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Jeffrey Engstrom
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Taking Disaster Seriously: East Asian Military Involvement in International Disaster Relief Operations and the Implications for Force Projection

JEFFREY ENGSTROM

Abstract: The participation of East Asian militaries (Japan, China, Taiwan, and South Korea) in international disaster relief is a relatively new phenomenon having many implications that will shape the global landscape of the 21st century. This article looks at the historical record of these operations and notes how they have evolved in size and scope over time. Empirical data are presented and analyzed to identify and compare demonstrated capacities for force projection. These demonstrated capacities are considered with current and future capabilities to contemplate the trajectory of the militaries’ future participation in disaster relief and ability for force projection. Finally, the article concludes with a brief assessment of implications and policy considerations.

International disaster relief operations pose a real and important test of a nation’s force projection capabilities as disasters are unpredictable and require an immediate response to be effective. The majority of the world’s militaries lack significant airlift or sealift capabilities and thus are not able to project force outside of their own borders for any purpose. For those militaries that are able, such instances stress operational flexibility and capacity to sustain such forces in overseas locations. In the absence of interstate conventional conflict, occurrences of military involvement in international disaster relief provide actual data points with which to measure the growth and evolution of a country’s force projection capabilities.

Although many of the militaries of East Asia now regularly participate in disaster relief operations on an increasingly global scale, such involvement is little more than a decade old. In fact, since the end of World War II, these militaries were terrestrially bound and focused on defending their borders or contributing to domestic disaster relief operations. In 1998, this narrow focus began to change when Japan sent Self-Defense Forces (SDF) personnel to deliver aid to a hurricane-struck Honduras and provide medical treatment to the affected. Since that time, the militaries of Japan, China, Taiwan, and South Korea have responded a total of 37 times to natural or manmade disasters.
International disaster relief operations are just one facet of the broader issue of force projection. Indeed, East Asian militaries are also projecting force for noncombatant evacuations operations (NEO), sea lanes of communication (SLOC) protection operations, and to support US-led coalition wars in Iraq and Afghanistan.4 Taken together, these occurrences belie a profound yet underappreciated development of growing global military engagement by East Asian capitals. Increasing global interests, greater inclination to take on international leadership roles, and growing investment in military capacities are spurring this phenomenon. Indeed, we are witnessing the beginning of a broader trend that, if continued, will shape the character and application of military force in the 21st century.

As a result of this phenomenon, a number of important questions have arisen. First, what initially led all but two of the militaries of East Asia to engage in disaster relief, and what is the historical record so far? Second, what abilities have these militaries demonstrated during disaster relief operations and what does this tell us about broader force projection capabilities? Third, what is the trajectory of trends for disaster relief specifically and force projection more generally? The article concludes by briefly looking at the implications for future East Asian military disaster relief efforts specifically and force projection more broadly from Washington’s perspective.

Answers to these questions are significant for several reasons. First, it is important to understand the internal and external factors that initially prevented and then allowed for military participation in disaster relief because a country’s national will to use its military abroad is a necessary but not sufficient condition for actual force projection. For example, the Japanese Diet had to pass legislation allowing the SDF to participate in international disaster relief because a narrow application of Article 9 of Japan’s Constitution, which prohibits the use of military force in any circumstance other than self-defense, had heretofore precluded such actions. Furthermore, even after military participation starts, internal and external constraints continue to play a role in how, where, and why such operations are carried out.

Second, beyond will, actual capability is the second necessary condition for force projection. Two types of disaster relief activities – aid provision and aid delivery – have many telling aspects for broader force projection capabilities, specifically by demonstrating baseline capacities and proficiencies. The article argues that crossing the threshold into a third activity – aid distribution – provides clear evidence for the ability to deploy, conduct, and sustain a wide variety of complex and high-tempo military operations abroad. As such, a military’s ability to demonstrate proficiency in these activities has direct, though imperfect, application to assess a military’s ability to function at higher ends of the force projection continuum that include combat operations.

Third, the article will look at future trends by weighing both demonstrated ability and current or emerging capabilities that affect participation in disaster relief and broader force projection. With one exception, all of the East Asian militaries surveyed are actively developing or acquiring new or enhanced platforms that, among other things, enable greater involvement in disaster relief.

To date, little attempt has been made to look at military responses to disaster relief and recognize the greater applicability to other force projection capabilities. As a result, the literature that exists is somewhat fragmented. One strain explores the motivators
and/or constraints on a country’s use of force. A second looks at the value of military contributions to humanitarian crises, often including disaster relief. Finally, a third strain looks at capabilities to project force (either whole or in part) that reside within a specific military’s force structure. This article attempts to break new ground and meld heretofore disparate threads together by providing a comparative look at how force was used to deal with disaster relief, examining broader analysis and ramifications from these cases, and concluding with how this can inform assessments of future disaster relief and force projection capabilities.

Definitions and Data
For the purposes of this article, force projection is defined as the ability of a military to send military equipment and personnel from their respective country (or another region) to engage in overseas military operations across the full spectrum of combat and noncombat missions, including disaster relief. Disaster relief, as defined by the United Nations, is “the provision of emergency services [such as rescue or medical care] and public assistance [such as food and shelter] during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of people affected.”

This article specifically looks at instances of military force, directed at the initiative of respective national command authorities and sent to the general location of a disaster-affected area to provide, deliver, or distribute relief aid. As result, the discriminator this article uses when analyzing various occurrences of military involvement is whether at least one military person was sent to or near the disaster location. In some cases, this may manifest itself in a sizable military presence for a substantial amount of time to distribute aid, provide medical care, and perform other tasks such as infrastructure repair. In others, it may simply mean delivering aid from a military transport aircraft to local authorities shortly before making a return trip.

Because this article is focused on examples of direct projection of force for disaster relief, not considered under this definition are situations in which a military provides advice, intelligence, or material support from afar to others working in the disaster area. The participation of foreign military personnel already in the country, for whatever reason, is not considered. Cases in which military personnel provide humanitarian assistance that is not in response to a specific disaster, such as goodwill medical missions, are also excluded from this analysis. However, some of these cases are noted.

