

REPORT OF A CSIS TASK FORCE  
IN PARTNERSHIP WITH  
KEIDANREN

# Partnership for Recovery and a Stronger Future

STANDING WITH JAPAN AFTER 3-11

*Chairman*  
Jim McNerney

*Directors*  
Michael J. Green  
Kiyooki Aburaki

*Project Coordinator*  
Nicholas Szechenyi

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INTERNATIONAL STUDIES

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## FOREWORD

On March 11, 2011, Japan was struck by an unprecedented and unimaginable disaster. The brave people of Tohoku rallied in their communities to provide relief from the destruction caused by the massive earthquake and tsunami and the fear caused by radiation leakage from the disabled nuclear power plant at Fukushima. Japan as a nation rose up to assist them with tens of thousands of Self-Defense Force personnel and private volunteers travelling north to lend a hand. The world stood by Japan as well, with supplies and contributions flowing from rich and poor nations alike. And we in the United States took great pride and comfort in the close cooperation between American and Japanese forces engaged in rescue and recovery under OPERATION TOMODACHI.

We at CSIS were also eager to do what we could to show support. Based on consultations with our colleagues at Keidanren on how we could help, we decided to form a high-level Task Force of prominent Americans to offer recommendations on how the United States and Japan could partner in the process of recovery and reconstruction. Jim McNerney, chairman, president, and CEO of The Boeing Company, generously agreed to chair the Task Force, and Hiromasa Yonekura, chairman of Keidanren, pledged his organization's full cooperation. On April 11, 2011, we announced "The Partnership for Recovery and a Stronger Future" and appointed Michael Green, CSIS senior adviser and Japan Chair, and Kiyooki Aburaki, Keidanren U.S. representative and CSIS visiting fellow, as codirectors.

The Task Force held a first plenary session on April 20 and formed working groups on: disaster relief and preparedness; macroeconomics and financing reconstruction; energy; health; alliance coordination; and civil society. In June, Ambassador Richard Armitage led a Task Force fact-finding mission to Japan for exchanges with political leaders and government officials, Keidanren executives and experts, and local officials and citizens in Tohoku. In July, Dr. Green presented interim findings of the working groups to Keidanren executives at that organization's annual Karuizawa retreat. We have also benefited throughout the process from consultations with senior officials in both the U.S. and Japanese governments.

Keidanren has been an ideal partner in this endeavor and has responded proactively to the disasters. On March 14, the organization established the Keidanren Great East Japan Earthquake Headquarters, headed by Chairman Yonekura with Vice Chairman and Director General Yoshio Nakamura, as the deputy. Keidanren then established the Special Committee for Recovery and Restoration on March 24, led by Chairman Yonekura and cochaired by Vice Chairmen Hiromichi Iwasa and Masahiro Sakane. Keidanren has since developed comprehensive measures focused on recovery and restoration and published detailed policy proposals from related committees within the organization. Our colleagues there have offered expertise, data, and advice, but they have asked that the final set of observations and recommendations of the Task Force represent an independent American assessment of how Japan can emerge from this disaster with a stronger economy

and society and a revitalized partnership with the United States. This report reflects the views of Task Force members, but they may not agree with every detail.

The members of the Task Force and the participants in the working groups dedicated considerable time and expertise to this project. We all came away with increased respect for Japan and with the hope that our own experiences with similar challenges at home—both successful and unsuccessful—can provide lessons for Japan at this critical juncture. More to the point, we hope that our efforts and ideas have demonstrated the readiness of Americans in all fields to continue working with Japan on rebuilding in the months and years ahead. This report represents not just the conclusions of the Task Force, but our vision for broadening our cooperation as we go forward.

We could not have conducted this work without the generous financial and in-kind support of American corporations that shared our conviction about the importance of a strong Japanese recovery. In particular, we would like to thank Aflac, Boeing, Fluor, Lockheed Martin, QinetiQ, and United Airlines. We would also like to thank Merck & Company for supporting a partnership between CSIS and the Health and Global Policy Institute in Japan, which allowed for new analytic work on shared health reform challenges and ways U.S. assistance can support Japanese-led recovery efforts. To do this right, we felt we needed to move quickly and to fund the project from our side, and our colleagues at these corporations agreed and stepped up.

John J. Hamre  
*President & CEO*  
CSIS



## PREFACE

When Dr. John Hamre, president and CEO of CSIS, asked me to chair the Partnership for Recovery and a Stronger Future, I was honored to accept. My heart, and the hearts of millions of people worldwide, went out to the people of Japan in the wake of the enormous death and destruction wrought by the March 11, 2011, earthquake and tsunami in Tohoku. The importance of the Task Force's mission—to enable the long-term economic recovery of Japan in the context of a strengthened U.S.-Japan alliance—was unmistakable. Furthermore, the formation of the Task Force would send a clear signal to the Japanese people that they would not be alone on the long path to recovery and reconstruction.

Inspired by a common cause and a deep spirit of partnership between the participating American and Japanese experts, starting with Keidanren, the Task Force has produced a series of constructive recommendations in support of the rebuild and recovery. Many of these recommendations, which were developed in close collaboration with a range of sectors in Japan—including industry, civil society, academia, and government and political leaders—call for joint Japanese-U.S. actions that will further strengthen the alliance while addressing the challenges at hand.

The Task Force focused considerable attention on the leading role of the private sector in the reconstruction process. If there is one, overarching message in this body of work, it is that the Japanese government needs to take the necessary steps to eliminate impediments so that the private sector can maximize its contribution to both the rebuilding of the Tohoku region and the revitalization of the Japanese economy.

I would like to thank the Task Force directors, Michael J. Green and Kiyooki Aburaki, as well as the six working group leaders and all the Task Force participants, for the leadership and expertise they have contributed to this important project.

Jim McNerney  
*Chairman, President, & CEO*  
*The Boeing Company*



## PREFACE

The natural disasters that struck Tohoku and eastern Japan on March 11, 2011, caused tragedies of unprecedented proportions. I would like to offer my heartfelt condolences and prayers for those who died and my deep sympathy to the people who have lost family members, loved ones, and friends, as well as homes.

The national challenges we face are probably the most serious since the end of World War II. In addition to the damage caused by the disasters, Japan still faces long-standing issues such as deflation and an aging society and must craft a strategy for sustainable growth. I believe that these crises have given us an historic mission or responsibility to build a “new” Japan associated with dynamism and optimism about Japan’s economic future. Keidanren has been working to this end in the aftermath of March 11, and one focus of our activities is to achieve sustained economic growth exceeding 3 percent in nominal terms and 2 percent in real terms. We recently issued the “Keidanren Growth Strategy 2011” with a comprehensive set of policy recommendations to achieve this goal. Japan will succeed if the private sector can fully exercise its strengths based on increased international linkages. It is my firm belief that Japan can accelerate the restoration process by taking an active role in international economic affairs and strengthening interactions and partnerships with other countries.

Many in Japan have acknowledged the significance of our ties with the United States. OPERATION TOMODACHI, a bilateral relief mission launched shortly after March 11, is one of the most impressive examples in this regard. “The Partnership for Recovery and a Stronger Future” led by CSIS is another example of the strong friendship and partnership between the United States and Japan. There is great potential for bilateral cooperation in various fields, and it is very important to craft a U.S.-Japan agenda for the future. I would like to express my sincere appreciation to Jim McNerney, chairman, president, and CEO of The Boeing Company, and to John J. Hamre, president and CEO of CSIS, for their leadership. I welcome the excellent recommendations in this report and strongly endorse and share the vision for a revitalized bilateral partnership with the United States and a stronger future for Japan based on the vitality of the private sector and the people of Tohoku and all Japan.

Hiromasa Yonekura  
*Chairman, Keidanren*



## LIST OF TASK FORCE MEMBERS

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## EXECUTIVE SUMMARY

When the Center for Strategic and International Studies (CSIS) initiated the Partnership for Recovery and a Stronger Future in partnership with Keidanren, it was based on the Task Force members' strong conviction that Japan not only had the wherewithal to recover from 3-11, but also to build the foundation for a stronger future. With that as the overall premise, the Task Force proceeded with four guiding principles.

First, the world needs a dynamic Japan and its ability to achieve a robust recovery and stronger future will have a major impact on the entire international system.

Second, while the United States can offer support and expertise based on the American experience, the Japanese people will choose their own path to recovery, and leadership for recovery has come and will continue to come from within Japan.

Third, the partnerships forged in the aftermath of March 11 demonstrated the depth of American affection and respect for Japan and the legacy of decades of work by leaders in both countries to solidify our bilateral relationship in all its dimensions. A broader web of relationships to deepen connections between American and Japanese businesses, militaries, and civil societies should be continued and strengthened in the years ahead.

Fourth, as many Japanese commentators have noted, the choices that the Japanese people must make on recovering and rebuilding from the March 11 disasters cannot be divorced from the larger set of choices that must be made to revitalize the Japanese economy and Japan's world role. We know from our own experiences that it is difficult for political leaders to ask citizens traumatized by natural disaster to consider not only returning to what they knew, but also the initiation of something new and enduring. The Japanese expert commissions organized to scope recovery and reconstruction planning have recognized this fundamental truth, but the mechanics for planning and implementation are still underway and it will be important to continue steering the process toward improved competitiveness and economic growth in the months and years ahead.

The Task Force formed working groups on: disaster relief and preparedness; macroeconomics and financing reconstruction; energy; health; alliance coordination; and civil society. This report reflects working group deliberations and outlines Japan's requirements and opportunities for bilateral cooperation in each of these areas.

### Disaster Preparedness and Recovery

Japan's seismic engineering and tsunami warning systems are second to none, but the Tohoku region was simply overwhelmed by the size of the tsunami that struck the country on March 11. The extent of the damage in the Tohoku region serves as a reminder that full disaster prevention is impossible and that governments and societies would do well to think of disaster preparedness

in terms of reducing risk, not averting hazards entirely. The experience of March 11 also demonstrates that an optimal risk reduction strategy must combine improvements in physical infrastructure with the reinforcement of people-oriented strategies, such as smart evacuation procedures and the inclusion of local communities in preparedness planning. Furthermore, the Tohoku disaster underlines the importance of public participation in making the transition from relief to sustainable recovery. These are some of the same lessons that the United States learned in the wake of Hurricane Katrina. The United States and Japan now have an opportunity to partner together to refine disaster preparedness and sustainable recovery strategies and to share our experiences and expertise with other nations in the Asia-Pacific region that will inevitably face comparable disasters in the years ahead. Proposals include “localizing” decisionmaking of the Cabinet Office’s Reconstruction Headquarters in Tohoku; creating a reconstruction financial tracking system to assure transparency; encouraging city twinning networks to share best practices; examining the establishment of a privately funded U.S.-Japan Facility for Disaster Risk Reduction and Recovery in the Tohoku region to study methodology for disaster reduction and the science of disaster recovery; and promoting bilateral research on the role of businesses in disaster relief and recovery.

## Economic Recovery

The March 11 recovery dealt a serious blow to the Japanese economy and also illuminated several challenges Japan was already facing, such as deflation, an aging society, and massive public debt. The government now confronts a difficult balancing act between stimulus and debt reduction as it devises a growth strategy that must address all of these challenges with urgency. Nevertheless, there are reasons to be confident about Japan’s capacity to recover from these disasters and to forge a path toward sustainable growth, such as leadership in technology and the inherent strengths of the Tohoku region, including a strong research and scientific base. It is clear that, at least in the short term, domestic demand associated with recovery efforts has had a positive effect on Japan’s economic growth, but sustained growth beyond that point is not guaranteed and the critical need is for a longer-term growth strategy. In surveying Japanese and American private-sector leadership, the Task Force found a consistent list of priorities that would lead them to maintain and expand their presence in Tohoku and in Japan as a whole. These include: a stable energy supply; tax reform; regulatory reform; and trade liberalization. One framework for fast-tracking positive changes in these areas in Tohoku would be through the Special Economic Zone strategy now being formulated in Tokyo. Indeed, effective development strategies for Tohoku could serve as a model for growth in Japan as a whole. It is also important for senior American policymakers to reflect a sustained U.S. interest in Japan’s recovery and economic growth in the organization of our partnership with Japan, perhaps building on the subcabinet-level Economic Partnership for Growth established in 2001.

## Energy Strategy

The Great East Japan Earthquake and resulting tsunami damaged nuclear power plants (NPPs), thermal power plants, and oil refineries throughout the Tohoku region. The fuel meltdown in three reactors at the Fukushima Daiichi nuclear power station was a particularly grave consequence, and the crisis there has heightened public concerns over the safety of nuclear power plant operations in general. The Great East Japan Earthquake essentially voided Japan’s energy strategy released last

year that placed a key emphasis on nuclear energy. Japan's energy challenges are two-fold. First, the uncertainty over restarting NPPs, and more fundamentally, replacing aging reactors complicates efforts to supply stable and affordable electricity to consumers. Second, the importation of substitute energy fuels, mainly in the form of liquefied natural gas (LNG), comes at an additional expense to the Japanese economy, which was already struggling prior to March 11 and now faces an even tougher path to recovery. The government confronts the urgent need to craft a reliable and predictable strategy for short-term energy supply, while improving the safety of nuclear energy, contemplating Japan's future energy mix, and exploring the use of alternative sources, with profound consequences for Japan's own growth. Japan is not alone in confronting these challenges, and there are ample opportunities for bilateral cooperation in this field to promote nuclear safety, help Japan strengthen the resiliency of the power sector, and maximize stability in the future. These include a bilateral commission to study lessons learned from Fukushima; efforts to strengthen the international nuclear safety regime; bilateral energy forums to address key issues in the global energy market and promote better understanding of energy policy issues in both countries; clean technology demonstrations in Tohoku; and bilateral exchanges on energy sector resiliency.

## Health and Recovery

The people of the Tohoku region, on March 11 and beyond, were subject to multiple profound health tests: loss of life, mass dislocation, trauma, destruction of health infrastructure, and exposure to radiation. Their resilience has been inspiring, and as of October 2011, the population has been stabilized, thanks to a significant degree to the remarkable emergency mobilization by Japan's health community. Attention is now increasingly focused forward on the reconstruction process that lies ahead. That requires addressing several significant needs exposed by 3-11: to better handle the science, safety, preparedness, and communications surrounding radiation; to bring quality services to vulnerable, often elderly populations; and to build back better the region's health infrastructure, including the introduction of electronic health records, which can protect individuals in both normal times and during emergencies. In each of these areas, there is ample opportunity for innovation and progress, and space for smart U.S. support to advance Japanese initiatives. Potential avenues of collaboration include: establishing an independent panel of U.S., Japanese, and other experts to address the health implications of low-dose, long-term radiation in Japan in order to bring benefits to both Japanese citizens and the larger world community; forming a consortium of U.S. experts to provide strategic advice and identify specific technical expertise that will be most appropriate to support the reconstruction of the Tohoku health infrastructure; and developing twinning arrangements between U.S. and Japanese medical schools to help meet the special health service needs of Tohoku's most vulnerable populations, especially the traumatized, dislocated, and elderly.

## Lessons for the Alliance

One of the most impressive aspects in the aftermath of March 11 was the conduct of Japan and U.S. forces in Humanitarian Assistance/Disaster Relief (HA/DR) operations in the Tohoku region. The Japan Self-Defense Forces (JSDF) dispatched over 100,000 personnel to conduct search-and-rescue operations, provide relief supplies, and rehabilitate infrastructure critical to the overall relief effort. The U.S. government moved quickly to support Japan in this effort and together with

Japanese counterparts engineered what became the largest bilateral mission in the history of the alliance: OPERATION TOMODACHI. Organizing the response to the March 11 disasters was exceptionally complicated and challenging, but effective bilateral coordination and the rapid mobilization of resources were particularly critical to the mission's success. That said, even the most successful operations yield lessons learned, particularly when consideration is given to other variables that might have significantly complicated planning and execution in a regional contingency. Issues for further examination include providing adequate resources to U.S. Forces, Japan, to make it an operationally viable headquarters; reviewing the Bilateral Coordination Mechanism and bilateral coordination cells to include HA/DR scenarios; incorporating consequence management capabilities into contingency planning through the broad spectrum of HA/DR requirements that arose from experiences with OPERATION TOMODACHI; and assessing lessons learned about joint operations capabilities from this peacetime HA/DR contingency for joint operational capabilities in more complex security contingencies. The Self-Defense Forces should share its comprehensive expertise in HA/DR with other nations in the Asia-Pacific region to build regional capability and enhance confidence building.

## Strengthening Civil Society Linkages

For civil society in Japan—and in particular the nongovernmental organization (NGO) movement—the Tohoku disaster has presented an outstanding opportunity to demonstrate the value that Japanese nongovernmental organizations can bring to relief efforts. Indeed, Japanese NGOs have played a significant role in the Tohoku disaster response and are working to become sources of post-relief assistance on recovery and reconstruction. Yet, despite their substantial role in the response, Japanese NGOs face a number of formidable challenges. Acknowledging the positive trends and challenges facing the NGO movement, the Task Force has proposed a series of measures for the two governments, the international NGO community, universities, and the business community that would help to strengthen Japan's civil society sector and the civil society linkages between the United States and Japan after March 11. These could include bilateral coordination of humanitarian and development assistance with programs that encourage mentoring and partnership between U.S. and Japanese NGOs; exploring partnerships between the two militaries and American and Japanese NGOs on training, exercises, and seminars on humanitarian and disaster relief; encouraging and supporting a thorough evaluation of the role of the NGO movement in the response; developing the disaster response capacity of partners in Japan; and establishing bilateral partnerships focused on developing a professional cadre of humanitarian and international development professionals in Japan.



## INTRODUCTION

When a magnitude 9.0 earthquake shook the earth beneath the Western Pacific at 2:46 p.m. on March 11, 2011, it unleashed a massive nine-meter tsunami toward the coast of the Tohoku region of Japan's main island of Honshu. The results were devastating: 15,960 dead and over 4,000 missing; at least \$220 billion in destruction of infrastructure and assets; hundreds of thousands of internally displaced persons, with over 50,000 still in temporary housing six months after the disaster; and, of course, the meltdown and radiation leakages from the Fukushima Daiichi reactors. The disaster highlighted and compounded challenges already facing Japan: a rapidly aging society (55 percent of the victims in Iwate, Miyagi, and Fukushima prefectures were 65 or older); the fiscal weight of a nearly 200 percent debt-to-GDP ratio; the drive for energy security in a nation lacking natural resources; and declining public confidence in the nation's political leadership.

