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SPECIAL LEAD-OFF INTERVIEW

RECOVERY FROM THE GREAT EAST JAPAN EARTHQUAKE
— TOWARD A JAPAN MORE OPEN TO THE WORLD —

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The Great East Japan Earthquake and Japan – Reflecting on Past Disasters

Yamamoto: I would like to begin by asking Mr. Makoto Iokibe, President of the National Defense Academy of Japan and recently Chairman of the Reconstruction Design Council in Response to the Great East Japan Earthquake, to comment on the significance the recent disaster had for Japanese history and for the Japanese people in light of his previous experience of the Great Hanshin Earthquake.

Iokibe: The Great Hanshin-Awaji Earthquake of 16 years ago struck at 5:46 am. I was still asleep when the entire house shuddered with a boom and awakened me, and I recall experiencing a shaking such as I had never felt before. My home was entirely destroyed, and the dismal state of houses and roads in our neighborhood testified to the ferocity of an epicentral earthquake.

The most characteristic feature of the Great Hanshin-Awaji Earthquake was that 90% of the victims were crushed to death when their houses collapsed, a fact attributable to the time at which the earthquake struck. The remaining 10% or so of the 6,434 deaths were due to fire or other causes. The Great Kanto Earthquake [of 1923], on the other hand, was actually a sequence of three earthquakes. In addition, that earthquake struck at 11:58 am, and the flames from kitchen stoves heating up lunch were fanned by the strong wind into a tremendous conflagration. Of the 100,000 people that perished in the Great Kanto Earthquake, approximately 90,000 burned to death and 10,000 were crushed to death in a compound disaster in which fire victims outnumbered those crushed to death in the earthquake nearly ten-to-one.

The most recent Great East Japan Earthquake (Tohoku-Pacific Ocean Earthquake) was an enormous quake of magnitude 9.0 caused by a linked sequence of undersea megathrust earthquakes. The Great Kanto Earthquake was an earthquake plus fires, while the recent disaster was an

earthquake plus a huge tsunami, to which was added an unanticipated nuclear power plant accident that made this a compound disaster the likes of which have no historical precedent.

However, I think there is cause for pride in the robust resilience to earthquakes demonstrated by Japanese society, as illustrated by the fact that Kurihara City in Miyagi Prefecture, the site where the tremor reached its highest level of intensity of 7 on the Japanese scale, suffered zero casualties. I believe that the level of earthquake resistance throughout Japan has been strengthened as a consequence of greater interest in the quakeproofing of houses and other structures following the Great Hanshin Earthquake.

Looking at the Shinkansen (bullet train), for instance, 10 trains were running in both directions along the Tohoku Shinkansen Line at about 270km/hr when the three prefectures were hit with violent shocks, but not one of these trains derailed. One train cruising at 265km/hr near the city of Sendai in Miyagi Prefecture, closest to the earthquake's epicenter, had begun to apply its brakes nine seconds before the earthquake struck, while another traveling along at 270km/hr near Koriyama in Fukushima Prefecture had begun braking 30 seconds ahead of the quake. The proper functioning of this Earthquake Quick Alarm System is very much to Japan's credit.

I had always considered the Tohoku region predominately a farming and fishing area, and I was surprised to learn that supply chains, electronics and electrical equipment production and automotive parts manufacturing had built up a presence on par with agriculture and fishing. The news reported that the damage to these areas in the disaster was reverberating worldwide. However, highways, Shinkansen service and supply chains were very quickly restored and, though initial forecasts called for 90% restoration by August, as much as 95% of this infrastructure is now back in satisfactory working order. I must say that the Japan's on-the-ground response capabilities are truly impressive.

Japanese society has thus enhanced its ability to deal with earthquakes to a degree that might even be called inspiring. The quakeproofing of structures of all types had been reinforced, and people comported themselves well. One thing not so admirable, however, has been the lack of political leadership. In developed Western societies, at least the top leadership can generally be expected to show some dynamism, while I fear that Japan has robust local capabilities but lacks the strong political leadership needed to coordinate these.

Lessons of the Great Hanshin Earthquake and Reforms – SDF Disaster Relief Efforts

Yamamoto: What are your thoughts on the SDF's disaster relief efforts following the Great East Japan Earthquake?

Iokibe: I found the committed and methodical post-disaster efforts of the SDF, police and fire departments and others extremely praiseworthy.

