Japan-U.S. Joint Operation in the Great East Japan Earthquake: New Aspects of the Japan-U.S. Alliance

SHIMODAIRA Takuya

Foreword

The Great East Japan Earthquake occurred at 14:46 on March 11, 2011, with an epicenter offshore of Sanriku. The enormous earthquake had a magnitude of 9.0 and the subsequent huge tsunami brought on the biggest disaster seen since the end of the World War II. In response to this event, the Self Defense Force (SDF) quickly went into action, preparing for deployment of 40 naval vessels and about 300 aircraft.\(^1\) Early the following morning, the Japan Maritime Self Defense Force (JMSDF) units reached a position offshore Miyagi Prefecture and started search and rescue activities. The first Joint Task Force (JTF) was formed on March 14, the SDF having mobilized over 100,000 personnel until their dissolution on July 1.

Meanwhile, the U.S. Navy’s response also was prompt on receipt of a request of assistance. It deployed eight naval vessels including USS Ronald Reagan (CVN 76) immediately. They arrived at the offshore Miyagi Prefecture before dawn on March 13 and started “Operation Tomodachi.”\(^2\) For this operation, the U.S. deployed approximately 20 naval vessels including an aircraft carrier, approximately 160 aircraft and over 20,000 personnel at its peak.\(^3\) The significance of this deployment, unprecedented in scale, is particularly worthy of being described. The Defense Minister Yoshimi Kitazawa evaluated it as a symbol of the “deepening of the

---

\(^3\) Emergency Headquarters for Response to Disaster, “Regarding Off the Pacific Ocean Earthquake (the Great East Japan Earthquake),” May 10, 2011, p.87.
Japan-U.S. alliance.”  Moreover, according to a policy think-tank, the PHP Research Institute, “Operation Tomodachi” made the Japanese people feel the ties and importance of alliance. Interoperability and communications between the SDF and the U.S. Forces posed no problems, and in addition, it was demonstrated domestically and internationally that both organizations had the capabilities to carry out large-scale joint operation in an emergency.

In an interview with the Yomiuri Shimbun on May 4, JTF Commander Lieutenant General Eiji Kimizuka told reporters that in respect to Japan-U.S. joint operations “the U.S. Forces were united with a determination to relief Japan from the flag level officers to the sailors or soldiers in entire organization. However, there were also problems. Initially, we were unable to figure out what they could do and what they could not do. The fact that we had no means of taking advantage of the U.S. Forces’ capabilities amid the disaster is a problem that must be considered in the future. It also was a considerable dilemma for the U.S., although finally yielding results in the recovery of Sendai Airport, isolated islands, railroads and schools after subsequent coordination.” Although Japan and the U.S. expeditiously deployed to the disaster site in full strength almost immediately after the disaster, what was it that made it so difficult to take advantage of the capabilities of the U.S. Forces quickly?

The author personally carried out Humanitarian Assistance and Disaster Relief (HA/DR) activities on board JS Hyuga (DDH 181) for most of “Operation Tomodachi” in cooperation with the U.S. Navy, as Chief of Staff of JMSDF Escort Flotilla 1. In this role the author was responsible for Japan-U.S. coordination adjacent to the site.

This document analyses the HA/DR activities actually implemented at the site by the U.S. Navy and how these compare to pre-existing HA/DR manuals. Specific operational points of the U.S. Navy will be taken into

---

6 Yomiuri Shimbun, May 4, 2011.
account. Finally, the problems in initial actions for HA/DR activities and directions for resolution of this shall be clarified by extracting and analyzing the lessons learned from the actual scene of the Great East Japan Earthquake.

1 Activity of the U.S. Navy in the Great East Japan Earthquake

On the night of March 11, the Government of Japan made an official request to the U.S. Ambassador to Japan, the Honorable John Roos for assistance by the U.S. Forces Japan. In response to this, the U.S. President Barack H. Obama promptly announced, “First and foremost, our thoughts and our prayers are with the people of Japan. I offered our Japanese friends whatever assistance is needed.” In response to the President’s direction, the U.S. Navy promptly started HA/DR preparations. While the entire U.S. Forces’ HA/DR activities during “Operation Tomodachi” cover a broad area, I focus on activities carried out by the Carrier Strike Group 7 (CSG7) comprised of USS Ronald Reagan and others, which deployed soon after the occurrence of the disaster, and the Essex Amphibious Ready Group (ARG) comprised of the U.S. amphibious assault ship USS Essex (LHD 2) and others.

(1) Carrier Strike Group 7
The rapidity and mobility of USS Ronald Reagan were thoroughly demonstrated by its immediate dispatch to the disaster afflicted area. In particular, programmed and systematic operations by helicopters were implemented to great effect. Upon arriving at the scene, they started search and rescue for the missing. Each vessel increased watch standards and conducted search and rescue of the missing by utilizing every equipped sensors including helicopters to the maximum extent as well as sharing information between Japan and the U.S. in the situation in the afflicted area.

---

areas. At the same time, transportation of relief supplies such as water, food and blankets were also carried out by on board helicopters. On the afternoon of March 13, helicopters of USS Ronald Reagan and helicopters of the JMSDF transported 30,000 emergency cans of food from the supply vessel JS Tokiwa (AOE 423), which was deployed off the coast of Miyagi Prefecture, to playgrounds and other places in Kesennuma City, Miyagi Prefecture. CSG7 comprehensively analyzed and assessed information the helicopters collected along with satellite information, in addition to information obtained from the JMSDF Escort Flotilla 1, setting focal points to be supported and updating them on a daily basis as they continued with their operations.

