LIAISON
A JOURNAL OF CIVIL-MILITARY DISASTER MANAGEMENT & HUMANITARIAN RELIEF COLLABORATIONS

Nepal Army’s After-Action Report
Anatomy of a NGO Response
Lessons from the Logistics Cluster

Lessons from Nepal and Other Recent Disasters
## Features

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Author/Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Right Time, Right Place, Right Skills: U.S. Army Green Berets save lives in Nepal</td>
<td>By Master Sgt. Mitchell Elwood</td>
</tr>
<tr>
<td>13</td>
<td>‘Mission First &amp; People Always’: The Nepal Army’s AAR on Operation Sankat Mochan</td>
<td>By the Nepal Army Headquarters Staff</td>
</tr>
<tr>
<td>18</td>
<td>The Handicap International Story: Logistics and Vulnerable Populations in Nepal</td>
<td>By Ludovic de Champs</td>
</tr>
<tr>
<td>22</td>
<td>Civil-Military Coordination after the Nepal Earthquake: Role of the HuMOCC</td>
<td>By Col. Ratindra Khatri (Ret.), Nepal Army</td>
</tr>
<tr>
<td>26</td>
<td>Interview with Brig. Gen. Paul Kennedy, USMC</td>
<td></td>
</tr>
</tbody>
</table>
On the cover: In the months after the April 2015 Nepal Earthquake, the world responded with aid and assistance for the people affected by the tragedy, but no group acted more fearlessly than the people, uniformed services and the Government of Nepal. The paper is called lokta, and is a handmade artisan paper indigenous to Nepal.

Departments

Partners

29 Nepal Earthquake: Anatomy of a Nongovernmental Response
By Dr. David A. Tarantino, Jr., Kelly Suter & James Cooper

35 Airfield Operations after the Nepal Earthquake

39 The Backbone of Response: Lessons from the Logistics Cluster

Technology

43 Form with Content: Ensuring Mission Success in HADR
By Yonahton “Yoni” Bock

47 A Community of Response
By Arlana DeLeo

Research & Education

49 Haiti’s 2010 Earthquake & the U.S. Response: Lessons for Asia-Pacific Disasters
By Dr. James A. Schear

53 Interagency Training Program for Disaster Response
By Lt. Col. Joe Evans

55 Final Thoughts: Observations of a Military Officer on Disaster Response & Security Cooperation
By Col. Joseph Martin

In Every Issue

3 The Director’s Letter
4 Letters to the Editor
5 Contributors
57 Calendar of Events
The Director’s Letter
Col. Joseph Martin, USAF

Just over a year ago a devastating earthquake struck the country of Nepal, with major aftershocks in the ensuing weeks. The international community responded across a wide range of capabilities and in many cases remains engaged today in recovery and reconstruction. This edition of the Liaison Journal is specifically set aside to capture a range of lessons learned, with each providing the unique perspective of the supporting organization and author.

Nepal saved Nepal, and the Nepalese can be justly proud of their ability to respond and recover. They can be equally satisfied knowing that the international community wanted to— and was allowed to—assist by bringing to bear a wide range of capabilities that helped to save lives. However, each participant’s perspective of success must be viewed through the lens by which they assisted. If the reader takes each of these articles from that perspective, it becomes clear that the larger international community did make a difference, and the lessons they learned are very much worth sharing.

We attempted in this addition to bring together that range of views, but are fully aware that Nepal generated a wide range of reports and potentially conflicting lessons learned; we simply cannot include them all. In other cases, such as the U.S. Pacific Command Joint After Action Report, the report in its entirety is limited in its distribution to only those with access to “For Official Use Only” systems, while other organizations also restrict distribution as part of their policy. Regardless, this venue provides a chance to see into how others sometimes see themselves, while providing invaluable lessons when catastrophe strikes again.


My team and I will continue to provide this broad range of perspectives from the disaster management community to engage you, our readers, in a dialog on how we are stronger together, and how each of our organizations can contribute to the great foundation of knowledge that makes us better equipped to prepare and respond to disasters when they occur.

Aloha,
LIAISON welcomes article submissions

LIAISON is a journal of civil-military disaster management and humanitarian relief collaborations and aims to engage and inform readers on the most current research, collaborations and lessons learned available. If you are interested in submitting an article for consideration, please email your story idea to editor@cfe-dmha.org.

• **Format.** All submissions should be emailed to the editor as an unformatted Microsoft Word file. Footnotes are the preferred method of citation, if applicable, and please attach any images within the document as separate files as well.

• **Provide original research or reporting.** LIAISON prefers original submissions, but if your article or paper is being considered for publication elsewhere, please note that with the submission. Previously published articles or papers will be considered if they are relevant to the issue topic.

• **Clarity and scope.** Please avoid technical acronyms and language. The majority of LIAISON readers are from Asia-Pacific nations and articles should be addressed to an international audience. Articles should also be applicable to partners in organizations or nations beyond that of the author. The aim is for successful cases to aid other partners of the DMHA community.

• **Copyrights or licenses.** All work remains the property of the author or photographer. Submission of an article or photograph to LIAISON magazine implies authorization to publish with proper attribution.

• **Supporting imagery.** Original imagery supporting any and all articles is welcome. Please ensure the images are high-resolution and can be credited to the photographer without license infringement. Images should be attached to the submission separately, not embedded within the Microsoft Word document.

• **Biography and photo.** When submitting an article, please include a short biography and high-resolution photo of yourself for the contributors’ section.

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. If you would like to address issues relevant to the disaster management and humanitarian assistance community, or share a comment or thought on articles from past issues, please submit them to editor@cfe-dmha.org. Please specify which article, author and issue to which you are referring. LIAISON reserves the right to edit letters to the editor for clarity, language and accuracy.
Yonahton “Yoni” Bock is a ten-year veteran of USAID’s Office of U.S. Foreign Disaster Assistance (OFDA) and has served on numerous overseas disaster responses, including post-election violence in Kenya, fires in Greece, and the 2008 Sichuan earthquake in China. Following the March 2011 Earthquake and Tsunami in Japan, Yoni deployed as the USAID’s Disaster Assistance Response Team’s (DART’s) Civil-Military Coordinator, providing guidance to the 3- and 4-star leadership on humanitarian requirements, including how best to direct U.S. military assets to deliver life-saving assistance and reinforce the vital strategic relationship between the U.S. and Japan (Operation Tomodachi). In 2015, Yoni served as the DART representative to USPACOM’s Nepal Joint Task Force. Bock holds an MA in Law and Diplomacy from Tufts University’s Fletcher School and a BA from McGill University in Montreal, Canada.

James Cooper currently works in Medical Planning and Preparedness at International Medical Corps, where he is a part of the organization’s effort to build a United States emergency response capacity. Prior to his employment at International Medical Corps, he was a program coordinator for a community service district in the San Francisco Bay Area. He holds a Bachelor of Art degree in Political Science from Lewis & Clark College and is a nationally registered emergency medical technician.

Master Sgt. Mitchell Elwood is the team sergeant for a Special Forces Mountain Team assigned to 1st Battalion, 1st Special Forces Group. With 21 years of Army service, Elwood has deployed to numerous countries throughout the world in support of U.S. national interests, such as supervising the planning and implementation of numerous civil-military projects alongside Civil Affairs and USAID counterparts in Iraq, Southern Philippines and Afghanistan. His humanitarian assistance and disaster response experience includes serving as the Joint Current Operations noncommissioned officer in charge for Joint Special Operation Task Force-Philippines during Operation Damayan and the SFODA 1121 team sergeant in charge of high-altitude rescue operations after the 2015 Nepal earthquake.

Lt. Col. Joe Evans is a U.S. Army South Asian Foreign Area Officer who is currently serving as the Chief, Office of Defense Cooperation in Kathmandu, Nepal. He was the senior military representative in U.S. Embassy Kathmandu following the April 2015 Gorkha Earthquake in Nepal. He previously served in the Pakistan Division of the Joint Staff, South Asia Desk for the Army International Affairs Division, and is a graduate of the Pakistan Army Command and Staff College in Quetta. As an infantry officer in the 10th Mountain Division he served multiple deployments in Afghanistan, Iraq and Kosovo. The author is also a graduate of the Catholic University of America with an M.A. in World Politics and the University of Alabama with an M.S. in Aerospace Engineering.

Ludovic de Champs is a logistics advisor for Handicap International and wields more than a decade of experience in humanitarian logistics. Additional organizations include Solidarités International, Première Urgence-Aide Médicale internationale, Doctors of the World, Pharmacists Without Borders, and others. Over the years, de Champs has managed logistics needs across a range of countries, including Haiti, Pakistan, the Democratic Republic of Congo, Palestine, and Cambodia. His original training was in both political sciences and carpentry.
Col. Ratindra Khatri, retired, serves as a coordination officer for the U.N. World Food Programme and represented the Emergency Logistics Cluster from the beginning of the Nepal Earthquake response. Khatri retired after 28 years in the Nepalese Army, where he acquired extensive practical experience on disaster response operations and civil-military coordination in peacetime and in crisis situations. He is a veteran peacekeeper as he served three tour of duty in the United Nations Peace Keeping Missions – Lebanon, Yugoslavia and Haiti. He is a survivor and responder of the 2010 Haiti earthquake where he was deployed before the earthquake as a branch chief of U.N. force headquarters and was also National Contingent Commander of Nepalese peacekeepers. He was actively involved in search, rescue, relief and recovery throughout 2010. Since retiring, Khatri has been actively involving in the HADR related activities in Nepal and was executive director of Strategic Centre for Disaster Risk Reduction, Nepal.

Kelly Suter is currently the senior nurse for the Medical Planning and Preparedness Unit, International Medical Corps. Suter is an experienced emergency department nurse and holds a master’s in Nursing Education. Prior to her current position, she spent five years as an emergency response nurse for International Medical Corps. She has numerous deployments supporting humanitarian assistance and disaster response operations, including the 2010 earthquake response in Haiti, Northern Haiti during the 2011 Cholera response, and to the Malakal IDP camp in 2014 at the height of the civil war in South Sudan. Most recently, she has supported operations in Liberia, Sierra Leone during the recent Ebola epidemic, Nepal after the 2015 earthquake, and Guinea Bissau. She has also worked with other humanitarian organizations in the Amazon, Mexico, East Timor, and Haiti.

Dr. David A. Tarantino, Jr. is a family medicine/preventive medicine physician serving as senior physician, Medical Planning and Preparedness, Global Strategy at International Medical Corps. He has also served at the Center for Disaster and Humanitarian Assistance Medicine/ Uniformed Services University, Headquarters Marine Corps, Washington D.C., and 3rd Marine Expeditionary Force in Okinawa, Japan. Dr. Tarantino received a Bachelor of Arts degree in Human Biology from Stanford University, including studies in the Stanford Overseas Studies Program in Florence, Italy; an M.D. Degree from Georgetown University School of Medicine; and a Master’s in Public Health from the Uniformed Services University of Health Sciences. He is board-certified in Preventive Medicine and Family Medicine and has received the International Diploma in Humanitarian Assistance. His military career includes multiple challenging overseas and operational assignments on six continents, including medical and humanitarian missions in Iraq, Afghanistan, Indonesia, the Philippines, Peru, Haiti, Guyana, Tanzania, Cambodia, Turkey, Guatemala, and several Pacific Rim nations.
Right Time, Right Place, Right Skills:
U.S. Army Green Berets save lives in Nepal

By Master Sgt. Mitchell Elwood,
U.S. Special Forces Team Sergeant,
1st Special Forces Group
On April 25, U.S. Special Forces Operational Detachment–Alpha (ODA) 1121 was on the tarmac of Kathmandu’s Tribhuvan International Airport awaiting the arrival of ODA 1126. When a massive 7.8-magnitude earthquake struck, the team rushed to an open area near the tarmac and watched helplessly as plumes of brown dust billowed into the sky from falling structures. They were witnessing the powerful destruction of a long predicted earthquake to the underprepared country of Nepal. The C-130 Hercules aircraft bringing in their fellow ODA landed safely during the ongoing earthquake, however nearly 9,000 people in Nepal would lose their lives from the devastation that day and in the days following.

U.S. Special Forces are known for their capability as force multipliers and trainers across a vast spectrum of tasks from special warfare to surgical strikes. A significant part of the Green Berets’ peacetime mission is training with partner forces in mutually beneficial exercises. A key facet of these training missions is the immense preparation and planning an ODA will perform to ensure success. The planning process ensures that the ODA prepares for contingencies and has the ability to flex if the need arises. The teams also are unique in that they coordinate local resources in support of the required mission, such as with host nation militaries and local businesses. This flexibility allowed the teams in Nepal to be uniquely prepared and ideally located to provide specific assistance in the developing humanitarian assistance/disaster relief (HADR) crisis.

HADR is not a primary mission of Special Forces; however, Green Berets have the capability and competency to fill valuable time sensitive gaps that exist in the current HADR model. Frequent host nation exercises and exchange training events place Special Forces in locations to react – in this case, near the epicenter of the Nepal earthquake.

The two detachments were in Nepal for a joint training exercise designed to enhance the Nepalese Mahabir Rangers response capability for counter-terrorism and high-altitude mountain rescue operations. ODA 1121 had landed three weeks earlier and just finished acclimating to the high altitude by trekking to Mt. Everest Base Camp (EBC) with their Mahabir Ranger counterparts. ODA 1126 was tasked to train with the Mahabir Rangers on counter-terrorism. Witnessing the earthquake’s devastation, both ODA’s missions immediately changed; their response to the disaster would soon provide the U.S. government a vital life line for stranded and injured citizens, while providing vital information for decision-makers at the highest levels.

As the initial shock of the earthquake began to wear off, it was soon apparent throughout the international community that there was a large void of information. Cellphones didn’t work, the internet was largely unreliable, and people wanted answers. U.S. Embassy personnel were both eager to help, but also concerned for their friends, family and co-workers in Nepal. U.S. citizens began arriving at the Embassy in large numbers for refuge and assistance. The United States’ large HADR response machine, in the form of Joint Task Force (JTF) 505, was ramping up to respond, but would take nearly two weeks due to Nepal’s inaccessibility. ODAs 1121 and 1126 were on the ground ready to help and quickly became the expeditionary arm of the U.S. Embassy in Nepal during the initial aftermath.

