was that the Task Force water supply began to freeze overnight. While many obstacles were overcome through the resilience and ingenuity expected of highly trained and experienced USAR personnel, measures have since been put in place to better prepare future deployments facing similar extreme weather conditions.

Transport

Another lesson learned from Japan is the importance of providing adequate information to assist with the sourcing of transport arrangements once the Task Force arrives in country. It is essential that this is done as soon as possible and with enough detail provided to ensure that the authorities making these arrangements on the team’s behalf have adequate information, such as the logistical footprint of the cache, so that they can source suitable transport and ensure the earliest possible commencement of operations. Despite infrastructure having suffered extensive damage and resources being in short supply across the disaster-affected region, logistics and support staff were able to provide adequate transport requirements throughout the deployment.

Liaison, language and culture

Two Australian Department of Foreign

The Australian team had to operate in harsh winter conditions during its deployment to Japan after the March 11 disasters. This photo shows conditions at the Base of Operations in Tome city.
Affairs and Trade personnel from the Australian Embassy in Japan joined the Task Force when it arrived in country and proved invaluable for communication and liaison with local authorities, as well as assisting with the acquisition of additional logistical support such as transportation, fuel and navigation. The knowledge base and awareness of the local culture that these personnel brought to the Task Force was also vital in ensuring successful outcomes in all negotiations with local emergency management officers.

Media strategy

The ability of international media to report on disasters using both their own resources and those available through social media places an ever-increasing responsibility on Task Force management to manage the distribution of accurate information. This initially requires discipline within the team to ensure that sensitive pictures, footage and information that may compromise the integrity of the mission are not released to the general public. It is a fact, though, that modern society has an expectation of receiving real-time data on events and as such, it is important to establish an effective media strategy at an early stage to control information regarding the activities of the Task Force. It is also necessary to ensure that the Task Force members are able to have contact with their family members while overseas. While this may not always be possible for various reasons, at the very least families need access to up-to-date information regarding the welfare of their family members while they are on deployment. A communication plan must be in place to address this issue.

Debriefing outcomes and conclusion

An important part of effectively capturing the lessons from Japan was the implementation of a structured debrief process throughout the deployment, commencing with daily debrief sessions conducted by the leaders of rescue and logistics teams and linked into the command element through attendance, documentation and reporting by Task Force operations officers. NSWTF/1 includes at least one critical incident support peer within the Task Force to assist team members in coping with stress related to exposure to traumatic events. In Japan we were fortunate to have three trained peers available to assist team members in this regard. Prior to demobilisation, a mission debrief was conducted involving the entire Task Force to capture the outcomes and provide closure to the mission.

In conclusion, NSWTF/1 learned greatly from the deployment to Japan in 2011 and has since been committed to developing and implementing changes where shortfalls were recognised, while ensuring that the successful components become embedded in future operations. The importance of thorough preparation prior to deployment cannot be understated, especially in the development of our USAR response capability in accordance with INSARAG Guidelines and practices over many years. It was also key to adequately using all available resources to obtain mission-specific information immediately prior to responding, and having the flexibility to adapt to that information as necessary. In addition, the value of liaison both prior to and throughout the deployment was a significant lesson for the Task Force that can be implemented in future missions. Through the support of the Australian government and partner agencies within NSWTF/1, allocation of sufficient resources, commitment to training and exercising, and being open to investing in the experiences of others, we continually strive to improve our disaster response capability.

Notes

1. The assessment was conducted using the Flash Environment Assessment Tool (FEAT), a joint initiative of the United Nations Environment Programme and the United Nations Office for the Coordination of Humanitarian Affairs. The FEAT is a tool used to identify critical environmental risks immediately after a natural disaster occurs.

About the author: Brian Smart has been the Manager, Rescue Capability, Fire & Rescue New South Wales (FRNSW), since July 2011, a role which encompasses responsibility for the New South Wales Urban Search and Rescue (USAR) response capability, including the implementation of lessons learned. He is also a focal point for national and international USAR liaison and deployments. Prior to his current position, he held managerial roles in the FRNSW Hazardous Materials Response Unit and was a liaison officer with the New South Wales Police Counter Terrorism and Special Tactics Command. Superintendent Smart can be reached at Brian.Smart@fire.nsw.gov.au.
The Swiss search and rescue mission in Japan
An interview with mission leadership

By Michael Fichter

Within 24 hours of the earthquake and tsunami that struck Japan on March 11, 2011, the government of Switzerland dispatched a team of specialists to the scene. The Swiss Humanitarian Aid Unit (SHA), a corporate domain of the Federal Department of Foreign Affairs, deployed 23 experts, including the search element of Swiss Rescue, the Swiss Confederation’s rapid response mechanism that is composed of civilian and military staff. Three major hazards potentially awaited them during their eight-day mission: aftershocks, tsunamis and the risk of radioactive contamination. Not only did this situation make operational planning and communication difficult, it also placed the mission leaders under severe pressure.

Ambassador Toni Frisch was the head of SHA from 2001 to 2011 and is currently the chairman of the United Nations International Search and Rescue Advisory Group (INSARAG). Martin Jaggi is the deputy head of SHA’s Africa Division and led the Swiss rescue team in Japan. In the following interview on June 6, 2012, Jaggi and Ambassador Frisch explain events leading up to the deployment of the Swiss team, the challenges that had to be overcome, and the lessons that can be learned.
Michael Fichter: In March 2011, Switzerland immediately dispatched a search and evaluation team to help with relief efforts following the earthquake in Japan. How did this come about?

Ambassador Toni Frisch: Traditionally, relations between Switzerland and Japan have been very good, particularly when it comes to emergency relief. As far back as 1995, a Swiss Urban Search and Rescue (USAR) team was on hand to assist relief efforts following the Great Hanshin-Awaji Earthquake in Kobe. We have stayed in regular contact with the Japanese authorities ever since, so much so that in some instances these working relationships have developed into friendships. When the country found itself facing another major disaster, we immediately wanted to help.

MF: And Japan was prepared to accept Switzerland’s offer of help?

TF: As far as we were concerned, Japanese relief efforts were extremely well planned and organised. The authorities had made it clear that they wanted only a select number of teams that they could deploy in clearly targeted missions. And so, they accepted our offer of help.

MF: Even at that point it was likely that there were not one but three disasters to contend with: the earthquake, the tsunami, as well as the radioactive threat. Was this the first time that Swiss emergency relief teams were faced with the problem of possible radioactive contamination?

TF: Swiss teams had already acquired direct knowledge of dealing with these types of dangers from past missions. For example, in 1985 Swiss Rescue was dispatched to Mexico to help with relief efforts following an earthquake there. At one point during our mission we were at a hospital and found ourselves confronted with the risk of radioactive radiation as a result of damage to the X-ray department. Since that mission we have been continuously building up our nuclear, biological and chemical (NBC) capacities, so when one year later the Chernobyl nuclear disaster struck, Swiss Rescue was prepared for deployment. Our subsequent efforts to enhance and expand our NBC capabilities include help from the Spiez Laboratory, the Swiss centre of expertise for NBC protection, which is part of the Federal Office for Civil Protection.

MF: Swiss Rescue is classified by the United Nations International Search and Rescue Advisory Group as a “heavy USAR team,” meaning it is capable of complex search and rescue operations. Yet Switzerland only sent a skeleton team to Japan. Why?

Martin Jaggi: Our starting assumption was that we would be unlikely to find survivors. This is why we did not dispatch Swiss Rescue en masse, nor did we include rescue professionals on the team, opting instead for a search unit, including an on-site advisor, a logistics specialist, telecommunications experts and a small staff. In the interest of flexibility, we also took very little material and equipment with us. This was the right decision to make as the situation on the ground demanded a maximum degree of flexibility. In no time at all, the team could be assembled, equipped and dispatched on a regular scheduled flight. During the mission, we observed that we were more flexible than other teams: while we were already on board our two buses and heading for our destination in the affected area, other teams were still waiting around in Tokyo for their material and equipment to arrive.

MF: Mr. Jaggi, you led the team in Japan. How did the team prepare for its deployment?

MJ: Like any mission of this kind, time was of the essence. A few hours after the Japanese authorities had accepted our offer of help, a search team of 23 men and women, as well as nine dogs, had assembled at Zurich International Airport. The team was composed of civilian and military experts belonging to SHA’s rapid response pool, as well as members – and dogs – of the Swiss Disaster Dog Association. There simply wasn’t enough time for the team to wonder what was happening in Japan and start worrying; their primary concern was making sure that they were ready for their pending mission. However, back at headquarters, other staff were busy gathering as much information as possible about the situation on the ground. Shortly before
take-off, the team was briefed about the current situation. A medic was also on hand to provide us with tips on the precautions that we could take and to remind us of the most important rules of conduct we should adopt to safeguard our health. Last but by no means least, a radiation protection expert also travelled with us, providing a welcome source of reassurance. Of course, when we left Zurich at midday on Saturday, March 12, no one could have envisaged the scale of the disaster that would await us.

**MF: What did the mission actually entail?**

**MJ:** The search team and a support team from the Swiss Embassy in Japan met in Tokyo on Sunday, a day and a half after the earthquake. It was split up and assigned to specific duties. Four specialists were stationed in the capital; their main duty was to assist the Swiss Embassy. I should point out that Tokyo was virtually shut down, and we had to bear in mind that there was a chance that our people would have to be evacuated. Our search team drove in two rented buses to the north of the Sendai region, where the Japanese authorities had assigned us to operations in Minamisanriku. Logistics were a major problem. We faced some food shortages, but thanks to the team from the German Federal Agency for Technical Relief (THW), these were overcome. In the spirit of give and take, we supported THW with our transport capacities to drive from the base of operation to the operations theatre and also included them in our evacuation

Photo by Michael Fichter/SHA
“We faced some food shortages, but thanks to the team from the German Federal Agency for Technical Relief (THW), these were overcome. In the spirit of give and take, we supported THW with our transport capacities…”

plan. Communication, too, proved difficult because the mobile phone network was down and we could only get through to Switzerland using a satellite phone.

MF: The mission was far from straightforward then?

MJ: Indeed. We expected to begin our mission in Minamisanriku on Monday morning, but it was postponed due to a tsunami warning. It was around three days before we got there. Added to this was the fact that one member of the team fell ill and had to be evacuated. Swiss Embassy staff in Tokyo immediately contacted the Americans, who then flew our col-
league out by helicopter. We also had to contend with a series of connection and logistical issues. We were forced to improvise constantly but no sooner had we solved one problem than another one loomed on the horizon. To make matters worse, it began to snow two days into our mission in Minamisanriku, which increased the risk of accidents for our search dogs as well as for the team members due to fact that dangerous debris was covered by snow caps and no longer visible.

MF: The situation in Japan changed on an almost hourly basis. What were the implications for the mission leaders?

TF: Of course, this mission was more challenging for us than previous missions. Our efforts relied on three key supports. The first was ongoing information gathering and assessments. Our excellent contacts with the Japanese authorities who coordinated the international USAR efforts proved invaluable here. The second was the data provided by our two radiation protection experts working on the ground. The third was liaising on an almost continuous basis with the Swiss National Emergency Operations Centre in Zurich, which processed developments in terms of the radiation situation around the clock and provided us with the all-important situation assessment. Considering the difficult circumstances in which we had to work, these three resources offered us sufficient reassurance that we were able to see through our mission to the end. I should also mention the excellent collaboration with our embassy in Tokyo. Without their help, our mission would not have been the success it was. For example, by the time we had arrived in Japan, the embassy had already solved a series of logistical problems.