From March 15 onward, transport of relief supplies by helicopters increased greatly in scale and intensity. Helicopters of USS Ronald Reagan, in cooperation with the JMSDF helicopters, delivered 25 tons of water and food to the afflicted areas. However not just food and water was delivered. On March 19, the crews of USS Ronald Reagan raised donations for sufferers and collected more than 100 blankets, 237 pants, 450 shirts, 311 jackets and sweaters, 748 pairs of socks, 154 towels, 57 pairs of shoes, 166 undergarments, 76 hats, 8 scarves and 34 pairs of gloves in the first few hours. USS Fitzgerald (DDG 62) and others also raised similar donations. These donations included boxes filled with toys and teddy bears bought by the crews for their own families at various ports of call, making them into virtual treasure boxes.

11 USS Curtiss Wilbur (DDG 54), USS John S. McCain (DDG 56), USS McCampbell (DDG 85), and USS Mustin (DDG 89) also operated together.
CSG7 also carried out transport of victims who had lost their homes as well as relief materials to designated materials collection sites. Search and rescue for the missing was also conducted prior to handing its mission over to USS Essex on April 4 as it left the site waters. Relief materials transported amounted to 300,000 lbs (about 135 tons) through activities from March 13 to April 4. Mr. Kazuhiko Togo, Director of the World Problems Research Institute of Kyoto Sangyo University, gave high praise to the activities of USS Ronald Reagan, saying “the deployment of USS Ronald Reagan to the offshore waters of Sanriku can be a new symbol of the Japan-U.S. Alliance after March 11.”

(2) Essex Amphibious Ready Group
Landing capability of large amounts of materials and personnel rapidly by the ARG was demonstrated and appreciated. Despite major landing crafts being present overseas, the preparations to support “Operation Tomodachi” were expeditious. USS Essex and the 31st Marine Expeditionary Unit (MEU), which had just arrived in Malaysia at the time of the earthquake, started preparations almost immediately to leave the port in order to rapidly reach waters around Japan. The dock landing ship USS Harpers Ferry (LSD 49) and the dock landing ship USS Germantown (LSD 42) stationed off Indonesia, also started preparations for departure on the evening of March 11. USS Essex medical department has the capability to expand to a 600-bed hospital with a 14-bed intensive care unit and 46-bed inpatient ward, the largest at-sea medical capacity of any U.S. Navy ship with the exception of hospital ships. The ship’s medical facilities also contain six operating rooms, three triage stations, X-ray facilities, a blood bank and a laboratory. The 31st MEU is also capable of providing 45,000 meals ready to eat, fresh water and bilingual personnel to assist in communication between U.S. service members and Japanese citizens.

USS Tortuga (LSD 46), a dock landing ship that carries helicopters and

---

12 Mainichi Shimbun, May 4, 2011.  
landing craft to support amphibious operations, left its forward deployed port of Sasebo in Southern Japan on the evening of March 11 to embark MH-53 heavy lift helicopters.\textsuperscript{14} On the morning of March 15, it loaded 90 vehicles including jeeps, trailers and 300 Japan Ground Self Defense Force (JGSDF) personnel at the port of Tomakomai, Hokkaido to carry out transport assistance for Ominato, Aomori Prefecture.\textsuperscript{15}

On March 20, after ten days had passed since the earthquake and the needs of the afflicted areas were shifting to livelihood support, no sooner had ships of Essex ARG and embarked the 31st MEU arrived off the coast of Hachinohe, Aomori Prefecture than they started to provide HA/DR in support of Operation Tomodachi.\textsuperscript{16}

As Col. Andrew MacMannis of the 31st MEU described it, “We have aviation and amphibious platforms capable of rapid delivery of relief supplies, medical assistance, transportation assets and engineer equipment to an affected area, which could be of great assistance to those in need right now.”\textsuperscript{17} The capabilities of the ARG were proven to have excelled in HA/DR activities.

What particularly exercised the capabilities of the ARG and showcased its abilities at home and abroad were the operations in Oshima and Kesennuma, Miyagi Prefecture. Oshima had been cut off due to the loss of a large number of ferries which were its only means of communication. When the Essex ARG arrived on March 27, the 31st MEU landed there using a

\textsuperscript{14} U.S. 7th Fleet, “Navy Units Prepare to Support Tsunami-Damaged Area,” March 12, 2011, http://www.c7f.navy.mil/news/2011/03-march/020.htm, accessed on February 6, 2012. USS Blue Ridge (LCC 19), the U.S. 7th Fleet command flagship, had arrived in Singapore for a port visit, but immediately changed its focus to loading humanitarian assistance/disaster relief equipment and preparing to return to Japan to provide support as directed.


landing craft utility (LCU), unloading cranes and construction vehicles of
the electric power company to restore some of the power sources in the
island in addition to transporting relief materials such as water and food.\textsuperscript{18}

From April 1 to 6, the 31st MEU started “Operation Field Day” to carry
out the removal of debris and road reopening work. They disembarked
humvees, dump trucks, water and fuel trucks, disaster aid and relief
supplies from USS Essex via LCU with approximately 170 Marines and
Sailors, and carried out a cleanup of debris which had remained in place
since the tsunami.\textsuperscript{19}

Besides the activities listed above, the U.S. Navy, in cooperation with the
SDF, Japan Coast Guard, National Police Agency, and Fire Authorities,
participated in three intensive searches in the coastal areas of Iwate
Prefecture, Miyagi Prefecture, and Fukushima Prefecture. Here the JTF,
while searching for the missing, retrieved 272 bodies in total.\textsuperscript{20}

To express appreciation for these efforts by the U.S. Navy, the Defense
Minister Kitazawa visited USS Ronald Reagan together with the U.S.
Ambassador to Japan, the Honorable John Roos and Joint Task Force
Commander; Admiral Patrick M. Walsh and conveyed Japan’s gratitude.
Relaying a message from Prime Minister Kan, he stated, “Japan and the
U.S. are true friends (“Tomodachi”), I have never felt such a strong feeling of
friendship with the U.S.,” and expressed his resolution for the restoration of
Japan.