The relationship between the Embassy and the Green Berets solidified with a mission to recover U.S. schoolchildren in Kathmandu with the help of the regional security officer. After the schoolchildren were safely back at the U.S. Embassy, the ODAs pushed into Kathmandu to provide real-time assessments of roads, bridges, hospitals and displaced persons camps to the Department of State (DOS) and Department of Defense (DOD). These assessments helped focus the upcoming response by JTF 505 and USAID’s disaster relief teams. During the assessments, it was common for the Green Berets to engage with the local population and learn details about the outlying hard-hit areas of Nepal. The information began highlighting the dire need to rescue hundreds of trapped trekkers, climbers and distressed Nepalese in the mountainous regions.

The ODAs were eager to help and actively volunteered to perform rescue operations but still faced several road blocks on the path to approval. A key dilemma was finding a way to “yes” that was coordinated with all the entities involved. The senior DOD representatives in Nepal were concerned for the safety of all military members and cautious about putting the Green Berets at risk, while stating “the USAID is responsible for the U.S. government HADR response”. This forced the ODA’s leadership to contact higher commands at the battalion and Special Operations Command Pacific levels to approve rescue operations. They explained in detail that the rescue operations were time sensitive and it could be too late by the time USAID responders arrived to save U.S. lives. Also, it is no mystery that the DOS and the DOD have their differences. The varying motivations and personalities between the two cultures could have easily created friction in the chaotic environment.

The Green Berets realized early on that working closely with the DOS personnel in the Embassy was vital for success. The ODAs took time to get to know the consular staff, security officers, and the Ambassador himself. They earned the confidence of DOS personnel as an energetic and capable ally during the crisis. No task was too small or too great for the
Twenty-six U.S. Green Berets were in Nepal when the earthquake struck April 25. They immediately sprang into action, helping to move rubble and treat the injured. ODAs to volunteer for. They helped set up cots and tents, assisted in the clinic, served food, augmented security, and provided detailed reports from their assessments. By bridging the cultural gap the Green Berets won the financial and popular support of the DOS.

Concurrently, while the ODA’s persuaded DOD and DOS for approval, they coordinated with host nation (HN) militaries using their Mahabir Ranger liaisons to reach out to police, paramilitary, and Army units in Kathmandu. The trifecta of HN, DOD, and DOS entities required delicate and deliberate interactions for endorsement. A key component was convincing each entity that successful high-altitude rescues would be mutually beneficial to all involved and would highlight joint Nepalese and U.S. response capabilities to the international community.

After conducting multiple assessments in Kathmandu, ODA 1121 was “green lighted” to rescue U.S. citizens trapped by avalanches and landslides in the mountainous areas of Nepal. The team scrounged for assets that would assist in high-altitude rescues, however, the Nepalese military had taken control of all available helicopters that could reach high-altitude locations and were only approving flights to specific areas. The Green Berets worked closely with members of the Mahabir Rangers, DOS, Nepalese private contractors, and helicopter pilots to use some of the high-altitude assets available. After obtaining the helicopter assets, the ODAs retained funding by DOS to pay for the services. The relationships that the ODA garnered in preparation for the training event, coupled with their access and skills made the Green Berets the primary search and rescue element for U.S. citizens trapped in high-altitude locations.

The ODAs proved to be seasoned expeditionary units and invaluable assets while supporting U.S. goals and objectives during the crisis response. All detachments are equipped with multiple linguists and all members have extensive cultural experience. In preparation
for Nepal, the teams coordinated for native speakers from 1st Special Forces Group to assist in the training mission, which proved to be invaluable during the crisis. All members are also trained in staff-level planning that can assist consular personnel in creating a common operating picture for resource allocation and can provide multiple source intelligence fusion to locate missing U.S. citizens. The ODAs in Nepal worked side by side with Peace Corps volunteers, Fulbright Scholars and the DOS consular staff to process incoming phone calls, internet posts and friendly tips on the location of missing U.S. citizens.

Within 48 hours of the earthquake, ODA 1121 began high-altitude rescue operations while ODA 1126 liaised with the Mahabir Rangers and continued assessments of the regions around Kathmandu. The first high-altitude rescue was to EBC at 17,500 feet. The rescue brought back injured U.S. personnel from EBC and Lukla to Kathmandu and returned the remains of one deceased U.S. citizen. In order to bring back the injured personnel and deceased remains, two Green Berets remained behind in Lukla giving up their space in the helicopter. This was a planned contingency and would be performed multiple times over the coming days. The Green Berets that stayed in Lukla were equipped with robust satellite communications and alpine equipment suitable for several days. Once all injured and deceased personnel were recovered, the remaining Green Berets were evacuated. Following the successful rescue operation at EBC, DOS support increased and the Green Berets quickly became a commodity.

Large avalanches and landslides had cut off escape routes in the remote trekking areas. The risks of slides and aftershocks froze trekkers in fear, preventing them from walking down off the high ground. Several trips were subsequently taken to the Langtang and Gorhka regions to rescue trapped personnel.

Another challenge stemmed from the Nepalese government pressuring private helicopter companies to stop assisting rescue operations without direct Nepalese military oversight. During the rescue operations, there were multiple entities competing for the limited number of high-altitude helicopters in Nepal. These organizations included foreign country representatives, private insurance companies and international news agencies. Helicopter services deftly tried to avoid oversight by the Nepalese government and sell their services to the highest bidder. News agencies and private insurance companies were generally the highest bidders and drew from resources in key areas. Unable to compete with private funding, the Green Berets used relationships and rapport to supplement their funding. Unlike many other rescue teams who only rescued their own citizens or clients, Green Berets prioritized U.S. personnel first and then filled up available space by triaging all other stranded persons. As a result, the Nepalese pilots favored working with the Green Berets and often overlooked higher bidders in their favor. In the end, the ODAs rescued 55 people from 13 different countries.

After access to Kathmandu became available, 1st Battalion, 1st Special Forces Group (Airborne) provided an additional planning and liaison cell to meet with key HADR leaders. The cell consisted of a Special Forces major and sergeant major with logistic planners co-located with the U.S. Embassy in Kathmandu. This

In the Nepal Embassy, the team used low-tech methods to keep a running estimate of the quantity of individuals stranded with a map to cross reference locations.
action enabled the ODAs to continue rescue operations while a unit representative explained the capabilities and restraints of ODAs to other agencies.

The Green Berets response in Nepal during the earthquake is not unique. In 2013, several ODA’s that were deployed to the Philippines witnessed Typhoon Yolanda and reacted quickly to assist in assessments, personnel evacuation and airfield procedures. The frequent occurrence of ODA presence in nations struck by disaster should spark discussion amongst the HADR planning circles to incorporate the possibility of this valuable resource when available. In crisis situations when planned assets are weeks away from arrival, if an ODA is already present for a combined exchange training event, a contingency plan should be incorporated into Embassy and Geographic Combatant Command HADR plans that utilize their skills. The ability to react immediately, with pre-existing relationships and resources, language support, and flexibility is a tool that should not be overlooked. Additionally, when an ODA is present, response plans should allocate proper U.S. support and resources, to include funds, that allow for quick acquisition of local resources to aid rescue or other operations.

Unfortunately, Green Berets will not be in every country when a disaster strikes. However, if they are, the ability of U.S. decision-makers and leaders to use them efficiently and effectively may be the tool needed to bridge the information gap created by crises, and ultimately the only American resource available to perform rescue operations when lives are on the line.
‘Mission First & People Always’: 

The Nepal Army’s AAR on 
Operation Sankat Mochan

By the Nepal Army Headquarters Staff 
Edited for length by LIAISON Staff

Shortly after the Nepalese Army transitioned from response operations to recovery, Army leadership released a 52-page after action report on Operation Sankat Mochan, the Nepal Army’s disaster relief mission to the Gorkha Earthquake of 2015. The report takes an honest and critical look at the challenges and success stories of the response, and strives to build upon the experience to improve the nation’s response procedures – an example for all nations facing disaster risk.

The report covers the national framework for disaster management, specifics of Operation Sankat Mochan, the use of technology for humanitarian assistance and disaster response (HADR) operations, and recommendations for improving operations in the future. This shortened version pulls lessons learned by the Nepalese Army that may aid other organizations determined to improve upon their disaster response plans and processes.

Lessons from the Report

Authority for Response

At the time of the earthquake, the Interim Constitution of Nepal 2006 had provisions that made it possible to mobilize the Nepalese Army for disaster management without prior authorization from parliament. On this authority, the Chief of the Army Staff immediately mobilized the Army, and the National Security Council subsequently recommended the same to the President through the Council of Ministers.

The Disaster Relief Act of 1982 has provisions to form a central rescue committee during times of natural disaster, chaired by the Minister of Home Affairs. Further provisions are laid down in the Act to form sub-committees for search, rescue and relief. Irrespective of the level of such committees (central or district level), representation of the Nepalese Army is mandatory. Additionally, within the National Disaster Response Framework – 2013, the Nepalese Army is given prime responsibility for directing and coordinating multinational military humanitarian assistance while the Ministry of Home Affairs assumes overall control of all the rescue and relief operations. Experience has shown that this may not always be the best practice. At times of major disasters, when several ministries and departments of the government are involved, confusions might arise in areas such as leadership, coordination and areas of specialty.

1 The complete report can be found at: http://www.nepalarmy.mil.np/engsankatmochan.php
During the response, there was an absence of a higher civilian active body to coordinate the efforts of all the concerned sectors. As a result, effective coordination among various concerned sectors could not be achieved and it affected the relief material collection and distribution mechanism. The need for an effective body to assume the leading role in coordinating the efforts of all the concerned sectors in the field was felt. Therefore, it is evident that there is urgency for establishment of a National Disaster Management Authority to effectively deal with disasters of similar nature in the future.

**Operation Sankat Mochan**

The objectives of Operation Sankat Mochan were to: save lives as a priority; maximize utilization of all available resources and coordinate with local authorities; ensure maximum effectiveness of rescue and relief operations by ensuring reach down to and conducting operations at the Village Development Committee level in affected districts; and establish effective cooperation and coordination with all government and nongovernment organizations, humanitarian organizations and foreign military teams involved in rescue and relief.

To ensure prompt and effective search, rescue and
relief operations, the Nepalese Army surged troops into the most affected areas, drawing from less affected regions. This reassured the public and ensured presence of the government in the most affected areas and helped to immediately launch search, rescue and relief operations to save lives. Despite being victims themselves, ninety percent of troops were immediately mobilized, or approximately 66,069 service members.

The Medical Corps of the Nepalese Army was successful in immediate management of patients, mobilization of forward medical teams, conduct of medical camps and mobilization of epidemiology and food inspection teams. The Nepalese Army treated a total of 85,954 patients. Besides this, international military medical teams treated an additional 7,390 patients, where the Nepalese Army played a vital role in coordinating their efforts.

**Logistics**

For the first 72 hours, the Army concentrated all its resources on conducting intensive search and rescue operations. After the first 72 hours, the Nepalese Army took the lead role in distribution of relief material. A logistics operations centre was established at the Army HQ to oversee relief material distribution. By following the principle of centralized control and decentralized conduct, two logistics centres were established in Kathmandu and Pokhara to make the relief distribution convenient and practical.

In Kathmandu, the Airport Coordination Centre was established at the Tribhuvan International Airport to manage and coordinate the international assistance received. The Nepalese Army also took over the lead responsibilities on behalf of the Government of Nepal for transportation of relief materials to the Humanitarian Staging Area, as well as the storage, record maintenance and distribution as per the priority set down by the National Emergency Operation Centre (NEOC). Relief materials were distributed to hard hit areas of Gorkha and surrounding places from the logistics centre in Pokhara. A Forward Staging Area was established in Palungtar and fed from relief materials brought in from Kathmandu to the logistics centre in Pokhara. Relief materials from India were re-routed directly to Pokhara and quickly distributed. The strategic decision to establish a logistics centre...
centre in Pokhara played a vital role in reducing a considerable amount of pressure from the logistics centre in Kathmandu.

The Nepalese Army initially adopted a ‘Push System of Logistics’ as it was very critical that all available relief materials reached the affected areas with minimum delay. Supply of relief materials on a ‘Pull System of Logistics’ (carried out after demand and requirements are identified) was subsequently put in place by the Nepalese Government. The ‘One Door’ policy of the government in relief distribution did not yield success as anticipated due to the absence of an appropriate and capable mechanism. Therefore a proper mechanism and coordination stood out as very important aspects of relief distribution and management.

Coordination was carried out with the World Food Program (WFP) at the Humanitarian Staging Area to supply the required relief materials to affected areas with minimum delay. The Nepalese Army provided WFP assistance in loading and unloading, and management of the materials received as humanitarian assistance. Likewise, when there was scarcity of means of transport for moving the relief materials, valuable assistance was received from the WFP.

Several humanitarian agencies rushed to Nepal after the earthquake. As some of these humanitarian agencies worked in isolation, people in some locations were getting relief materials repeatedly and in excessive quantities whereas other areas were inadequately supported. Therefore, a need for coordination was felt for the relief operations to be more effectively conducted by jointly utilizing the resources of all those involved in humanitarian activities. With this purpose, on the request from WFP, UNOCHA and other humanitarian agencies, a Joint Coordination Centre was established at the Nepalese Army HQ. Within this mechanism, the humanitarian agencies could request logistic support from the Nepal Army (mainly for air transport) and in return, the Nepalese Army could also get assistance from these humanitarian agencies or share information related to humanitarian assistance. This was in addition to the liaison officers exchange with the Multinational Military Coordination Centre (MNMCC), On-site Operation Coordination Centre (OSOCC), and the Joint Coordination Centre.

In its endeavor to make the logistics operations effective and well managed, the Nepalese Army came up with a strategic logistics plan with the key objective of ensuring the prevention of loss of life due to lack of food and shelter. A mechanism for effective distribution of food and nonfood items, stored in the Humanitarian Staging Area at the Tribhuwan International Airport, to the earthquake-affected districts was developed. Relief items were sent to earthquake-affected districts in a coordinated manner, via air and roadway, with help from the Nepal Food Corporation and National Trading Limited. The logistics supply plan stood out to be an important aspect of the overall logistics plan, as it clearly explained the crux of the logistics plan in a diagrammatic manner. This diagrammatic plan proved useful not only to the Nepalese Army but to all the humanitarian agencies that were involved in relief operations.

Another important aspect in logistics supply is the availability of air transport and its use for movement of supplies. Despite limited numbers and capacity, the Nepalese Army Aviation’s helicopters played a vital role. However, due to limitations in size and carrying capacity, right from the beginning these helicopters were used more in evacuation of the injured than in supply of relief materials. The biggest challenge was fulfilling the rescue and relief requirements with whatever air assets were available to meet the expectations of those in need. The larger foreign military helicopters, which arrived shortly after the earthquake, played an important role primarily in the supply of relief materials.