MJ: Several members of our team had previous experience working in zones that had been hit by an earthquake or tsunami, but no one had ever faced a potential nuclear emergency, and most certainly had never been exposed to all three risks simultaneously. There was a feeling that this detail should not be overlooked.

MF: How did the team handle the dangers it encountered in the field?

MJ: It is important to differentiate between objective and subjective risk. The region experienced a great many aftershocks, and in some cases the tremors were particularly strong. This is an example of a risk that actually materialised. In addition, we had to suspend our mission twice due to tsunami warnings. We were able to take precautionary measures to protect ourselves against these two real dangers, to some extent at least. For example, we slept in tents to minimise the risk of injury or worse should an earthquake occur. There was also a latent tsunami risk but thanks to the links we had established with local emergency response teams, the risk was calculable since we could assume that their alarm systems were working properly. In contrast, the potential threat of radiation exposure caused major concern in the field. This was due to a whole array of factors over which we had no control or of which we were unaware. What exactly was going on inside the nuclear power plants? Could the wind carry contaminated dust in our direction? The perception was that this invisible danger was lurking everywhere and led to general unease about the severity of the danger to which we were directly exposed during the mission. It was vital that steps be taken to minimise such concerns. First, special counters we had brought from Switzerland permanently displayed the level of radiation exposure. Second, our headquarters in Bern, which coordinated the Swiss intervention in Japan, received field data on radiation exposure through the Swiss National Emergency Operations Centre. Third, the team was constantly kept up-to-date on the latest developments and information.

“One lesson that we can take from the Japan mission is that teams which are due to be deployed under these sorts of conditions must be prepared to take a modular approach to their work.”
MF: How did you prepare for the possible dangers?

MJ: For the mission leaders it meant revising our contingency plans on an ongoing basis. We were constantly investigating possible exit routes and devised a variety of options based on different scenarios. We were also in the fortunate position of having our own transport, as this would have enabled us to react quickly to changing events on the ground. Having said that, fuel was in short supply, and there were other rescue teams that no longer had access to their own transport. We subsequently decided that if the worst came to the worst, we would have to leave material and equipment behind. We repeatedly talked to and with the team about the dangers we were all facing, and we were able to rely on our specialists for the latest information. This was a great help. In some ways, it was a good thing that part of the mobile telephone network was down, because it meant that information was channeled somewhat, thereby preventing media speculation and exaggerated reports from doing the rounds.

MF: What were the main challenges back in Switzerland?

TF: Keeping people back in Switzerland up-to-date on developments was more important during this mission than in previous operations. A special SHA liaison officer was appointed to handle queries from family, friends and colleagues and to provide them with regular updates.

MF: The search team decided to wind down its operations only six days after the earthquake. Why?

MJ: We were faced with a tough decision. Due to the weather conditions it was too dangerous for both the team and the dogs to continue working in the debris. The risk of the snow causing an accident simply became too great. If we had really thought that there was a good chance of finding survivors, we would have ploughed on with our work. The local emergency response teams understood why we made the decision we did.

MF: And how did the team react to the decision?

MJ: We were trained to locate survivors, but in Japan all we seemed to find were bodies. The local communities were pleased that we even came at all, and we also sensed that the Japanese authorities greatly valued the assistance that we had already provided.

TF: We shouldn’t forget that everyone involved in the mission was aware from the outset that the main objective was to locate rather than rescue, which is why we did not have any trained rescuers on the team. We also were well aware that the chances of surviving the tsunami were slim. Nonetheless, the process of locating bodies is an extremely important one. It is bad enough losing loved ones, but it is worse still if you don’t know what happened to them.

MF: How was the mission in Japan wound down?

MJ: After we left the disaster area, we made our way to the north of Misawa. We were involved in helping to evacuate two families - one Swiss, one French – who were living in the Sendai area. Our experts who were stationed in Tokyo stayed behind for several more weeks to assist the embassy. Most of the team flew back after a week. In this regard, too, we benefited from our cooperation with other teams. Once back home, every member of the team underwent a medical checkup. All were declared to be in good health. As the checks on our counters showed, no one had been exposed to increased levels of radiation. In fact, radiation levels were higher on the plane bringing the team home than they were in the area where we had been posted.

MF: Will there be more USAR missions like this one in the future that don’t follow the traditional approach?

TF: I believe so. The deployment of an entire heavy team cannot be ruled out, but the situation has not arisen over the last few years. For example, Swiss Rescue was not dispatched to Haiti. Instead, a large rapid intervention team was sent to aid relief efforts; up to 70 people were simultaneously deployed there. The primary focus of the mission was to provide women and children with much-needed medical care. But other specialists, like water and sanitation, were also part of the team. I firmly believe that we were more effective and efficient in Haiti than a USAR team would have been. The statistics bear me out: our rapid intervention team managed to save some 150 lives. Previous missions have taught us that we must respond and act appropriately to the situation and to the needs on the ground.

MF: Do you think INSARAG, which you are currently chairman of, will follow suit and change its classifications to focus on this modular approach to forming search and rescue teams?

TF: No, I don’t think so. INSARAG tests as many teams as possible in the three categories of heavy, medium and light. If a team is awarded INSARAG classification, it means that it is capable of conducting rescue and recovery operations accord-
the team’s ability to carry out its mission. Communication implies not only providing information but also listening and taking on board the needs and concerns of others, including our team’s families. Training courses and drills will take greater account of this in the future.

**MF: Will this be difficult to put into practice given that it tends to be virtually impossible to simulate such “soft factors?”**

**MJ:** It certainly will be difficult. But we must put the necessary structures and processes in place. Also, those in leadership positions must be made more aware of it. Certain things must be prepared beforehand like a list of family members’ telephone numbers. We had this information for the Japan rescue team and within a short space of time were able to bring family members up to speed on developments. I also believe that cultural awareness is another important point. Our mission in Japan demonstrated how crucial it is to be able to deal with the local culture, customs and practices even though the time to prepare for this may be short. It is not enough to read the Wikipedia entry on the place where you will be posted. We had people on our team who had lived and worked in Japan, which facilitated our work considerably. As far as I’m concerned, we need to work on honing our intercultural awareness.

**About the author:** Michael Fichter was the information officer and reporter on the Swiss rescue team’s Japan mission. He is head of the media relations office of the Bernese cantonal police. He is also a member of the militia corps of the Swiss Humanitarian Aid Unit, where he is Chief Information Officer. He can be contacted at michael.fichter@sdc.net.
The frequency of large-scale tsunamis is increasing worldwide. The recent tsunamis in Chile in February 2010 and in Japan on March 11, 2011, caused tremendous casualties and damage. The Republic of Korea needs a detailed response plan for tsunamis in preparation for such events. Although the National Emergency Management Agency (NEMA) has a National Disaster Management System (NDMS) in place to protect citizens’ lives and wealth from natural disasters, the country needs a more structured response system for the specific threat of tsunamis. NEMA had planned to develop such a system by 2014, but the occurrence of the Great East Japan Earthquake has made development more urgent and it is now expected to be finished by December 2012.

Korea is at relatively low risk for earthquakes, but it is well known that there is an active fault along Japan’s west coast. When an earthquake occurs there, it is highly probable that the ensuing tsunami will reach the east coast of the Korean Peninsula, as occurred in 1983 when a tsunami which originated in the middle of the East Sea (also known as the Sea of Japan) swept into Imwon Port, inundating 70 kilometers (43 miles) of the east-central coastline. In 1993, another tsunami that originated in the sea southwest of Hokkaido, Japan, caused damage and casualties in Korea. Therefore, Korea needs a tsunami disaster response system that can minimize damage from such an event. NEMA has secured the technology for making a tsunami disaster map and preparedness plans for the east coast of Korea through the “Tsunami-Related Disaster Reduction Technology Development Project.”

The research project began in 2010 and concludes this year with the development of tsunami inundation forecast maps for places at high risk of tsunami disasters in order to facilitate immediate responses to tsunamis. In addition, the National Disaster Management Institute (NDMI), a division of NEMA that oversees research and provides disaster preparedness training and education for government workers and the public, has developed models for potential tsunami floods and evacuation routes for residents.
Establishment of a tsunami response system using inundation maps

The existing tsunami inundation forecast maps developed in each local government’s area of responsibility in Korea are limited in their effectiveness because they are based only on the analysis of past experiences, making it difficult for the central disaster management agency to use and manage the information. Therefore, the NDMI is aiming to develop a tsunami disaster response system by December 2012 in 40 locations along the east coast such as ports and beaches in Kangwon (Gangwon) Province and North Kyungsang (Gyeongsang) Province, the areas affected by the 1983 tsunami. These will use inundation forecast maps based on the existing tsunami flood modeling program and a virtual tsunami scenario focused on the east coast. The NDMI is working with local governments to implement this project.

The following is the action plan for the development of the system:

- Identify major populated areas on the east coast that are potentially vulnerable to tsunami disasters and analyze their current conditions and response plans.
- Develop virtual tsunami scenarios through an analysis of active faults in the East Sea.
- Establish a grid system and information on the topography of the coastal area.
- Analyze flood traits and tsunami inundation forecast maps for the selected areas.
- Collect and analyze existing tsunami response materials and plans, such as evacuation shelters, methods of evacuation and evacuation maps.
- Conduct additional research for the new system on climate, population and current land usage.
- Collect information on geographical features and sea depths, and process them for modeling.
- Assuming seven different magnitudes of potential earthquakes from 11 potential origins, create a total of 77 inundation forecast maps.

This project will facilitate the ability of local and central governments to grasp the potential impact of a tsunami quickly and respond immediately.

Research on potential damages during tsunami evacuation

The NDMI has also conducted research on modeling damage from tsunami floods as well as tracking the evacuation process. The model shows the evacuation track of a person to a designated shelter according to the person’s walking speed, topographical obstacles en route, and the size of the flooded area based on the scale of the tsunami. It uses four kinds of data: 1) geographical data such as elevation and sea depths of the selected area, 2) evacuation data such as the starting time of evacuation and speed, 3) danger potential data showing danger factors in the area, and 4) seismic wave data such as the depth of the tsunami inundation and the size of the inundated area calculated through the tsunami flood model. There are five factors in the danger potential data set: distance, topography, obstacles, population density and tsunami flood potential. Using this model, disaster managers in each area can model the potential effects of a tsunami, find the most suitable shelter locations and select the optimal evacuation routes to them. In addition, this program can support policy development for disaster preparedness by...
providing disaster preparedness information, education and training materials. With the forecast maps and modeling of damages and evacuation routes, the tsunami disaster response system will be an important part of the NDMS, providing accurate analysis of tsunami-related disasters and a database of detailed coastal geography and sea depths that can be used for coastal disaster prevention and risk-reduction activities.

**Policy recommendations**

In addition to the creation of the tsunami disaster response system, the NDMI has also made some observations about disaster preparedness policies that should be implemented based on its research.