Subsequently, on behalf of the U.S. government, the U.S. Ambassador to
Japan, the Honorable Roos stated, “It is that fabric of friendship between
our two countries, represented by each one of you here today that brings our
two countries together. Today we stand together -Japan and the U.S.-
side-by-side on the deck of USS Ronald Reagan as friends who have worked
together, day and night, to uplift this great country.” He expressed the U.S.
friendship for Japan.

\textsuperscript{18} Asahi Shimbun, March 27, 2011.
\textsuperscript{19} U.S. 7th Fleet, “31st MEU aids isolated island of Oshima,” April 3, 2011,
\textsuperscript{20} Asagumo Shimbun, April 7, 14 and 28, 2011.
In response to this, the Defense Minister Kitazawa said, “I want to express my heartfelt appreciation and admiration to each and every U.S. service member that came to the aid of the victims of the disaster. Your warm help will be cherished and engrained in the hearts and souls of the Japanese people.”

The U.S. Forces assigned to “Operation Tomodachi” shipped about 280 tons of food, 7.7 million liters of water, 45,000 liters of fuel and transported approximately 3,100 tons of other items. The U.S., after making enormous contribution, terminated the operation while maintaining a quick reaction capability.

Moreover, as a JTF, it controlled at the maximum five divisions and four brigades (about 45,000 ground personnel), 50 vessels and 172 aircrafts (about 14,000 maritime personnel) and 240 aircrafts (about 21,000 air personnel). The results of its activities over the three months were: 11,699 lives saved, 9,496 remains found, medical assistance to 21,009, food-service assistance for 4,413,632 meals, water-supply assistance of 30,196 tons, bathing assistance to 936,695 and other points including removal of debris from public facilities, as well as carrying out bridge construction and the building of temporary housing.

2 Operation procedures of the U.S. Navy in HA/DR

(1) Development of TACMEMO formulation
What factors contributed to the U.S. Navy’s rapid and systematic measures? I would like to examine this against the backdrop of the U.S. Navy’s situation.

23 Jiji Press, May 1, 2011.
24 “Joint Task Force for Disaster-Relief (JTF-TH) Instruction by JTF-TH Commander in disbanding,” July 1, 2011.
A similar large-scale disaster to the current Great East Japan Earthquake was the Sumatra Earthquake and Tsunami, which brought huge damage to South and Southeast Asia, and occurred on December 26, 2004. 2004 to 2005 was a big turnaround for the U.S. Forces in respect to non-military activities including HA/DR activities. Other than HA/DR activities during the Sumatra Earthquake and Tsunami, Stabilization and Reconstruction Operations (SROs) such as Bosnia and Herzegovina, Kosovo, Afghanistan and Iraq have started to draw attention.\(^{25}\) In November 2005, the Department of Defense Directive DcDD3000.05 “Military Assistance for Stabilization, Security, Transition and Reconstruction Operations” was issued and the Stabilization operations were made a core task for the U.S. Forces.\(^{26}\) Moreover, in December of the same year, George W. Bush issued National Security Presidential Directive NSPD 44, instituting an initiative for harmony between the military and the private sector.\(^{27}\) Under these circumstances, the necessity of the military to cooperate in non-military activities as part of its roles has been rising.

The New Maritime Strategy was officially announced with the joint signature by the Chief of Naval Operations, Commandant of the United States Marine Corps and the Coast Guard Commander on October 2007. In its contents, six articles, “Forward Presence,” “Deterrence,” “Sea Control,” “Power Projection,” “Maritime Security,” “Humanitarian Assistance / Disaster Response (HA/DR)” are listed, and of those, “Maritime Security” and “HA/DR” are newly stipulated.\(^{28}\) Furthermore, the Naval Operations Concept 2010, which stipulated concepts as to when, where and how HA/DR shall be carried out, was similarly announced with a joint signature. HA/DR was upgraded from 6th to 4th in rating regarding naval strength capable of


playing a major role, based on the actual results of 366 operations involving HA/DR from 1970 to 2000.\textsuperscript{29}

From the standpoint of implementing this HA/DR activities more effectively, the U.S. Navy reassessed measures on the tactical level. Regarding the measures for the Sumatra offshore earthquake as one of the most complicated operations, the NWDC (Navy Warfare Development Command) played the main role in formulating a manual in respect to HA/DR in the form of a TACMEMO (Tactical Memorandum) in August 2005.\textsuperscript{30} The NWDC is an agency in which specialists from various sectors formulate concepts and doctrines by carrying out modeling and simulations to look into every level of future marine operations, ranging from tactics to strategy and basing this on an enormous number of lessons.

This TACMEMO indicates guidelines for commanders and staff to formulate plans and action policies when they prepare and implement HA/DR activities. It naturally does not cover all matters perfectly, however, it has a substantial meaning in providing a tentative action plan and alternatives to contribute to prompt responses. The total structure is comprised of nine chapters: Chapter 1 – Introduction; Chapter 2 – Initial Considerations in Operations Planning (Generic); Chapter 3 – Commander’s Principal Concerns and Decision; Chapter 4 – External Relations; Chapter 5 – Information and Situation Awareness; Chapter 6 – Command, Control, Communications, Computers, and Intelligence (C4I); Chapter 7 – Logistics; Chapter 8 – Health Service Support (HSS); Chapter 9 – Personnel, Skills and Capabilities.

