



# ADRC Highlights

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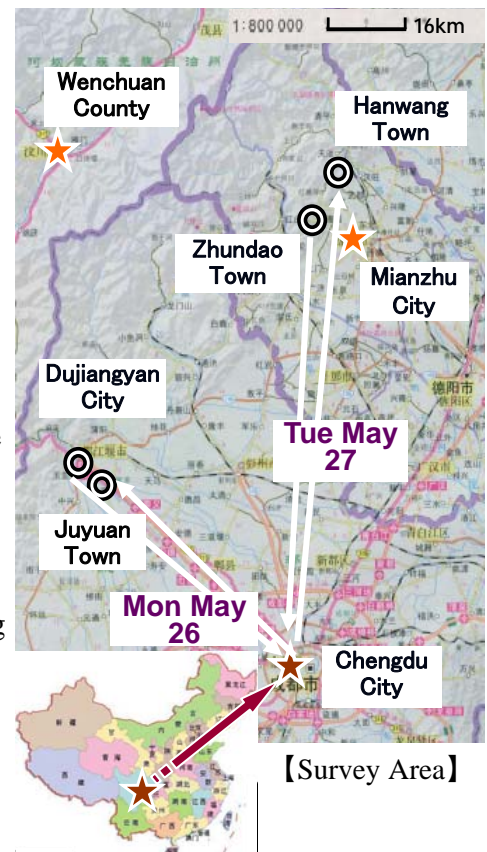
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## ● Natural Disasters in Asia Survey Report on Sichuan Earthquake

The Asian Disaster Reduction Center (ADRC), in cooperation with the Disaster Reduction and Human Renovation Institution (DRI), investigated ways for the lessons and experiences of the Great Hanshin-Awaji Earthquake with regard to recovery and restoration of disaster-stricken areas to be utilized in response to the Sichuan Province Earthquake that struck Wenchuan County in China's Sichuan Province (GLIDE no. EQ-2008-000062-CHN) on 12 May 2008. To conduct this investigation, ADRC Senior Researchers Mr. Kenpei Kojika and Mr. Shuhei Tanaka, and DRI Research Fellow Mr. Atsuo Takahashi spent 25-30 May visiting the cities of Dujiangyan and Mianzhu in the disaster-stricken area to assess the situation on the ground and to share information with officials from the Sichuan Provincial People's Government, the China Earthquake Administration, and the National Disaster Reduction Center (NDRC) of the Ministry of Civil Affairs.

### 1. Situation Report

In Chengdu City, the provincial capital of Sichuan, little physical damage was sustained by buildings and other structures. Shops are open as usual, and just two weeks after the earthquake, citizens are going about their everyday business. About 60 km from Chengdu, however, lies Dujiangyan City, a popular tourist destination registered on the World's Heritage List. Many of this city's buildings have been damaged, and the shops are closed. In Juyuan Town (outside of Dujiangyan City), relatively few buildings were destroyed, but residents, fearful of returning to their homes, have been sleeping outside in tents. Public tent villages and large-scale temporary housing construction is being promoted at a feverish pitch, and the speed of the government's response is evident. In Hanwang Town (outside of Mianzhu City), which is believed to lie along the fault where this recent earthquake occurred, sustained catastrophic damage, with many buildings having collapsed. Even the Hanwang Town Administration Building was completely destroyed. Recovery and reconstruction efforts will be difficult here. In Zhundao Town (outside of Mianzhu City), a field hospital equipped with X-ray equipment has been opened, and a medical system has been established to meet the needs of patients. The most seriously wounded victims who cannot be



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treated here are being sent by ambulance to hospitals in the city. Temporary schools have also been established.

The attitudes of some victims reflect an understanding of the situation, "Under these circumstances, there is bound to be a shortage of supplies. The government is handling the situation well, so we will continue to persevere." Others, however, are complaining, "There are no relief supplies coming in and we are at a loss for what to do." It is difficult to secure baths, toilets and water, and there is a shortage of tents, blankets, medicines, and heavy construction equipment. There has been little effort to address the emotional needs of victims who have lost family members. With daytime temperatures exceeding 30°C, sanitation is an important issue, and government institutions are engaging in disease prevention efforts.

