Enhancing Trilateral Disaster Preparedness and Relief Cooperation between Japan, U.S. and Australia

Approaches from Various Civil-Military Perspectives

Joint Research Project by:

- **The Association for Cooperation between Japan, U.S. and Australia (ACJUA)**
- **The Asia-Pacific Center for Security Studies (APCSS)**
- **Queensland University of Technology (QUT)**

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Acronyms

A2AD	Anti-Access and Area Denial
AADMER	Agreement on Disaster Management and Emergency Response
ACDM	The ASEAN Committee On Disaster Management
ACJUA	Association for Cooperation between Japan, U.S., and Australia
ACMC	Australian Civil Military Centre
ADF	Australian Defence Force
AFP	Australian Federal Police Force
AHA Centre	ASEAN Coordinating Center for Humanitarian Assistance on Disaster Management
APAN	All Partners Access Network
APCSS	Asia Pacific Center of Security Studies
APEC	Asia-Pacific Economic Cooperation
ARF	ASEAN Regional Forum
ASEAN	Association of South East Asian Nations
AUSAID	Australian Agency for International Development
BCCs	Bilateral Coordination Centers
C2	Command and Control
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance
CGP	Center for Global Partnership, Japan Foundation
DFAT	Department of Foreign Affairs and Trade
DHS	Department of Homeland Security
DMHA	Disaster Management and Humanitarian Assistance
EAS	East Asian Summit
EMA	Emergency Management Australia
ERAT	Emergency Rapid Assessment Team
FEMA	Federal Emergency Management Agency
FPDA	Five Power Defense Arrangement
HA / DR	Humanitarian Assistance / Disaster Relief
HC	Humanitarian Coordinator
HCT	Humanitarian Country Team
HSV	High Speed Vessels
IASC	Inter-Agency Standing Committee
ISAF	International Security Assistance Force

ISR	Intelligence, Surveillance and Reconnaissance
JASDF	Japan Air Self Defense Force
JDRAC	Japan Demining and Reconstruction Assistance Center
JDRT	Japan Disaster Relief Team
JDSC	Japan-Australia Joint Declaration on Security Cooperation
JICA	Japan International Cooperation Agency
JIIA	Japan Institute of International Affairs
JMSDF	Japan Maritime Self Defense Force
JMTDR	Japan Medical Team for Disaster Relief
JPF	Japan Platform
JSF	Joint Support Force
JTF	Joint Task Force
MPS	Maritime Prepositioning Ships
MINUSTAH	United Nations Stabilization Mission in Haiti
MOFA/MFA	Ministry of Foreign Affairs
MoU	Memorandum of Understanding
NDAJ	National Defense Academy of Japan
NDMC	National Disaster Management Centre
NDPG	National Defense Program Guidelines
NGO	Non-government Organization
NIMS	National Incident Management System
NLL	Northern Limit Line (between North and South Korea)
NOTAM	Notice to Airmen
NOTMAR	Notice to Mariners
NPR	National Police Reserve
NRP	National Response Plan
NSC	National Security Council
NSS	National Security Strategy (US, 1977)
ODA	Official Development Assistance
PKO	Peace Keeping Operations
PLA	People’s Liberation Army
QUT	Queensland University of Technology
RAAF	Royal Australian Air Force
RAMSI	Regional Assistance Mission to Solomon Islands
RIF	Requests for Information
RMC	Roles, missions and capabilities

ROK	Republic of Korea
SAARC	South Asian Association for Regional Cooperation
SDF	(Japan) Self-Defense Forces
SIPRNet	Secret Internet Protocol Router Network
SOP	Standard Operation Procedure
TCCs	Trilateral Coordination Centers
TSD	Trilateral Strategic Dialogue
UN	United Nations
UNHRD	United Nations Humanitarian Response Depot (in Malaysia)
UNISDR	United Nations International Strategy for Disaster Reduction
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
UNTAET	United Nations Temporary Administration in East Timor
USAF	United States Air Force
USAID	United States Agency for International Development
USFJ	United States Forces Japan
USMC	United States Marine Corps
USN	United States Navy
USPACOM	United States Pacific Command
VOCO	Verbal Orders of the Commanding Officer
VTF	Virtual Task Force
5AF	U.S. 5th Air Force

Introduction

By Noboru Yamaguchi

On March 11 2011, a 9.0 magnitude earthquake struck Northeastern Japan followed shortly after by a powerful tsunami. The disaster caused devastating damage along the Pacific coastline and more than 20,000 people were declared killed, injured or missing. Through this tragedy of the Great East Japan Earthquake (hereafter the 3/11 Earthquake), there are many important lessons on disaster preparedness and relief that can be learned; the implementation of such lessons is an important way to ensure that the victims of the disaster did not lose their lives in vain.

In the aftermath of the 3/11 Earthquake, various internal and external actors including governmental organizations, militaries, non-governmental organizations (NGOs), private companies, and international organizations participated in the disaster relief activities. Yet this disaster was not an isolated event, but occurred amid a spate of recent large-scale calamities in the Asia-Pacific region. These include the Indian Ocean Tsunami of 2004, the Pakistan Earthquake of 2005 and the Sichuan Earthquake of 2008. Relief activities were similarly conducted in response to each of these disasters by various internal and external civil-military actors. However, it became apparent through these relief activities that there were difficulties in coordinating and unifying the efforts of the various actors, which in turn hampered the provision of swift and efficient support to survivors. The effectiveness of the UN Cluster

Approach[1] is widely acknowledged yet it takes considerable time to activate this approach. Therefore the question of how relief activities can be rapidly and effectively conducted by various civil-military actors in response to a disaster continues to remain a challenge.

The members of this research project recognized the necessity for more effective international disaster relief cooperation in the Asia-Pacific region. Towards this end, we began to consider the possibilities for cooperation between Japan, the U.S. and Australia. These three countries each have rich experience in and high capability for disaster preparedness and relief. Moreover, there are existing bilateral political frameworks among them and they also share close relations, facilitating cooperation. We believe trilateral cooperation would enable the provision of swifter international disaster relief and help to smooth the transition to the UN Cluster Approach. Accordingly, the aim of this research project is to assess the possibilities of and also challenges to trilateral cooperation.

Therefore, in the first part of this study we outline the background of trilateral cooperation on Humanitarian Assistance and Disaster Relief (hereafter HA/DR) from the perspectives of Japan, the U.S., and Australia. We then clarify the necessity for cooperation among these three countries by addressing the

[1] Clusters are groups of humanitarian organizations, both UN and non-UN, in each of the main sectors of humanitarian action, ie. water, health and logistics. They are designated by the Inter-Agency Standing Committee (IASC) and have clear responsibilities for coordination. The Resident Coordinator and/or Humanitarian Coordinator (RC/HC) and the Humanitarian Country Team (HCT) manage humanitarian responses through such clusters.

questions of why trilateral cooperation and why HA/DR? In this context we also consider the future security environment of the Asia-Pacific region and the implications of this for trilateral cooperation.

In the next section, we examine the lessons learned from the foreign HA/DR operations of Japan, the U.S. and Australia, individually, and the implications of such lessons for trilateral cooperation. This section does not cover lessons learned from the 3/11 Earthquake, but rather, clarifies the characteristics of each country's foreign HA/DR operations and assesses the possibilities for trilateral cooperation.

Lastly, we identify the lessons learned from the 3/11 Earthquake in relation to trilateral and bilateral (Japan-U.S., U.S.-Australia) cooperation on HA/DR. We also consider the challenges to cooperation among the three countries and how to enhance trilateral cooperation in the future from the perspectives of Japan, the U.S., and Australia. Although this report focuses on trilateral cooperation, considering that all countries in the Asia-Pacific region share the common threat of natural disasters, it is hoped that our conclusions will be applicable to other countries in the region that wish to cooperate with Japan, the U.S. and Australia.

Also, it should be noted here that while in the 3/11 Earthquake Japan suffered two different types of disasters—(1) the earthquake and tsunami and (2) large-scale radioactive contamination, we focus our analysis on the former type of disaster, as it offers a better lens through with which to assess trilateral and

bilateral cooperation.

The idea for this research project was originally conceived by the Association for Cooperation between Japan, U.S. and Australia (ACJUA), which consists of researchers from the National Defense Academy of Japan (NDAJ) and the Japan Institute of International Affairs (JIIA). Researchers from the Asia Pacific Center of Security Studies (APCSS) in Hawaii and Queensland University of Technology (QUT) in Brisbane also participated in this project. As part of the project we held workshops in Hawaii, Brisbane and Tokyo, where we had discussions with various civil-military actors.

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This study marks only the beginning of our research on cooperation among the various civil-military actors in Japan, the U.S. and Australia. We hope to receive feedback from various stakeholders in order to further develop this research. We anticipate that our findings will contribute to future trilateral cooperation and also

cooperation among regional countries more broadly on disaster preparedness and relief.

The views presented in this report are those of the authors and do not reflect the views of the organizations behind this project.

Chapter I:

The Case for Trilateral Cooperation for HA/DR

This chapter examines Japanese, American, and Australian perspectives on trilateral cooperation for HA/DR in the context of rising trends in non-traditional security issues. As Amitav Acharya argues, the development of the concept of human security has strong roots in the Asia-Pacific; in the East, the concept has largely been conceived of in terms of "freedom from want," and in the West, "freedom from fear." As researchers have increasingly broadened their conception of security, assessments of non-traditional security issues have been carried out across the globe. In *East Asia Imperilled: Transnational Challenges to Security*, Alan Dupont predicts that a failure to reverse the trends of the decline in energy, food and water sufficiency, and the increase in HIV transmission, drug addiction and people smuggling "will have overwhelmingly negative outcomes for peace and stability in the region."[2]

The Asia-Pacific region experiences more natural disasters than any other part of the globe. In addition to being situated squarely on the earthquake-prone "Ring of Fire," it suffers from frequent cyclones, hurricanes or typhoons, floods, and even volcanic eruptions. According to the Asia-Pacific Disaster Report for 2012, produced by the United Nations (UN) Economic and Social Commission for the Asia-Pacific and the UN Office for Disaster Risk Reduction, countries in the Asia-Pacific region accounted for 80 percent of global economic loss due to

[2] Alan Dupont, *East Asia Imperilled: Transnational Challenges to Security*, (Cambridge, UK: Cambridge University Press), 2001: 243.

disasters in 2011. The 3/11 Earthquake in Japan and ensuing tsunami and nuclear disaster and also the floods in Southeast Asia (particularly those in Thailand), were major contributors to the staggering U.S.$294 billion in regional economic losses over the year.[3] Yet 2011 was not an aberration; the UN report indicated that the Asia-Pacific region is the most disaster-prone area in the world and also the most seriously affected by disasters. Almost 2 million people were killed in disasters in the Asia-Pacific between 1970 and 2011, representing 75 percent of global disaster fatalities. The most frequently occurring hazards for the region are hydro-meteorological ones, which, among other hazards, affect the largest number of people. Since 2000, more than 1.2 billion people were exposed to hydro-meteorological hazards through 1,215 disasters, whereas 355 million people were exposed to 394 climatological, biological and geophysical disasters over the same period. The effects of climate extremes and variation have meant that while the number of tropical cyclones (typhoons in Asia and the Pacific) has not been increasing in frequency, they tend to be stronger, making the region more susceptible to greater potential losses. This trend of increasing tropical cyclones also poses a serious threat to human beings.

[3] "Asia-Pacific Disaster Report 2012," The United Nations Economic and Social Commission for the Asia-Pacific and the UN Office for Disaster Risk Reduction, accessed online at: http://www.unescap.org/publications/detail.asp?id=1512

Global and Asia-Pacific Disaster Fatalities, 1970-2011

Source: UN Asia-Pacific Disaster Report 2012

Recognition of non-traditional security challenges also sheds new light on the workings of regionalism and multilateralism in practice.[4] In the Asia-Pacific, regional institutions like ASEAN, ASEAN + 3, the ASEAN Regional Forum (ARF), the Asia-Pacific Economic Cooperation (APEC), and the East Asian Summit (EAS) have played an important role in responding to new security challenges such as the Asian financial crisis, the surge of piracy in the Straits of Malacca, and the outbreak of SARS. In addition to these regional and subregional arrangements, bilateral and trilateral (or minilateral) frameworks have added new layers of regional institution and shaped the contours of regional institutional architecture in Asia.

[4] Mely Caballero-Anthony, "Nontraditional Security and Multilateralism in Asia: Reshaping the Contours of Regional Security Architecture?" *The Stanley Foundation Policy Analysis Brief*, 2007: 3, accessed online at: http://www.stanleyfoundation.org/publications/pab/pab07mely.pdf

1. Japan

By Tetsuo Kotani

Japan's Interest in Non-Traditional Security Issues

Japan was one of the first countries to recognize non-traditional security challenges. The Japanese government developed the concept of "comprehensive security" in the 1970s and 1980s in recognition of Japan's vulnerability as a resource-poor island nation surrounded by military powers. The concept, from its inception, encompassed not only military threats but a diverse range of phenomena, including the economy, energy, food, and disasters, and advocated full use of nonmilitary means to achieve national security. In short, the concept was borne of Japan's peace constitution and realism.

The ending of the Cold War paved the way for Japan to proactively respond to non-traditional security challenges. Japan's generous financial contribution to the Gulf War was not fully appreciated and so Japan sought new ways to engage in international cooperation. Against this backdrop, the Japanese government enacted a law in 1992 enabling its Self-Defense Force (SDF) to participate in United Nations peacekeeping operations (PKOs). Then, in 1995, the massive earthquake that struck Kobe and the sarin gas attack in the Tokyo subway network served as catalysts for the Japanese government's approval of the National Defense Program Guidelines (NDPG) later in the same year; one of the emphases of these defense guidelines was large-scale disaster response. Following the September 11 terrorist attacks of 2001, the Japanese government decided to deploy its SDF to support the U.S.-led coalition in the war on terror. In

accordance with these events, the 2004 NDPG came to identify counter-terrorism and counter-proliferation of weapons of mass destruction as urgent missions for the SDF.

Growth in HA/DR Missions

Asia is a region prone to frequent and large-scale natural disasters. The massive tsunamis that hit the Indian Ocean region in December 2004 and more recently, Japan, in March 2011, vividly illustrate the scale of devastation that natural disasters can wreak and the immensity of the task involved in undertaking disaster relief operations and providing humanitarian assistance, post-disaster reconstruction and rehabilitation. Natural disasters generate complex emergencies that require urgent and coordinated responses from a broad range of military, government, foreign, and non-state actors.

Yet many states in Asia are not prepared to cope with such complex disasters. The 2004 Tsunami clearly revealed the lack of regional capacity to respond to large-scale disasters and to provide emergency relief, rehabilitation, and reconstruction. HA/DR operations were in fact conducted by major powers such as the United States, Australia, and Japan, as well as international aid agencies. However, after the 2004 Tsunami, the region realized the necessity of developing a more effective mechanism for disaster prevention, mitigation, relief and assistance.[5] Accordingly, ASEAN initiated the annual Regional Disaster Emergency Response Simulation Exercise in 2005, to provide immediate

[5] Ibid., p. 5-6.

humanitarian assistance to affected countries in times of natural disaster. There have also been other ad hoc exercises in disaster management that have been undertaken within the ARF framework to develop guidelines for improving civilian and military cooperation in humanitarian operations. APEC established the Virtual Task Force (VTF) on Emergency Preparedness in 2005 to strengthen coordination efforts in disaster relief and improve regional emergency and natural disaster management capability.

While regional initiatives to improve disaster management are currently under consideration, attention also needs to be focused on improving capacity at the national level. Traditionally, HA/DR has been considered a secondary role of armed forces; deterrence and national defense have been the primary and the most important military missions. Yet due to the self-sufficient nature of armed forces they are highly effective in conducting relief operations in areas that have suffered infrastructural damage after large-scale natural disasters. Armed forces are also capable of conducting HA/DR in remote areas where access is limited; they are able to do this effectively precisely because they are trained and equipped for war fighting. Indeed, command and control, communication, joint operations, amphibious capabilities, logistics, medical assistance, and search and rescue are all important both in war fighting and in HA/DR. In other words, in order to conduct effective HA/DR missions, armed forces need to have advanced war-fighting capabilities. Indeed, Japan and the United States were able to conduct effective HA/DR operation after the 3/11 Earthquake because of their sophisticated war-fighting capabilities.

Japan suffers from natural disasters such as earthquakes, tsunamis, typhoons, and floods every year. The SDF has participated in HA/DR missions since its establishment in 1954. As previously noted, the 1995 Kobe Earthquake signaled a turning point in HA/DR operations. Japanese citizens widely appreciated the contribution made by the SDF, which in turn dramatically improved the SDF's image. The SDF was also dispatched overseas to participate in international HA/DR operations, specifically the 2004 Indian Ocean Tsunami, and the 2010 Haiti Earthquake. Japan mobilized 100,000 SDF personnel for HA/DR in the 3/11 Earthquake, working closely with the U.S. military. As it is predicted that a major earthquake will hit Tokyo within the next 30 years, HA/DR continues to be important for the SDF. The 2010 NDPG emphasized the defense of Japan's southwestern islands to balance the rise of Chinese naval power and provide sufficient HA/DR capabilities for these remote islands.

The Case for Japan-US-Australia HA/DR Cooperation

In the wake of Japan's 3/11 Earthquake, the United States implemented Operation Tomodachi while Australia launched Operation Pacific Assist. Both operations provided enormous support for the SDF's relief efforts. This trilateral cooperation was only possible because of the U.S. alliances with Japan and Australia, growing security ties between Japan and Australia, and an emerging trilateral security partnership.

For Japan, Australia is naturally a key partner in security cooperation given the two countries' long history of economic partnership. Japan and Australia share a

common interest in regionalism and have jointly initiated regional economic institutions such as APEC.[6] Bilateral security collaboration started on a limited scale in the 1970s and expanded in the 1990s. The close cooperation between the Australian Defense Force (ADF) and the Japan SDF in the peacekeeping-operation in Cambodia,1992-1993, added a further dimension to their security relationship.[7] In the latter half of the 1990s, annual political-military dialogues, regular intelligence exchanges, joint naval exercises, reciprocal port visits and some maritime surveillance operations were conducted.

After the turn of the century, Japan and Australia upgraded their bilateral security cooperation in the areas of ballistic missile defense, counter-proliferation, and counter-terrorism. The two countries' defense ministers signed a Memorandum of Understanding (MoU) on Defense Exchanges, and the ADF escorted the SDF in its operations in Samawah—a definitive event in the institutionalization of the Japan-Australia security relationship. The Japan-Australia Foreign and Defense Ministerial Consultation ("two-plus-two meeting") commenced in 2007 and within this forum agreements were reached on various issues including cooperation on HA/DR.

The fact that Japan and Australia are both major allies of the U.S. in Asia, serves as a binding factor between the two countries.[8] Japan and Australia

[6] Takashi Terada, "The Australia-Japan Partnership in the Asia-Pacific Region: From Economic Partnership to Security Co-operation?" *Contemporary Southeast Asian Studies*, vol. 22, no. 1, April 2000: 177.
[7] Desmond Ball, "Whither the Japan-Australia security relationship?" Austral Policy Forum 06-32A 21, September 2006, accessed online at: http://nautilus.org/apsnet/0632a-ball-html/
[8] See Tomohiko Satake, "The Background to and Outlook for Japan-Australia Security Cooperation," *The National Institute for Defense Studies News*, August/September 2010, Combined Edition (no. 146), accessible online at: http://www.nids.go.jp/english/publication/briefing/pdf/2011/146.pdf.

consolidated their bilateral security ties in 1996 when Tokyo and Canberra announced their respective joint security declarations with Washington in tandem. The participation of both countries in the U.S. war on terror also led to deepened bilateral security cooperation. The Trilateral Strategic Dialogue (TSD) between Australia, Japan and the United States was initiated in 2006 and the three countries have since conducted trilateral military exercises in areas such as Okinawa, in 2010, and the South China Sea, in 2011. The three countries are also currently working together on the U.S. Pacific Partnership, an annual HA (Humanitarian Assistance) program.

Future Prospects for Trilateral HA/DR Cooperation

The three countries hold the shared values of democracy, free trade, the rule of law and human rights protection, to name but a few. They also have shared interests in regional stability and greater engagement with China in regional affairs. The Abe administration promotes value-based diplomacy and emphasizes the strengthening of ties with the United States, Australia, and India. The Obama administration is rebalancing toward Asia and seeking deeper regional engagement.[9] The Gillard administration has published a white paper on Asia and adopted an Asia-centered policy.[10] Evidently, there is strong basis upon which to further promote the trilateral partnership in coming years.

However, China's growing presence may further shape the dynamics of the trilateral partnership in the region. Given the three countries' respective

[9] See Department of Defense, Sustaining U.S. Global Leadership: Priorities for 21st Century Defense, January 2012; Hillary Clinton, "America's Pacific Century," *Foreign Policy*, November 2011, accessible online at: http://www.foreignpolicy.com/articles/2011/10/11/americas_pacific_century

[10] See Australian Government, Australia in the Asian Century: White Paper, October 2012.

capacities and the existence of U.S. bases in Japan and Australia, the trilateral framework has been effective in addressing non-traditional challenges in the region and has the potential to be a platform by which to further encourage and engage China's peaceful rise. However, Japan, Australia and the U.S. need to recognize that a stronger trilateral partnership can adversely be perceived as a means to limit China's expansion and influence.

The promotion of trilateral HA/DR cooperation may be effective in lessening this misperception and geopolitical power play. In Asia, HA/DR cooperation is a human security imperative with a strong basis for cooperation and little cause for provocation. The by-products of HA/DR cooperation include demonstration of national goodwill and confidence building among participants. From the Indian Ocean Tsunami and Operation Tomodachi missions, the U.S. HA/DR contribution dramatically improved its image and relationship with Indonesia and Japan. It is due to these HA/DR benefits that China has been conducting "peace mission" operations in Africa and other regions. By promoting trilateral HA/DR cooperation, Japan, the United States, and Australia can enhance regional capacity building through HA/DR leadership.