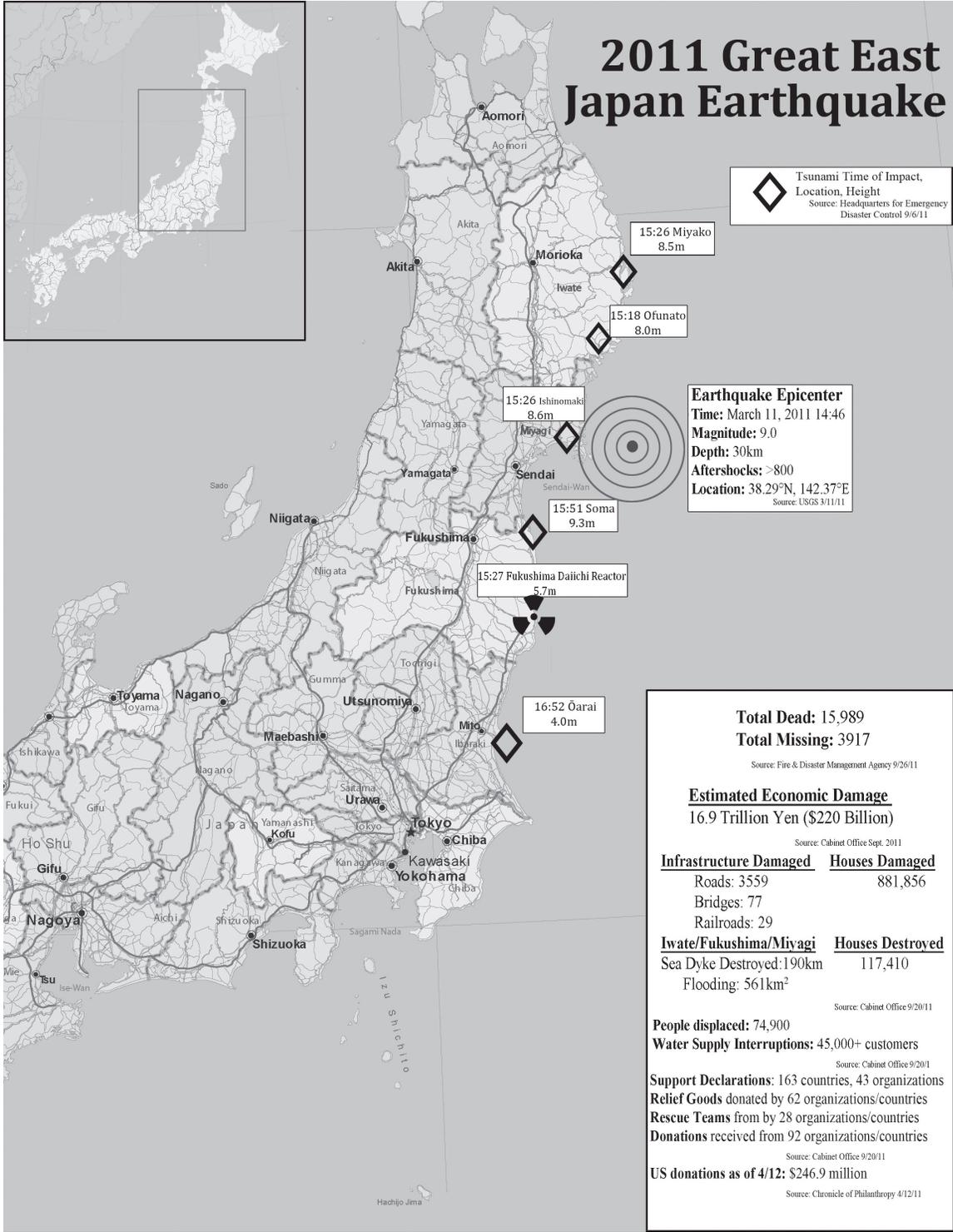
Yet the tragedy of March 11 also revealed deep reservoirs of strength in Japan's economy and national character. The world marveled at the remarkable bonding and perseverance of the citizens of Tohoku. Tens of thousands of citizens from across the country dropped their studies or work and traveled to Tohoku to help with relief efforts, belying the narrative about listless youth or weak civil society in Japan. When the nuclear crisis required conservation, citizens across Japan voluntarily cut their energy consumption by an amazing 25 percent in a nation already known for the highest energy efficiency in the world. The damage to Japanese factories in Tohoku interrupted supply chains across the industrialized world, revealing Japan's continued dominance of critical technologies. And Japanese industry defied early skepticism about its ability to recover global market share by bringing the majority of the damaged production back on line within a matter of months. The Japan Self-Defense Forces dispatched over 100,000 personnel in highly complex and sometimes dangerous relief operations that demonstrated their competence, bravery, and close ties to the U.S. military, which dispatched 24 ships and close to 20,000 personnel under OPERATION TOMODACHI. And with the prompt dispatch of rescue teams from 20 countries and relief goods and donations from 92 international organizations and 163 countries, the international community highlighted what opinion polls had shown for years: that Japan is one of the most respected and admired countries in the world.<sup>1</sup>

When the Center for Strategic and International Studies (CSIS) initiated the Partnership for Recovery and a Stronger Future in partnership with Keidanren, it was based on the Task Force members' strong conviction that Japan not only had the wherewithal to recover from 3-11, but

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1. According to the 2011 BBC Country Rating Poll, on average, among the 24 tracking countries surveyed in 2010 and 2011, 57 percent have a positive opinion of Japan's influence (the third highest ranking); only 20 percent held a negative view. "Views of US Continue to Improve in 2011 BBC Country Rating Poll," *BBC/Globescan*, March 7, 2011. [http://www.worldpublicopinion.org/pipa/pdf/mar11/BBCEvalsUS\\_Mar11\\_rpt.pdf](http://www.worldpublicopinion.org/pipa/pdf/mar11/BBCEvalsUS_Mar11_rpt.pdf)

# 2011 Great East Japan Earthquake



also to build the foundation for a stronger future. With that as the overall premise, the Task Force proceeded with four guiding principles:

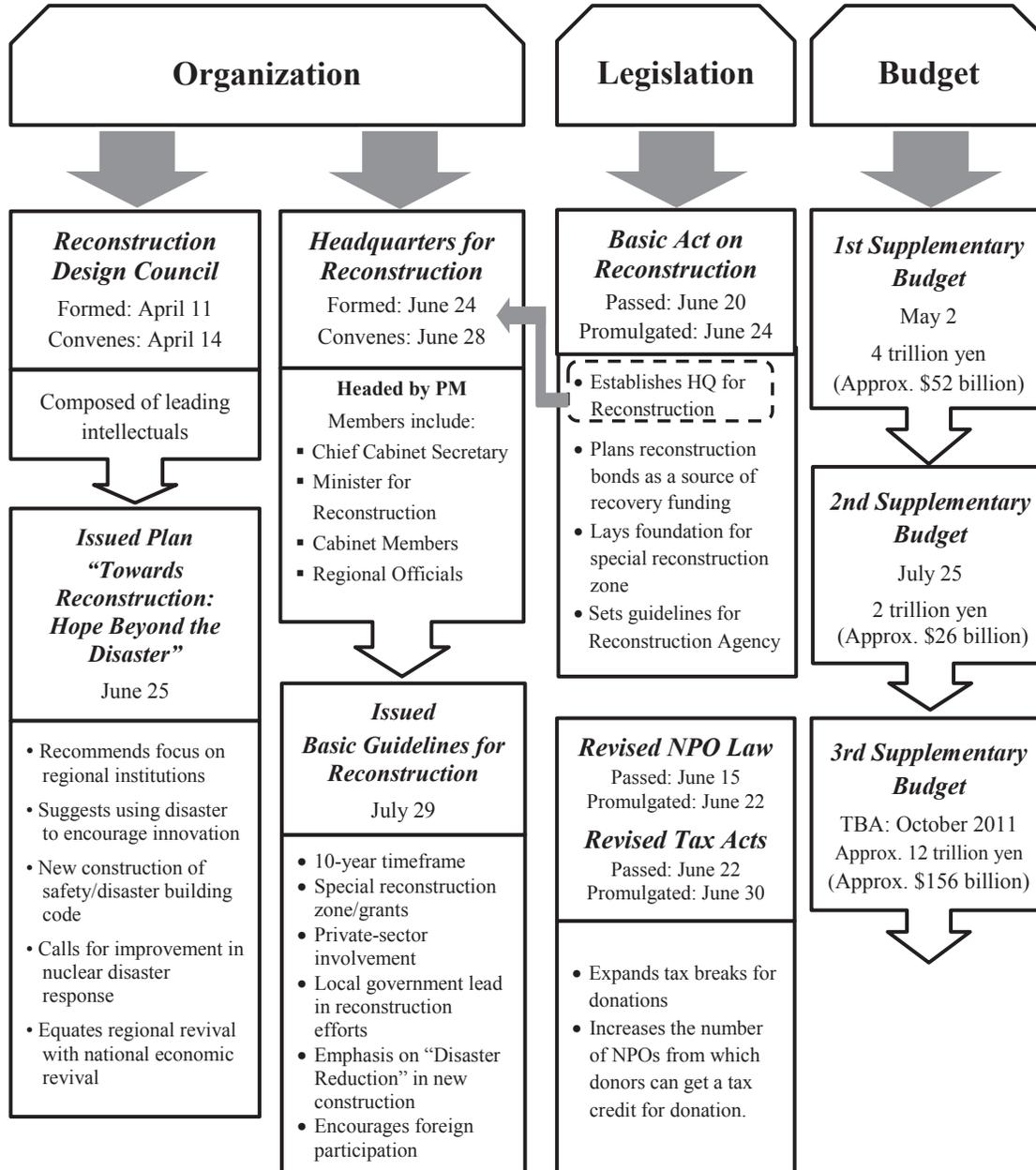
- 1. The world needs a dynamic Japan.** Japan is the third-largest economy in the world; a leading supporter of the institutions that underpin international order, such as the United Nations, International Monetary Fund (IMF), and the World Bank; the cornerstone of U.S. policy in Asia; and an indispensable pillar to maintaining an open and liberal political and economic order in Asia at a time of major power shifts in the region. While recovery from the disasters of March 11, 2011, will necessarily consume the attention of the Japanese government and people, the international situation is not standing still. Japan's ability to achieve a robust recovery and stronger future will have a major impact on the entire international system.
- 2. The Japanese people will choose their path.** No amount of *gaiatsu* (external pressure) will determine Japan's trajectory at this historic juncture. Despite popular frustration with the political classes in Nagata-cho—hardly unique to Japan—Japan's democracy works. The Japanese people will choose their own path to recovery. As Japan's closest ally, the United States can offer support and expertise based on the American experience, but the U.S. officials, business leaders, and scholars on the CSIS Task Force recognize that leadership for recovery has come and will continue to come from within Japan.
- 3. This is an opportunity to revitalize our partnership.** American public appreciation of Japan as an ally has never been stronger,<sup>2</sup> but we face a more complex international environment and new challenges to our 60-year-old alliance. The partnerships forged in the aftermath of March 11 demonstrated the depth of American affection and respect for Japan and the legacy of decades of work by leaders in both countries to solidify our bilateral relationship in all its dimensions. The March 11 disasters also revealed how much more could be done to broaden and deepen connections between U.S. and Japanese businesses, militaries, and civil societies. That broader web of relationships should be continued and strengthened in the years ahead. We must ensure that one positive outcome of the current challenge is a revitalized U.S.-Japan partnership.
- 4. The right strategy can lead not only to recovery, but also to a stronger future.** As many Japanese commentators have noted, the choices that the Japanese people must make on recovering and rebuilding from the March 11 disasters cannot be divorced from the larger set of choices that must be made to revitalize the Japanese economy and Japan's world role. We know from our own experiences that it is difficult for political leaders to ask citizens traumatized by natural disaster to consider not only returning to what they knew, but also the initiation of something new and enduring. The Japanese expert commissions organized to scope recovery and reconstruction planning have recognized this fundamental truth, but the mechanics for planning and implementation are still underway, and it will be important to continue steering the process toward improved competitiveness and economic growth in the months and years ahead.

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2. The Ministry of Foreign Affairs released the results of a poll on the image of Japan in the United States showing that 84 percent of the American public and 90 percent of opinion leaders consider Japan a dependable ally. "Opinion Poll: 2011 U.S. Image of Japan," Ministry of Foreign Affairs, June 9, 2011, [http://www.mofa.go.jp/announce/announce/2011/6/0609\\_02.html](http://www.mofa.go.jp/announce/announce/2011/6/0609_02.html).

# The Government of Japan's Actions

## *Response, Recovery, and Reconstruction*



## Building a Stronger Future and Revitalizing our Partnership

During the course of the Task Force working groups' research and study, the government of Japan and the business community including Keidanren stood up several critical councils and organizations to plan and implement reconstruction and recovery, and the government passed necessary supplemental budgets to pay for the job. Government activities are summarized in the adjacent chart. Keidanren responded proactively to the disasters. On March 14, the organization established the Keidanren Great East Japan Earthquake Headquarters and then established the Special Committee for Recovery and Restoration on March 24 to develop comprehensive plans for recovery. Keidanren published its first paper on March 16 urging the government to conduct search and rescue operations expeditiously and provide relief to the affected areas as soon as possible. On March 18, Keidanren launched a plan to transport relief goods to the people of Tohoku. The Special Committee first convened on March 31 and issued recommendations on various aspects of the recovery effort, including the urgent need to pass basic legislation for reconstruction; the establishment of a government agency to manage the response; and proposals on fiscal policy, financing reconstruction, and deregulation to support victims, secure employment, and revive the economy. Keidanren has since published several detailed proposals focused on the recovery, with main findings listed in the chart below.

The Task Force members benefited from continued interaction with Keidanren, Japanese scholars, and the Japanese and U.S. governments as each of these entities refined their own roles in recovery and reconstruction from March 11. The working groups sought to fill gaps in current planning; to frame policy choices that are still pending; to draw on U.S. experience in disasters such as Hurricane Katrina; and to highlight areas where Americans can contribute to recovery and reconstruction and broaden the enduring linkages between our governments, industries, and societies. The Task Force working group assessments and recommendations follow.

## Keidanren Actions in Response to the Great East Japan Earthquake

- March 14:** Keidanren Great East Japan Earthquake Headquarters established. Led by Keidanren Chairman Hiromasa Yonekura and Vice Chairman & Director General Yoshio Nakamura as deputy.
- March 16:** “Urgent Appeal for an Early Recovery and Restoration from the Unprecedented Earthquake Disaster” released (<http://www.keidanren.or.jp/english/policy/2011/019.html>).
- March 18:** Relief Goods Hotline transportation scheme launched (<http://www.keidanren.or.jp/english/news/announce/20110318.html>).
- March 24:** Special Committee for Recovery and Restoration established and chaired by Keidanren Chairman Yonekura and cochaired by Vice Chairmen Hiromichi Iwasa and Masahiro Sakane.
- March 31:** Inaugural meeting of the Special Committee for Recovery and Restoration. “Urgent Policy Proposal for the Recovery and Restoration from the Earthquake Disaster” released (<http://www.keidanren.or.jp/english/policy/2011/022.html>).
- April 11:** Keidanren Voluntary Electricity Peak-Cut Action Plan is announced (<http://www.keidanren.or.jp/english/policy/2011/027.html>).
- April 22:** “Proposal for an Early Legislation of the Basic Law for Recovery and Restoration” released (<http://www.keidanren.or.jp/english/policy/2011/034.html>).
- April 28:** “Request for Regulatory Reform Regarding Great East Japan Earthquake” released (<http://www.keidanren.or.jp/japanese/policy/2011/040.html>).
- May 13:** “Second Request for Regulatory Reform Regarding Great East Japan Earthquake” released (<http://www.keidanren.or.jp/japanese/policy/2011/043.html>).
- May 26:** FY2011 General Assembly Resolution, “Create NEW Japan beyond today’s national challenges,” released (<http://www.keidanren.or.jp/japanese/policy/2011/053.html>).
- May 27:** “Master Plan for Recovery and Creation of a New Japan” released (<http://www.keidanren.or.jp/english/policy/2011/054.html>).
- June 21:** Meeting with a delegation of the CSIS Partnership for Recovery Task Force, led by Amb. Richard Armitage (in Tokyo).
- July 11:** “The roles of Information and Communication Technologies (ICT) for Recovery and Restoration” released (<http://www.keidanren.or.jp/japanese/policy/2011/075/index.html>).
- July 14:** “First Proposal on Energy policy” released (<http://www.keidanren.or.jp/japanese/policy/2011/078/index.html>).
- July 21:** Meeting with Dr. Michael Green, CSIS Senior Adviser and Japan Chair, held at the Keidanren Summer Forum (in Karuizawa).
- September 14:** “Proposal for Taxation Reform in FY2012” released (<http://www.keidanren.or.jp/japanese/policy/2011/086/index.html>).
- September 16:** “Keidanren Growth Strategy 2011: Accelerating Growth through Private-Sector Dynamism” released (<http://www.keidanren.or.jp/english/policy/2011/089.html>).
- September 20:** “Keidanren Request for Regulatory Reform in FY2011” released (<http://www.keidanren.or.jp/japanese/policy/2011/088/index.html>).

# 1

## DISASTER PREPAREDNESS AND RECOVERY

### Introduction

On March 11, 2011—9 to 12 seconds before the first vibrations of a 9.0-magnitude earthquake off the northeast coast of Japan struck land—an advanced earthquake detection system deployed by East Japan Railway Company automatically cut the power supply and applied the emergency brakes on two bullet trains running through Sendai, reducing their 170 mile per hour speed by more than half before the strongest vibrations were felt just over a minute later. This is a vivid example of effective disaster preparedness that ensured zero injuries or deaths to rail customers on the 4,700-mile network that day and a success story for the international disaster preparedness community as a whole.

Japan's seismic engineering and tsunami warning systems are second to none, but the Tohoku region was simply overwhelmed by the size of the tsunami that struck the country on March 11. The extent of the damage in the Tohoku region serves as a reminder that full disaster prevention is impossible, and that governments and societies would do well to think of disaster preparedness in terms of reducing risk, not averting hazards entirely. The experience of March 11 also demonstrates that an optimal risk reduction strategy must combine improvements in physical infrastructure with the reinforcement of people-oriented strategies such as smart evacuation procedures and the inclusion of local communities in preparedness planning. Furthermore, the Tohoku disaster underlines the importance of public participation in making the transition from relief to sustainable recovery. These are some of the same lessons that the United States learned in the wake of Hurricane Katrina.

The United States and Japan now have an opportunity to partner together to refine disaster preparedness and sustainable recovery strategies and to share our experiences and expertise with other nations in the Asia-Pacific that will inevitably face comparable disasters in the years ahead.

### Analysis

While this working group considered the situation of humanitarian relief following the disaster, participants largely agreed that immediate relief to disaster-affected populations was being sufficiently addressed by the government of Japan, Japanese Self-Defense Forces, the Japanese Red Cross, and nongovernmental organizations. The rapid clearing of main transport routes, the provision of emergency shelter, food and water, and the supply of medical care and other social services have been handled with competence by local authorities in Japan despite the scale of the disaster. Certainly, the availability of land for the construction of temporary housing remained a

pressing issue. However, the shelters that have been constructed are exemplary, and the working group trusted that the government of Japan would hasten to implement the necessary measures to accommodate populations who did not yet have a transitional solution. For this reason, working group members thought it more useful to concentrate their attention on issues of disaster risk reduction and an unhampered transition to recovery.

Discussions about reduction and preparedness acknowledged an overall technical mastery of engineering measures and early warning systems in Japan. Therefore, the working group focused its discussions less on the hard science of risk reduction and more on the “soft” infrastructure measures and expertise that require further development. Considerations surrounding the transition from relief to recovery were driven by the wish to support a transparent and inclusive reconstruction process, one that incorporates the views of local government, local business, and disaster-affected communities in all aspects of national planning. The incorporation of local perspectives in public decisionmaking proved to be a particularly sensitive issue following Hurricane Katrina and will surely require an equal level of finesse in the case of Tohoku.