The SDF's initial response to the Kobe earthquake was slow, and thus they did not prove very helpful in rescuing survivors. A total of 6,434 people is said to have perished in the Hanshin-Awaji earthquake and, of the 35,000 people rescued from collapsed houses, 77% were saved by family members, neighbors, and other persons in the immediate community. The reason for this is simple: about 80% of disaster survivors are rescued on the first day. The survival rate drops considerably on the second day, and beyond the third day any rescue is considered a miracle. The SDF's slow initial response left them only able to rescue 165 survivors while approximately 3,800 were rescued by police officers and 750 by firefighters in the area. Once it was ready to move, the regiment responsible for the afflicted area weaved its way through traffic congestion to arrive on-site but, by the time preliminary discussions with local police had been completed and operations begun, the first day was nearly over. There are even now high-ranking officials in Tokyo who contend that the SDF did not deploy earlier because of delays in requesting assistance on the part of the prefectural governor, but this is entirely a myth. Whether the governor issued a request or not, the fact remains that preparations would have required this much time. The SDF personnel that began steadily arriving in the disaster-hit area recovered many bodies and thereafter provided assistance for restoring lifelines for 100 days by clearing away rubble and opening roadways, prompting locals to remark on how much they could rely on the SDF. The governments of Kobe and other cities and towns in the vicinity who had previously refused to conduct joint disaster-prevention training with the SDF subsequently became accepting of it.

Reflecting deeply on the delays following the Hanshin-Awaji earthquake, the SDF undertook serious reforms. New laws were passed across the country to facilitate greater responsiveness from the SDF, but I think the most significant changes were made by the SDF itself. The SDF's remarkable organizational capabilities and mobility amid severed traffic and communications networks in the extensive area struck by the recent disaster were in part attributable to these reforms. The US military offered help in the form of Operation Tomodachi. Against the backdrop of this exceptionally tragic compound disaster, more than 26,600 lives were saved. Credit for nearly 20,000 of these goes to the SDF, which was responsible for an overwhelming majority of successful rescues.

Post-disaster Japan-US Cooperation

Yamamoto: Please tell us more about Japan-US cooperation after the disaster, in particular Operation Tomodachi, the largest joint military operation ever conducted by the Japanese and US governments.

Iokibe: During this large-scale joint Japan-US operation, a sweeping sea search was made on the 21st day, the day on which fishermen's lore suggests that corpses swept out to sea by a tsunami would resurface, and many bodies were recovered. Corpses still hidden beneath the rubble continued to be discovered long thereafter. To ensure that the search for bodies was conducted in the respectful manner that others are to be treated in Japanese culture – requiring a careful search for bodies before rubble is cleared away – the Japanese side took full charge of the operation, with the US playing a supporting backup role. With this understanding, the US military performed truly valuable service through Operation Tomodachi.

We were particularly grateful for the US' robust capabilities when it came to removal operations at Sendai Airport. As soon as enough runway had been cleared to allow some planes to land, large US transport aircraft began pouring in and rapidly restored the airport; I was quite awed by their effectiveness. In addition, powerfully-built young American men visited elementary schools and elsewhere, leaving an impression on the local people with the kindness they displayed.

Japan's SDF should learn from the US' solid public relations strategy and its approach of determining the most effective course of action. Japan's SDF do give their all in a puristic fashion, however, and the media would do well to ascertain the key efforts and closely cover such stories as the tremendous help provided by the aircraft carrier *Hyuga* in protecting people during the disaster.

The US boasts tremendous intelligence-gathering capabilities. Surface objects can be observed very well by both satellite and by surveillance aircraft. Concerns about the nuclear power plant accident and radiation leakage reportedly had the US considering for a time pulling its personnel out but, after SDF helicopters began dropping water on the Fukushima nuclear power plant, the US military switched gears and launched Operation Tomodachi. The SDF helicopters did not have any radiation protection, and many on the US side were surprised at the SDF's willingness to undertake this extremely risky operation, deemed by some a suicide mission. This action nonetheless gave the US some idea of the SDF's determination, and I have heard that it was this resolve that convinced the US to cooperate rather than withdraw. The US took note of the SDF's earnest dedication to search for bodies in a very dangerous forward area despite the radiation, and it responded with support for its ally. The US places great emphasis on whether a partner, ally or not, is earnest in its efforts, and it is ready to match the efforts of determined partners. This was one of those instances, of course, and the US lent us its enormous strength.

The presence of the US military had a greater significance in terms of security than simply contributing to the total 100,000 to 120,000 personnel mobilized for disaster countermeasures in Operation Tomodachi. The SDF's mobilization of 107,000 personnel constituted a deployment of more than half of the Ground SDF's total troop strength. It was in truth inadvisable to leave bases here and there empty, and such a mobilization cannot be sustained for a prolonged period. With gaps throughout Japan's defensive perimeter, what would we do if another national defense contingency were to occur? Last year saw the Senkaku Islands incident and, while the units on the front involved in that incident remained mostly in place, a deployment of 100,000 troops goes beyond the pale when considering the possibility of other natural disasters and national defense incidents. The fact that the SDF was able to respond as normal following the maximum mobilization deemed logical was in great part due to the support of 20,000 US troops.