Evolving Approaches to Military Participation in Disaster Relief
What factors prompted a turnabout from no participation slightly more than a decade ago to regularized participation today? What is the actual nature of East Asian military participation in disaster relief? This section provides a descriptive overview tracing the history of East Asian military participation in international disaster relief as shown in Table 1. This table provides an overview of all known responses to various disasters of various sizes and complexities in which the four East Asian militaries surveyed in this article have participated.
### TABLE 1

<table>
<thead>
<tr>
<th>Disaster-Afflicted Country</th>
<th>Year</th>
<th>Disaster</th>
<th>Responding Military</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honduras</td>
<td>1998</td>
<td>Hurricane (Mitch)</td>
<td>Y</td>
</tr>
<tr>
<td>Macedonia</td>
<td>1999</td>
<td>Complex emergency</td>
<td>Y</td>
</tr>
<tr>
<td>Turkey</td>
<td>1999</td>
<td>Earthquake</td>
<td>Y</td>
</tr>
<tr>
<td>India</td>
<td>2001</td>
<td>Earthquake</td>
<td>Y</td>
</tr>
<tr>
<td>Algeria</td>
<td>2003</td>
<td>Earthquake</td>
<td>Y</td>
</tr>
<tr>
<td>Iran</td>
<td>2003</td>
<td>Earthquake</td>
<td>Y</td>
</tr>
<tr>
<td>Thailand</td>
<td>2004</td>
<td>Tsunami (Indian Ocean)</td>
<td>Y</td>
</tr>
<tr>
<td>Indonesia</td>
<td>2004</td>
<td>Tsunami (Indian Ocean)</td>
<td>Y</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>2004</td>
<td>Tsunami (Indian Ocean)</td>
<td>Y</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2005</td>
<td>Earthquake</td>
<td>Y</td>
</tr>
<tr>
<td>Philippines</td>
<td>2006</td>
<td>Landslide</td>
<td>Y</td>
</tr>
<tr>
<td>Indonesia</td>
<td>2006</td>
<td>Earthquake</td>
<td>Y</td>
</tr>
<tr>
<td>Burma</td>
<td>2008</td>
<td>Cyclone (Nargis)</td>
<td>Y</td>
</tr>
<tr>
<td>China</td>
<td>2008</td>
<td>Earthquake (Sichuan)</td>
<td>N/A</td>
</tr>
<tr>
<td>Cambodia</td>
<td>2009</td>
<td>Typhoon</td>
<td>Y</td>
</tr>
<tr>
<td>Indonesia</td>
<td>2009</td>
<td>Earthquake</td>
<td>Y</td>
</tr>
<tr>
<td>Philippines</td>
<td>2009</td>
<td>Typhoon</td>
<td>Y</td>
</tr>
<tr>
<td>Haiti</td>
<td>2010</td>
<td>Earthquake</td>
<td>Y</td>
</tr>
<tr>
<td>Mongolia</td>
<td>2010</td>
<td>Winter emergency</td>
<td>Y</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2010</td>
<td>Flood</td>
<td>Y</td>
</tr>
<tr>
<td>New Zealand</td>
<td>2011</td>
<td>Earthquake</td>
<td>Y</td>
</tr>
<tr>
<td>Japan</td>
<td>2011</td>
<td>Tsunami</td>
<td>N/A</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2011</td>
<td>Floods</td>
<td>Y</td>
</tr>
<tr>
<td>Thailand</td>
<td>2011</td>
<td>Floods</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total International Disaster Relief Operations</td>
<td>13 13 6 5</td>
</tr>
</tbody>
</table>

**Note.** “Year” corresponds to the year of the disaster and may not correspond to the year of military response. Table 1 shows known instances of East Asian military participation in international disaster relief based on an extensive survey of available sources.

**Sources:**

**Moving Beyond the Past: Japan**

Until the early 1990s, Japan’s strict interpretation of Article 9 of its constitution forbidding the use of its military forces for any purpose short of self-defense meant that
Japan, though quite capable, sat out or played a marginal role in the provision of disaster relief. Before this time, Japan had almost exclusively relied on cash grants to countries suffering natural disasters, while occasionally using chartered flights to deliver aid shipments to affected areas. This approach drew criticism when those chartered flights were slow to arrive, as was the case when Japan relied on an Aeroflot charter to deliver aid in response to the 1988 Armenian earthquake. Japan created a civilian disaster response team a year before in 1987, but this team had to rely on often already stressed local transportation to directly respond. Globally, demand was growing for Japan to take a role in international contingencies commensurate with its economic and military strength to include disaster relief operations.

The tipping point came in the aftermath of the 1991 Bangladesh cyclone – a disaster that took a staggering 139,000 lives. Although SDF helicopters might have been employed to assist in aid distribution and rescue stranded victims, laws allowing the use of Japanese forces abroad under such circumstances did not exist. Prompted by this disaster, the Japanese Diet voted to allow the military to engage in disaster relief as well as in UN peacekeeping.

In 1995, the Japanese SDF released an updated National Defense Program Outline that explicitly recognized its newfound international role. Another three years passed before the SDF had its first dispatch for international disaster relief. In the wake of Hurricane Mitch, a storm that devastated a number of areas in the Gulf of Mexico, including Honduras where the death toll exceeded 5,000 and nearly 2 million persons were affected, the SDF airlifted an estimated 42 tons of medical supplies on six C-130s and set up a field hospital.

Today, under Japan’s new National Defense Program Guidelines (NDPG) the SDF is the most prolific East Asian contributor of military disaster relief. The NDPG calls for the SDF to proactively engage in International Peace Cooperation Activities (IPCA), a broad term that also encapsulates its participation in UNPKO, antipiracy efforts in the Gulf of Aden, and Japan’s support to both US-led Operation Iraqi Freedom and Operation Enduring Freedom in Afghanistan. Given the aforementioned constraints under Article 9, IPCA essentially encompasses all international operations conducted by the SDF.

Since 1998, the SDF has engaged in seven instances of aid provision, when they sent SDF medical teams to disaster-affected areas, and has also sent aid delivery as many times, though not all concurrently, as well. Though in the majority of cases, aid delivery occurred through airlift, to date, the Maritime Self-Defense Force (MSDF) is the only navy in East Asia to play a role in aid delivery and has done so on two occasions. In response to the 1999 Turkey earthquake, the MSDF sent the single largest aid delivery of any East Asian military to date using three ships to send 500 prefabricated houses. In responding to the 2008 China earthquake in Sichuan province, the MSDF was used after China ultimately decided against allowing Air Self-Defense Force (ASDF) transport aircraft to deliver aid, as Japanese military aircraft had never landed in postwar China. As a result, during an already scheduled port visit to Zhanjian six weeks later, the MSDF delivered a nominal amount of aid to China.