2. U.S.

By David Fouse

U.S. Interest in Non-Traditional and Transnational Security Threats

The U.S. government's interest in transnational security challenges was evident well before the tragic events of September 11, 2001. Soon after taking office in 1992, the Clinton administration signaled its interest in "new" security issues by creating several new offices in traditional areas of the government. These included a national intelligence officer for global and multilateral issues, a deputy undersecretary of defense for environmental issues and an undersecretary for global affairs at the State Department. The National Security Council (NSC) also added a new Directorate for Global and Environmental Issues, which attempted to integrate environmental considerations throughout the NSC's decision-making process.[11]

The Clinton administration's National Security Strategy (NSS) of 1997 moved the issue of transnational challenges closer to the forefront of U.S. policy. The 1997 NSS named transnational threats, including terrorism, the illegal drug trade, illegal arms trafficking, international organized crime, uncontrolled refugee migrations and environmental damage as "threats to U.S. interests" on par with regional or state-centered threats and threats from weapons of mass destruction.[12] However, there was often disparity between these policy pronouncements and comparable levels of funding and policy initiatives during a

[11] Ann M. Florini and P. J. Simmons, "North America," in Paul Stares, ed., *The New Security Agenda: A Global Survey* (Tokyo and New York: Japan Center for International Exchange, 1998): 62.
[12] Ibid., p. 61.

period of declining public and congressional support for foreign engagement.[13]

Clearly, the terrorist attacks on New York and Washington in September 2001 helped to galvanize U.S. strategic thought and resources to combat non-traditional and transnational security challenges. These events moved the threat of terrorism—and the danger of weak states that may be vulnerable to terrorist networks—to the highest level of priority in U.S. security policy.[14] In the wake of 9/11, the U.S. launched a number of new initiatives aimed at building the capacity of weak states to combat internal and transnational threats, including the Department of State's Office of the Coordinator for Reconstruction and Stabilization and the U.S. Agency for International Development's "Fragile States Strategy." It has since become axiomatic of U.S. security policy in the post-9/11 era to work multilaterally with other countries to combat a variety of non-traditional and transnational threats that undermine state stability and the capacity to govern effectively.

I. Geopolitical Impediments to Multilateral Cooperation: Continuing Interstate Tensions across the Asia-Pacific

Realists and others who have a skeptical view of broadening the concept of security often have pointed to the problems of making security in this sense operational, emphasizing the need for governments to prioritize among a diverse

[13] Ibid., p. 63.
[14] See the Bush Administration's National Security Strategy of 2002, accessible online at: http://georgewbush-whitehouse.archives.gov/nsc/nss/2002/

array of possible threats.[15] Some have argued that the end of the Cold War has been overrated: great power confrontations are not obsolete but rather in the "down phase" of a cyclical pattern that will eventually return. Such viewpoints posit that emerging powers and rogue states continue to challenge the international order, and that policymakers turn attention away from these threats at their own peril.[16]

Critics of the new focus on non-traditional and transnational security threats have been bolstered by a recent uptick in traditional interstate tensions. Nowhere is the continuing relevance of traditional interstate tensions more apparent than in the Asia-Pacific. Territorial and sovereignty issues continue to plague many countries in the Asia-Pacific, including (but not limited to) the Kashmir problem between India and Pakistan, the India-China border dispute, the Northern Limit Line (NLL) separating North and South Korea, Japan's territorial disputes with Russia, South Korea, China and Taiwan, and the various overlapping territorial and exclusive economic zone claims of countries in the South China Sea. Tensions related to the North Korean nuclear weapons program and small-scale attacks on South Korea, China's new assertiveness regarding its territorial claims in the South and East China Seas and the lingering issue of Taiwan's status continue to be cause for concern in the region.

The Asia-Pacific has experienced robust growth over the past decade which has

[15] Stephen Walt, "The Renaissance of Security Studies," *International Studies Quarterly*, vol. 35, no. 2, 1991: 211–39.
[16] John Mearshimer, "Disorder Restored," in Graham Ellison and Gregory T. Treverton, eds., *Rethinking America's Security: Beyond Cold War to New World Order,* (New York: W. W. Norton, 1992).

supported rapidly increasing military budgets in many countries of the region, which has in some cases exacerbated tensions associated with unresolved territorial and sovereignty disputes. Asian defense spending is projected to overtake that of Europe by the end of 2012 and is unlikely to slow significantly unless a major disruption of economic growth should occur.[17] Recent trends have seen many of Asia-Pacific's most developed countries not only replacing outdated equipment, but also acquiring advanced military platforms developed elsewhere, and some, such as China, have developed new technologies such as anti-satellite and anti-network capabilities.

Further adding to the tensions in the region are the growing sentiments of nationalism in many countries, which have been aggravated by the ongoing territorial disputes and military expansion, noted above. The rapid economic growth and rising stature of the Asia-Pacific has lead to growing popular expectations which can at times constrain political leadership from making the type of compromises necessary to unwind the many territorial and sovereignty disputes in the region. Economic growth also increases the need for scarce resources such as energy and minerals, which further fuels tensions related to these disagreements. Thus despite progress in terms of economic integration, the Asia-Pacific remains a region where interstate tensions and the possibility of conflict remains a major concern for many policymakers.

[17] Joachim Hofbauer, Priscilla Hermann and Sneha Raghavan, "Asian Defense Spending 2000-2011: A Report of the CSIS Defense-Industrial Initiatives Group," Center for Strategic and International Studies, October 2012, accessed online at: https://csis.org/files/publication/121005_Berteau_AsianDefenseSpending_Web.pdf

U.S. Rebalancing

In accordance with the growing geostrategic significance of the Asia-Pacific, the Obama Administration announced in November 2011 that it would rebalance its strategic focus away from the wars of the Middle East to the Asia-Pacific region. Despite the fact that the rebalance has received criticism both inside and outside the U.S., based on the perception that it is a veiled attempt to contain China militarily, the rebalance includes a wide array of diplomatic, economic, budgetary and security related initiatives. While the U.S. and its allies in the region are concerned with China's growing anti-access and area denial (A2AD) capabilities, and the rebalance is in part intended to address these issues, Washington's new initiative aims more broadly to engage the region on the diplomatic and economic fronts. Writing in *Foreign Policy,* Secretary of State Hillary Clinton summed up the new policy, stating that "…our work will proceed along six key lines of action: strengthening bilateral security alliances; deepening our working relationships with emerging powers, including with China; engaging with regional multilateral institutions; expanding trade and investment; forging a broad-based military presence; and advancing democracy and human rights."[18]

The U.S. thus intends to deepen its working relationship with China while also strengthening traditional bilateral alliances and engaging the region multilaterally, a tall order that many will find hard to accept. The key will be to find areas of common ground from which to build these various relationships simultaneously. One area of common ground that the U.S. has targeted for developing strategic

[18] Hillary Clinton, "America's Pacific Century," *Foreign Policy*, November 2011, accessed online at: http://www.foreignpolicy.com/articles/2011/10/11/americas_pacific_century?page=0,1

relationships in the region is Humanitarian Assistance and Disaster Relief (HA/DR). U.S. efforts in HA/DR following the December 2004 Tsunami in Southeast Asia helped improve U.S. relations with a number of countries in the region, which has put HA/DR front and center in U.S. military strategy documents released since 2007. The U.S. now conducts a variety of HA/DR exercises within the region, including the Pacific Endeavor exercise, which was conducted in August 2010 and included 16 Asia-Pacific countries in a real-life scenario based on a massive earthquake in metropolitan Manila. The U.S. now views its efforts in improving HA/DR cooperation in the region as critical to overall security cooperation in the region and an avenue of enhancing relationships with both historic allies and potential partners.

II. HA/DR: Building Common Ground for Multilateral Security Cooperation

Though the U.S. has been accused of neglecting the Asia-Pacific in the post-9/11 era, the U.S. emphasis on non-state actors as primary security concerns has provided the United States and major powers such as China and Russia—both having their own reasons to be concerned with the terrorist threat—with a stabilizing framework from which to engage each other despite deep differences over many other strategic concerns.[19] Many experts have suggested that cooperation in the region can be extended through cooperation on other non-traditional and transnational security challenges.[20] At times, however, non-traditional and transnational security challenges that might be

[19] See Shirley Kan, "US-China Counter-Terrorism Cooperation: Issues for US Policy," CRS Report for Congress, May 12 2005, accessible online at: *www.fas.org/sgp/crs/row/RS21995.pdf.*

[20] See for example Amitav Acharya, *Constructing a Security Community in Southeast Asia: ASEAN and the problem of regional order*, 2nd ed. (Routledge, 2009).

considered prime for further cooperation in the Asia-Pacific, have been found to overlap with traditional strategic issues in ways that make cooperation difficult. Resource issues such as water and energy, for example, appear to be areas of mutual concern that could lay the ground for broad multilateral cooperation. In many cases, however, cooperation on these issues is complicated by the conflicting territorial claims of the countries involved. Cracking down on counterfeiting and illicit trafficking can conflict with basic economic needs in some countries, and in others, corruption is so entrenched in the political system that meaningful cooperation is extremely difficult. In contrast, one significant area for non-traditional security cooperation that many countries find less threatening is in the area of Humanitarian Assistance and Disaster Relief. As the next section will show, cooperation in these areas is not only politically more feasible than many others, it is sorely needed in the Asia-Pacific.

Trilateral U.S.-Japan-Australia Cooperation for HA/DR: Laying Foundations for Broader Security Cooperation in the Asia-Pacific

In response to the trends noted above, many of Asia's strongest militaries, including in Japan, China and South Korea, have begun to develop rapid response units that can provide aid more quickly in the event of natural disasters and pandemic disease outbreaks. Unfortunately many of these efforts are often not well coordinated, as in the case of the 2004 Indian Ocean Tsunami, where key stakeholders were sometimes preoccupied with carving up disaster zones among themselves, flying their own flags and showcasing their involvement to the world instead of working together. Steps must be taken to enhance

cooperation between all the stakeholders involved in disaster management in the Asia-Pacific. This includes national governments, disaster relief agencies, local civil society groups, international organizations and major external powers. A variety of initiatives for improving coordination between various stakeholders have been proposed and some implemented, yet many obstacles to improved coordination in humanitarian assistance and disaster efforts remain.

Beyond the political feasibility of coordinating HA/DR efforts between countries with competing interests lie many other practical problems that can only be resolved through planning and practice. Interoperability becomes a key issue when militaries from different countries attempt to work together in times of crisis. Developing communications systems that will talk to each other and protocols for sharing information have proven critical issues in past disaster relief operations. The recommendations to be presented in this report for trilateral U.S.-Japan-Australia cooperation on HA/DR would like to build upon the foundations already established in these areas through the three countries bilateral security relationships and past experience in HA/DR operations, in order to provide the groundwork for expanding effective coordination in HA/DR to other countries throughout the region.

3. Australia

By Paul Barnes

Background

Recognition that threats to national security have evolved from the conventional forms seen in “Cold War” times is generally an accepted proposition. From an all-hazards perspective these evolved threats may manifest via disruptions to financial markets and the global economy, geopolitical events, disruption of supply chains, as well as biosecurity incursions impacting on food security and, where relevant, agricultural export markets. While these threats are responsive to varying degrees of human control, damaging weather events and seismic activity, for example, cannot be prevented. When this latter category of event occurs, significant disruption of local and regional economies results: normally with ongoing damage from subsequent cascading impacts on infrastructure systems. Even with detailed preparedness planning, catastrophic losses remain a key concern, particularly in relation to the uncertain nature of climate variability.

The continued potential for disruption in the Asia-Pacific is likely to be exacerbated by high population densities, intensive infrastructure systems and the coastal location of major Southeast Asia of regional economic activities (Asian Development Bank, 2009). That natural hazards are significant issues in this region is not surprising given that most Association of South East Asian Nations (ASEAN) member countries reside within or in close proximity to the

Pacific “Ring of Fire.”[21] For example, the devastating 2004 Indian Ocean (Asian) Tsunami impacted twelve countries with an estimated 280,000 victims and U.S. $14 billion worth of property losses.[22]

While Australia is not geographically within the “Ring of Fire” it has significant diplomatic, economic and humanitarian assistance commitments within it. Notwithstanding a developing affiliation with ASEAN, and its active role within the Asia Pacific Economic Cooperation (APEC) countries, Australia has long-standing geopolitical links with the United States and, in recent times, rapidly developing links with Japan covering a range of mutual interests from trade to security with official engagement at the highest levels.

All crisis-creating situations strain the capacities of established countries, recognition of the extent and nature of some disaster settings and the ability to begin dealing with their aftermath amounts to what has been described as “wicked problems.” [23] Thus where the capacity of an affected country to deal with a disaster is overwhelmed by extent and by damage, the assistance of neighbors and allies is needed. In early 2011, the combined effects of the earthquake, tsunami, and nuclear disaster presented Japan with an unprecedented wicked problem: one that resulted in its allies stepping forward to assist.

[21] The Ring of Fire has 452 volcanoes and is home to over 75 percent of the world's active and dormant volcanoes.
[22] Swiss Re, “Natural Catastrophes and Man-Made Disasters in 2004,” *Sigma*, vol.1, 2005: 1-40.
[23] H. W. J. Rittel & Melvin M. Webber, “Dilemmas in a General Theory of Planning,” *Policy Sciences*, vol. 4, 1973: 155-169.

Australian Experience of Non-Traditional Security Issues

In addition to participation in United Nations sanctioned peacekeeping operations over an extended period, Australia has been active in a series of HA/DR or related responses across Oceania, North and South Asia and into Western Asia over the past number of years. In many cases of Australian involvement in such events it has taken a lead role as a larger regional economy assisting neighboring countries across the Asia-Pacific Region. In doing this it has been recognized as one of the most proactive contributors of military capability and resources to regional humanitarian missions.[24]

In recent years deployments have varied from human security and humanitarian activities to full-scale disaster responses. In nearly all cases, other than as members of the International Security Assistance Force in Afghanistan and earlier in the Iraqi conflict, Australian support has been predominantly regionally focused and involving civilian or civil-military teams, as summarized in Figure 1 below

[24] S. Wiharta et. al., "The effectiveness of foreign military assets in a natural disaster response," Stockholm International Peace Research Institute (SIPRI), 2008.

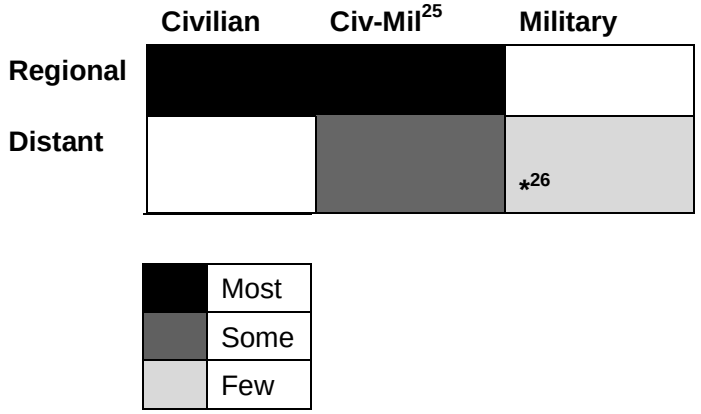

Figure 1: Patterns in Recent Extra-National Australian Disaster Response

This emphasis in regional response activity is arguably based on the size and capacity of the Australian Defence Force for sustained force projection, but a deeper understanding comes from what is arguably a longer history of assisting in the development of capacity for preparedness and planning for disaster mitigation among our near neighbors. This position has been a central policy federally for many years. This contention is supported by the fact that Australia's expenditure on risk reduction peaked at AU$100 million in 2010-11 with key partners in Southeast Asia (Indonesia, the Philippines, Vietnam) and Pacific Island countries. This ongoing commitment positions Australia as the 9th largest overall donor to the United Nations International Strategy for Disaster Reduction (UNISDR).[27]

In addition to unilateral efforts in humanitarian assistance and human security activities, Australia is an active member as well in the Five Power Defense

[25] The term Civ-Mil as used here includes the uniformed Police as well Urban Search & Rescue services.
[26] This emphasis is based on Australian Defence Force involvement in Afghanistan as part of the International Security Assistance Force (ISAF).
[27] Commonwealth of Australia, AusAID 2011, Humanitarian Action Policy Implementation Plan, 2012, accessed online at: http://www.ausaid.gov.au/publications/Documents/2011-humanitarian-action-policy-implementation-plan.docx

Arrangement (FPDA), a maritime security and air defense initiative linking it with Malaysia, Singapore, New Zealand, and the United Kingdom, whose focus has grown to include the development of readiness, capacity building, and interoperability among its members in the area of HA/DR operations. While some have questioned its currency, the maintenance of joint capability and interoperability of each regional country would benefit rapid response to natural disasters. Importantly, such a loose coupling of regional partners also enhances confidence building and cooperation.[28]

In addition to Southeast Asian engagement, Australia works closely with France and New Zealand under a trilateral arrangement known as FRANZ to respond to a range of emergencies in the South Pacific and Oceanic region. The FRANZ Agreement, dating from 1992, commits its signatories to "exchange information to ensure the best use of their assets and other resources for relief operations after cyclones and other natural disasters in the region." While cyclones remain the chief natural disaster impacting communities across the South Pacific, FRANZ has in practice been an effective system against the wide range of events requiring collaboration in early warning and joint response and recovery as needed.[29]

A point to note is that in all of the activities listed above the approach taken by Australia is a balance of civilian first responder, government and military actors.

[28] T. Huxley, “The future of the Five Power Defence Arrangements,” *The Strategist*, November, 2012, accessed online at: http://www.aspistrategist.org.au/the-future-of-the-five-power-defence-arrangements/

[29] Commonwealth Secretariat, *Review of international mechanisms for disaster relief, rehabilitation, and reconstruction*, 1999, accessed online at: http://www.thecommonwealth.org/shared_asp_files/uploadedfiles/%7BE4049D36-92C9-4800-B47B-08067BF23EDB%7D_CCGE992.pdf

This balance is indicative of a considered approach to the needs in the location of the disaster, those affected, and an assessment of the goals and a projection of the capability required.

Potential for Growth in Collaboration on Non-Traditional Security Responses

While Australian experiences have predominantly focused on regional responses comprising teams made up from a mix of civil-military groups, it has been active in other for such as the Asia Pacific Economic Cooperation (APEC) communities and the ASEAN Regional Forum (Association of South-east Asian) nations.

Equally important are the historically strong links with both Japan and the United states on strategic security policy. While much has been made of the so-called American “rebalance" to Asia the reality is that there has been a long-standing cooperation with America over many years within Australian borders. In addition, visits by U.S. Navy ships have been a standard practice to both East and West Coast ports over many years. The addition of a semi-permanent contingent of U.S. Marines and Air Force on a rotational basis in the Northern Territory, arguably adds little to the existing situation of ongoing collaboration.

For example, each year elements of the Australian and American militaries carryout a joint training exercise over an extended period. A goal of the Talisman Sabre training exercise is to enhance interoperability between the two armed

forces, however a major part of the 2007 exercise focused on joint deployment in humanitarian and disaster response contexts.[30]

While formal engagement between Australia, the United States and Japan has been occurring within the context of APEC and ASEAN over some time, the 2007 Japan-Australia Joint Declaration on Security Cooperation (JDSC) extended mutual obligations and extended the relationship to the point where each agreed on priority areas for practical cooperation between Australia and Japan, including disaster relief. A significant element in this elevated engagement was the cooperation between the Australian Defence Force and the Japanese Self-Defense Force (SDF) elements active in infrastructure recovery in Iraq where Australian army elements provided operational security for Japanese military engineers. Instances of collaboration such as Japanese logistical support of multi-national maritime activities in the Indian Ocean are also an important part of this expanded context, as were expanded training opportunities involving military elements of both countries. While the JDSC emerged as a relatively new element in the long established bilateral link between the countries, it was not at the level of an alliance, as seen between the U.S. and Japan. [31]

The subsequent trilateral engagement between all three countries was in later 2007 expanded to include India in a quadrilateral arrangement. This four-party

[30] C.M. Perry, et. al., "Finding the Right Mix" (Disaster Diplomacy, National Security, and International Cooperation), The Institute for Foreign Policy Analysis, 2009.
[31] T. Terada, "Evolution of the Australia-Japan Security Partnership: Towards a Softer Triangle Alliance with the United States?" IFRI Centre for Asian Studies, Paris, 2010.

grouping was not long-lived as Australia subsequently left this arrangement in the same year. The conundrum faced by Australia at that time, one that is currently still active, is that its major regional economic partner was not the same as its major security ally. Thus a difficult and possibly intractable balance point was reached where Australian national interests held sway over a progression of wider security engagements.[32]

The central enduring core of all evolving agreements, one that evades the concerns of China, is a multilateral appreciation of the value of Humanitarian Assistance and Disaster Response between Japan, Australia and the United States. The 2004 multinational response to the combined impacts of earthquake and tsunami is a clear example of many neighbors—close and far—providing care and comfort to those in need.

It is logical in terms of capability and experience, in both peace keeping, peacemaking, and disaster response roles, that the three countries pursue effective means to work together in a range of contexts. While such cooperation might be construed in a range of ways by other Asian countries the potential benefits of rapid and concentrated humanitarian aid and disaster assistance, delivered as and where needed, militates against concern.

However for the Australian regionalist context the situation requires a balanced

[32] The State Department Quadrennial Diplomacy and Development Review and the Department of Defense Quadrennial Defense Review, 2010; The United States under the context of development, elevated humanitarian assistance as a key priority in foreign assistance.

position. A way forward is for the three countries to combine their experience, capability and capacities in civil-military cooperation within a coalition of North and South Asian partners to ensure that deficits in perception and local response capacity can be addressed in an environment of dialogue and mutual effort.

