Preparation made all the difference for the Tohuku schools when the 3/11 earthquake and tsunami hit Japan: in most, staff had agreed on their evacuation route in advance but in one, teachers couldn’t agree which route to take.

The careful planning saved 3,000 students in Kamaishi City from the tsunami. But Okawa Elementary School in Miyagi did not designate an evacuation area in advance and valuable time was lost as teachers tried to reach consensus about where to go. As a result, 68 of the school’s 108 pupils died.

The Consul General of Japan in Boston Takeshi Hikihara gave this example as part of his frank assessment of Japan’s preparedness and rebuilding process following the 9.0 magnitude earthquake and tsunami. Consul Hikihara was speaking at an international workshop organized by the Center for Rebuilding Sustainable Communities after Disasters (CRSCAD) at the University of Massachusetts Boston, which focuses on reconstruction with vulnerable populations. The conference drew participants from five continents and examined lessons from Japan as well as social vulnerabilities in specific populations worldwide.

Consul Hikihara noted the safe evacuation of most schools was the result of careful disaster preparation. All organize emergency drills in the first week of September and are given three rules to guide them in case of emergency: “Take nothing for granted. Take the best possible evacuation route in a given situation. Be the first to evacuate.”

“Our temperament and our mindset are an important part of preparedness,” said Consul Hikihara.
Another example of good preparedness Consul Hikihara pointed to was the automatic shutdown system for the Shinkansen or bullet trains which run at speeds up to 200 miles per hour. The early warning system functioned exactly as planned, detecting waves and slowing and then stopping the trains. As a result there were no derailments, fatalities or even injuries to those on the trains.

The budget for Japan's reconstruction is $228 billion over the next five years and a government agency for reconstruction will be launched to oversee the process. One mechanism to be used will be “easy to use” grants that local governments can access to implement their own reconstruction plans. Working with the private sector will be another key to successful reconstruction, emphasized Consul Hikihara. Overarching policies will also seek to ensure that rebuilding responds to the longer range challenges of an aging society and population decline.

Regarding the damage to four nuclear reactors at the Fukushima plant, Consul Hikihara said that they had been able to complete a total cold shut down of the nuclear reactors and were working to ensure that the radiation dose remains in steady decline. Contributing factors to the damage were a “lack of preparation for severe accidents” as well as an “insufficiency in response to the nuclear emergency,” he said. A remaining challenge is to “decontaminate these areas—which is a huge task.”

Lessons learned from Fukushima include the need to secure a reliable source of electricity and improve information sharing between agencies as well as between the local sites and the reactor's main station. In addition the “safety culture” should be strengthened, especially in human preparedness, said Consul Hikihara.

Reporting on the philanthropic response, David Janes of the United States-Japan Foundation reported that Japanese-American societies led fundraising efforts to support the work of Japanese non-governmental organizations (NGOs). Overall, some 22,000 US donors raised $11 million dollars for the Japan relief efforts.

A total of 190 cities or villages in the Tohoku region were affected by the disaster, reported Janes, noting that this area is home to the highest percentage of elderly in Japan, “a very vulnerable population.”

Beyond the immediate impact of the disaster, David Santulli, executive director of the non-profit organization United Planet, said that the rise in the number of suicides following the disaster compounded the initial tragic loss of life. The elderly were especially at risk. Santulli stressed the need for more trained mental health workers.

Yuka Uchida, a visiting fellow at the Brookings Institute who worked with the Japanese NGO Civic Force noted that NGOs were much more prepared during this emergency than
they were for the 1995 Kobe earthquake. Civic Force was able to charter planes to survey the damage almost immediately. She also said that messages of support from abroad were very encouraging to earthquake victims: “The fact that they were not alone was so important to them.”

**Diversity in Social Vulnerabilities**

Several speakers examined types of social vulnerabilities. Michele Santos da Cruz of the University of Sao Paulo reported that her research found that physical activity resulted in greater empowerment for people with disabilities. She noted that it is important to focus “less on the physical characteristics of people with disabilities and more on cultural responses to these characteristics.”

Psychologist Oluwatoyin Olatundun Ilesanmi from Redeemer’s University in Nigeria identified informal economy workers, most of whom are women, as a very vulnerable group in her country. Others were those stigmatized with illness, particularly those with HIV/AIDS and the mentally ill; poor families and the self-employed, particularly in rural areas. Against the backdrop of the country’s religious, political and intertribal conflicts, migrant workers, internally displaced people and refugees were particularly at risk. These conflicts have resulted in “widespread human, material, economic, and environmental losses” that the community lacks the capacity to address.

A unique prison model from Bolivia was described by researcher Cristal Downing from New York University. Prisoners must pay the costs for their own imprisonment by becoming entrepreneurs and running small businesses within the prison. This prison system seems to be very effective, achieving one of the lowest recidivism rates in the world at 36 percent.

**A Call for Better Planning**

Inadequate planning increased vulnerability to disasters observed several presenters. “Planning decisions are not taking climate change into consideration—while this is bad in developed countries, it is really bad in the developing world,” said Patricia Perkins from the University of York in Canada.