Most importantly, the SDF demonstrated significant proficiency for complex aid distribution operations three times. Following the aftermath of the 2004 Indian Ocean
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Four months after the tsunami, Japan sent a force of almost 1,000 personnel composed of ASDF, MSDF, and Ground Self-Defense Force (GSDF) personnel to operate in an area that stretched more than 1,000 nautical miles from Thailand to the Indonesian island of Java. Disaster aid, staged from Utapao Air Base in Thailand, was flown via ASDF C-130 to an airport in Banda Aceh, where it was then picked up and delivered by helicopters from the GSDF and MSDF directly to affected areas as well as to supporting SDF medical and rescue teams on the ground.23 To minimize its footprint in an area that was in the midst of a violent secessionist movement, GSDF helicopters operating in and around Aceh were stationed off the coast aboard an MSDF landing ship tank (LST).24 Two landing craft air-cushions launched from the LST’s well deck were also used to transport heavy equipment for cleanup and reconstruction ashore. To coordinate its efforts with those of the government of Indonesia and other foreign contingents providing relief in the area, Japan set up six regional liaison offices from Bangkok to Jakarta.25

Seven months later, Japan’s SDF found itself undertaking another disaster relief operation as a result of an earthquake in Northern Pakistan. Because of the location far inland from any maritime boundary, the MSDF was not involved. It was still a joint operation, however, as ASDF C-130s carried a total of six GSDF UH-1 helicopters to Islamabad. From their forward operating base, these helicopters carried more than 41 tons of aid and transported 720 persons to and from the city of Battagram near the epicenter of the quake where road access had been cut off.26

The most recent instance of SDF aid distribution was in response to flooding covering areas adjacent to the Indus River in Pakistan. Japan sent three GSDF UH-1 helicopters, personnel, and aid aboard seven ASDF C-130s.27 Two weeks later, a GSDF CH-47 was dispatched via chartered cargo aircraft.28 Four weeks from the initial response, a pair of CH-47 helicopters aboard an MSDF LST arrived in Karachi. All of these helicopters used Multan Air Base as a staging point to reach affected populations. In total, these helicopters distributed 240 tons of aid to affected areas before ending their operation once receding floodwaters rendered roadways passable.29

A New Eye to the World: South Korea

South Korea’s military is undergoing an evolution from a static industrial-age force focused solely on its northern neighbor to an information-age force with growing global reach. Indeed, Seoul has embarked on a modernization program that significantly expands its military capabilities, allowing it to respond to a variety of “non-military threats such as contagious diseases, natural disasters, global warming, and environmental pollution.”30 Facing this new spectrum of challenges, the Defense White Paper 2008 stated that the Korean military must perform a number of tasks including participation in “international peacekeeping operations and reconstruction projects.”31 These military reforms are part of South Korean President Lee Myung-bak’s broader national security strategy of engendering a “global Korea.” This strategy seeks to position South Korea as “a global actor with broad horizons that engages proactively with the international community in the service of peace and development in the world.”32

Of the four militaries investigated in this article, the Republic of Korea (ROK) Armed Forces were the last to engage in international disaster relief. To date, the
Republic of Korea Air Force (ROKAF) has been the sole military service within South Korea to participate in disaster relief by delivering aid and civilian personnel via sorties of cargo aircraft to six countries. This first occurred in the aftermath of the 2004 Indian Ocean tsunami when Seoul airlifted relief aid to Sri Lanka. A year and a half later, the ROKAF again dispatched its C-130s to deliver aid to the Philippines after a landslide, and three months later, to Indonesia after an earthquake. More recently, ROKAF sent three cargo sorties with aid and a rescue team to China after the 2008 Sichuan earthquake and then later a single C-130 delivering aid to typhoon-ravaged Cambodia in 2009. The most recent ROKAF response followed the 2011 Japan tsunami, during which it sent three cargo sorties of aid as well as 102 civilian rescuers.

The Pitfalls of a Lack of International Recognition: Taiwan

The absence of international recognition for Taiwan’s status and a regular role responding to frequent domestic natural disaster limits the Taiwanese military’s use in international disaster relief. As a result, Taipei is forced to use its military disaster relief both selectively and strategically. Indeed, unlike many of its neighbors, greater participation in international disaster relief for Taiwan is not a residual effect of increasing will and military capacity for force projection, but rather it is a means to more proactively interact with countries in ways that might otherwise be unavailable. Some of the greatest insight on this point comes from Taiwan’s Deputy Defense Minister Andrew N. D. Yang, who states that international disaster relief for Taiwan’s military is used “as a platform for engagement . . .” so as to “help the R.O.C. (Republic of China) achieve a higher moral ground in international politics.”

This lack of international recognition for Taiwan results in a number of intricacies, constraints, and oddities in the way that military-based disaster relief is carried out. Not surprisingly, Taiwan’s status seems to have some effect on a recipient country’s eagerness to accept aid from Taipei and has forced Taiwan’s military to act with secrecy, on at least one occasion. On the other hand, military-supplied disaster relief was delivered in at least two instances to countries that, at the time of provision, had official diplomatic relations with Taipei.

The Taiwanese military’s first known foray into international disaster relief was in April of 1999 when it sent a team of ten medical and engineering personnel as part of a larger contingent to Macedonia in response to a complex emergency brought about by an influx of refugees from neighboring Kosovo. For its part, Macedonia had officially recognized Taiwan only a few months earlier after a new government coalition seeking increased foreign aid came to power.

The military’s next known act was to deliver relief aid in response to the 2004 Indian Ocean tsunami, where after failing to secure approval from the Indonesian authorities, two Republic of China Air Force (ROCAF) C-130 cargo sorties of relief aid were flown to neighboring Singapore with the national emblem of Taiwan covered. With less secrecy, ROCAF C-130s responded to two other disasters with relief materials in Indonesia a year and a half later in the aftermath of an earthquake and mudslides in the Philippines in 2009.

Though denied by Taiwanese President Ma Ying-jeou, the international tug of war between Taipei and Beijing over the former’s status was undoubtedly a factor in both
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As Port-au-Prince is one of nearly two-dozen capitals that recognize Taiwan’s diplomatic status, similar to Macedonia a decade before, it was important for Taipei to show support. China, already having posted a contingent of UN peacekeepers to the beleaguered island nation, immediately dispatched a chartered aircraft loaded with relief supplies, and a search-and-rescue team provided one of the first shipments of international relief aid. After securing permission from Washington nine days after the quake, an ROCAF C-130 delivered approximately six tons of aid three days later. Though sources disagree as to the number, the flight required three to five refueling stops at various US military airfields along the way and took at least 40 hours. Both the time between the quake and the actual aid delivery as well as various stipulations imposed by Washington suggest that it was difficult for Taipei to negotiate such a relatively innocuous mission.