Finally, although there were no significant damages to the lone international airport, a lot of challenges emerged due to its limited cargo handling and parking capacity. Hence many problems were faced in coordinating the handling, storage, supply and distribution of the relief materials.

Military-military and civil-military coordination

Immediately after the earthquake the Nepalese Army established the MNMCC, which helped in the systematic mobilization and coordination of international search and rescue teams that arrived in Nepal in the form of multinational military assistance. A liaison officer from the Nepalese Army was attached to each of these international military search and rescue teams to mobilize them in a systematic and coordinated manner. The liaison officers informed the MNMCC about developments in the field. If there was a requirement for change or modification of task for these teams it was relayed through the liaison officers. The practical delay in establishing the UNOCHA-led OSOCC – which should have been responsible for coordinating the functioning of civilian international search and rescue teams – led to confusion amongst the nonmilitary teams. This challenge was overcome by the MNMCC initially undertaking this responsibility until the OSOCC stood up functionally.

In the future, the National Emergency Operation Centre (NEOC) would provide guidance to a military command centre that would coordinate the operations of foreign military humanitarian assistance teams and the OSOCC would coordinate the efforts of civilian search and rescue teams. As the OSOCC could not be estab-
lished on time, in the initial stages, all the search and rescue operations (military and civilian) were coordinated through the Multinational Military Coordination Centre (MNMCC). Thus, the need for an enhanced military command centre, beyond the cell envisaged within the framework of the NEOC, was found to be necessary.

Air support was the most important type of military humanitarian assistance received. The multinational military personnel providing air support faced many challenges in conducting air operations due to the difficult nature of terrain and limited technology available in the field of aviation.

Ultimately, international teams (including 18 military teams) deployed from some 34 nations. By 15 July, 19 people, most beyond the rescue capabilities of national teams, were pulled out alive. 135 bodies were recovered, 27,390 people were provided medical treatment, 3,493 people were evacuated by air and 966 tons of relief supplies were delivered. Above and beyond this deeply valued physical assistance and numbers of lives saved, the presence of highly equipped international teams also helped reassure public confidence. These teams worked in close cooperation and coordination with the Nepalese Army.

Additional Recommendations

Organization of incoming relief supplies. An Airport Liaison and Logistics Operation Centre should be established to manage the huge quantities of relief items that will flow into the country.

Prior agreements. Bilateral and multilateral agreements for military humanitarian assistance are required prior to a disaster, specifically in areas such as search and rescue, medical treatment and air supply of relief materials, which was very crucial for the success of overall disaster response operations. As the national capacity in the above-mentioned areas is lower than it should be, it is advisable to accept such assistance from friendly foreign countries in times of disaster.

MNMCC Standard Operating Procedures. To effectively mobilize the resources brought in by foreign military humanitarian assistance teams and to coordinate their activities, the SOPs for the Multinational Military Coordination Centre must be further developed. Only after such a SOP is formalized and implemented, problems faced in the recent past (such as foreign military assistance teams bringing along weapons or not coming in self-sustained) can be avoided. In addition to its development and implementation, sites suitable for establishing camps for such foreign military assistance teams should be earmarked in advance.

Many more lessons on preparedness actions, the use of technology, interaction with the media, and host nation responsibilities are available. The report can be found in its entirety at: http://www.nepalarmy.mil.np/engsankatmochan.php
When the Nepal Earthquake struck at 11:56 a.m. April 25, 2015, a cohort of Handicap International’s 55-person team in Nepal was together in Kathmandu—playing another international NGO in a game of soccer, no less. From a logistics perspective, it was a stroke of luck. Here in Lyon, France, we knew shortly after the quake that our team was safe, where they were, and where they were headed.

Handicap International has worked in Nepal since 2000, and the current team included rehabilitation professionals, inclusion experts, and five logisticians accustomed to peaceful settings. As the local team moved to the office, which had been retrofitted to withstand large earthquakes, they could see that the humanitarian needs around them were acute.

The earthquake was no surprise, and my colleagues in Kathmandu put into practice a key project rehearsed for nearly two years; it helped the team, as well as local doctors and nurses to prepare for such an event. Known as the Earthquake Preparedness Project (EPP), which was part funded by the European Commission Humanitarian Aid Office’s Disaster Preparedness Program, local staff had been teaching doctors, nurses and other front-line health professionals about the kinds of injuries they could expect. Earthquake injuries can include severe fractures, spinal injuries and crushed limbs. If not properly cared for, even seemingly simple injuries can lead to further complications, like gangrene, or poor bone alignment—disabling conditions that the teams would work hard to avoid.

By 3 p.m., Handicap International had assessed one of the largest hospitals, Tribhuvan University Teaching Hospital or TUTH, and the surrounding neighborhoods and health facilities. By 5 p.m.—still wearing their soccer uniforms—they provided TUTH with the first delivery of assistive devices.

This was not Handicap International’s first response to a natural disaster, and lessons from Indonesia in 2005, Haiti in 2010, Pakistan in 2011, and the Philippines in 2013, has shown that logistics and immediate medical
treatment are vital in the aftermath. We knew our local networks of rehabilitation professionals would play a critical role in recovery, and they were active by the afternoon, helping to triage the injured.

The logistics team in Nepal unlocked stocks of rehabilitation and mobility devices, such as wheelchairs, crutches, walking frames, and leg braces—the very items we knew would be needed by people with new injuries, or by people with disabilities who had simply lost their own. These had been stored at “hub” hospitals in Kathmandu, and were essential items to have on hand.

Meantime, in France, the phones of the logistics and emergency teams were buzzing at the organization’s global headquarters in Lyon. The LOG and emergency teams are in touch regularly with its counterparts at other NGOs, and on a day like the Nepal quake the coordination began swiftly. What were everyone’s Nepal teams reporting? When would we deploy? How would we deploy?

In Lyon, the focus was sharp: we had to get our logisticians in place, so the program teams could focus on their jobs. One of the main lessons learned after Typhoon Haiyan hit the Philippines is that we need a strong logistics team as soon as possible.

We prepared two teams—including logisticians and emergency personnel—to leave immediately. One team departed on a commercial flight, a second team on a plane commissioned by the French government, an important safeguard, ensuring that at least one would land in Kathmandu soon. These teams brought their own supplies, knowing they couldn’t purchase many items locally.

The LOG team’s second goal was to bolster the teams’ supplies in Nepal. By Sunday morning, the hospitals had run out of tools for wound management, drills, fixators and assistive devices. We placed orders for rapid supplies.

The basic needs among the population were huge. Nepal’s economy wasn’t ready for this kind of earthquake, even if everyone knew it would arrive. They simply couldn’t provide the necessary goods to help people survive the first days. It was very advantageous that all the agencies and international NGOs could get access to
airplanes so quickly, as well as flying slots, and permissions to land.

Headquarters unlocked several tons of equipment stored in France, the Philippines, and Dubai. The crates contained basic needs kits, including tents and cooking items for families, logistical equipment, and equipment for treating and rehabilitating the injured.

During emergencies, it’s vital that vulnerable populations are not forgotten, overlooked, nor excluded. These are precisely the people who are most at risk during a crisis, and also the people least likely to wait in long lines for aid, or to trek to an aid delivery spot. Our teams would need to bring the aid to the people who required it. As they assessed districts for service needs, the teams made it a point to bring aid with them. Some teams hiked for hours into the mountains, camping along the way, to villages completely cut off from the aid effort.

By Tuesday, April 28, a full logistics project team was in place. The cooperation was very good with the logistics cluster, led by the World Food Programme. The day after our arrival, we discussed how we could complement, and support the logistics cluster activities, and soon began to help them.

In fact, because the airport was bottlenecked, the logistics cluster needed to install an additional, inter-agency storage facility and requested that Handicap International manage it. The storage facility benefited numerous humanitarian agencies. Working closely with the cluster in this kind of response is key; we act as one team.

While international and local NGOs try to supply vulnerable populations with the essential and specific items they need, international military teams are supporting search and rescue. For the first 72 hours, we absolutely work together. There’s a real need of coordination, to tap the competencies of all the actors. We all want to reach the people, and they can reach people (in remote areas) by air. They are usually, but not always, the first to get air access in a country after a disaster. As government actors, they can directly discuss with a local government, and get a slot to fly. As an international NGO, we let the search and rescue teams arrive first; we come in second. And in this case, aside from one flight into Kathmandu from France, we didn’t rely on military flights.

Foreign Medical Teams (FMT) began arriving on Days 3 and 4, but most didn’t bring any rehabilitation professionals, though they did request tools for discharge and rehabilitation. The notable exception was UK-Med, which includes Handicap International physical therapists in its deployments.

On May 5, assessments conducted by Handicap International teams in four Kathmandu hospitals (Baktapur, Bir, Patan and TUTH) revealed that of the people treated more than 65 percent of injuries involved fractures and 12 percent were spinal cord injuries. Teams also observed an increase in the number of amputations. The people with more acute injuries would absolutely require physical and occupational therapy for weeks and months to recover.

While our staff offered triage to the lightly injured, and rehabilitation to patients in hospitals, another crew focused on helping other actors, including NGOs and international agencies, make their services inclusive to the most vulnerable, such as people with disabilities, older people and those with chronic conditions. This is what we call the “twin-track approach”: providing services directly, while simultaneously helping others make their services accessible to everyone. The 2011 World Report on Disability found that 15 percent of the world’s population has some form of a disability—in a disaster, we know that figure is higher. Working through the U.N. cluster system, we supported other actors ensure their interventions were accessible to everyone.

On May 8, for the first time, the team chartered an entire Airbus 310-300F, loaded with 33 tons of humanitarian aid, in addition to reserving portions of cargo space on three other humanitarian flights. One of our proudest moments was that touchdown. It was very complicated because Kathmandu airport was flooded with an influx of aircraft, and at the last moment we weren’t sure the plane would even be able to land.

In addition to rehabilitation equipment, kits with braces, mobility devices such as crutches, walking frames and wheelchairs for the injured, the LOG team packed the plane full with more than 500 emergency kits to provide families who have lost everything with sheets, cooking sets and hygiene kits, as well as cold weather kits and tents.

“This underlined the scale of our operation in Nepal,”
explains Hélène Robin, the head of Handicap International’s emergency operations. Through July, such stock benefitted tens of thousands of people. By May 12, Handicap International logisticians were overseeing one of the two humanitarian aid storage centers in Kathmandu in partnership with the World Food Programme. This work expanded similar capacity into three of the hardest hit areas, and lasted until February 2016.

Outside of Nepal, staff were on call to support the needs coming from the Nepal teams. Bolstering all the teams was another unit dedicated to procurement, ordering whatever the field team needed to get the job done. Within a month, the team counted 20 expatriates and 70 national staff, among them 22 physical therapists and 23 social workers, and work had extended well beyond the city of Kathmandu.

The teams, powered by a strong logistics platform, were able to meet an array of needs. Our rehabilitation teams provided 16,558 rehabilitation sessions – roughly 3.5 sessions for each of the injured people we worked with. They distributed nearly 5,000 assistive devices and rehabilitation equipment. In addition to the kits given out in the first month of the crisis to more than 11,000 people, staff provided 500 “return kits,” including cooking, basic hygiene, and sleeping items, to people discharged after an extended stay in the hospital—long after most of the other NGOs’ basic needs kits had been given out. Our goods and professionals supported 44 health facilities, including hospitals.

Today, our four inter-storage facilities that helped other NGOs stage goods are now closed, as the demands for storage diminish. What’s more, Hafeez Ur Rehman, the logistics project manager who oversaw the logistics platforms, had something great to celebrate: “We didn’t have a single loss report. We handed everything back to WFP, without any discrepancies.”

Well-oiled logistics teams made it possible for our teams “to go the last kilometer,” reaching people with what they needed, wherever they happened to live. But we’re already preparing for the next disaster, expanding our pre-positioned stocks in Nepal to more hospitals outside of Kathmandu, and ensuring those stocks are sufficiently stocked with crutches, wheelchairs, and rehabilitation tools to meet the challenges we know the population will face.
Five minutes after the earthquake hit Nepal in April 2015, Nepalese Army troops, alongside Nepal Police and the Armed Police Force, were already in the streets performing search and rescue operations. Likewise, the U.S. Special Forces teams already in Kathmandu for a joint exercise provided the first international assistance, and Indian Air Force planes landed the same night with search and rescue teams in response to an international appeal by the Government of Nepal. Numerous foreign military forces, including the U.S. military, rapidly followed these efforts. As the numbers and types of assistance increased, coordination between the different actors increased as well. While military-military coordination is standard in most international disaster responses, each event offers new opportunities for civil-military coordination to become more successful.

Government Response

While in principle the military is considered to be the last resort in humanitarian assistance and disaster response (HADR) operations, in Nepal’s case the reality was entirely different. Due to the overwhelming magnitude of the earthquake, Nepal’s capacity to respond to the crisis was not sufficient; however, the initial response was by no means insignificant. The Central Natural Disaster Relief Committee (CNDRC) meeting was held at the Ministry of Home Affairs within two hours of the first earthquake, and meetings continued through strong coordination efforts.

The Multi-National Military Coordination Centre (MNMC) is coordinating all foreign military assets through daily meetings. The Nepalese Army has appointed a dedicated liaison officer from the MNMC in the National Emergency Operations Centre of the Ministry of Home Affairs.

The Humanitarian Military Operations Coordination Centre (HuMOCC) was established to provide the physical space dedicated to facilitate the interface between humanitarian and military actors.

### OVERVIEW

<table>
<thead>
<tr>
<th>Country</th>
<th>In-country</th>
<th>Delivering cargo (not positioned in-country)</th>
<th>Pending arrival</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nepal</td>
<td>8 x military helicopters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>3x IL-76 aircraft</td>
<td>3x MI17 helicopters</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>6x C-17, 2x Iluyshin II-76, 6x C-130 aircraft</td>
<td>8x MI17, 6x ALH helicopters</td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td>1x C-17 Globemaster III aircraft</td>
<td>4x Osprey aircraft, 3x UH-1 helicopters</td>
<td></td>
</tr>
<tr>
<td>Pakistan</td>
<td>4x C-130 aircraft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>1 C-130 aircraft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bangladesh</td>
<td>1 C-130 aircraft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russia</td>
<td>2 IL-76 aircraft</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### AIR ASSETS IN-COUNTRY

- 25 foreign military air assets
- 8 foreign militaries

Data source: UNDAC

By Retired Col. Ratindra Khatri, Nepal Army, & Coordination Officer, United Nations World Food Programme

---

**Civil-Military Coordination after the Nepal Earthquake:**

**Role of the HuMOCC**

---

Center for Excellence in Disaster Management & Humanitarian Assistance
tremors. Also, a Command Post was established at the National Emergency Operations Centre (NEOC) under the command of the Home Secretary. Based on recommendations of the CNDRC, a cabinet meeting was held within the next two hours. The Cabinet declared a state of emergency in all earthquake affected districts and decided to mobilize all in-country resources. The Cabinet also decided to request international assistance including military support to Nepal for disaster response.