As mentioned earlier, wide area disasters as “wicked problems” require “joined up” response. To this end trilateral agreements operating within the broader inclusiveness of ASEAN and APEC are a viable means to develop and sustain both capability and capacity in HA/DR across the Asia Oceanic region.

Chapter 2:
Lessons Learned from HA/DR Operations and Implications for Trilateral Cooperation

In order to develop a framework for Japan-U.S.-Australia trilateral cooperation on HA/DR, it is necessary to grasp the general trends of each nation's disaster relief experience. This chapter aims to identify each of the three countries' strengths in the area of HA/DR and their respective lessons learned through past experience in international HA/DR operations. This analysis will provide a basis for understanding the potential for the three countries to collaborate on HA/DR, and how this collaboration can then be extended to the Asia-Pacific region at large.

1. A U.S. Experience

By Jessica Ear

Clearly United States involvement in any international disaster response increases resource and manpower available for the operation. U.S. political will to assist during major global disasters is nested in strategic national guidance that deems disaster relief as one of its foreign policy priorities.[33] Additionally, the U.S. Department of Defense (DOD) considers HA/DR to be a core mission objective.[34] However, while the U.S. involvement in humanitarian efforts creates

[33] *The State Department Quadrennial Diplomacy and Development Review and the Department of Defense Quadrennial Defense Review*, 2010, The United States under the context of development, elevated humanitarian assistance as a key priority in foreign assistance.

[34] The Department of Defense in 2005 issued Directive 3000.5 by which reconstruction and stabilization is further iterated as a core U.S. military mission. Follow-on DoD Instruction in 2009 more specifically defined U.S. military support to stability operations to include humanitarian relief. U.S. Department of Defense, A Cooperative Strategy for 21st Century Seapower (Washington DC: Pentagon October 2007) includes

disaster response advantages, increasing stakeholders in operations also raises coordination and cooperation challenges. A study of key lessons learned reveals the need for capability and coordination integration, improved disaster governance structures, and greater communication and information management among relief actors. Thus the U.S., Japan and Australia should leverage their strengths to collectively address common lessons learned in disaster operations, as this will serve to enhance trilateral interoperability and maximize response effectiveness. It will also serve to enhance key capabilities beyond the limits of HA/DR.

Military and Civilian Coordination Integration

On December 26 2004, the fourth largest earthquake in a century occurred underwater off the coast of Indonesia's Aceh province. The magnitude 9.3 earthquake killed more than 228,000 people in 14 countries in Southeast and South Asia. With damage estimates of nearly U.S.$10 billion, the tsunami affected nearly 2.5 million people and generated record aid donations from national governments, institutions, organizations and individuals.[35]

The U.S. military and 14 other foreign militaries were key contributors to the unprecedented relief efforts. Within days of the tsunami, the U.S. launched Operation Unified Assistance to assist Indonesia, Sri Lanka and Thailand, the hardest hit countries. The sea-based response included twenty-five Navy ships

HA/DR as one of the six sea services' core capabilities.

[35] "The Tsunami Legacy; Innovations, Breakthroughs and Change," The Tsunami Global Lessons Learned Project Steering Committee, 2009.

and a Coast Guard cutter, forty-five fixed-wing aircraft and fifty-eight helicopters.[36] More than 15,000 U.S. military members were also in Southeast Asia assisting in the relief efforts.[37]

Once the global community grasped the full, devastating impact of the tsunami, the United Nations (UN) agencies, alongside other international organizations and more than 3,600 non-government organizations (NGOs) mobilized to assist.[38] While the UN and humanitarian community scrambled to organize themselves in various locations in the tsunami-affected areas, the U.S. Operation Unified Assistance remained mostly geographically separated from this UN-led coordination. This was due in large part to the sea-based coordination of the operation by which important meetings were conducted on-board the USS Abraham Lincoln, the aircraft carrier central to the U.S. operation. The difficulty of physical access to the ship and requirements of security clearance levels resulted in low civilian representation at briefings and coordination meetings.[39] Conversely, at that time, the UN did not have a defined, transparent framework to facilitate ease of military integration into a collective international response. It was not until after the Tsunami in 2005 that the Inter-Agency Standing Committee (IASC) established the "Cluster Approach," a humanitarian assistance system of organization to "improve the effectiveness of

[36] Bruce A. Ellerman, *Waves of Hope: The U.S. Navy's Response to the Tsunami in North Indonesia*, Naval War College Newport Papers, Feb 2007, accessed online at: http://www.usnwc.edu/Publications/Naval-War-College-Press/Newport-Papers/Documents/28-pdf.aspx
[37] "Wall of Water, U.S. Troops Aid Tsunami Victims," U.S. Defense 2005 Year in Review, accessed online at: http://www.defense.gov/home/features/2006/2005yearinreview/article2.html
[38] "The Indian Ocean Tsunami, A Case Study Investigation by NATA RTO SAS-065 Part Two: The Case of ACEH and North Sumatra," March 24, 2008, accessed online at: http://www.dodccrp.org/files/case_studies/Tsunami_case_study.pdf
[39] *Waves of Hope: The U.S. Navy's Response to the Tsunami in North Indonesia*.

humanitarian response and strengthen partnerships."[40] Under the approach, identified agency leads have reporting and accountability requirements when coordinating assistance in its designated sectors. With a clearer coordination system, the approach creates a way for militaries and other actors to "plug into" or integrate their capabilities into the concerted effort.

In any coordinating situation, a clear, transparent and accountable system helps to facilitate greater unity of effort that can reduce duplication, but difficulties associated with multiple layers of coordination remain a primary area for improvement. The strain of an emergency response mixed with actors' varied interests can create a risk of misunderstanding among civilian organizations, between civilians and militaries, militaries to militaries, and even among international and domestic actors. Misunderstandings if not addressed perpetuate mistrust and negative perceptions of the actors. During the Tsunami response for example, perceptions (with some basis in truth) existed that NGOs were troublesome; they aggressively competed for assistance opportunities because their future funding was dependent on their visibility and function. Foreign militaries were feared to cause more harm in distributing aid because they did not adequately consult on cultural and community-relevant needs.

[40] "Clusters" are groups of UN and non-UN humanitarian organizations working in the main sectors of humanitarian action, e.g. shelter and health." The eleven cluster areas are assigned clear system of agency leadership and accountability in order to strengthen coordination under a humanitarian country team at the country leave for effective application of the approach. Cluster sectors or areas are water/sanitation, education, early recovery, emergency telecommunications, food security, protection, health, camp coordination and management, emergency shelter, nutrition, and logistics. They were created when clear humanitarian needs exist within a sector, when there are numerous actors within sectors and when national authorities need coordination support. Clusters provide a clear point of contact and are accountable for adequate and appropriate humanitarian assistance. Clusters create partnerships between international humanitarian actors, national and local authorities, and civil society, accessed online at: http://www.unocha.org/what-we-do/coordination-tools/cluster-coordination

Lastly, UN agencies can be seen as unwieldy, lacking authority and capacity to coordinate large numbers of organizations. Biases and misunderstandings of each other's organization whether in form, functionality or operating culture, can deter and hinder willingness to work together, increasing the likelihood of inefficient resource use and repetitive tasks; all can result in assistance delays to hard struck areas. [41]

Although the mission struggled with these less than ideal coordination conditions, it was deemed successful with grounds for coordination improvements. The U.S. military treated 2,238 patients and delivered over 24 million pounds of supplies.[42] Most importantly, the mission motivated the U.S to bolster planning, education and practice as priority areas in HA/DR coordination. Operation Unified Assistance became a watershed event for large-scale, U.S. military preparedness in HA/DR operations. Following lessons learned in the 2004 Tsunami, the U.S. placed greater emphasis on disaster coordination with host countries, other militaries and key humanitarian actors to develop more integrated disaster frameworks in the region and contingency planning to increase capacity in mitigation and preparedness. Priority was also given to civil-military education to include courses, exercises and simulations with an aim to enhance HA/DR know-how and operational responses. These initiatives were intended to increase understanding of humanitarian communities, interests and operating frameworks such as the UN Cluster Approach.

[41] "The Indian Ocean Tsunami, A Case Study Investigation by NATA RTO SAS-065 Part Two: The Case of ACEH and North Sumatra," March 24, 2008, accessed online at: http://www.dodccrp.org/files/case_studies/Tsunami_case_study.pdf

[42] Defenselink, "DoD Relief Efforts Fact sheet Summary," February 14, 2005, accessed online at: http://www.pacom.mil/special/ 0412asia/factsheet.html

Disaster Governance Structures

Recognizing a similar need to link multiple levels of coordination within domestic departments and authorities, the U.S. a few years prior, issued the 2002 National Strategy for Homeland Security (NSHS) and subsequent National Response Plan (NPS). The objectives of the NSHS and NSP were two-fold: to build one all-discipline national system for incident management from separate federal plans, and to standardize protocols and procedures for all responders. However, the new strategy and plan for U.S. disaster management was not exercised at each government level therefore potential complications in legal authorities, bureaucratic pitfall, and capacity shortfalls were not anticipated.[43]

Hurricane Katrina struck the southern states in August 2005 and left a trail of devastation along the U.S. Gulf States. The storm flooded the historic city of New Orleans, claimed over 1,300 lives, displaced around 700,000 people and caused over $148 billion in damages.[44] In terms of property damage, Katrina was the most destructive natural disaster in U.S. history.[45] The initial response to hurricane Katrina came primarily from state and local authorities with the federal government playing a supporting role because in the U.S., disaster

[43] Congress created the Department of Homeland Security (DHS) in November 2002. President George Bush proposed DHS lead the initiative to establish national policies, priorities and guidelines to strengthen U.S. homeland security and provide a consistent nationwide approach for Federal, State, and local governments to prepare and respond to national disasters and emergencies.

[44] "Hurricane Sandy vs. Hurricane Katrina," Andy Newman, The New York Times, Friday, January 1, 2013.

[45] "The Federal Response to Hurricane Katrina Lessons Learned," February 2006. The winds and storm surges, twenty-seven feet high, overwhelmed levees along the lower Mississippi River and Lake Pontchartrain. Flooding destroyed over 300,000 homes and displaced around 700,000 people. Katrina also devastated the regional power infrastructure leaving 2.5 million people without power. Communications suffered as well, with more than 3 million customer phone lines and up to 50% of radio and television stations severely affected. Environmental and health hazards including standing water, oil pollution of over 7.4 million gallons leakage, sewage, household and industrial chemical and both animal and human remains destroyed or compromised drinking water and waste water facilities.

response is traditionally deemed a state's responsibility. The separation of powers inherent in federalism is intended to prevent excessive concentration of power, but it proved an obstacle to relief in the Katrina context.

The impact of Katrina overwhelmed and in some areas disabled local and state capacity to respond. The federal support system, absent request for assistance from affected states, was left without authority to intervene, thereby delaying critical early response. Moreover lack of adequate training and expertise in state-designated service areas contributed to further delays. Federal responders found themselves struggling to perform unplanned, state/local command-guided responsibilities such as search and rescue, law enforcement and evacuations—activities normally conducted by states and local authorities.[46] Without capabilities, experience or rehearsed surge capacity at the federal level to substitute for state emergency services, the federal government scrambled to utilize assets and personnel to mobilize a response.

The central government relied on the DOD active duty forces, National Guard and Coast Guard personnel, communication infrastructure, logistics and planning capabilities. While military resources and capabilities proved to be critical to assist in the Katrina response, limitations under Federal law and DOD policy caused active duty military to be dependent on requests from each U.S. State for assistance. This slowed application of DOD resources during the crucial days of the crisis. "The bureaucratic process of request, assessment,

[46] Ibid.

approval and assignment for provisions required a 21-step process and highlighted a need to expedite procedures and pre-define circumstances when resources can be given to state and local government absent a request."[47] The numerous bureaucracies resulted in many agencies making decisions and taking actions under their own independent authorities to following instructions from the Department of Homeland Security (DHS) and the Federal Emergency Management Agency (FEMA). This contributed to response delays through duplication and process confusion. The inefficiencies culminated in harsh public and media criticism of George W. Bush's leadership and administration.[48]

The federal government also received criticism from frustrated international donors as many countries and organizations encountered extreme difficulties in offering the U.S. foreign assistance. The enormity of Katrina's devastation prompted one hundred and fifty countries and international organizations to pledge contributions and other gifts or services in kind that roughly equated to $854 million.[49] While some of the aid was put towards the relief efforts and reached the affected communities through the Red Cross and private foundations, "hundreds of offers of assistance went unclaimed."[50] There were multiple contributing factors that hampered acceptance of contributions to include logistical hardship related to the immediate response, process confusion

[47] Ibid.
[48] Ibid.
[49] "Foreign Aid to U.S. for Katrina Relief," Associated Press, September 10, 2005, accessed online at: http://www.msnbc.msn.com/id/9282598/ns/us_news-katrina_the_long_road_back/
[50] "Accepting Disaster Relief from Other Nations: Lessons from Katrina and the Gulf Oil Spill," Backgrounder, February 17, 2011, accessed online at: http://www.heritage.org/research/reports/2011/02/accepting-disaster-relief-from-other-nations-lessons-from-katrina-and-the-gulf-oil-spill

and delays, non-diplomatic relationship with donating countries, and legality of donations under U.S. laws. However, it was noted that the U.S. bureaucracies and lengthy approval process of multiple-departments exacerbated the ability to accept aid. In the official U.S. government report, foreign aid management was recognized as problematic and recommended departments to revise existing policies, plans, and procedures to better facilitate contributions.[51]

Where the U.S. response to the 2004 Tsunami highlighted a need to improve coordination internationally, Katrina was a lesson on fixing disaster governance processes at all levels of government domestically. Furthermore Katrina's lessons emphasized a need for effective mechanisms, thin in bureaucratic "red tape," to accept contributions from diverse actors in the broader U.S. national relief efforts.[52] Katrina demonstrated that a lack of a unified, national and state plan can have large human security implications and political toll. Good disaster governance requires not only well-written plans to collectively respond, it also requires practice among multiple actors to identify potential shortfalls and areas of unpreparedness. Hurricane Katrina struck a chord in the U.S. and public opinion pushed the federal government to have a greater role and capacity to assist in future catastrophic events. Hurricane Katrina and its lessons became a catalyst for U.S. reform in disaster governance to better develop mechanisms and integrate domestic exercises across all levels of government.

[51] "The Federal Response to Hurricane Katrina Lessons Learned," February 2006.
[52] Ibid.

Communication and Information Management

Whether pre-event or post-event, coordinating multiple stakeholders in the disaster response process also requires greater communication and information management. This was demonstrated during the response to Haiti's earthquake in January 2010 when a 7.0 magnitude earthquake decimated the capital city of Port-au-Prince; 230,000 people were killed, 1.6 million displaced, and over 2 million people were affected.[53] The Haitian government, being one of the poorest countries in the world, was incapacitated by the scale of the destruction and was unable to respond. Haiti's geographical and political importance to America led to a tremendous response by the U.S. government, supported by the international community. The proximity of Haiti to the U.S. and the historical relationship between the two countries were important factors in determining the U.S. government's role in earthquake response. The U.S. contributed more funding to relief in Haiti than any other foreign government and launched response efforts unprecedented in size, approach and scope.[54] The relief involved what President Obama labeled as a "whole-of-government" approach where numerous agencies and actors coordinated under the United States Agency for International Development's (USAID) lead.

Coordination among "whole-of-government" actors that included interested U.S. congressional offices and political leadership was complicated by the U.S. communication and information management systems. During the Haiti

[53] "Independent Review of the U.S. Government Response to the Haiti Earthquake, Final Report," United States Agency for International Development, March 28, 2011.
[54] Ibid.

response, limitations related to information management existed in two major lines. Data was limited for tactical and operational decisions, yet at the same time there was overwhelming data and information requests from U.S. policy leaders that hampered systematic data collection efforts. Frequent information requests from leaders detracted from the response because of the need to constantly answer inquiries and "chase down" facts.[55] The military, NGOs, UN, USAID and the myriad of other responding actors collected massive amounts of information, however, the U.S. government did not attempt to coordinate data and information sharing across agencies. Needs assessments and surveys conducted by varying agencies used differing collection methods, which also hindered the ability to standardize or validate information for timely information sharing. As such, more efforts were put forth to create a more effective central data and information management system to ease communication among responders.

Implications for Trilateral Cooperation

There are many areas of security cooperation that emphasize collaboration, but HA/DR is commonly accepted as a prime area or vehicle to enhanced international relationships. The U.S., whether individually or in cooperation with its allies, has significantly contributed to large-scale natural disaster response over the last decade. While the aforementioned disaster lessons were important drivers to improve U.S. coordination domestically and internationally, the U.S. response experience also profiled strengths in U.S. HA/DR capabilities that can

[55] Ibid.

be leveraged in any joint international operations. The U.S., through these mega responses, exerted ability to evolve its disaster coordinating structures, provide responders and logistical surge capacities via its civilian and military assets, and seek platforms for better information and communication exchanges.

The U.S., Australia and Japan, with strong ties grounded in treaties and declarations, are important partners in U.S. foreign disaster relief operations. Understandably HA/DR response coordination with countries such as Australia and Japan "saves lives and alleviates suffering," [56] but it also creates opportunities for enhanced relationships, capacity and improved mission interoperability to respond to various humanitarian threats of which disasters are one. To achieve greater efficiencies in trilateral HA/DR responses, each of the tri-lat countries must emphasize education and training as tools to promote cooperation. Security practitioners whether civilian or military, work better together with shared HA/DR understanding. Knowledge of regional context, cooperation framework, and awareness of competing stakeholder interests helps to alleviate misunderstandings and ease coordination. Exercising the ability to "plug" into partnership systems prior to mission execution enhances interoperability. Additionally, domestic disaster governance structures and management plans should also integrate assistance from international partners into its coordinating national framework. A centralized and clear disaster framework tested in application can greatly strengthen coordination because it

[56] Humanitarian Code of Conduct, International Federation of Red Cross and Red Crescent Societies, accessed online at: http://www.ifrc.org/en/publications-and-reports/code-of-conduct/

improves understanding of each other's disaster response capabilities and limitations. Without understanding the roles and responsibilities between federal versus state and local governments during the Hurricane Katrina response for example, partner nations may not appreciate constraints U.S. federal agencies experienced and may interpret deficiencies in response as negligence, especially as it applies to receipt of international offers of assistance. Avoiding frustrations and misunderstanding that may dampen states' relationships requires an increased understanding of each others' unique governance and coordinating structures. While annual HA/DR-focused exercises strive to integrate military capabilities and foreign assistance, other actors such as the UN agencies, the Association of South East Asian Nations (ASEAN) and NGO's, along with their independently-developed HA/DR processes, should also be considered and their procedures practiced for strategic congruency and process interoperability.

Improving HA/DR response coordination requires a multi-layered process improvement approach. The first coordination layer is to improve each nation's domestic HA/DR framework. Framework should be followed by education and training of disaster responders and partners to optimize capabilities and shared understanding. Lastly, external processes of the UN and other evolving regional disaster management structures such as ASEAN should be incorporated into overall HA/DR trilateral cooperation. In doing so, ease of communication and information exchanges will be facilitated.

While there are many lessons learned in past mega disasters, three areas of common challenges continue to plague HA/DR operations and cooperation. These are categorized in a state's disaster governance and management structures, maximizing available national capabilities and foreign assistance, easing communication and information sharing and multiparty coordination. Disaster response starts at home in the affected countries; however, when a catastrophe overwhelms a nation's ability to respond, the international community is ready to assist. In the case of the U.S., Japan and Australia, resources and capacity is often not an issue as much as the ability to quickly and effectively respond to save lives. Delays from conflicting or unclear governance and management structures, inefficient use of capabilities and inadequate information coordination can have high cost in human lives and prolonged suffering. Therefore, a focus to improve HA/DR responses and cooperation among the trilateral partners is paramount and the long-term benefits for closer relationships and ties are significant for the Asia-Pacific region.

2. An Australian Experience

By Paul Barnes & Mark Gower[57]

Under ideal circumstances there is sometimes a degree of awareness of the potential for disasters that results in a capacity for ***prevention*** (in the form of vulnerability reduction that can lessen the severity of impacts, such as enforcing building codes designed to comply with destructive weather events), and ***preparedness*** (as a generic increased readiness in anticipation of events). While such disaster response capability factors may be readily present in modern countries, they may be deficient in modernizing countries.

However when significant disasters occur regionally, and more widely, mobilization for a response effort is often carried out on very short notice, extended travel time is normally required to remote locations, with significant human suffering and infrastructure damage awaiting responders. The provision of Humanitarian Assistance/Disaster Response (HA/DR) on such scales is not an insignificant endeavor and requires considerable effort to develop and sustain capability and adequate capacity.

Recent Australian Experience

As mentioned in an earlier section, Australian civil-military deployments supporting HA/DR in recent years have varied from human security and

[57] The findings summarised here result, in part, from discussions with a range of Australian defence personnel involved in disaster response.

humanitarian activities to full-scale disaster responses. Table 1 (below) provides pertinent details of specific instances.

Table 1: Selected Australian Multi-agency HA/DR Responses[58]

Date	Event
July 2003	***Regional Assistance Mission to Solomon Islands (RAMSI)*** At the request of the government of the Solomon Islands, was deployed in July 2003 to assist in the establishment of peace and security, through support for law and justice, democratic governance, and economic growth. Unlike other security focused commitments (i.e. Bougainville and East Timor), RAMSI had diplomatic leadership from the Department of Foreign Affairs and Trade (DFAT), with an emphasis on policing, and with a "light" Australian Defence Force (ADF) footprint. As one of 15 contributing member countries to RAMSI, Australia has led the mission and contributed civilian, police, and military personnel in addition to funding. Personnel from departments of Foreign Affairs, Finance, Treasury, and Customs and Border Security, as well as AusAID, the Australian Federal Police (AFP) and the the ADF support this work.
Dec 2004	***Sumatran Earthquake & Tsunami*** The ADF assisted the Indonesian Government authorities as part of the Australian Government program of humanitarian relief following the Boxing Day Tsunami. The ADF worked in support of tsunami disaster relief in Indonesia's

[58] Accessed online at: http://www.defence.gov.au/op/index.htm

Northern Sumatra and Aceh Provinces since December 28 2004.