Regarding “Operation Tomodachi,” the U.S. Navy can be said to have carried out its operations exactly in accordance with the TACMEMO, when viewed from the scene level. In its initial actions after the occurrence of the disaster, in JMSDF Escort Flotilla 1, responsible for coordination between Japan and the U.S. at the actual scene, no stress and anxieties were felt at

\textsuperscript{30} Department of the Navy, Office of the Chief of Naval Operations, Navy Warfare Development Command (NWDC) TACMEMO 3-07.6-05 Humanitarian Assistance/Disaster Relief (HA/DR) Operations Planning, August 2005.
all due to the similarity with usual Japan-U.S. joint exercises. Admiral Robert F. Willard, Commander U.S. Pacific Command also emphasizes the results of the regular Japan-U.S. joint operations, saying they were “a good fit,” in a Kyodo News interview.

In the following article, I will examine the strategic points actually implemented by the U.S. Navy according to the articles in the TACMEMO, after narrowing down the TACMEMO to three central matters including Initial Considerations in Operations Planning (Generic), “Commander’s Principal Concerns and Decision” and “Logistics.”

(2) “Operation Tomodachi” from the point of view of TACMEMO

a) Matters of initial consideration in operations planning (generic)

First of all, review superior commander’s guidance and direction: After arriving at the site, a coordination conference onboard was executed before starting “Operation Tomodachi” and VTC (video teleconference) was also held every day in order to unify each commander’s recognition of his duties and basic policies. Then, we decided the distribution of forces and the command relationships. After this, we clarified duties, operational objectives and desired results based on the unit’s organization, composition and the rear infrastructure in the case where units’ ISR (intelligence, surveillance and reconnaissance) capabilities were integrated.

Secondly, the priority of the operations was decided through the analysis of missions. At the same time, intelligence (information) was prepared and the lessons of the past were confirmed. The operation started in accordance with a determined cycle called battle rhythm.

It is not an exaggeration to say that “Operation Tomodachi” was an information-oriented operation and that operations and information were fully integrated. Intelligence was involved in almost all aspects of the operation such as the on-site hearings, onboard sensors of E-2C and helicopters and comprehensive analysis of satellite information. The timing

and rotation of assets to be supported and the content of the support were all determined by intelligence on the situations in the afflicted area.

In order to increase the efficiency of the operation, the lessons of the past were utilized. It was possible to collect lessons during the operation so that they could be reorganized and contribute to future operations. Although I could not confirm that this happened during this operation, it is prescribed in the TACMEMO that analysts of CNA (Center for Naval Analyses) and an NLL (Navy Lessons Learned) lesson collection team should be on board a vessel in large-scale operations where necessary. As I have explained, the U.S. Navy has accumulated valuable records both of actual operations and exercises in its database and was ready to output such records rapidly.

b) Determination of commander's principle concerns

The civil-military relationship and the relationship between the supported force and the supporting force (Supported/Supporting) are determined after missions and the command relationship are clarified. In order to do so effectively, situational awareness is of critical importance. It is also necessary to give consideration to the establishment of rear area systems, the redeployment of forces and the transition to the civilian sector. Regarding the Supported/Supporting, a commander who plays a central role in an operation and commanders who assist him are designated depending on a change in the operating environment and in this way, it is expected that their responsibilities and division of roles are clarified.

What notable here is that the naval strength is effective as a first response in HA/DR activities. Swiftness is essential for such a response and this is particularly important until infrastructure is developed by JTF. Also, it is prescribed that the involvement of the military in operations should be limited to a short period of time in emergency situations to the extent possible. The points for collecting lessons, the necessity of having liaison officers (LNO), matters to consider in respect to communications such as satellite systems, chat and VTC and matters to consider in implementing the battle rhythm are also mentioned in order to improve the efficiency of operations.

LNO should be dispatched as early as possible in order to enhance
communications among commanders. Indeed this time, LNOs were mutually exchanged prior to “Operation Tomodachi”. Especially with the U.S. Destroyer Squadron 15 that operated along with USS Ronald Reagan, the deputy commanders (O-6 and next expected commanders) and Unit-level Commander class officers have been exchanged normally on exercises such as Japan-U.S. joint exercise, so the operation progressed smoothly without any stress.

It is prescribed that the battle rhythm should be set including conferences, various reports and major events in order to coordinate operations effectively and unite the recognition of each commander. To this end, current situational awareness was unified and needs in the afflicted areas were confirmed with each other in accordance with a situational changes. This was done in order to clarify current situations, unclear points and problems relating to coordination, and decisions were made on how to solve these problems and future policies.

The core of the battle rhythm is VTC. Each Japanese and U.S. commander on the scene held VTC systematically together with satellite chats. VTC is a process of making decisions on action policies in which each commander confirms facial expressions and tone face to face based on such materials as prepared slides. In this process, LNOs complement questions and confirm unclear points with each other and help us to overcome the language barrier. This demonstrates the importance of establishing a relationship of trust through regular joint exercises.

c) Logistics
Logistics means wide range of various matters and it includes relief materials, the importance of the needs of the scene, matters of the vessels and aircrafts, fuels, forward dispatched team, coordination of each unit, protection of units, contracts, legal restraints, communications, and personnel administration. In this section, I examine the initial response after the disaster occurred from the aspect of relief supplies and the relationship with outside which was prominent on the scene.

Regarding relief supplies, survival bags with water, food, blanket, vinyl sheet, water purification tablets are to be provided. It is prescribed that
water is of extreme importance among relief supplies and that the maximum effort should be made to provide it. In fact, at the time of the disaster, the type and quantity of water was sufficient, such as 10-gallon water containers, water tanks and reverse osmosis water purification units in addition to a large volume of pet bottles. Needs for relief supplies in the afflicted areas changed as the time passed after the disaster and such daily essentials as diapers and sanitary goods became insufficient. Therefore, it is necessary to precisely grasp needs in the afflicted areas in detail.