Immediately after the earthquake, the Nepalese Army established the Multinational Military Coordination Center (MNMCC) in the surviving premises of the Army Headquarters for systematic mobilization and coordination of international search and rescue teams. By structure, militaries are not formed to respond to disasters as their principal duty. Nevertheless, in Nepal and many countries in the region, national militaries are primarily the first responders in disaster situations and other complex humanitarian situations simply by having a physical presence in all earthquake affected districts and the ability to react quickly. This approach is arguably supported by the understanding that developing nations can ill-afford elaborate separate disaster response organizations to cover its entire territory. Ruggedness of terrain, lack of infrastructure and communication networks pose other challenges; in this reality, the Nepalese Army and government security forces including the Armed Police Force and the Nepal Police served as the default primary responders.

**Broad Coordination**

Within a week thousands of international responders landed in Kathmandu. Search and rescue teams from the International Search and Rescue Advisory Group (IN-SARAG), foreign militaries and many others arrived to provide assistance. Additionally, a flood of relief workers also poured in. Smooth coordination of all these resources was not an easy job. In lieu of a functional civilian operations center, at the behest of the Government of Nepal, civilian humanitarian agencies from some 16 countries originally reported to the MNMCC, which served as one of the relatively more dependable platforms from where they fetched firsthand information and other coordination details. This certainly added many unpredicted roles to the MNMCC.

As per the National Disaster Response Framework (NDRF) of Nepal, MNMCC and the On-site Operation Coordination Center (OSOCC), the latter to be established by U.N. Office for the Coordination of Humanitarian Affairs (OCHA), are two main components tying into the National Emergency Operation Center (NEOC). The MNMCCC primarily coordinates efforts between national and international military response forces, while the OS-OCC responds to the disaster by coordinating different ci-

---

villian clusters. Due to the lack of an OCHA office in pre-earthquake Nepal, the OSOCC could not initially play the desired role. After arrival in post-earthquake Nepal, OCHA personnel were, quite rightly, primarily focused on supporting the U.N. Resident Coordinator’s Office through the Humanitarian Country Team in different cluster operations. Alternatively, OCHA officials proved immensely effective in a supporting role to the MNMCC to facilitate effective civil-military coordination.

The HuMOCC

The concept of the Humanitarian-Military Coordination Center (HuMOCC), at least the nuanced version used in Nepal, may be new for many. It was developed by OCHA in the aftermath of the Haiti Earthquake in 2010 and the Typhoon Haiyan response of 2013, and implemented after the Nepal Earthquake. It was functional approximately one week after the earthquake for the coordination of all other humanitarian actors with national and international militaries. “The HuMOCC’s objective was to provide a predictable humanitarian-military-police coordination platform. Complementary to the OSOCC, the HuMOCC provided the physical space as an interface between humanitarian actors, national and foreign military actors, as well as the national police present in country.”

MNMCC, all international and national NGOs coming to the MNMCC channeled to the HuMOCC for necessary coordination. This certainly helped to fill the gap of coordination between the civilian and military communities.

It must be noted that this is quite different from the HuMOCC concept that may be implemented in ungoverned spaces, failed states or where an intervention based on a Security Council resolution is under effect. In such a case, the HuMOCC would coordinate and may even be called upon to provide some guidance directly to the assisting international militaries and national security forces as available. However, in cases such as Nepal where there is an existing and functional government, even if somewhat degraded by the disaster, and more importantly, where the international militaries are deployed on bilateral request of the sovereign government, all coordination with the military goes through the MNMCC. From there, the MNMCC needs to send military representatives to the HuMOCC.

Yet another point worth noting was that the Nepalese Army, in its Lessons Learned Booklet, states a preference to referring to the HuMOCC as the Joint Coordinating Committee (JCC), reportedly to avoid the misunderstanding with the classical HuMOCC that many contributing states are used to in the intervention/failed state model. A complementary suggestion of the Nepalese Army is for the attendance of the JCC to be beyond the liaison officer level, with actual planners and mid-level decision-makers taking part to enable rapid agreement on actionable plans.

In Nepal, OCHA coordinated the HuMOCC/JCC, with Nepalese Army, Police and Armed Police Force officers present to provide the latest updates and overviews of the security situation of the earthquake affected areas. Representatives of other international militaries attending as staff officers of the MNMCC were valued resources, as were key cluster personnel, and representatives of the Red Cross and Red Crescent Movement. International NGOs, especially those that had large-scale operations and experience in civil-military cooperation at the international-level, were the main beneficiaries of the HuMOCC/JCC. Many international NGOs, who were in Nepal for the first time, also attended the meeting to familiarize themselves with the process, and to obtain geographic information system (GIS) and other important information.

The HuMOCC/JCC platform was an important component in facilitating Request for Assistance (RFA) services to humanitarian partners when they needed military support services, such as for helicopter lift. Requests for military and civil defense assets (MCDA) were discussed and prioritized in the HuMOCC/JCC and then were submitted to the MNMCC for the support of national and foreign military forces.

The formal part of the HuMOCC/JCC certainly played important roles. On top of that, informal interactions before and after the meetings – between civil-military, civil-civil and military-military – reflected the added value of this platform. Established after the initial rescue phase, the HuMOCC/JCC was effectively used during relief to the early recovery phase. It was partially operational until the end of September 2015.

There were some critics alleging that HuMOCC/JCC sought to replace the OSOCC. In reality, it played an effective role coordinating and liaising between civil and military partners as a part of the former’s broad role of civil-military coordination.

In recent years, most large-scale disasters have multiple implications and no single government can respond to any humanitarian crisis on its own. Without proper cooperation and coordination among all humanitarian actors as well as national and international military responders, execution of HADR is going to be a daunting challenge. While the concept of a ‘traditional’ HuMOCC has great value in certain intervention or failed state models, the concept of HuMOCC/JCC that evolved out of necessity in Nepal, as a complementary means to further facilitate the coordination between the MNMCC and the civilian agencies, can be an effective platform for enhanced civil-military coordination.
Interview with U.S. Marine Corps

LIAISON Staff

While acting as the commanding general of 3rd Marine Expeditionary Brigade, U.S. Marine Corps Brig. Gen. Paul J. Kennedy led the forward command element of Joint Task Force 505 during two large-scale disaster response operations in the Asia-Pacific.

In 2013, within six hours of notification from the U.S. Pacific Command commander, Kennedy and 3d MEB left Okinawa, Japan, for the Philippines after Super Typhoon Haiyan – known locally as Typhoon Yolanda – struck the Republic of the Philippines, causing widespread destruction and displacing millions of citizens. For two weeks, JTF 505 worked around the clock to provide unique capabilities to the Armed Forces of the Philippines. When the Filipino government was able to restore infrastructure and take over, JTF 505 transitioned responsibilities to the Armed Forces of the Philippines, nongovernmental organizations, and other friendly nations to continue the ongoing relief effort.

General Kennedy was called to lead again in 2015 when a 7.8-magnitude earthquake rocked Nepal. Kennedy led a 20-person Joint Humanitarian Assistance Survey Team (JHAST) to support relief efforts in central Nepal. As the devastation and needs were realized, 3d MEB was designated as JTF 505 Forward and assumed control of the joint force. The task force accessed hard-hit areas and quickly delivered critical emergency supplies in coordination with the Government of Nepal and supporting the U.S. Agency for International Development Office of Foreign Disaster Assistance (USAID/OFDA). At present, no commanding general has more time on ground leading humanitarian assistance and disaster response operations in the Asia-Pacific region.
LIAISON: What was the situation in which you were tasked to go to Nepal?

Brig. Gen. Paul Kennedy: The 3d MEB is the standing Air Contingency Marine Air-Ground Task Force, or crisis response force, for U.S. Pacific Command (USPACOM). The command is ready to go 24-hours a day in three echeloned movements. When the earthquake hit, we stood up a crisis action team both at III MEF and 3d MEB, anticipating activation. This is a mission we had trained for and had trained with the Nepal Army back in 2013. 3d MEB typically is the lead element of, or forward command element, of JTF-505. Once USPACOM received the request from the U.S. Embassy in Nepal, the assistant chief of mission was sent by C-130 aircraft through Thailand to Kathmandu. Our mission was tasked to support USAID/OFDA, not to lead the U.S. effort.

L: What was the situation like when you arrived in regards to other militaries, NGOs, and assisting states?

BGPK: We expected the greater metropolitan area of Kathmandu and Tribhuvan International Airport to be severely damaged. We expected a giant search and rescue effort within Kathmandu to be underway and that we would provide general logistics support to the international humanitarian community by the direction of OFDA. None of this transpired; the earthquake largely spared the built-up area of Kathmandu (although most of the UNESCO sites were destroyed), instead devastating the outlying region to the West. The hundred thousand expected casualties were well below and within a manageable range. The airport was intact which changed the complexity of the problem in a good way. Several international military and non-military search and rescue teams were already operating out of the Nepalese Army Headquarters. Virtually all of these missions were disciplining their efforts through the Multinational Military Coordination Center (MNMCC) with some notable exceptions. Gen. Rana, Nepal’s Chief of Defense, was designated the executive agent and coordinated directly with the various agencies. This created a slight problem as some of the international missions were committed to the human principle of “military as a last resort” and would not heed Gen. Rana’s direction. This was not a problem for the U.S.

L: What was your mission?

BGPK: On order, JTF-505 supports U.S. government efforts, led by USAID/OFDA and Department of State, to provide foreign disaster relief to the Government of Nepal to save lives and alleviate human suffering, transitioning relief efforts to the Government of Nepal and governmental/non-governmental agencies when appropriate.

L: What did you find to be the most successful way to coordinate with the Nepalese government, USAID and other agencies?

BGPK: OFDA worked directly with my staff out of the Command Post at the American Club. This facilitated constant communication. We also attended all of the appropriate crisis working groups at the Embassy and were in constant communications with Ambassador Bodde to synchronize our effort or request his assistance in pushing past obstacles. The JTF worked directly through the Nepal Army as well, with daily meetings with the CHOD or his designee. We exchanged liaison officers with the MNMCC and with various international agencies, to include the UN/World Food Program to tailor our support to their needs, but always with the full concurrence of USAID/OFDA. We maintained
special dialogue with the U.K. and Australia as we had successfully done during Typhoon Haiyan. And finally, we developed a slow but fruitful daily air coordination meeting with the Indian Army whose pilots greatly assisted in the search and recovery of our downed helicopter.

L: How does the JTF fall under US-AID during a response?
BGPK: According to the U.S. Foreign Assistance Act of 1960 (with subsequent edits) the lead agency during any U.S. government foreign disaster response is USAID with the Office of Foreign Disaster Assistance as the operative. The Disaster Assistance Response Team is usually in the field before DOD and calls forward any U.S. response.

L: Did you find any significant civil-military challenges or successes during the Nepal response?
BGPK: I believe the civil-military issues were most internal to the USG players. Unlike Haiyan, every actor had been schooled in (USAID/OFDA’s Joint Humanitarian Operations Course) and most had worked together in exercises or previous responses. This common working relationship allowed the JTF to operate close to instantly and seamlessly. This is not true with other international missions; many were unaccustomed to taking orders from civilians or would not compromise the Humanitarian Principles. In one spectacular failure, an entire country’s contingent was sent home because of an unwillingness to compromise – not a diplomatic win. From 13 to 15 April 2015, several USPACOM planners, along with USAID/OFDA, attended the World Humanitarian Summit to discuss closer collaboration in the event of something like an earthquake in a remote country like Nepal. Two weeks later we reassembled in Kathmandu. U.S. DOD needs to support OFDA by scheduling JHOC several times a year then follow through with attendance at the regional humanitarian conferences. Working with the international humanitarian community (IHC) prior to the next disaster will speed the saving of lives.

L: You have previous disaster response experience with the Philippines’ 2013 Typhoon Haiyan; did that better prepare you for the Nepal response?
BGPK: Much of what I learned in the Philippines served as a starting point in Nepal although in execution the two were completely different challenges. The most valuable lesson was trusting and working to support OFDA. Al Dwyer and Bill Berger are the regional DART directors and their desires were my commands.

L: Were there lessons from the Philippine typhoon response that you applied to the Nepal response operation?
BGPK: The two disasters were so different it is difficult (and undiplomatic) to describe. Best said that a land-locked country with the most challenging terrain on Earth, with neighbors at odds with the outcome, poses a much different challenge than an archipelagic nation with a well-established military to military relationship. In Nepal we were restricted to a single military-grade runway with nearby a dozen over-flight requirements with other countries while the Philippines allowed multiple airfields with the added benefit of approach by the sea from any direction.

L: In your opinion, how can lessons learned be better transitioned into best practices for HADR operations?
BGPK: I mentioned before the opportunity to learn through the JHOC. I also believe that an unclassified repository of lessons learned needs to be commonly understood and easily accessed. I hesitate to include much of this at our center for Professional Education as this would give tacit mission-tasking to DOD. HADR is not a core mission for the DOD and best left to the Department of State and the IHC. We are part-time supporters at best.

L: Anything else you would like to add?
BGPK: HADR is largely a political act. The real decision-makers were never present during the training prior to the Nepal earthquake, probably the same in the Philippines. Neither the IHC nor foreign military missions will ever understand the internal maneuvering that takes place, whether between rivals in an election year; between ministries when budgets are at stake; nor between embassies where national interests are more important to some than saving lives. For the affected country, the political act comes to its climax when a government can or cannot provide a return of investment to the taxpayers during their hour of need. Credit, legitimacy, and mandates all derive from the competence of the host nation during the first ten days.
Medical personnel treat survivors of the Nepal Earthquake at Dhading Mobile Medical Unit.

By David A. Tarantino, Jr., MD, MPH; Kelly Suter, MSN, RN; & James Cooper, International Medical Corps

The year 2015 was busy for the global humanitarian community, including nongovernmental organizations such as International Medical Corps. While much of the world’s, and International Medical Corps’, attention had been focused on the response to the Ebola epidemic, another humanitarian response on the other side of the world deserves examination as well. The 7.8-magnitude Nepal earthquake, which struck on April 25, 2015, was a long-anticipated, but nevertheless devastating catastrophe, followed by multiple aftershocks and landslides. Final estimates of the devastation include: 8,969 fatalities, 22,493 people injured, more than 890,000 homes destroyed or damaged, and 2.8 million people in need of humanitarian assistance.1, 2

With Nepal at the center of one of the world’s most seismically active areas—where the Indian and Eurasian tectonic plates collide, as evidenced by the Himalayan Mountain range—seismologists and emergency planners had been anticipating a major earthquake in Nepal for years.