Building a Country Resilient to Disaster – Toward an “Open Reconstruction”

Yamamoto: The recommendations “Towards Reconstruction – Hope beyond the Disaster” to the Prime Minister of the Reconstruction Design Council in Response to the Great East Japan Earthquake contained a chapter entitled “Open Reconstruction.” As Japan moves forward with reconstruction, what are the key points in confronting the challenges that will be encountered?

Iokibe: Postwar Japan dealt with its first disaster in 1959, the Isewan Typhoon (Typhoon Vera). This disaster prompted Japan in 1960 to adopt its first legislative approach in the form of the Basic Act on Disaster Control Measures. This law was supplemented the following year by the Act on Special Financial Support to Deal with Designated Disasters of Extreme Severity (Severe Disasters Act), and new laws were passed each time an earthquake, typhoon, volcanic eruption, torrential rain or other disaster occurred. In this way the government responded whenever some event drove reality home, and these responses came together in a patchwork manner. This approach had seemed generally adequate up until the Hanshin-Awaji earthquake, but what surprised me with this latest disaster was the absence of any basic system for handling tsunami disasters.

The tsunami generated by the recent earthquake caused extensive damage all along a sprawling area of deeply-indented coastline. As housing in the areas hit by the tsunami would be imperiled by future tsunamis, the Act on Special Financial Support for Promoting Group Relocation for Disaster Mitigation is being used in an attempt to support the development of residential areas in safer locations. Tsunamis leave no other choice but to evacuate. The best option in doing so is collective evacuation, with the entire town evacuating to higher ground. Fortunately new hilltop towns are no longer a rare sight anywhere in Japan. After the 1896 Great Meiji-Sanriku Tsunami, the mayor of one town boldly decided to relocate the town to higher ground, and we ourselves must also be continually seeking a new level of safety in line with the lessons learned from history.

I am therefore recommending at this time that the national government provide backup support for collective relocation projects aimed at disaster mitigation and tailored to local circumstances.

I believe in the future it will be more important to emphasize “disaster reduction” than “disaster prevention.” It is nothing but human arrogance to think that a major disaster can be completely contained. Nature’s tyranny will launch one unexpected surprise attack after another, and safeguarding a town against every contingency would cost too much and make ordinary life inconvenient. Instead, I suggest we consider combining a variety of methods for the purpose of “disaster reduction.” Most important is building proper escape routes, and then building towns in the locations to which people have fled.

For some towns, topography may make it difficult to “seize” the high ground. Kamaishi and Rikuzentakata are relatively large towns that have no good spot to which to relocate in the hills behind them. One idea might be to use rubble to build a mound on the beach offering people an evacuation point in the event of an emergency, and a marker bearing the names of those who perished in the recent disaster could be placed there and a festival held each March 11 in commemoration. Constructing breakwaters to protect harbors and coastal levees along the coastline, turning those places likely to suffer damage during the next tsunami into green spaces, parks, or perhaps farms, and building in a slightly elevated location a secondary levee topped with a road that would be able to hold back most tsunamis would constitute what the report refers to as “multiple defenses,” in which a variety of disaster reduction measures are combined to enhance the level of safety. These might entail building ferroconcrete buildings able to withstand tsunamis near the harbor, with offices occupying the first few floors and residences the fifth floor and up; making exterior stairwells mandatory so that people can escape to rooftops in the event of a tsunami, and putting all ordinary two-story private residences behind the secondary levee. Moving to higher ground coupled with deploying multiple defenses could serve as a breakthrough approach for the frequently tsunami-hit Sanriku area.

I think there are two central issues that Japan must consider in recovering from this enormous disaster. One is rebuilding to make towns safer and more secure through disaster reduction. There is little sense to rebuilding a town if it remains desolate and unpopulated, so the emphasis should be on livelihoods, employment, industry and recovery. With regard to the marine products industry, for example, concerns have been expressed that, as things stand now, there will not be enough people to take over the work even in the treasure trove of fishing spots that makes up the Sanriku coastline; rather than imposing a fisheries cooperative monopoly, a special zone could be established and incentives provided to allow private companies to move into the industry. At the same time, recovery efforts must also address the long-term structural changes inherent in the aging of Japanese society. When shifting to higher ground in keeping with the Act on Special Financial Support for Promoting Group Relocation for Disaster Mitigation, not only private residences but hospitals, elementary schools, and nursing homes as well will have to be moved

together so that comprehensive care can be provided by the community. When I made this point at the Reconstruction Design Council, however, the Ministry of Land, Infrastructure, Transport and Tourism, the Ministry of Education, Culture, Sports, Science and Technology, and the Ministry of Health, Labour and Welfare noted their differing areas of responsibility and had varying opinions to offer so, insisting on the need for an overall solution, I sought their cooperation in dealing with the situation by requesting that each ministry and agency not ask what is available but rather determine what is needed and create it. The ministry representatives communicated back and forth between the Council and their home ministries and in the end they came together in cooperation, fully prepared to deal with the situation. It is very valuable to have knowledgeable people with authority to implement measures solidly join in and supplement or change those areas that everyone deems necessary.