Several thousand volunteers, including students and other members of the community, have signed up to help in Dujiangyan City. Private and corporate volunteers with experience addressing issues of poverty and the environment have been active in the region, but they have primarily been involved in getting supplies to victims. There is a particularly serious need to enlist volunteers with specialized knowledge of mental health care issues.

## 2. Government Response

According to Deputy Director Mr. Tang Hong of the Sichuan Province Foreign Affairs Office, who is responsible for accepting relief supplies from overseas, more than 2,000 tons of supplies have been delivered from 40 countries, and these are being delivered to victims under rigorous controls. Since blankets and other relief supplies had already been provided from Hyogo Prefecture, the Sichuan provincial government responded to our team's visit and gifts of support with expressions of gratitude to Governor Ido and the people of Hyogo Prefecture for their past and ongoing assistance. A letter of gratitude was presented to ADRC Senior Researcher Mr. Tanaka, who is also an official with the Hyogo prefectural government. The Sichuan provincial officials also expressed gratitude for the emergency response teams and medical teams that arrived ahead of those from other countries.

Vice Director Mr. Miao Chong-gang of the Earthquake Emergency Management Department Response Command Center of the China Earthquake Administration explained that detailed damage surveys are being conducted on 1,000 buildings in the disaster-stricken region and that officials are getting started on efforts to review the seismic intensity maps that stipulate the standards for seismic resistant design.

Deputy Director Mr. Fang Zhiyong of the NDRC says the authorities have been basing their post-quake response on the assumption that there will be about 60,000 deaths, saying "Our top priorities at the moment are providing medical care and everyday living assistance to victims, preventing disease, and building temporary housing. We are in the process of investigating more specific recovery and restoration plans. We currently need about three million tents, but only 400,000 have thus far been supplied from domestic sources. As soon as they can be produced, they will be shipped to the disaster-stricken areas." He explained that three million temporary housing units are needed, and that this need will be met domestically by assigning specific disaster-stricken areas to economically wealthier coastal provinces that can provide support. He also expressed gratitude for our visit and our willingness to cooperate based on our interest in large earthquakes and our experiences and lessons learned from the Great Hanshin-Awaji Earthquake.

With regard to the formulation of a recovery and restoration plan, according to Professor Gu Linsheng of Tsinghua University's Emergency Management Research Center, the central government has divided the disaster stricken region into four areas, and government agencies will be working together with academic institutions to formulate recovery plans for each area within the next three months. Professor Gu has already summarized the issues that need to be addressed in the restoration plan, based on information gleaned from the Great Hanshin-Awaji Earthquake, and has presented that information to the government authorities. Grass-roots exchanges of volunteers with experience helping out with large earthquakes are also expected to take place between Japan and China.

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### 3. Conclusions

Multifaceted response efforts are underway in the regions covered in this survey with regard to public evacuation shelters, field hospitals, medical care, disease prevention, temporary elementary schools, temporary housing construction, and the revision of seismic resistance standards. Experiences and lessons of the Great Hanshin-Awaji Earthquake can be used to provide support for the recovery and restoration of the disaster-stricken region in the following ways:

- Advice regarding the formulation of earthquake restoration plans (within three months)
- Management of temporary housing facilities and the maintenance of communities
- Mental health care for victims
- Industrial restoration
- Repairs to cultural assets

Finally, we would like to take this opportunity to thank all of the Chinese officials who made themselves available to us during this challenging time, and all of those who provided cooperation and support for our efforts.

\* Details of this report can be found at the ADRC website ([http://www.adrc.or.jp/top\\_j.php](http://www.adrc.or.jp/top_j.php)).

\* According to the Earthquake OCHA Situation Report No. 10, the death toll for this disaster is 68,858 people with an additional 366,596 injured and 18,618 missing. A total of 45.61 million people have been affected.