Seeking International Roles that Underscore Great-Power Status: China

Under the broad political construct of Chinese President Hu Jintao’s “New Historic Missions,” the People’s Liberation Army (PLA) is in the midst of training, equipping, and most recently operating for and in a variety of force projection contingencies short of conventional conflict. The PLA uses the now-discarded US Department of Defense acronym “MOOTW” (Military Operations Other Than War) to describe such contingencies and has even increased spending for what it calls “MOOTW capabilities.” According to the 2010 defense white paper, the development of MOOTW capabilities allows the PLA to play an active role worldwide in “supporting earthquake rescue and disaster relief operations, in escort operations in the Gulf of Aden and waters off Somalia, in flood control and emergency rescue operations, and in international rescue operations.” Beijing participates in international disaster relief and a number of other MOOTW activities, in the words of two China specialists, “to enhance China’s image abroad by carrying out activities that make China look like a responsible member of the international community.” In this regard, China is certainly not unique among its neighbors.

While previous defense white papers did not go into much detail, the most recent edition prominently mentions that the PLA has involved itself since 2002 in “28 urgent international humanitarian aid missions and [has] provided 22 disaster-stricken countries with relief materials.” These numbers, however, conflate three distinct types of aid provision: military support to civilian-based disaster relief efforts, military provision of nondisaster humanitarian aid, and actual military provision of disaster relief. The 2010 white paper implicitly recognizes that the PLA has a broad definition of its own participation in disaster relief stating that China’s armed forces “have actively assisted relevant departments of the Chinese government to provide relief materials.” The instances that do not meet the criteria set forth in this article include aid that is delivered and distributed by nonmilitary means such as the white paper’s first reported instance of PLA involvement of delivering aid in response to the 2002 Afghanistan earthquake.

It is only through counting such cases that the 2010 white paper’s tally of disasters can be reached.

In analyzing the PLA’s provision of nondisaster humanitarian aid, the use of the word “urgent” may be somewhat of an overstatement. In a number of occurrences,
the PLA has participated in various goodwill missions to countries such as Gabon and Peru – often in conjunction with multilateral training exercises with the host country. More recently, the PLA Navy’s 300-bed hospital ship known as the “Peace Ark” made a humanitarian journey from East Africa to South Asia in 2010, and another to the Caribbean and Central America in 2011.

Initially, the PLA’s direct involvement in international disaster relief was overwhelmingly focused on aid provision through the deployment of medical and/or search-and-rescue teams. However, five years later, in 2008, the PLA broke this mold and added aid delivery, and even one instance of aid distribution (in 2010), to its accomplishments.

Though established in early 2001 and regularly deployed in the wake of disasters since 2002, China’s International Search-and-Rescue Teams (CISAR) were largely kept out of the spotlight until the 2010 Haiti earthquake. To date, these teams have served in at least nine separate international disaster relief contingencies, most recently in the aftermath of the 2011 Japan tsunami. Unlike their counterparts in East Asia, the members of CISAR are composed of military personnel from the PLA and People’s Armed Police (PAP). As a result, deployments of CISAR teams constitute military force projection, albeit at a low level. In all but one known instance of CISAR deployment in which only a medical team was deployed (2010 Pakistan floods), PLA search-and-rescue personnel have been involved. Medical personnel from the PAP General Hospital have responded four times.

PLA also has also sent personnel from non-CISAR units to participate in aid provision. In the aftermath of Cyclone Nargis in Burma (2008), a team of 50 personnel led by a military officer who was the deputy director of a military hospital under the Guangzhou Military Region treated almost 4,000 patients for two weeks. More recently, a unit under the General Logistics Department operated concurrently but independently from the CISAR medical team in the 2010 Pakistan floods. This team later returned to newly flooded Pakistan in 2011. Although it is not clear as to how these other units fit into China’s overall international disaster response structure, they may act as an operational reserve, called upon when CISAR is already fully engaged.

As previously mentioned, the PLA has only recently begun to use military airlift assets to deliver aid, which has amounted to a total of five specific instances. The first occurred in conjunction with the aforementioned response to Cyclone Nargis. Along with transporting the previously mentioned medical team, 32 tons of vehicles, food, and medicines were also delivered aboard two PLA Air Force (PLAAF) Il-76 transports. In response to a winter emergency in Mongolia in February of 2010, the PLA responded a second time by sending more than 680 tons of aid to its neighbor of which the PLAAF transported 180 tons. Three PLAAF Il-76 transport aircraft, making two sorties each, brought the relief materials to snow-ravaged Ulaanbaatar. In August 2010, during the Pakistan floods, three Il-76 transports delivered an estimated 90 tons of relief materials later followed up in late September by 60 tons of relief supplies distributed directly to affected areas from four PLA Chinese Mi-17 helicopters. Using the Pakistani city of Hyderabad as a forward operating location, these helicopters distributed aid through airdrops directly while simultaneously accomplishing other
tasks such as supporting a medical component of one of the two PLA teams engaged in aid provision.\textsuperscript{68} A PLAAF II-76 transport aircraft returned to a newly flooded Pakistan a year later in September 2011 to deliver approximately 400 tons of aid.\textsuperscript{69} A month later, China sent three II-76 transports to deliver 72 tons of aid to a flood-hit Thailand.\textsuperscript{70}

**Evidence of Emergent Force Projection Capabilities**

Though factors specific to each country have shaped the timing of participation and the scope seen to date, the four East Asian militaries surveyed have all shown a growing willingness and ability to project force for international disaster relief operations. The question remains as to how these operations have demonstrated greater aptitude for force projection among East Asian militaries. This section studies a military’s capacities to carry out necessary, though not sufficient, aspects of all force projection operations by analyzing two specific types of aid: delivery and aid provision. Empirical data from these cases can be captured to measure real-world demonstrations of actual lift and personnel sustainment capacities, respectively. The section will then examine a third type of disaster aid – aid distribution – to measure capabilities to conduct complex operations. Such aid often requires a military to send a combined arms or joint force that is actively engaged in operations over a large geographical area. Furthermore, these forces also need to be able to deal with ever-changing and multifaceted operational realities on the ground.

**Operational Capacity for Force Projection: Aid Delivery**

At the most basic level of assessing the contributions of East Asian militaries’ responses to disaster situations is a comparative analysis of demonstrated ability. To look at the evolution of operational capacity among East Asian militaries to execute disaster relief operations, this article focuses specifically on logistical capabilities by looking at the amount of relief aid delivered and distance that it travels on military lift. Airlift in particular is “one of the less controversial functions of military assets,” and as such, it is not surprising that all of the East Asian militaries surveyed have engaged in aid delivery.\textsuperscript{71} Although delivering a few tons of aid on a single military cargo flight to a nearby disaster area is a notable event, it is on the lower end of operational complexity. Increasing the numbers of sorties, size, and even locations of aid delivery are all demonstrations of a military’s growing mastery of these skills.