As for fuel, it is difficult to procure it in the afflicted areas owing to contract and transportation difficulties. Therefore, it is prescribed that it is important to allocate helicopters to an appropriate place. In this operation, the demand for gasoline for vehicles was very high. But it was not possible to transport it by helicopters because the flash point of gasoline is low and it is highly dangerous to be transported by helicopter. Therefore, the transportation was limited to small boats. On the other hand, light oil was possible to be transported using helicopters systematically.

Regarding food, a large quantity of MRE (Meal Ready to Eat) was transported expeditiously. However, when we asked the afflicted people a few days after the distribution, most of them did not even open MRE. Therefore, we gave instructions on how to eat using exhibitions and distributed a pamphlet for explanation in Japanese. It is important to confirm after the distribution in respect to relief supplies.

Concerning relationship with outside, the cooperation with the forces of other countries, the relationship with the local government and in particular the relationship with NGOs (Non Governmental Organization), these are described in detail. As shown in the case of the 2004 Sumatra Earthquake in which more than 109 NGOs were in operation in Indonesia about three weeks after the disaster, a number of NGOs participate in HA/DR activities. The coordination among NGOs tends to be difficult due to the differences in each NGO’s policies, organization and budget. Moreover, it is pointed out as a reminder that NGOs tend to concentrate on their own organization and depend on provisional methods and networks. Also, they tend to exaggerate the current situations in order to lead own activities to
their advantage. In addition, it is mentioned that close coordination with media is required in order to widely transmit information obtained by the military, and the content of activities in operation and to share the recognition on situations with each organization. After the Great East Japan Earthquake, the speed of recovering the land infrastructure was rapid and each prefecture’s headquarters for disaster countermeasures took charge of coordinating with NGOs in each prefecture so that we did not see any problem related to NGOs. It is necessary, however, to deeply deliberate on the utilization of NGOs that have a variety of knowledge and experiences and determine the possible points of collaboration.

The actual activities of the U.S. Navy explained above were in accordance with TACMEMO. I would like to add that there was no large discrepancy in recognition of priorities between Japan and the U.S. in terms of the operation. What was difficult for us was to accurately grasp the change of needs in the afflicted areas and share information, and how to assign duties to the two countries in a flexible and effective way.

3 Lessons Learned and Consideration Observed from the Afflicted Areas in Initial Actions after the Large-Scale Earthquake

There remain a number of issues related to the response “post disaster,” not “post war,” such as what type of support can be provided now by the JMSDF and the U.S. Navy and what type of support should be provided next from a long-term point of view. Escort Flotilla 1 coordinated Japan and the U.S. on the scene during most of the “Operation Tomodachi,” which lasted about one and a half months, and even after the Japan-U.S. Bilateral Coordination Center was established, involved in as a point of contact for Japan-U.S. joint operation in the afflicted areas. Based on that experience, I would like to comprehensively summarize and examine lessons learned from the tactical, operational and strategic levels. In this section, I will

---

32 Yomiuri Shimbun, March 24, 2011. Takashi Mikuriya, Professor of University of Tokyo, argued that the time has changed from “post war” to “post disaster” due to the impact of the Great East Japan Earthquake.
deliberate mainly on the tactical level as seen from the scene, with additional points as viewed from the operational level and strategic level.

(1) Tactical level
I would like to mention four points, the necessity of a Japan-U.S. joint manual, the effectiveness of a sea base, a common operation cycle for disaster countermeasures and information superiority.

a) Necessity of a Japan-U.S. joint manual
The capabilities of the U.S. Navy including the aircraft carrier and the ARG were outstanding, as shown in the performance during “Operation Tomodachi.” However, Robert D. Eldridge, Associate Professor at the School of International Public Policy, Osaka University then, who investigated the lessons learned from the Sumatra Earthquake, pointed out that “Japan does not have any provision on the use of the U.S. Forces Japan in the case of any disaster that exceeds the capabilities of Japan to respond nor recognize its necessity.”

Till today, Japan continues to have this problem. TACMEMO pertaining to HA/DR currently used by the U.S. Navy is based on the lessons learned from the 2004 Sumatra Earthquake. It was designed taking into account places with poor infrastructures. There is no problem with following the TACMEMO immediately after any disaster. However, in the case of Japan, despite the fact that there was a little of disorder immediately after the disaster, the recovery of infrastructure was swift and some parts of the TACMEMO became inapplicable. Moreover, the involvement of civil forces increases as time passes and thus more detailed coordination and consultations with local governments become essential. Additionally, the contents of the TACMEMO itself are somewhat general and do not account for a Japan-U.S. joint operation.

Therefore, it is necessary for us together with local governments, to formulate a manual based on the TACMEMO, making a common

understanding of the lessons learned, and taking into account the geographical features, weather, climate and culture of Japan.

b) Effectiveness of a Sea Base
What is required immediately after any disaster is to devote all the efforts to search and rescue of the missing. It is also necessary to understand the situation of the afflicted area in detail in order to foster the transportation of relief supplies. Taking the characteristics of naval power into consideration, the effectiveness of access from the sea is expected to achieve great results, particularly in the initial actions after any disaster when search and rescue of the missing are being prioritized.

The difference between the operations after the Great East Japan Earthquake when compared with the Chuetsu Earthquake in Niigata Prefecture was that the target support area was along the extensive coastal line, and the degree of damage and type of support required varied according to the disaster stricken area. The large volume of floating debris in coastal areas made it difficult to approach the coast, and caused confusion beyond our imagination. The response to such a situation requires comprehensiveness. Therefore, access from the sea using helicopters and LCAC is extremely effective to isolated coastal areas hit by particularly large tsunamis, such as the tips of peninsula and isolated islands where the land access is limited.