Relief assistance provided by Australia is part of a co-operative effort involving the ADF, the Australian Agency for International Development (AusAID) and Emergency Management Australia. Water, tentage, medical supplies, blankets, and other emergency provisions, and logistical support were provided.

In the provincial capital of Banda Aceh, the ADF set up a water purification plant and established a combined ANZAC Field Hospital. Both ADF and New Zealand Defence Force medical personnel jointly operated infectious diseases and surgical facilities at the field hospital, co-located with the heavily damaged Banda Aceh public hospital.

The ANZAC Field Hospital performed its final operation on February 20 before the handover of its facilities to Indonesian civilian management supported by AusAID. The Australian Navy amphibious transport ship, HMAS Kanimbla, delivered a detachment of Australian Army Engineers on January 13, and took up station as a floating support and logistics base for relief and reconstruction work.

Oct 2005 ***Pakistan Earthquake***

The Australian Government provided support to relief and recovery operations in the areas affected by the earthquake. AusAID assisted local and international NGOs and multilateral agencies to deliver immediate humanitarian assistance as well as longer-term education and health initiatives.

The ADF deployed critical medical relief capability through field-based Primary Health Care Teams. The medical personnel were drawn primarily from the Army, with support from an Air Force Primary Health Care Team; they were in turn supported by an Army Black Hawk helicopter detachment which assisted in the transportation of medical assistance to remote areas.
Sep 2009 ***Earthquake - West Sumatra*** Following a devastating earthquake with its epicentre close to the West Sumatran capital Padang, Australia responded with financial aid, DFAT, AusAID, ADF and state government personnel and other assets in support of Indonesia's own relief and reconstruction effort. AusAID contributed funds for relief and reconstruction, including support through local Indonesian government organisations. The ADF contributed personnel and assets from all three services: the Army contributed medical personnel, engineers, logisticians and support personnel; the Navy contributed health staff, airlift support, and asset support; and the Air Force contributed asset support and personnel, including air-load teams. Finally, the Queensland Fire and Rescue Service team contributed civilian search and rescue personnel. Australia's whole-of-government effort was coordinated on the ground through a Joint Task Force.
Sep - Dec 2009 ***Tsunami Impacts- Samoa, American Samoa and Tonga***

Following the earthquake-generated tsunami that hit Samoa, American Samoa and Tonga, Australia contributed a financial aid package for emergency relief, recovery and reconstruction. This included deployment of medical personnel and emergency response specialists and asset support primarily through AusAID, Emergency Management Australia and the ADF, to Samoa and Tonga. The Royal Australian Airforce (RAAF) deployed aero-medical evacuation staff and provided airlift support for transporting rescue equipment and emergency supplies, as well as New Zealand officials and asset support. The Royal Australian Navy (RAN) contributed a heavy landing ship and personnel to facilitate the delivery of aid, including AusAID engineering and relief equipment.
July 2010 ***Pakistan Floods*** In addition to initial financial aid and the early dispatch of relief supplies by the RAAF to those affected by the Pakistan floods, the ADF and AusAID deployed a Joint Inter-Agency Medical Task Force to Kot Addu in the Punjab province. The joint medical relief effort comprised a field hospital staffed by civilian and military doctors, nurses, and paramedics, logistically supported by ADF personnel and air assets. The civilian medical teams were coordinated through the Attorney-General's Department (Emergency Management Australia) and AusAID, in conjunction with the Department of Health and Ageing. As the magnitude of the disaster unfolded, Australia committed additional funding to UN agencies, the Pakistan Government, and Australian NGOs engaged in humanitarian relief and recovery activities.

The activities listed above confirm the tendency for Australian HA/DR responses, historically, to be joint civil-military operations, often under the control of civilian authority. The underlying approach for the design of these deployments arguably derives from a deep policy perspective defining the use of collaboration and flexibility as a core approach, leveraging organisational and cultural diversity, and supporting pro-active multiagency engagement.[59]

Lessons Learned

Notwithstanding the appeal of multiagency approaches there are a number of lessons worth noting. While not unique to disaster responses these points are drawn from a wide range of operational experiences and are also not limited to any particular location to which Australian groups have responded. In general these cover the importance of rapid and effective:

- Identification of relief needs
- Sourcing of HA/DR supplies (and sustaining supply chains)
- Methods for establishing priorities (in support of on-the-ground requirements)
- Tasking and operation of scarce aviation and maritime-based assets

More detail on each of these points is offered below. However a further element of considerable importance, which emerged after the Banda Aceh Tsunami response and one that may seem simple and obvious in hindsight, is to begin planning for withdrawal of support with full handover early in the response process. An additional issue of note, derived also from response to Banda Aceh

[59] *Strengthening Australia's Conflict and Disaster ManagementOverseas,* The Asia Pacific Civil-Military Centre of Excellence, 2010 Commonwealth of Australia.

is the importance of speed of entry to affected locations with “most of a plan ready” but with an expectation of adapting these to local conditions—all with a strong awareness of cultural sensitivity.[60]

Identification of HA/DR Needs

To determine actual needs and relative priorities at the various stages of the operation, it is vital to coordinate and communicate with embassy staff of affected the countries before deployment, as well as with NGO’s and other responding groups/countries with “on-the-ground” knowledge. Decisions on urgent versus important will always be greatly assisted by having local knowledge available. To this end, having the support of Embassy staff (and/or local officials) on location with HA/DR responders will assist in the provision of:

- Advanced accurate information on damage and the nature of human need (allowing the most convenient team design and equipment fit)
- Adaptability for the response and recovery workforce and supporting equipment lists to be appropriately structured at each phase of the operation (thereby ensuring the workforce footprint in the area of operations is appropriately structured)
- Security and sustainability for deployed teams (health and physical). This is always a consideration and requires dedicated support; often this also requires protection during the distribution phase of relief efforts

[60] D. Chalmers, (2012) “Coordinating Response in Complex Emergencies - Lessons from the 2004 Tsunami,” presentation at the 8th International Lessons Learned Conference (ILLC): Sydney, Australia, December 3-6.

- Anecdotal evidence that emerged from the response to the 2005 Pakistani Earthquake suggests the presence of an armed military security element within a contingent of medical and humanitarian responders may have been seen as a factor of concern, not however by those primarily affected by the disaster. This evidence suggests that at times international NGO's may not "engage" effectively with such deployed groups.

Sourcing of HA/DR Supplies

Past Australian experiences in HA/DR highlights a need to ensure disaster logistics and supply chains are effective and sustained throughout all phases of a response. Generic aspects of this experience can be summarised as:

- The consideration of pre-prepared and positioned supplies and materials, in particular, disaster kits in strategic locations. In addition to containing non-perishable stocks these supplies need to be configurable: that is, packaged to enable a building block approach where the support package is tailored to meet the identified needs
- Electronic tagging of supply pods to allow rapid identification and sustained transit visibility for supplies and equipment. This will significantly reduce manual labor needed to account and record for supplies

Tasking and Operation of Scarce Aviation / Maritime Assets

Airlift assets are flexible and fast however they are also scarce, costly and require specialist ground and loading support. An effective aviation asset tasking cell and a forward air-loading capability are two essential ingredients for an

effective and sustainable air bridge. Effective load planning and aircraft configuration control will also ensure maximum availability of these scarce assets.

- Configurable aircraft (what comes or goes in is different to what comes out)
- Coordinated tasking cell(s) for modal coordination and end-use distribution of delivered supplies
- Off-load airfield capacities (material handling equipment and refuelling instructors)
- Multi-role configurable aircraft such as C-130 and C-17 are very versatile and flexible, however time is required to reconfigure, for example it can take up to twelve hours to configure or de-configure from existing roles. To this extent avoiding delays in affecting load planning is essential

Coordination of Military, NGO and Civilian Agencies

Every agency brings a piece of capability to any operation but no one agency has all the capability needed and therefore a “coalition” of support is necessary. The “sum of the whole” of any coalition is significantly greater than its parts (various agencies, national responders and local groups) if effective coordination, cooperation and understanding are achieved. In many cases however this “coalition of the willing” has to emerge as a spontaneous outpouring from the groups on the ground without any opportunity for collective planning or exercising. In addition to the obvious importance of interoperability of people and equipment, the following points are critical for effective cooperation in disaster contexts:

- Communication and coordination compatibility between civil, military and foreign response groups
- Establishing “Standard Operation Procedures” (SOP’s) for coalition HA/DR operations
- Exercising of HA/DR capability using the SOP’s
- Development of effective liaison capabilities spanning civilian and military organisations
- Developed and pre-positioned HA/DR dedicated response kits

This level of understanding and cooperation is best achieved from pre-established reporting and command, control and coordination lines for a particular operation. A level of “coalition” training, simulation and planning exercises are undertaken well in advance of a HA/DR incident. Investment in such training will identify strengths and weaknesses of the “coalition” and enable rationalization of assets and capabilities. For example communication, medical capability, legal support, and planning capabilities all exist independently in each agency but need to be rationalized for an operation to be effective, reduce duplication and limit wastage of often scant resources.

Options for Enhancing Future Trilateral Cooperation

Previous Australian experience in regional response contexts and in support of Japan during the 3/11 Earthquake, suggest a number of opportunities to improve the speed and effectiveness of response to future disasters. Two enabling steps with the potential for significant benefits are:

1. Establishing a common platform for joint pre-planning and operational exercising involving civilian (NGO), government and military groups from relevant countries. This work should include coverage of Communications, Command and Control protocols, as well as pre-arrangement of operational coordination generally, but airlift support in particular;
2. Expanding opportunities for language acquisition to benefit planning and operational cooperation on emergency response between Australian and Japanese responders across the civil-military contexts (similar benefits would accrue from enhancing linguistic skills in other North and South Asian languages as well).

A further rationale for pursuing expanded HA/DR cooperation in a trilateral context is that the U.S., Japan and Australia have a long history of trade engagement and important links on security issues, with the latter under bilateral and trilateral arrangements. Equally, as members of the Asia Pacific Economic Cooperation countries, all three have worked with partners in both North and South Asia on a range of capability development efforts ranging from human security, emergency response and supply chain continuity issues.

In addition, as countries with significantly high degrees of capability in their respective disciplined (military) and civilian services applicable to HA/DR, it is not surprising that the three have worked together in both peace time and less than peaceful times, in the pursuit of human security and recovery efforts. So with an assumption that even the most able country might be overcome when

the consequences of disasters extend beyond their ability to cope, working together to prepare for and respond to the destruction wrought by disasters is simply a good thing to do. As three countries with a history of working together and assisting those in need, deepening capability and capacity to work together in HA/DR settings is not only a worthwhile thing to do it is a logical thing to do and should be actively pursued.

3. A Japanese Experience

By Teruhiko Fukushima

The Evolution of Disaster Relief in Japan

Japan is a country highly prone to natural disasters such as earthquakes, typhoons, and volcanic eruptions. In light of this, it is no wonder that Japan's Self-Defense Force (SDF) has accumulated a high level of capability and experience in responding to natural disasters. In fact, the history of disaster relief operations by SDF goes back to 1951 when the National Police Reserve, the SDF's predecessor, was formed. Since then, the SDF has been engaged in 32,000 operations involving the mobilization of more than 7.3 million personnel, making domestic disaster relief activities one of the most frequent SDF operations. Hence, the SDF has accumulated considerable capabilities and experience in disaster relief. However, it should be noted that up until the 1990s these operations were confined to the domestic sphere.

Japan's international disaster relief activities were originally initiated as an attempt to shoulder international responsibilities commensurate with its economic power. In 1980 Japan first dispatched a medical team to assist Cambodian refugees; this coincided with the beginning of Japan's hosting of refugees, who at the time, mainly consisted of Indo-Chinese boatpeople. These attempts were carried out in accordance with the so-called Manila Doctrine through which Prime Minister Takeo Fukuda announced Japan's intentions to commit itself to peace, stability, and welfare in South East Asia.

Thus the medical care for Cambodian refugees was a politically motivated makeshift rather than an attempt by Japan to make the most of its relief capabilities. This resulted in the medical team's late deployment, prolonged stay, soaring costs and poor coordination. In order to overcome these problems, the Japan Medical Team for Disaster Relief (JMTDR) was established in 1982, which consisted of staff from the Ministry of Foreign Affairs (MOFA), the Japan International Cooperation Agency (JICA), and registered volunteer medics. As Japanese medical teams subsequently took on famine plagued Ethiopia and the earthquakes and volcanic eruptions in Latin America in the mid-1980s, the mood to strengthen Japan's relief operations by including rescue staff and experts, gained momentum.[61]

Subsequently, the Law Concerning Dispatch of the Japan Disaster Relief Team (JDRT) came into force in 1987. Under this law, and in accordance with an order from MOFA, JICA oversaw the dispatch of JDRT, which consisted of a search and rescue team, a medical team and a team of experts on disaster prevention and damage mitigation. At the same time, JICA came to supervise the provision of emergency assistance materials to disaster-affected areas. Surprisingly, however, there was no domestic opposition to the dispatch of JDRT. With the high appreciation of the yen after the Plaza Accord of 1985 and the subsequent so-called "bubble period," Japanese people had belatedly come to perceive their living standards as genuinely rich, possibly from the increasingly popular overseas travel experience, and became receptive to the idea of Japan actively

[61] Kae Yanagisawa, "Nihon no Kokusai Kinkyu Enjotai 30 nen wo Furikaeru" [Looking Back on the 30-Year History of Japan's International Disaster Relief Team], *Gaiko [Diplomacy]*, vol. 7, May 2011: 56-57.

helping those struggling in the world. During the 1980s when the Ministry of Finance maintained stringent budgets, expenditures for defense and Official Development Assistance (ODA) were “sanctuarized” from the tight outlay ceilings. It is no surprise then that Japan grew to be the world’s largest ODA donor in 1990. But these instances of international cooperation were carried out by Japan rather passively, with the aim of fulfilling its international duty as an economic power. Although JDRT activities gradually became more comprehensive and frequent, they remained relatively small scale and faced new obstacles, such as the need to sustain larger scale, self-sufficient relief activities and to improve the problems of transport difficulties. In order to address these issues the Japanese public had to overcome several big hurdles.

Japan had to wait until Iraq’s invasion of Kuwait in August 1990 before the need to dispatch SDF personnel overseas was seriously discussed within domestic circles. However, the Japanese public was unprepared to hold constructive discussions over the SDF’s deployment to the Persian Gulf so the opposition parties, centered on the pacifist Japan Socialist Party, were able to capitalize on the evenly divided public opinion and ditch the UN Peace Cooperation Bill in the National Diet.

The failure to show its presence in the UN-endorsed international operation against Iraq gave the Japanese elites the so-called “Gulf Shock,” as they realized that their donation of as much as U.S.$13 billion to the multilateral forces did not buy gratitude, let alone respect on the international stage.

Although pacifists still mounted strong resistance against SDF operations overseas, there emerged a national consensus among the Japanese public for *kokusai koken* (international contribution), whether it be carried out in the form of financial or non-military human assistance. As a result, the Japanese government was able to gain approval for the dispatch of the Maritime SDF's minesweepers to the Persian Gulf and the enactment of the Peacekeeping Operations (PKO) Act in 1992.

At the same time, the legislation for JDRT was amended to enable SDF to engage in international disaster relief activities, especially in the hitherto weaker fields of transport, water supply and epidemic prevention. The fact that, apart from the PKO Act, there was no opposition to this amendment in the Diet deliberations (not even from the members of the Japan Communist Party, who were vehemently opposed to the PKO Act), demonstrated how receptive the Japanese public had become to the idea of Japan's active participation in international disaster relief activities.

The 1995 Kobe Earthquake had two significant implications in shaping Japan's disaster relief to its present form. Some prefectures, especially those led by left-inclined governors, had been averse to call on the SDF for help in the event of natural disasters as wanted to avoid involving the military. Long indulged in such customs, it was alleged that the Governor of Hyogo Prefecture spent idle hours before issuing a request to local SDF to dispatch their units. Prime Minister Tomiichi Murayama, the then Japan Socialist Party leader, was also

blamed for his sluggish response. Drawing lessons from this, and also from the contribution made by the SDF in the domestic terrorist attack by Aum Shinrikyo—which involved the sprinkling of sarin gas in the Tokyo subway and occurred only two months after the Kobe quake—it came to be firmly recognized by the Japanese public and government leaders that the SDF should be immediately deployable in the event of disaster. The legislation was duly amended to enable local SDF headquarters to be deployed on their own volition in case of serious emergencies wherein prefectural governors are rendered unable to issue a formal request to the SDF.[62]

The second implication of the Kobe Earthquake was that it became a watershed of Japan's volunteer activities, which had until then been given only minor attention. The news of Kobe's devastation attracted an unexpectedly large number of volunteer workers from all over Japan. With the proverbial economic bubble having burst, there was a widely prevailing sentiment among Japanese that extending kindness and help to others was more important than satisfying individual greed for money. Yet many of the volunteers arrived at the affected cities empty handed thereby increasing the burden on local residents. Hence this demonstrated that the Japanese had a strong aspiration to help others but lacked the necessary knowledge and experience to do so.

Thus, for the first time, Japanese society had come to recognize the utility of NGOs' capabilities in organizing people who had a desire to volunteer but lacked

[62] Ministry of Defense, "Response to Large-Scale/Extraordinary Disasters," *Defense of Japan 2006*, pp. 177-178, accessed online at: http://www.mod.go.jp/e/publ/w_paper/pdf/2006/3-2-2.pdf

the know-how. At the same time, faced with a rapidly decreasing aid budget and strong pressure to improve the quality of ODA, MOFA came to fully utilize its links with NGOs in its aid policy. This situation paved the way for civil collaboration, one of the main characteristics of Japanese-style disaster relief.

Developments in the SDF's International Disaster Relief Activities

As noted above, owing to its domestic experience, the SDF has a high level of capability for disaster relief. On the civil level, Japan's search and rescue, medical, and expert divisions, have accumulated skills and experience both domestically and internationally. Due to the SDF's late foray into disaster relief, however, Japan may still have a lot to learn in terms of improving coordination in the whole-of-government approach. In fact, SDF personnel just recently started collaborating with JICA staff on the ground in peacekeeping operations in South Sudan.

Nevertheless, there are several unique features of Japan's disaster relief that can be of use to other countries in the Asia-Pacific region. The following is a chronological list of the contributions of the SDF in international disaster relief operations.

- Honduras Hurricane, Nov-Dec 1998: medical, epidemic prevention, aerial transport
- Turkey Earthquake, Sep-Nov 1999: sea transport of makeshift houses
- India Earthquake, Feb 2001: aerial transport of tents
- Iran Earthquake, Dec 2003-Jan 2004: aerial transport of tents

- Thailand Tsunami, Dec 2004-Jan 2005: search and rescue by MSDF ships
- Indonesia Tsunami, Jan-Mar 2005: medical, epidemic prevention, aerial/sea transport
- Russia Submarine Accident, Aug 2005: rescue
- Pakistan Earthquake, Oct-Dec 2005: aerial transport
- Indonesia Earthquake, June 2006: medical, epidemic prevention, aerial transport
- Indonesia Earthquake, Oct 2009: medical
- Haiti Earthquake, Jan-Feb 2010: medical, epidemic prevention, aerial/sea transport
- Pakistan Flood, Aug-Oct 2010: aerial/sea transport
- New Zealand Earthquake, Feb-Mar 2011: aerial transport

The SDF's Learning Curve: 1998-2003

The hurricane disaster in Honduras in 1998 was the first occasion in which SDF were dispatched for international disaster relief, which took place six years after the amendment of the JDRT legislation. In response to the then Japanese ambassador's question about Honduras's preparedness to accept the SDF's disaster relief team, the president of Honduras made a strong appeal for medical and epidemic prevention assistance. In reaction to this, objections reportedly emerged within the Japanese government to the effect that the JDRT amendment was aimed at the SDF's dispatch to neighboring Asian countries, and that Honduras was too far away from Japan and beyond the scope of the

amendment.[63] The fact that the SDF relief team was ultimately sent to Honduras over such a long distance was clearly the result of political and diplomatic consideration and Japan's desire to make an international contribution.

Ground SDF teams took smoothly to the missions of medical treatment and epidemic prevention, supported by JICA's interpretation and Air SDF's C-130H transport services. Nevertheless, the Honduran operation imparted many lessons to the SDF and highlighted areas for improvement. Firstly, in terms of the effective dispatch of disaster relief teams, the SDF realized the needed to improve its readiness and also the importance of collecting information about the affected areas. Secondly, it became evident that the Honduran aerial dispatch succeeded owing to assistance from the U.S. Air Force, through the use of its air bases, and there was a growing recognition by the Japanese government that it should consider dispatching beyond the neighboring region in future. This was desirable for the improvement of not only the disaster relief operation system but also the SDF's capabilities. Thirdly, the importance of maintaining close communication among the Defense Agency, SDF, MOFA and JICA, was recognized[64].

While each of these lessons appears to be a matter of course, they illustrate that this period was very much the beginning of the SDF's international disaster relief

[63] Masateru Ito, "Kokusai Kinkyu Enjotai: Jieitai Hatsuno Haken Honjurasu he," [International Disaster Relief: the Self-Defense Forces First Dispatch to Honduras], *Raten Amerika Jiho [Latin American Affairs]*, no. 1396, Autumn 2011: 29-30.

[64] Boeisho [Ministry of Defense], "Hondyurasu deno Katsudo" [Operations in Honduras], *Boei Hakusho [White Paper on Defense]*, 1999, chapter 3-4-2, accessed online at: http://www.clearing.mod.go.jp/hakusho_data/1999/honmon/index.htm

activities. These lessons were evidently learned quickly. From the 1999 version of Japan's Defense White Paper onward, mention was made of the Ground, Maritime and Air SDF's readiness for self-sufficient international disaster relief activities[65].