## Risk Reduction and Preparedness

If it has been said once, it has been said a thousand times: if there was a country able to withstand the disaster of March 11, it was Japan. From cutting edge seismic engineering to state-of-the-art earthquake and tsunami early warning systems, Japan has made remarkable investments in disaster risk reduction over the last 15 years.<sup>1</sup>

Engineering experts from around the world have noted that because Japan invested in ductile, earthquake-resistant construction for all new buildings and the retrofitting of older structures, most buildings, not just in Sendai, but across the capital city of Tokyo, withstood both the initial 9.0 quake as well as the hundreds of aftershocks that followed. Innovative engineering technologies that allow buildings to absorb shocks and walls to slide contributed to the integrity of many buildings in the face of the extensive shaking and demonstrated Japanese leadership and ingenuity in this area of disaster risk reduction.<sup>2</sup>

State-of-the-art earthquake and tsunami warning systems were also in place in Japan at the time of the disaster. Following the detection of the first earthquake shock waves, the newly launched nationwide earthquake warning system effectively triggered public alerts via cell phone, radio and television.<sup>3</sup> The Japan Meteorological Agency (JMA) followed up the earthquake warning some minutes later with a tsunami warning based on data from the National Oceanic and

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1. Japan spends 1.2 percent of its national budget on disaster risk reduction activities, above and beyond the spending of many other industrialized countries. In its latest regional progress report of the Hyogo Framework for Action (HFA) 2005–2015, the foremost international guide on disaster risk reduction, the UN International Strategy for Disaster Reduction (UNISDR) scores Japan above all other 27 countries of the region across the five HFA priority areas with the exception only of China which scored just above Japan in a single priority. UNISDR, *HFA Progress in Asia-Pacific: Regional Synthesis Report 2009–2011* (Bangkok: UNISDR, 2011), [http://www.preventionweb.net/files/21158\\_hfaprogressinasiapacific20092011.pdf](http://www.preventionweb.net/files/21158_hfaprogressinasiapacific20092011.pdf).

2. Brian Vastaq, “Japan a leader in engineering earthquake-proof structures, helping to limit damage,” *Washington Post*, March 12, 2011, <http://www.washingtonpost.com/wp-dyn/content/article/2011/03/11/AR2011031106948.html>.

3. The new warning system was launched in 2007.

Atmospheric Administration's (NOAA) Data Buoy Center.<sup>4</sup> While some parts of the country had less time to evacuate than others, it would seem from all accounts that communities did receive both earthquake and tsunami warnings and were well-versed on how and where to move.

If there is an area where the Japanese performance fell short, it was in the experts' prediction of the size of tsunami waves. It has been widely acknowledged that tsunami scenario projections, based on a recurrence of the 1896 Meiji Sanriku tsunami, were not adequate for the March 11 disaster. At the same time, early tsunami detection data did not calculate the full length of the earthquake and, thus, resulted in real-time underestimations of the size of the tsunami surge. Pre-existing infrastructure was not sufficient to mitigate loss of life and economic damages. Sea walls were at their maximum only 10 meters high and only three meters high near Sendai.<sup>5</sup> Evacuation sites were designed to a maximum of three stories rather than four or five stories as was required.<sup>6</sup>

Japan's best experts have acknowledged this analytical shortcoming and have characteristically worked to improve their modeling and projections. Japanese transparency on tsunami projection errors has been forthright and constant. At the same time, Japanese experts have worked tirelessly to begin making technical adjustments to mitigation and early warning planning. In specific, the JMA released a revised early-warning system in August 2011 that comprises a first three-minute tsunami warning that is more cautious in estimating wave height to be followed by more precise details about wave surge once more precise information is available.<sup>7</sup> Additionally, the various reconstruction models described in the Reconstruction Design Council's report and in the Basic Guidelines for Reconstruction stress the importance of a *combination* of physical mitigation measures, including sea walls, coastal dikes and setback levees in addition to the construction of much higher evacuation towers.<sup>8</sup>

Given that the most important technical lessons would seem to have been identified by Japanese experts and work initiated to rectify them, building U.S.-Japan partnerships that could develop a deeper knowledge base about the "soft infrastructure," or people-oriented measures, for disaster prevention and preparedness would be particularly useful. It was stressed by a multitude

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4. The system is run by the National Research Institute for Earth Science and Disaster Prevention, but the Japan Meteorological Agency sends out the earthquake warnings. Lucy Birmingham. "Japan's Earthquake Warning System Explained," *Time*, March 18, 2011, <http://www.time.com/time/world/article/0,8599,2059780,00.html#ixzz1WcDJpeME>.

5. *Ibid.*

6. The story of local government officials in Minamisanriku being swept off the evacuation roof while working the crisis on March 11 is a stark illustration of the inadequacy of evacuation towers.

7. "The agency will start discussions of a more thorough overhaul in September. Imamura hopes that, instead of the present single figure for the height of an incoming wave, the next revision will include plans for detailed inundation maps estimating what levels a tsunami would reach at different locations on shore. The United States has been working on such a system since the Indian Ocean tsunami in 2004." See David Cyranoski, "Lessons from Tohoku wave lead to drop in early-warning predictions," *Nature Magazine*, August 11, 2011.

8. See Reconstruction Design Council, *Towards Reconstruction: Hope Beyond the Disaster*, Report to the Prime Minister of the Reconstruction Design Council in response to the Great East Japan Earthquake, June 25, 2011, <http://www.mofa.go.jp/announce/jfpu/2011/7/pdfs/0712.pdf>. Experts have also noted that a combination of mitigation strategies is the only realistic way forward as the existing sea walls cost \$1.5 billion to construct and to build them much larger would be cost-prohibitive. See Norimitsu Onishi, "Seawalls Offered Little Protection Against Tsunami's Crushing Waves," *New York Times*, March 13, 2011, <http://www.nytimes.com/2011/03/14/world/asia/14seawalls.html>.

of CSIS Task Force counterparts in Japan<sup>9</sup> that enhanced prevention and preparedness would require an approach that focused as much on engineering innovations as it did on the reinforcement of human behavior. Some people-oriented areas of research include augmenting public awareness of potential inundation areas, community-based hazard mapping, fine-tuning evacuation behavior, “mutual aid”<sup>10</sup> disaster training, as well as deliberately creating a space for the role of women, children and the elderly in risk reduction planning. Inherent in the current thinking in Japan is the concept that disaster prevention *per se* is not always possible and that it is smarter to develop both hard and soft infrastructure to reduce risk.<sup>11</sup>

Preparedness is also an area that could benefit from further soft infrastructure research. Initial interviews of survivors would seem to demonstrate that there were multiple variables at play in determining the speed and manner in which populations evacuated, much of which had to do with what neighbors were doing, the relative age of family members, the need to check on loved ones, etc. The human component of evacuation was also a major issue during Hurricane Katrina, and one that merits additional cross-cultural analysis to deepen international understanding. To call for an official evacuation in a timely manner is one thing. To plan for the inevitable obstacles to evacuation is another. The United States learned in New Orleans that many citizens did not have the means to evacuate, either in terms of transport or a place to go. Others required assistance in moving the sick and the elderly as well as business assets and household pets. More work needs to be done to study evacuation procedures, with particular attention to creating individual, family, and business preparedness plans that are both highly tailored and routinely practiced.

## Transition from Relief to Recovery

It is no secret that there has been considerable frustration regarding the post-March 11 earthquake recovery process in Japan. Unlike the reconstruction of Kobe following the Great Hanshin earthquake of 1995, the Great East Japan Earthquake and Tsunami of 2011 devastated a large and diverse geographic area. Moreover, it occurred in a part of the country with a diminishing economy and a shrinking population. From nearly day one of the disaster relief effort, there has been an emphasis on using the opportunity of the disaster to re-conceptualize the Tohoku economy and physically restructure the communities that live there. As a result, the transition from relief to recovery has presented a highly complex challenge for the government comprising a range of design, legislative, and political obstacles. Larger macroeconomic and development planning aspects of the challenge are dealt with by the economics working group, but it is important to note several things here with respect to efforts on the ground.

First, Japanese government authorities performed the important relief functions such as clearing roads, removing large amounts of debris, and accommodating displaced persons in shelters, or

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9. The cost-effectiveness and added benefits of soft infrastructure was mentioned by Japanese counterparts during the Asian Disaster Reduction Center (ADRC) East Japan Earthquake Expert Group Meeting of May 29–31 and during the CSIS Task Force Trip to Japan of June 19–23.

10. The Reconstruction Design Council discusses the importance of “mutual aid” in its report, June 25, 2011.

11. The Great East Japan Earthquake and tsunami showed that not all disasters can be prevented, but loss of life and economic damages can be minimized through reduction methods. See Reconstruction Design Council’s thinking on this matter, June 25, 2011.

where not possible, assisting them with rental situations.<sup>12</sup> The speed with which authorities and local communities cleared dangerous debris and reopened community facilities was stunning for those in the working group who had seen similar efforts after Katrina or in other disasters. However, the local communities in Tohoku clearly expressed concern that the process toward sustainable recovery was slow and unpredictable. This is not an uncommon challenge after large-scale disasters, as U.S. federal, state, and local governments found in the wake of Katrina. However, it will be important for the Japanese government to convey a predictable process for moving from recovery to reconstruction in order to restore confidence to the people in Tohoku and to avoid the outward migration of citizens uncertain about future prospects. The experience of the United States in Katrina suggests that without establishing a clear plan or process for reconstruction, citizens who have relocated are decreasingly likely to return the longer government officials deliberate over reconstruction.

U.S. challenges in the wake of Hurricane Katrina suggest other lessons for Japan as well. In the instance of the U.S. disaster, it was clear from the outset that rebuilding would require a significant amount of change, particularly in hardest-hit New Orleans. At the time of the hurricane, the city was plagued by low economic growth and a dwindling population. When it came time to rebuild, many stakeholders believed that recovery not only required reinforced physical risk reduction infrastructure through an enhanced Mississippi River levee system, but also called for an economic and structural overhaul of the city. Therefore, the recovery process—like that in Tohoku—created many governance challenges and was fraught with tough decisions about land-use regulation, urban planning, and investment in social services.

The situation in New Orleans became rapidly politicized. While pre-existing issues of race and poverty in the city were a major component of the politics, the tension between restoration and change heightened pre-existing sensitivities. In post-disaster environments generally, governments are faced with a heavy burden as they seek to restore normalcy when change is inevitable. Federal, state, and municipal relations were highly strained post-Katrina, in part because the various levels of government were not well coordinated and had very different ideas about what the remaking of New Orleans was supposed to look like.<sup>13</sup>

A compelling best practice of disaster recovery is that it is most successful when both its design and implementation are as “localized” as possible. This can be most successfully executed through government decisionmaking that happens in close proximity to affected-areas and through the participation of affected populations in all aspects of the process. Two good examples of decentralized recovery are the case of the Indonesian government post-2004 Indian Ocean tsunami and that of the government of Pakistan following the Kashmir earthquake. In both instances, the governments chose to establish national reconstruction agencies with headquarters in the disaster-affected regions rather than in capital cities. In Indonesia, the government set up the Re-

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12. It should be noted that the provision of temporary housing has emerged as a significant challenge because of the lack of public space available for building. Municipalities with little land for building are struggling to accommodate displaced persons through other options such as rental housing or in structures further from their communities of origin. See Earthquake Engineering Research Institute (EERI), “The March 11, 2011, Great East Japan (Tohoku) Earthquake and Tsunami: Societal Dimensions,” EERI, Oakland, CA, <http://www.eqclearinghouse.org/2011-03-11-sendai/files/2011/03/Japan-SocSci-Rpt-hirez-rev.pdf>.

13. Robert B. Olshansky and Laurie A. Johnson, *Clear as Mud: Planning for the Rebuilding of New Orleans* (Washington, DC: American Planning Association, 2010).

construction and Rehabilitation Agency of Aceh and Nias (BRR), headquartered in Banda Aceh.<sup>14</sup> In Pakistan, the government set up the regionally located Earthquake Relief and Reconstruction Agency (ERRA) to rebuild earthquake-affected areas across Kashmir and Khyber Pakhtunkhwa. The decentralized posture of these agencies—far from the politics of central governments—is widely considered to have been critical to their effectiveness.

Further to the localization of decisionmaking, public participation will be paramount to Tohoku recovery. Crafting coherent ways to encourage public participation, however, can prove challenging and can also be very costly. In post-Katrina New Orleans, there were multiple attempts to ensure the involvement of disaster-affected populations in public decisionmaking, many of which failed. Ultimately, government officials hired an outside consulting firm, *AmericaSpeaks*, to mastermind the facilitation of large-scale town meetings under the auspices of the Unified New Orleans Plan.<sup>15</sup> Given the scale of the destruction across Tohoku as well as the compound nuclear disaster at Fukushima, public participation in the remaking of the region will be central to moving forward in a thoughtful and sustainable manner.

The issue of collective relocation vs. small-scale residential district improvement also merits attention, with consideration of each method's potential impact on community and economic revival. Following Katrina, government officials considered the idea of mass relocation but ultimately decided to appropriate grants to individual homeowners who wanted to move back under the auspices of a program called Road Home. The program (apart from being heavily criticized for delays) ultimately resulted in patchy redevelopment that made it difficult for the city to provide social services in a cost-effective manner. Even today, one can see that while some people have returned to neighborhoods like the Ninth Ward, the community has never truly regained its vitality. Apparently, similar relocation issues surfaced in Japan following the Niigata disaster of 2005<sup>16</sup> and merit further study as the Tohoku recovery process moves forward. The role of small business in supporting collective relocation and speeding the overall rate of recovery should also be examined.

## Recommendations

The working group recognized the important cultural, political and economic differences between the United States and Japan and held the overall Japanese capability for disaster preparedness in high regard. It also acknowledged that the challenges of recovery in Tohoku bear striking similarities to those faced after Katrina. To that end, the working group felt that the United States has concrete experiences—some painful—that may help to guide Japan's planning process. In the context of a highly complex post-disaster environment, there are a range of suggestions that can be made. The following recommendations can be implemented in the near term and, in nearly all instances, capitalize on American and international experience and/or the potential for a U.S.-Japan partnership. They are listed as follows:

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14. BRR and Partners, *Aceh and Nias Two Years After the Tsunami: 2006 Progress Report* (Jakarta: BRR, December 2006), [http://reliefweb.int/sites/reliefweb.int/files/resources/8F7E4BD64414C4C449257252001D DD68-Full\\_Report.pdf](http://reliefweb.int/sites/reliefweb.int/files/resources/8F7E4BD64414C4C449257252001D DD68-Full_Report.pdf).

15. Olshansky and Johnson, *Clear as Mud*.

16. As explained by Mashiro Sawada, Nagaoka Institute of Design, during a presentation at Asian Disaster Reduction Center conference, Tokyo, May 31, 2011.

1. **“Localize” decisionmaking of the Reconstruction Headquarters in Tohoku.** While the Japanese government has chosen to set up Reconstruction Headquarters in Tokyo with a “field office” in Sendai, the government may wish to follow the good practice examples of Indonesia following the 2004 Indian Ocean tsunami and Pakistan after the 2005 Kashmir earthquake and move the bulk of reconstruction operations to the affected region of Tohoku. The United States did not structure recovery in this way following Katrina, and, as a result, there was significant confusion and disorder between federal, state, and municipal authorities. Closing the geographic gap between the Reconstruction Headquarters and prefectural and local government reconstruction bureaus could facilitate greater understanding of the priorities of different levels of government and, at the same time, minimize the potential for corruption. It would also send a strong signal of confidence to disaster-affected populations.
2. **Create a transparent and state-of-the-art reconstruction financial tracking system.** In addition to setting out fiduciary guidelines for reconstruction projects that are in line with relevant ministries, the government may wish to prioritize the public awareness of financial recovery information. It can support local government entities to do this under the auspices of their prefecture-level reconstruction plans via three basic steps used by Indonesia’s BRR post-tsunami: (a) public signboards that provide basic information on total budgets, wage rates, and allowable overheads; (b) municipal-level public readings of all bids from suppliers and findings by audit agencies; and (c) recording all incoming funds and programs into municipal financial records.<sup>17</sup> Further to the system itself, the government could compose an independent board of overseers with membership drawn from affected communities.
3. **Formalize emergent city twinning networks within Japan and create a platform for them to share best practices.** A city twinning network has emerged since March 11, facilitated by the pioneering efforts of Hyogo prefecture, and now including some six prefectures from the Kinki, or Kansai, region.<sup>18</sup> The network should be formalized and expanded in order to share municipal-level information and best practices for recovery. Through the creation of an on-line interactive platform, for example, the network could “crowdsource” ideas and solicit direct funding from private sources. It could also nurture public-private partnerships between local governments and corporations through locally initiated projects and the secondment of experts from the business community to municipal offices. Economic organizations could potentially function as brokers to match corporate skills with recovery needs through this network. Such an effort would function to decentralize the reconstruction process and ensure assistance through multiple channels.
4. **Take a methodical approach to public participation.** Communication with disaster-affected communities during recovery is a continuous process that requires multiple channels and frequent updating to ensure that information is kept current. The government can instill trust through transparency and reassurance about changes that are occurring in people’s communities. Investments in public participation can be time-consuming and costly. Therefore, it is important to be as scientific and methodical about public participation as possible. The size of groups, frequency of meetings, and tools for eliciting feedback are all important components to

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17. BRR and Partners, *Aceh and Nias Two Years After the Tsunami*.

18. ERRI, “The March 11, 2011, Great East Japan (Tohoku) Earthquake and Tsunami.”

managing an effective public participation campaign. Japanese authorities may wish to consult with American counterparts to understand better what worked and what did not following Katrina. The Japanese authorities may wish to establish a roundtable of town meetings similar to the American model—*TohokuSpeaks*—to establish greater knowledge about affected communities. Japanese success in this regard is particularly important given diminishing public approval of the government following the Fukushima disaster.

5. **Make a historical documentation of public decisionmaking and inter-governmental relations throughout recovery.** There have been repeated calls to use the response to and recovery from the March 11 disaster as a learning tool for the future. One of the most important areas of potential research involves the roles of different levels of government in relief and recovery. Rather than providing “lessons learned,” which often synthesize learning to such a point that it risks losing a level of richness, Japanese academics may wish to document the first year of public decisionmaking and inter-governmental relations through a candid storytelling of government actions since March 11. This would be an important contribution to the international disaster community and a very useful tool for other disaster-affected governments. An excellent example of this kind of historical documentation comes from Robert B. Olshansky and Laurie A. Johnson following the Katrina disaster. It is entitled *Clear As Mud: Planning for the Rebuilding on New Orleans* and could be replicated for Japan.<sup>19</sup>
6. **Examine the establishment of a U.S.-Japan Facility for Disaster Risk Reduction and Recovery.** A facility for disaster risk reduction and recovery in the Tohoku region to study cutting-edge methodology for disaster reduction would allow the United States and Japan to build disaster expertise and nurture their lasting bilateral alliance. While there are many multilateral networks across the Asia-Pacific that regularly convene experts to discuss issues of disaster risk management, real strides in country-specific learning require a smaller grouping of experts able to work with each other on a daily basis to build an applicable evidence base. The Australians and Indonesians created a similar facility in Jakarta in July 2010 to reflect their strong relationship and united commitment to disaster risk management. The facility, staffed with climate scientists, engineers, urban planners and other disaster specialists from the two countries, functions as a lab, offering unprecedented and continual bilateral learning through scientific testing and experimentation.<sup>20</sup>

The U.S. and Japanese governments might consider supporting research focused initially on the “soft” or people-oriented aspects of disaster risk reduction and recovery, deemed so important following the March 11 disaster and channel that learning into larger regional disaster networks such as the Association of Southeast Asian Nations (ASEAN) Coordinating Center for Humanitarian Assistance on Disaster Management (or AHA Center, based Jakarta), the United Nations International Strategy for Disaster Reduction (UNISDR) Institute for Urban Risk Reduction (URR) (Incheon), and the Asian Disaster Preparedness Center (ADPC).