Rear Admiral Richard B. Landolt, Commander Task Force 76 (CTF 76) who commands the 7th Fleet Amphibious Force emphasized the importance of helicopters based on his experience from typhoon Morakot in 2009, saying “HM 14’s heavy lift capabilities have been essential in past disaster response efforts in the region. They can take engineering equipment and large amounts of cargo to places they would otherwise not be able to go.”

In addition, Thomas B. Fargo, former Commander, U.S. Pacific Command, also commented that the U.S. Forces played a very extensive role in the response to the disaster caused by Hurricane Katrina and said, “It is not important whether it has been called until recently a nonconventional military activity, but what is important is how effective we can react in those activities for providing the international community with peace and security.” and “The example of this tsunami showed that it was necessary for the military that has various functions to respond to the crisis. (Snip) The utilization of helicopters was of particular importance.”

This idea of a Sea Base is also called GFS (Global Fleet Station). This is a sea base created because of the necessity to maintain functioning so-called stability operation, in particular, a platform for HA/DR. In the U.S. Navy, initial GFS was established in the Gulf of Guinea in October 2007.

The base of this concept is already prescribed in the joint doctrine and it points out that the necessity of the civil-military cooperation tends to increase. What is new since 9/11 is an increasing urgency for the Defense Department to engage in peacetime operations traditionally considered nonmilitary. Therefore, the marines that operate at the front line in each operation now deliberate on the points for coordination with local governments, international organizations, and NGOs.

The JMSDF is able to effectively provide such a sea base. It is necessary to deploy at the target site, collectively coordinate activities of the JGSDF and Japan Air Self Defense Force (JASDF), and effectively utilize the capabilities of the U.S. Navy. Also, coordination needs to take the relationship with the Japan Coast Guard, the Police and prefectural headquarters for disaster countermeasures into consideration. The Squadron (HM) 14 flew 55 sorties and lifted more than 260,000 pounds of gear, including excavators and engineering support equipment.

---

command and control center function and the air base function of JS Hyuga, a precious asset of Japan, should be fully utilized. Naval forces have high capabilities in searching isolated afflicted areas in detail, collecting information, searching and rescuing at sea, transporting relief supplies to a wide area, and analyzing and evaluating to select the type of support required taking into account the extent of damage. In doing so, it is necessary to accurately grasp needs in the afflicted areas, always keeping in mind the need to maintain the effective operation of forces and discern a content of support required.

**c) Common operation cycle for disaster countermeasures**

The response of the U.S. Navy was extremely swift. Within three days after the disaster, the U.S. Navy put forces at the afflicted areas, designed a detailed operation plan and executed it. We were able to see throughout the operation their cordial and sympathetic activities. Their operation cycle was the same as the usual operation cycle. The cycle of HA/DR to “find disaster victims at an early stage and provide supplies that meet the needs in the afflicted areas” is the same as the cycle of battle to “find a target and effectively attack it.”

The initial action after any disaster is the most important factor in the operation cycle. In the Sumatra Earthquake, we still remember that the U.S. Navy played a central role in coordination at the disaster stricken area. The U.S. Navy thoroughly exercised its strength, particularly in search and rescue immediately after the disaster occurred and the coordination of the civil-military relationship. The U.S. Navy including USS Ronald Reagan also exploited its characteristics such as the swiftness and mobility in the initial action after the Great East Japan Earthquake occurred. At the same time as the occurrence of the disaster, both of the U.S. Navy and the Government of Japan swiftly made preparations for collecting information and responded at full power. This is basically the same as any combat military operation.

The needs in the afflicted areas change. “Search and rescue” of the

---

41 Department of the Navy, TACMEMO 3-07.6-05 Humanitarian Assistance/Disaster Relief (HA/DR), A-1.
missing are prioritized for about three days after the occurrence of disaster. The transportation of relief supplies is prioritized about three days or one week after the occurrence of disaster, and then the priority shifts particularly to the recovery of lifelines and “life support” for isolated victims. Furthermore, the priority shifts to efforts for “reconstruction assistance” one week after the occurrence of disaster and to “assistance to efforts toward full-blown reconstruction” when about two weeks have passed. It is of utmost importance to discern the timing of change in needs.

In “Operation Tomodachi,” when the U.S. Navy judged that it was possible to move to the reconstruction stage according to situations in the afflicted areas, when reinforcement forces arrived, the duties were handed over to forces required for reconstruction such as Essex ARG, and USS Ronald Reagan and other vessels sailed to their next mission. This shows the importance of reviewing the organization of forces by their function according to the capabilities of each force.

It is also essential for the JMSDF to utilize, in particular, the capabilities of JS Hyuga in the operation of JTF Maritime Component and to review the functions so that each unit can exploit its ability to the maximum extent. In doing so, not only efficient operating forces, but also various supplies and coordination for repair, are required. In addition, it is necessary to design a cycle in which forces may be poured in and changed continuously in order to meet the on-scene needs, and such timing have to correspond to the needs in the afflicted areas.