**Shelter selection criteria**

Two different types of shelters are recommended: temporary shelters for emergency evacuation and shelters designated for long-term relief operations. These shelters must be earthquake-resistant and located outside of forecasted tsunami inundation zones. In the event of a tsunami, vertical evacuation is more effective than horizontal. Therefore, several easily accessible temporary shelters with high enough floors should be designated within the evacuation zone.

<table>
<thead>
<tr>
<th>Desired structural conditions for shelters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Types</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Height</strong></td>
</tr>
<tr>
<td><strong>Scale</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Desired locations for shelters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location of buildings</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Evacuation time</strong></td>
</tr>
<tr>
<td><strong>Appropriate buildings</strong></td>
</tr>
</tbody>
</table>

A comprehensive information board posted along the coast in Gangreung (Gangneung) city, Kangwon (Gangwon) Province. Graphic courtesy of NDMI

**Evacuation route selection criteria**

A tsunami evacuation route should be selected in consideration of the likely direction of the tsunami and the safety of the route itself. In principal, the evacuation route must be perpendicular to the shoreline (the direction of an incoming tsunami), without crossing any rivers or main roads. Assuming that the route will be congested when in use for evacuation, it must not run through a residential area where many houses could be obstacles in an evacuation. Complicated routes where people have to open fences or make new openings should be avoided. When designating evacuation routes, the routes should be examined carefully on foot to check for any potential problems while walking them. If there are any bridges on a route,
they must be checked for earthquake resistance. Buildings along the route also must be checked for any possibility of collapsing. In crowded places such as beaches, the evacuation route should be wide enough to accommodate a large number of people. If there are stairs or uphill roads, they should have railings.

Major points and crossings along the evacuation route must have signs, which should be installed every 200 meters (656 feet) and at every major crossroad. In areas at risk for tsunamis, warning signs should be installed so that residents and tourists can be fully aware of the risk. If a hill is designated as a temporary evacuation site, an evacuation staircase (which can be used as a walking trail in non-disaster times) should be installed to facilitate rapid evacuation.

Comprehensive evacuation information signboards

Currently, each evacuation area in Korea has one comprehensive evacuation information signboard installed. To facilitate awareness and information dissemination, signs should be installed at every kilometer along the coastline, and be continually updated and maintained. Information on the board should include the elevation of the current location, detailed times of normal tides, directions for evacuation and the locations of evacuation shelters. Symbols used on the board should be as universal as possible so that not only local residents, but also tourists would be able to easily recognize them. The signboard should be lighted at night in case a tsunami occurs in the dark.

Plans for further development

Tsunamis are more rare in Korea than other types of natural hazards such as typhoons and the yellow sand phenomenon. People tend to forget about the dangers of tsunamis after such a disaster has passed, and they become careless about prevention and preparedness. Moreover, residents and tourists are often unaware when they are in an area at high risk for tsunamis. The NDMI is planning to support the development of evacuation plans, using evacuation simulation programs and analyzing major tsunami risk areas and the predicted damage. The Institute will develop a highly advanced model in order to strengthen disaster preparedness capacity through efficient delivery of disaster information. Discovering areas at high risk of tsunami that have had no past experience with such disasters and raising residents’ awareness of tsunami risk can increase the efficiency of disaster preparedness activities. When complete, the tsunami inundation forecast map project will provide a good foundation for disaster preparedness and risk reduction with accurate analysis of predicted tsunamis.

Notes

3. NDMI, “Study on the Criteria.”

References

HUMANITARIAN COMMUNITY
More than a year has passed since Japan’s largest recorded disaster hit the northeastern part of the main island of Honshu. The combined impact of the Great East Japan Earthquake and accompanying tsunami resulted in the deaths of approximately 20,000 people, while hundreds of thousands remain displaced from their homes. From the very outset as the seven-storey headquarters of the Japanese Red Cross Society (JRCS), located close to the capital’s iconic Tokyo Tower, shook with an unusual intensity, it was clear that the country was experiencing an earthquake of major proportions.

The JRCS swung quickly into action, dispatching medical teams to the disaster area and fulfilling its mandate under the national disaster coordination mechanism. Rotations of nearly 900 medical teams, made up of staff from the 92 JRCS-run hospitals around the country, were to care for nearly 100,000 earthquake survivors in the weeks and months following the disaster. In tandem, a wide-ranging relief and recovery operation was to unfold, addressing the material and emotional needs of those affected by the disaster. The unprecedented humanitarian needs and generous global response led the JRCS to embrace areas that were entirely new to the national society’s operational experience. These included providing a greater degree of psychosocial support than at any time in its previous experience, embarking on the reconstruction of clinics and supplying packages of electronic household appliances to more than 130,000 survivor families living in temporary housing.

Japanese Red Cross cooperation with civilian and military responders in the Great East Japan Earthquake

By Francis Markus
With its recovery and reconstruction programmes still ongoing in the affected areas, JRCS continues to make a significant and valuable contribution to supporting survivors. As with the humanitarian responses to all major natural disasters, there is also acknowledgement that there are lessons to be learned.

An evaluation completed in early 2012 by a three-member team of experts with Red Cross Red Crescent backgrounds highlighted what JRCS and the wider International Red Cross Red Crescent Movement could learn from the response to the Great East Japan Earthquake. The report concluded that JRCS’ state of preparedness was appropriate in relation to past experience relative to the kinds of domestic disasters to which it had been called upon to respond. But in order to be able to respond with maximum effectiveness to a mega-disaster of the kind the March 11 earthquake and tsunami represented, the report stressed that more planning and preparation are needed.

One area highlighted by the evaluation report is the need for better coordination with other actors, such as government agencies, the Japan Self-Defense Forces (JSDF) and non-governmental organizations (NGOs). This observation confirms the sense among JRCS operations managers that coordination, especially in the initial stages of the response, was definitely challenging. Several distinct issues played out in the coordination between JRCS and other actors. These ranged from the overstretched state of the government’s coordination mechanisms, to the JRCS’ position amid the evolving Japanese civil-society landscape, and the dynamics of the Red Cross Red Crescent Movement’s relations with the military.

**Coordination mechanisms**

In the Japanese Cabinet Office, there was a small team of no more than 10 people assigned to coordinate domestic and international organisations. This team was soon overwhelmed and Japan Platform – an organization that supports Japanese Official Development Assistance by promoting coordination between NGOs, the government and the business community – offered to provide a liaison point for the national NGO sector. It set up offices in the worst-affected prefectures and kept the Cabinet Office informed of NGO response activities. As one of the larger members of Japan Platform, JRCS played a supportive role.

In places such as the Miyagi prefectural government’s auditorium, a great many stakeholders were assembled for coordination purposes, representing central and local governments, police, fire brigades, JSDF, NGOs, JRCS and many others. Though physically sharing the same workspace, each party functioned without significant communication or information sharing. It was only after four weeks that there was sufficient dialogue for coordination to function well. In many places, there was also a lack of capacity for assessment of the situation and needs on the ground. The result was that in a number of cases, duplication occurred in the interventions of various actors in the early stages of the operation, wasting valuable resources and reducing efficiency.

Clearly the most important practical lesson is the need for sharing of information among stakeholders in terms of their mandates, activity scope, capacity, technical expertise and funding size. But this cannot begin after a disaster. Information sharing has to be part of disaster preparedness planning.

**NGOs in Japanese civil society**

There are varied assessments of the position of NGOs in Japan. But a general consensus seems to be that they tend to be relatively small in size and capacity compared to those in other industrialised countries. Clearly, this has had implications for their role in civil society and for cooperation between them and JRCS. The JRCS, like its sister national societies worldwide, acts as an auxiliary to the government.

All Red Cross Red Crescent Societies have their own distinct focus; JRCS’ is on health and medical care. Running 92 hospitals throughout Japan, JRCS enjoys a high degree of recognition, both among the public and from local and national authorities, in a way which few of the country’s NGOs can emulate.

“’We know about the Japanese Red Cross but we don’t know about you,’” one NGO representative quoted local government officials as saying. However, this apparent imbalance is gradually changing, with local NGOs’ capacity to raise funds and provide services steadily increasing. While this may represent new competition for JRCS, obviously it is in the best interest of civil society and the beneficiaries of these groups.

**Civil-military coordination**

The Red Cross Red Crescent Movement, with its seven fundamental principles that embody rigorous adherence to such concepts as neutrality and impartiality, has strict guidelines governing its cooperation with the armed forces in any country. It is vital that “while maintaining a dialogue with armed forces at all levels, the components of the Movement preserve their independence of decision-making and action, in order to ensure adequate access to all people in need of humanitar-
ian assistance,” says a 2005 resolution of the Red Cross Red Crescent Movement’s Council of Delegates, a high-level body which brings together all components of the Movement to discuss issues of mutual concern.¹

In practice, cooperation between Red Cross Red Crescent Societies and the military is common in times of natural disasters at a national level. In an international context, the issues are more complex, especially as regards the use of military assets. The basic guideline is that these may be used as a last resort to save lives if no other means exist. But in the case of international contexts, their use must be approved at the top leadership level within the Movement.

In Japan, the JRCS and JSDF roles are defined at the national level in the country’s disaster prevention plan. But apart from that, the cooperation between the two is essentially determined at a prefectural level. In some regions, such as the area of Osaka, in western Japan, there has long been close cooperation facilitated by regular meetings, and JSDF first responder teams often work closely in emergencies with JRCS medical teams.

In terms of responses to major disasters, there has been an increase in cooperation between JRCS and JSDF in recent years. Some observers date this back to the Chuetsu earthquake, which struck the western prefecture of Niigata in 2004. After that disaster, both parties put into practice many of the lessons learned in a previous large-scale disaster in which JRCS-JSDF cooperation was found wanting in key areas – the 1995 Great Hanshin-Awaji Earthquake in Kobe.

After the Chuetsu quake, a division of labor fell into place as the security forces, led by JSDF, conducted search and rescue operations, while JRCS and the Disaster Medical Assistance Teams set up by the government following the Kobe earthquake assisted in setting up triage to treat the injured and helped transport them to hospitals. Similar cooperation was seen in the aftermath of an off-shore quake that affected the Chuetsu region in 2007, and also following the Great East Japan Earthquake in 2011.

One of the most significant examples of cooperation after the Great East Japan Earthquake took place at the Ishinomaki Red Cross Hospital. In addition to being the nerve centre of JRCS operations, this facility was also used as a temporary disaster management headquarters by JSDF after the first floor of Ishinomaki City Hall, which had been designated for use as a JSDF disaster management headquarters in a large-scale disaster, was destroyed. A firm foundation for working together
had been laid back in June 2010, when Ishinomaki Red Cross Hospital participated in helicopter transport training for a large-scale disaster. The training was coordinated by Miyagi Prefecture with the participation of JSDF, the police, several ministries and the Japan Coast Guard.

“In practice, cooperation between Red Cross Red Crescent Societies and the military is common in times of natural disaster at a national level. In an international context, the issues are more complex, especially as regards the use of military assets.”

Fifteen helicopters were utilized for the training.