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19. Olshansky and Johnson, *Clear as Mud*.

20. The Australia-Indonesia facility cost approximately \$68 million for the first five years including the procurement of two supercomputers to conduct a significant level of climate modeling.

7. **Use the disaster to initiate bilateral learning about the role of businesses in disaster relief and recovery.** The exposure of economic assets to disaster risk is a major issue for industrialized countries such as the United States and Japan. American and Japanese disaster experts should build a research platform to study the role of large and small businesses in disaster.<sup>21</sup> The Tohoku region, with the support of the business community, may wish to establish a network of small and medium-sized business owners that could meet during the course of recovery to match capabilities with needs and to build longer-term public-private partnerships for the next disaster. Such a network would also be useful to larger multinational corporations seeking local entry points for investment.<sup>22</sup>

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21. Louisiana State University's Stephenson Disaster Management Institute (SDMI) has committed to promoting a cultural shift in the value of preparedness through a national initiative in small business preparedness, as well as training business leaders about their roles in disaster response and recovery. It might be valuable to both countries and to the international community to create a bilateral research initiative between SDMI and a Japanese university, such as Tohoku University, to study the role of small and medium-sized businesses in disaster risk reduction and recovery more carefully.

22. The Business Civic Leadership Center (BCLC) at the U.S. Chamber of Commerce has proposed to work with the U.S. Agency for International Development (USAID) and other stakeholders to develop a Pacific Rim Coordinating Center (PRCC) that builds upon the strengths of existing initiatives and also engages the capabilities, expertise, and resources of the private sector. The center will be a hub for stakeholders to meet, build personal relationships, identify ways to collaborate, share best practices, and build upon each other's strengths.

As a first stage in developing the PRCC, BCLC plans to build an online map and database to support the work of public-sector and private-sector stakeholders engaged in Pacific Rim disaster mitigation and response, and in community resiliency. To be designed and implemented in 2011–2012, the platform will engage communities, government agencies, the private sector and AmChams, and NGOs throughout the Pacific Rim to collect and map (1) private-sector contributions to recent disaster and capacities for future disasters and (2) the location of private-sector stakeholders that have been trained in disaster risk reduction and appropriate donations following a disaster.

# 2

## ECONOMIC RECOVERY

### Introduction

The March 11 crisis was the most catastrophic event in Japan since World War II and dealt a serious blow to the economy. The 9.0-magnitude earthquake and subsequent tsunami caused over \$200 billion in damage to infrastructure; reduced consumer confidence and demand; and disrupted the production chains and energy supply. The March 11 tragedies also illuminated several challenges Japan was already facing such as deflation, an aging society, and massive public debt, which prompted Moody's Investors Service (though notably *only* Moody's) to downgrade Japan's sovereign debt rating in August. The government now confronts a difficult balancing act between stimulus and debt reduction as it devises a growth strategy that must address all of these challenges with urgency.

Nevertheless, there are reasons to be confident about Japan's capacity to recover from these disasters and to forge a path toward sustainable growth. Japan remains a leader in technology as evidenced by earthquake detection systems and other advances that saved countless lives. The fact that the global supply chain was disrupted after March 11 speaks to Japan's vital roles as a source of advanced technology products. The rapidity with which Japanese corporations brought production back on line demonstrated a unique agility in manufacturing organization and processes in Japan and corporations are investing in Tohoku.

From the macroeconomic point of view, Japan is expected to return to positive economic growth in 2012 with a growth rate of 2.3 percent in real gross domestic product (GDP) according to the International Monetary Fund. It is clear that, at least in the short-term, domestic demand associated with recovery efforts have had positive effects on Japan's economic growth. That is the usual pattern after natural disasters require rebuilding of infrastructure, and though economists debate whether replacing assets destroyed should count as real increases in national wealth, the momentum provided by reconstruction should not be discounted. Already two governmental supplementary budgets totaling \$78 billion have passed through the Diet and a third budget of \$156 billion is expected to pass before the end of the year. The legislation enacted in the summer of 2011 authorizing the issuance of deficit-financing bonds provides a sound financial basis for funding government operations including those related to recovery and reconstruction. Moreover, legislation outlining basic guidelines for reconstruction including grants for local governments and a system of special zones also cleared the legislature over the summer with detailed plans to emerge in late 2011 or 2012. However, the positive growth projected for 2012 does not ensure sustained growth beyond that point. The critical need is for a longer-term growth strategy.

## Analysis

The CSIS Task Force heard requests at all levels in Tohoku—from city ward to prefectural assembly—for greater Japanese and foreign direct investment in their region. Those Task Force members exploring Tohoku for the first time were deeply impressed with the region's strengths, including: a highly educated and motivated work force; natural beauty and attractions for tourism; responsive local and prefectural governments; and a strong research and scientific base particularly at Tohoku University in Sendai, which ranks third in the world in material sciences.<sup>1</sup> These positive factors are encouraging, but government efforts will be necessary to create an attractive environment for future corporate investment. In surveying Japanese and American private-sector leadership, the Task Force found a consistent list of priorities that would lead them to maintain and expand their presence in Tohoku and in Japan as a whole. These include: a stable energy supply; tax reform; regulatory reform; and trade liberalization. One framework for fast-tracking positive changes in these areas in Tohoku would be through the Special Economic Zone strategy now being formulated in Tokyo. Indeed, effective development strategies for Tohoku could serve as a model for growth in Japan as a whole.

## Energy Policy

The most immediate task will be to establish medium- and longer-term energy strategies that reduce uncertainty for the private sector and increase confidence among a public rattled by the radiation leakages at the Fukushima Daiichi nuclear power plant. Task Force assessments and recommendations on energy are detailed in a subsequent chapter of this report, but it is important to note here that decisions made in the near term with respect to energy policy could have immediate and long-term implications with respect to corporate planning for investment and manufacturing. In June of this year, the government established a cabinet-level council on energy and environment tasked with introducing measures to stabilize supply in the near term and develop a comprehensive strategy going forward. The basic direction will become clear by the end of 2011 and final details are expected by 2012. Transparency in this process will be critical in reassuring the private sector and the public as Japan contemplates its energy future.

## Tax Policy

Japan faces a difficult challenge of how to finance the enormous cost of reconstruction given the country's extremely high debt-to-GDP level, demographic profile, and the desire to avoid aggressively raising taxes, which would further restrain the country's anemic economic outlook. The current debate centers on whether to combine a reduction in corporate tax rates with phased-in adjustments in the income tax and other taxes to support reconstruction. (The government also is considering a gradual increase in the consumption tax strictly to shore up social security.) As these policies evolve, Japan's economic policymakers may want to consider that cuts in individual income and municipal tax rates could have a stimulative effect in encouraging greater levels of labor force participation and capital formation. Japan should also consider aggressively reducing central government expenditures wherever possible. Efforts to generate a sound and sustainable fiscal

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1. Thomson Reuters, "Thomson Reuters Announces Ranking of Top Japanese Research Institutions for All Fields, 2000–2010," press release, April 13, 2011, [http://thomsonreuters.com/content/press\\_room/science/japanese\\_research\\_ranking](http://thomsonreuters.com/content/press_room/science/japanese_research_ranking).

pathway, coupled with regulatory liberalization, a stable supply of competitively priced energy, and Special Economic Zones, will help propel Japan's growth rate to a higher level.

## Trade Policy

Trade liberalization initiatives should constitute another core element of the regional recovery and national growth strategy as a means of expanding export opportunities and harmonizing regulatory standards to spur investment. Fewer Japanese and foreign firms are viewing Japan as the right platform to take advantage of dynamic growth in the Asia-Pacific region as a whole. The disaster of March 11 has accelerated decisionmaking within Japanese and foreign firms that need to decide whether they can continue competing in Asia from manufacturing, research and development, and service assets based in Japan. Even before March 11, a majority of Japanese and Western firms were viewing the Japanese market as disconnected from Asia-Pacific markets. One factor in this is the high yen, but it is hardly the only or decisive variable, and the attraction of operating and exporting from Japan would be significantly enhanced by greater trade liberalization and participation in agreements such as the Trans-Pacific Partnership (TPP) or similar ongoing negotiations with Australia, the European Union, China, and Korea. Obviously TPP would do the most to enhance U.S.-Japan economic integration and strengthen overall transpacific trade architecture, but from the perspective of revitalizing Japanese exports and sustaining and growing jobs inside Japan, all of these agreements have merit. This is particularly true given the lack of momentum in global trade talks at the World Trade Organization (WTO).

## Special Economic Zones

Special economic zones (*tokku*) in Tohoku can also serve as a powerful model for sustainable growth and a symbol of dynamism of Japan's economic future. A fundamental issue for the zones is the degree to which a business-friendly environment can be established. The current levels of corporate taxation and the regulatory environment, including inflexible labor laws, are well-known examples of how Japan's policies impede investment from within and without. However, a strategy for Special Economic Zones, which prioritizes private-sector-led job creation in the region and which overrides strong sectionalism among and between central and local governments can attract investment that the citizens and governments in Tohoku clearly want.

The Basic Guidelines for Reconstruction adopted by the government on July 29 make specific reference to Special Economic Zones, building on recommendations submitted in June by the government-sponsored Reconstruction Design Council. The Council stressed that local municipalities play a central role in reconstruction planning and a coordination mechanism between central and local governments is under consideration with details to be included in legislation to be finalized by the end of this year. The success of the process will depend on how collective actions among central, prefectural, and municipal governments work and how they collaborate with the private sector. The government should ensure that planning for the Special Economic Zones takes full account of private-sector incentives and does not assume an "if you build it they will come" philosophy.

The success of the Special Economic Zones also depends on the balance between local programs and regional initiatives that would benefit from economies of scale. The legislation on special zones could include multiple layers, but the parameters remained unclear as of this writing.

For that reason, there is considerable support within Japan's business community for a Tohoku-wide Special Economic Zone that would provide scale. The Council introduced the term "open reconstruction," presumably a reference to general principles such as Japan's WTO obligations and foreign direct investment. This will naturally be an area of particular interest for foreign firms interested in investing in Tohoku in the future. Finally, sustaining support for small and medium enterprises (SMEs) outlined in the first two supplementary budgets (such as increased loans, temporary reduction of interest rates, and investment mechanisms) will also prove critical, as will investment in infrastructure such as information and communication technology (ICT).<sup>2</sup>

The U.S. experience with federal tax incentives for localities affected by Hurricane Katrina in 2005 could prove instructive for Japan as it develops assistance plans for the Tohoku region. For example, a 2008 study by the U.S. Government Accountability Office (GAO) found that Gulf states authorized to allocate and oversee the use of federal tax incentives under the Gulf Opportunity Zone Act (GO Zone Act) generally did so on a first-come, first-served basis without consistently targeting the most damaged areas, which allowed less-affected areas to receive benefits at the start of the program.<sup>3</sup> Analysis of so-called Liberty Zones in New York City after the terrorist attacks of September 11, 2001, also points to challenges associated with large-scale tax incentives, particularly with respect to monitoring and evaluation.<sup>4</sup>

## Growth Strategy

Ultimately, efforts to help localities recover from March 11 and revitalize the Tohoku region should be linked to an ambitious strategy for national growth that tackles both the challenges specific to the disasters and other issues that have plagued the economy since the collapse of the asset bubble in the 1990s. This cannot merely be an exercise in rebuilding what was lost. The central government should consider coordinating closely with local policymakers and the private sector to create new tools to ensure economic dynamism into the future. And the resilience of the public thus far suggests Japan can demonstrate the will and confidence to succeed.

It is also important for senior American policymakers to sustain their interest in Japan's recovery and economic growth. The Obama administration's commitment to supporting Japan in the recovery stage has been widely praised in Japan and the United States, but previously existing mechanisms for coordinating economic growth strategies—such as the subcabinet-level Economic Partnership for Growth established in 2001—have largely atrophied. The United States has a national interest in Japan's economic growth, and this should be reflected in the organization of our partnership with Japan.

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2. Japan's Ministry of Internal Affairs and Communications has developed an ICT strategy for Tohoku recovery. See "Chishiki Jōhōshakai no Jitsugen ni muketa Jōhōtsūshin Seisaku no arikata: Higashi Nippon Fukkō oyobi Nippon Saisei ni muketa Sōgō Senryaku" [Ways to Realize an Information Communication Policy for a Knowledge Information Society: A General Strategy toward the Recovery of East Japan or the Rebirth of Japan], Ministry of Internal Affairs and Communications Telecommunications Council, July 25, 2011.

3. "Gulf Opportunity Zone: States Are Allocating Federal Tax Incentives to Finance Low-Income Housing and a Wide Range of Private Facilities," U.S. Government Accountability Office, July 2008, <http://www.gao.gov/new.items/d08913.pdf>.

4. "Overview of Federal Disaster Assistance to the New York City Area," U.S. Government Accountability Office, October 2003, [www.gao.gov/new.items/d0472.pdf](http://www.gao.gov/new.items/d0472.pdf).

# Recommendations

## Macro

1. The private sector can and should play a leading role in long-term recovery and reconstruction.
2. Moving forward with policies to reduce corporate tax rates and encourage investment, while broadening the base of potential revenue and adjusting the consumption tax rate over time to alleviate fiscal pressures, will be well received by markets. As these policies evolve, consideration should also be given to reducing the levels of individual income and municipal taxes to avoid inactivation of domestic consumption.
3. An ambitious trade liberalization agenda will expand export opportunities and potentially attract greater internal and foreign direct investment in Tohoku and Japan. Harmonizing regulatory standards will also facilitate foreign direct investment. Deliberations on the Trans-Pacific Partnership are encouraging, as this would help secure an active role for Japan in the economic integration of the Asia-Pacific region.
4. Revising Japan's labor laws to allow for flexibility in corporate hiring of part-time workers and also support nongovernment organizations (NGOs), which struggle to hire professional staff on a part-time or project-based basis, will contribute to economic growth in Japan and job opportunities for the people of Tohoku. Appropriate safety net measures would be necessary in tandem with more flexibility on labor laws.

## Tohoku

1. Continue support for SMEs as outlined in the first and second supplementary budgets of Japan fiscal year 2011 and introduce tax incentives to encourage entrepreneurship.
2. Establish special economic zones that can provide a favorable business environment as good as other Asian countries. Offer special tax incentives and a more favorable regulatory environment in special economic zones to spur foreign direct investment in Tohoku.
3. Consider developing a "fast-track" approval process for reconstruction projects in the legislation for special economic zones to facilitate public-private partnerships at the regional and local level and expedite the recovery process in damaged areas.
4. Investment in regional infrastructure, particularly information and communication technology, can be a critical component of city planning and advances in health care. It will be useful to explore partnerships between U.S. and Japanese corporations in this field.

## U.S. Policy

1. The United States should consider restoring a bilateral economic strategy forum with Japan to assist with ongoing recovery and reconstruction planning, which would be modeled on the subcabinet-level Economic Partnership for Growth.

# 3

## ENERGY STRATEGY

### Introduction

The Great East Japan Earthquake and resulting tsunami damaged nuclear power plants, thermal power plants, and oil refineries throughout the Tohoku region. The fuel melt-down in three reactors at the Fukushima Daiichi nuclear power station was a particularly grave consequence, and the crisis there has heightened public concerns over the safety of nuclear power plant operations in general. In July the government ordered stress tests for all nuclear power plants (NPPs) as a prerequisite for restart, and it is unclear how many of the plants shut down for regularly scheduled maintenance will be allowed to resume operations. The Great East Japan Earthquake essentially voided Japan's energy strategy released last year, which placed a key emphasis on nuclear energy. Prior to the earthquake, Japan planned to increase the share of nuclear energy in the electricity generation mix from roughly 26 percent in 2009 to 53 percent in 2030.

Japan's energy challenges are two-fold. First, the uncertainty over restarting NPPs and, more fundamentally, replacing aging reactors complicates efforts to supply stable and affordable electricity to consumers. Second, the importation of substitute energy fuels, mainly in the form of liquefied natural gas (LNG), comes at an additional expense to the Japanese economy, which was already struggling prior to March 11 and now faces an even tougher path to recovery. For 2011, Japanese imports of liquefied natural gas are forecast to increase by 10 to 13 percent (equivalent to 7 to 9 million tons of LNG) to make up for electricity that would have otherwise been generated from nuclear energy. Power generation from natural gas has increased 8.6 percent on a year-to-year basis, and Japan's reliance on natural gas will most likely increase amid the uncertainty over the future role of nuclear energy. Japanese LNG imports are expected to reach 85.4 million tons in 2020, from 78.8 million tons (estimate) in 2011. By 2020, Japan's primary energy consumption will likely comprise natural gas at 24 percent (18 percent in 2010), oil at 38 percent (44 percent in 2010), coal at 22 percent (21 percent in 2010), nuclear at 9 percent (12 percent in 2010), and hydro and others at 7 percent (5 percent in 2010) under the no-nuclear scenario published by the East-West Center.<sup>1</sup> In addition to the additional fuel expenses, Japan would also need to invest in energy infrastructure such as additional thermal (e.g., natural gas) power plants and renewable power generation facilities to address power shortages that would stem from the uncertainty over nuclear energy.

The Japanese public's conservation efforts over the summer were laudable and helped Tokyo avoid blackouts, and factories in areas with limited energy supplies have adjusted work schedules to alleviate the potential for power shortages. Conservation is not the same as efficiency however,

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1. Tomoko Hosoe, "LNG Figures Heavily in Japan's Post-Disaster Energy Demand," *Oil and Gas Journal*, August 1, 2011, <http://www.ogj.com/articles/print/volume-109/issue-31/processing/lng-figures-heavily-in-japan-s-postdisaster-energy-demand.html>.

and such efforts are not easily sustainable over the long run, nor necessarily productive in supporting Japanese efforts to restore a vibrant economy.

The government faces the urgent need to craft a reliable and predictable strategy for short-term energy supply, while improving the safety of nuclear energy, contemplating Japan's future energy mix, and exploring the use of alternative sources, with profound consequences for Japan's own growth. Japan is not alone in confronting these challenges, and there are ample opportunities for bilateral cooperation in this field to promote nuclear safety, help Japan strengthen the resiliency of the power sector, and maximize stability in the future.