It is indispensable for each component commander and the JTF Commander to be able to design a concept based on common doctrine and maintain a common operational picture by holding VTC and exchanging LNO in order to facilitate the effective operation cycle between the JTF Commander and the Maritime Component Commander. Although LNOs were dispatched to USS Ronald Reagan and the USS Essex to facilitate better coordination, the U.S. Navy’s real capabilities were not exercised to the maximum. As for cooperation with the U.S. Navy, the coordination process has been established through exercises in the past few years and communications on the scene were sufficient. However, there has not been
any opportunity to practice under normal circumstances with regard to the interaction between the JTF Commander and the Maritime Component Commander. In the end, the principal means of HA/DR is by land. The characteristics of ground, maritime and air forces and their operating environment are different. Therefore, it is necessary to conduct exercises based on the idea of “supported-supporting” such as that of the U.S. Forces, which clarifies the responsibility of which of the three forces provides assistance and which receives assistance in each operation phase in order for the characteristics of each force to be exploited to the maximum.

d) Information superiority: Centered on on-site needs

HA/DR no doubt had the same operation cycle as combat military operations. The “victims’ needs on the scene” equivalent to the “movement of the enemy” are core factors of the operational cycle.

In the case of the U.S. Navy, information was always the center of the operation cycle. Firstly, water and emergency food were transported to the afflicted areas and every time they did so, they directly asked victims or conducted questionnaire surveys. Then, they reflected these needs in their next assistance action. This is equivalent to the analysis of information on the enemy.

The JMSDF conducted the search and rescue of the missing immediately after the disaster, the provision of water, food and blankets and activities such as assistance for bathing. It is necessary, however, to conduct further deliberations in the future on whether they were truly appropriate activities. In particular, it is important to distribute appropriate information in order to alleviate the anxiety not only of victims but also of the entire nation and to avoid unnecessary confusion taking into account the tremendous lack of information in the afflicted areas immediately after the occurrence of disaster.

It is necessary to consider the points for distributing, replenishing and rotating accumulated relief supplies. It is important to share information and coordinate activities in order to respond to needs in the afflicted areas swiftly and accurately. The cooperation between the JMSDF, JGSDF and JASDF and the U.S. Force is becoming more and more important depending
on characteristics of the area where they operate. We should not forget that “one-way” assistance may cause more confusion on the scene.

Each SDF and the U.S. Forces need to coordinate in a way that they can achieve the goal of the entire force based on a synergistic effect in order to maximize their capabilities taking advantage of their characteristics. Based on the lessons of the past, the JMSDF should have been aware of the steps of the search and rescue stage in the initial actions, the subsequent life assistance stage, the reconstruction assistance stage and the withdrawal of units. Although it was difficult to define the standards for the decision on transitioning to the next step and express them as specific activities, information for making such decision always exists in the afflicted areas, so that it is necessary to see the afflicted areas with our own eyes.

(2) Operational level

From the point of view of implementing the joint operation swiftly and effectively, it is necessary to establish a permanent Joint Headquarters and to make preparations during peacetime. The Japan-U.S. Security Consultative Committee (2+2) held on June 21, 2011 highly praised “Operation Tomodachi,” saying that “the success of this large-scale joint response has validated years of bilateral training, exercises and planning.”

As a matter of fact, the SDF and the U.S. Forces established the “Japan-U.S. Joint Coordination Offices” in three places: the Ministry of Defense, the U.S. Forces Japan Command (U.S. Yokota Air Base) and the JGSDF NEA (Sendai garrison), and they started consultations from March 14.

On March 24, in order to reinforce the staff of the U.S. Force Japan, the Joint Support Force (JSF) 519 was formed under Adm. Patrick M. Walsh, Commander U.S. Pacific Command. The establishment of the Japan-U.S. Joint Coordination Offices and the formation of the JSF made

44 It was also formed at the time of the earthquake off the coast of Sumatra in 2004, and USS Abraham Lincoln (CVN 72) was deployed swiftly to the afflicted area.
the two countries recognize that the SDF and the U.S. Forces can collaborate closely, and demonstrated the value of the Japan-U.S. alliance domestically and internationally. However, it took the Japan-U.S. Joint Coordination Offices two weeks before it could become accustomed to the Japan-U.S. cooperative mission at a full-blown level.

A large-scale disaster generally causes a state of confusion due to conflicting information, and its impact on inside and outside of the country are beyond our imagination. It is necessary, therefore, to prepare not only for military activities under armed attack but also for non-military activities such as HA/DR during peacetime. Particularly, this disaster revealed the effectiveness of the military in HA/DR. As the cooperation within the SDF, with the U.S. Forces and the military services of other countries and the civil-military relationship with local governments and NGOs must be taken into consideration, prior planning, preparations and trainings are needed.

(3) Strategic level
The response at the national level is indispensable. In the Great East Japan Earthquake, more than 130 countries including the U.S. offered such assistances as disaster relief teams, relief supplies and donations. When a large-scale disaster occurs, cooperation and support from a number of countries can be expected. The Japan-U.S. Security Consultative Committee held on June 21, 2011, emphasized the importance of multilateral cooperation, HA/DR, and of effective cooperation during such activities. While the response at the scene level has its own limitation, the relationship with the private sector such as NGOs would become more and more important depending on the situation. In addition, there are harmful

45 As of March 31, 159 countries and regions and 43 international organizations offered assistance, and the disaster relief teams and medical support teams from 23 countries and regions were in operation. Ministry of Foreign Affairs, “Emergency Support from Other Countries and Regions,” http://www.mofa.go.jp/mofaj/saigai/index.html, accessed on February 6, 2012.
rumors and anxiety that spread not only in the afflicted areas but also their neighboring areas, as well as the delay of response resulting in the shortage of supply and the expansion of anxiety among the general public due to the delay in the provision of information. Therefore, it is necessary for the national government to subjectively grasp the actual conditions of activities, to distribute accurate information and to define clear policies for the nation. The direction should be free from the existing framework.

The accident at the Fukushima Daiichi Nuclear Power Plant has surfaced a number of issues that needs to be examined by a number of parties such as Tokyo Electric Power Company, the Nuclear and Industrial Safety Agency, the Ministry of Economy, Trade and Industry and the prime minister’s official residence, and calls for a more flexible way of thinking to handle unknown challenges.