The other issue is that of nuclear power plants: do we halt nuclear power generation right away or after a certain deadline, or do we continue enhancing nuclear power plant safety? Regardless of the path Japan chooses, there is no question that we must increase our use of natural and renewable energies. When building new towns, therefore, we can address this issue starting with basic infrastructure as we look ahead to an age of renewable energies. This approach will give Tohoku a cutting-edge aspect, and it would be nice if the entire country could support these efforts. This was not an approach that could have been taken at the time of the Hanshin-Awaji earthquake, when national funding was only available for restoration, with only enough funds provided to restore afflicted areas to their pre-disaster condition, and recovery was left to local governments. This time around, however, I think there may be a sense of solidarity, fellowship and sharing that will allow us to do everything we can. Even if we have to create new rules, I would like to see the entire nation get behind increasing the technological sophistication of the Tohoku region. Naturally no one is asking the impossible; we simply want to do as much as we can now. I believe this could prove the salvation of Japan as a whole. There are possibilities of major earthquakes in the Nankai and Tonankai areas and, before an earthquake strikes directly below Tokyo, we need to create with everyone's support model communities incorporating long-term changes that can endure in the eras ahead. Funding for this should come from the current generations, and not our future grandchildren 100 years down the line. If we do not take such steps, there will be one disaster after another. Recovery will demand an enormous investment of 10 or 20 trillion yen, and we must use the return on this investment during an economic boom to undertake new measures to prevent disasters. I would like to see a wholesale reform of our social security and tax systems to firmly establish such a program. I hope the recent disaster will become the catalyst for reinvigorating Japan as a whole.

Finally, it is also essential that we seek a recovery open to the rest of the world. The recent disaster was followed by an unprecedented volume of warm-hearted condolences and support from countries and people around the globe. It is only natural that we share with the world our accounts of the disaster and the lessons learned. A developed country having a history replete

with natural disasters, Japan should take the lead in international cooperation in the area of disaster prevention and reduction using the know-how and technology it has garnered through its own experiences. Japan has long been engaged in international emergency relief efforts for disasters via the United Nations and the Japan Disaster Relief Team of the Japan International Cooperation Agency (JICA), and recently it has sought to commence similar cooperation in ASEAN and Japan-China-South Korea frameworks. It is regrettable that Japan's ODA is on the whole declining, but that is no reason that it cannot take on a serious role in disaster prevention and reduction. Reaffirming that it can only survive by being an integral part of the international community, Japan should not turn inwards but instead should work toward recovery in a context of international interdependence and reinvigorate the Japanese economy. I would like to see the Japanese people reset their lifestyles to advance hand-in-hand with the other peoples of the world.

(End)

* This interview was conducted on August 1, 2011.

Post-interview comments

Interviewer: YAMAMOTO Yoshinobu, Advisor, PHP Research Institute; Professor Emeritus, University of Tokyo

After the Great East Japan Earthquake, Japan received assistance from many countries, with the US military's assistance being particularly conspicuous. When we decided to focus this issue's special feature on the post-disaster Japan-US alliance, one topic we wanted to address was the disaster itself and Japan's own responses. I asked to interview Makoto Iokibe, President of the National Defense Academy of Japan, as the best person to discuss the relevant matters. Mr. Iokibe was himself in Kobe when the Great Hanshin-Awaji Earthquake struck and more recently served as Chairman of the Reconstruction Design Council in Response to the Great East Japan Earthquake and, as President of the National Defense Academy, he is well-versed in SDF affairs and the Japan-US alliance. It was this background that prompted me to request an interview, which I believe has more than sufficiently served its purpose. He was able to compare the two earthquakes, discuss the SDF's deployment and the US military's assistance in the disaster-hit areas, and comment on the road to recovery. His insistence on an open recovery and his advocacy of the importance of international cooperation thereto was quite striking.

I am grateful that Mr. Iokibe made time for my interview despite his busy schedule and that he so thoughtfully answered my questions. His commentary is worthy not only of appearing as a feature article in this issue but also of being more broadly considered by those wishing a deeper understanding of the recent disaster and its repercussions.