In the wake of the 1999 earthquake in Turkey, the Turkish government made a specific request to its Japanese counterpart to supply the makeshift houses that had been used in the areas devastated by the 1995 Kobe Earthquake. Maritime SDF's fleet fulfilled its mission in transporting these houses to Istanbul, with only a one-day stopover at Alexandria, voyaging 23 days successively- a hitherto MSDF record. This transportation of containers was also a first for the MSDF and the crew faced the difficult task of preventing the load from collapsing during the long voyage.[66] The case of the Honduran operation and the transportation of houses to Turkey demonstrate that the SDF's capabilities were improved through new experiences in international disaster relief.

When an earthquake hit the state of Gujarat in early 2001, the Indian government at first requested the Japanese government to provide medical assistance. However, the Japanese survey team found that local demands for medical relief had been adequately met yet the state government was desperate to provide some form of accommodation to the local residents who had lost their

[65] Boeisho "Jieitai ga Okonau Kokusai Kinkyu Enjo Katsudo" [International Disaster Relief Operations Conducted by the SDF]", *Boei Hakusho [White Paper on Defense]*, 1999, accessed online at: http://www.clearing.mod.go.jp/hakusho_data/1999/honmon/index.htm

[66] Boeisho, "Toruko Kyowakoku niokeru Kokusai Kinkyu Enjo Katsudo ni Hitsuyo na Busshi no Yuso" [Transport of Materials for International Disaster Relief Activities in the Republic of Turkey], *Boei Hakusho [White Paper on Defense]*, 2000, chapter 4-2-2, accessed online at: http://www.clearing.mod.go.jp/hakusho_data/2000/honmon/frame/at1204020202.htm

homes in the disaster. Accordingly, while ASDF's C-130H planes transported the loads of tents and blankets, Ground SDF personnel were sent to teach and train local staff about how to set up various types of tents. Close cooperation with the Japanese Embassy and JICA staff proved highly effective in the maintenance of communication between the Japanese relievers and the locals. A MSDF frigate on voyage to participate in an Indian naval review also transported a load of relief materials.[67] These cases of Japanese assistance to India illustrate that the SDF had largely been freed from the constraints on its international disaster relief engagement, was able to provide assistance over long distance and showed improved response towards joint operation among Ground, Maritime and Air SDFs. Almost three years after the Indian operation in December 2003, when a strong earthquake hit South Eastern Iran, ASDF's C-130Hs engaged again in aerial transport of emergency relief materials such as tents and blankets stored in JICA's warehouse in Singapore.[68] Slowly but steadily, the Japanese government was learning the whole-of-government approach to international disaster relief.

Enhanced Capabilities: The Sumatran Earthquake/Tsunami and the Haiti Earthquake

The SDF's responses to the Sumatran Earthquake and Tsunami of December

[67] Boeisho, "Indo Jishin ni saishiteno Kokusai Kinkyu Enjo Katsudo" [International Disaster Relief Operations in the Event of the Earthquake in India], *Boei Hakusho*, 2001, chapter 5-2-2, accessed online at: http://www.clearing.mod.go.jp/hakusho_data/2001/honmon/frame/at1305020202.htm

[68] Boeisho, "Iran Nantobu Jishin ni saishiteno Kokusai Kinkyu Enjo Katsudo" [International Disaster Relief Operations in the Event of the Earthquake in South East Iran], *Boei Hakusho*, 2004, chapter 4-3-3, accessed online at: http://www.clearing.mod.go.jp/hakusho_data/2004/2004/index.html; JICA permanently stores emergency relief materials in the warehouses in Singapore, Johannesburg, Frankfurt and Miami. Yanagisawa, p. 58.

2004 were epoch-making in they constituted the SDF's most large-scale international disaster relief operation, involving the mobilization of more than one thousand personnel. Responding to the Thai government's request, MSDF directed three vessels on their way back from the Indian Ocean to carry out a search and rescue operation off the island of Phuket and in doing so they discovered more than fifty bodies afloat on the ocean. In early January 2005, in accordance with the Indonesian authorities' request, SDF were dispatched to one of the hardest-hit Indonesian provinces, Aceh. This became the first occasion that Japanese helicopters were mobilized overseas. GSDF's CH-47JAs and UH-60JAs and MSDF's SH-60J were engaged in various activities including search and rescue, and delivery of relief materials to the severely damaged remote areas. Moreover, MSDF's vessels carried the GSDF's helicopters to their operation spots and offered headquarter space for the GSDF's medical and epidemic prevention teams. This was also the first time that all the Ground, Maritime, Air SDFs and the Joint Staff Council dispatched their staff in the same international disaster relief operation.[69] Thus the Indian Ocean Tsunami became a landmark in the SDF's development of a more flexible and effective system for joint coordination and operation.

This experience was fully utilized when ASDF's C-130Hs transported GSDF's helicopters to Pakistan to deliver relief materials and evacuate affected locals in the remote areas of Kashmir that were hit by an earthquake in October 2005.[70]

[69] Ministry of Defense, "International Disaster-Relief Activities by Japan after the Large-Scale Earthquake off Sumatra Island and the Indian Ocean Tsunami," *Defense of Japan 2006*, pp. 304-305, accessed online at: http://www.mod.go.jp/e/publ/w_paper/pdf/2006/5-1-3.pdf

[70] Ministry of Defense, "International Disaster-Relief Activities by Japan after the Large-Scale Earthquake

In the case of the earthquake in central Java, the Japanese government made a quick decision to send SDF personnel to Indonesia two days after the devastation. In 2009, the SDF medical team commenced treating victims in devastated areas five days after another large earthquake hit western Sumatra. Thus the mobilization of SDF relief teams had become vastly more rapid.

The Haiti Earthquake of January 2010 became another landmark in the development of the SDF's international HA/DR activities. Faced with the news that the airport at the capital Port-au-Prince was closed for civil air service, ASDF directed its C-130H transport plane—which was on a training mission in the U.S. at the time—to engage in transportation between Florida and Port-au-Prince. The C-130H took the JDRT medical staff to the devastated area and brought back evacuees from Haiti. This was a case where the flexible use of the SDF's resources helped rapid deployment of relief units. Subsequently the SDF medical assistance team took over the mission from the JDRT, and after treating nearly three thousand patients over a three-week period, handed the job over to the medical team of the Japan Red Cross.[71] Collaboration did not end with Japanese organizations, however, as SDF relief activities were supported by the U.S. and Canadian Forces and also international NGOs.[72]

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in Pakistan," *Defense of Japan 2006*, pp. 307-311.

[71] It is reported that the Japan Red Cross team developed a unique assistance system by employing the Haiti medics—who suffered from the earthquake and were losing their jobs due to tough competition with foreign assistance teams—and letting them give medical treatments to the local residents. This is another example of Japanese assistance aiming at self-reliance. So Shiokawa, "Jieitai ni yoru Kokusai Kinkyu Enjo Katsudo no Deguchi Senryaku: Haichi ni okeru Iryo Enjo Katsudo no Jirei" [An Exit Strategy for the SDF's International Disaster Relief Activities: Case of Medical Assistance Activities in Haiti], *Kokusai Anzen Hosho* [International Security], vol. 38, no. 4, March 2011: 33.

[72] Ministry of Defense, "International Disaster Relief Activities in Haiti", *Defense of Japan 2010*, pp. 339-340, accessed online at: http://www.mod.go.jp/e/publ/w_paper/pdf/2010/34Part3_Chapter3_Sec1.pdf

The huge number of casualties in the Haiti earthquake—more than 200,000 victims—drove the UN to request its member countries to increase the number of personnel sent for the United Nations Stabilization Mission in Haiti (MINUSTAH), in order to tackle the more difficult tasks of reconstruction and stabilizing. The Japanese government responded positively to this request and within two weeks the SDF's additional group had commenced its activities in Haiti. This marked a record time in the overseas dispatch of SDF for peacekeeping operations, and was facilitated by the establishment of the Ground SDF's Central Readiness Force in 2007 and the rotation system of standby personnel for overseas missions.[73] The SDF's activities under MINUSTAH were unique in that they conducted not only the usual emergency humanitarian assistance, such as dismantling damaged buildings and houses and removing wreckage, but also the UN Quick Impact Projects (QIP) for confidence building between the UN peacekeeping personnel, local residents and other assistance organizations, which included the construction of a park after clearing wreckage and the reestablishment of an orphanage.[74] Evidently, the SDF has had remarkable achievements in the field of civil assistance in past peacekeeping operations, which is indispensable for post-disaster reconstruction and self-reliance. Before their withdrawal in February 2013, SDF units handed over their heavy equipment, such as bulldozers and power shovels, to their Haitian counterparts. As was the case with previous peacekeeping operations, these units educated local staff in handling and operation and also

[73] Ministry of Defense, "United Nations Stabilization Mission in Haiti (MINUSTAH)", *Defense of Japan 2011*, p. 353, accessed online at: http://www.mod.go.jp/e/publ/w_paper/pdf/2011/37Part3_Chapter3_Sec3.pdf

[74] Seiko Toyama, "Kokuren PKO no QIPs to Kinkyu-Jindo Shien" [UN PKO's QIPs and Emergency Humanitarian Assistance], January 11, 2013, accessed online at: http://www.pko.go.jp/PKO_J/organization/researcher/atpkonow/article038.html

maintenance and repair of the equipment.[75] It is also noteworthy that under MINUSTAH's QIP the SDF units collaborated with Peace Winds Japan on civil engineering work, which marked the first occasion of SDF collaboration with Japanese NGOs on peacekeeping.[76] The Defense Ministry also dispatched technical officials who demonstrated high levels of professional skill and knowledge in inspecting and assessing the durability of scores of damaged buildings.[77] As an earthquake prone country, construction expertise is a field in which Japan has an edge, not only in the terms of disaster relief, but also its prevention.

Trends in SDF International Disaster Relief Operations

As seen from the above outline of the evolution of Japan's international disaster relief activities, Japan's international disaster relief started relatively late for an advanced country due to inexperience in overseas missions and the political constraints on the SDF; yet once dispatched overseas, Japan steadily accumulated experience and learned various lessons and its disaster relief capabilities gradually improved. For the SDF, particularly the long distance transport operations, such as those to Honduras and Turkey, were helpful in enhancing its capabilities and confidence. As steady achievements were accumulated and served as precedents for further activities, the Japanese public came to support the dispatch of SDF personnel for international disaster relief.

[75] "Haichi Haken Haken Kokusai Kyuentai Taiki Henkanshiki" [The Unit Flag Return Ceremony by International Relief Team Dispatched to Haiti] Ministry of Defense Official Facebook Page, accessed online at: http://www.facebook.com/media/set/?set=a.507877315941354.1073741833.383046131757807&type=1
[76] Ministry of Defense, "SDF Operations in Haiti," *Defense of Japan 2011*, p. 356.
[77] Ministry of Defense, "United Nations Stabilization Mission in Haiti (MINUSTAH)," Defense of Japan 2010, p 328.

The fact that the SDF had the precedents of participation in the anti-terrorism operation in the Indian Ocean, and restoration assistance in Iraq, would have contributed to the Japanese government's swift decision to dispatch its largest number of SDF personnel to the international HA/DR operations in the Sumatran Tsunami.

Secondly, as the SDF accumulated HA/DR experience, the government's response to disasters became more expeditious, flexible, and sophisticated. Since Japan is a disaster prone country, JDRT have considerable capabilities in disaster relief, particularly with regard to earthquakes. Considering that the weakest point of Japan's civil disaster relief teams remains to be transport, it is unsurprising that one of the SDF's main roles in international disaster relief has been in transport, an arena in which the SDF has high capabilities. Learning from this experience, the SDF came to engage in joint operations in transportation in international disaster relief, with the Indian Ocean Tsunami operation serving as a harbinger. In the case of the Pakistani Flood of 2010, the Air SDF's C-130Hs and the Maritime SDF's transport vessel carried the Ground SDF's UH-1 and CH-47 helicopters and relief materials.[78]

Thirdly, as illustrated in the Haiti case, the SDF developed new skills in civil assistance disaster relief. In fact, this was not the first time that SDF engineers demonstrated highly developed skills in this domain; the SDF groups that were

[78] Ministry of Defense, "Disaster Relief Activities In Response to the Flooding in Pakistan," *Defense of Japan 2011*, pp. 362-363, accessed online at: http://www.mod.go.jp/e/publ/w_paper/pdf/2011/37Part3_Chapter3_Sec3.pdf

dispatched to the United Nations Mission of Support to East Timor (UNMISET) carried out the difficult task of civil assistance—for the first time as a part of UN peacekeeping—in a highly successful manner. From 2002, the SDF engineer group in East Timor not only took on the task of reconstruction assistance, making full use of heavy equipment, but also civil assistance, such as repairing school facilities and agricultural infrastructure. SDF engineers considered it important to provide training to local officials and residents so that they could operate and repair the heavy equipment that the SDF were to hand over to the East Timorese just before their withdrawal. These civil assistance activities were so well received that the East Timorese expressed their wish for the operation to be continued, but the Japanese government decided to withdraw the SDF unit in 2004. Remarkably, an NGO named the Japan Demining and Reconstruction Assistance Center (JDRAC) was established in 2003 by retired SDF engineers, and it took over the SDF's operations in East Timor in 2005; its activities included demining, house construction and car repairing. What is noteworthy about JDRAC is that it not only provided services to locals but also transferred its professional skills of demining, construction, and repairing to the Timorese officials and residents, as had been done by SDF engineers. JDRAC now has the ambition to train East Timorese National Force's engineers in capacity building assistance.[79]

Japan's international disaster relief activities have been conducted with

[79] With regard to the activities of the SDF engineers and the JDRAC in East Timor, see "Higashi Thimoru PKO 10-shunen: Seika to Kadai" [10th Anniversary of the SDF's East Timor PKO: Achievements and Challenges], *Boeigaku Kenkyu [Defense Studies]*, no. 48: 81-93.

increasing flexibility in regard to meeting various local demands for short-term relief and longer-term capacity building as a result of the developments in "whole-of-government" and "all-Japan" approaches, involving NGOs and business. The 2005 Earthquake in Pakistan was the first case in which the SDF utilized a wide range of whole-of-government approaches in international disaster relief activities, operating in close cooperation with JICA, other JDRTs and the International Organization of Migration (IOM). The Japanese civil staff was especially helpful in providing the SDF helicopter crew with interpretation services and advice on religious and local customs.[80] Then in Haiti, SDF engineers started collaborating with Japanese NGOs.

Japanese NGOs have a number of unique characteristics. As the Japanese government struggles with pressure for expenditure cuts, more room has developed for Japanese NGOs to contribute towards international cooperation, including HA/DR. However, Japanese NGOs have some weaknesses including small membership and limited financial resources. Yet small as they are, they have enormous flexibility in collaborating beyond the barriers of race, religion and culture, as illustrated by the case of the Association of Medical Doctors of Asia (AMDA), which extends the network of emergency assistance combining medical staff from Japan and also other countries—mainly in Asia—on an equal status.[81] Japanese NGOs, many of which start as volunteer circles, are more receptive to collaboration with other NGOs when they share the same objectives.

[80] Ministry of Defense, "International Disaster-Relief Activities by Japan after the Large-Scale Earthquake in Pakistan."
[81] AMDA International, "Emergency Relief Activities", accessed online at: http://www.amdainternational.com/english/activities/index.html

Due to this flexibility, Japanese NGOs may be able to more effectively establish networks of civic collaboration, especially in culturally diverse Asia, than their Western NGO counterparts—many of which tend to pursue advocacy of their own.

The Iraqi War of 2003 proved too big for a single Japanese NGO to tackle. Therefore, the Japan Platform (JPF) was established to combine a number of small NGOs into "all Japan." Since then, JPF has played a role in networking with NGOs and coordinating international assistance including disaster relief.[82] An important development has been that *Keidanren* (Japan Business Federation) has come to show an interest in supporting NGOs' activities as a part of fulfilling its corporate social responsibilities.[83] Here, JPF has again played the role of matchmaker between corporate donors and NGOs in collaboration with *Keidanren*. Through such networking support, small Japanese NGOs have played a significant role in filling the "niches" in international disaster relief. Indeed, they carried out an important role in the 3/11 Earthquake.

Japan's Disaster Relief and Its Implications for Trilateral Cooperation

Japan started international HA/DR activities in the 1980s in response to external pressure to fulfill its responsibilities as an economic power. Yet, participation by the SDF had to wait until 1998 due to political constraints on its overseas deployment. As a late comer to international disaster relief, Japan's HA/DR

[82] Japan Platform's website is accessible online at: http://www.japanplatform.org/E/
[83] *Keidanren*, "Report on Relief Efforts by the Business Community for the People and Regions affected by the Great East Japan Earthquake", March 2012, accessed online at: http://www.keidanren.or.jp/en/policy/2012/011_overview.pdf

dispatches tended to be slow, sporadic and small scale, yet nonetheless Japan developed its own unique HA/DR style. As JDRT and the SDF accumulated relief experience, especially through their large-scale deployment in the Sumatran Tsunami, they came to operate in coordination not only with each other but also with civil sectors such as NGOs and businesses. With this "all-Japan" approach, Japan has demonstrated a high level of ability in the field of civil assistance for post-disaster reconstruction, as illustrated in the Haiti post-earthquake peacekeeping.

This Japanese-style disaster relief also has important implications for trilateral cooperation with the U.S. and Australia. Firstly, although a late comer to the international stage of HA/DR, Japan has matured as an able responder to natural disasters, having accumulated considerable experience and developed its own unique know-how. Despite the political constraints on the SDF's overseas deployment, the Japanese public has become highly receptive to international dispatches for HA/DR and peacekeeping. Considering its expertise and achievements, it would be a natural development for Japan to join the U.S. and Australia as leading actors in HA/DR in the Asia-Pacific region, particularly in light of the fact that these three nations were the biggest contributors to HA/DR in the Indian Ocean Tsunami of 2004.

Secondly, as the U.S. has adopted a strategy of rebalancing towards the Asia-Pacific, Australia's role in promoting regional cooperation for HA/DR is significant. If Japan and the U.S. try to advocate regional cooperation it may be

misconstrued as an attempt to contain China. Yet, Australia, while a loyal U.S. ally, has recently established close defense cooperation ties with China and was the first Western country to develop naval joint exercises, including live firing, with China in 2010.[84] Moreover, the Australian Army engaged in joint HA/DR exercises with the People's Liberation Army in 2011 in Sichuan, a province that was devastated by an earthquake in May 2008.[85] Japan and Australia have long played a central role in building up regional cooperation in the Asia-Pacific, such as by establishing APEC. To their credit, the two countries adopted a reserved incremental approach in bringing about coordination in the vastly diversified region. In the field of HA/DR, Australia can likewise play a bridging role in regional cooperation. In fact, Australia supported trilateral joint exercises with the U.S. and Indonesia in Darwin—a city that is host to U.S. Marines—and was even receptive to the idea of China's participation.[86] Moreover, it was reported that Indonesia's President Susilo Bambang Yudhoyono was accepting of the fact that the Darwin base was to be used by the U.S. Marines for HA/DR training purposes.[87] Japan should follow Australia's approach to regional HA/DR cooperation whilst employing the same reserved and incremental approach Japan has applied in economic domains.

Thirdly, Japan can make a significant contribution toward regional HA/DR cooperation—centered on trilateral cooperation with the U.S. and Australia—in

[84] Department of Defence, "Unique naval exercise underway", *Defence News*, 24 September 2010, accessed online at: http://www.defence.gov.au/defencenews/stories/2010/Sep/0924.htm
[85] Department of Defence, "Joint Australia－China Disaster Relief Exercise ends", *Defence News*, 9 December 2011, accessed online at: http://www.defence.gov.au/defencenews/stories/2011/dec/1209b.htm
[86] Geoff Kitney & Greg Earl, "Defence deal with Indonesia," *Australian Financial Review*, 03 July 2012.
[87] Greg Earl & John Kerin, "SBY visit touches on US base," *Australian Financial Review*, 29 June 2012.

the field of civil assistance, capacity building and mobilization of NGOs and business, as it demonstrated in East Timor and Haiti. Japan's responders, including aid organizations, share the common trait of emphasizing acquisition of self-reliance by recipients, which is important for the process of restoration from disasters. In terms of HA/DR, the strength of the U.S. lies in its rapid, large-scale response, while Australia excels in the whole-of-government approach to relief activities in the Asia-Pacific. Japan's unique style can complement these two roles by expanding regional networks of HA/DR based on trilateral cooperation. In view of the fact that Japan and Australia have often dispatched their relief teams to the same disaster sites, and that the Japan-Australia Acquisition and Cross Servicing Agreement (ACSA) has now been effectuated, the HA/DR actors of the two nations should develop close cooperation with one another and provide education, training and skill transfer, know-how and technology, in the field of HA/DR for other partners in the Asia-Pacific region. In order to do so, it goes without saying that the three nations should make the most of existing platforms such as the Pacific Partnership joint exercises for HA/DR.

Chapter 3:

Lessons Learned from the Response to the 3/11 Earthquake: Implications for Trilateral Cooperation and Beyond

This chapter focuses on the response to the 3/11 Earthquake. In the aftermath of the disaster, Japan, the U.S. and Australia conducted practical cooperation for the first time. In the case of the Indian Ocean Tsunami of 2004, various civil-military relief actors from the three countries participated in the international disaster relief and co-existed in the affected areas however there was no evidence of trilateral cooperation. The response to the 3/11 Earthquake could in many ways be considered a successful attempt at cooperation but this success was limited. While Australia supported Japan, the majority of international cooperation occurred between Japan and the U.S., particularly between the Self-Defense Forces (SDF) and U.S. Forces. There were also many misunderstandings and a great deal of confusion in the cooperation process between the two long-time allies. This chapter assesses the implications for future prospects for trilateral cooperation based on the lessons learned from both the trilateral and bilateral HA/DR cooperation conducted by the three countries.