Figure 1 shows that the majority of East Asian military aid delivery to date has gone to countries within 4,000 nautical miles of the country offering the aid. Southeast Asia in particular is the target of such aid, though South Asia and East Asia are also areas of recurring focus. With the exception of the ROCAF’s delivery of relief aid to Haiti in 2010, only Japan’s SDF has sent aid to disaster-stricken areas beyond these regions, having airlifted relief materials to Iran and Honduras and sealifted aid to Turkey. Of the four countries, China has so far stayed the closest to home by delivering aid to three countries that share a common border (Burma, Mongolia, and Pakistan) and a third that is nearby (Thailand). As the only East Asian air force that possesses heavy transports, the PLAAF has the capacity and ability to deliver aid further abroad if directed. As a result, this may reflect a decision on Beijing’s part to focus the majority of China’s disaster relief efforts on neighboring countries.
FIGURE 1
AMOUNT OF AID PROVIDED BY MILITARY LIFT AND DISTANCE TRAVELED, BY COUNTRY PER DISASTER RELIEF OPERATION.

*Denotes the use of sealift; all other instances show airlift delivery of aid.

Note. Figure 1 only shows known instances of relief aid delivery and does not include instances where military personnel were sent to a foreign country via military airlift or sealift without material aid. Dates shown correspond to the year of the disaster and may not correspond to the year of response. Distances and/or amounts of relief aid are estimated when specific figures are unavailable.


Japan to date has set the record for aid delivery for a single disaster relief operation by delivering approximately 6,120 tons of aid via military sealift to Turkey in 1999. China, South Korea, and Taiwan have yet to deliver aid via sealift. Out of 20 instances of aid by East Asian military airlift, China’s PLAAF holds the current record for a single operation, totaling almost 400 tons to Pakistan in 2011. China also holds the second place with its delivery of 180 tons in 2010 to Mongolia. In comparison, Japan comes in a close third at 170 tons to Pakistan in 2010 and Taiwan has the fourth place record at approximately 91 tons to Indonesia in 2005. Aid delivery at these levels is significant though not overwhelming as it shows the ability to generate multiple sorties to accomplish a task. In comparison, South Korea’s greatest single effort of almost 27 tons of delivery (to China in 2008) ranks in tenth place.

**Operational Capacity for Force Projection: Aid Provision**

Aid provision in disaster relief is yet another measure of capacity directly applicable to the broader realm of force projection, as it requires a military to quickly send abroad personnel to an affected area often for an extended period of time. This measure intentionally focuses on numbers of “boots on the ground,” and as such, it does not capture numbers of military personnel who are offshore or supporting operations through airlift or sealift. In this way, it is most akin to a ground combat element, operating from a forward location though still having a significant and possibly larger supporting structure behind it, either elsewhere in theater or at home.

Two types of aid provision have been demonstrated by East Asian militaries: medical personnel and search-and-rescue personnel. Of the two, medical personnel sent abroad for disaster relief are generally a better gauge of these capabilities, as treating the affected is a much lengthier task than are search-and-rescue operations.

To date, the numbers of military personnel projected abroad has ranged from a low of 10 to a high of 180 (see Figure 2). Time spent has also ranged from 7 to 60 days. During the 2010 Pakistan earthquake, both Japan and China sent their largest contingents to date. Taiwan had only one instance of aid provision in 1999, while South Korea has yet to engage. So far, these numbers are not large, though tracking aid provision in future contingencies is an important way to measure growing aptitude for force projection.

**Evidence of Advanced Capacity for Force Projection: Aid Distribution**

Even more noteworthy is the evolution of Japan’s SDF and China’s PLA from aid provision and delivery activities to aid distribution. This is a profound shift because it involves a number of aspects that directly relate to proficiencies necessary for operations at the higher end of the spectrum of conflict that include war fighting. This often involves a high operations tempo to distribute crucial relief materials, ferry workers, or transport wounded civilians over a broad geographical area. Such situations often require a military to respond with combined arms or even a force that is joint, one in which two or more service branches work closely together. Furthermore, such operations often occur during a number of weeks, sometimes months. In four total instances from three independent disaster situations, both Japan’s SDF and, to a lesser extent,
China’s PLA have demonstrated such capabilities. The value of the military contribution in such situations is obvious especially when civilian assets are slow to be organized or are nonexistent. However, concerns about political sensitivities and appropriateness can be brought to the fore when foreign militaries operate abroad for an extended period.
In three cases, Japan’s SDF has distributed aid during the past eight years. The showcase operation for the SDF was in response to the 2004 Indian Ocean tsunami during which all services played important roles in delivering, providing, and distributing aid for approximately 41 days operating over a wide geographical area that incorporated two other countries. The 2010 Pakistan earthquake response is the second notable case. Though the operation was further afield, the ASDF and MSDF’s roles were focused mostly on delivering (and returning) GSDF helicopters. During this disaster, SDF operations were ongoing for 49 days. The third aid distribution operation, after the 2005 Pakistan earthquake, was also a mostly GSDF operation. The ASDF played a supporting role by providing lift assets. During this operation, the SDF operated in theater for 51 days – its longest disaster relief mission to date.

Beginning in 2010, the PLA made a dramatic change during a very short period in its demonstrated approach to disaster relief by engaging in both aid delivery and aid distribution. Prior to 2010, the PLA had solely engaged in aid provision. China’s response to the 2010 Pakistan floods, though relatively short at roughly three weeks, incorporated a PLA helicopter unit. Additionally, two CISAR medical teams, geographically separated from each other and the helicopter unit, engaged in aid provision and demonstrated increasing ability for complex disaster relief operations. Though there is only one known instance during this mission of actual combined arms, when according to one article, “badly needed” airlifted supplies were provided to one of the deployed medical teams by the helicopter unit, this is an important milestone. Still, in terms of joint engagement during complex disaster relief operations, the PLA has a way to go as the two medical teams and the helicopter unit otherwise appeared to operate independently, even arriving and departing on separate chartered aircraft or their own helicopters, respectively.

How do Japan and China’s four combined occurrences of aid distribution stack up? By focusing on sorties flown and the weight of aid distributed, Figure 3 shows what has been demonstrated by the SDF and PLA so far and compares it to US responses during the same events. The figure shows that China’s first effort at aid distribution in the 2010 Pakistan floods delivered slightly more total tons of relief aid compared with Japan’s response to the 2005 Pakistan earthquake. However, Japan’s total delivery for the 2010 Pakistan flood was four times this amount. The US military response during these complex situations has been one to two orders of magnitude greater and provides a measuring stick for China and Japan’s efforts to date.