Because of such realistic training, all parties involved in the helicopter operation after the Great East Japan Earthquake were able to understand each other’s responsibilities, limitations and organizational cultures well enough to smoothly carry out their mission with 63 helicopter flights coming in and out of the heliport of Ishinomaki Red Cross Hospital, transporting sick and injured survivors from all over the surrounding region. Further cooperation benefited the hundreds of thousands of survivors who took shelter in evacuation centres – JSDF provided water and food support and organised baths while JRCS took charge of medical services, psychosocial support and the provision of non-food items, such as sleeping and hygiene kits.

In the months following the disaster, JRCS also played a support role alongside the military and other actors in looking after residents from areas close to the Fukushima Daiichi Nuclear Power Plant who would return to their homes in the restricted area for temporary visits. Tasks involved coordination of these short stays, screening for radiation after their return from the stays, establishment of decontamination systems and medical assistance. These tasks were divided among the municipalities, JSDF, JRCS and business operators, including the plant operator, Tokyo Electric Power Company. Roles were clearly defined, and the division of labour was relatively smooth.

In addition to JRCS and JSDF cooperation in disaster response operations and participation in exercises, the International Committee of the Red Cross – which is mandated to inform the armed forces about international humanitarian law – organizes several activities each year with JSDF. However, it is still not easy to assess the extent to which all of these engagements translate into familiarity with each other at a grass-roots level within the respective organizations. Since the Great East Japan Earthquake, there have been several workshops looking at the lessons to be learned at which JRCS and JSDF have further exchanged experiences. But anecdotal evidence suggests that some of the basic tenets of the Red Cross Red Crescent Movement are still not all that well known to many in the military. Clearly there is a need for continued dialogue.

Conclusion

The scale and complexity of the Great East Japan Earthquake and accompanying disasters, the resources required and the pressure placed on the government’s disaster management structure have given rise to the reflection that JRCS should consider proposing a new framework for cooperation between the government and the non-governmental sectors. The legal base defining the relationship between the Government of Japan and JRCS in times of disaster is established in the Japanese Red Cross Law of 1952. But another lesson from the experience of the March 11 disasters may be that JRCS’ relationships with both the government and the NGO community need to be further strengthened.

In many respects, the dramatic nature of the Great East Japan Earthquake has been a huge shock to Japan’s consciousness and its faith in existing practices and norms. The country in general, as well as JRCS and other actors, has shown the eagerness and ability to learn the lessons of previous disasters. The impetus of the 2011 earthquake and tsunami will clearly have an effect in building engagement and cooperation among all stakeholders.

One senior JRCS disaster manager recently said, “We just have to keep talking to each other and better understand each other’s capacity way before the disaster.” In keeping with Japanese culture, cooperation with the military and with other civilian actors may be based at least as much on relationships as it is on formal structures. The important thing is that it optimises and makes use of the respective strengths of all the parties in such a way as to bring the greatest support to those affected by any future mega-disaster.

Notes:

About the author: Francis Markus is the East Asia Regional Communications Delegate for the International Federation of Red Cross and Red Crescent Societies. He is based in Beijing, China.
International response to the Great East Japan Earthquake
Reflections on civil-military coordination

By Arjun Katoch

A magnitude 9.0 earthquake occurred off the Tohoku region of northeastern Japan at 14:46 hours local time on March 11, 2011. This earthquake triggered a tsunami that hit approximately 480 kilometres (298 miles) of coastline with a wave of 30 meters (98 feet) in height in places. The maximum depth inland to which the tsunami reached was approximately 30 kilometres (19 miles) in river mouths and 10 kilometres (six miles) in the Sendai plains. The tsunami resulted in many towns, fishing villages and communities being completely wiped off the map, and ultimately in more than 21,000 dead or missing persons with more than 750,000 buildings destroyed or damaged. It also resulted in extensive damage to the Fukushima Daiichi Nuclear Power Plant, leading to significant radiation leakage. At one time 480,000 internally displaced persons (IDPs) were housed in evacuation centres, an estimated half of them evacuees from the area affected by the nuclear emergency.

The United Nations Disaster Assessment and Coordination team

The Government of Japan was faced with three concurrent crises in this natural disaster. Though it is one of the best prepared countries in the world and a fully developed country, it had limited previous experience receiving international assistance, as it has been a donor country for many decades. Therefore it requested the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) to send a U.N. Disaster Assessment and Coordination (UNDAC) team to assist it.

I was selected by the United Nations to lead this multinational UNDAC team. The Deputy Team Leader was Sebastian Rhodes Stampa, who was also the OCHA Civil Military Coordination Officer for the Asia-Pacific region. Other team members were from Sweden, Korea, Japan, the European Commission Humanitarian Aid and Civil Protection department and OCHA. We were also supported by the non-governmental organizations (NGOs) Telecoms Sans Frontieres and MapAction. This article is based on my experiences as the Team Leader of the UNDAC team in Japan and is necessarily a subjective viewpoint; it does not by any means claim to be a comprehensive account of the overall response to the Great East Japan Earthquake.

The terms of reference of the mission were finalised on March 14 at a meeting of the UNDAC team with the Director of the Humanitarian Assistance and Emergency Relief Division of the Japanese Ministry of Foreign Affairs (MOFA). The tasks given to the UNDAC team were:

a) To report to the outside world on the emergency situation resulting from the earthquake and tsunami in Japan.

b) To advise MOFA on how to respond to the numerous offers of assistance being received by the Government of Japan.

c) To assist, from Tokyo, in the handling of the international Urban Search and Rescue (USAR) teams that were deploying to Japan.

Overview of international humanitarian and military response operations

Government of Japan coordination structure

The government established a very centralised coordination structure. The Headquarters for Emergency Disaster Response, a disaster management committee headed by the Prime Minister, took all decisions. All ministries reported directly to this committee, and all prefectures (roughly equivalent to states or provinces) also reported to this committee. This re-
sulted in all decisions having to go to the very top and very little inter-ministerial coordination below that level. This centralised coordination structure resulted in difficulties in coordination and in the fact that in the initial days, the government’s primary focus (rightly so) was on the radiation leak at the Fukushima Daiichi Nuclear Power Plant and less on the humanitarian relief issues of the population affected by the tsunami.

Assisting the Government of Japan in managing the crisis

The major assistance that the UNDAC mission provided to the Government of Japan was in reporting to the world the events surrounding this emergency and the response to it. In Japan all work, data, media, etc., are in the Japanese language. Had it not been for the UNDAC team gathering data available in Japanese and presenting it in English situation reports that the emergency humanitarian world could understand, there would have been very little accurate information about the emergency available to the world. This has especially to be looked at in the context of the intense and often sensationalist media coverage of the disaster and its aftermath. The Japanese government was very appreciative of this function performed by UNDAC.

“Though [Japan] is one of the best prepared countries in the world and a fully developed country, it had limited previous experience receiving international assistance…”

International Urban Search and Rescue response

The UNDAC team established itself and set up an On-Site Operations Coordination Centre (OSOCC) at the Japan International Cooperation Agency’s International Training Centre in Tokyo. In addition three sub-OSOCCs were set up at Ofunato, Sendai and Minamisanriku. Twenty international USAR teams were deployed by 15 countries to the affected area from March 12-21 with a total of 890 rescuers and 38 dogs. The international teams were integrated and coordinated by the authorities in the respective prefectures along with national response units. There were considerable difficulties in communication between the OSOCC in Tokyo and sub-OSOCCs due to the distances and disrupted roads, railways and communications between Tokyo and the Tohoku region.

Japanese and U.S. military response

The mainstay of the Japanese response to this emergency was the Japan Self-Defense Forces (JSDF), supported by the U.S. military. The Japanese military had between 80,000-106,000 troops in the affected area at various times in the response, and they were responsible for the delivery of food, water and other relief supplies to the affected population. In addition, U.S. Forces Japan and the U.S. Navy’s Seventh Fleet were deployed to assist the Government of Japan, thereby providing an additional 20,000 U.S. troops and immense logistics capabilities in an operation the United States named “Operation Tomodachi.” The UNDAC team also established direct links with the U.S. military with the deployment of a U.S. Pacific Command (USPACOM) liaison officer in the OSOCC in Tokyo. This was of major help to us on this mission. One of the biggest lessons that ought to be drawn from this mission is the fact that military humanitarian coordination needs to be practiced and strengthened as most of the responses to major disasters rely heavily on domestic military resources, often supported by international military resources.

Impact of the radiation issue on humanitarian operations

The radiation issue related to leakage from the Fukushima Daiichi Nuclear Power Plant was the event on which the international media concentrated almost exclusively. It had a major bearing on humanitarian operations as it generated approximately 240,000 IDPs once the Government of Japan established a 20-kilometre (12-mile) radius evacuation zone and a 30-kilometre (19-mile) radius safety zone around the plant. The U.S. authorities set up a precaution zone for their own nationals with an 80-kilometre (50-mile) radius in which U.S. rescue and relief units were not allowed without specific safety procedures. UNDAC followed the same precautions as the United States.

The U.S. Government also provided to Japan very significant technical capabilities from both the U.S. Armed Forces and the U.S. Department of Energy (DOE) to assist the Japanese government in dealing with the nuclear radiation situation. The UNDAC team carried out its own monitoring for changes in levels of radiation with our own dosimeters and intensimeters.

Reflections on civil-military coordination

This international response was an unusual response in that it was conducted in a rich, developed country, which could have handled the emergency from within its own resources and had never accepted international assistance before. It was also a mission in which we were dealing with three crises in one emergency. The following observations are an attempt to bring out some of the lessons that could be drawn from this unusual mission.

A clear chain of control from the highest level down to the community, integrating the military, is a must.

One of the shortcomings of the government’s response in Japan was the fact that at the central level, government departments worked somewhat in isola-
tion of each other. The MOFA, National Police Agency, Ministry of Defense, Fire and Disaster Management Agency and Japan Coast Guard all reported directly to the Prime Minister’s disaster management committee. As a result of this structure, that committee was the only place where any decision could be taken. This slowed down decision-making and while the attention of the government was on the situation at the Fukushima Daiichi Nuclear Power Plant, it resulted in a slower response to the needs of the population in other areas affected by the earthquake and tsunami. The lesson learned here is that there should be a clear, delegated chain of control in which there is interaction at all levels among all departments of government, the military, as well as NGOs and other responders. No silos should be permitted.

Effective use of the military is essential in response to major disasters.

The response to the earthquake in Japan was primarily a military response utilising at its peak almost 106,000 JSDF troops. In addition there was extensive assistance from the U.S. military through Operation Tomodachi. The scale of damage, the difficult terrain and the weather combined to make it a task that only the military with its extensive logistics capabilities could perform. This is normally the case in most countries in the Asia-Pacific region. The military was integrated into the response at the prefecture level. However, this could not be said to have been the case at the national level, where the “silos” in reporting worked against effective civil-military coordination.

Government institutional preparedness to receive foreign assistance, including foreign military assistance, is needed.

No country, no matter how advanced and wealthy, can handle such major disasters on its own, as proved by the Japan earthquake and Hurricane Katrina in the United States. As such, the government must be institutionally prepared to receive foreign assistance, including foreign military assistance. This is significantly more complicated than it appears and requires pre-established structures and procedures at the central, state and district levels that are aligned with humanitarian and military coordination principles.

Coordination procedures between national and foreign militaries, as well as with humanitarian responders, need to be improved.