Considering, however, that the 3/11 Earthquake struck Japan, a developed country that is host to a significant number of U.S. forces, the lessons learned from the trilateral/bilateral cooperation evinced in this disaster might not be

applicable beyond the case of Japan. Nevertheless, this chapter attempts to derive common implications from the lessons learned that can be applied for future trilateral cooperation in the Asia-Pacific region.

It should be noted here that there was also significant international cooperation conducted in response to the Fukushima Daiichi nuclear disaster, which is part of the wider 3/11 disaster. However, as the lessons learned from this particular disaster relate mainly to nuclear technology and nuclear issues, it is beyond the scope of this chapter to include an assessment of it.

This chapter focuses on the assistance operations initiated by the U.S. Forces and the Australian Defence Forces (ADF) in support of Japan, known respectively as Operation Tomodachi (hereafter Tomodachi) and Operation Pacific Assist. As part of Tomodachi, the U.S. Pacific Command established the Joint Support Force (JSF) under the command of Admiral Walsh, the commander of the U.S. Pacific Fleet. The JSF headquarters was located at the Yokota Air Base/U.S. 5AF in Japan, and at its peak, JSF comprised 16,000 personnel, 15 naval vessels and 140 aircraft. JSF conducted far-reaching support including search and rescue, transportation of goods, removal of debris and the recovery of Sendai Airport.[88] Through Operation Pacific Assist, the ADF provided strategic airlift of the Task Force to Yokota Air Base, and three of the ADF's C-17 cargo planes conducted 23 flights within Japan to transport vital stores, equipment and personnel.[89]

[88] Japan Ministry of Defense, *Defense of Japan 2011*, Ministry of Defense (August 2011), p.19.
[89] Australian Government, Department of Defence, *Operation Pacific Assist*, accessed online at:

Trilateral/Bilateral Cooperation by the SDF

By Nozomu Yoshitomi

Lessons Learned

In order to realize effective international civil-military cooperation, it is necessary to develop a framework between the relevant countries and organizations. In the case that the organizations have different operational cultures from one another it is important to establish common know-how for cooperation to occur. Another essential condition for inter-organizational cooperation is that the organizations in question each possess mutually complementary capabilities; organizations with comparatively less capability would not constitute appropriate partners. This chapter therefore proposes to examine the lessons learned from the 3/11 Earthquake through the lenses of framework, know-how and capabilities.

◆Framework

There were three types of military-military relations discernible during the disaster relief conducted in response to the 3/11 Earthquake. The first of these is relations between the SDF and U.S. Forces. Based on their bilateral security treaty, Japan and the U.S. already had various institutional ties[90] in tact and moreover a bilateral coordination mechanism was established between Japan and the U.S. in the form of the 1997 Defense Guidelines.[91] Although this mechanism was designed for response to an armed attack against Japan, it was

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http://www.defence.gov.au/op/pacificassist/

[90] For example, Japan and the U.S. concluded guidelines for Japan-U.S. Defense Cooperation in 1978 and 1997, the Acquisition and Cross-Servicing Agreement (ACSA) in 1996, and the General Security of Military Information Agreement (GSOMIA) in 2007.

[91] Ministry of Foreign Affairs, The Guidelines for Japan-U.S. Defense Cooperation, accessed online at: http://www.mofa.go.jp/region/n-america/us/security/guideline2.html

applicable in the bilateral disaster relief carried out in response to the 3/11 Earthquake. In this context, the SDF and U.S. Forces established Bilateral Coordination Centers (BCCs) following the disaster.[92] However, due to a lack of preparedness regarding the specific role and mission of each BCC, operational procedures, and adequate human resources, it took time for operations between the two countries to proceed smoothly.

The second example of military-military cooperation is the relations between the SDF and armed forces from ROK, Thailand, Israel and France. None of these foreign forces had institutional ties through which to swiftly and effectively cooperate with the SDF. In peacetime, the SDF and these foreign forces have sufficient time to organize bilateral cooperation. However, in the mayhem surrounding the unforeseen disaster they had difficulty in promptly coordinating their activities.

The third type is relations between the SDF and the ADF. Japan and Australia are not allied countries, but the two countries signed a Joint Declaration on Security Cooperation in 2007. This was the first instance of Japan institutionalizing security cooperation with a foreign country other than the U.S. Additionally the ADF has the authority to utilize major U.S. military facilities in Japan under the United Nations-Japan Status of Force Agreement. This agreement enabled the ADF's C-17s to swiftly operate in Japan after the 3/11 Earthquake. Moreover, U.S. Forces and the ADF share firm ties based on the

[92] The three BCCs established after 3/11: there were two BCCs in Tokyo (Ministry of Defense and the Headquarters of USFJ) and one in the affected area (Sendai).

ANZUS treaty. The U.S. Forces were able to mediate between the SDF and the ADF through both the Japan-U.S. Security Treaty and the ANZUS treaty. For example, the closely coordinated whole of airlift operations that were conducted between the SDF and U.S. Forces in Japan in the aftermath of the 3/11 Earthquake, were facilitated by the Japan-U.S. Security Treaty. At the same time, the interoperability fostered by ANZUS treaty made it possible for the U.S. Forces to closely support the airlift operations of the ADF's C-17s. In this way, when the ADF's C-17s transport SDF personnel and equipment, U.S. Forces can act as a conduit for coordination between these two defense forces. In any case, it is evident that the SDF, U.S. Forces and the ADF have unique institutional ties, with the U.S. Forces serving as the linchpin. This implies that the ROK, Thailand and the Philippines, also allied countries with the U.S., may also have the potential to better cooperate with Japan and Australia.

Beyond this military-military cooperation, however, there is no comprehensive framework for the SDF to collaborate domestically or internationally with civilian entities. In Japan, almost all civil-military collaboration is carried out between the public sector (central/local government) and the SDF. The SDF collaborates with aid organizations and private companies but rarely with NGOs. Therefore, it is difficult to say that civil-military bodies would be able to act unitarily. The reason why civil-military collaboration is inactive in Japan is because of the official disaster relief mechanism. According to the Disaster Countermeasures Basic Law, prefectural governors have the responsibility to protect people's lives and property in disasters. Prefectural governors in the affected areas usually set up a

disaster response headquarters to coordinate disaster relief activities. The members of these headquarters are only public organizations such as relevant departments within prefectural governments, prefectural police, fire departments, the Japan Red Cross Society and the SDF. Foreign aid organizations, private companies and NGOs cannot be official members of these headquarters. This means that there is no official setting to coordinate all of the civil-military bodies. In light of this legal restriction in Japan, civil-military collaboration is problematic.

◆Know-how

The SDF and U.S. Forces have shared their cooperation know-how through various conferences and exercises based on their bilateral security treaty. The SDF and the ADF on the other hand, have only recently begun to develop mutual understanding and interoperability through exercises. Trilateral exercises have been conducted among their respective Navies and Air Forces.[93] However, the main focus of the SDF, U.S. Forces and the ADF has been war fighting. The SDF and U.S. Forces were not familiar with their counterpart's capabilities and procedures for disaster relief.[94] Therefore, misunderstanding and confusion occurred in the response to the 3/11 Earthquake. For example, the Japan Ground Self-Defense Force, the main service for disaster relief, had little knowledge about operations with the U.S. Navy, Air Force and Marine Corps. It is said that this lack of bilateral/joint awareness both within the SDF and U.S. Forces hampered the two countries' ability to smoothly coordinate their actions

[93] During the deployment of the Japan Ground Self-Defense Force in Iraq, ADF played a role in ensuring the safety of Japanese units. The three navies conducted trilateral exercises in June and September of 2012, and their air forces conducted trilateral exercises in February 2012.

and to respond rapidly to 3/11.

Another problem was that authorized know-how for international civil-military collaboration is non-existent in Japan, because Japanese society has not recognized the necessity of international civil-military collaboration for disaster relief. However, there is an example of successful international civil-military collaboration conducted in response to the 3/11 Earthquake. In the reconstruction of the seriously damaged Sendai Airport in Miyagi prefecture, the SDF, U.S. Forces, government airport officials and local private construction companies were the primary actors in the operation. They met with one another, shared their ideas and capabilities, and coordinated their roles and missions. A unity of international civil-military effort was created and this collaboration was one of the reasons why Sendai Airport reopened in five days.[95] This flexible approach by all actors showed that international civil-military collaboration could be realized in Japan. On the other hand, the 3/11 Earthquake made it clear that Japan's civilian sector, especially local governments, were inexperienced in accepting relief bodies from outside, such as foreign aid organizations and NGOs.

◆Capabilities

Generally speaking, militaries have various capabilities that can be effectively utilized in disaster relief. Some of these capabilities such as search and rescue,

[95] "Nichibei kanmin wo hitotsu ni shita: misutaa kasamatsu to iu otoko" [*Mr. Kasamastu, a man who managed public officials and civilians of both Japan and the U.S.*], *Puresidento* [President], July 18, 2011:166-169.

medical, water/food supply and construction, are common to the civilian sector; but there are also certain capabilities that are unique to the military, such as transportation. The damage inflicted by the earthquake and tsunami on 3/11 was so extensive that ground transportation in the affected area became completely paralyzed. Therefore, sea and air transportation were critical for the rapid supply of relief personnel and materials. However, most of the facilities and equipment in seaports and airports in the affected area were so damaged that private sea and air transportation measures such as cargo planes and ships could not operate. However, due to the unique sea and air transportation measures possessed by the SDF, U.S. Forces and ADF, such as roll-on roll-off type cargo planes, large cargo helicopters, landing crafts, and aircushion vehicles, they were able to accomplish their transportation missions despite the tough environments of the affected areas.

Additionally, the Maritime Self-Defense Force (MSDF), the U.S. Navy and the U.S. Marine Corps established a maritime platform for their relief operation off the affected area with their aircraft/helicopter carriers and amphibious ships. This platform provided a wide range of transportation support for search and rescue, medical and livelihood distribution, and rehabilitation of facilities by airplanes, helicopters, landing crafts and aircushion vehicles. Many seaports in the affected area were seriously damaged by the tsunami so the maritime platform became the primary measure for transportation from the sea. Moreover, in comparison with the ground bases, the maritime platform was quickly established and decreased the burden in the affected area by minimizing the

footprint of troops and materials.

Air transportation also played a significant role. C-17s from the U.S. Air Force (USAF) and Royal Australian Air Force (RAAF), and C-130 cargo planes from Air Self-Defense Force (ASDF) and the U.S. Air Force conducted long/medium range airlift operations. They were able to carry numerous personnel and a great deal of materials, including heavy equipment from outside of the affected area. Fortunately, the ASDF, the U.S. Air Force and RAAF had capable heavy/medium cargo aircraft fleets and their air/ground crews maintained a high operational tempo during the 3/11 Earthquake response. Helicopters also played a significant role in short-range transportation because of the serious damage inflicted on ground traffic in the affected area. Fortunately, the SDF had a large number of heavy/medium helicopters including CH-47s, UH-60s and UH-1s. Additionally, U.S. Forces were able to deploy a number of helicopters in Tomodachi.

In regards to civil-military collaboration, the SDF became actively involved in civilian works in the response to the 3/11 Earthquake as local governments were struggling to deal with works requested of them, due to the fact that a lot of city halls/town offices were destroyed and many officials were killed in the tsunami. The SDF was the main body engaged in gathering requests from survivors in temporary shelters, sorting support materials for shelters, and burying victim’s bodies. Local governments were in fact responsible for dealing with such works but did not have the capacity. Consequently, the SDF were not able to focus on

military works such as search and rescue, transportation and the removal of debris.

Civilian organizations also have unique HA/DR capabilities and comprehensive HA/DR is not possible without effective collaboration between civilian and military elements. As mentioned above, transportation via air/sea is a unique capability of the military but its effectiveness depends on the efforts of civilian organizations. Just after the 3/11 Earthquake, a huge amount of relief materials such as water, food, fuel, blankets, tents, clothes were hastily gathered by the civilian community in Japan and abroad. These materials were carried to the affected areas mainly by military air/sea transportation measures. However, the Japanese civilian sector (central and local governments, aid organizations, NGOs and private companies) did not have adequate stockpiles of relief materials for large-scale disasters like the 3/11 Earthquake. If there were active stockpiles located in Japan, survivors in the affected areas could receive the necessary relief materials more quickly. Needless to say, preparing large-scale stockpiles for livelihood support is the role of the civilian sector. Collaboration between civilian stockpiles and military transportation is necessary to produce quick and sufficient material support for affected people. This means that the civil-military collaboration in gathering and transporting relief materials was insufficient in the response to the 3/11 Earthquake.

Implications for Trilateral Cooperation

◆Potential for Trilateral Cooperation on HA/DR in the Asia-Pacific Region

As demonstrated in the lessons learned, there is strong potential for trilateral cooperation among the SDF, U.S. Forces and the ADF on HA/DR operations.

From an institutional standpoint, relations among the three militaries, which are defined by the Japan-U.S. alliance, the U.S.-Australia alliance and nascent security cooperation between Japan-Australia, possibly constitute the most solid political and military frameworks in the region. Additionally, the three militaries are now developing interoperability through bilateral and trilateral exercises and are able to exchange necessary materials and services for HA/DR operations based on the Acquisition and Cross-Servicing Agreement (ACSA).

In terms of capability, the SDF, U.S. Forces and the ADF are the most sophisticated forces in the Asia-Pacific and have much experience in HA/DR operations, as demonstrated in Chapter Two. In terms of rapid, heavy and long-range transportation capability via air and sea, the SDF, U.S. Forces and the ADF have the best air/sea fleets in the region. With regard to sea transportation, their navies could establish a sea platform with their aircraft carriers, helicopter carriers, amphibious ships and hospital ships. The U.S. Navy in the Pacific has five aircraft carriers, four amphibious assault ships, three amphibious transport docks, six dock landing ships and one hospital ship which could be useful for sea platforms. The MSDF has two helicopter carriers and three amphibious-type transportation ships. Additionally, the MSDF will have two

larger helicopter carriers in the near future. The Royal Australian Navy (RAN) will also have two large amphibious ships (Canberra Class LHD) in 2014 and 2015.[96] A sea platform consisting of these ships could potentially provide a hub for sea transportation in trilateral HA/DR operations.

At the same time, the ASDF, the U.S. Air Force and the RAAF have a lot of C-130 medium cargo aircraft. Additionally, the USAF and the RAAF possess C-17s, one of the most sophisticated heavy cargo aircrafts in the world. Additionally, the ASDF will have its first heavy cargo aircraft- C-2s in the near future.[97] These aircrafts could provide superior long/medium range airlift for disaster relief. Moreover, the SDF, U.S. Forces and the ADF have a lot of heavy/medium helicopters for short-range airlift and the U.S. Marine Corps has deployed MV-22s in Japan. Their extended flight speed and radius could be helpful in enhancing trilateral air transportation capabilities for HA/DR.

In HA/DR operations, the role of governmental aid agencies, non-governmental aid organizations and private companies are critical. The governmental aid agencies such as the Japan International Cooperation Agency (JICA), the United State Agency for International Development (USAID) and the Australia Agency for International Development (AusAID) have the most advanced capabilities in the region. The Red Cross Society, NGOs and private companies in the three countries are also active in HA/DR operations. In the response to the

[96] The Royal Australian Navy, “Amphibious Assault Ship (LHD),” accessed online at: http://www.navy.gov.au/fleet/ships-boats-craft/lhd
[97] The Japan Air Self-Defense Force, “The Outline of C-2,” accessed online at: http://www.mod.go.jp/j/approach/hyouka/seisaku/results/22/jizen/sankou/03.pdf

3/11 Earthquake, both civilian and military entities attempted to collaborate but this attempt was undermined by their lack of preparedness. In particular, a mechanism for comprehensive civil-military collaboration was lacking, as were standing operational procedures for collaboration and mutual understanding. However, undoubtedly both civilian and military entities in Japan, the U.S. and Australia possess great capability to respond large-scale disasters. Therefore, there would be great potential for effective trilateral civil-military collaboration if each of the relevant entities could implement the lessons learned from the 3/11 Earthquake.

Moreover, the geographic location of Japan, the U.S. and Australia lends itself to trilateral cooperation in Asia-Pacific region. Japan is located in the northern part of the region, Australia, in the southern part, and the U.S. (Guam and Hawaii), in the eastern part. This means that if the three countries were to establish large stockpiles in their territories, they would be able to provide cooperative emergency humanitarian support to the entire Asia-Pacific region.

◆Challenges to Trilateral Cooperation for HA/DR in Asia-Pacific Region

From an institutional standpoint and in comparison with other militaries in the region, the SDF, U.S. Forces and the ADF share strong security ties. However, there is no existing standing mechanism or quick-reaction mechanism for cooperation among the three militaries. The U.S. Forces and SDF are allied forces and have established BCCs for bilateral coordination, but these are activated in response to an event. With regard to the U.S. Forces and the ADF,

many ADF officers are on duty in U.S. Forces but there is no standing coordination center. Evidently, in the case of a sudden disaster, it will take time for the three countries to implement trilateral cooperation and work effectively together. Survivors inevitably require swift assistance in the wake of a disaster but presently there is no trilateral cooperative mechanism in place that can be implemented rapidly.

In terms of civil-military collaboration, there is similarly no existing framework that can incorporate a variety of civil-military actors. Therefore, civil-military collaboration can only be carried out as temporary coordination at the field level. This form of ad hoc and unregulated collaboration is far from an effective, systematic, and unified response by civil-military actors.

From the perspective of know-how, it was evident that the SDF was neither familiar with the capabilities and disaster relief procedures of U.S. Forces nor the ADF. By the same token, the U.S. Forces and the ADF were unfamiliar with the SDF in these areas. As a result, crucial time was wasted on questions and explanations about each militaries respective capabilities and procedures for implementing operations. In order to establish common know-how for trilateral military cooperation in HA/DR operations, the enhancement of mutual understanding would be a good starting point.

Another challenge to civil-military collaboration pertains to differences in culture. The three militaries share a common military culture that facilitates cooperation.

However, cultural gaps between civilians and militaries sometimes impede collaborative efforts and this gap can be hard to overcome. In international civil-military collaboration too, cultural gaps can pose a serious problem, and also within the civilian sector. Therefore, it is necessary to establish a fusion center for the various actors to develop the know-how needed for collaboration. The U.S. and Australia have their own centers for excellence, respectively the Disaster Management & Humanitarian Assistance (DMHA) in Hawaii and the Australian Civil Military Centre (ACMC) in Canberra. Yet there is no existing organization that focuses on civil-military collaboration in Japan. Most of Japan's civil-military entities are lacking in knowledge, experience and a common language through which they can collaborate with each other.

In terms of capabilities, one of the problems that became apparent just after the 3/11 Earthquake was the shortcomings in information collection measures. SDF launched large-scale reconnaissance operations from air and ground immediately after the disaster. However, it took considerable time to grasp the situation of the affected area. This is because the SDF did not have any effective measures for all-weather, all-condition and continuous information collection. Therefore, the SDF was required to get information from the RQ-4 Global Hawk of the U.S. Forces, which flew over the affected area.[98] In trilateral HA/DR operations, SDF and the ADF need to possess adequate information collection measures and not rely completely on the U.S. Forces.

[98] Tohoku Defense Bureau, accessed online at: http://www.mod.go.jp/rdb/tohoku/fmradio/2309gatuhousou-miyagi.html#top

Regarding transportation during emergencies, the SDF, U.S. Forces, and the ADF appear to have adequate sea/air transportation capabilities. However, the Asia-Pacific region is a wide maritime area some of the developing countries in the region do not have sufficient airports. Moreover, there are many densely-populated areas along the sea. In the case when a tsunami hits the region, the number of people affected is generally very high and such people require prompt and efficient emergency relief. Therefore, sea transportation is important in the region. In the case of the Indian Ocean Tsunami of 2004, the northern part of Sumatra Island—which suffered serious damage in the disaster—did not have adequate airports, which meant that sea transportation assumed an important role. However, the speed of a standard naval vessel is 20-30 knots and therefore it requires considerable time to reach distantly affected areas. High Speed Vessels (HSV) that can sail at 35-45 knots would be helpful for rapid sea transportation. However, within the region, only the U.S. Marine Corps possesses such a vessel.

In terms of air transportation, there were no serious problems in the response to the 3/11 Earthquake. However, considering the potential for future disasters to have wide-ranging impact in various parts of the Asia-Pacific region, the short operational radius and low speed of common helicopters might pose a problem for long range/rapid air transportation in the case that there is no airport. The MV-22, which has a longer operational radius and travels at greater speed than usual helicopters, may provide a solution. Within the region, presently only the U.S. Marine Corps possesses MV-22s. If the SDF and ADF were also to acquire

HSVs and MV-22s, this would accelerate sea/air transportation and also facilitate trilateral HA/DR operation.

Civilian capabilities such as adequate disaster stockpiles are presently insufficient, even in Japan—a country that is one of the world's biggest economic powers and whose people have a long history of disaster preparedness. It can be assumed that civilian sectors in developing countries in the region have poor disaster resiliency. Now, there are three large-scale stockpiles for international HA/DR operations in the Asia-Pacific region. The first is the United Nations Humanitarian Response Depot (UNHRD) in Subang, Malaysia;[99] the second is the emergency supply chain warehouse in Brisbane, Australia;[100] and the third is the emergency stockpiles in Singapore run by the Japan International Cooperation Agency (JICA).

Recommendations for Japan

- Establish a center of excellence for civil-military collaboration in Japan.

The goal of this center would be to make it possible to launch international and inter-Japanese civil-military collaboration in the immediate aftermath of a disaster. In normal times, this center would contribute to the development of mutual understanding with civil-military entities from other countries in the region. The staff of the center would consist of a small number of broad civil-military actors and would be engaged in education/training for international/domestic

[99] UNHRD Humanitarian Response Depot, accessed online at: http://www.hrdlab.eu/?page_id=102&phpMyAdmin=175c4d22fcc0tb0ce17c

[100] Oxfam Australia, "Faster disaster response," accessed online at: http://webfw.oxfam.org.au/explore/conflict-and-natural-disasters/features/faster-disaster-response

civil-military collaboration, including information sharing and research. The center would need to cooperate with related organizations such as the DMHA in Hawaii and the ACMC in Canberra. In the event of a disaster the functions of this center would be expanded by a reinforced staff. This center could support not only central and local governments but also all civil-military actors in terms of reception, staging and integration in disaster relief.

