Tokyo International Workshop 2009 on Earthquake Disaster Mitigation for Safer Housing

1.Date and Time

	Session 1&2	Session 3&4
	January 21 (Wed), 2009	January 22 (Thu), 2009
JAPAN	16:00 – 20:20	16:00 – 21:00
INDONESIA	14:00 – 18:20	14:00 – 19:00
NEPAL	12:45 – 17:05	12:45 – 17:45
PAKISTAN	12:00 – 16:20	12:00 – 17:00
TURKEY	9:00 – 13:20	9:00 – 14:00

2.Venues

- **JAPAN**
  - □ Tokyo—World Bank Tokyo Development Learning Center (TDLC)
  - □ Tsukuba—Japan (Sub Venue)：Building Research Institute (BRI)
- **INDONESIA**
  - □ Jakarta—JICA Indonesia Office
  - □ Bandung—Bandung Institute of Technology
  - □ Yogyakarta—Gadjah Mada University
- **NEPAL**
  - □ Kathmandu—JICA Nepal Office
- **PAKISTAN**
  - □ Islamabad—JICA Pakistan Office
  - □ Peshawar—NWFP University of Engineering, Peshawar(UETP)
- **TURKEY**
  - □ Istanbul—Bilgi University
  - □ Ankara—JICA Turkey Office

3.Participants

Venue	No. of participants	
	Session1&2	Session3&4
□ Tokyo	24	21
□ Tsukuba	9	10
□ Jakarta	2	2
□ Bandung	8	15
□ Yogyakarta	9	6
□ Kathmandu	7	5
□ Islamabad	6	7
□ Peshawar	3	2
□ Istanbul	1	2
□ Ankara	1	2
□ Web streaming	5	5
Total	75	77

4.Language：English

地震防災のための東京国際ワークショップ 2009
＜住宅の被害軽減を目指して＞

１．日時

	第 1 部、第 2 部	第 3 部、第 4 部
	2009 年 1 月 21 日（水）	2009 年 1 月 22 日（木）
日本	16:00 - 20:20	16:00 - 21:00
インドネシア	14:00 - 18:20	14:00 - 19:00
ネパール	12:45 - 17:05	12:45 - 17:45
パキスタン	12:00 - 16:20	12:00 - 17:00
トルコ	9:00 - 13:20	9:00 - 14:00

２．場所

下記の５ヶ国を世界銀行グロバール・ディスタンス・ラーニング・ネットワークのビデオ会議システムで繋いで実施。

- 主会場：世界銀行東京開発ラーニングセンター（内幸町富国生命ビル）
- 国内サブ会場：建築研究所（つくば市）
- 海外サブ会場：インドネシア（ジャカルタ、バンドン、ジョグジャカルタ）
- ネパール（カトマンズ）
- パキスタン（イスラマバード、ペシャワール）
- トルコ（イスタンブール、アンカラ）

３．参加者

会場	参加者数	
	第 1 部、第 2 部	第 3 部、第 4 部
□　東京	24	21
□　つくば	9	10
□　ジャカルタ	2	2
□　バンドン	8	15
□　ジョグジャカルタ	9	6
□　カトマンズ	7	5
□　イスラマバード	6	7
□　ペシャワール	3	2
□　イスタンブール	1	2
□　アンカラ	1	2
□　ウェブストリーミングス	5	5
合計	75	77

４．言語：英語

Summary of discussions/comments during Q & A times

Session 1:

➢ ***PP-band***

Attaching is easy. Just prepare the mesh, put them inside and outside, and just connect them by steel wire or any material. The effect will be low if there's any space between the mesh and the inside brick so if the connection is imperfect, you should put material (mortar or cement) on the surface.

Several model houses using our system are in central Java and you can visit them.

Certainly by lowering the cost, it is easier to make PP-band more acceptable, but in fact, an insurance company is very interested in the system and a village scale implementation is now on progress in India. Also it may be well promoted by firstly introducing it to public facilities but this system is basically for the non-engineering section and it should be promoted by establishing good seismic call and a quality control system.

