

## 4-2-6 Earthquake Disaster Management Seminar in Mongolia

1) **Seminar Title**

“Vulnerability and Risk Assessment of the Possible Earthquake and Measures to Prevent Earthquake Disaster in Urban City”

2) **Organizers (Co-organizers)**

ADRC,  
International Cooperation Department, Strategic Planning and Management Department,  
Ministry of Nature and Environment of Mongolia, and  
National Agency for Disaster Management of Mongolia

3) **Period**

March 20th to 23rd, 2004

4) **Location**

Conference Hall, Continental Hotel (Ulaanbaatar, Mongolia)

5) **Main Objective**

Located at the center of the Eurasian Continent, Mongolia experienced four magnitude 8-class inland earthquakes during the 20th century alone. The country has suffered no catastrophic damages so far, thanks to its sparse population density and the traditional nomad-style housing structures (tent-like mobile housing called “ger”). Therefore, the country has low awareness of earthquake risk. With the transition from nomadic to settled lifestyle, and the rapid population growth, urbanization and industrialization, however, Mongolia should promote urban earthquake disaster preparedness immediately. Under these circumstances, an urban disaster management seminar was held that was intended mainly for disaster management personnels of the country’s central and local governments to get a clear image of urban disaster preparedness.

6) **Details**

(1) Course Schedule

A two-day course was repeated for March 20th - 21st, and for March 22nd - 23rd (same contents for both occasions).

(2) Participants

The seminar participants consisted of disaster management personnel of the central government ministries and agencies of Mongolia (Depts. of International Cooperation and Strategic Planning, the Ministry of Nature and Environment, the National Agency of Disaster Management, the Ministry of Infrastructure, the Ministry of Health, etc.) and their counterparts in local governments (prefectural governors, Ulaanbaatar Urban Planning Bureau, etc.). The first two day course participants were mainly decision- makerlevel officials such as department directors of the central government ministries and agencies and prefectural governors, while the second course participants consisted of working-level officials.

Each course had an attendance of approximately 30 persons. The total number of seminar participants for four days reached approximately 60 persons.

(3) Instructors

Mongolian instructors (nine persons)

Two from Research Center for Astronomy and Geophysics (RCAG), four from the National Agency for Disaster Management of Mongolia, one each from the Mongolian Society of Civil

Engineers, the Ministry of Infrastructure of Mongolia, and Mongolian Institute of Technology

Japanese instructors (three persons)

Tomohiko Hatori (Senior Researcher, ADRC), Satoru Ohya (World Seismic Safety Initiative (WSSI), Advisor to OYO Corporation), Yasuhiro Hayashi (Associate Prof., Disaster Prevention Research Institute, Kyoto University (DPRI-KU))

(4) Duration of One Class

Japanese instructors taught 60 minute classes, each followed by a 10 minute question-answer session. Mongolian taught 30 -45 minute classes, each followed by a 10 minutes question-answer session.

(5) Languages

Japanese instructors used English for PowerPoint presentations. Explanations and interlocutions during lectures were consecutively interpreted from Japanese into Mongolian. Mongolian versions of English abstracts prepared beforehand were supplied to the participants.

Mongolian instructors used Mongolian for both lectures and materials.

(6) Lecture Themes

- ① “Present State of Research Work and Environment on Mongolian Earthquake and Future Developments”, Dr. Demberel (Research Center for Astronomy and Geophysics (RCAG))
- ② “Seismic Micro Zonation Map of Ulaanbaatar City”, Mrs. Ankhtsetseg (RCAG)
- ③ “Lessons from the Great Hanshin-Awaji Earthquake Disaster,” Dr. Tomohiko Hatori (ADRC)
- ④ “Earthquake Disaster Risk Management – Impact of Seismic Tremors on the Ground Geology,” Mr. Satoru Ohya (World Seismic Safety Initiative (WSSI), OYO Corporation)
- ⑤ “For the Improvement of Seismic-resistance Performances of Urban Architectural Structures,” Mr. Yasuhiro Hayashi (DPRI-KU)
- ⑥ “Proposals for Earthquake Disaster Management in Mongolia – Lessons from WSSI Activities,” Mr. Satoru Ohya (WSSI, OYO Corporation)
- ⑦ “Risk and Vulnerability Assessment of Urban Area”, Dr. Ganzorig (President, Civil Engineering Association of Mongolia)
- ⑧ “Measures to Prevent Earthquake Disaster in Urban Development”, G. Tulga, Director (Seismic Engineering Investigation Bureau, Department of Construction, Urban Development and Public Utilities, Ministry of Infrastructure)
- ⑨ “To improve earthquake warning and search and rescue work”, Colonel Ch. Batchuluun (Chief, Operative Management and Coordination Division, NADM)
- ⑩ “Medical Supply in case of Earthquake Disaster”, Lieutenant Colonel A. Enkhbat (Officer, Operative Management and Coordination Division, NADM)
- ⑪ “Collaboration and Cooperation of State Services for Disaster Protection in Earthquake Disaster Reduction”, Dr. Mayor General, O. Urjin (Deputy Chairman, NADM)/Colonel Ch. Batchuluun (Chief, Operative Management and Coordination Division, NADM)
- ⑫ “Active faults of Central Asia”, A. Bayasgalan (Director, School of Geology, Mongolian University of Science and Technology)

7) **Evaluations by Seminar Participants**

All the participants were asked to fill in the evaluation sheets for the seminar. The results are as follows:

- (1) 90% of the participants had not previously attended urban earthquake disaster prevention seminars of this kind.
- (2) Lecture contents found to be particularly helpful and informative include:
  - All lectures
  - Explanations on building seismic-resistance enhancement methods

- Explanations on the backgrounds to the establishment of the Earthquake-resistant Building Standards Law, and the mechanism for its enforcement
  - Explanations on the strengthening of disaster management researches and activities
  - Explanations on earthquake disaster prevention and mitigation awareness raising activities targeting citizenry
  - Presentations on examples of past earthquake disasters and lessons learnt from them
  - Lectures delivered by Japanese instructors
- (3) Topics to be elaborated include:
- Disaster preparedness awareness campaigns targeting local populations
  - Lessons from past earthquake experiences
- (4) Most of the participants responded that all the lecture were well-organized and easy to follow. Meanwhile, some said that it was difficult to absorb diverse information at a time.
- (5) Contents to be included into future seminars include:
- Countermeasures for natural disasters other than earthquakes
  - Experiences and knowledge obtained from earthquakes in the rest of the world
  - More specialist training
- (6) To the question on what information they would like to share with their work colleagues, all the participants unanimously said the entire contents of the seminar.
- (7) All the participants answered that seminars of this kind would be helpful and informative for the rest of disaster management personnel in Mongolia. Moreover, some answered that it is important to create and distribute disaster preparedness awareness campaign materials, such as leaflets, targeting citizenry, and to provide disaster management education to a wider spectrum of people, including teaching staffs and students of universities and colleges.
- (8) Other responses are as follows:
- A mechanism for registration and control of building and construction sites is necessary.
  - A Building Standards Act should be established.
  - Construction companies should have their employees trained for earthquake resistant construction methods.

**8) Follow-up Activities**

- (1) CD-Rs containing presentation materials used in the seminar to be delivered to related parties.
- (2) Suggestions and proposals presented by seminar participants for government disaster reduction policy were summarized and compiled into a report.
- (3) In cooperation with related UN organizations, WSSI, JICA, and other related organizations, ADRC will continue its support to the Mongolian government's commitment to disaster reduction.