- Establish large stockpiles for HA/DR operations in Japan:

In the Asia-Pacific region there are three large stockpiles located in Malaysia, Singapore and Australia. If Japan also possessed such a stockpile, it would be possible for Japan and the U.S. Forces to rapidly respond to disasters in Northeast Asia; having four stockpiles in total would enable the swift delivery of relief materials to the entire Asia-Pacific region. The stockpile in Japan should be located next to an airport with a 3,000m grade runway for heavy cargo airplanes like the C-17, C-5, IL-76 and C-2. On May 26 2011, Mr. Toshimi Kitazawa, a former Japanese defense minister, referred to Shimojishima Airport at Shimoji Island as a hub for international disaster relief.[101] The location of the stockpile should also be safe from disasters such as tsunami, flood, volcano eruptions and heavy snowfall.

Moreover, the stockpile would best be located near a major seaport. Naha Airport in Okinawa and some airports in the western part of mainland Japan would be an ideal location. Additionally, maritime stockpiles (large cargo ships

[101] Miyako Mainichi Shinbun, 27 May 2011, accessed online at: http://www.miyakomainichi.com/2011/05/19357/

with huge amounts of relief materials) such as the Maritime Prepositioning Ships (MPS) of the U.S. Forces would be useful in providing rapid relief[102].

- Enhance information collection measures of the SDF:

With a Long-Endurance Unmanned Aerial Reconnaissance System such as the RQ-4 Global Hawk, information could be gathered in all weather conditions and remain on station for more than 24 hours. Additionally, amphibious vehicles such as AAV-7 could conduct reconnaissance and rescue mission in areas submerged by water and debris. Moreover, ways of sharing information with the U.S. and Australia should be developed.

- Enhance military sea/air transportation capabilities in the SDF:

Large HSVs that are capable of transporting a high number of personnel and relief materials are useful in disaster relief. Japan should acquire some HSVs in preparation for a crisis. For air transportation, Japan should also study the effectiveness of the MV-22;[103] the flight speed, radius, and payload of the MV-22 far exceeds all existing helicopters, and it is operational from ground and sea platforms.

[102] The Maritime Prepositioning Ships (MPS) are part of the United States Military Sealift Command's (MSC) Prepositioning Program. They are strategically positioned around the globe to support U.S. Forces.

[103] Japan's Ministry of Defense has already started its study about the MV-22.
Sankei-News, Dec 30, 2012, accessed online at:
http://sankei.jp.msn.com/politics/news/121230/plc12123022090012-n1.htm

Drawing Lessons from Operation Tomodachi for Trilateral HA/DR Operations: A U.S. Perspective[104]

By Jeffrey W. Hornung

No matter where natural disasters strike, military forces are relied on to support the subsequent HA/DR operations. Because U.S. military capabilities are unrivaled, it is no surprise the U.S. is often at the forefront of these operations. When Japan suffered its 3/11 Earthquake, the U.S. supported Japan's efforts in Operation Tomodachi (hereafter Tomodachi). Tomodachi was unprecedented because it was the first time Japan's Self-Defense Forces (SDF) conducted a real joint operation with U.S. Forces. Australia was the only other military to provide HA/DR assistance to Japan, but much of it was via its own alliance with the U.S., not Japan.[105] While Tomodachi successfully showed how the alliance can function in an emergency, there were significant challenges they encountered that helped generate important lessons learned. Examining these lessons learned against a future trilateral HA/DR operation in the Asia-Pacific provides critical insight into the challenges the U.S., Japan and Australia can expect to encounter.

[104] This chapter is based on publically available information with some of the more prominent listed in References. It also relied heavily on anonymous interviews that the author conducted with military officers in both the U.S. and Japan. Aiding me tremendously in understanding the "nuts and bolts" of HA/DR operations were my generous colleagues at APCSS: Major Doug Krugman, USMC; Captain (Ret.) Carleton "Shifu Dong" Cramer, USN; and Lieutenant Colonel Reese "Rusty" Evers, USAF.

[105] The Royal Australian Air Force was integrated into the U.S. Joint Task Force airlift operations and air task orders.

Partnering Framework

From a U.S. perspective, success of an HA/DR mission on the scale of Tomodachi depends largely on the partnering countries.[106] Conceptually, this can be demonstrated by the Partnering Framework in Figure I that graphically demonstrates the closeness of relationships with the U.S. through a series of concentric circles.[107] At the center, or Tier One, the U.S. has its alliances with Japan and the Republic of Korea. They are at the center because they host a significant number of U.S. personnel and assets. At Tier Two are the other U.S. allies in the Asia-Pacific: Australia, the Philippines and Thailand. They differ from Tier One in that, while they have close relationships with the U.S. and a history of training/exercises, they do not host a sizable contingent of U.S. Forces. At Tier Three are countries that are not allies with the U.S. but nonetheless have trained with it. This includes countries like Brunei and Bangladesh. Finally, Tier Four represents countries that are neither allies of the U.S. nor have a record of joint training/exercising. This includes countries like China and Burma.

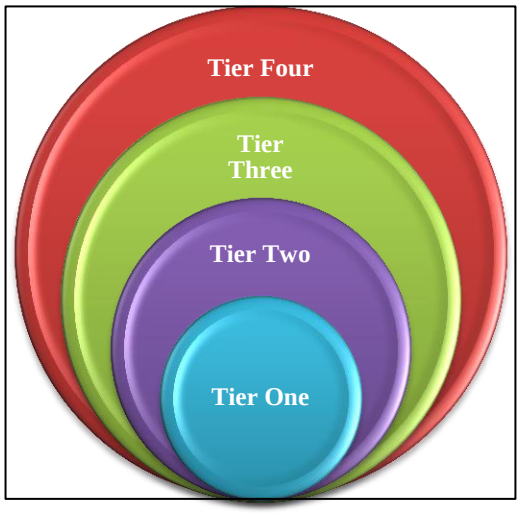

Figure 1: Partnering Framework

The Partnering Framework is important when considering the applicability of

[106] U.S. Forces sent 24 naval ships, 189 aircraft, and about 24,000 personnel.
[107] I would like to thank Captain (Ret.) Carleton “Shifu Dong” Cramer for helping me conceptualize this Framework.

Tomodachi's lessons to the U.S. partnering with other countries in HA/DR operations. This is because Tomodachi was a unique event, making Tomodachi's lessons learned mostly applicable to Tier One countries. In Japan, there is a heavy U.S. presence, years of bilateral training/exercises, various levels of liaisons, some level of common assets/systems and, where that is not the case, a general understanding of each other's assets/systems. This is not the case the farther out one travels from Tier One, leading to a relative increase in the difficulty of the U.S. partnering with a country in an HA/DR operation. Specifically, the farther out from Tier One will mean fewer training/exercising with the U.S., reduced knowledge about each others' capacity and capabilities; fewer existing processes necessary for cooperation and, most importantly, no U.S. presence in the state requiring assistance. Below I examine a number of lessons learned from Tomodachi that are relevant to trilateral cooperation to show the difficulties the U.S., Japan and Australia can expect to encounter in an HA/DR operation elsewhere in the Asia-Pacific region.

Tomodachi's Lessons Learned and Expected Challenges Ahead

Militaries tasked with HA/DR operations use their assets to gather information of the situation, such as where damage occurred, where people are, and the condition of surviving infrastructure. This process of gathering intelligence and conducting surveillance and reconnaissance (ISR) is a necessary aspect that feeds into the Command and Control (C2) process to make decisions for the HA/DR operation. In the case of Japan, given the large scale of the disaster, the SDF simply did not have the assets to conduct the requisite ISR. As such, the

U.S. 5th Air Force (5AF) provided the bulk of support to conduct these operations. Most notably, the U.S. deployed its RQ-4 Global Hawk unmanned aerial vehicle and the U-2 to examine the conditions of the disaster zone, particularly at the crippled Fukushima Daiichi nuclear power plant.

Based on this information, the allies had to decide how to respond. SDF capabilities were inadequate for all the transportation of personnel, equipment, and relief supplies that was required. Yet, this highlighted a disconnect relating to requests for assistance. There were many cases where the Japanese side was slow to identify specific *requirements* that existed. Instead, they wanted to know what specific *assets* the U.S. brought. The U.S., on the other hand, wanted to know the current situation so it could determine what available capabilities/resources to apply to those requirements. Things were made worse by the fact that the U.S. initially lacked a formal process to receive requests from Japan and determine the most effective way to provide that support. Instead, each service component acted on a need when they discovered one, resulting in multiple components surging resources to one location while other locations received no support. Both resulted in an ineffective use of assets.

Considering this was a problem between two allies with a history of joint training/exercises, the problem has the possibility of multiplying in a trilateral HA/DR operation, particularly because Japan and Australia have a short history

of training and exercising.[108] Lacking is not only a common process by which to request/receive support, but a common understanding of first identifying specific needs and then the capabilities available to respond. Without this, there is a danger the three countries will not utilize their capabilities' comparative advantages or risk duplicating support to one location while neglecting another.

These challenges extend to logistics as well. In logistics, the task is to know what supplies go on what assets, where those supplies/assets are now, and how to get them where they need to go. The task is difficult in any one country with different military services facing infrastructure challenges and damaged assets. When the number of states is increased that also have different services and different sources from which to draw manpower and supplies, difficulties multiply exponentially. Not only do the partners have to plan how to get these supplies to the country struck by the disaster, planners are also tasked with determining what supplies/equipment their own country has, where they are, the comparative advantage of their partners' capabilities, and whether their partners have sufficient/suitable training to do the missions.

During Tomodachi, Japan and the U.S. coordinated the collection and distribution of supplies from other parts of Japan to the disaster area. This was largely done through a hub and spoke mechanism of utilizing permanent military instillations (both Japanese and American) in other parts of Japan to move

[108] For example, during its assistance to Japan, the Royal Australian Air Force encountered difficulties moving SDF equipment in its C-17 because it was unfamiliar equipment and the proper load configuration was unknown.

supplies to bases and civilian airports in the Tohoku region. Once in the region, the SDF delivered them. Yet, there were many cases of logistical problems due to information gaps. While some of these problems were due to differences in information systems/equipment between U.S.-Japan, a major challenge at the beginning of Tomodachi was the process itself. Initially, there was no single location to obtain information or submit Requests for Information (RFIs). This made it difficult to determine what RFIs had been submitted, pending, or answered and led to duplicate RFIs. In turn, it was difficult to know what was needed, what was available, and where things were located.

These challenges were multiplied by the fact that it was difficult to track personnel. Although the U.S. and Japan were responsible for tracking their personnel, the constant movement of personnel resulted in delayed reporting and conflicting numbers. On the U.S. side, things were made more difficult by the frequency of VOCOs (Verbal Orders of the Commanding Officer). Because of the severity of Japan's disaster, there were many instances of personnel deployed on VOCOs in order to meet critical needs but not loaded into the tracking system. The result was an inability to accurately account for all personnel. All this made it difficult to locate assets, supplies, and the people responsible for moving them. Understanding this was in one region of one country with an infrastructure largely intact, if we consider a lesser developed country with a damaged infrastructure to which the U.S., Japan and Australia have to transport their assets and supplies, a much higher level of confusion and difficulties should be expected, particularly between Japan and Australia that

share no history of such cooperation.

Communications will also prove more difficult for a trilateral operation. In Tomodachi, while there were notable difficulties the SDF encountered given its heavy dependence on the private sector for telecommunication, a bigger challenge proved to be the systems themselves. The U.S. relied on the Secret Internet Protocol Router Network (SIPRNet), which is a U.S. government network used to transmit classified information. While it proved useful for the U.S., Japan does not have access to the system. Because of this, the U.S. was forced to rely on commercial, largely unclassified means like unsecure telephones, email, and multiple internet portal services for their communication with Japan (i.e. All Partners Access Network (APAN), HarmonieWeb, Intellipedia). The multiplicity of sources caused not only a waste of time and communication difficulties, it caused confusion because there was no consistent location to post/obtain information, not all were kept up-to-date, and not all participants accessed all sites. This meant that information found on one source did not always match the information found on another source, leading to both unwanted redundancy as well as gaps in knowledge about asset location. More problematic was the fact that it slowed down the dissemination of timely, actionable information. Such confusion can expect to increase in an operation including Australia. Unless the U.S.-Japan-Australia establish something like NATO's shared version of SIPR, called CENTRIX, or agree on a shared internet portal, such as APAN, the same problem encountered during Tomodachi will be replicated in a trilateral operation.

For any operation to run smoothly, it is imperative to have a clear command structure. In usual HA/DR operations, and how most U.S. HA/DR scenarios are planned, the U.S. takes a large degree of control because operations are usually in less developed countries with limited resources. Tomodachi was different because it was in a developed country where both the government and infrastructure remained and response teams had the capacity to respond but lacked the capability. Given this, the U.S. chose to align its capabilities to support Japan's lead. To do so, it could not rely on U.S. Forces Japan (USFJ) because it is not an operationally capable headquarters.[109] Instead, PACOM surged personnel and resources to stand up a separate C2 structure dedicated to HA/DR operations, assigning this task to a Joint Task Force (JTF), called JTF-519, to augment USFJ to form a Joint Support Force (JSF).[110] The JSF and JTF-519 worked closely with Japan's Joint Staff Office and communicated with Japan's operational JTF established in Tohoku.[111] To ensure smooth operations between forces, three Bilateral Coordination Centers (BCCs) were set up, manned by American/Japanese personnel to serve as focal points for communication and operational coordination.[112]

Yet, there were many challenges that will complicate efforts at transferring this framework to a trilateral operation. The most challenging was a clear line of

[109] This meant it lacked the staffing, expertise, and equipment necessary to conduct operational planning.
[110] It also stood up JTF-505, which was tasked with helping U.S. citizens evacuate.
[111] Admiral Patrick Walsh, Commander of US Pacific Fleet, was made JSF Commander. He was put in charge of IIIMEF, Fifth Air Force and Seventh Fleet. LTG Eiji Kimizuka was made the JTF-Tohoku Commander. He was already Commanding General of the Ground-SDF Northeastern Army and was put in charge of the Commander of the Air-SDF Air Defense Command and the Commander of the Maritime-SDF Yokosuka Regional District.
[112] Three were set up in total: 2 in Tokyo at the strategic level, 1 in Sendai at the operational level.

authority. On the U.S. side alone there was a complex structure of command and supporting relationships between PACOM, JSF, JTF-519, JTF-505, III MEF, 5AF, and 7th Fleet. It took time to clarify roles and responsibilities at the same time that the Japanese side was doing the same thing. When considering trilateral operations, there needs to be a clear specification of the authority relationships in different scenarios. This requires determining specific scenarios throughout the region and requires PACOM to plan for designating authority to a Joint Task Force (JTF) commander once that event arises.[113] It also includes thinking about how to surge C2 resources and personnel and from where they will be drawn. This planning needs to be done concurrently with the U.S. delineating roles and responsibilities with Japan and Australia, particularly if the three countries seek to establish a Combined Joint Task Force that would provide a single operational command structure for their three militaries with senior positions divided between them. None of this has been done and will require a lot of time to clarify, agree upon, and sort out legal difficulties. The ad hoc nature of the framework may have worked during Tomodachi, but will prove problematic during a disaster elsewhere in the region where the U.S. does not have forward presence but a rapid response is required with its Japanese and Australian allies.

A second challenge was legal. The BCCs were ad hoc responses. In existing Japanese law, bilateral defense planning can only be in response to a contingency, which excludes natural disasters. The ad hoc nature of the BCCs caused problems, such as communication and roles/responsibilities between

[113] The U.S. has commanders planned for contingencies, such as a Korean Contingency, but it needs to think about HA/DR operations in different parts of the region and in different levels of complexities.

BCCs. It took time to clarify these things and determine capabilities of the forces conducting the operations. Given this ad hoc nature proved initially challenging, the inclusion of Australia into what would become a Trilateral Coordination Center (TCC) would add layers of complexities to a HA/DR operation in another country where neither the U.S., Japan nor Australia has personnel or assets. Without providing a legal basis to TCC, the three countries cannot clarify roles, missions, and capabilities (RMC) or determine who would man a TCC. Instead, they would be forced to rely on ad hoc measures like Tomodachi which, as stated above, will prove problematic.

The BCC experience highlighted two additional challenges related to effective communication between partnering militaries. The first has to do with language. The BCCs functioned because of the crucial work played by Americans who could speak Japanese and Japanese nationals who could speak English. Yet, this was a very small number of people with a lot of the burden put on the Japanese-side, which had more English speakers. The Australians confronted the same issue. A trilateral operation would require more Japanese speakers in both the U.S. and Australia and English speakers in Japan to ensure accurate communications in all units for the three countries to realistically work together. A second challenge was the use of military acronyms. The wide array of acronyms between countries and between services proved to be confusing for those in the BCCs and troops in the field. The confusion, in turn, resulted in some cases of slower responses because of the need to find out the meaning of acronyms on documents/requests for equipment/supplies. When Australian forces are

factored in, another set of acronyms only adds to the confusion.

If these challenges were not enough, there are also significant challenges involved in the airlift/sealift operations that will be necessary for any regional HA/DR operation. Specifically, there are two considerations not encountered in Tomodachi that will complicate trilateral cooperation.

The first has to do with legal permissions to enter into water/air space of another country. HA/DR operations require a great amount of coordination with host countries. In Tomodachi, this was never an issue because U.S. Forces were already in Japan. In the case of an HA/DR operation for the U.S. in a Tier Two country like Australia, this is also not onerous because the processes are in place. In a Tier Three or Four country the task becomes more difficult when the U.S. needs to get its assets in immediately but requires legal permissions that could take weeks to obtain from the host government, if at all. When we consider Japan and Australia having to do this with countries it has not exercised or shares a troubled history, their task becomes more difficult. The U.S. has encountered this problem before in Burma and Indonesia. It is unclear how difficult some countries would be in a disaster, but if they deny entry to the U.S., Japan, or Australia, the remaining two would have to resort to ad hoc procedures to fill the gaps.

Assuming they receive permission, they would have to deal with a second challenge: force protection. The U.S. trains for protection from things as simple

as petty theft all the way to a terror attack. Although it is less likely to encounter opposition to HA/DR efforts by a country suffering from a disaster, piracy, thievery, and riots are all things the U.S. has experienced that threaten supplies entering ports and airfields and en route to their destinations. Because of this, the U.S. sets up security perimeters, protecting ships and planes upon entry, offloading, and establishing a convoy. Japan's constitutional interpretation does not recognize its right to exercise collective self-defense, so it is legally impossible for the SDF to protect U.S./Australian forces if they come under attack. As such, the three countries are unable to plan for joint protection. Instead, while the U.S. and Australia could plan for joint protection, they have to plan for sector protection in relation to Japan. Given the intricacies of Japan's legal basis by which the SDF can operate abroad, such a force protection plan will take time to develop.

Conclusion

No one would argue that Tomodachi was not a success. Yet, there are limits in applying its success to trilateral HA/DR operations in a non-Tier One country. Tomodachi's success was unique in that Japan hosts a sizeable U.S. presence and the operation was limited to a geographical space within which both countries are used to operating. This fact cannot be overstated. U.S. personnel and assets were already located in the same country as the HA/DR operation. Additionally, the two militaries have a long history of joint exercising and training, which feeds into a greater knowledge about each other's capabilities/capacities and military culture. Even with all that, the allies encountered the challenges

highlighted above. Because all these factors are missing in any trilateral HA/DR operation elsewhere in the region—particularly between Japan and Australia—the three countries can expect to encounter significant challenges.

Arguably, the severity of the challenges could be minimized by Japan and Australia increasing joint exercises/training and all three countries engaging in non-combat planning and establishing a coordination mechanism. After all, HA/DR operations are more likely to occur than combat operations and yet, these three have done very little to prepare for their occurrence. Such efforts would feed into a shared understanding of capabilities and capacities as well as roles and responsibilities in an HA/DR operation. The trilateral Pacific Global Air Management Seminar program is one such avenue, providing the three countries with a basic framework for mutual understanding of interoperability gaps and their approaches to strategic airlift. Another would be for defense planners to examine the strengths and weaknesses of Japan's and Australia's separate alliances with the U.S. to determine where gaps exist and how their separate strengths can be leveraged to support a trilateral operation.

Still, training and exercising only goes so far. Not only do militaries limit their forces from taking the full risks encountered in real operations, real-world operations involve a lot of confusion and ad hoc execution. Despite years of training, Japan and the U.S. still encountered significant challenges during Tomodachi. More importantly, with the chances high that a HA/DR operation will be in a Tier Three or Four country, trilateral cooperation will suffer from the

tyranny of distance. With all three countries having to move their assets to the operation site, response will be slower, logistics will be strained, communications will be stressed, and knowledge of the country will be less. Although the three countries have a lot of work to do before we can expect a successful trilateral HA/DR operation, they need to start somewhere. Understanding the expected challenges outlined in this section is the first step.

Future Issues for Cooperation on HA/DR

By Paul Barnes

When faced with significant disaster-related damage and ongoing impacts, few countries would not rely on their military forces to apply the rigour of discipline and their capability in support of both response and recovery. While this is a norm internationally, the question of cross-border aid using military resources has been and will remain an issue requiring careful thought and diplomacy. The notion of cross-border aid is central to the question of future trilateral arrangements in HA/DR between Japan, the U.S. and Australia.

While repairing the damage from the 3/11 Earthquake will require many years to be fully realised, a number of noteworthy challenges are identifiable from the trilateral response effort. Equally, there are a number of opportunities to enhance capability that are evident from looking back at the response efforts and the wider regional efforts in HA/DR. Further important factors derive from contagion effects resulting from enhanced capability and familiarity between the three countries with implications that support regional development of HA/DR competencies. Comments on both aspects are detailed below.