Applying the INFORM (Index for Risk Management) approach (Risk = Hazard x Vulnerability x Coping Capacity) results in a very high-risk assessment score for Nepal, which highlights not only the likelihood but also the challenges of a response to such a devastating earthquake.3

Recognizing this high-risk assessment, international organizations and the U.S. government (including the

Office of U.S. Foreign Disaster Assistance and U.S. Pacific Command), had taken steps to raise awareness of the risk in Nepal and had been working to put plans and mechanisms in place for mitigation and response.

In mounting the response to the Nepal earthquake, the humanitarian community had a wealth of experience to draw upon. The Active Learning Network for Accountability and Performance in Humanitarian Action (ALNAP) encapsulated much of this experience in its contemporaneous report, “Nepal Earthquake Response: Lessons for Operational Agencies,” which highlighted 17 lessons for consideration at the strategy and management level and at the technical delivery level (Figure 1).4 International Medical Corps has been a leading global response organization for more than 30 years, including playing significant roles in the 2010 Haiti and 2005 Pakistan earthquake responses and other similar disasters. International Medical Corps was in a strong position to work with the Nepalese authorities, the U.S. government (USAID/OFDA), and corporate partners, to apply its full array of institutional capabilities in the public health and medical sector, as well as related sectors such as water, sanitation, and hygiene (WASH); nutrition and food security; mental health and psychosocial support; protection; and health system strengthening to the Nepal earthquake response and recovery efforts. As International Medical Corps initiated these efforts, the prior lessons, including the ALNAP lessons, were implemented to the greatest extent possible.

**Immediate Assessment and Response**

International Medical Corps’ primary strength is in rapid public health and medical response and training in any situation around the world. Within hours of the Nepal earthquake, International Medical Corps had activated its internal Rapid Assessment process and its Emergency Response Unit (ERU). Immediately recognizing the need for International Medical Corps support to the response effort, an Emergency Response Team (ERT) was assembled in the field in Nepal to conduct initial assessment and response activities. A Response Management Team (RMT), composed of ERU members, health experts, logisticians, finance specialists, security advisors, communication specialists, operations specialists, and other sectoral leads was established in the U.S. headquar-

---

would center on pre-existing marginal socio-economic facilities saw greater damage. Humanitarian challenges only minor damage, but smaller, more remote health critical infrastructure. Several major hospitals suffered and transport infrastructure, as well as damage to other lighted significant damage to buildings, damage to roads and hygiene (WASH) was also identified as a critical need, with limited facilities in displaced persons camps, creating a significant risk for communicable disease outbreaks. To facilitate transport efforts, International Medical Corps contracted its own helicopter capability. Initially, helicopter support was utilized to deploy mobile medical units to remote locations and facilitate patient evacuations and referrals as required.

Expanded Response Efforts

Ongoing assessments continued to reveal the extent of the destruction to Nepal’s already fragile health system, with 465 health facilities destroyed and 690 damaged, including primary healthcare centers, village health posts, and birthing centers. From the outset of its emergency relief activities, International Medical Corps recognized the need to significantly increase its response efforts while simultaneously planning for transition to recovery and capacity-building efforts, with the goal of “building back better”, in keeping with Lessons 3, 9, 11, 14, and 16. International Medical Corps’ typical modus operandi is to use initial emergency public health and medical emergency relief efforts – including WASH, mental health and psychosocial support, nutrition and food security, protection, and other sectoral efforts – as a springboard to more development exacerbated by acute trauma, loss of shelter due to damaged or destroyed buildings, loss of critical infrastructure, disruption of water and sanitation infrastructure, and damage and disruption to the health system, with potential for communicable disease outbreaks, behavioral health challenges, and operational constraints due to damage to an already fragile transportation network.

Initial interventions by the ERT included establishment of multiple Mobile Medical Units (MMUs) in Gorkha and Dhading districts and the capital city of Kathmandu. These medical units provided basic medical care for displaced populations and provided medical supplies to functional health facilities. In keeping with the ALNAP lessons 1, 4, 9, 10, and 16, International Medical Corps conducted ongoing health sector assessments, which identified damage to and overcrowding at key health facilities, with a backlog of trauma and surgical patients. The ERT also identified significant shortages of critical medicines and supplies, including braces, wheelchairs, crutches, canes, plastic sheeting, temporary shelters, antibiotics, IV fluids, wound care supplies, and gloves. Water, sanitation, and hygiene (WASH) was also identified as a critical need, with limited facilities in displaced persons camps, creating a significant risk for communicable disease outbreaks. To facilitate transport efforts, International Medical Corps contracted its own helicopter capability. Initially, helicopter support was utilized to deploy mobile medical units to remote locations and facilitate patient evacuations and referrals as required.

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.

International Medical Corps

In Gorkha District, volunteer nurse Kevin Murphy, from Mass General Hospital, and his teammates travel by helicopter each day to reach remote villages in the Himalayas.
robust and comprehensive response efforts, while laying the foundation for transition to longer-term, capacity-building and recovery efforts in all of these areas.

One month into the response, International Medical Corps was working with international partners, national and local authorities, local partners, and local staff to provide:

• Primary health care and reproductive health care in hard-to-reach villages through MMUs (over 3,200 primary health care consultations);
• Surgical support to MoHP hospitals and facilities (31 surgeries in Dhading and Patan hospitals);
• Health and hygiene education to village residents for prevention against communicable diseases;
• Mental health and psychosocial services in primary health care facilities and MMUs;
• WASH support to affected communities (252 emergency latrines in multiple districts);
• Nutritional support to affected communities; and
• Conducting assessments and promoting availability of gender-based violence protection mechanisms and establishment of community gender-based violence response efforts through local partners.

At this point, International Medical Corps was also noting the challenge of the upcoming monsoon season and the challenges imposed by disrupted communications systems, consistent with Lessons 11 and 13.

**Toward Recovery – Building Back Better**

By month two of the response, International Medical Corps was already well on its way to leveraging the above activities, guided by ongoing assessments and lessons from prior responses (ALNAP lessons), and in concert with national and local authorities, partners, and staff, to transition its focus to longer-term, capacity-building efforts with the goal of building back better.

Recognizing the fragile and degraded state of Nepal’s health system, International Medical Corps placed its highest priority on assisting with efforts to rebuild the health system. International Medical Corps is still working with local partners to rebuild and rehabilitate damaged and destroyed health centers, as well as re-provisioning with equipment and supplies. These efforts, at 13 health posts, will have a direct impact on over 157,000 people who will have greater access to health care as a result.

As described above, the earthquake only served to confirm the ongoing hazards, socio-economic vulnerability, and diminished coping capacity that makes Nepal highly vulnerable to natural disasters. In particular, the earthquake highlighted the need to increase the capacity of Nepal’s ambulance services and prepare for disrupted communications. To that end, International Medical Corps is working to improve emergency response capacity so local authorities can be ready for the next disaster. Specifically, 50 personnel will be trained as Emergency Medical Technicians (EMTs) to serve as first responders, providing emergency health services at the onset of a disaster. In addition, 15 hospitals and dispatch centers will receive new communication systems and share five new ambulances to better serve Kathmandu.

One of the enduring tragedies of the Nepal earthquake is the thousands of injured and disabled, for whom the lack of local rehabilitation services is devastating. To address this type of need, International Medical Corps is providing medical staff, including physical therapists and nurses, to support inpatient and outpatient physical therapy care. As a result, more than 32,000 people will have access to rehabilitative services through a “step-down” facility in Gorkha, which provides outpatient physical therapy services.

International Medical Corps places a top priority on protection issues, including gender-based violence. In
Nepal, as community coping mechanisms were stressed, women and girls faced increased risk of gender-based violence. To address this, International Medical Corps is working with local partners to enhance protection messaging and services. Through these efforts over 19,700 individuals will be reached with protection messages.

Another challenge, closely related to protection and gender-based violence issues, is decreased resources to maintain sexual and reproductive health. In response, International Medical Corps is working to strengthen sexual and reproductive health services in health facilities and increase knowledge among adolescents on family planning and sexual reproductive health. As a result over 13,800 adolescents will benefit from 75 health providers specifically trained on the provision of adolescent health services. In addition, over 1,200 females will have increased access to care through two mother-baby transition homes.

Through extensive experience, International Medical Corps has recognized the challenge of long-term mental health needs in catastrophic disasters and has placed a top priority on addressing them. If mental health and psychosocial support needs go unaddressed, individuals can develop chronic problems, like depression and post-traumatic stress disorder. To address this type of need, International Medical Corps is integrating formal mental health and psychosocial support services (MHPSS) into primary health care facilities and community settings to facilitate access and care. As a result, there will be more than 1,600 health workers and community leaders trained in MHPSS, and over 2,000 people will be sensitized to mental health and psychosocial support issues through anti-stigma campaigns. In addition, over 250,000 people will be reached through radio programs and other means regarding mental health support and services.

Recognizing the linkage of health and WASH, International Medical Corps has long prioritized WASH interventions in disaster response and recovery. The Nepal earthquake degraded water and sanitation infrastructure, which even before the earthquake was inadequate to meet safe drinking water and sanitation needs. In response, International Medical Corps is providing water, sanitation, and environmental waste management solutions to reduce the risk of preventable disease – including cholera. As a result 52,000 people will benefit from more than 2,080 latrines constructed in homes and schools, over 12,000 will be reached with hygiene education and promotion messages, and 125 WASH committees and community health workers will be trained in priority hygiene practices.

Another critical area of linkage to health in disaster response and recovery is nutrition, in particular for children and other vulnerable populations. Adequate nutrition is crucial to children's growth and development, yet the nutrition status of the most vulnerable populations remains critical in many affected areas. To address this, International Medical Corps is working with local partners to create nutrition stabilization centers and providing on-the-job training to prevent and treat severe acute malnutrition in children under five years. As a result, over 280 health staff and caregivers will be trained and seven stabilization centers will be created, giving over 180,000 children under five access to increased nutrition prevention and response services.11

Civil-Military Considerations

As mentioned above, over the past years there has been considerable anticipation of a catastrophic earthquake in Nepal, with resultant preparations by many international governments and militaries. This was manifested in the extremely broad military response from the Nepalese military, as well as other militaries, requiring extensive civil-military coordination efforts. As per usual practice, the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) took the lead in facilitating civil-military coordination through the Humanitarian-Military Operations Coordination Center

---

(HuMOCC), and participating militaries coordinated their efforts through the Multinational Military Coordination Center (MNMCC).

The majority of military support involved logistics/transport and field medical teams, which were also coordinated through the Logistics Cluster (facilitated by the World Food Program) and the Health Cluster. With significant involvement in logistics/transport and health and medical teams, International Medical Corps was careful to coordinate its efforts through appropriate civil and military processes and counterparts. For example, deconfliction of field medical team activity was a top priority. Recognizing early on the challenge of logistics and transport in light of the disrupted infrastructure, and to ensure access, speed, and flexibility, International Medical Corps made arrangements for its own rotary wing lift capability to handle the bulk of its transport needs. This was made possible by a generous sponsor network and a novel social media campaign in partnership with Facebook.

International Medical Corps also established relations and coordination with the Nepalese military as manifested by a cooperative effort to create a field post-operative unit with Patan Hospital and the Nepalese military. As another example, International Medical Corps was able to use its lift capability when available to deliver food and non-food items from the Nepalese Army to communities in Gorkha and Dhading districts.

**Conclusion**

The Nepal earthquake was a reminder of the risk of natural disasters in the Asia-Pacific region. International Medical Corps, a global nongovernmental humanitarian organization, has worked with partners to apply its experience, and the lessons identified by ALNAP, to this catastrophe. There is a robust and growing body of knowledge in the professional practice of disaster response which must continue to inform future response efforts. International Medical Corps also placed a high priority on building back better through its ongoing recovery and capacity-building efforts. In addition, just as important as getting the next response right and building back better, is the need to mitigate risk in advance. Recalling the three-pronged INFORM risk index, it is essential to continue to address each element through: enhanced hazard mitigation efforts; efforts to address vulnerability; and efforts to increase coping capacity.
Airfield Operations after the Nepal Earthquake

LIAISON Staff
In September 2015, Maj. Chris Weaver, assistant director of operations for 36th Contingency Response Group, provided a unit capabilities and Nepal disaster response brief to a Humanitarian Assistance Response Training (HART) class at Pearl Harbor, Hawaii.

The 36th CRG sent a 42-person rapid-deployment unit representing more than 20 Air Force career fields to Kathmandu, Nepal days after a 7.8 earthquake devastated the area. Specializing in airfield operations, the unit’s mission was to “assist the government of Nepal to receive and distribute humanitarian aid to areas affected by the earthquake.”

The government of Nepal faced many obstacles following the earthquake, however, one of the most significant challenges was the small size of Tribhuvan International Airport, which consists of only one runway and parking slots for nine jets.

In non-emergency conditions, the airport primarily supports passenger travel, and is not equipped for a major influx of jumbo jets carrying tons of relief supplies. As a result, on May 3 officials were forced to close the airport to large planes after the runway sustained damage from the incursion of flights delivering assistance, compounding the damage sustained during the earthquake.

The 36th CRG reached Nepal on May 5. Their immediate task was an airfield assessment to determine if the underlying structure of the airfield could maintain the rigorous traffic that it would receive in the coming days.

Nepalese officials downgraded the airfield until the evaluation could be complete. The 36th CRG, alongside Nepalese counterparts, discovered numerous cracks in the runway and taxiway that were significant enough to cause alarm.

“(The cracks) brought into question the suitability of the field,” said Weaver. “The earthquake, obviously, can cause soil liquefaction that changes the whole dynamics of the substructure, so you don’t know if airplanes can land there or not.”

With the use of a dynamic cone penetrometer, the team determined that the airfield was suitable for landings by C-17 Globemaster III aircraft and smaller. As a result, air operations resumed during the day and at night. Additionally, the joint team was able to repair 15 critical surface cracks.

Once the airfield was fully functional, the 36th CRG turned their focus to downloading humanitarian assistance and disaster relief cargo in a manner that assisted the effectiveness and efficiency of NGOs and United Nations agencies to distribute aid.