What is particularly interesting about the 2010 Pakistan floods is how the disaster relief operations of Japan and China’s militaries augmented that of already ongoing relief operations by the US military and the government of Pakistan. Other than Islamabad, Washington was the first to respond to the disaster, sending aid delivery by cargo flights within a day and a half. To commence aid distribution sorties, US Army helicopters were sent from neighboring Afghanistan (and later relieved by Navy and Marine helicopters) approximately four days after the flooding started. From their operating location at Ghazi Air Base in Northern Pakistan, they focused on areas in the Northern part of the country.

As rising floodwaters headed southward, Japan’s SDF was able to position its relief assets and begin relief operations focused on the area around Multan in Central Pakistan by
FIGURE 3
AMOUNT OF MILITARY RELIEF AID DISTRIBUTION AND NUMBER OF HELICOPTER SORTIES, BY COUNTRY PER DISASTER RELIEF OPERATION.

Note. Sorties for Japan in all three instances and for the United States in one instance (Pakistan, 2010) are estimates.


As floodwaters continued to rise even further south, China’s PLA sent a rescue helicopter unit from a base in Western China in late September and commenced aid distribution operations from a base near Hyderabad in Southern Pakistan. As the entire scope of the disaster took time to fully unfold, Japan and China’s military contributions to disaster relief during this crisis helped distribute aid in newly emergent disaster areas. As such, these two militaries provided highly flexible and substantial contributions.

Prospects Are (Mostly) Looking Up
The analysis has demonstrated that East Asian militaries are growing their proficiency in disaster relief operations by engaging in three observed types of aid: delivery,
provision, and distribution. By themselves, these proficiencies allow East Asian militaries to make increasingly substantial contributions to disaster relief operations. These proficiencies, however, also demonstrate necessary and significant, though not sufficient, aptitudes for greater force projection capabilities to include kinetic operations by displaying airlift and sealift capacities, personnel sustainment, and the ability to carry out complex operations abroad using either a combined arms or joint force. As a result, international disaster relief operations allow observers to measure, though imperfectly, demonstrable force projection capability through highly observable, and now relatively frequent, operational deployments. When thinking about how a country could use its instrument of military power far from home, such analysis moves well beyond speculation or bean counting. Instead, it sheds valuable light on the potential scope and scale of such an operation by providing relevant empirical evidence.

An important question to ask is, where is this trend headed? Have we seen the likely extent of such contributions, or is more significant and frequent participation in disaster relief yet to come? This section weighs the contributions of recent or impending additions to East Asian military capabilities to look at the future contributions to disaster relief.

Ready for New Challenges: Japan

Japan’s SDF has already shown itself capable and willing to operate in other regions at substantial distances from home for disaster relief. Specifically, the ASDF is making significant enhancements to its ability to conduct long-range aid delivery. The recent addition of four KC-767 tanker aircrafts will be useful in supporting Japanese airlift operations, which have already occurred on behalf of UN peacekeeping in Haiti.82 Heavy transport aircraft (the Kawasaki C-2) under development will add greater airlift capacity. Not to be outdone, the MSDF’s two new Hyuga-class helicopter carriers in addition to an even larger helicopter carrier currently under development, named the “22DDH,” substantially increase Japan’s capacity for disaster relief and expand its reach.83 Taken together, these enhancements will allow Japan to take an even greater role in complex aid distribution operations in disaster-stricken countries and to potentially do so further abroad in places such as Africa or even Latin America, should it choose.

New Capabilities Yet Untested: South Korea

Though the most recent to come to participation in disaster relief and to date having only engaged in aid delivery, South Korea’s military is making purposeful strides toward greater force projection capabilities that should benefit disaster relief. Most notably the ROK Navy has deployed a Dokdo-class helicopter landing platform dock that will give Seoul the ability to carry out a variety of force projection operations, and a second ship is on the way.84 Beyond the addition of new and soon-to-be-added hardware, the South Korean military still has much to prove to demonstrate necessary proficiencies for force projection in general and complex disaster relief operations in particular.
A Brave New World: China

The PLA’s somewhat surprising aid distribution involvement in the 2010 Pakistan earthquake may be a special case. China not only shares a land border with Pakistan, but also a strong civil–military relationship that has waxed all the more as the United States’ relationship with the country has waned. On the other hand, China is making significant strides in building a military that can achieve at least a limited global reach, and a large part of this is developing a blue-water navy. Beijing has already taken the first steps in building and deploying three large amphibious ships, with potentially even an LHD to follow. Once the object of mere speculation, China’s newly retrofitted Soviet-built aircraft carrier is undergoing sea trials. Though the ship will eventually be capable of fixed-wing aircraft operations, it may be extremely useful when used primarily as a helicopter platform to support force projection operations as disaster relief. Furthermore, though unsuccessfully offered to Tokyo in the aftermath of the 2011 Japan tsunami, the PLA Navy’s hospital ship has already made two nondisaster-related humanitarian voyages to ports in the Indian Ocean and the Caribbean. Though China still lacks substantial numbers of transport aircraft, it does have a flexible fleet composed of both heavy (Il-76) and medium (Y-8) transport aircraft. Using million ton-miles per day (MTM/D) calculations, the PLA has an airlift capacity that is approximately 15 percent greater than the combined military fleets of Japan, Taiwan, and South Korea, currently composed of medium lift transports.

Until 2010, as noted earlier, China did not even use military force for aid delivery, something that South Korea and Taiwan had already demonstrated with some competency six years before. However in less than two years, the PLA has now outpaced all East Asian militaries except Japan’s SDF and is the most prolific contributor of airlifted aid delivery by total tonnage.

More of the Same? Taiwan

A decreasing military budget, significant time and attention spent dealing with frequent domestic disaster operations, and the constraints of little official recognition of its status make Taiwan’s military the least likely of the four East Asian militaries to substantially increase its frequency or scale of participation in disaster relief operations. Although certain countries in Southeast Asia have appeared to warm to ROCAF aid delivery, most notably Indonesia’s acceptance of aid in 2006 after having seemingly denied it earlier in 2005, expanding its scope to actual aid distribution may be a difficult line to cross. Furthermore, as the difficulties in providing aid to Haiti after the 2010 earthquake all too clearly highlighted, Taiwan’s military cannot readily or easily rely on third-party countries to facilitate its disaster relief operations. This aspect alone significantly reduces the total support the military could potentially provide, not to mention the very relevance of the aid delivered.