During the response to this disaster there were very few international actors. Essentially these were the U.S. Government, especially the U.S. military and DOE, UNDAC and the international USAR teams. Of these, the major player was undoubtedly the U.S. military, which one would expect to have close links with the JSDF. Yet it was observed that there were significant coordination issues between the two military allies in disaster response, especially at the national level. UNDAC was fortunate that Deputy UNDAC Team Leader Sebastian Rhodes Stampa was also the OCHA Civil Military Coordination Officer for the Asia-Pacific region. His excellent contacts at USPACOM enabled us to stay well informed and coordinated with the U.S. military, especially on the crucial issue of the radiation leak. As a result, quite accurate information could be made available to international USAR teams. However, this also starkly brought out the absence of an institutionalised civil-military coordination structure during this emergency. This needs to be worked upon because had there been a larger number of international actors, this lacuna would have been keenly felt.

Handling the media, including social media, requires professional training and preparation, especially for militaries.

There was intense international and national media interest in this event. However, there appeared to be no comprehensive and thorough Japanese government media policy in the initial aftermath of the disaster to effectively manage the situation. As a result, media speculation was rife and social media was very active. A major lesson of this disaster was that all governments, including their militaries, must have a very clear media policy and trained people reaching out and constantly briefing the media, as well as...
posting on social media. It is not clear that decision-makers in various governments or among the senior echelons of militaries are fully cognisant of the ramifications of the spread of the mobile phone and social media on the speed of formation of public opinion in such events.

All levels of government and the military must regularly and mandatorily participate in national and state disaster response exercises.

This should occur at least once a year. Otherwise the response to a disaster becomes ad hoc and unprofessional since the decision-makers may have had no prior experience with large-scale responses to disasters, or with the national and international assets at their disposal. These exercises should also endeavour to include the military and non-governmental responders, such as NGOs, civil-society organisations and the Red Cross family, as these will be present in communities in any disaster. As far as I know, such multi-agency exercises involving civil society were not regularly conducted in the Tohoku region prior to the earthquake.

The technical means to respond to international nuclear accidents needs to be examined.

While observing and dealing with issues related to the Fukushima Daiichi Nuclear Power Plant and the radiation leak from it, one fact struck me. Plutonium 239, which was one of the isotopes that leaked from the nuclear fuel used in the power plant, has a half-life of 24,000 years. That is almost three times the generally accepted length of recorded human civilisation. Yet, even with such a significant potential threat in existence, the technical capacity of the Government of Japan to respond to such an emergency was inadequate. The assistance of the U.S. Government, especially the U.S. military and the DOE with their technical knowledge and equipment, was crucial in controlling the disaster.

With a large number of nuclear power reactors online elsewhere in the world, probing questions need to be asked about the technical capacities present in other countries (and other militaries) to deal with similar accidents. In addition, arrangements need to be made to pool such response capacities if required.

Conclusion

The contribution of both JSDF and the U.S. military to the successful handling of the post-earthquake situation in Japan, especially the nuclear emergency, cannot be stressed enough. It was crucial to the response and to a large degree is under-appreciated in international fora. However, it is also quite interesting from the point of view of civil-military coordination. There were only two militaries heavily involved, the U.S. military and JSDF, and they are close allies. There were also very limited humanitarian actors. The fact that there still appeared to be hiccups in military-military and civil-military coordination, at least to an outside observer, is interesting because it highlights that close military ties do not in themselves lead to good civil-military coordination in a disaster response. In hindsight, it is obvious that unless the civilian part of the government has also been involved in prior planning and exercises with the military, it is likely that there will be problems in an actual emergency.

No discussion on the response to the Great East Japan Earthquake can be complete without a tribute to the resilience of the Japanese people. Their fortitude, discipline and community spirit in the face of such a major disaster was an outstanding example to all of us. One only hopes we could emulate them should we ever be faced with such an unfortunate situation.

Editor’s note: This article is adapted from a talk given by the author at the United Services Institution of India, New Delhi on June 29, 2011. A similar version is published on the Institution’s website at: http://www.usiofindia.org/Article/?pub=Journal&p=586&ano=850
Peace Winds America (PWA) was one of many non-governmental organizations (NGOs) that responded to the March 2011 disasters in Japan’s Tohoku region. The organization’s Chief Executive Officer (CEO), Dr. Chuck Aanenson, has more than 30 years of international aid and development experience, including leadership positions within the U.S. Agency for International Development (USAID). After retiring from his Foreign Service post at the U.S. Embassy in Tokyo in 2008, Aanenson founded PWA, an organization dedicated to strengthening disaster preparedness and response throughout the Asia-Pacific region. PWA’s programs include civil-military workshops designed to increase understanding and coordination among military and civilian disaster managers, and sister cities initiatives that build disaster management capacities and integrate various emergency responders, including the private sector.

In a June 25, 2012, interview at PWA’s headquarters in the U.S. city of Seattle, Washington, Aanenson described how the NGO’s strong relationship with its Japanese sister organization and connections made prior to the Great East Japan Earthquake with civil-military humanitarian assistance and disaster relief (HA/DR) stakeholders greatly enhanced PWA’s ability to provide meaningful relief and recovery support in the affected area.

Jessica Wambach: Many people may have heard of Peace Winds Japan but not Peace Winds America. Could you describe the relationship between the two organizations?

Chuck Aanenson: When in Tokyo, I became familiar with Peace Winds Japan (PWJ) – one of the stronger NGOs there. The PWJ CEO, Kensuke Onishi, is a solid manager with a good vision. We worked together on a couple of projects; in fact, PWJ was one of three NGOs that USAID funded during the 2007 Niigata Earthquake. Numerous organizations, including the United Nations Development Program and the Japanese Ministry of Foreign Affairs, have funded PWJ for overseas work. Before departing Tokyo, Onishi and I discussed setting up a sister organization, i.e., Peace Winds America. PWJ handles not only natural disasters, but also man-made disasters and development, and has been in countries such as Sierra Leone, Liberia, Iraq, Afghanistan and Timor-Leste. So the organizations have several differences. PWA works only on natural disaster preparedness and response in the Asia-Pacific, whereas PWJ is not constrained to any geographic region or to natural disasters. The funding, budgets and boards of directors are totally separate, yet we frequently communicate.

PWA was established in 2008 with an
outstanding board of directors. One of our primary strengths is that our board consists of senior representatives of the military, private sector, diplomatic corps and think-tanks, and has Japanese and Americans, men and women.

JW: Prior to the March 11 disasters, what type of work had PWA done in or with Japan?

CA: Since 2004, we’ve realized that Japan and the United States are the two primary responders to Asia-Pacific natural disasters. How could we strengthen those ties and communications so that they both could better use resources to save lives in the disaster-prone, vulnerable Asia-Pacific? Could we connect prior to disasters and also on the ground? When serving at the Embassy, I conducted several training programs with the militaries, aid agencies, diplomatic corps and NGOs. The results were soon evident. For example, in the response to the Central Java earthquake in 2007, the Japanese, not finding any Indonesian officials when they arrived, quickly met the U.S. military medical team, which had arrived earlier. They had “connected” during the earlier training programs, and immediately began sharing assessments and information. Given this and other success stories, and the very high personnel turnover among the militaries, civilians and NGOs, we continued the civil-military trainings. In 2010, PWA partnered with U.S. Embassy Tokyo and USAID to conduct Japan-U.S. civil-military disaster preparedness training. In 2011, with foundation support, PWA launched the two-year Japan-U.S. Civil-Military Disaster Preparedness Initiative, targeting all stakeholders – militaries, civilian agencies, NGOs and the private sector. They all want to be involved, which is critical, as we found out in Tohoku.

Concerning natural disasters, although the federal or central governments will help, it’s the cities that must be prepared. Thus in 2010, we initiated a sister cities program with Japan and U.S. cities – all within the Pacific Ring of Fire. PWA brought together disaster managers and planners from the sister cities of Seattle and Kobe, San Francisco and Osaka, and Honolulu and Hiroshima, along with their prefectural and state officials and NGOs. At a September 2010 conference in Seattle, more than 100 managers shared lessons learned, best practices and new technologies. The response was overwhelmingly positive, with increased demand for more exchanges, especially in the areas of public-private partnerships, community and business resilience and on-site assessments. Six months later, following the March 11 Great East Japan Earthquake, we heard from participating Kobe and Osaka officials that the lessons learned from the Seattle conference were being implemented as they were helping the cities in Miyagi and Osaka prefectures.

PWA responded with PWJ to the 2009 Padang earthquake (West Sumatra, Indonesia). In the case of Taiwan’s Typhoon Morakot (2009), PWA responded with a local Taiwan NGO, yet informed PWJ of our targets and funding. In the Haiti earthquake (2010), which is outside of PWA’s geographic response area, PWJ asked that I join them to help initiate their response and recovery program. PWA and Japan have both also been active participants in Pacific Partnership, the U.S. Pacific Fleet’s humanitarian civic assistance mission.

JW: Can you summarize PWA’s activities in the first few weeks after the Great East Japan Earthquake?

CA: On the afternoon of Friday, March 11, a group of concerned leaders in Seattle, including PWA, met at the Hyogo Business and Cultural Center to discuss how Seattle could respond to the Tohoku earthquake and tsunami. The earthquake happened late Thursday night Seattle time, so already we were well aware of the devastation. We informed the group that PWA would respond immediately with our sister organization, PWJ. In fact, I already had my plane ticket, as I had planned to travel to Tokyo to prepare for the next civil-military disaster preparedness workshop. Leaders from key organizations – the City of Seattle, Hyogo Business and Cultural Center, the Japan-
America Society, the Japan Business Association, the Port of Seattle, the Red Cross, the YMCA, several churches and temples, the alumni of Japan Exchange and Teaching, and several others—established Seattle Japan Relief, a joint fundraising effort that funded three organizations responding to the disaster. One organization was PWA. Seattle Japan Relief and its members began to blanket the greater Seattle community, a community with close friendships and economic ties to Japan. The immediate support was tremendous.

At most of our civil-military workshops when we ask, “What’s the first thing you do at the time of a disaster?” the U.N. agencies respond, “Appeal! We cannot respond unless we have funds.” Fortunately PWA already had monies. We were also fortunate that we are trusted, resulting in donors immediately funding PWA. We informed our donors, the public and Seattle Japan Relief that 100 percent of the raised funds would go to PWJ programs—PWA would take no overhead for our relief response. Knowing we had a reputable on-the-ground partner, and also that we were working with local authorities, had no overhead and were accountable, had an enormous impact.