## Analysis: Key Areas for Recovery

### Nuclear Energy

Since March 11, 2011, a majority of Japan's 54 NPPs have come under scheduled maintenance, with a serious uncertainty over how and when they may gain local government approvals to restart. Also, a longer-term question looms over whether Japan may replace the country's aging plants in coming years. Concerns abound over the potential impact of Japan's energy challenges on economic growth. According to the Institute of Energy Economics of Japan (IEEJ), the country's gross domestic product (GDP) may go down as much as 3.6 percent (¥20.2 trillion) if no reactors are allowed to resume operations, and a no-nuclear scenario would lead to a rise in jobless claims by 197,000. In addition, Japan has a critical leadership role to play in the establishment of global standards on nuclear safety, security, and nonproliferation. Exports of nuclear power infrastructure have been a key part of the Japanese government's growth strategy. The United States is inextricably intertwined in this strategy because of the close linkages between U.S. and Japanese manufacturers. By continuing to play an active role in global nuclear development, Japan will be able to help work toward the highest standards for safety, transparency, and nonproliferation. Moreover, the standards Japan now sets in investigating the Fukushima nuclear accident and establishing best practices based on lessons learned could prove essential to shaping global norms on nuclear power.

### Natural Gas

Japan is already the largest importer of LNG in the world. Japan began importing LNG from Alaska in 1969, becoming a pioneer in the global LNG trade. In 2009, Japan accounted for about 36 percent of global LNG imports. Under a nuclear energy-constrained scenario, Japanese reliance on natural gas is expected to grow. A Merrill Lynch report sees LNG prices rising to \$25 per MMBtu next year if Japan's nuclear power stress tests prevent reactors from restarting. Japan's increased demand coincides with a North American interest in overseas gas markets. The current price differential between the Asia-Pacific (\$14 to 15 per MMBtu) and North American (\$4 to \$5 per MMBtu) markets make the trade, whether direct or otherwise, an attractive option for Asian buyers, including Japan. In addition, a significant reserve of natural gas remains stranded on the north slope of Alaska and may not be competitive in the U.S. gas market. Export to Japan may be an option for developing this resource.

Several key challenges need to be addressed before the potential benefits of such LNG trade may unfold. First, the Asian LNG market has developed around long-term contracts with fixed

price escalation clauses. The U.S. gas market is oriented toward short-term sales but also has a liquid futures market. The development of exports from the United States will have to adapt to these market parameters. Second, Sabine Pass, the most advanced U.S. LNG export proposal, is unlikely to export LNG before 2015. (Meanwhile, in March 2010, Conoco Phillips and Marathon sent their final Japan-bound LNG shipment from Kenai, the only U.S. terminal supplying LNG to Japan, and subsequently closed down the facility as they were reportedly unable to secure contracts through April 2013. This was despite the companies' decision to pursue an extension of their operating permit—which was later granted—to the 40-year-old Kenai, Alaska, plant through 2013. Kenai was once the sole supplier to Japan, but its share had declined to approximately one-half of 1 percent in recent years.) Third, infrastructure constraints, especially the congestion in Tokyo Bay and environmental restrictions, may limit the quantity of LNG that can be imported each year. The opportunities for cooperation on natural gas, therefore, merit a long-term vision and strategy.

## Renewable Energy

In 2010, renewable sources and hydro accounted for nearly 10 percent of total electric power generation with the majority supplied by hydro. Japan had a previous target of 21 percent renewable by 2030, but the Fukushima crisis is accelerating public interest in the greater use of renewable energy sources. On August 26, the Diet passed legislation that would promote the greater use of renewable energy. The Act on Special Measures concerning the Procurement of Renewable Electric Energy by Operators of Electric Utilities, to go into effect on July 1, 2012, entails the utility obligation to purchase solar, wind, hydro, geothermal, and biomass generated power for contractual terms and at prices to be fixed by the Minister of Economy, Trade and Industry. The success of renewable energy utilization would depend on how the actual implementing regulations would be written, on matters such as the criteria for approval of specified suppliers, the requirements for interconnection and the capacity of the grid, and the specifics of price relief for certain industrial users.

## Smart Grids and Micro Grids

“Smart grid” technologies, including micro grids, offer the promise of important benefits to energy efficiency, access for renewable energy, and grid stabilization. Though the utilities in Japan do not have a monopoly on power distribution, the necessary restructuring of the energy sector after March 11 could lead to new opportunities to attract private-sector investment in micro grid and smart grid that increase efficiency and reduce cost to consumers.

## Power Market Resiliency

The difference in frequency between eastern and western Japan limits the capacity to share a surplus in one half with the other half in response to power shortages. While Tokyo and the rest of eastern Japan run on 50-hertz electricity, west of Tokyo and the rest of the country run on alternating current that cycles at 60-hertz. The country's three frequency converter stations—two in Shizuoka Prefecture and one in Nagano Prefecture—have a combined capacity of approximately 1.2 gigawatts, which for example is only a fraction of the supply shortfalls experienced in summer 2011. Under the auspices of the Ministry of Economy, Trade and Industry, a study is under way on how to expand the country's frequency conversion capacity. Moreover, to allow for greater efficiency

and flexibility in the energy market place that would fully accommodate power generation from diversified sources and players, the current market structure—i.e., ownership and participation in generation, transmission, and distribution businesses; responsibilities for maintaining stable electricity supply; and costs of business developments—merits close examination.

## Recommendations

- 1. U.S.-Japan Joint Commission on Fukushima.** Following the Three Mile Island (TMI) accident in 1979, the United States undertook research and development efforts focused on the impact of the accident, post-accident reactor evaluation and decontamination, and waste immobilization/management. Japan recognized that this research and development undertaking would yield valuable insights and data that would contribute greatly to enhanced safety of nuclear reactor operations in Japan. A group of Japanese utilities, manufacturers, engineering companies, and research institutes thus partook in a research project on TMI led by the U.S. Department of Energy. The Japanese consortium provided direct funding of \$18 million (roughly 2 percent of the \$965-million total) in return for information and the opportunity to gain first-hand experience by participating in the cleanup.

U.S. companies have been active in Japan's stabilization and decontamination efforts at Fukushima. A bilateral, public-private commission to streamline synergetic efforts by the U.S. and Japanese private sector would greatly benefit Japanese efforts, but also allow both countries a more structured way of digesting lessons learned from Fukushima and implementing actions needed to improve the safe operation of nuclear power plants in the United States, Japan, and around the world. The commission would complement other international efforts, such as the work Japan is doing with the International Atomic Energy Agency (IAEA), including a conference on nuclear safety scheduled for next year.

- 2. Strengthen Operational Safety.** Following the Three Mile Island accident, the U.S. nuclear industry organized the Institute of Nuclear Power Operations (INPO) to perform in-depth peer review of safety practices of U.S. nuclear power plants. The ratings provided by INPO can be an important factor in the determination of insurance pricing by Nuclear Energy Insurance Limited, the main insurer for the industry. The industry recognized that the behavior of each individual member directly affected the interests of all. As a consequence, INPO has been effective in setting best practices for the industry, significantly improving safety as well as operating performance. Japan may want to consider establishing a similar process, either by strengthening existing institutions like the Japan Nuclear Technology Institute (JANTI) or forming a new organization.
- 3. Bilateral Efforts to Promote the Global Safety Regime.** The sustainability of the global nuclear business requires higher international standards for safety and security. Because of its technological expertise, but also insights gained through the Three Mile Island and Fukushima accidents, the U.S. and Japanese nuclear industries are well positioned to take the lead in strengthening the international safety regime, either by strengthening the World Association of Nuclear Operators or by establishing a more comprehensive international framework. Moreover, through continued business partnerships, the United States and Japan can make

substantive contributions toward capacity building (e.g., human resources training and other institutional capacity) in emerging and new markets in addition to supplying high-quality, proliferation-resistant reactors overseas.

- 4. U.S.-Japan Energy Forum.** Japan and the United States would benefit from greater interactions between private-sector stakeholders. The forum would highlight key trends in the global energy market and facilitate greater understanding of energy policy issues in Japan and the United States. This forum may also serve as a platform to advance commercial issues of mutual interest, some of which may be put forward to public-sector stakeholders.

The first area of focus may be natural gas. The participants would address economic, regulatory, and technological challenges associated with increased LNG trade between the United States and Japan, particularly from Alaska. The forum could consider the possible policy and financial incentives that might be available from the governments of Japan and the United States to facilitate natural gas trade. Another area of focus may be for Japanese and U.S. companies to proactively seek unified codes and standards for smart grids. The unified codes and standards are essential if smart grid technologies are to expand and related services are to flourish.

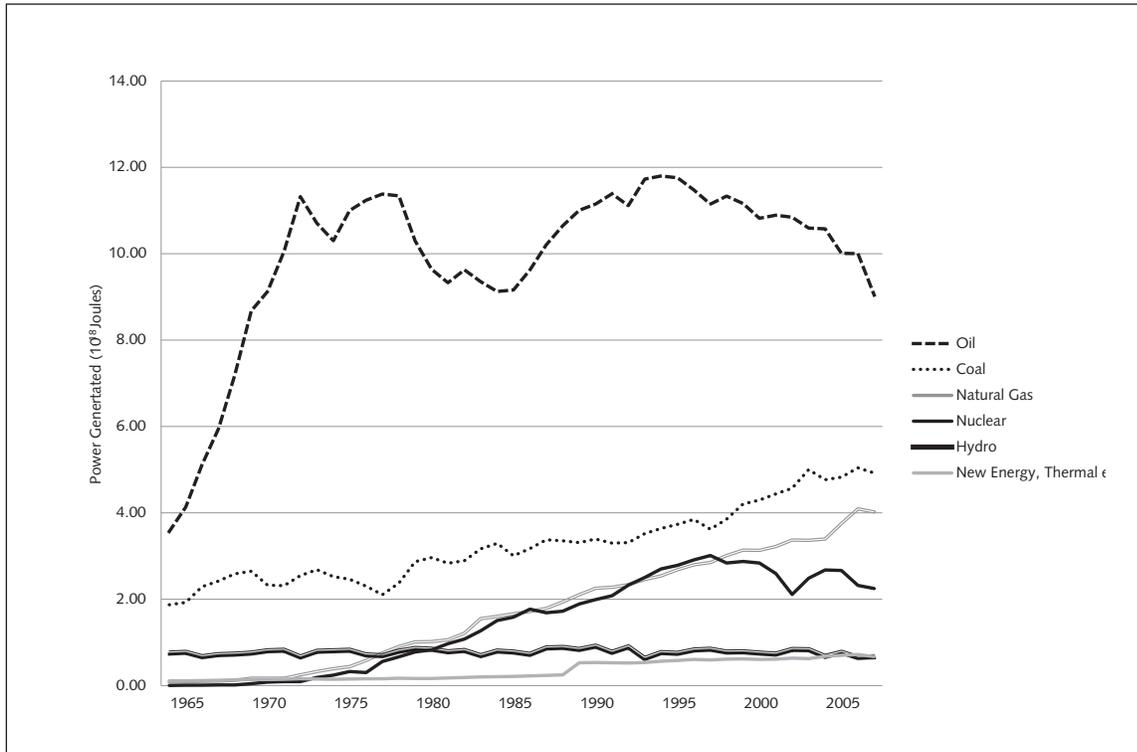
- 5. Tohoku Clean Energy Demonstration.** Japan and the United States have been investing toward the successful deployment of various clean energy or energy efficient technologies, some through the smart grid/community concept. The viability of individual clean energy technologies has been demonstrated, but an integrated system-wide demonstration is more challenging. Communities in Tohoku where infrastructure was severely damaged may provide a test ground for the integrated demonstration of new technologies. Such demonstrations would also serve to highlight economic potential and employment opportunities in local communities. This may be cast as a private-sector follow-on to the Hawaii-Okinawa project on clean energy cooperation, established in 2010.

- 6. Bilateral Exchange on Energy Sector Resiliency.** For the past decade, the United States has been actively examining ways to improve the nation's electricity transmission and distribution systems. The U.S. power system consists of three independent networks (i.e., eastern, western, and Texas). Also, there are more than 3,100 electric utilities in the nation, including some 200 stockholder-owned utilities; 2,000 public utilities run by state and local government agencies; and 930 electric cooperatives. Additionally, there are nearly 2,100 non-utility power producers, including both independent power companies and customer-owned distributed energy facilities. The improved system—through greater resiliency and interconnectivity and integration of renewable sources—would help the nation become better prepared, not only for future demand growth but also against supply disruptions from natural disasters as well as terrorist acts. Several institutions in the United States have experience and capability in examining these issues (e.g., the U.S. Department of Energy, the National Academies of Science, National Energy Technology Laboratory, and Electric Power Research Institute).

With a handful of power generators and a vertically integrated business model, the Japanese utility sector is different from that of the United States. Nonetheless, there exist opportunities for improvement in the current Japanese system that would allow for greater reliability as well as flexibility in times of supply disruptions. Potential topics for examination include power sharing between eastern and western Japan, efficient introduction of renewable sources into

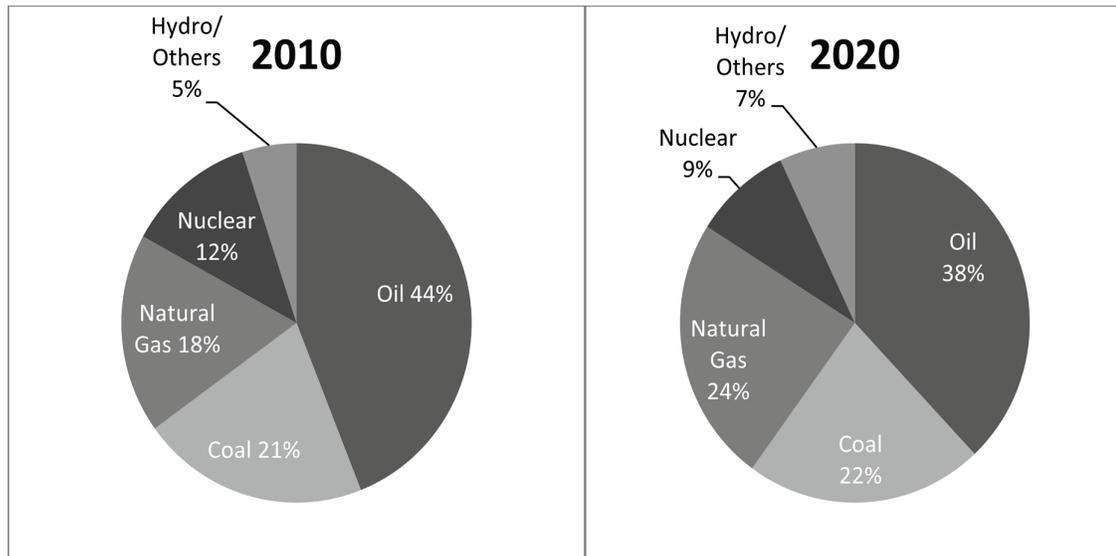
the grid system, greater economic incentives in power production, and options for sharing of responsibilities in stable electricity supply and costs of business developments, among others. Japanese specialists may benefit from an active exchange of information with U.S. experts, perhaps through personnel exchange programs among research institutions to address these challenges.

### Primary Energy Supply in Japan (1965–2008)



Graph Data Source: Ministry of Economy, Trade and Industry (METI), *Energy Hakusho 2010* (Annual Report on Energy 2010), June 2010, p. 161.

## Projection of Primary Energy Consumption Composition in Japan



Graph Data Source: Tomoko Hosoe, "LNG Figures Heavily in Japan's Post-Disaster Energy Demand," *Oil and Gas Journal*, August 1, 2011, <http://www.ogj.com/articles/print/volume-109/issue-31/processing/lng-figures-heavily-in-japan-s-postdisaster-energy-demand.html>.

## Effect on 2012 Economy (Estimation based on zero nuclear option)

Scenario	Economy recovers after fall 2012	Negative economic trend continues after fall 2012
Real GDP growth	1.6%	-3.6%
	-9.1 trillion yen	-20.2 trillion yen
Manufacturing	-2.2%	-4.8%
Service-sector	-1.6%	-2.2%
Unemployment	+98 thousand	+197 thousand

Source: The Institute of Energy Economics, Japan (IEEJ), "Short-Term Energy Supply/Demand Outlook," July 2011, p. 28.

\*The estimation assumes that electricity shortage would cause a slump in economic activity in the summer season. (IEEJ, p. 19.)

## Timeline of Response to Fukushima Nuclear Emergency

		Incident	Government Response	
Fukushima Daiichi	March	11	Earthquake and tsunami hit Reactors 1–3 lose external power Water supply to emergency cooling system fails in reactors 1 & 2	Government declares nuclear emergency Evacuation order issued: 3-kilometer radius Indoor evacuation order issued: 3- to 10-kilometer radius
		12	Reactor vents opened Hydrogen explosion occurs in reactor 1 Responders begin to pump water into reactor	Evacuation order issued: 20-kilometer radius
		13	Water supply to emergency cooling system in reactor 3 fails	
		14	Hydrogen explosion occurs in reactor 3	
		15	Fire breaks out in reactor 4	Indoor evacuation order issued: 20- to 30-kilometer radius (removed on April 22)
	April	21		Area within 20-kilometer radius designated as exclusion zone
	May	12	TEPCO confirms meltdown in reactor 1	Investigation Committee on the Accident at Fukushima Nuclear Power Station established under Cabinet Secretariat
		24	TEPCO confirms meltdown in reactors 2 & 3	
June	27		Goshi Hosono appointed minister in charge of Fukushima nuclear accident	
Fukushima Daini	March 12	Pressure control lost in reactors 1, 2, & 4	Evacuation order issued: 10-kilometer radius (removed on April 21)	

# 4

## HEALTH AND RECOVERY

### Introduction

The people of the Tohoku region, on March 11 and beyond, were subject to multiple profound health tests: loss of life, mass dislocation, trauma, destruction of health infrastructure, and exposure to radiation. Their resilience has been inspiring, and as of October 2011, the population has been stabilized, thanks to a significant degree to the remarkable emergency mobilization by Japan's health community. Attention is increasingly now focused forward on the reconstruction process that lies ahead. That requires addressing several significant needs exposed by March 11: to better handle the science, safety, preparedness, and communications surrounding radiation; to bring quality services to vulnerable, often elderly populations; and to build back better the region's health infrastructure, including the introduction of electronic health records, which can protect individuals in both normal times and during emergencies. In each of these areas, there is ample opportunity for innovation and progress, and space for smart U.S. support to advance Japanese initiatives. In each, there is a strong case for moving ahead quickly and expeditiously to take full advantage of this moment for change.