## **● Promoting Cooperation with Member Countries**

### **Cooperative Project with Thailand: Workshop on Strengthening of the Capacity of Thailand's Tsunami Early Warning System**

On 6 March 2008, the Department of Disaster Prevention and Mitigation (DDPM) of Thailand's Ministry of the Interior conducted a workshop in Phuket on Strengthening the Capacity of Thailand's Tsunami Early Warning System. This project was conducted in cooperation with the ADRC.

The objective of the workshop was to disseminate information about the tsunami early warning system to local residents and to review tsunami evacuation routes. The seminar was attended by approximately 50 people including local government officials of Phuket province, local community leaders, high school students, and teachers.

The vice governor of Phuket province delivered the opening remarks at the workshop. The ADRC then gave a presentation on tsunami early warning systems and community-based tsunami preparedness using examples from Japan's experience. Participants actively asked questions about such topics as emergency kits and public reactions to false alarms. The DDPM then gave presentations on disaster management and tsunami disasters in Thailand. They also discussed the 2004 Indian Ocean Tsunami and the various countermeasures that have been taken in response to that event, including the installation of tsunami sirens and evacuation signs, and the implementation of evacuation drills. Participants also learned about the tsunami warning system in Thailand from the National Disaster Warning Center (NDWC).

After this series of lectures, participants were divided into two groups to tour the evacuation shelters shown on the tsunami disaster prevention maps. In the process, they had a chance to talk with local officials and residents about evacuation distances and the security of evacuation routes. They also checked signage along the evacuation routes and signs to raise tsunami awareness. After checking these



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sites, each group gave presentations on the current status of the sites they visited and the areas needing improvement.

This cooperative project was a success thanks to the efforts of the DDPM and Mr. Arun Pinta, former ADRC Visiting Researcher. We hope the results will contribute to the implementation of tsunami early warnings and to prompt evacuations in the tsunami-prone areas of Thailand.

### ●ADRC Staff Profile No.30

#### Mr. Masato Ohori, Senior Researcher

My name is Masato Ohori and I joined the ADRC as a senior researcher on 1 April 2008.

I have spent the past 37 years working as a building engineer with Taisei Corporation. Of those, eight were spent working in Japan, at the Taisei branches in Niigata, Tokyo, Hiroshima, and Yokohama. During the remaining 29 years, I was assigned to several international branches working on various overseas projects. The major international projects I was involved in include a desalination plant in Kuwait (3 years), a national government complex in Malaysia (5 years), a power plant project in Saudi Arabia (5 years), and factory and other building projects in China, the Philippines, and other locations.



I encountered one of the greatest human-induced disasters, the Gulf War, twice, during my stay in the Middle East in 1990-91. Because of the war, our project team twice had to evacuate the region. The first time, when Iraq invaded Kuwait, each member of the team had to evacuate to his respective country. The second time, the entire project team was sent to a safer location rather than having individuals leave the region separately. Immediately after the outbreak of the war, we had to sleep in the open desert for two weeks. With the war continuing on and our sanitation conditions worsening, we decided to move to a safer place near Jeddah, Saudi Arabia. A caravan of about 600 workers traveled 1,600 km across the hot deserts of the Arabian Peninsula. After spending about a month in Jeddah, the workers headed back to the eastern coast of Saudi Arabia along the same route.

These experiences were unforgettable for me in both good and bad ways. It was thanks to good planning and preparation that our team did not experience any accidents during either evacuation. Also, because of these experiences, I can no longer be considered a stranger to the issues of disaster, disaster risk, and disaster risk reduction. I believe that disaster risk can certainly be decreased through comprehensive planning and organized, systematic preparations, and I am hopeful that I will be able to utilize my experiences in my work at the ADRC even as I learn from my research here.

This is my first assignment in the Kansai region (which includes the cities of Kobe and Osaka), and I am pleased that the timing of my assignment allowed me to spend the “Ohanami-Cherry Blossom” seasons in Osaka and Kyoto this year.

I hope that my work at the ADRC will benefit the mission of the organization and will prove useful to other members of the ADRC team. It would give me great pleasure if the knowledge I have gained over the course of my 37-year career could make a positive contribution to the efforts of the ADRC.

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