Lessons compiled by the unit during the operation include:

- Having one team or organization responsible for unloading all cargo maintains structure and orderliness. Prior to the unit’s arrival, cargo was being unloaded from aircraft in a haphazard manner. The unit was able to coordinate with local officials to designate a humanitarian staging area (HSA) near the south end of the airfield. From there, all incoming aircraft were unloaded and cargo staged in the HSA by aid type to be distributed by NGOs and other aid agencies.

- Partnering with host nation counterparts on each level maintains proper guidance channels and prevents confusion. From the moment the unit touched down, Nepalese counterparts assisted with every stage of U.S. involvement. The benefit of partnering with local personnel was two fold: 1) All guidance received came from Nepalese staff and therefore led to improved partnering and communication at all levels of effort, and 2) U.S. service members were able to teach Nepalese counterparts how to perform functions that they had not been required to perform in the past, increasing the capability and capacity of the host nation.

When necessary and possible, provide affected nation with equipment needed to maintain operations after...
departure of assisting states. To ensure Nepalese personnel maintained the capability to perform essential tasks like unloading cargo, the United Kingdom and Australia donated heavy mobile equipment such as forklifts to the Nepalese.

At this time, operations by 36th CRG were reduced to half days when Nepalese staffs were able to resume normal air operations independently. The unit transitioned to an advise and assist mission to be available if needed, however the majority of tasks were effectively performed by host nation assets.

Weaver stated that one task of their advise and assist role included “teaching their airport handling staff some of our cargo handling practices that they generally are not accustomed to.”

Having a linguist with the team is essential. Senior Airman Manoj Khatiwada, a 21st Medical Operations Squadron aerospace medical technician, requested to join the team and return to Nepal, where he was born and raised. His presence greatly accelerated airfield operations and provided a critical link between the U.S. service members and Nepalese staff.

“Having Senior Airman Khatiwada embedded with our team has helped us better communicate how we can assist the people of Nepal in the relief efforts,” said Lt. Col. Glenn Rinehart, the 36th Mobility Response Squadron commander, in an earlier interview. “He understands their interests and helps ensure effective communication so we can work together better. What would have normally taken days to orchestrate, he has been able to communicate and coordinate within hours.”

“Airfield operations are really our bread and butter,” Weaver concluded. “What we provide as a contingency response group is for the most part managing the air mobility picture – what is going to fly into a location, but we didn’t take control of the airfield, we just assisted. It was entirely a Nepali operation, the airport staff was in control during the entire period.”

To watch Maj. Christopher Weaver’s brief on the 36th Contingency Response Group and Nepal disaster response, please email cfe.dmha.fct@pacom.mil for a link.
By the Global Logistics Cluster
Summary by LIAISON Staff

The Backbone of Lessons from the
On 25 April 2015, the Government of Nepal declared a state of emergency after a 7.8-magnitude earthquake struck the country and immediately called upon the international community for support. With the United Nations World Food Program (WFP) as the lead agency, the Logistics Cluster activated within 48 hours and would serve for the duration of the emergency mission to coordinate, manage information, and provide logistical services to ensure an effective, efficient response.

As Nepal is a high-risk disaster country, national preparedness and response coordination mechanisms were in place. The 11-person WFP and partner Logistics Cluster team that arrived in the first 10 days did not start work in a vacuum. Moreover, 10 additional WFP staffers followed them into the country, and local hires provided support. Nonetheless, challenges arose from the outset. A large number of the estimated 2.8 million people affected by the two earthquakes resided in mountainous, remote, difficult-to-reach areas. Relief planning was complex due to the large number of organizations involved. Finally, congestion at Nepal’s one international airport in the early days proved an obstacle to efficiency.

Four months after the disaster and as part of a now well-established strategy, the Global Logistics Cluster commissioned a Lessons Learned Exercise (LLE) to assess the Logistics Cluster response and to examine lessons learned for applicability in future situations. The LLE included three methods of information gathering: 1) review key documents; 2) interviews with Logistics Cluster users – national government staff, international and national NGO staff, donors, etc.; and 3) survey key users of Logistics Cluster services in two phases – during and after the response. Overall findings indicate that the Logistics Cluster response was well-executed and generally enabled organizations to deliver lifesaving relief materials in a mostly efficient way.

Lessons & Findings

Published in January 2016, the LLE report notes four major themes that contributed to the strengths and weaknesses of the Logistics Cluster response in Nepal:

**Coordination:** The WFP Regional Bureau and Country Office had prepared prior to the disaster via a cluster response plan that foresaw a Humanitarian Staging Area (HSA) being established adjacent to the international airport in Kathmandu. In addition, WFP staff in Nepal and the region who had been involved in response plan development immediately identified a strong surge team. Partnerships and relationships created during the preparedness phase through meetings and trainings supported the swift launch of the response. Proactive engagement of organizations whose existing systems and resources in Nepal allowed them to contribute to specific parts of the response augmented Logistics Cluster capacity.

Coordination mechanisms such as cluster meetings were established to unify the humanitarian response, minimize duplication of logistics activities, and address commonly identified needs. However, planning and coordination was challenged in this response by an incomplete overview of requirements (upstream pipeline information, future needs and prioritization of needs). A scarcity of good quality information, high staff turnover and the constant presence of newcomers to the Logistics Cluster approach became stumbling blocks to decision-making.

An additional shortcoming in terms of partnerships and participation emerged in LLE surveys. Logistics Cluster participation in other “service cluster” meetings was perceived to be lacking. Thus, issues arose regarding transparency in the use and prioritization of resources. Strategic decision-making, particularly regarding prioritization of cargo, became a heavily top-down activity, excluding key stakeholders.

**Information Management:** Although reportedly chaotic in the first few days, the Information Management (IM) function contributed by facilitating sharing of logistics information among all organizations. A website managed by the Logistics Cluster included maps, Geographic Information System (GIS) services, situation reports, meeting minutes, etc. and provided consistent, timely,
current, accessible and useful information. A dedicated e-mail mailing list and substantial participation in cluster meetings facilitated and promoted information sharing.

Although largely positive, the Logistics Cluster IM functions were not entirely without room for improvement. Substantial pre-disaster preparedness efforts had one glaring hole: the Logistics Capacity Assessment (LCA) had not been updated for several years. This gap became a limiting factor for obtaining logistics information in the first days of the response although this shortcoming was swiftly overcome.

Logistics Services Delivery: The pre-established HSA at Tribhuvan International Airport (TIA) in Kathmandu was activated immediately, and was enlarged according to need. It contributed significantly to diminishing delays in receipt and onward delivery of relief materials, decongesting the airport, and helping the prompt set up of field hubs. The TIA HSA had support services, including equipment and trained equipment handlers, and their pre-positioning allowed for a fast, cost-effective set up of hubs in Kathmandu and in the field. A dedicated fleet of trucks was available for primary transport, with smaller vehicles for secondary transport. WFP aviation preparedness allowed for immediate mobilization of air assets by a local operator that meant cargo and passengers needing to reach remote areas could do so. Deployed civilians, military officers and U.N. Humanitarian Air Service facilitate liaison with military forces in-country from the outset, allowing delivery to remote villages. Systems to register and track consignments were established quickly.

Despite these clear successes, however, the logistics services activities were not without shortcomings. Concerns arose about delays in obtaining sufficient air transport capacity, cost-effectiveness, and equity due to lack of capacity. Air asset availability and restrictions on foreign air operators caused delayed asset deployment, which ultimately resulted in a backlog of cargo pending airlift. Short funding for air operations caused a move to a cost-recovery basis, but organizations involved in airlifting cargo complained about short notice regarding this change. The consequence was a failure to plan and prepare for the need of additional funds, leaving some organizations with no funds available to pay for air transport.

Of a more localized nature, the remoteness of some affected communities posed a challenge. Porter and pack animal transport was required, and this delivery necessitated rehabilitation of trails to isolated communities. Porter and pack animal services were late to start and did not cover all areas. It was clear that pre-planning had not

The Government of Nepal provided food assistance in areas within the Kathmandu Valley while the World Food Programme concentrated efforts outside the valley, including remote mountain regions using trucks, tractors and helicopters. (Right) A mother feeds her child from food assistance rations.
included a scenario in which a large part of the affected population resided in remote, hard-to-reach areas. Planning for moving relief items to these areas had to be done from scratch.

Leadership by the Global Logistics Cluster (GLC): Primarily responsible for strategy, policy guidance, mobilization of surge capacity, and systems and partnerships linkages, GLC played a key role. It facilitated Standby Partner deployments, provided linkages to the private sector for shipping and logistics assistance, and facilitated information management and relief item tracking support. Still, some logistics support was delayed because of decision-makers’ geographic location (spread across time zones), and logistics participants that had not been part of preparedness activities.

Recommendations

Even taking into account the geographic challenges posed by a response in Nepal, the LLE provides recommendations for future relief operations that fall along the four themes above:

Invest in Preparedness Activities: Preparedness and partnerships built in advance proved an invaluable asset in this mission. Preparation must include construction of a regional roster of persons with the right experience and local knowledge. For the civil-military liaison, early deployment and integration of the officer with the deployed military units is crucial. All relevant stakeholders must be identified and proactively engaging to leverage support, potentially through strategic advisory groups. Government representatives, military units, service users, donors, and private local or global organizations all have the potential to contribute to advisory groups, leading to better strategic decision-making and increased accountability. The partnership approach must be institutionalized via guidance and shared procedures and methods for quick engagement during emergencies.

Information Management: IM tools and products used in the Nepal response facilitated information sharing for an effective operation. Enhancements would include preparation of a quick newcomer briefing or briefing package; increased information on access and resource constraints and their impact on service provisions and resources; and information on how to work in the Logistics Cluster.

Logistics Services Delivery: Communication and participation are, again, critical to improving delivery. Funding and funding constraints must be clearly communicated by organizations involved in decisions regarding movement prioritization. Moreover, a clear definition of roles and responsibilities of the different service delivery units is crucial. Finally, investment in interim tracking measures or pre-established tracking services in high-risk countries will provide additional accountability.

GLC Leadership Responsibilities: The GLC is the central, international mechanism for identifying actors who could potentially provide support. The GLC must develop guidance and procedures on how to work in the Logistics Cluster, and it must be able to ensure sufficient, appropriate surge capacity from the region via local knowledge, Logistics Cluster understanding, and strong management and leadership skills. GLC coordination efforts must include involving strategic participants in preparedness planning, and establishing strategic advisory groups/user groups for key decision-making and logistics prioritization. The Humanitarian Country Team should also be actively involved in prioritization from the outset.

The Nepal LLE 2016 can be found in its entirety at http://www.logcluster.org/sites/default/files/logistics_cluster_nepal_lessons_learned_report_160121.pdf
Ensuring Mission Success in HADR

Operation Sahayogi Haat, the Joint Task Force (JTF) 505 mission that supported USAID’s 2015 Nepal earthquake response, should be widely seen as a paradigm for civil-military cooperation in disaster relief. While the tragic loss of a U.S. helicopter—including U.S. Marines, Nepali soldiers, and civilian passengers—casts a long shadow over any retrospective, the overall U.S. military mission was a success: focused, deliberate and effective. Understanding how, amidst logistical challenges, intense media scrutiny, fluctuating humanitarian needs, and constant aftershocks and landslides, the JTF had such a narrow yet successful mission requires a broader understanding of the systems and tools used to focus the U.S. military’s humanitarian missions on critical enabling functions.

Chief among these tools is the Mission Tasking Matrix (MITAM) process—developed by USAID’s Office of U.S. Foreign Disaster Assistance (USAID/OFDA) and the U.S. Department of Defense (DOD) over the past decade. MITAM is an operational- and tactical-level system for communicating, validating, implementing, and tracking U.S. military missions during foreign humanitarian operations. Born out of the challenges of the 2004 Indian Ocean Tsunami response and other large-scale relief operations in the early 2000s, MITAM is a process that routes requests for assistance from any number of relief actors—host nations, nongovernmental organizations, U.N. agencies, and U.S. government entities—through USAID/OFDA for humanitarian validation and over to the U.S. military for action and implementation.

By Yonahton “Yoni” Bock,
Humanitarian Assistance Advisor to the Military, USAID’s Office of Foreign Disaster Assistance

LIAISON Volume VIII | Spring 2016
MITAM refers not only to the system but also to each individual request. The two key components of MITAM are as follows: 1) a comprehensive request for assistance (RFA) that gathers basic information for each request before any decision is taken on action. The form details what is being asked; who is requesting it; when action needs to take place; where it is to occur; and why the U.S. military is being asked to do it; and 2) a clear process for moving the RFA from request to implementation. The MITAM system is a low-technology solution; however, it not only helps synchronize U.S. civilian and military actions, but also overcomes five challenges inherent in humanitarian operations.

Working through the “fog of relief”: Most disaster environments include any number of confusing variables: undetermined needs, unknown numbers of response actors, unclear requirements, and broad coordination challenges. By insisting on visibility and transparency for U.S. military humanitarian action, MITAM brings about a unity of effort among U.S. government (USG) responders to focus efforts on synchronization of USG activities in support of the humanitarian relief cluster system and host nation.

Balancing deliberate planning with speed of response: In a disaster, response time and speed are essential. Yet, actions taken too reactively and too quickly can result in poor planning, half-baked implementation, and unforeseen and unintended secondary and tertiary consequences. With USAID/OFDA’s Disaster Assistance Response Team (DART) validating humanitarian missions through MITAM, military planners can speed up the rapid response planning process and focuses JTF planning solely on an analysis of whether the JTF has the resources and authorities to fulfil it; not whether it fits within a broader humanitarian mission.

Adherence to doctrine: DOD doctrine states that U.S. military assets provide foreign disaster relief “in support of USAID” (DODD 5100.46 4(a), July 2012). MITAM reinforces this supporting-supported relationship by ensuring USAID/OFDA validation of all DOD disaster relief activities.

Keeping costs in check: International humanitarian response is costly to donor governments and taxpayers, and the use of military assets is generally even more expensive. By focusing missions only on validated requirements, MITAM provides a cost efficiency to the limited funding allocated to DOD and ensures that commanders receive reimbursement for costs accrued through the humanitarian mission.

Avoiding mission creep: With overwhelming needs there can be a temptation to try to do more with less. MITAM allows USAID/OFDA to prioritize military activities, and forces military planners to focus on specific requirements to assist rather than broad capacities that could be brought forward. Similar to keeping costs in check, so too does the MITAM system enable operational efficiency, preserve the chain of command, and limit the chances of broader scope creep.