Opportunities for Applying Lessons Learned

Await an invitation or Arrive?

Like most globally connected countries, Australia watched aghast at the destruction from the triple disaster: earthquake and tsunami and then the third cascading impact—the Fukushima Nuclear accident. An Australian response

was mooted within hours of the earthquake with C-17 heavy lift aircraft being made ready to assist in any way deemed needed by the Japanese government. After further engagement, initial support, agreed by (then) Foreign Minister Rudd and his Japanese counterpart Foreign Minister Matsumoto, involved the deployment of a taskforce of civilian search and rescue teams (including search and rescue dogs and their handlers) with the already standing by C-17 aircraft as an obvious means to bring this group to Japan.

Notification that Australia was readying this active response to the destruction of the 3/11 Earthquake was confirmed at the Australian embassy in Tokyo within hours of the earthquake's initial destruction.[114] The configuration of the C-17 and thus the contents of the flight were to be based on "what the Japanese government needed." Clearances for the plane and the emergency response teams to land in Japan, and for the C-17 to remain operational within Japanese airspace for a limited period to assist with heavy lift operations, were achieved relatively easily. A decision by the Australian commander to focus efforts on Japanese government loads rather than fully integrate activities within the U.S. logistics response, prompted recognition of a need to initiate closer liaison with the Japanese Self-Defense Forces. Two issues are of note. The first, as a result of the desire to directly assist Japanese response efforts, the C-17 plane, for efficiency purposes, would have needed to work from SDF airbases. However concerns were reported about the weight of the Australian C-17 planes on hard

[114] T. Gellel, "An Australian Defence Force Perspective of the Humanitarian Assistance and Disaster Relief Response to the 11 March 2011 Great East Japan Earthquake and Tsunami, and Nuclear Crisis," at a NIDS International Symposium on Security Affairs, November 9, 2011, Tokyo, accessed online at: http://www.nids.go.jp/english/event/symposium/pdf/2011/e_04.pdf

stand on aprons at the SDF airbases: possibly as the heavy lift capability of the SDF at that time had not developed to the point where reinforced hard stands were widespread at SDF airbases. Some suggestion was also made that a reluctance to allow full operations was due to a lack of familiarity with the aircraft. As a result the C-17 flights were ultimately integrated with U.S. flight schedules and thus operated from U.S. controlled bases.

The second issue requiring attention was language. While the assistance to move Ground Self-Defense Force equipment was welcomed, the reality of loading personnel and unfamiliar loads onto the C-17 planes proved to be an issue requiring a rapid solution. This fortunately came in the form of a Japanese-speaking Royal Australian Air Force (RAAF) Wing Commander who aided RAAF loadmasters in liaison with their Japanese counterparts. An additional benefit of the serendipitous presence of the RAAF officer was the fact the she had knowledge of the Trilateral Australia-Japan-United States Pacific Global Air Management Seminar (PGAMS) program.

Beginning in 2007, this program was designed for enhancing collaboration between the Japanese, U.S. and Australian Air Forces in carrying out strategic airlift in HA/DR contexts. This form of engagement proved to be important and should be continued. A wider remit for such engagements to include civil-military cooperation would also benefit all parties.

Notwithstanding these issues, the RAAF C-17 aircraft remained in Japan for two

weeks and undertook 23 sorties providing intra-country airlift of vital stores and equipment assisting in the humanitarian effort, including food and bottled water. In total during the deployment, the C-17 and its crew moved more than 450 ton of humanitarian stores, 41 SDF vehicles, 135 SDF personnel, 45 tons of palletized water and specialist runway clearing equipment for Sendai Airport.

The severity and nature of the destruction obviously challenged the provision of rapid situational awareness. Any government would have been hard pressed to deal with the wide geographical spread of consequences and the many secondary and tertiary impacts that followed the initial effects. In hindsight the nature of what might have been sent as aid and what was actually useful to send is easy to discern. As mentioned previously is this report, it would be reasonably simple to establish emergency response kits in pre-packaged formats ready to load and fly away, but the issue of needing formal acceptance of offers of assistance, while not necessarily an obstacle, was certainly a hurdle to rapid response.

One opportunity to improve future trilateral aid efforts, certainly in terms of speed of response, could be to establish prearranged emergency support protocols—enacted by a legislative basis at a national level—for how to respond and what to respond with, given on-the-ground conditions post-disaster. A conceptual framework that could be used for considering these arrangements, based on damage assessment linked to the nature of relief materials needed, is shown in Figure 2, below.

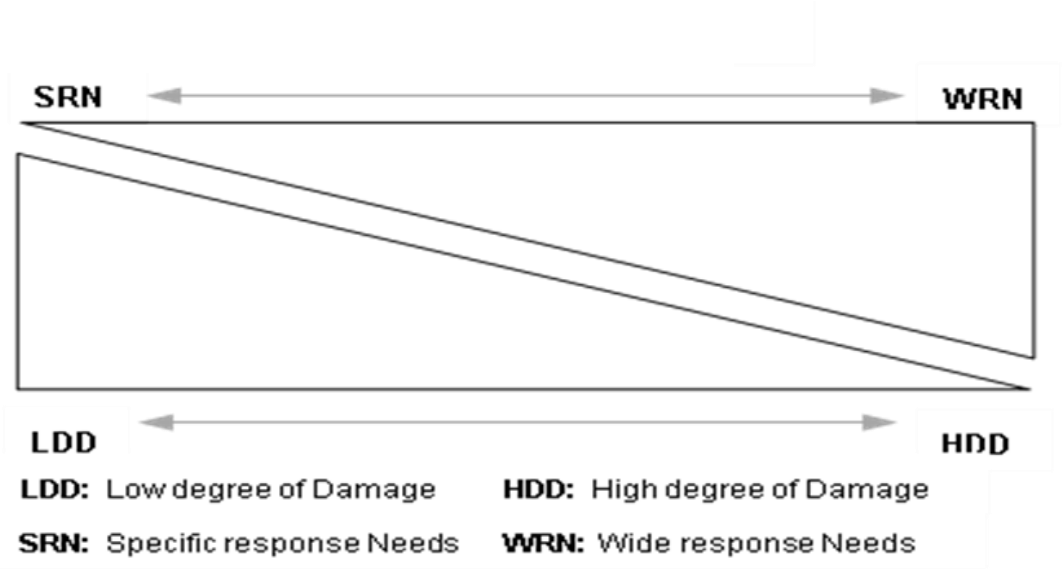

Figure 2: Damage-based HA/DR Protocol

The structure of the framework assumes that where there is a low degree of damage (LDD) in an affected country, it would logically need limited specific assistance (initially). On the contrary where there is significant damage (HDD), or where there was damage over a wide area, a more varied range of material would be needed and as a result, the disaster supply chain would be extensive. In each context the degree of communication between the affected government and allied government(s) would need to be decisive and as detailed as possible, but more importantly, timely.

A possible implication from Operation Pacific Assist is the need to pre-qualify the types of aid that could be provided, regularize the “approval to fly within airspace” process and ensure they can be fast-tracked for future post-disaster aid activities. A goal would be to enhance the agility of aid providers in their engagement with the affected country. This outcome would require considerable

familiarity among response personnel and disaster planners from the respective countries. This could also require extended periods of cross training and exchange. These levels of efficiency would be particularly important in settings where the HDD and WRN conditions prevailed. The framework in Figure 1 is not meant to be definitive but might be used as a foil for asking questions such as: what arrangements need to be in place or be flexible at different stages along the “degree of damage” and “response needs” continua?”

Spillover Effects: Regional Development

The second factor of importance in this section is a logical spillover effect resulting from the trilateral engagement on HA/DR activities relating to each of the three countries’ multilateral activities across North and South Asia. Central to this argument is the benefits of transferring the skills and capability generated from the trilateral collaboration across multilateral links that the three countries are engaged with, in a broader geopolitical context. Figure 3 below depicts how such a spillover might be represented.

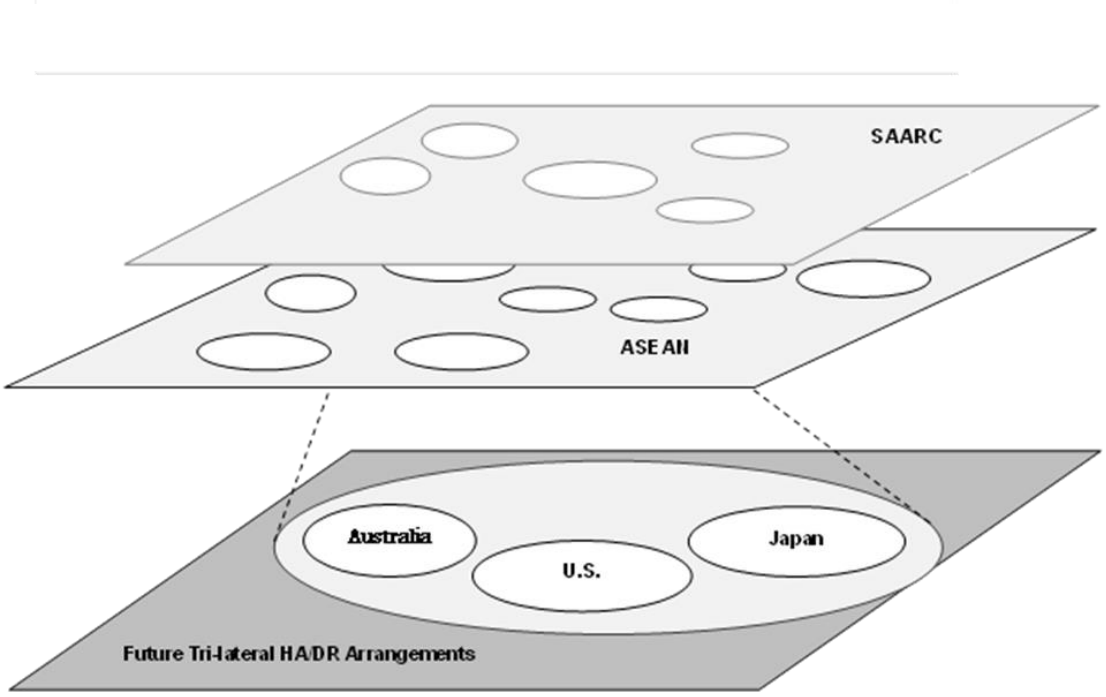

Figure 3: Future Spillover Effects from Trilateral HA/DR Arrangements

The countries of South and North Asia could be deemed an Asian Economic Union in the making. The logic of extending the HA/DR competencies learned by Japan, the U.S. and Australia into the multilateral links explicit within these economic partners is compelling. For example, Japan, the U.S. and Australia are members of the Asia Pacific Economic Cooperation (APEC) in partnership with many of the countries in the Association of Southeast Asian Nations (ASEAN). In fact the ASEAN+3 also grouping includes Japan.

Another collaborative example and opportunity is the “East Asia Summit” whose members include 10 members of ASEAN plus China, Japan, South Korea, India, Australia and New Zealand. And while all of these associations have dialogue processes related to emergency and disaster management, efforts to date might

be construed as not being fully or even effectively coordinated. Leading by example might be an ideal way to spread real capability outcomes, derived from the recent trilateral leanings across North and South Asia. Linkages might also include in time members of the South Asian Association for Regional Cooperation (SAARC). While the geographic spread of these member states is quite broad, Japan, the U.S. and Australia have all been involved in HA/DR efforts in these countries in recent years and in fact have observer status within the SAARC group. The disaster mitigation and response capability transfer resulting from firmer links with this trilateral group would benefit them.

A further reason for capability transfer across ASEAN as a viable spillover effect relates to opportunities to directly engage on HA/DR issues with existing endeavours. In July 2005, as a result of the 2004 Indian Ocean Tsunami, ASEAN initiated steps toward a comprehensive Agreement on Disaster Management and Emergency Response (AADMER).[115]

The AADMER Framework and work program for 2010-2015 covers a detailed road map for four strategic disaster management components:

- Risk Assessment, Early Warning and Monitoring
- Prevention and Mitigation
- Preparedness and Response
- Recovery

[115] ASEAN "ASEAN Agreement on Disaster Management and Emergency Response, Work Programme for 2010 – 2015," 2010, accessed online at: http://www.asean.org/resources/publications/asean-publications/item/asean-agreement-on-disastermanagement-and-emergency-responce-work-programme-for-2010-2015

The ASEAN Committee on Disaster Management (ACDM) oversees activities under the AADMER Framework. The ACDM is charged with collaborating with ASEAN's Dialogue Partners and other international and multilateral agencies.

The ACDM, in its 2010-2012 strategic work plan, identified a number of flagship programs to be implemented. These include:[116]

- The creation of an emergency rapid assessment team (ERAT) concept
- Development of a GIS-based disaster information-sharing platform for early warning
- Production of disaster recovery training
- Establishing an "ASEAN Resource Centre" as part of the AHA Centre

The framework established the ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre) in Jakarta as one of the main operational engines of the framework. Opportunities for Japan, the U.S. and Australia to collaborate more broadly with ASEAN and its disaster management apparatus are likely to generate significant multiplier effects targeting wide-area disaster mitigation.

Future Options

In conclusion, two areas warrant consideration. These include (1) issues related to progressing trilateral arrangements as flow-on outcomes, and (2) regional

[116] A. Costea, and T. Felicio, "Global and Regional Mechanisms of Disaster Risk Reduction and Relief: Review, Evaluation, Future Directions of Integration," 2013, accessed online at: http://www.cris.unu.edu/fileadmin/workingpapers/20051021102742.O-2005-12.pdf

issues.

Trilateral Engagement

It is suggested that:

1. There be a significantly increased frequency of familiarisation contact between Japanese and Australian response groups, across both civilian and military arenas;
2. Options for negotiating the means—ahead of time—for seeking rapid agreement on permission for Australian military aircraft to operate in Japanese airspace during times of disaster relief are actively pursued. This goal may require changes in relevant legislative contexts within Japan*. (The same holds for scenarios that may require flights into Australia or into U.S.-controlled airspace by any of the trilateral partners);*
3. Steps be made to ensure that there are common operating arrangements for the seamless integration of C4i[117] functionality among responding trilateral partner groups; either when jointly operating in support of fourth-party countries or in the case where support is provided directly to a trilateral member country.

Regional Issues

As referenced above, one of the significant “spillover effects” from ongoing development of a formal and informal trilateral partnership on HA/DR is the benefit to the regional countries of both North and South Asia.

[117] C4i: Command, Control, Coordination, Communication and Information (sharing).

4. Develop a dialogue for anticipating the need/invitation to assist in HA/DR activities broadly across North and Southeast Asia with existing treaty-related organisations, i.e. the ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management, or with APEC via it's Emergency Preparedness Working Group (or similar);
5. Creation of a framework for cooperative action among countries/agencies detailing Concept(s) of Operation, supported ideally by an appropriate multilateral agreement defining initial response protocols, needs assessments, engagement protocols, and importantly, methods for establishing operational priorities, command and control arrangements.

Conclusions

By Noboru Yamaguchi

While a great number of lessons have been derived from this project, there are four points in particular that demonstrate the need for the U.S., Australia and Japan to move towards cooperative security through trilateral HA/DR collaboration.

Firstly, trilateral cooperation among the U.S., Australia and Japan on HA/DR would not only be a very timely endeavor, but would also stand to immensely benefit the Asia-Pacific region at large. HA/DR can potentially serve as a platform for regional security cooperation as it provides a harmless, easy and beneficial “common ground” for security cooperation among actors in the region. As has been reiterated throughout this report, the Asia-Pacific is a disaster-prone region where HA/DR is urgently required. The need for HA/DR will become ever more pressing as the economy of the region continues to rapidly expand, and regional countries develop their capabilities to respond to natural disasters that could potentially affect their neighboring countries as well as their own populations and territories. Moreover, growth in the regional economies has led to increased infrastructure vulnerability which means that nations now stand to lose more in the event of natural disasters than they did in the past. Therefore the necessity and potentialities of cooperation on HA/DR operations in the Asia-Pacific region are now higher than ever.

In this context, it is extremely important to utilize the HA/DR capabilities of the

U.S., Australia, and Japan, as their respective capabilities are among the highest in the region and cooperation among the three countries will have a synergistic effect. It is needless to say that U.S. military, governmental and non-governmental organizations have tremendous capabilities that can be utilized in HA/DR operations. For example, U.S. rapid deployment capabilities supported by its air and sealift fleet in addition to its global C4ISR capabilities are second to none. While Australia and Japan similarly have robust capabilities, they also have a unique geographical advantage, facilitating cooperation with the United States. Japan along with the ROK—another U.S. ally—is located in Northeast Asia and hosts sizable U.S. Forces within its territories. In particular, power projection capabilities provided by U.S. Navy, Air Force and Marines Corps stationed there have been key to rapid deployment in various contingencies throughout the entire Asia-Pacific region, including natural disasters. Australia is also planning to host the U.S. military in Darwin, which will provide the U.S. with better access to Southeast and Southwest Asia. In light of its geographically distributed posture, U.S. HA/DR capabilities will become even more robust in the region.

Secondly, HA/DR cooperation can serve to reinforce the policies of the U.S. and its allies and friends to ensure a continued U.S. commitment in the Asia-Pacific region. If the three countries place HA/DR as one of their focal elements in regional security cooperation, the importance of U.S. political commitment to and military presence in the region will be more convincing. In other words, cooperation on HA/DR could assist the U.S. in rebalancing its policy towards

Asia. In *Foreign Policy* (November 2011), former Secretary of State Hillary Clinton stated to the effect that: “as the war in Iraq winds down and America begins to withdraw its forces from Afghanistan, the United States stands at a pivot point.” Her article and the ensuing statements of the U.S. government, such as those made in the strategic guidance released in January 2012, made clear the intent of the U.S. to “rebalance toward the Asia-Pacific region.” This U.S. policy line has been welcomed in the region by U.S. allies and friends, such as Australia, Korea and Japan, who perceive it as a strengthening of U.S. political commitment and military presence in the region, and believe the rebalance will help to maintain regional peace and stability. It is highly desirable that this increased U.S. commitment is positively accepted in the region at large, including China. With increasing support for U.S. commitment among regional actors, active involvement by the U.S. in HA/DR operations—in the form of both disaster response and better preparedness—will help to strengthen the basis of a continued U.S. presence in the region.

Thirdly, there are many ways in which HA/DR can be utilized to build and maintain better and constructive relations with rising China. The rapid rise of China is a given fact so the challenge for regional players is to formulate policies that will promote positive relations with China. As discussed earlier in this report, it is possible that U.S.-Australia-Japan trilateral cooperation may be misinterpreted as a policy aimed at the containment of China. This sort of misperception may negatively impact on peace and stability in the region if it inculcates a sense of insecurity in China, and in turn results in a security

dilemma. The U.S. has consistently tried to prevent this sort of misperception. For instance, Secretary Clinton made clear in her speech at the Naval Academy on April 10 2012 that “we are not on the brink of a new Cold War in Asia,” and that “we will only succeed in building a peaceful, prosperous Asia-Pacific if we succeed in building an effective U.S.-China relationship.” Yet these efforts by the U.S. have ostensibly had relatively limited success. It is therefore important to consider the potential for HA/DR cooperation to build better relations with China, especially with the PLA. The Chinese government and the PLA have been active in international activities such as UN PKOs and HA/DR operations. For example, China made a considerable contribution in Haiti after the earthquake hit the island in January 2010 by sending rescue units to the affected areas on top of the PLA peacekeepers already deployed there. China operated in Haiti with the same purpose and in the same areas as rescuers from the U.S., Australia and Japan. These three countries can improve their relations with China by working individually or collectively with China in the HA/DR domain. In this context, trilateral and bilateral HA/DR cooperation among the U.S., Japan and Australia should always be conducted inclusively—open to other countries in the region, such as China—and in a benign manner.

The fourth point concerns the technical lessons derived from HA/DR operations conducted in the aftermath the 3/11 Earthquake. In a HA/DR operational environment, a diverse set of actors with varying capabilities and characteristics come together, such as military, government, non-government, and international organizations, which are dispatched by various countries. The assistance

needed in a disaster zone can also vary considerably, as evinced in the case of the 3/11 Earthquake. While the nuclear reactors in Fukushima required immediate technical assistance to ensure their safe shut down, the assistance needed by affected people in the northern part of Tohoku differed from one town to the next. This is because the towns afflicted by the disaster were situated along the rias (saw tooth) coastline, which is characterized by contrasting terrain, resulting in varying impact in the disaster. The key to managing the diverse rescue capabilities of organizations and the varying needs for assistance in disaster areas is effective communication between the rescuers and affected people. Generally speaking, military command and communication networks are the most robust and self-contained networks in the wake of disasters. Therefore it is a good option for non-military organizations to utilize military infrastructure by plugging into military networks. Examples of this include the Sumatra Tsunami in 2004 and the Haiti Earthquake in 2010, wherein military rescuers provided other organizations with international civil-military cooperation coordination centers as nerves and brains for better coordinated rescue operations. In the case of the 3/11 Earthquake, while communication infrastructure in tsunami-hit areas was completely damaged, communication lines between the central and prefectural governments remained intact and therefore prefectural governments in the afflicted areas were able to continue governing. The problem was rather the breakdown in communication between prefectures and the affected towns and cities, making it extremely difficult for rescuers to meet local needs. Since central and prefectural governments remained in charge, military organizations such as SDF higher headquarters and

U.S. Forces deployed in the affected areas were not called to assist in the coordination and communication between the various actors. It is crucially important to prepare to build communication infrastructures for disaster relief, not only in the case that much of the communication infrastructure is lost, but also in the case that governance and communication infrastructure remain intact, to some degree. This may be of particular importance when highly developed countries are in need of disaster relief assistance, as in the case of the 3/11 Earthquake in Japan.

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