I departed for Japan the next day, and upon arrival to Tokyo, went immediately to the PWJ office. We reviewed all the available information from Tohoku and the central government, studying the area maps. PWJ’s Onishi wisely chose to focus our relief efforts on the badly destroyed four northern cities of Kesennuma, Minamisanriku, Rikuzentakata and Ofunato. Many other Japanese and international NGOs chose Sendai as the roads were less damaged and it was easier to access. Transport to these northern areas was near impossible, but we had access to helicopters through Onishi connecting with the helicopter pilots and their union. PWJ staff and I helicoptered to these isolated cities to assess the situation, bringing with us kerosene, water, rice, fruit and sanitary items. Working with PWJ, you quickly learn to follow protocols. For example, when we arrived we went right to see Mayor Sugawara of Kesennuma. We met the city officials and then called upon the chamber of commerce chairman. At that moment, no one knew the private sector—who wanted to participate, and how to approach them. We knew a helicopter pilots’ union in which pilots would volunteer their time if we paid for fuel. Partnering with the various organizations paid off! One of PWA’s board members was working at the Cabinet assisting the response. He used PWJ-PWA connections. We were aware of the capabilities and limitations of responding organizations, and they knew ours. One isolated island near Kesennuma was stranded until USFJ delivered goods. But we knew this was not to be long term, so PWJ followed up. Because of his credibility and connections with some prefectural authorities, Onishi managed to have a ferry from Hiroshima start delivering food and supplies to the formerly

“It’s important to get your story out to your funders and your local people as quickly as possible, and to have as little overhead as possible so the foundations, businesses and individuals know that you’re truly helping people.”
stranded survivors.

These connections allowed PWJ and PWA to obtain on-the-ground assessments, enabling us to procure and provide what was needed to the disaster victims and survivors. These assessments also allowed us to find partners who would help deliver the supplies, whether militaries or private sector. Lack of such information was a severe bottleneck for many.

**JW: How did PWA fit in to the greater response effort as it was coordinated by the Japanese government?**

**CA: We’re talking about three levels of government – national, prefectural and local. With the national government, we knew what was happening or not happening because one of our board members was working with them. At the prefectural level in Iwate and Miyagi, the NGOs began holding meetings where we could meet with all the Japanese NGOs and discuss who was doing what and where, thus avoiding each other or complementing each other. We absolutely coordinated with the local governments. We like to think every disaster is local. Our mission is to empower the local governments by funds, programs or ideas. It was easier to work where the prefectural government wasn’t as strong but the local government was.**

Taiwan, we didn’t know the private sector, so it took much time to link with them. Here we knew numerous companies willing to provide assistance – with PWJ we connected with AEON, Costco, IKEA and others. They wanted their brands out there, but they were also sincerely eager to help. That’s not always the case in developing countries.

Another difference was USFJ. They were in Japan, and they were strong. When USFJ partnered with JSDF to clear the Sendai Airport, morally it was a big lift for the whole country. The public had been told that airport was out of business, yet USFJ and JSDF cleaned those runways and got it functioning. You may hear from the militaries themselves about all their problems or concerns, but they were great, both the United States and Japan. And they will probably be even more effective next time.

The military had a big role in Haiti, but there we didn’t have a Haitian government. Here we had a Japanese government, and they truly partnered with the militaries. It was great to see that our military was serving the Japanese people, with the Japanese Ministry of Defense (MOD) in the lead. You seldom saw USFJ in the newspaper or on the TV; it was MOD and JSDF. So that’s a good lesson we learned – how can we do that in other countries?

**JW: What are some other lessons that PWA has learned as part of the response to this disaster?**

**CA: Have a solid working relationship with good NGOs on the ground. Have an effective relationship with the private sector so that you can share resources and complement each other. It’s important to get your story out to your funders and your local people as quickly as possible, and to have as little overhead as possible so the foundations, businesses and individuals know that you’re truly helping people. It’s critical to work with the local governments, and to be seen working with the local governments. And it’s imperative to have access to timely, accurate needs assessments.

There were some coordination challenges. The central ministries in Japan have offices at the prefecture level and may also have offices at the local level. In Kobe in 1995, the ministries worked vertically to respond to the disaster. In this disaster it was decided that decisions would be made at the central government level, through a group representing all of the ministries, and then those decisions would be passed to the next lower level. That was a slow, arduous process. With strong leaders at all levels, it might have been more effective. However, this disaster was so massive, compounded with the Fukushima nuclear issues, which resulted in tough decisions for all those people.

**JW: How is PWA continuing its disaster recovery work in Japan today?**

**CA: Going in, we knew this was a fishing industry area and started thinking about recovery right away. We knew a First World nation would be able to address relief quite quickly, so we needed to aid recovery as soon as relief needs were met. Fishing and the fishing cooperatives became our focus, as well as small businesses and chambers of commerce. Many fishermen lived on the water and their homes were washed away. They had no place to keep their equipment, no place...**
to process the fish or seaweed. One of our projects targeted building sheds and replacing equipment, working with the fishing cooperatives and the districts. We also rebuilt one fishing cooperative that had been at the port. Once that was built, others set up a credit union there. So the cooperative is not only a place where members can meet and start marketing and transporting their catch, but where they can also finance loans and savings.

One PWA staff member has been in Japan since the disaster. We financed and seconded her to PWJ. She has been invaluable in following through with our relief and recovery programs. PWA is monitoring the relief and recovery support of the Japanese government and others. We purposely have not spent all of our funds because we want to ensure we can still help when others depart and some recovery needs are still unmet. How one makes best use of recovery funds is a constant question, as donors want to see their monies spent and effectively used. If you have a solid program, monies are available. Foundations and people continue to give generously.

**JW: What lessons have you learned during your recovery efforts?**

CA: One lesson learned is to have a recovery vision as you start delivering relief. We encourage the military to have an exit plan, and the NGOs should have a recovery plan, as well. It may change based on finances, but then one apportions the funds accordingly.

Have a local partner, whether it’s the government, chamber of commerce, or a fishing cooperative. Work not only with them but partner with local NGOs. Local NGO overhead is very small, and they will be there long after the disaster. Partner with international NGOs to leverage your funds, and capitalize on their skills and expertise.

Another lesson: Do not let equity destroy either relief or recovery. If you’re worried about everybody getting a little piece, you may never deliver. When we started with these fishing sheds, one fishing cooperative said that every member should receive a shed. However, every member didn’t lose their house; every member is not fishing; some members retired. We initiated an application process with the district leaders who were amenable to a system targeting those most in need. It’s often difficult to select one fisherman over another, one project or one city over another. Selection criteria are essential; however, one should not let equity or indecision prevent assistance. Find the fairest system that is culturally appropriate to the local people.

Connect and partner during preparedness – that is, prior to disasters. Onishi is signing cooperative agreements with some of the cities and prefectures so that when a disaster happens, PWJ and Civic Force, its domestically focused partner organization, will already have agreements with prefectural governments to work together. We then can go to the private sector with those agreements and draw them in, too.

Another good lesson is that it is critical to have a board of directors who are keenly interested in what you’re doing. We can approach some of them about raising monies; we can approach some for program ideas.

**JW: Peace Winds strives for whole of community involvement in disaster preparedness, in which the government, military, NGOs and the private sector are all engaged. From your perspective, what challenges and successes did these groups have working together in Japan?**

CA: Sometimes these groups did not know the capabilities and the limitations of each other. This they should try to assess prior to a disaster. Some inter-
national NGOs will not work with the military. But generally the military and NGOs in Japan have learned that they want and need to partner. Now the focus is how to partner and who goes first – it must be the NGOs!

This is true with the private sector as well. Partnering with the private sector can greatly help the other stakeholders, but also we can aid the private sector. What we would like is better planning at the front end so response happens quicker. We need to know what infrastructure is critical to businesses so that they don’t go under. A business closed for one or two weeks may never reopen.

One challenge all groups faced was obtaining accurate assessments, understanding the on-the-ground situation, and knowing what relief was being provided and by whom. Initially there was no centralized information center; all stakeholders were working independently, yet were desperate for information. The militaries had the best assessments and information, although some were classified and unavailable to others. Slowly this was remedied, but time during disaster response is critical.

JW: In the aftermath of the disaster, have you changed any of your focus or introduced any new programs?

CA: It brought everything home that we’re clearly on the right track with our civil-military workshops. The NGOs, military, private sector, governments, host nations – all of the stakeholders want to partner, they want to connect. We have recently launched a Vietnam-U.S. Sister Cities Initiative. The importance of this was confirmed by the recent floods in Thailand as well as the Tohoku disaster. Disaster response and recovery are critical parts of these exchanges, especially in terms of economic resilience and business continuity planning.

JW: Do you think the important role of NGOs in the response to the Great East Japan Earthquake might expand their role in Japanese society in general?

CA: It’s too soon to tell. Financial incentives for donating to NGOs and tax deductions are limited in Japan, but new legislation has passed where NGOs can register locally and with the prefectural office of the Ministry of Finance. The government and private sector have met most of the people’s needs. Until we have a disaster! Perhaps as people see the need for NGOs – perhaps with an aging society with limited health care – there will be greater demand for non-profits as a third sector. The public was generous to the NGOs in the response to Tohoku as it saw how effective they were in reaching those in need. Let’s hope the NGOs can continue the connections with the public, as well as initiate relationships with the government, military and private sector. If all can see how they each have complementary roles, the NGOs will be strengthened.

About the author: Jessica Wambach is the Publications Editor at the Center for Excellence in Disaster Management & Humanitarian Assistance, where she has worked since 2007, previously as an Assessment Officer and an Information Research Analyst. She holds an M.A. in Diplomacy & Military Studies from Hawai’i Pacific University, and a B.A. in Journalism and History from the University of Montana.
A volunteer’s personal reflection on the disaster response

By Mark Flanigan

As a Rotary International Peace Fellow in Japan, I had the privilege of studying for almost two years at the International Christian University (ICU, 国際基督教大学) in Tokyo. I was somewhat of a rarity, as I had served in the U.S. Army, first as an enlisted soldier and then as a commissioned officer. When I arrived in Japan in the summer of 2010, my intent was to learn more about the role of the Japan Self-Defense Forces (JSDF), especially in their capacity of supporting United Nations Peacekeeping Operations. I was very much interested in Japan’s role, as a post-conflict country itself, in the promotion of peace and security.

My focus changed after the terrible tragedy of March 11, 2011, which completely devastated much of the fisheries and agricultural industry, as well as the livelihoods of many of the people living in northeastern Japan. Specifically, the combined disasters destroyed the fishing industry in Miyagi Prefecture, which had produced 80 percent of Japan’s oyster seeds in the past few years. While Japan has experienced the deadly effects of earthquakes and tsunamis for centuries, it had never faced the triple threat of a combined earthquake, tsunami and potential nuclear fallout.

At that point, I did not even know if I would be able to continue at ICU, as...
By going with an established group, we also did not risk making things worse by spontaneously appearing in a disaster region and taking up already scarce resources... 

mined to participate in Japan’s disaster recovery but did not know how. Luckily, I learned about a new volunteer program for university students in Japan that was planning upcoming trips to disaster-affected areas. I had never done anything quite like this before, but the time and extreme circumstances compelled me to step up and volunteer. 

From May 3-7, during Golden Week in Japan, four of us ICU Rotary Peace Fellows were part of a combined volunteer group of 90 Japanese students and 35 Japan-based international students from more than 20 different countries. Made up of both male and female members, we traveled north on buses provided by the Seibu Lions professional Japanese baseball team up to Ishinomaki, Miyagi Prefecture, as student volunteers for “The ROAD Project.” The Project was sponsored by the Nippon Foundation in conjunction with Gakuvo and the Nikkei Youth Network to provide assistance to the affected areas. Our main task was to help the fishermen and oyster producers in the Oshika-hama fishing community remove earthquake- and tsunami-related rubble and salvage the valuable equipment that would be essential once their industry recovered. 