With the inclusion of MITAM, the timeline of JTF-505 becomes a richer story about the internal coordination of U.S. government relief efforts to assist an important partner country and strengthen the overall humanitarian response community in Nepal. Within a few hours of the April 25 earthquake, USAID/OFDA stood up a Response Management Team (RMT) in Washington, D.C., and reached out to U.S. Transportation Command to bring OFDA’s DART, including two U.S.-based urban search-and-rescue teams, from the U.S. to Nepal. Recognizing that U.S. military forces would likely play a central role in the response, USAID/OFDA also redirected a DART civil-military assistance coordinator (CMAC) to Okinawa to link up with III Marine Expeditionary Force – U.S. Pacific Command’s (USPACOM) identified component responder for humanitarian assistance and disaster relief – and sent two additional staff to USPACOM to augment the lone staffer there. The very first MITAM, submitted by the DART and validated on April 29, sought the deployment of a Humanitarian Assistance Survey Team (HAST) to Nepal to “advise on DOD capabilities and assets that could support the response, as well as to assess and scope appropriate DOD missions.” When the 22-person HAST, under the command of Brig. Gen. Paul Kennedy, arrived in Nepal on April 30, USAID/OFDA’s CMAC was among the staff, with a mission to represent the DART to the JTF and enable the overall MITAM process.

Subsequent MITAMs on April 29 and 30 continued to set the conditions for the broader DOD mission: provision of airfield logistics support to include cargo handling, logistics management, and materiel; and provision of rotary wing assets to enable transportation of personnel, relief supplies, and equipment to remote, disaster-affected locations. With the arrival of MV-22 Ospreys and UH-1Y helicopters the first week of May, the MITAMs quickly shifted from operationally focused requests to specific tactical missions to deliver relief supplies and move personnel from Kathmandu to outlying areas.

Over the next two weeks, the DART validated an additional 40 separate missions. By the time the JTF achieved full operational capacity on May 9, JTF-505 had a well-oiled system in place for receiving, reviewing, and acting upon validated MITAMs. In total, JTF-505 implemented 25 MITAMs (including the initial three), with another 18 cancelled or changed as conditions in the field evolved.
An example of the Mission Tasking Matrix (MiTaM) form.
More than half of all requests originated from non-U.S. government sources, including, notably, nearly one-third submitted by the Nepalese Army. Not surprisingly, close to 80 percent of missions relate to transportation.

On May 19, the JTF completed the final MITAM, the delivery of relief commodities to road-inaccessible villages near Charikot district. In just over three weeks, JTF-505 had transported 115 tons of emergency shelter materials, food, and medical supplies to remote villages and transported 550 personnel, including 459 Nepalese and 75 casualty evacuees, from affected areas. When the JTF stood down on May 22, it was with the concurrence of the Government of Nepal and the approval of U.S. Ambassador Peter Bodde based on an assessment from the DART that there were no outstanding humanitarian requirements that JTF-505 was uniquely positioned to fulfill.

For any JTF commander, deciding when to end a disaster response mission is among the hardest parts of the operation, balancing outstanding operational needs with financial implications and the political optics of having U.S. military aircraft in country. The temptation to expand a mission in the face of overwhelming needs and overt human suffering – much of which likely preceded the disaster event – is great. To avoid potential mission creep, therefore, the mission must end when the goals set out at the beginning have been met. Military responders do not have the luxury of a long mission; a heavy operational footprint, limited funding, and costly daily burn rates are but a few of the reasons why most military disaster relief missions end sooner rather than later.

While some may opine that JTF-505 left before all humanitarian needs were met and when it still could have served as a useful way to demonstrate U.S. commitment to Nepal, from the perspective of both international humanitarian best practices as well as DOD doctrine, the timing made sense. Per international best practices, international military assets do not remain in theater when they no longer provide unique assets. As the federal lead, USAID/OFDA’s role was to coordinate with Government of Nepal entities, humanitarian clusters, relief organizations, and U.S. interagency actors to determine the appropriate U.S. contribution and validate the humanitarian requirement for aid. By the end of May, road transport and access to remote areas had improved; alternate rotary wing lift was available through the Government of Nepal and Logistics Cluster actors; and outstanding humanitarian shelter, livelihood, health, and protection needs presented complex challenges to be addressed, not by foreign militaries, but through a combination of continued USAID support, local Nepali citizens, international volunteers, capable nongovernmental organizations and charities, and the Government of Nepal. Following the JTF’s drawdown, the DART continued to lead the U.S. response efforts to address humanitarian needs, and USAID programs are still supporting a range of relief activities to this day.

One of the many successes of Operation Sahayogi Haat was the use of the MITAM to define the goals and set the end state for the overall operation. In general, the impact of disasters lasts for years, and if a JTF utilized assessments of broad humanitarian needs as the metric for progress toward mission completion, the mission would never end - needs will always persist, and full recovery often takes a generation or more. While many humanitarian NGOs can shift focus from initial disaster relief activities to programs that assist in recovery and sustainable reconstruction, militaries do not have this flexibility. However, using MITAM fulfillment as an assessment of progress provides a JTF with a measurable target and focus: when all MITAMs are completed, the mission is at its end. In Nepal, focusing on MITAM completion ensured that the JTF could work toward concrete goals and leave when their mission was over. In this way, Operation Sahayogi Haat presents an ideal model for future JTF commanders when they are called upon to provide humanitarian assistance and disaster relief.
The All Partners Access Network (APAN) is the unclassified information sharing and collaboration enterprise for the United States Department of Defense (DOD). APAN provides the DOD and mission partners community spaces and collaborative tools to leverage information to effectively plan, train and respond to meet their mission objectives. APAN makes these tools available over the open Internet so individuals and organizations that do not have access to traditional DOD systems and networks can participate in information sharing and collaborative events.

Nepal Earthquake

The APAN team responded to a request from U.S. Pacific Command (USPACOM) to provide unclassified information sharing and collaboration support to Nepal Earthquake response efforts. Using past experiences and lessons learned from prior humanitarian assistance and disaster response (HADR) operations – the Haiti earthquake, Japan earthquake and tsunami, Philippine typhoon and Vanuatu cyclone – APAN was ready to provide community creation, knowledge management consultation, platform training, 24/7 help desk services, development and Geographic Information Systems (GIS) support to include daily metrics reporting services within hours of the earthquake.

Several organizations requested APAN groups be stood up in support of the operation in the days following the disaster. The APAN knowledge managers worked closely with group owners and organizations were able to meet their needs while keeping the number of APAN sites and groups to a minimum, reducing duplication. Each community started with the general APAN HADR template and then customized to meet specific community needs. With APAN’s catalog of tools and capabilities a community owner could pick and choose which tools best served their requirements. APAN team members also provided links to reference documents, SOPs, lessons learned and best practices to ensure the environments were optimized to meet information sharing objectives.

As of 11 June, the Nepal HADR Response Community had 451 members. The purpose of this community was to openly share information with response communities to include the DOD, nongovernmental organizations (NGOs), international organizations (IOs), and civilians. Over the course of approximately one month, all postings on the APAN community were unclassified and included a multitude of information ranging from openly available reports from education or news reporting outlets, news stories, situation reports, requests for information, requests for assistance, maps, links to publicly available resources for the U.N., and relief organizations’ donations and response information.

Of the 451 members, approximately 45 members posted situation updates or imagery, responded to efforts initiated to assist, shared links to or re-posted publicly available information, and helped answer questions other group members posed. The active community members ranged from U.S. military personnel and NGOs to commercial and educational resources. Aside from DOD and NGO activity, representatives from Thailand, Sri Lanka, and Nepal participated in discussions and contributed relevant materials. The primary organizations represented within this community were USPACOM, DOD Chief Information Officer, DOD Intelligence Information System, National Geospatial Intelligence Agency, Joint Task Force 505, Pacific Disaster Center, Center for Excellence in Disaster Management and Humanitarian Assistance, and NGOs to include Team Rubicon, Humanity Road, Global Professional Nepali Network, the Military Auxiliary Radio System and foreign militaries in the Asia-Pacific region.

An APAN GIS developer worked closely with community users to configure specific map feeds and other GIS solutions to improve how information displayed to end-users. Unfortunately, the map.apan.org service was unavailable during the response timeframe due to server issues, so APAN’s mapping capabilities were not used. Nevertheless, the APAN team was still able to provide a quick turnaround for feature enhancements based on re-
quests from the National Geospatial Intelligence Agency and feedback received during an APAN Adobe Connect meeting. A total of four different maps were available to the public group.

**Lessons Learned**

*Use the public APAN community for all unclassified information.* It is recommended that if the U.S. military component is going to use only a NIPR portal (CAC-accessible only) to share and store information with other U.S. military personnel, they should consider using the publicly-accessible APAN portal to share unclassified instructions, announcements and documents that have been vetted and approved for release to the public and other non-government organizations. In this case there would be no requirement to have a separate APAN “private” SharePoint site or group. The restricted JTF 505 APAN SharePoint Community had no measurable impact on the information sharing opportunities with other supporting agencies and militaries.

*Utilize open forum discussions.* Utilization of open discussion forums encouraged community members to contribute to and continue dialogs that provided requested information, requested assistance, situation reports and other valuable, time sensitive information and resources to the broader audience.

*Continue APAN development to improve user experience.* Modification to the group content map and tag functionality need additional development, along with a feature that will allow group owners to enable a “bulk upload” feature for members. However, quick links to related external sites offered valuable resources to members.

The document can be found in its entirety at: https://community.apan.org/support/m/mediagallery/159344
By any measure, Haiti’s earthquake of January 12, 2010, was a horrific disaster, but to say that Haitian society was totally unprepared for a catastrophe would be wrong. Given the country’s chronic vulnerability to tropical storms, as well as its extreme poverty and legacy of political unrest, its citizens have honed truly remarkable coping skills. That said, no Haitian living in 2010 had ever experienced a large-scale seismic event in Haiti. As an unexpected, high-impact event, the international response was overwhelming.

1 Dr. James A. Schear, a Global Fellow at the Wilson Center, served as Deputy Assistant Secretary of Defense for Partnership Strategy and Stability Operations from 2009-2013. The unabridged version of this article was originally published on July 29, 2015. The author wishes to thank Frances Veasey for her much-appreciated editorial assistance as well as Al Lucini and S. James Ahn for their invaluable research assistance. The views expressed in this essay are solely the author’s.

2 The most recent large-scale (7.0+) event was in 1860; see Reginald DesRoches, et al., “Overview...
natural disaster, this earthquake tested the Haitian people’s resiliency. It also triggered a heroic international relief effort—one of the largest in modern history—with massive support provided by the United States along with many other countries and nongovernmental relief organizations working through or alongside key U.N. humanitarian agencies.3

As one of the largest seismic disasters in modern history,4 the Haiti earthquake of 2010 imparts significant lessons for the Asia-Pacific region, not only for risk-prone nations but also for their neighbors, allies, and partners. Although one case study cannot generate insights that apply uniformly across a hugely diverse region, some highly relevant lessons can be gleaned from Haiti’s mega-disaster.

**Lesson 1:** Domestic “shock-absorber–bounce-back” strategies will greatly affect the scale and impact of a sudden-onset disaster and the responses that are required to alleviate its damaging effects.

For Asia-Pacific countries—especially those with dual vulnerability (that is, exposure to seismic as well as severe weather hazards)—disaster resilience must be homegrown. Ideally, a domestically focused “shock-absorber–bounce-back” strategy has two pillars: hazard-specific risk reduction initiatives, and larger resilience programming that addresses more chronic vulnerabilities (sea-level rise, soil salinization, water scarcity, etc.). Haiti’s fragile status—marked by clear deficiencies in effective land-use planning, zoning, building codes, and safety inspections—greatly elevated its population’s vulnerability to disaster-inflicted damage.

**Lesson 2:** A leaning-forward posture is critical for rapid and effective responses to sudden-onset mega-disasters, but operational success requires that all the requisites be in place.

The Haiti response was successful because relief aid got through to hundreds of thousands of victims who might not have otherwise survived. To achieve this result, the United States had to mobilize a huge capacity to lift aid (via ships, aircraft, etc.) into a country just a few hundred miles off south Florida’s coast and to secure relief deliveries in collaboration with UN peacekeepers and the Haitian police. Hispaniola’s proximity was Haiti’s greatest asset; in the Asia-Pacific region, even with a sizable U.S. forward presence, there’s a tyranny of distance created by the region’s vast size.5 The United States and its Asia-Pacific partners will need a forward-leaning posture that draws upon U.S. naval presence, critical staging bases,6 and a track record of multinational coordination. There’s also a need to pre-position equipment and logistics support useful for disaster response operations. The Haiti experience also argues for a more comprehensive set of MOAs to help guide whole-of-government contributions to overseas mega-responses, including enumeration of agency-specific tasks, required capacities, as well as funding and reimbursement. While USAID already has MOAs, its span of prior agreements did not cover all the agencies that participated in Haiti. As the Haiti experience shows, adequate pre-deployment training and immunizations are needed, as are clear agreements on the depth of support the supplying agency should expect, the modalities of coordination at all levels, and who pays the bills.

**Lesson 3:** Access is vital; don’t assume it will be easy.

Access to disaster-stricken areas is always a vital prerequisite of international relief efforts, and the Haiti experience shows how perilously fragile air- and seaport access might be even for a littoral country with a large urban seaside population. Seismically active areas throughout the Asia-Pacific’s coastal regions, especially those areas overlaid with large urban populations, should be assessed in terms of their accessibility under worst-case conditions. The problem is not purely urban, though—scalable over-the-shore logistics assets may also be critical for meeting the relief needs of affected rural areas, especially in the Asia-Pacific’s far-reaching Oceania region. Finally, in the Asia-Pacific’s non-coastal areas, especially seismically vulnerable regions surrounding the Himalayas and the Indus-Gangetic plain, access by overland routes could be extremely challenging, as we saw most vividly in Nepal’s massive earthquake last April. Effective staging of relief assets into those remote areas would require the active cooperation of neighboring states, whether India, China, or other countries, on a compressed schedule.7

**Lesson 4:** Anticipate massive human displacement as well as long-term medical assistance needs.

In massive urban-centric earthquakes, survivors will be forced to flee from damaged or destroyed buildings into parks, streets, or surrounding areas. In Haiti’s case, the residents of Port-au-Prince were fortunate to have largely vacant rolling hills and lowlands close by. This may not be the case elsewhere, especially where large, seismically vulnerable metropolitan areas are spread out through mountain valleys—Kathmandu, Nepal, is a

---

6 As seen in Thailand, political instabilities need to be factored into assumptions about accessibility to key staging bases. Having multiple options is the best fallback.
7 According to reports from on-the-ground experts, India’s orchestration of relief access overland—both into the Kathmandu area as well as more remote affected regions—in the wake of Nepal’s massive earthquake was very impressive.
prime example.8

Lesson 5: Work up front to clarify coordination mechanisms for civil-military operations as well as a mutually reinforcing division of labor.