That said, Taiwan’s military is still highly motivated to make efforts at disaster relief, both to gain Taiwan greater international respect and to maintain current sources of recognition, as evidenced by the 2010 Haiti earthquake. Lack of international recognition, however, prevents it from going toe-to-toe with the other
regional militaries in disaster relief contributions and will likely prevent it from engaging in greater disaster relief activities beyond aid delivery, which is often on the margins.

Conclusions and Final Thoughts
The analysis has described the nature of East Asian military participation in disaster relief. Japan, South Korea, Taiwan, and China have recognized the importance of contributing to international disaster relief and the significant role that their militaries play in delivering such aid. Furthermore, all of the surveyed country’s governments now regularly call upon their militaries during such international crises. As such, East Asian military participation is now a fully established and regularized aspect of international efforts to respond to disasters. Such occurrences, taken together with other international operations that these same militaries have also engaged in recently such as SLOC protection, NEO, or support for US-led operations in Iraq and Afghanistan, paint a multifaceted picture of increasing East Asian engagement and the growing ability to project force globally for a variety of operations.

Second, the analysis has shown that instances of military-provided disaster relief can be examined to measure demonstrated capacities for force projection. That is, specific aspects of aid delivery, aid provision, and aid distribution can be recognized and assessed quantitatively and qualitatively to provide important insights into actual progress of a military toward the attainment of force projection proficiencies. They can also be used to make comparisons across countries to recognize capabilities relative to other East Asian countries or to highly proficient militaries, such as the US military. Short of actual war fighting, military operations such as disaster relief provide readily available data points valuable for assessing the nature of a military’s evolving force projection capabilities. As a result, studying future cases of East Asian disaster relief is important to further chart this progress.

Third and finally, the article has demonstrated that we can expect such responses to not only continue but (with the likely exception of Taiwan) also to increase in both frequency and scope. Large investments are being made in attaining new military hardware that will significantly enhance the reach and capacity for disaster relief. Simultaneously, significant political rhetoric from Tokyo, Seoul, and Beijing is laying the groundwork for increasing international stature of which greater military engagement is a major component. International disaster relief is but one of many tools for such military contributions toward these national goals.

A Future (More) Perfect: International Disaster Relief
The 1991 Bangladesh cyclone stands out as an event during which US forces provided essentially all of the heavy lifting for the international community in the aftermath of the disaster. At that point in time, participation from East Asian militaries was unheard of. Two decades later, such circumstances seem remote. If repeated today, the disaster response would almost inevitably involve the militaries of Japan and possibly China in significant roles and would include contributions from South Korea and Taiwan. A number of other countries such as Australia, Singapore, and
India would likely also participate. As the analysis has shown, US military assistance is often still the necessary backbone for effective large-scale international disaster relief efforts.

Greater East Asian military participation in disaster relief is a valuable contribution, both as a provision of a global public good and as evidence of increased burden sharing. As allies that have undergone dramatic transitions to become prosperous democratic societies in the latter half of the 20th century, it should be particularly encouraging for Washington to see Tokyo and now Seoul make growing contributions to international disaster situations. With regards to Beijing, disaster relief operations present many opportunities for military-to-military interface and partnership. Working productively with the PLA in international disaster relief not only helps Washington enhance its level of cooperation with Beijing but also further helps to integrate China into a role as a responsible global stakeholder.

Undoubtedly, disaster-affected peoples are the clear winners in a world where relief aid is not provided solely at the benevolence of a single capable power, but rather from an array of diverse sources. As East Asian nations continue to demonstrate greater willingness and capabilities, regionally spearheaded relief efforts to aid disaster-stricken neighbors will become more of a reality. As such, the effects of natural and manmade disasters can be mitigated, possibly more successfully than before, through greater international burden sharing.

Storm Clouds Ahead? Implications of Enhanced Force Projection Capabilities

Although possible, it is unlikely that the growth in disaster relief capacity among the East Asian militaries surveyed is being driven solely by an interest to enhance the efficacy of international disaster relief responses. Rather, enhanced proficiency and capacity for international disaster relief is the residual benefit of enhancements made to develop more combat-centric force projection capabilities. To put it another way, it is doubtful that the East Asian militaries surveyed in this article are acquiring new airlift and sealift platforms specifically for the purpose of improving their international disaster relief response.

If enhanced disaster relief is not the sole end of these increases in terms of both force projection capabilities and proficiencies, then the actual intentions of each of these actors become important. Unfortunately, intentions are difficult to observe and future intentions provide an even greater conundrum.91 As a result, questions arise about how Tokyo, Seoul, and Beijing will exercise this growing capacity for force projection in the future, especially when individual global interests are threatened and they are unable to either free ride off of the efforts of another power or cannot find a coalition to bandwagon with to reach a satisfactory outcome. For Tokyo and Seoul, both US treaty alliance partners, Washington must consider to what ends these means will be used, now as well as in the future. Would such an instance potentially signal lesser dependence on US might?

A different set of questions arises for Washington in regards to Beijing. At their best, Chinese force projection capabilities, such as disaster relief or SLOC protection, provide global public goods and should be generally encouraged by Washington. In other instances, such as the NEO demonstrated recently in Libya, Chinese force projection
operations are of interest to Washington, but they are not necessarily of concern. Disquieting, however, is whether the PLA might be directed in the future to project force in ways that may be antithetical to US global interests or international partners. Though such occurrences only currently exist in the realm of speculation, recognizing where Washington and Beijing’s global interests intersect will be an increasingly important topic of study. This is particularly so if China’s interests continue to expand and the PLA’s projection of force for a variety of missions becomes a more regularized aspect of the global landscape.

NOTES

1. For the purposes of this article, force projection is defined as the ability of a military to send military equipment and personnel from their respective country (or another region) to engage in overseas military operations across the full spectrum of combat and noncombat missions.

2. East Asia consists of China, Japan, Mongolia, North Korea, South Korea, and Taiwan. Until this point, East Asian militaries did not participate in international disaster relief. Instead, civilian government or nongovernment provided the only East Asian responses to international disasters, and these were standard approaches to providing aid, if at all. Of the six countries listed, the militaries of North Korea and Mongolia remain inactive in international disaster relief participation.

3. These numbers were achieved by summing the total instances in which a particular military was dispatched for disaster response. Situations in which a country sends multiple teams without continuous presence to a particular country are not counted separately.


5. For example, an in-country military attaché that may oversee aspects or participate directly in aid delivery operation is not considered, as this individual was not specifically sent from the responding country for this task.