A big advantage of going as part of a group project with a well-organized national non-governmental organization (NGO) was that we did not have to worry about managing the logistical, legal or even socio-cultural challenges. By going with an established group, we also did not risk making things worse by spontaneously appearing in a disaster region and taking up already scarce resources while not necessarily understanding the situation on the ground. Additionally, we stayed off-site and coordinated our arrival and departure times in advance.

Our work involved cleaning up many houses that had been flooded by seawater, retrieving buoys and anchors that had been scattered all about the peninsula by the force of the tsunami, and collecting shells that were used to harvest the oyster catch each year. Naturally, the fishermen and their families were a bit hesitant to open up to us at first, but we gradually built up a level of trust with them that allowed us to assist them in the massive clean-up job at hand. Although we were just there a few short days, we were hopefully able to make some impact in their lives, no matter how small. The people of Ishinomaki really impressed me with their strong spirit and desire to continue life in the face of such tragedy, even though so many had lost their family members, homes and means to work after the terrible impact of the tsunami. Most of all, it reminded me of the need to treat survivors as active partners and participants in their own recovery, and not simply as passive victims.

Volunteering to assist such resilient people in the aftermath of the most complex humanitarian crisis in their history, I was struck by a very simple and powerful realization. The group of us who joined in the relief mission came from a great number of places around the world, including native-born Japanese and rep-
resentatives from more than 20 other countries. We did not know most of our fellow volunteers at first, yet we immediately joined together to serve the local survivors because we saw firsthand the unspeakable impact the earthquake and tsunami had unleashed on the fishing communities in Ishinomaki. We came not as “disaster tourists,” but as humble representatives of different backgrounds, communities, languages and parts of the world. In some ways, it was a best-case illustration of the concepts of international cooperation that drive organizations like the United Nations, played out amid the rubble of Ishinomaki. As a volunteer, I felt as though I was finally putting the lessons of peace and security into practice, taking the theories of the classroom at ICU and applying them in humble and respectful service to my fellow human beings in need.

Some lessons to be learned based on my experience include the importance of respecting the personal property of survivors; damaged though it may be, it is still a central part of their existence on earth. Working with survivors as active partners, not just passive victims, is also imperative to ensure their human dignity remains intact. Understanding the local people, culture, language and “way of doing things” at the grass-roots level is critical to mission success, and is preferable to a purely top-down approach. Going as part of an organized group working through a well-managed and locally sourced network, and with a clear itinerary and resources, is also preferable to just showing up spontaneously and potentially causing further harm to already burdened communities.

And lastly, being able to work alongside and understand both sides of the civil-military spectrum is certainly an important aspect of relief work. Seeing the Japanese cadets meet and work together with their civilian university student counterparts, many of whom held strongly pacifist worldviews, provided me with greater insight as to how a common goal can be achieved through mutual coordination, effort and trust. Such team-building efforts can do much more to advance the ideals of civil-military coordination, particularly in crises which pose an acute danger to those who are most vulnerable in society. While I am far from being a subject-matter expert, I was able to learn all of these lessons firsthand, as someone who was on the ground in the disaster-affected areas and in direct contact daily with both survivors and civil-military responders alike.

After volunteering, I went on to complete an internship with the U.N. Office for the Coordination of Humanitarian Affairs in Geneva, focusing on improving global leadership in coordination of disaster relief. Inspired by the coordinated success of the response to the Great East Japan Earthquake, I decided to change the topic of my thesis at ICU from the role of the JSDF in U.N. Peacekeeping Operations to its comparative experiences in disaster response. It has been more than a year since I volunteered. In some ways, it still seems like it was only yesterday. I left Tokyo when I graduated from ICU in June 2012 and started a new position with the Japan ICU Foundation in New York City, but part of me will always remain with those people and communities in Tohoku, where I truly became a disaster responder for the first time in my life.

Mark Flanigan with one of the cadets from the National Defense Academy of Japan. About 20 cadets volunteered to join “The ROAD Project” to support recovery efforts during their Golden Week holidays, along with their civilian student counterparts.
About the author: Mark Flanigan is a U.S. Army veteran, former Presidential Management Fellow and Japan Exchange and Teaching Program participant who now serves as Program Director for the Japan International Christian University (ICU) Foundation in New York City. As part of his M.A. thesis at ICU in Tokyo, he did a comparative analysis of Japan’s role in the 2005 Sumatra, 2010 Haiti and 2011 Tohoku earthquake responses. In the summer of 2012, Mr. Flanigan received the “Award of Excellence” in the 28th Eisaku Sato Memorial Foundation Essay Contest, which looked at how to improve the United Nations’ role in disaster response. His winning essay was selected from a pool of numerous global entries, in both English and Japanese languages. He can be reached at mflanigan@jicuf.org.

Notes
1. Rotary International is a U.S.-based service organization with more than 34,000 clubs worldwide. Its members volunteer for and contribute to international programs focused on improving health and sanitation, supporting education and job training, eradicating polio, etc. The Rotary Peace Fellowship funds selected participants to earn a master’s degree or professional certificate in a field related to international studies in peace and conflict resolution at selected institutions, including International Christian University in Tokyo.

Student volunteers, both Japanese and international, work together to clear tsunami debris from several of the worst-affected family homes in Oshika-hanto. This was an especially sensitive task, as many of the families were still living temporarily on the second floors of their severely damaged homes. Volunteers had to operate diligently while still respecting the dignity of the traumatized homeowners.

Photo by Mark Flanigan
Putting lessons into practice
A message from the Editor

As the contributors to this issue of Liaison describe, the Great East Japan Earthquake posed both new and routine challenges that tested the experience and practices of even the most seasoned disaster responders. Although we chose to organize the articles in this issue according to the type of responder the authors represented – affected state, assisting states or the humanitarian community – all three groups identified similar lessons that need to be learned. This emphasizes the importance of working collaboratively to find solutions that meet as many stakeholders’ needs as possible.

Identifying lessons learned is, of course, the easier part of this process. True commitment to enhancing preparedness involves turning these lessons into improved practices. Several of the contributors to Liaison have set examples of how to do this. As we learn from Superintendent Brian Smart, New South Wales Task Force 1 has adapted its logistical plans to ensure more efficient transport of people and equipment in future missions. It comes as no surprise that the Government of Japan, with its strong record of enhancing preparedness following major disasters, has reinforced disaster risk reduction education programs in schools. Sung Jin Hong tells us that the Republic of Korea’s National Disaster Management Institute has accelerated efforts to create a tsunami disaster response system and safer evacuation routes along its own shores.

While these and many of the other authors discuss specific measures for applying lessons from the Great East Japan Earthquake in order to improve preparedness and response capacities, a few themes emerge across all of the articles:

**Establish relationships prior to disasters**

Many of the authors posit that a lynchpin in their successful disaster response operations was prior familiarity with the host nation and other responders. The most obvious example is the historic relationship between the Japan Self-Defense Forces (JSDF) and the U.S. military. According to Arjun Katoch, the U.N. Office for the Coordination of Humanitarian Affairs’ (OCHA) regional civil-military coordination officer’s strong connections with the U.S. military’s Pacific Command proved key to the U.N. Disaster Assessment and Coordination team’s situational awareness in Japan. The Japanese Red Cross Society, JSDF and other responders’ experience in an exercise allowed for the smooth use of a Red Cross hospital as a temporary disaster management headquarters in the affected area, as Francis Markus tells us. Training and exercises are cited time and again as the keys to establishing the kinds of relationships that make a difference when a disaster strikes. Such training and exercises must involve humanitarian assistance and disaster relief scenarios and include all stakeholders, including non-governmental organizations (NGOs) and the private sector, as emphasized by many of the authors here.

Agree to practical methods for coordination

Although existing relationships helped make for a smoother response, multiple authors noted that there were still significant coordination challenges among the diverse stakeholders who responded to the March 11 disasters. The authors from Japan’s National Defense Academy explore this issue in detail, particularly as it pertains to coordination between JSDF and the U.S. military, and offer a range of possible solutions. Several articles point to the exchange of liaison officers between JSDF and U.S. forces during the response operation as a practical measure that partially addressed this challenge. Many others promote the establishment of agreements among potential responders to ensure that mechanisms are in place for interoperability during disasters. While it is not realistic to expect that all responders can work together flawlessly in all scenarios, surely there are enough similarities among responses to provide opportunities to prepare for improved coordination. Any proposed framework should be vetted through the responders who are expected to use it in order to facilitate clear understandings of roles, responsibilities and authority. The fact that there were different reflections on the same events and partnerships, even within this issue of Liaison, also indicates a continued need to conduct after action reviews and share lessons learned. When two parties set out to improve coordination mechanisms in hope of better cooperation in the future, it is critical that they work together and include each other’s perspectives in their adjustments if they expect real change to occur.
**Improve information sharing**

Nearly every author cites information sharing as a challenge in the response to the Great East Japan Earthquake. Although technology and the aforementioned relationships have provided increased opportunities for communication among counterparts, information sharing remains one of the most important and difficult requirements in a disaster response. There were significant efforts made to share information in Japan, including OCHA’s humanitarian situation reports, and an effort by the U.S. military to make the majority of its reports unclassified in order to make information more accessible to the Japanese and other stakeholders. Nevertheless, many responders still cited a deficiency of information about military, government and NGO activities. This indicates a lack of awareness regarding available information resources, as well as a lack of a common process for sharing information that is important to decision-makers, responders and the general public. Particularly given how insufficient official communication can lead to the quick spread of rumors and misinformation, there is a clear need for improvement in this area. Captain Hiroyuki Terada is among the authors who recommend measures to address information-sharing issues, such as ensuring integration of interagency communication networks.

**Play to the strengths of different responders**

In constructing frameworks for coordination, disaster managers should capitalize on the strengths and interests that each stakeholder brings to the table. Although this disaster overwhelmed many, the model used by Japan of assigning local governments the lead in disaster response efforts ensures that those who know the affected communities best play the key role in articulating and meeting their needs following a disaster. Their quick response capacities, logistical capabilities and training for operating in hazardous environments make militaries – both host nation and international – particularly well-suited for assisting the host-nation government with initial response operations when requested. As Peace Winds America reminds us, by working with and through local aid organizations, international NGOs and other donors can ensure continuity of their programs and boost the role of local organizations in domestic civil society. The disasters in Japan also highlighted the benefits that can come from including the private sector in disaster preparedness and response planning, as some companies offered equipment and manpower to assist with important tasks such as transportation and burials. Others donated goods and money to support relief operations. As Tetsuya Ito and Keishi Ono explain through practical examples of kinks in the coordination of civilian and military responders, it is important for these roles to be determined and understood by responders prior to disasters in order to avoid confusion and maximize the efficiency of response operations. But responders themselves must also prepare to be flexible in order to meet the needs of a particular situation, as illustrated by the Swiss government’s deployment of a search and rescue team tailored to fit the situation they expected to find in Japan.

**Enhance domestic preparedness**

One of the most important lessons of this response was demonstrated by what Japan had already learned. Although the response was far from perfect, and the Japanese contributors themselves identify many areas for improvement, Japan is clearly a leader in domestic preparedness. Its constant efforts to improve its readiness paid off on March 11. Despite the remarkable scope and complexity of the disaster, Japan required relatively little international assistance, proving the benefit of incorporating lessons learned from a long history of natural disasters. Still, many authors encourage Japan to fortify its domestic coordination framework to prepare for times when local governments are overwhelmed and not able to lead initial response efforts. Others recommend the Government of Japan take a critical look at its top-level coordination structure to ensure an efficient process for making decisions and providing guidance to other levels of government.