The Haiti experience validates a longstanding lesson in disaster management that civil-military relations can be either a key enabler or, if poorly orchestrated, a hugely complicating factor. The Haiti experience’s positive steps on civil-military coordination—for example, the Humanitarian Assistance Coordination Center, the MiTAM (Mission Tasking Matrix) process, and the All Partners Access Network—definitely helped form a coherent overall approach among a diverse group of responders. Ultimately, operational success requires a blending of expertise. In Haiti, it became clear to overworked military air-traffic controllers that to optimally allocate landing slots among a flood of competing NGO requests, they needed advice—from relief experts who could speak to the track record, reputation, and likely capacity of the requesting aid organization—so they could do their job right.

Lesson 6: Communications, social media, and public affairs messaging are always going to be core ingredients in disaster response.

With a 24/7 news cycle and increasingly well-connected communities—including a mega-disaster’s victims as well as their potential donors—the public posture of a disaster response has become a critically important part of an operation. Mega-disasters have a magnetic quality, drawing in journalists and media organizations, as well as in-kind donations from well-intentioned donors. This was so in Haiti. Reporting from chaotic aid distribution points or interviews with frustrated, unaided victims grabbed headlines, as did reports of U.S. surveillance drones. The lesson for public affairs officers and commanders is not to default into positive news mode, but to provide a clear picture of an operation’s challenges and its larger strategy for transitioning from the response phase toward longer-term recovery in partnership with the host nation and its citizens.

Lesson 7: Work intensively on strengthening field-level
relations with regional partners on disaster relief, including the private sector, especially if U.S. military support is suddenly needed elsewhere.

While Haiti’s earthquake triggered a global response, the contributions of Western Hemisphere neighbors were particularly notable. Regional collaboration on disaster relief is already a highly visible part of the Asia-Pacific’s architecture, and the United States in concert with its allies and partners will need to consider options for strengthening regional contributions in high-end disasters. One pathway here might be to consider variations on the core group concept (for example, regional leads for a given disaster), drawing upon the experiences of the quadripartite Tsunami Core Group\(^9\),\(^10\)—Australia, Japan, India, and the United States—that led efforts to coordinate disaster response in the Indian Ocean in 2004.

**Lesson 8:** When a disaster strikes, transition planning should start immediately, both to flesh out a conditions-based (yet calendar-informed) progression from emergency to relief to recovery missions, as well as to ramp up back-end resilience-building programs in a disaster’s aftermath.

The need to orchestrate a graceful handoff from international disaster responders to national stakeholders is well understood. Conditions-based criteria for this transition should be identified and agreed upon in advance, even though end states for a disaster relief operation will not always be alluring. In the Asia-Pacific, the greater level of development throughout the region may serve to heighten public expectations that disaster-affected countries can make the transition more quickly—a perception that, ironically, may place more pressure on their leaders as they struggle to balance day-to-day needs against recovery goals over the longer term. It is important to work with local stakeholders on the best ways to foster self-reliance via risk-reduction initiatives and create opportunities for a candid dialogue on steps to mitigate the intrinsic vulnerabilities as well as various stressors—urbanization, climate change, etc.—that a country will have to confront when seeking to build its own resilience.

**Concluding Observations**

Ultimately, there is no one-size-fits-all guide for mapping out the challenges or opportunities for coordinated action whenever a major disaster hits. Like Haiti, many Asia-Pacific countries are located in disaster-prone areas, and their people have developed longstanding traditions of endurance. What the Haiti experience shows is that emergency responders, logistics access, field coordination, and sensitivity to cross-cutting vulnerabilities can make a huge—and positive—difference in the lives of the affected communities.

The article can be found in its entirety at: [http://www.anser.org/babrief-haiti-lessons-learned](http://www.anser.org/babrief-haiti-lessons-learned)

Dr. Schear developed this work in concert with ANSER.

---


\(^10\) National Bureau of Asian Research, “Strategic Assistance: Disaster Relief and Asia-Pacific Stability,” 2014. Note in particular this report’s discussion of vulnerabilities in South and Southeast Asia (pp. 6-7).
The U.S. Embassy Country Team in Nepal played an integral role in the aftermath of the 7.8-magnitude earthquake that occurred April 25, 2015. Although the Nepalese security forces were able to quickly respond, a large international response was required to assist with the aftermath of the disaster. The core of the U.S. response was from the Office of Foreign Disaster Assistance (OFDA) Disaster Assistance Response Team (DART) and U.S. Pacific Command (USPACOM) Joint Task Force (JTF). These organizations arrived quickly and were critical contributors; however, the Embassy Country Team was a constant presence before and after the response. One lesson learned from this event is that the embassy staff responding to the earthquake had received very little disaster management training. Therefore, it would be extremely beneficial for USPACOM or another U.S. government organization to provide a disaster response training program for embassy interagency teams in disaster prone countries.

Currently, there is no standardized disaster response training program for the country team as a whole. The defense attaché and security cooperation officers receive very basic instruction during their preparatory training courses, but there is no comprehensive education on disaster response. Some members, or organizations, receive training but it is often incidental or from previous experience. There is also no disaster response training that allows different agencies to train together within an Embassy Country Team. Although the most useful part of the U.S. response might be what is provided before and after a disaster, the country team members have access, relationships, knowledge, and insight into the affected country that can be invaluable to the efforts of the JTF and DART. The process of developing the host nation’s disaster response capacity and capability-building programs allows the country team to have a unique insight into the overall response plan. A joint U.S. training program will allow each organization to identify their most appropriate role and help others to accomplish theirs by also capitalizing on the knowledge and relationships the country team has with their host nation counterparts.

Therefore, a short disaster management training program for select embassy personnel will help to enhance the country team’s response after a major natural disaster. The program should be structured in a way that will best accommodate the participants but also take cost and available time into consideration. There are at least three options that could be considered for the training. These possibilities include a mobile training team, hosting a regularly scheduled course in Hawaii, or incorporating the training into existing preparatory courses.

The first – and best – option is a mobile training team (MTT) that can travel the region and provide training to country teams at different embassies. The advantages to this type of program are that it will be able to include a larger selection of the embassy team, the instruction can be tailored specifically to the country, and the participants will have an established working relationship. The main disadvantage is that the participants will be busy...
in their jobs and may also be distracted by other work-related requirements.

A second option is to add the course either into or at the end of the annual conferences that USPACOM hosts for the defense attachés and security cooperation offices. This alternative has several advantages, which include the time available and lack of work distractions. The downside to this option is that the participants will not have their country team counterparts and it will only apply to the primary officers from the attaché and security cooperation offices.

A third feasible option is to incorporate a more substantive disaster management portion into the existing preparatory courses. These courses include the Joint Military Attaché School, Defense Institute of Security Assistance Management, and the USPACOM Augmentation Team course. The positive aspects of this possibility are that every one of the DOD members will pass through this training and, again, they will not be distracted by other work requirements. The disadvantages are that it will not include participants from other organizations and participants will have not yet developed the contextual understanding of their respective countries.

The course should focus on providing a baseline understanding of disaster management and response operations. It should begin with an overview of the roles and responsibilities of different U.S. government and international organizations, then take a closer look at the roles and capabilities of a JTF and the OFDA DART. Participants could also learn about what type of resources are available and how to utilize them during a disaster response operation. Lessons learned from previous disasters in both the specific country (if possible) or regionally should also be incorporated. Finally, it might also be useful to include basic search and rescue, medical first responder, or other relevant subjects to ensure that disaster response planners understand the issues that they will face. Ultimately, the participants should gain an appreciation of the options available before, during, and after a major natural disaster.

The program should be designed to incorporate as many different perspectives as possible. An effective course will include instructors who are disaster response experts from across the interagency. This group should include, but not be limited to, subject matter experts from USPACOM, OFDA, the Defense Security Cooperation Agency, and other organizations that will have a role in supporting disaster response activities. Ideally, the students will include all of the military representatives from the embassy team as well as their locally employed staff. Other agencies, such as USAID, Department of Justice, and the State Department should also be involved as much as possible.

The United States has a tremendous capacity to utilize both military and civilian resources for humanitarian assistance and disaster relief. It is essential that an embassy’s military team is able to contribute to this overall effort in the most efficient and effective manner possible. A comprehensive training program offered to the embassy in countries where major natural disasters frequently occur will be a tremendous benefit across the spectrum of responders. Failing to effectively train and fully utilize the country team would be a significant oversight, as this group is the first line of response from the U.S. government in the immediate aftermath of a disaster.

Immediately after the earthquake struck Nepal, the USAID-supported aid group Save the Children distributed tarpaulins, kitchen utensils, baby kits, blankets and other much-needed supplies to survivors with the aid of Nepalese police and army personnel.
Disaster response is a national security issue and nowhere is it more cleverly disguised than in the Pacific. Not only is the Asia-Pacific the most disaster-prone area of the world, it is also host to a range of fragile governments -- largely democracies -- that suffer from being both economically and meteorologically “one challenge away” from failure. When you merge in the competing national interests of both a local and distant hegemon, the challenges to a standing government could become insurmountable during and after a catastrophe.

In recent years, a both pleasant and disturbing trend has emerged as nations have evolved capacities for self-sufficiency that put them at odds with old relationships and dependencies. Freedom of choice for countries in critical partnerships has been exacerbated by options that just decades ago seemed unimaginable. Additionally, capacity building has enabled previously dependent nations to resolve all but the hardest issues independently, and nowhere is this more evident than in the ever-present disasters that plague the region.

Consider just a few contextual changes since U.S. policy on disaster response was developed at the end of the Cold War. Previously, the international community was hamstrung by the U.S.-Soviet stalemate on the Security Council floor where single veto authority discouraged and often times prevented an international response to disasters. That is not to say that responses did not occur, but they were often restricted to which side of the iron curtain your loyalties and interests fell. With the fall of the wall, came the evolution of the U.N. and U.S. response processes and maturation to the condition we have today.

The wildcard has been the rise of a regional hegemon with a political and aspirational vision that is contrary to U.S. objectives in many areas. Although the U.S. certainly remains the partner of choice today in relationships, the eastward movement of extremism and the exponential growth in non-U.S. engagements across the spectrum of interests puts many nations into a perilous situation. I contend that the U.S. advantage in the region with specific countries can be quickly lost via the forces of nature. It is an important realization that several nations are simply “one bad disaster response” away from a change in government.

During the U.S.-ASEAN Defense Forum in 2014, regional leaders recognized that more must be done to address the effects of inadequate disaster preparedness and climate change impacts. With a defense context as the impetus, members of the international community embarked on a journey that quickly identified the most likely and most devastating natural disasters. The objective of the newly formed consultative group is to combine the expertise and capabilities of the five most likely affected states – Nepal, Bangladesh, Burma, Indonesia and the Philippines, – the humanitarian community, and military partners.

The intrinsic value of this data point is that the mental and physical pre-disposition of forces in the Asia-Pacific is very much bent towards our national level security requirements. Disaster response is at the bottom of the list (but it is on the list) of joint force military priorities in the 2015 National Military Strategy. When you merge
the low frequency of U.S. military response, and observe that only in the most devastating situations are military forces involved, it becomes obvious that we must think differently. Our forces must train differently, and in a sea change of thought, we need to consider the national security implications of disaster response as another component to our regional engagement strategy, leadership and resolve.

This observation is not specific to security cooperation or training activities that U.S. forces engage in on a regular and highly effective basis. Instead, this refers to the fact that for the five most likely mega-disaster scenarios in the Indo-Asia-Pacific, a failure by the affected state to respond and recover effectively may result in their failure as a government. The options after that change in governance will be more susceptible to emerging extremist or anti-democratic movements. This, compounded by the presence of a resource-rich local hegemon with political objectives and national values cross-purpose to the United States, could quickly erode U.S. influence.

A fire chief in Australia shares a story about catastrophic fires a few years back in his area of responsibility. His words were that what he experienced was beyond his training, it was beyond his experience, but worse yet, it was beyond his imagination. The five mega-disaster scenarios currently in consideration are not the only possible apocalyptic situations the world could face, just the most likely in the Pacific area. Changes in US response patterns this decade indicate those may very well be the only future situations – those beyond our imaginations – in which the US may respond in a massive military response.

The question needs to be asked, are we postured as a government and a military to respond appropriately to a major regional disaster? What does 30,000 dead or 70,000 collapsed buildings look like? Are we ready to respond to a “Haiti in the Pacific”? Are we ready to think beyond our imagination, and are we ready to engage in supporting a worldwide response to a truly catastrophic scenario?

Failure not only affects the lives of the victims, but would almost certainly alter the political landscape of the nation should the affected government fail its people.
1. **Australian Institute of Emergency Services**  
   5th Australian and New Zealand Disaster and Emergency Management Conference  
   May 30 – 31  
   Gold Coast, Australia

2. **International Association for Information Systems for Crisis Response and Management**  
   Humanitarian Technology 2016: Science, Systems and Global Impact  
   June 7 – 9  
   Cambridge-Boston Mass., USA

3. **U.N. Office for the Coordination of Humanitarian Affairs**  
   Supporting Humanitarian Action in Emergencies and Disasters (SHARED) Course  
   June 22 – 25  
   Port Dixon, Malaysia

4. **U.N. Office for the Coordination of Humanitarian Affairs**  
   Civil-Military Coordination (CMCoord) Course  
   June 26 – 30  
   Berlin, Germany

5. **Center for Excellence in Disaster Management & Humanitarian Assistance (CFE-DM)**  
   Humanitarian Assistance Response Training (HART) Course  
   August 1 – 4  
   Pearl Harbor, Hawaii, USA

6. **RedR Australia**  
   Essentials of Humanitarian Practice  
   September 7 – 12  
   Central Victoria, Australia

7. **The Humanitarian Coalition**  
   Canadian Humanitarian Conference  
   October 6 – 7  
   Ottawa, Ontario, Canada
Asian Disaster Preparedness Center
46th Regional Training Course on Disaster Management
November 7 – 25
Bangkok, Thailand

Tsunami and Disaster Mitigation Research Center
10th Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery
November 22 – 24
Banda Aceh, Indonesia

Austrian Institute of Technology
3rd International Conference on Information and Communication Technologies for Disaster Management
December 13 – 15
Vienna, Austria