9. For example, providing satellite imagery to the disaster-affected country’s government. Similarly disaster aid organized by a military but brought to the affected area on a chartered civilian flight and distributed by civilian personnel is also not the focus of this article, though it is often noted.
20. The latter two, which essentially allow Japan to contribute a supporting role for US-led coalition wars, are based on time-limited laws that have to be approved and regularly reapproved by the Diet. *Defense of Japan 2009* (Tokyo: Ministry of Defense, 2009), p. 280.
24. The MSDF helicopters were stationed aboard two MSDF destroyers also participating in disaster relief efforts.
37. Directly quoting a World Bank–Colombia University study, one report states that Taiwan “may be the place on Earth most vulnerable to natural hazards.” Mark A. Stokes and Tiffany Ma, *Taiwan, the People’s Liberation Army, and the Struggle with Nature* (Arlington VA: The Project 2049 Institute, 2011), p. 3.
43. In response to the 2006 earthquake in Indonesia, the ROCAF flew ten C-130 sorties with relief aid, its largest response to date. For the Filipinos mudslides, only one sortie of relief aid was flown. “Taiwan Military Aircraft Deliver Relief Goods to Indonesia,” *BBC Monitoring Asia–Pacific – Political*, June 8, 2006. “Disaster Relief Operations Said Straining Philippine Military Resources,” *BBC Monitoring Asia–Pacific – Political,*
45. This team, however, focused its efforts on recovering the bodies of Chinese peacekeepers who died in the quake while supporting ongoing UNPKO. The team then left the country shortly thereafter. Beijing later dispatched a second team that focused on the provision of medical treatment as well as sending chartered flights with aid. Daniel Erikson, “The Politics of Disaster Relief: China, Taiwan and the Haitian Earthquake,” China Brief, Vol. 10, No. 3 (2010), pp. 7–10. “Chinese Medical Team in Haiti Back Home,” Xinhuaw, February 11, 2010.
46. Because Haiti’s damaged airport infrastructure was already overwhelmed with international relief flights, the ROCAF C-130 landed instead at the San Isidro Air Base in the neighboring Dominican Republic. After the relief aid was placed onto trucks, the ROCAF C-130 and its crew made the return flight to Songshan Air Base near Taipei, Taiwan. "WHO Envoy Thanks Taiwan for Medical Aid to Haiti," BBC Monitoring Asia–Pacific – Political, January 26, 2010. “Military Transport Plane Carries Supplies to Haiti,” United Daily News, January 26, 2010. “Taiwan Army Plane Returns After Delivering Relief Supplies to Haiti,” BBC Monitoring Asia–Pacific – Political, January 31, 2010.
47. Conditions included in this agreement that were publically released stated that the flight could not transport any “diplomatic personnel, overseas expatriates, or other goods” back to Taiwan. “Military Transport Plane Carries Supplies to Haiti.”
58. This number encompasses all known international disaster relief operations carried out by the CISAR team.
60 Asian Security


60. So far, CISAR teams have taken chartered flights in every known instance when deployed abroad for disaster relief operations.


63. “Chinese PLA Medical Rescue Team Arrives in Pakistan,” PLA Daily, October 21, 2011.

64. “Chinese, Laotian Medical Teams Arrive to Give Health Care Services.”


66. “China Sends Disaster Relief Material to Snow-Hit Mongolia.”


68. “Second Chinese Contingent Arrives in Pakistan’s Thatta for Disaster Relief.”


70. “Programme Summary of CCTV-7 Channel Military News 1130 gmt 21 Oct 11.”

71. The Effectiveness of Foreign Military Assets in Natural Disaster Response, p. 34.

72. Although the total weight of the 500 prefabricated homes is unknown, this is an estimate that each house is 700 square feet and each square foot of material weighs 35 pounds.

73. There is only a small window of time in which search and rescue teams are effective at retrieving victims alive.

74. “Second Chinese Contingent Arrives in Pakistan’s Thatta for Disaster Relief.”

75. The Effectiveness of Foreign Military Assets in Natural Disaster Response, p. 34.

76. Once mastered, instances in which a foreign military participates in aid distribution may still be limited as a result of such sensitivities.

77. Before this point, all PLA involvement in disaster relief aid distribution was accomplished using chartered aircraft and does not meet this article’s stricter definition of requiring actual military personnel to be sent abroad to either provide, deliver, or distribute aid. In comparison, it took Japan seven years, from 1998 to 2005, to make such a leap. South Korea and Taiwan are now both at the seven-year mark of aid delivery, though both have yet to engage in aid distribution.


81. “China to Send Military Helicopters to Pakistan for Flood Relief,” Xinhua, September 19, 2010.


84. The Dokdo is alternately referred to as an “LPX” (landing platform experimental) or an “LPD” (landing platform dock), though neither term, especially the latter, seems to correctly describe the ship. A more accurate classifier would be “LHD” (landing helicopter dock) as the Dokdo has both a well deck for landing craft and a large flat top for helicopters. International Institute of Strategic Studies, The Military Balance 2012, p. 253. “LP-X Dokdo (Landing Platform Experimental) Amphibious Ship,” GlobalSecurity.org, July 11, 2011. Available at http://www.globalsecurity.org/military/world/rok/lp-x.htm.

85. Islamabad has seemed increasingly eager to rely on Beijing for security provision. In the aftermath of challenges to sovereignty from drone strikes and the raid that killed Osama bin Laden, as well as accusations of linkages between Pakistani intelligence and insurgent groups fighting US and coalition forces in Afghanistan, the Pakistani defense minister even offered its port in Gwadar as a location for a PLA naval base. Beijing declined. Griff Witte, “Pakistan Courts China as US Ties Sour,” Washington Post, June 23, 2011.

86. According to one report, three Yuzhao-class LPDs have been launched, but only one is known to have reached initial operational capacity. Ted Parsons, “China Launches Third Type 071 LPD,” Jane’s Naval International, September 28, 2011. The People’s Liberation Army Navy: A Modern Navy with Chinese Characteristics (Suitland, MD: Office of Naval Intelligence, August 2009), p. 45.


89. “‘Peace Ark’ Hospital Ship to Visit Latin America,” PLA Daily, September 16, 2011.

90. In 2012, China’s heavy and medium cargo aircraft were capable of approximately 2.76 MTM/D, whereas (in decreasing order) Japan, Taiwan, and South Korea’s fleets are at 1.29, 0.68, and 0.41 MTM/D, respectively.


Jeffrey Engstrom is a Senior Project Associate at RAND Corporation, Arlington, VA, USA.