Civilian and military disaster responders and their partners around the world have been working on these issues for years and have made great strides forward. Unfortunately, there is no true substitute for practical experience, and the responders to the Great East Japan Earthquake can offer critical insight for more effective management of future disasters, wherever they may strike. The contributors to this Liaison have graciously shared their observations and recommendations, and in many cases, changed their own ways in accordance with their experiences. What remains to be seen is whether the rest of us will put their lessons into practice, as well.

Thank you for your interest in this issue of Liaison. We welcome comments and questions and hope that those interested in contributing to future issues will watch for Calls for Papers on our website, www.coe-dmha.org.

Sincerely,

Jessica Wambach
Editor
pr@coe-dmha.org
Michael Barnett’s *Empire of Humanity* is one of the first major academic books to cover the history of Western humanitarianism as a movement. In contrast, much of the literature on humanitarianism published in the last decade focuses on the shortcomings of the aid industry, often by practitioners, ranging in spirit from cynical condemnation to introspective reform. (See Michael Maren’s 2002 *Road to Hell*, Fiona Terry’s 2002 *Condemned to Repeat?*, David Rieff’s 2003 *A Bed for the Night*, Tony Vaux’s 2003 *The Selfish Altruist*, Linda Polman’s 2010 *The Crisis Caravan*, etc.) Barnett identifies major themes and places the humanitarian movement within larger historical contexts over the last three centuries, while striving to not pass judgment on it.

Barnett divides his chronology into three ages he identifies as Imperial Humanitarianism (early 1800s to World War II), Neo Humanitarianism (World War II through the Cold War), and Liberal Humanitarianism (end of the Cold War to the present). Primary among his themes is the tension between emergency humanitarianism – relief work focused solely on saving lives, versus alchemical humanitarianism – work addressing root political causes of suffering and thus attempting to transform the social world. The invented terminology of “emergency versus alchemical” humanitarianism initially feels stilted, as it partially mirrors what most humanitarian practitioners have long called “relief versus development.” However, Barnett’s conceptualization lays the groundwork for his questioning the extent to which both types of work remain apolitical.

**Imperial Humanitarianism**

Barnett defines the age of Imperial Humanitarianism from the late 1700s/early 1800s to World War II, marked by compassion shifting from the private to public sphere. This shift is reflected in Western philosophies moving away from a Hobbesian view of human nature – each man for himself with life being “solitary, poor, nasty, brutish, and short” – and toward a notion of sympathetic man. He traces humanitarian trends back to the anti-slavery movement, highlighted by the British Empire outlawing slavery in 1834. Sharing roots with the missionary movement, which conveniently capitalized on colonialism opening up new populations to proselytizing, abolitionist compassion was often bounded by paternalism and a Christian worldview.

Most humanitarian aid professionals are well aware that Swiss businessman Henri Dunant was inspired by the Battle of Solferino to campaign for all wounded soldiers to be treated humanely and equally regardless of their allegiance. Dunant’s efforts led to the establishment of the International Committee of the Red Cross (ICRC) in 1863 and the First Geneva Convention in 1864, seen by many as the birth of Western humanitarianism centering on the principles of humanity, impartiality, neutrality and independence. However, Barnett reveals some interesting context, including how states eventually supported Dunant’s message in the face of pacifist arguments in order to retool the rules of warfare and shore up the legitimacy of their monopoly on violence.

Following World War I, Eglantyne Jebb, Save the Children’s British founder, prominently used the relatively new discourse of the humanitarian principles of humanity, neutrality, impartiality and independence. She lobbied for aid to be distributed impartially to all children in need, including German children – a radical idea in the United Kingdom in the aftermath of the First World War. She advocated effectively by leveraging the idea of the child as a universal innocent, ironic given that she personally did not care for children.

Across the Atlantic, the American Relief Administration, newly established by the U.S. Congress, notably walked a political tightrope in delivering supplies to Central Europe and famine-stricken Russia. The High Commissioner for Refugees, established in 1921 by the League of Nations, made historical headway as an interna-
Through the 1990s, the conflicts in Somalia, Bosnia, Rwanda and Kosovo challenged how humanitarian actors adhered to operational principles of humanity, impartiality, neutrality and independence, and increasingly called into question whether they were doing more harm than good.

Neo Humanitarianism

Barnett describes the age of Neo Humanitarianism from World War II to the end of the Cold War as marked by the growth of aid agencies and states getting further involved in aid funding. Many agencies that got their starts providing relief in World War II expanded their scope beyond Europe afterward. In the United States, the organization CARE started out as the Cooperative for American Remittances to Europe. In the United Kingdom, the Oxford Committee for Famine Relief initially delivered food aid to Greece but expanded globally as Oxfam. While CARE and Oxfam grew out of the war in a secular direction, World Vision International started in the 1950s, uniquely combining personal evangelism with social action. Post-war growth of the aid industry also brought dilemmas. Aid agencies struggled with perceived neutrality and actual autonomy while receiving government funding, as states increasingly acted to influence aid in accordance with their foreign policies.

In the 1960s, while the Nigerian government wielded famine as a weapon of civil war against its Biafran region, the Ibo rebels in Biafra exploited international sympathy derived from the famine and manipulated Western aid as a resource. The ICRC struggled in Biafra with its approach of quiet diplomacy to work with the consent of the ruling power. It was not outspoken enough for one faction, which broke away to become Médecins Sans Frontières (MSF/Doctors Without Borders) and advocated “témoignage,” or bearing witness to raise awareness along with practicing emergency medicine. In the 1960s and 1970s, Vietnam was a game changer for U.S. aid agencies, especially CARE and Catholic Relief Services (CRS), which were reported in a negative light as only doing relief work in accordance with U.S. Government wishes, thus furthering the U.S. war effort. In Cambodia, after the Khmer Rouge killing fields, aid agencies grappled with capitulating to the Vietnam-backed Cambodian government’s suspect restrictions on how aid could be provided. Famine in Ethiopia in the 1980s received unprecedented media coverage and international funding, but aid agencies were ill-prepared to properly manage the amount of aid. While the aid industry grew enormously in the decades following World War II, agencies struggled with operating impartially and neutrally if receiving government funding or capitulating to humanitarian access restrictions imposed by authorities. Aid growth also led to agency mandates expanding from emergency relief to reconstruction and development work (or what Barnett also categorizes as alchemical work), as the desire grew to not just treat symptoms but also the root causes of suffering.

Liberal Humanitarianism

Barnett terms Liberal Humanitarianism as the period from the end of the Cold War up to the present. The end of the Cold War brought new global conflicts and a shift in humanitarian dialogue toward addressing root causes of humanitarian crises, which would necessitate political engagement at odds with the principles of impartiality and neutrality. Barnett looks at how increasing acceptance of armed humanitarian intervention in the 1990s created humanitarian dilemmas in four conflicts.

In Somalia in the late 1980s and early 1990s, amid the anarchy of a failed state aid agencies controversially hired armed protection from local clans, fuelling conflict among warring factions. In Bosnia in the early 1990s, the U.N. Protection Force was mandated to protect aid supplies but not people, while the U.N. High Commissioner for Refugees (UNHCR) operated as overall lead for aid operations, but without full humanitarian access. A dilemma UNHCR faced was that providing aid, as it was allowed in select geographic locations only, enabled a form of ethnic cleansing by influencing Bosnian population migration out of certain areas. But not providing aid ensured a death sentence. In 1994, the international community’s inaction allowed the genocide in Rwanda to continue until the Tutsi-led Rwandan Patriotic Front retook the country. Aid agencies could only access the area after the genocide, when they provided aid to displacement camps where Hutus fearing reprisals fled, leading to the agonizing realization that they were also aiding genocidaires within the camps. In Kosovo in 1999, as North Atlantic Treaty Organization (NATO) bombing intended to protect Kosovo Albanians led to an expanded crisis, aid agencies allied with NATO, a party to the conflict, to access beneficiaries. Through the 1990s, the conflicts in Somalia, Bosnia, Rwanda and Kosovo challenged how humanitarian actors adhered to operational principles of humanity, impartiality, neutrality and independence, and increasingly called
into question whether they were doing more harm than good.

In examining how several major aid agencies changed their strategies in the 1990s, Barnett concludes that CARE, CRS, World Vision International, and the UNHCR all shifted toward political engagement out of decisions to address root causes of humanitarian crises. Whether this shift focused on justice, poverty, political or human rights, he identifies that it conflicted with operating on principles of neutrality and impartiality.

He also doubts whether organizations doing only emergency work to save lives can avoid engaging in politics of protest, pointing to MSF, which speaks out on abuses it witnesses, and suffers political ramifications. However, Barnett does not sufficiently acknowledge that some organizations manage to focus on emergency relief and encourage political change without publicly speaking out on political issues and openly compromising their operating principles of impartiality, neutrality and independence. For example, the ICRC lobbies for change by quietly working with offending governments. Given that Barnett broadly defines political work as addressing root causes of suffering, he would likely see the ICRC as political, lumping it with MSF. But to do so would not adequately consider the impact of the two organizations’ very different operational approaches, from ICRC’s quiet diplomacy to MSF’s témoignage and public denunciation. The difference in operational approaches is significant because the current relevance of humanitarian principles is their role in facilitating aid agencies’ operational access in difficult situations. How effectively aid agencies follow humanitarian principles for operational access is, admittedly, another conversation. But it would be interesting to see how Barnett would apply his “political” critique in a more discriminating manner to different operational approaches.

Barnett’s historical overview provides a good narrative that can serve as a platform for examining trends in history and humanitarianism from a new perspective. One striking trend is how the persistent paradigm of the sovereign nation-state has impacted humanitarian issues over the past several centuries. In the late 17th Century, the ICRC naively assumed national Red Cross societies would be transnational instead of focusing patriotically on their own countries’ troops. In the 1930s, international organizations were frustrated by governments refusing to recognize refugees persecuted by their allies. Today, a debate continues on whether a “right to protect” civilians from abuses extends to humanitarian invasion in violation of states’ sovereignty.

Barnett has narrated a compelling history of Western humanitarianism as a cohesive movement. He points out tensions and challenges without overly passing judgment, refraining from romanticized praise external observers often apply or condemnation sometimes leveled by world-weary practitioners. Academics may appreciate the analyses available in the various patterns identified – chronological, as well as thematic. Researchers will find a treasure trove in the comprehensively documented sources, while Barnett’s analysis is already influencing humanitarian literature reviews. Practitioners familiar with the usual story of humanitarianism beginning with Henri Dunant and the ICRC will likely find fresh insights into the history of the movement, as well as a challenging reexamination of humanitarian principles and politics. He is upfront that the scope of his work only encompasses Western humanitarianism, leaving the door open for humanitarian movements throughout other cultures to be further examined.

“"He points out tensions and challenges without overly passing judgment, refraining from romanticized praise external observers often apply or condemnation sometimes leveled by world-weary practitioners.””