The health working group has since April 2011 examined the complex, evolving health situation in Japan and weighed what would be the most appropriate and effective U.S. assistance in the medium term to support Japanese-led health recovery efforts.<sup>1</sup> CSIS has built systematically on a preexisting partnership with the Health and Global Policy Institute (HGPI) in Japan to generate new analytic work on shared health reform challenges and actionable steps to address them. A guiding premise is that the U.S. and Japanese health systems are in fact quite similar: each features

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1. The health working group effort is chaired by Dr. Tachi Yamada, formerly the president of Global Health at the Gates Foundation (2006–2011). It is directed by J. Stephen Morrison, senior vice president and director of the Global Health Policy Center at CSIS. Professor Brian Biles of George Washington University and Suzanne Brundage of CSIS have been vital contributors to the working group. The working group's findings and recommendations derive from several focused activities, including meetings with senior Japanese health policy officials, particularly Dr. Nakamura, special adviser to the cabinet on medical innovation, and three days of site visits and interviews with health officials, medical university leaders, and health care providers in Fukushima, Miyagi, and Iwate prefectures conducted jointly by Stephen Morrison and Ryoji Noritake of HGPI in June 2011. CSIS and HGPI then cohosted a meeting in Washington on July 13–14 with a special focus on low-dose, long-term radiation exposure and the mobilization of Japanese mothers. Dr. Tachi Yamada led subsequent discussions on August 17 to craft the working group's recommendations. The working group is particularly grateful to Suzanne Basalla, senior adviser to U.S. ambassador to Japan John Roos, and to ambassador to the United States Ichiro Fujisaki and the embassy's excellent health attaches, Tadayuki Mizutani and Shinichi Nozaki; and many experts and policymakers at the U.S. Departments of State, Department of Health and Human Services, the National Institutes of Health, and the Centers for Disease Control and Prevention (CDC.) The findings here do not necessarily reflect either U.S. or Japanese government policy or individual officials' perspectives.

multi-insurers, private providers, and fee-for-service.<sup>2</sup> Also throughout this process, the working group made it a high priority to reach out to the many promising U.S.-Japan health initiatives that have moved ahead in Tohoku since March. The aim was to learn of their evolving work and seek their guidance.<sup>3</sup> The CSIS-HGPI collaboration will build on this initial analysis and set of recommendations with a focus on medium-term health recovery in the Tohoku region.

## Analysis

There are five core findings that inform our recommendations:

- Japan's radiation crisis has revealed urgent issues of rising global health import, but also spotlighted opportunities to address the health implications of low-dose, long-term radiation in Japan in order to bring benefits to both Japanese citizens and the larger world community.
- 2012 will be a critical year of decision in Japan in these respects. These are still early days in Japan in terms of devising policies, plans and financing for post-March 11 reconstruction in the health area. Patience will be essential in advancing any U.S.-Japan partnerships in health reconstruction in Tohoku; in this next phase, it will be very important to remain highly consultative and exploratory in understanding the direction that reconstruction may take, the special sensitivities that will be at play, and where U.S. initiatives are to be most valuable and welcomed.
- Any U.S. initiative will need to be informed by the evolving views of authorities at several levels and draw their active support and guidance. At the national level in Tokyo, there will need to be an active ongoing dialogue with the Ministry of Health, Labor and Welfare, the Reconstruction Agency, and the Diet, with a special focus on national reconstruction policy, guidance, the legal regulatory environment and financing. At the prefecture and municipal levels, including Tohoku University and other medical universities based in the prefecture capitals, the priority will be understanding their evolving initiatives, needs, perspectives and concrete priorities.
- Any effective action will require strong and recognized independent Japanese partners, both individual experts and institutions, for these collaborations to acquire legitimacy and acceptance.
- There are many promising U.S.-Japan health initiatives that have moved ahead in Tohoku since March, undeterred by political stalemate and the slow pace of defining a reconstruction strategy and financing it.

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2. This CSIS-HGPI partnership has recently produced two reports on lessons from the United States for Japan, each to be issued in Japanese and English. One report of immediate direct import to the health working group is John Halamka, *Addressing Japan's Healthcare Challenges with Information Technology: Lessons from the U.S. Experience* (Washington, D.C.: CSIS, August 2011). <http://csis.org/publication/addressing-japans-healthcare-challenges-information-technology>. Another of broad relevance is Gerard Anderson and Naoki Ikegami, *How Can Japan's DPC Inpatient Hospital Payment System Be Strengthened? Lessons from the U.S. Medicare Prospective System* (Washington, D.C.: CSIS, October 2011). In late July in Tokyo, John Halamka briefed 30 Japanese experts drawn from government, business, and academia on the substantive argument contained in his paper and the potential implications for the future health reconstruction of Tohoku.

3. The working group is especially grateful to Project Hope, GE Health, Dr. Seigo Izumo of Boston, Dr. Shunichi Homma and the Columbia University School of Medicine, and the U.S.-Japan Council. Special outreach was also made to organizations interested in health in Tohoku post-3/11, most notably Merck & Company, Kaiser-Permanente, and the Bill & Melinda Gates Foundation.

## Priority Areas for U.S.-Japan Cooperation

The working group has reached a consensus that there are three areas that are the most appropriate and effective for U.S. assistance over the next three years:

- *Long-term, low-dose radiation*: developing lessons learned from Fukushima—for Japan and the larger world—with respect to future preparedness; resolving outstanding safety issues; tracking health impacts; improving communications; and preserving the public’s trust.
- *New and innovative Tohoku health services infrastructure*: piloting regional health services in a more integrated, flexible, and cost-effective system, adapted to an aging population; introducing new uses of information technology to achieve higher efficiencies while protecting individuals’ privacy.
- *Meeting the health care needs of the most vulnerable*: providing effective health services for the traumatized, dislocated, and aging populations of the Tohoku region.

### Long-term, Low-dose Radiation

The health implications of long-term, low-dose radiation are a rising global health issue. The unfolding Japanese experience with radiation in Fukushima has significance that extends well beyond Japan. What happens in Fukushima, what is learned from that experience, and what it reveals about what we do not know and what we need to know: these will inform future action in many other parts of the world where there could be similar future reactor crises. There are over 450 existing nuclear plants worldwide, many aging, and an additional 60 plants are under construction or slated to be built in the next few years. By comparison with Japanese standards, these nuclear reactors are often less well-sited geographically and less well-organized for emergency response and recovery efforts.

In the midst of the ongoing Fukushima Daiichi nuclear reactor crisis, citizens’ anxiety regarding long-term, low-dose exposure to radiation in the Fukushima and adjacent regions has risen steeply. It stems from inconsistent safety standards, confusing communications, a lack of adequate preparedness programs, public admissions by the Japanese government that data was withheld at points in the crisis, the discovery of multiple inland “hot spots” far from the coastal nuclear plants, and a revised estimate showing that the radiation released was twice what had originally been acknowledged. There has been considerable popular anger and frustration toward the government, and confidence has fallen. Heightened anxiety is linked to worsening hypertension and related chronic disorders.

Mothers have mobilized in Fukushima, and a sizeable number of mothers and children are migrating out of Fukushima. Five to 10 percent of the prefecture population of 2 million has been dislocated and/or has spontaneously chosen to move from their homes. An unknown portion of the population is nervously eyeing the situation, weighing whether to stay or not. The government of Japan is itself considering what if any additional evacuations may be warranted, and under what circumstances citizens may be permitted to reenter their home areas. Media treatment of the issue has become quite overheated. The international organizations World Health Organization (WHO) and International Atomic Energy Agency (IAEA) have not provided effective guidance, with respect to assessing the health challenges and communicating with the public.

Across diverse interviews conducted by CSIS in June in Tokyo and the three prefectures, there was a common urgent appeal that the United States should help lead an international effort to assist the Japanese government in refining exposure standards, strengthening the quality of medical longitudinal studies, and improving communications and public outreach strategies. Such external expert assistance in partnership with Japanese experts could raise the transparency and accountability of efforts and lower popular anxieties. It could also assist in addressing preparedness gaps exposed by March 11, such as how to overcome regulatory and legal barriers on the sharing of potassium iodine in the event of a nuclear reactor crisis, as well as sort through important workforce resettlement issues, such as how and when to re-staff health care systems when there is continued confusion and tension around low radiation risks.<sup>4</sup>

Over the course of the summer of 2011, the Japanese government launched multiple long-term major epidemiological studies. In the second supplementary budget approved by the Diet on July 25, the government committed to track the health status of all 2 million Fukushima residents for the next 30 years at an estimated cost of \$1.2 billion. The government also began a focused immediate study of 29,000 residents of heavily impacted communities, along with a medical study of 280,000 children for thyroid cancer, and plans to introduce in 2011 and 2012 full body scans for 200,000 residents. These are highly ambitious, important long-term commitments. To a significant degree, they build on the considerable Japanese expertise acquired over the past 60 years in tracking the health impact of radiation, in partnership with U.S. and other scientists.

**Recommendation 1. A rigorous study should be undertaken as soon as possible by an independent international panel of Japanese, U.S., and other experts. This study should focus on three issues of considerable importance to global health and on which U.S. expertise and assistance would be both valuable and timely:**

- *Preparedness:* What are the core lessons of the Japanese experience regarding how countries can best prepare ahead for future crisis situations like that seen today in Fukushima? In particular, what needs to be in place to inform and prepare populations at-risk, and to ensure adequate monitoring and tracking of radiation health impacts in the event of a radiation crisis?
- *Safety:* How should outstanding issues be resolved about what level of risk is acceptable, with what level and type of radiation, over what amount of time? What does the existing science indicate, what gaps need to be addressed, and what type of standards and scales are appropriate?
- *Communications:* How can government more effectively communicate scientific realities to a public subject to multiple, confounding sources of information and demanding to have access to data?

The study should aim to benefit both the long-term future of the Tohoku region, and Japan more generally. No less important, it should also aim to inform a global health policy community concerned with the health impacts of low-dose, long-term radiation, organized around the three issues outlined above. The study should draw as appropriate from the experiences of Chernobyl (April 1986), Three Mile Island (March 1979), and other important cases and should conclude with pragmatic, actionable policy recommendations.

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4. These and related issues were examined in September 2011 at the Conference on the U.S.-Japan Alliance after 3-11, Massachusetts Institute of Technology, Cambridge, MA; and the International Expert Symposium in Fukushima: Radiation and Health Risks, Fukushima Medical University, Fukushima, Japan.

This effort should be led by an independent, well respected institution such as the Institute of Medicine (IOM) of the National Academies of Science in the United States. The lead organization will need to attract the best experts in Japan, the United States, and elsewhere, adhere to the strongest evidence-based approaches, and have a proven record of addressing contentious health and science issues in a balanced and incisive way. The lead organization will need to work in close cooperation with relevant Japanese and U.S. official agencies; experts from other countries with major nuclear industry experience; the IAEA and the WHO. Participants will need to conduct extensive research on the ground in Fukushima prefecture and other impacted neighboring areas, systematically engaging with local authorities, individual citizens, medical providers, and civil organizations.<sup>5</sup>

## Reconstructing Health Services in the Tohoku Region

2012 will likely be a year of major decision with respect to the reconstruction of health infrastructure in Tohoku.

There is a significant opportunity, and perceived need, to build back Tohoku's health system in ways that better align it with the special evolving needs of that region. Tohoku's population is aging, economically often marginalized, and dispersed across many small communities. There is an emerging consensus among health policy experts that it is important to use Tohoku as a regional prototype to streamline the delivery of services, better integrate different levels of service from remote primary locations to tertiary care in the prefecture capitals, incentivize providers to operate on a regional basis, and introduce electronic patient records that allow for greater portability, as patients seek care in different locations, and greater assurance of a continuation of care during emergency disruptions.

Fukushima, Iwate, and Miyagi prefectures, three of the six in the Tohoku region, have a total population of 6 million. Over 400,000 people were initially displaced in the immediate aftermath of March 11. By the end of August, displaced persons had been relocated from shelters to temporary housing where they will live for at least two to three years, where they will be served by temporary medical clinics. Meeting the needs of the dislocated populations, disposing of the massive debris in the coastal areas (over 25 million tons), and responding to the nuclear reactor crisis (Fukushima) have understandably dominated authorities' attention in the months following March 11.

The Ministry of Health, Labor and Welfare is now shifting from the provision of emergency support to the displaced to the prevention and treatment, over the long-term, of major health challenges. In the immediate aftermath of March 11, nonprofits had dispatched 156 medical teams to address acute needs. By July, as Tohoku transitioned from emergency to recovery, the number of teams had fallen below 10.

Hypertension remains a very serious concern for the populations in shelters and temporary housing. In response, the ministry has dispatched nutritionists to examine how diets can be improved to better manage hypertension. Japanese and international experts, as well as the Japanese government noted in working group interviews and discussions that much more needs to be done to provide comprehensive, coordinated care. In particular, the triple disasters of March 11 revealed

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5. It should be possible to complete this study in 18 to 24 months, at a cost between \$1.5 million and \$2.0 million. The lead institution will be responsible for raising that support.

the grave consequences for vulnerable individuals when there is no system of transferable, electronic medical records.

There is rising recognition by the ministry, expressed through the government's recent reconstruction guidelines, of the importance of making use of information technology in the reconstruction of the health sector, including creating transferable, electronic health records. The largely paper-based system, with limited transferability across hospitals and providers, left many thousands of Tohoku citizens without timely access to records: this contributed to disruptions of medications, undue anxiety, and aggravated suffering. Several groups are actively promoting telemedicine and cloud computing in Tohoku. An important opportunity now exists for Tohoku to be a regional model for the introduction of new information technology (IT)-based models of health care, including electronic medical health records. To be successful, national policies, possibly legislative action, and practical implementation measures will be needed to ensure that enduring privacy concerns are adequately addressed.<sup>6</sup>

In the Tohoku region, an estimated 30 percent of the health infrastructure—over 1,300 health facilities, concentrated on the coast—was heavily damaged or destroyed as a result of the earthquake and tsunami. In Fukushima, as a result of the Daiichi nuclear reactor crisis, a number of hospitals and clinics, including several prominent facilities for the mentally ill, have also become inaccessible for an indefinite period. Over 80,000 persons have been dislocated in Fukushima on account of the nuclear reactor crisis.

The three affected prefectures have begun planning for rebuilding their health services infrastructure but remain at an early point, as they await action at the national level: on the third supplementary budget for reconstruction, due this fall; legislation for Special Zones for Reconstruction; and detailed plans for the newly established Reconstruction Agency and the issuance of a reconstruction strategy. Each of the three prefectures appears to be planning relatively independently. They are drawing on the expertise of their full-time health officials and faculty of their respective medical universities. Tohoku University in particular has launched plans to build a center of excellence in health reconstruction, including use of IT.

Prefecture officials are also looking outside their territory for novel partnerships, such as the public-private partnership formed by Takuya Tasso, governor of Iwate Prefecture, with Project Hope, a U.S.-based disaster recovery organization.<sup>7</sup>

The process of figuring out what to rebuild and where is highly challenging and politically charged: plans must integrate the reconstruction of housing, health, roads, rail and schools, at

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6. One example is GE Health, which is building upon relationships in Miyagi Prefecture dating back to GE's 2009 "Sustainable City Project," to create 11 mobile clinics capable of bringing health care services to remote areas and elderly populations until permanent clinics are reconstructed near these vulnerable groups. By early 2012, GE plans to link the mobile clinics to a cloud data center that will allow for remote access to patient information from all three prefectures.

7. Project Hope and the Iwate government, signed in May 2011 a direct Memorandum of Understanding to collaborate on long-term redevelopment of health services. Project Hope's activities in the Tohoku region have focused on deploying Japanese-speaking volunteers to augment clinical staff shortages, constructing temporary modular health clinics, setting up services and scholarship funds for newly orphaned children, conducting medical gift-in-kind campaigns to replace damaged or destroyed medical equipment, developing a Tokyo-based regional response center for Asia-Pacific natural disasters, and developing a rehabilitation program for the elderly in cooperation with the firm Johnson and Johnson.

higher altitudes and at greater distances from the coast, and appropriate and affordable building sites that often are in short supply, and will require legal and regulatory changes.

**Recommendation 2. To support the reconstruction of the Tohoku health infrastructure, establish a small high-level consortium of U.S.-based experts to partner with an independent Japanese group and develop a collaboration with Health Ministry officials at the national level, prefecture-level authorities, and experts at Tohoku University to provide strategic advice and to identify specific technical expertise that will be most appropriate, timely, and useful in two key areas:**

- The development and operation of *integrated health services systems*: e.g., the size, location, and staffing of new health service facilities, as coastal areas are rebuilt and repopulated; the means to best link new local primary facilities and practitioners with secondary and tertiary care services, including regional medical centers.
- The introduction of *information technology* (IT) systems in Tohoku which could be a national demonstration model for transferable, integrated electronic medical records, with effective protections of individuals' privacy.

The U.S. consortium of experts, in partnership with an organization such as HGPI, would carry out its work with Japanese health care leaders in Tokyo and Tohoku through a series of structured consultations over the course of 2012. The consortium would draw from leading scholars in the United States who have addressed these challenges and developed a menu of protections, regulatory policies and other approaches that can ameliorate these concerns and encourage greater efficiency in the sharing of data and improving quality of health services. A top priority would be understanding the evolving policy strategy and needs in Tohoku, and what external technical support will be most highly valued and welcome. The consortium should include senior representatives of the major organized U.S. health services systems and experts on health care IT systems. Special effort will be needed to address privacy concerns, including how best to raise public confidence that privileged personal data is protected.

The consortium could potentially be facilitated through the CSIS-HGPI partnership or a similar institutional arrangement. CSIS and HGPI are actively developing concrete collaborations in this area. The consortium's costs would include the time of the experts involved, travel to Japan, and the administrative and logistical support of the sponsoring organizations.

## **Psychosocial Health Service Needs of the Displaced and Aging Population**

Evidence is growing of post-traumatic stress disorder (PTSD) and depression. It is expected that there will be greater manifest evidence of psychosocial impacts as 2012 unfolds. We know that stress makes people sick, and how it can change basic biology. An emerging challenge in Tohoku is how to assist a significant population that is living with a continuum from minor stress to PTSD, in the context of continued high levels of social stigma about seeking mental health help and often weak post-trauma care.

A significant portion of the Tohoku population has been traumatized by the loss of family and friends as well as homes and community, and requires special post-trauma mental health counseling

and other services. Many of the displaced, including those who will reside in temporary housing for the next two to three years, have also experienced increased stress-related hypertension and other physiologic conditions. In the aftermath of March 11, the Ministry of Health, Labor and Welfare dispatched mental health teams, composed of psychiatrists, nurses, and social workers, to assess needs. Mental health disorders continue to carry a strong stigma in Tohoku and the quality and scope of services available is often inadequate.

Prior to March 11, over 25 percent of the regional population was over 65 years of age. It is anticipated that a significant share of younger individuals from Tohoku will now relocate outside the region, leaving an even higher share of elderly population for the future. Medical services in the region will need, in addition to meeting the immediate post-disaster mental and medical needs of the population, to have a greater capacity in the future to provide geriatric care. These services will address the usual chronic health conditions of the elderly, including cardiovascular disease, hypertension, stroke, cancer, respiratory diseases including emphysema, and Alzheimer's, and other dementias.

Long-term care services will need to be adapted to the special physical needs of these populations. A share of the new housing to be rebuilt in the region could include tiered housing complexes with health care services and model home and community-based health care programs.

While the rebuilding of medical facilities and the reorganization of health services to a more effective and efficient model will be led by prefecture health officials, leadership in clinical services is often most appropriate and effective if it comes from within the physician community.

Future efforts to address the specific clinical needs of the displaced and aging residents of the Tohoku region will require cooperation, amongst others, with prefecture health authorities, the faculty of medical schools and other medical leaders in the three prefectures. Medical schools in the Tohoku region include Tohoku University School of Medicine, the Iwate Medical University, and the Fukushima Medical University. The Fukushima Medical University includes a Department of Public Health.