Admiral Keiji Akahoshi (Ret.), the former Chief of Staff, JMSDF, admits that the swift initial actions of the SDF in this operation was the fruit of practical trainings and says that “it is always impossible to exercise one’s capability more in actual circumstances than in trainings and to fully deal with emergency situations without trainings.”47 He also emphasizes the importance of what is called table top exercise at a national level in which mental training of parties concerned with crisis management within government-affiliated organizations are conducted in line with real situations. In addition, Michael Lind, the Whitehead Senior Fellow at the New America Foundation, pointed out the aftermath of Hurricane Katrina showed the limitations of a model of homeland disaster response in which the military is employed only after local and state authorities have failed.48 In HA/DR associated with large-scale disasters, it is necessary to make preparations for the rapid deployment of the army at a national level with local governments using various forms of coordination.

Non-military activities such as HA/DR provide the SDF with a new place

for their active involvement, and the SDF must develop a strategy to back it up. That means the active involvement of the SDF in “Non Combatant Military Operation (NCMO)”\(^{49}\) that can be implemented in all periods, ranging from peacetime to emergency situations. The active involvement is a change of mentality, from the traditional stance “we cannot do” due to the various restrictions in Japan, to the stance of “what can we do now” by paying attention to activities possible even under those restrictions. On June 4, Defense Minister Kitazawa expressed his gratitude for assistance to the Great East Japan Earthquake from many countries in the Asia Security Summit (The Shangri-La Dialogue) and proposed to hold a meeting for discussion on the cooperation among defense authorities for unprecedented issues like nuclear incidents.\(^{50}\) This is a promising area where Japan is able to play a leading role. The necessity of multilateral cooperation is increasing as an urgent response is required.

**Conclusion**

Jean Baudrillard, famous French sociologist, examined the Great Hanshin-Awaji Earthquake and summarized its characteristics, saying that “a catastrophe is actually a political and social catastrophe even if it is caused by the nature. That is to say, a natural disaster exposes and reveals cracks and fluctuations in the current political and social systems to everyone.”\(^{51}\) The Great East Japan Earthquake threw the entire country into chaos and it became dysfunctional. The deployment of each SDF, the coordination with the police, firefighters and NGOs, the removal of debris and the preparation of temporary housing were efforts made by the entire country. In this sense, the line between a disaster and war damage is very thin.

In this operation, although both the Japan and the U.S. Forces rushed to


\(^{50}\) Toshimi Kitazawa Minister of Defense, Japan Speech, The 10th IISS Asia Security Summit The Shangri-La Dialogue Second Plenary Session, June 4, 2011.

\(^{51}\) *Asahi Shimbun*, March 2, 1995.
the afflicted areas and responded at their full potential in the initial actions, the JTF Commander said that there was a problem in the coordination between Japan and the U.S. in the initial actions and that the capabilities of the U.S. Forces could not be fully utilized. That was because the means and points for coordination between Japan and the U.S. and the standards for judgment in order to respond to the change of needs at the scene had not been shared under normal circumstances. In order to take advantage of the capabilities of the U.S. Forces to the maximum extent in any Japan-U.S. joint operation, it is necessary to formulate a Japan-U.S. joint manual that includes the means and procedure for coordination, and conduct prior preparation and trainings under normal circumstances. This makes communications among the scene, the Maritime Component Commander and the JTF Commander smoother and it also allows us to efficiently respond even in a chaotic situation.

In a chaotic situation caused by a large-scale disaster, the integral self-sustaining function the military has is extremely effective. However, the military cannot respond in an actual war without trainings. In order to raise the effectiveness to the maximum extent in a cooperative operation, such as Japan-U.S. cooperative operation or civil-military cooperative operation, the coordination among various organizations that have different structures would be more important, and organization, preparation and training towards it are required. In addition, the mutual relationship of trust through information sharing and trainings is essential.

The idea pointed out by Samuel P. Huntington after the Cold War that “The mission of the Armed Forces is combat, to deter and defeat enemies of the U.S. The military must be recruited, organized, trained and equipped for that purpose alone. Its capabilities can, and should be used for humanitarian and other civilian activities, but the military should not be organized or prepared or trained to perform such roles,” is not applicable any more. A military organization cannot exercise its capabilities to the maximum extent without organization, preparations and training based on

---

both military and non-military activities. This gives a military a new role in the future.

The lessons learned in the afflicted areas of the Great East Japan Earthquake were that to be effective in utilizing the capabilities of the U.S. Navy to the maximum extent in a large-scale disaster, regular preparations and training in normal circumstances, are necessary. Also, we can find a new aspect of the Japan-U.S. alliance in the role of Japan in non-military activities such as HA/DR.

The JMSDF and the U.S. Navy succeeded in carrying out an unprecedented large-scale operation. Michael Green, Senior Advisor and Japan Chair, The Center for Strategic & International Studies, states that China and Russia must have been surprised at the interoperability between the SDF and the U.S. Forces.\(^53\) The response to the Great East Japan Earthquake demonstrated the solid ties of the Japan-U.S. alliance domestically and internationally. This alliance has contributed to the maintenance of peace and stability in the Asia-Pacific region for more than half the past century. This year commemorates the 60th anniversary of the conclusion of the former Japan-U.S. Security Treaty. What should the Asia-Pacific region, where Japan and the U.S. have a common interest in peace and stability be like? It is necessary for the two countries to make efforts for realizing peace and stability and deepen the alliance based on the experiences and lessons of the Great East Japan Earthquake.

\(^{53}\) *Asahi Shimbun*, May 15, 2011.