Perkins urged planners to use a “bottom up”, not a “top down” approach that invites neighborhood residents to be involved in the way infrastructure is developed and draws on the community’s knowledge. She recommended a strategy of “community mapping” that asks members where the rivers flood, where children play, where the public spaces are, etc. Older people can share their historical knowledge with younger people as well.
Lien Dieu To, a Masters student in Public Affairs at UMass Boston reported on the repeated flooding in the Central region of Vietnam. While the region has geographic features that make it prone to flooding, she emphasized that, “Humans make it more serious by fast deforestation and overexploitation.” She recommended that government officials receive more training and that communities in the most vulnerable areas be relocated.

Oluwatoyin Olatundun Ilesanmi described characteristics of megacities which experience a form of “involution” marked by vast expansion coupled with economic decline. “The Lagos megacity is dysfunctional yet dynamic,” she said, “Its history is marked by severe deterioration in the quality of life with high levels of poverty, proliferation of slums, and environmental degradation.” Contributing to the growth of Lagos was the country’s drastic and rapid transition from a rural to an urban oriented economy.

Post disaster rebuilding plans in and around New Orleans are still experiencing obstacles, reported Jennifer Trivedi of the University of Iowa. Attempts to relocate some of Katrina’s survivors to safer ground in the Woolmarket neighborhood north of East Biloxi have met with resistance. Woolmarket is a more white and wealthy community with large lots; its residents protested efforts to rezone areas to build smaller homes on smaller lots like those that were in East Biloxi.

**Gender Issues in Disasters**

“Disasters magnify gender disadvantages,” said Alisa Klein, a public policy consultant on sexual violence issues. Women are more likely to live in poverty and “people in poverty are the least likely to have access to a place they can go to and stay for days or weeks.” Women’s greater care-taking responsibilities assigned by gender conventions and social roles also limit women’s possibility of escape.

Sexual violence is already an underreported crime and in disasters “when dealing with basic survival issues, women might take months to report what is seen as a tertiary issue,” said Klein. Victims often come to feel like “throw away people” who have been abandoned by the authorities.

In the aftermath of the 2010 Haiti earthquake, women in the camps were at particular risk, often separated from their families and without the protection of an adult male relative, said Chantal Healy, an attorney and healthcare and social justice advocate.
camps also lacked lighting and private bathing facilities, further increasing risk. She recommended measures including community building and camp patrols as well as training in self-defense and income generating skills for the women.

Ana Servigna, an anthropologist at Rollins College, looked at the responses of indigenous women in Venezuela to the flooding disaster of 2010. She said that although they are “excluded from many aspects of Venezuelan life, these women are respected in their own community” for their knowledge, skills, and experience. “Reciprocity and cooperation are their guiding principles,” said Servigna. During and after the disaster, it was these women who developed “coping strategies to ensure the survival of their communities.”

Disaster Planning with Vulnerable Populations in the U.S.

Keynote speaker Marcie Roth, director of the Office of Disability Integration and Coordination at the US Department of Homeland Security/ Federal Emergency Management Agency (FEMA), said a “whole community approach” is required for effective disaster preparedness and response planning. She noted that in addition to people with disabilities, nearly 149 million Americans have a health maintenance need. Some examples are the 10 percent of American adults who take antidepressants on a daily basis and the six percent of children who need bronco-dilators. It was essential, she said, to include all the different groups in a community, particularly those most vulnerable, when planning for disasters.

W. Russell Webster, Federal Preparedness Coordinator for FEMA Region One emphasized that, “Individuals are the cornerstone of preparedness. Ninety percent of the time your neighbors are your first responders.” Webster discussed FEMA’s outreach work to youth, schools, and higher education and their Student Tools for Emergency Planning (STEP) program. The STEP program is now being implemented in several states for students in the fourth and fifth grades.

Dr. K. Viswanath of the Harvard School of Public Health discussed effective communication strategies in emergencies. “There are significant differences among social groups in the way people acquire information during a public health emergency,” he said.

“Information is always unequally distributed. Some people have better access, pay more attention to it, learn more from it, and have more capacity to act on it,” said Viswanath. “The more educated people are, the more likely they are to get their information from the
Internet. The less educated tend to rely on local TV news.” Recommendations for action should be kept simple: “The more simple the behavior, the more likely it will be followed.”

Bruce Lockwood, deputy director of Emergency Management in New Harford, Connecticut presented findings of a federal government study on children and disasters. The study recommended that children’s needs be integrated across all phases of disaster planning and that a permanent focal point for coordinating their needs be identified.

Shelter operators need to provide “a safe and secure environment for children including access to essential services and supplies.” Respite care should be planned so parents in shelters can have breaks from constant childcare.

Other recommendations were to ensure physical and mental health services for all children during disaster recovery, require disaster response capabilities for childcare providers, and include the evacuation and transportation needs of children in all response plans. All emergency personnel should also be trained in “psychological first aid” he said. Finally, he noted that long-term disaster recovery plans need to be put in place for children and families.

The complete workshop program including abstracts and presenter biographies, as well as some presenters’ power point presentations are available on the website of CRSCAD at www.umb.edu/crscad/