The U.S. experts who might best assist Tohoku's clinical leaders in this process include medical school faculty, clinicians, and research specialists in post-traumatic mental and physiologic needs, and chronic conditions and care for aging populations. These experts might also include individuals with experience in the actual organization and provision of services to displaced and aging populations. Illustratively, a collaboration of this kind is currently underway between Fukushima Medical University and New York based experts, including Columbia University, the Japanese Medical Society of America, JAMSnet New York, Japan Society, Mount Sinai Global Health, Noveida, and Rotary Club. Collectively the organizations are supporting the "Kokoro no Care" project through a three-year sustainable grant. The program's goal is to create community-based mental health clinics, along with stress relief sessions for vulnerable populations and two satellite mental health care outreach teams that will dispatch services to elderly patients and chronically mentally ill members of society.

**Recommendation 3. To help meet the special health service needs of Tohoku's most vulnerable populations, especially the traumatized, dislocated and elderly, develop *twinning arrangements*—highly targeted—over the next three to five years between U.S. medical schools and Tohoku University School of Medicine, the Iwate Medical University, and the Fukushima Medical University.**

Ideally, these twinning arrangements for clinical leaders in the Tohoku region should not be based on one-time-only events but should result in an ongoing collaboration among U.S. experts and their Japanese counterparts. They will need to incorporate prefecture government health authorities, psychiatric hospitals, and other regional hospitals. These arrangements could include:

- The collaborative efforts might begin with U.S. experts joining in small group discussions, seminars and larger meetings with senior faculty, and physician and other health care leaders at medical schools and other sites in each of the three prefectures.
- As the collaborative process develops, the program might include: special delegations of U.S. experts with experience in specific areas identified as of greatest usefulness such as the U.S. experience post Hurricane Katrina in 2005; targeted commissioned papers and other working documents in specific areas of need as requested by Japanese leaders; and visits to the United States by delegations of physician leaders and experts from medical schools and other organizations in Japan to medical schools and federal or state offices in the United States with experience and expertise in specific areas of interest.
- Applied research collaborations, with a focus, for example, upon provision of tailored clinical care for cardiovascular disease, hyper tension, stroke, cancer, respiratory diseases including emphysema, and Alzheimer's and other dementias; tiered housing with health care services complexes and/or model home and community-based care programs.

Funds for this initiative might come from foundations, major corporations, and the partner medical schools.

Throughout its research, the health working group was deeply impressed with the dedication and generosity of Japan's health care professionals, who have been indispensable in easing suffering in the immediate aftermath of March 11 in Tohoku and who turn their talents increasingly to defining the future of health care in that region. An important window exists today to tackle the radiation challenges in ways that build knowledge and best practices to better the lives of those living in Fukushima and surrounding areas and better prepare for the future those nations that have a nuclear industry or will soon acquire one. There is also a window to rebuild the Tohoku health system on the basis of innovative, integrated new models with broad potential benefits across Japan and beyond. For each, moving ahead rapidly in the next few years is a critical consideration. And for each, focused Japanese-U.S. partnerships can help accelerate results and build long-term expert linkages.

# 5

## LESSONS FOR THE ALLIANCE

### Introduction

One of the most impressive aspects in the aftermath of March 11 was the conduct of Japanese and U.S. forces in Humanitarian Assistance/Disaster Relief (HA/DR) operations in the Tohoku region. The Japan Self-Defense Forces (SDF) dispatched over 100,000 personnel to conduct search and rescue operations, provide relief supplies, and rehabilitate infrastructure critical to the overall relief effort. It was the first occasion for Japan to activate its Self-Defense Reserve Forces for a contingency mission. The U.S. government moved quickly to support Japan in this effort and U.S. Forces, Japan (USFJ), and Japan's Joint Staff (JJS) quickly established Bilateral Crisis Action Teams (BCAT) at Yokota and Ichigaya and engineered what became the largest bilateral mission in the history of the alliance: OPERATION TOMODACHI, or "friend" in Japanese. At its peak, this humanitarian relief operation involved over 16,000 U.S. military personnel, 24 ships, and 190 aircraft. Though these numbers are great, they belie the contributions made to relieve suffering in Japan's northeast region. The SDF and bilateral missions were exceptionally well received across Japan; a survey by the Pew Research Center three months after the HA/DR operations noted that the public held the SDF in higher esteem than most other institutions of government, with 95 percent saying the SDF did a good job in responding to the crisis.<sup>1</sup> The Pew survey also indicated 85 percent of the Japanese public held a positive view of the United States, the highest number in nearly a decade due in no small part to American relief efforts.

The two governments are conducting internal and bilateral reviews to identify lessons learned from OPERATION TOMODACHI and the following observations are meant to support those efforts and to highlight challenges and opportunities for the broader public. The series of events in the aftermath of March 11 clearly highlighted HA/DR as a promising arena in which to advance bilateral cooperation but also brought to light several issues with important consequences for the core mission of the alliance: defense and security.

### Analysis

Organizing the response to the March 11 disasters was exceptionally complicated and challenging, but alliance preparation over the 15 years since the April 1996 Clinton-Hashimoto Joint Security Declaration proved invaluable in facilitating bilateral coordination. Approximately three hours after the earthquake USFJ and the JJS under the Ministry of Defense both worked to implement the Bilateral Coordination Mechanism (BCM) and bilateral coordination liaison cells (BCATs at

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1. "Japanese Resilient, but See Economic Challenges Ahead: U.S. Applauded for Relief Efforts," Pew Global Attitudes Project, Pew Research Center, June 1, 2011, <http://www.pewglobal.org/2011/06/01/japanese-resilient-but-see-economic-challenges-ahead/>.

Yokota, Ichigaya, and Sendai) developed under the U.S.-Japan Guidelines for Defense Cooperation in 1997, which supported planning and operations. Though these mechanisms were intended for regional contingencies, they were exercised with positive effect. USFJ and the JJS quickly developed a bilateral command and control framework where U.S. forces were organized under the command of the “Joint Support Force,” a headquarters in direct support of JJS.

The rapid mobilization of resources in response to the disasters is also noteworthy. The U.S. Agency for International Development (USAID) dispatched a Disaster Assistance Response Team (DART), which arrived in Japan within 24 hours of the earthquake, and U.S. Pacific Command (PACOM) activated a joint task force (JTF) and surged command and control assets to Japan from Headquarters Pacific Fleet to facilitate operations. The JTF’s efforts centered on returning Sendai airfield to an operational state in support of the overall response. Sendai’s airfield had been flooded by the tsunami and filled with debris, and both sides identified Sendai airfield early on as critical infrastructure to the response and recovery efforts. USFJ assembled required operational capabilities from throughout Japan, and personnel from both militaries cleared a portion of the runway and reestablished air traffic control in a few days. The first relief aircraft, an MC-130, landed on March 16. In the first 21 days after the tsunami U.S. Air Force controllers brought in over 250 aircraft delivering 2.31 million pounds of humanitarian aid and over 15,000 gallons of diesel fuel and gasoline. By March 20, Japanese and U.S. forces had cleared the entire runway, allowing C-17 aircraft to land with relief supplies. Airfield operations were transferred to Japanese Air Traffic Control on April 1 and commercial flights resumed on April 13. Being able to conduct relief operations—to include search and rescue—from Sendai rather than airfields further away allowed USFJ to conduct operations in the disaster area with greater effectiveness. The transformation of Sendai Airport from a disaster zone to a fully operational logistical center in one month was truly remarkable and a testament to the value of alliance cooperation and force interoperability.

It is worth noting that SDF and bilateral HA/DR operations not only saved lives, but also sent an important signal of alliance solidarity to the region in the wake of political difficulties in 2009–2010 over plans for relocation of Marine Corps Air Station Futenma. The SDF operations, particularly around the crippled nuclear reactor at Fukushima, were complex and dangerous. Senior officers feared there might be casualties, but the men and women under their command did not hesitate to execute their mission. In addition, OPERATION TOMODACHI was the largest joint and combined operation in the history of the alliance, and the rapid surge of forces from both sides was noted in the region. Moreover, the timely restoration of operations at Sendai Airport demonstrated the agility of the alliance in missions that bear a close resemblance to battle damage recovery from ballistic missiles. The fact that among the first flights into Sendai was a Royal Australian Air Force C-17 highlighted the advances in Japan’s defense cooperation with that nation since the signing of a bilateral Security Agreement in 2007. Overall, the HA/DR operations went a long way toward erasing any doubts in the Asia-Pacific region about the solidarity, resolve, and capabilities of the U.S.-Japan alliance that may have emerged in recent years.

That said, even the most successful operations yield lessons learned, particularly when consideration is given to other variables that might have significantly complicated planning and execution. While the SDF, U.S. forces, and their commands deserve all of the public and official praise they have rightly received for their HA/DR operations after March 11, it is important to reiterate that the core mission of the SDF is not HA/DR, but the defense of Japan and their role in situations in areas surrounding Japan. The rapid mobilization of resources for HA/DR and the relatively smooth command, control, and communications arrangements were possible not only because

of previous work done since 1996, but also because OPERATION TOMODACHI was a peacetime mission, with the area of operations confined to Japan, and without an enemy seeking to defeat U.S. and Japanese efforts. As a result, PACOM was able to surge resources, most notably the commander, Pacific Fleet, and a staff of 90 service members with command and control assets, to bolster U.S. capabilities in Japan. It is doubtful this would be possible in a more complex regional contingency. Moreover, the command and control arrangements and specific task forces established for OPERATION TOMODACHI derived from and depended heavily on the component commands within Japan (Army, Navy, Air Force, and Marines); another convenience that might not be possible in a regional contingency, when those forces likely will be required elsewhere. Together these facts highlight longstanding questions about the operational capacity and role of USFJ as a command and whether USFJ should be reconfigured to function as a headquarters in contingencies.

The bilateral communications structure for OPERATION TOMODACHI, while effective in the peacetime HA/DR scenario, also raises questions about capabilities in a more complex and hostile contingency. Communications in OPERATION TOMODACHI were largely limited to commercial, unclassified means (unsecure telephones and e-mail); clearly not means that would be effective or reliable in scenarios where an enemy is attempting to intercept communications or conduct cyber attacks on communication networks. There is no doubt that resilient and secure bilateral communications capabilities exist between U.S. and Japanese forces, particularly for specific missions such as missile defense or antisubmarine warfare. However, OPERATION TOMODACHI highlighted the challenges of retaining secure and resilient communications in a scenario that involves all military components and civilian agencies—precisely the kind of scenario that would confront Japan and the alliance in the event of national security threats to Japan.

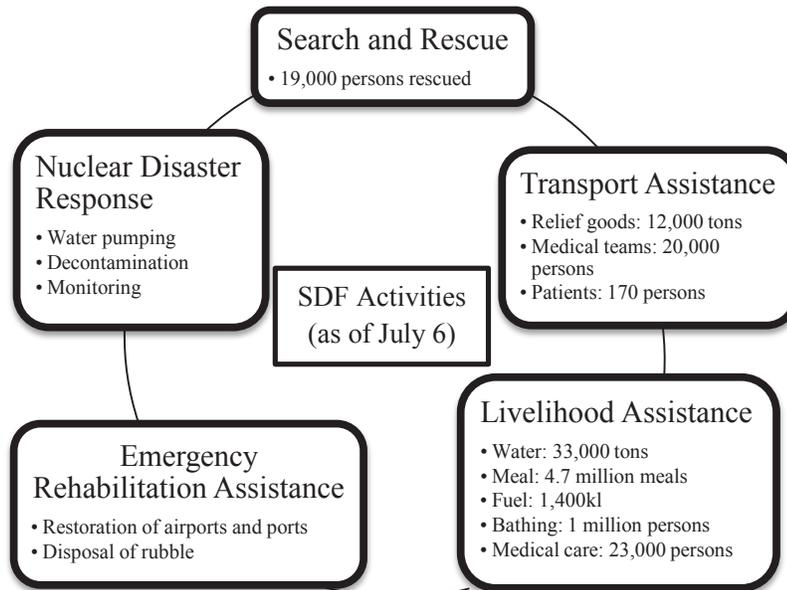
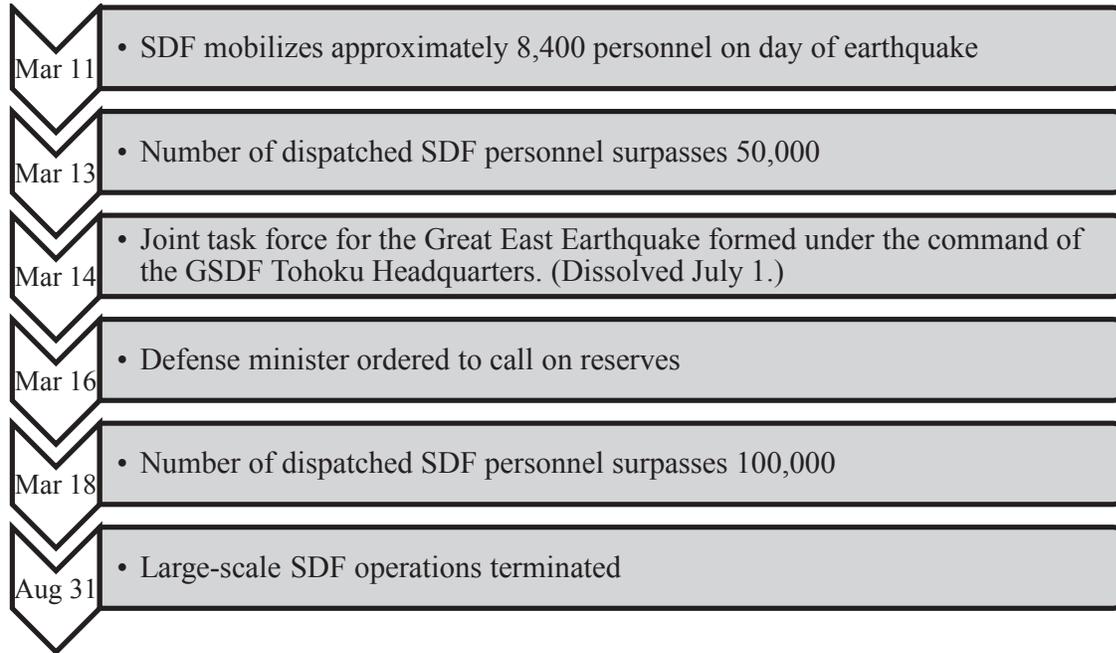
## Recommendations

- 1. Based on USFJ experience in OPERATION TOMODACHI, the United States should consider whether USFJ should be an operationally capable headquarters competent to respond to contingencies centered on the defense of Japan and regional contingencies.** In most cases, USFJ should be prepared to fulfill a supporting role for other U.S. forces in a regional contingency. However, there are cases where USFJ should be prepared to assume the responsibility of a supported headquarters, especially those requiring rapid response in a defense of Japan contingency, such as missile defense. To ensure that USFJ is an operationally capable headquarters would require three key areas to be addressed by the Department of Defense: adequate human resources, command and control resources, and identification of specific missions to be assigned to the headquarters.
- 2. The Self-Defense Forces should share their comprehensive expertise in HA/DR with other nations in the Asia-Pacific region to build regional capability and enhance confidence building.** Japan has demonstrated world class capabilities in HA/DR. Joint exercises with the United States, Australia, and other partners can further enhance Japan's leadership role and develop credentials as a center of excellence in this area.
- 3. The Bilateral Coordination Mechanism and bilateral coordination liaison cells that currently provide the link between U.S. and Japanese forces should be reviewed to incorporate HA/DR scenarios.** Consequence management capabilities should also be incorporated into

contingency planning through the broad spectrum of HA/DR requirements that arose from earthquake, tsunami, and nuclear disaster experiences in OPERATION TOMODACHI.

- 4. Assess lessons learned about joint operations capabilities from this peacetime HA/DR contingency for joint operational capabilities in more complex security contingencies.** Recognizing that the core mission of the SDF is defense, policymakers in both countries, in assessing the lessons learned, should apply a harder test—namely how well the forces would be able to execute their mission together in a more complex mission in the defense of Japan or situations in the area surrounding Japan.

## SDF Response Timeline and Activities



Sources: Ministry of Defense, *Defense of Japan 2011*, "Special Feature," [http://www.mod.go.jp/e/publ/w\\_paper/pdf/2011/02\\_SpecialFeature.pdf](http://www.mod.go.jp/e/publ/w_paper/pdf/2011/02_SpecialFeature.pdf).

Headquarters for Emergency Disaster Control, *Kinkyu Saigai Taisaku Honbu Heisei 23nen (2011 nen) Touhoku-chihou Taiheiyou-oki Jishin (Higashi nihon Daishinsai) ni tsuite* [Regarding the Heisei year 23 (2011) Tohoku-Pacific Ocean Earthquake (Great East Japan Earthquake)], September 20, 2011, <http://www.kantei.go.jp/saigai/pdf/201109201700jisin.pdf>.

"Saiha-kibo Chikujū Shukushō E" [Disaster Area Deployments to be Gradually Decreased], *Boueishin Shinbun*, July 15, 2011, [http://www.boueishin.com/news/2011/20110715\\_1.html](http://www.boueishin.com/news/2011/20110715_1.html).

## Operation Tomodachi

- Response by U.S. Armed Forces to disaster in Tohoku region, organized together with *government of Japan*
- Active operations: March 12–May 4, 2011
- Initial DOD budget: \$35 million
- Total cost (as of June 15): \$88,600,000
- Branch involvement: U.S. Army, U.S. Navy, U.S. Air Force, U.S. Marines
- Peak forces deployment (as of June 2): 24 naval ships, 189 aircraft, 24,000 personnel
- Individuals rescued in first week: 20,000
- U.S. and SDF bases used as staging grounds/infrastructure for relief efforts
- Sample activities:
  - Debris removal
  - Supply distribution
  - Critical infrastructure repair
  - Search & rescue
  - Logistics coordination with SDF
  - Nuclear crisis assistance and assessment
  - Evacuation management

### Sources:

Andrew Feickert and Emma Chanlett-Avery, *Japan 2011 Earthquake: U.S. Department of Defense (DOD) Response* (Washington, DC: Congressional Research Service, March 22, 2011).

Andre Feickert and Emma Chanlett-Avery, *Japan 2011 Earthquake: U.S. Department of Defense (DOD) Response* (Washington, DC: Congressional Research Service, June 2, 2011).

USAID Bureau for Democracy, Conflict, and Humanitarian Assistance (DCHA)/Office of Foreign Disaster Assistance (OFDA), "Japan Earthquake and Tsunami: Fact Sheet #18," June 15, 2011.

## USAID Involvement

- USAID assistance to Japan (as of June 15): \$6,285,726
- Works with U.S. Army Reserve Operations and Cargo Transport
- Operations in partnership with counties of Los Angeles, CA, and Fairfax, VA, U.S. Army Reserve (USAR), DOD
- USAID rescue teams accepted in immediate aftermath:
  - Two 72-member teams with rescue dogs (6) deployed March 13
  - Teams include Search and Rescue, Medical and Engineering Staff
  - Teams assigned to Ofunato in Iwate Prefecture
  - Teams operate under supervision of Tokyo Fire Dept.
- Provides supplies in conjunction with USAR/DOD
  - 10,000 personal protective equipment (PPE) kits to assist in rescue/cleanup efforts
  - Rescue supplies to Ofunato Fire Dept. (boats, cots, heaters)
  - Food, water, toiletries to victims

### Sources:

USAID DCHA/OFDA, "Japan Earthquake and Tsunami: Fact Sheet #8," March 18, 2011.

USAID DCHA/OFDA, "Japan Earthquake and Tsunami: Fact Sheet #15," April 8, 2011.

USAID DCHA/OFDA, "Japan Earthquake and Tsunami: Fact Sheet #18," June 15, 2011.

Ministry of Foreign Affairs of Japan, "Acceptance of USAID rescue teams including rescue dogs," March 12, 2011.

## Operation Tomodachi Command Relationships

- U.S. Pacific Command activated elements of Joint Task Force 519 (JTF 519) to augment the staff of U.S. Forces, Japan (USFJ), to form Joint Support Force.
- Commander Joint Support Force: Lieutenant General Burton M. Field (commander of USFJ)
- Japan formed a joint task force under the command of the GSDF Tohoku Headquarters.
- The Japan Self-Defense Forces (SDF) and U.S. forces established bilateral coordination centers in Ichigaya, Yokota, and Sendai. The United States and Japan evaluated that “[t]his experience will serve as a model for future responses to contingencies of all kinds.”

### Sources:

Joint Support Force, USFJ, <http://www.usfj.mil/JSF/Index.html>.

Ministry of Defense, *Defense of Japan 2011*, “Special Feature,” [http://www.mod.go.jp/e/publ/w\\_paper/pdf/2011/02\\_SpecialFeature.pdf](http://www.mod.go.jp/e/publ/w_paper/pdf/2011/02_SpecialFeature.pdf).

Security Consultative Committee Document, “Cooperation in Response to the Great East Japan Earthquake,” June 21, 2011, [http://www.mofa.go.jp/region/n-america/us/security/pdfs/joint1106\\_03.pdf](http://www.mofa.go.jp/region/n-america/us/security/pdfs/joint1106_03.pdf).

# 6

## STRENGTHENING CIVIL SOCIETY LINKAGES

### Introduction

Every crisis presents opportunity. For civil society in Japan—and in particular the nongovernmental organization (NGO) movement<sup>1</sup>—the Tohoku disaster has demonstrated the value that Japanese NGOs can bring to relief efforts. Japanese NGOs have played a significant role in the Tohoku disaster response. Unlike other major global disasters, international NGOs have not deployed en masse to Japan but rather have channeled over \$400 million in support through Japanese affiliates and partners. The Japan Platform—a consortium of 31 Japanese humanitarian organizations—has provided another \$80 million in private contributions to its members, and Japanese NGOs themselves have raised many tens of millions more directly from their constituents.<sup>2</sup> Although comprehensive data are not available, it seems reasonable to estimate that the Japanese NGO movement has raised as much as \$1 billion in funding for responding to the Tohoku disaster.

Japanese NGOs have been instrumental in distributing relief goods, serving meals to the displaced, providing mobile health services and caring for children and the elderly. In a society where the government is expected to have the capacity to respond on a massive scale, NGOs have branched out with creativity to respond to the many gaps and niche needs that have surfaced, such as setting up communications centers using Internet and satellite phones to help disaster survivors contact family members and providing legal counsel to those seeking information about insurance and/or the status of property inundated by the flooding. NGOs have taken assistance down to the community and family level as sources of post-relief assistance on recovery and reconstruction.

Moreover, the Japanese NGOs have provided a vehicle by which the public in Japan, and around the world, could contribute to relief efforts. Having this channel to participate is enormously important to our own sense of humanity, but also, as the data above suggests, brings forth substantial resources that would not otherwise be available.

Yet, despite their substantial role in the response, Japanese NGOs face a number of challenges including capacity, human resource development and linkages with official responders and planners. The civil society working group looked at these challenges and the enormous possibilities for

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1. In Japan, “NPO” for “nonprofit organization” has been the prevalent nomenclature historically. Recently, many commentators have begun making a distinction between NPOs and NGOs, the latter being the growing group of Japanese civil society organizations that are engaged in international relief and development work, while NPOs is used to describe domestically focused organizations—which are much more numerous, smaller, and more likely to rely on volunteers in programming. In this chapter, the terms are used interchangeably.

2. Mirroring the position of the American Red Cross in the United States, many Japanese instinctively donate to the Japanese Red Cross, which also receives massive contributions from their federation partners. As of June 2011, the Japanese Red Cross had raised over \$3.6 billion.

Japan's civil society sector that were revealed in the response to the disasters of March 11. Based on this work, the Task Force has proposed a series of measures that would help to strengthen Japan's civil society sector and the civil society linkages between the United States and Japan after March 11.

## Analysis

During the visit of the CSIS delegation to Japan in June 2011, there appeared to be limited awareness among senior officials and politicians about the specific roles of the NGO sector in responding to the March 11 disasters, though much greater awareness at the local level. At the same time, all interlocutors noted the larger trend toward increasing recognition and legitimacy for NGOs in Japan. Legislation passed in 1998—inspired in part by the contributions of the NGO community to the 1995 Kobe earthquake response—provided a more formal legal status to NGOs. Legislation in 2001 provided an avenue through which donors could earn tax deductions for contributions to qualifying NGOs. However, the application process has been challenging. Of roughly 80,000 civil society organizations in Japan, just over 40,000 are registered nonprofit organizations (NPOs), of which only 176 had tax-deductible status as of last October 2010.<sup>3</sup> The Tohoku disaster seems to have inspired a new step toward legislative support for NGOs: legislation approved by the Diet in June 2011 provides a waiver of estate taxes for contributions to qualified NPOs, as well as other tax advantages.

Inspired in part by the role Japanese NGOs played in responding to the 1995 Kobe earthquake, the late 1990s saw the beginning of a trend of increased government funding for international relief and development work carried out by Japanese NGOs. Overseas development assistance (ODA) to NGOs through the Japan Platform had grown to \$85 million by last year. While there will be a 10 percent reduction in Japanese official overseas development assistance in the coming year in order to refocus resources on domestic recovery, it seems safe to assume that there will be a continuing long-term trend toward increased government funding for ODA through Japanese NGOs.

Despite these developments, the NGO movement in Japan is still hampered by the popular perception that NGOs are simply groups of volunteers. Indeed, a government survey last year found that the average income of NPOs is about \$200,000 per year, with a median income of only \$60,000.<sup>4</sup> There is a common assumption among many outside observers that Japan does not have a philanthropic “culture of giving” like the United States. In fact, it appears that Japanese corporations and citizens can be quite generous and that the real lag has been in Japanese NGOs developing a “culture of asking.”<sup>5</sup> Indeed, of the 10 largest NGOs in Japan, most are the affiliates of Western NGOs such as World Vision, Save the Children, Care, Adventist Development and Relief Agency (ADRA), and others that have introduced a more systematic approach to fund-raising. Their example suggests that Japanese NGOs could also develop successful strategies for fund-raising. Indeed, many international NGOs have heretofore viewed Japan primarily as a fund-raising platform and should be encouraged after the experience of March 11 to look for opportunities to develop the professional capacity in disaster response and recovery of their Japanese affiliates. Such expanded partnerships could prove mutually reinforcing for all parties.

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3. For further analysis see Jeff Kingston, “The Untapped Potential of Japanese Civil Society,” *Japan Chair Platform*, CSIS, November 5, 2010, [http://csis.org/files/publication/101105\\_Kingston\\_CivilSociety\\_JapanPlatform\\_formatted.pdf](http://csis.org/files/publication/101105_Kingston_CivilSociety_JapanPlatform_formatted.pdf).

4. Ibid.

5. Ibid., paraphrasing Ayumi Suzuki of the Coalition for Legislation to Support Citizens' Organizations.

The handful of large Japanese NGOs arising from a community of much smaller NPOs and community-based organizations mirrors the situation that prevails in the NGO movements in the United States and Europe. These larger Japanese organizations have formed themselves into a few different consortia for the purpose of advocacy and even fund-raising. Most prominent are the Japan Platform and the Japan NGO Center for International Cooperation (JANIC), each of which has just over 30 members (14 in common).

Even among these larger Japanese NGOs, there is a challenge of human resource capacity, in both legal and cultural terms. NGO work is viewed by many as volunteer work, and indeed, many Japanese NGOs rely heavily on legions of people willing to volunteer for short periods of time. This is good, and the enormous volunteerism after March 11 was impressive to see. However, there is still a need for an experienced core group of professional managers and technical experts to design and administer effective relief and recovery operations. Employment laws in Japan make it difficult for NGOs to hire professional staff on a project-by-project basis, which is common in the NGO world elsewhere. These challenges in perception and employment law complicate efforts to further human resource development for Japanese NGOs.

NGOs in Japan have proven agile and are adjusting to the longer-term requirements after massive rapid-onset emergency. Peace Winds—one of the largest home-bred Japanese NGOs—has shifted impressively to more market-based strategies to support economic recovery. It has supplanted relief goods with vouchers that can be redeemed with local merchants and has been working closely with the small business community and the local fishing associations to support small business recovery. Save the Children Japan and World Vision Japan—in addition to Peace Winds—are among the NGOs focusing on the long-term psychosocial recovery of children and adolescents.

Looking to the future—and beyond the Tohoku response—Japanese NGOs deserve support as they pivot toward a larger role in international relief and development. Successful NGOs like Peace Winds were already active internationally before March 11, but had to pull experienced staff home from abroad because they did not have sufficient scale to conduct multiple humanitarian responses simultaneously. American international relief and development NGOs currently garner over \$13 billion in private resources for international assistance per year, in addition to which only \$3 billion comes from government. Despite having the world's third-largest economy, the participation of Japanese civil society in international relief and development is relatively low, and Japan is dramatically underrepresented in key international humanitarian fora as a result. There are no Japanese members of the International Council of Voluntary Agencies (ICVA); InterAction, the American NGO consortium, which has a number of Euro-grown NGOs among its members; or the Humanitarian Accountability Project, a Geneva-based membership organization that promotes accountability to beneficiaries. There are only two Japanese members of People in Aid, which operates internationally to help NGOs develop human resource capacity. Japanese NGO participation in the Sphere Project, a collaborative effort of international NGOs to develop standards for humanitarian response, has been limited.

The lack of Japanese representation in these international humanitarian fora has multiple implications. First, the Japanese perspective is not represented in the way these organizations develop common positions and tools, which is a loss to the international humanitarian movement and contributes to the notion that the humanitarian movement is conceptually Western. Second, Japanese NGOs are missing out on some very valuable resources to develop capacity, acquire common tools, establish networks, and coordinate effectively with the rest of the humanitarian community.

Finally, as NGOs are often the face of international humanitarianism, Japan as a nation is missing an opportunity to further demonstrate its compassion and commitment to humanitarianism in the international arena.

The Japanese NGO movement faces challenges in further developing capacity in disaster relief, recovery, and reconstruction, but the trajectory is clearly upward. Much like the Kobe earthquake response in 1995, the Tohoku disaster response is providing new opportunities for the Japanese NGO movement to build a public profile and robust capacity. Japan has long been one of the most generous nations on the planet in terms of assistance for developing nations. The disasters of March 11 demonstrated that Japanese NGOs are poised to broaden Japan's critical role in international relief and development and to become an important pillar in the bilateral partnership between the American and Japanese people. The key question now is how government, the private sector, and Japanese and international NGOs themselves can contribute to that outcome.

## Recommendations

There are a number of things that American institutions can do:

- 1. The federated international NGOs—many of which have strong American roots—should look to Japan as more than a fund-raising platform; they should seek to develop the disaster response capacity of their federated partners in Japan to enhance both domestic and international response.**
- 2. American and Japanese universities should explore partnerships that would support the expansion of programs that could bolster a professional cadre of humanitarian and international development professionals.** Leading graduate programs in development in Japan, such as but not limited to the Graduate Research Institute for Policy Studies (GRIPS), and in the United States at schools such as the Johns Hopkins School of Advanced International Studies (SAIS) and Georgetown University's Walsh School of Foreign Service, should explore more collaborative bilateral research and teaching.
- 3. The U.S. Agency for International Development (USAID) and Japan International Cooperation Agency (JICA) should expand cooperation and coordination of humanitarian and development assistance with programs that encourage mentoring and partnership between U.S. and Japanese NGOs.** It will be important for USAID to maintain a robust presence in Tokyo in order to coordinate with Japan's NGO sector.
- 4. American NGOs and other American organizations that have channeled support to Japan should encourage and support a thorough evaluation of the role of the NGO movement in the disaster response.** Such support can be instrumental to the success of the evaluation, but the process must be driven by the Japanese NGOs themselves, possibly through their consortia (such as JANIC or Japan Platform). The review should include a survey of the key stakeholders in the response: the Self-Defense Forces, local and national government, the donors, the NGOs themselves, and most importantly, the beneficiaries. Further, the same NGOs should be willing to invest in implementing action steps to address the findings of the process.
- 5. The U.S. Pacific Command and U.S. Forces, Japan, should work with their counterparts in the Japan Self-Defense Forces and the Ministries of Foreign Affairs and Defense to look for**

**opportunities for outreach and partnering with American and Japanese NGOs in training, exercises, and seminars on humanitarian and disaster relief.**

- 6. U.S. donors should encourage that some portion of their relief and recovery funding be set aside for disaster risk reduction and NGO capacity development in Japan.**
- 7. American and Japanese foundations should encourage grant applicants to incorporate NGO participation in projects related to bilateral cooperation.**
- 8. The business communities in the United States and Japan should focus on encouraging support for NGO capacity building and bilateral partnerships, for example, through the Keidanren 1% Club, the U.S.-Japan Business Council, or the American Chamber of Commerce in Japan.**





## APPENDIX 1 PARTICIPANTS IN WORKING GROUP MEETINGS

The following individuals made valuable contributions to the discussions but were not asked to sign on to the final report. The Task Force also held discussions with Japanese leaders in business, academia, and civil society in the United States and Japan and appreciated their input.

**Charles Aanenson**  
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*America's Natural Gas Alliance*

**Katherine Bliss**  
*CSIS*

**Cary Bloyd**  
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**Sarah Bonner**  
*GE*

**David Bowen**  
*Bill & Melinda Gates Foundation*

**Laird Burnett**  
*Kaiser Permanente*

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National Institutes of Health*

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*U.S. Chamber of Commerce*

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*Columbia University*

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**Maki Hishikawa**  
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**Shunichi Homma**  
*Columbia University*

**Susan Hubbard**  
*Japan Center for International Exchange/USA*

**Seigo Izumo**  
*Boston-Japan Medical Relief Initiative*

**Jenae Johnson**  
*U.S. Department of State*

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**Samir Khalil**  
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*Homeland Security Institute*

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Bob Whitcomb  
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Phyllis Yoshida  
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## APPENDIX 2

# JAPAN FACT-FINDING MISSION

A task force delegation visited Japan from June 20–22, 2011, to exchange views with senior leaders in government, business, and civil society and made a trip to the affected region.

### Delegation Members

**Kiyoaki Aburaki**  
*Visiting Fellow, CSIS*  
*U.S. Representative, Keidanren*

**Tim Adams**  
*Managing Director*  
*The Lindsey Group*

**Richard Armitage**  
*President*  
*Armitage International*

**Joseph Booth**  
*Executive Director, Stephenson Disaster*  
*Management Institute*  
*Louisiana State University*

**Michael Green**  
*Senior Adviser and Japan Chair, CSIS*  
*Associate Professor, Georgetown University*

**John Hopkins**  
*Group Executive*  
*Fluor Corporation*

**Richard Kirkland**  
*President*  
*Lockheed Martin Global, Inc.*

**Charles Lake**  
*Chairman*  
*Aflac Japan*

**Randolph Martin**  
*Director of Global Emergency Operations*  
*Mercy Corps*

**Stephen Morrison**  
*Senior Vice President and Director*  
*Global Health Policy Center, CSIS*

**Thierry Portè**  
*Chairman*  
*Japan-U.S. Friendship Commission*

**David Pumphrey**  
*Senior Fellow and Deputy Director*  
*Energy and National Security Program, CSIS*

**Stanley Roth**  
*Vice President, International Government Relations*  
*The Boeing Company*

**Robin Sakoda**  
*Partner*  
*Armitage International*

**Sheila A. Smith**  
*Senior Fellow for Japan Studies*  
*Council on Foreign Relations*

**Nicholas Szechenyi**  
*Senior Fellow and Deputy Director*  
*Japan Chair, CSIS*

## APPENDIX 3

# HOW TO CONTRIBUTE TO JAPAN'S RELIEF, RECOVERY, AND RECONSTRUCTION

**Akaihane Relief Fund:**

<http://www.akaihane.or.jp/en/index.html>

**Architecture for Humanity:**

<http://architectureforhumanity.org/>

**Direct Relief:**

<http://www.directrelief.org/WhereWeWork/Countries/Japan/Japan.aspx>

**Global Giving:**

<http://www.globalgiving.org/dy/v2/content/countries.html?country=Japan>

**International Medical Corps:**

<http://internationalmedicalcorps.org/Page.aspx?pid=1970>

**International Rescue Committee:**

[https://www.rescue.org/donate/japan?ms=ws\\_ircz\\_zzz\\_rcol\\_zz\\_zzzzzz](https://www.rescue.org/donate/japan?ms=ws_ircz_zzz_rcol_zz_zzzzzz)

**Japan Center for International Exchange (JCIE):**

<http://www.jcie.org/earthquake.html>

**Japan Platform:**

<http://www.japanplatform.org/E/>

**Japan Red Cross:**

<http://www.jrc.or.jp/eq-japan2011/donation/index.html>

**Mercy Corps:**

<http://www.mercycorps.org/countries/japan>

**Operation USA (Must Specify Japan):**

<http://www.opusa.org/projects/japan-earth-quake-and-tsunami-immediate-response-and-recovery-projects/>

**Peace Winds:**

<http://peacewindsamerica.org/support/>

**Relief International:**

<https://www.ri.org/donate/donate.php>

**Tomodachi Initiative:**

The TOMODACHI initiative is a U.S.-Japan public-private partnership that supports Japan's long-term recovery while strengthening U.S.-Japan relations. Coming on the heels of the successful Operation TOMODACHI in the immediate aftermath of the March 11 tragedies, the TOMODACHI initiative will support programs and activities that invest in people, particularly in the areas of education and youth programs. TOMODACHI seeks to empower the next generation of thinkers, leaders, and entrepreneurs in order to contribute to the longer-term recovery of Tohoku and help Japan more broadly; to connect people in Japan, and in particular Tohoku, with U.S. support; to promote cross-cultural interchange; and to provide opportunities for young people they would not have otherwise. TOMODACHI is administered by the U.S.-Japan Council, a 501(c)3 nonprofit organization, with the support of the U.S. and Japanese governments. TOMODACHI will coordinate with local communities to match needs to tailored activities and contributions, drawing on contributions and activities throughout the public and private sectors in both the United States and Japan.

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