Efficiency would be higher if we use 45°mesh, but 90°mesh is more than enough and also it is easy to prepare. / ***Dr. Kimiro MEGURO***

➢ ***Minimum requirement for reconstruction after EQ***

We learned from the experience of the Java Earthquake when we were criticized by the government that our proposal did not fit the local standard. We are still developing the minimum requirement. This is just one approach of the Peruvian experience. / ***Mr. Ichiro KOBAYASHI***

➢ ***EEW system***

EEW is one technology to give a warning before strong motion and another research is needed to fully utilize it to make it result in reducing damages. / ***Dr. Tatsuo NARAFU***

Some core space inside the building must be prepared to escape. / ***Dr. Shunroku YAMAMOTO***

JR uses the same system for 5-10 years. / ***Dr. Shunroku YAMAMOTO***

A station costs 40 million yen, home seismometer costs 40-60 thousand yen. / ***Dr. Shigeki HORIUCHI***

Session 2:

➢ ***Disaster Relief***

When disaster happens we contact JICA(located in more than 150 countries), MOFA and Japanese embassy. Time to time we share it with the rescue team. / ***Mr. Hitoshi SATO***

When the team dispatch the country we try to cooperate with local government through LEMA (Local Emergency Management Agency). We provide a scheme on rescue training, disaster reduction / mitigation and rescue technique. JICA has training courses; one or two person(s) will be invited for 2 weeks up to 3 months (the period depends on the course). Please contact local JICA offices for information. / ***Mr. Hitoshi SATO***

Instructors / graduates of our PR program are familiar with interact process and they know the requirement of collaboration. Response given by the MFR is higher than first aid but lower than medical response but it can stabilize the victims. Assessment will be given and injury will be identified. But when the victim is to be taken out and transported to the hospital, they should be provided with necessary medical response. Therefore some medical rescue course is necessary to be taken to gain medical response skills to be used inside the collapsed buildings. / ***Mr. Amod DIXIT***

Session 3:

➢ ***Why the result differed between Japanese and Pakistani brick***

The reason why the Japanese brick survived the shake and the Pakistani brick didn't, is an issue we are still studying on, but at least there are two factors to be considered; (1) Strength between mortar and brick --- Japanese brick bond harder to mortar than Pakistan's, (2) The two walls only became separated on the Pakistani brick side. / ***Dr. Toshikazu HANAZATO***

➢ ***Future advancement of cyclic loading experiment***

We are trying to quantify numerical data of the common practice of Indonesia. This is just a first step and it's a basic result. We'll continue adding to this result. / ***Dr. Dyah KUSUMASTUTI, Dr. Tatsuo NARAFU***

➢ ***Difficulty in introducing sliding seismic isolator by steel plate to a masonry unit***

Slab is a big problem. There is a need to make a rigid base and reinforce it to introduce this system to a masonry unit which isn't a rigid block. / ***Dr. Eizaburo TACHIBANA***

➢ ***Cost of the seismic isolation technology using scrap tires***

Maybe about $15. It's nearly free. If there's any need for expenses they're for steel between the tires and rods to join. / ***Dr. Ahmed TURER***

➢ ***Period of sliding style isolator***

There's no natural period for sliding isolation system. / ***Dr. Yuji ISHIYAMA***

➢ ***Relation between seismic characteristic and the system operation***

Structural period equals seismic characteristic period and if the character is soft, earthquake period will be large. That means, if the seismic characteristic is rigid, base isolation period will be short, and base isolation system works better. / ***Dr. Iman Satyarno***

Session 4:

➢ ***Difference in earthquake risk perception among different areas in Indonesia***

Capacity of schools / teachers does differ between big island and small islands, and big cities / urban areas and rural areas. / ***Dr. Krishna PRIBADI***

An Iranian case shows that information exchange of school retrofitting program and education program is effective. / Dr. Ando

➢ ***Further action to enhance the crisis provision by women***

It would be nice to expand this approach to some activities of introducing retrofitting improvement program or method that is easy for women to understand. / ***Dr. Shoichi ANDO***

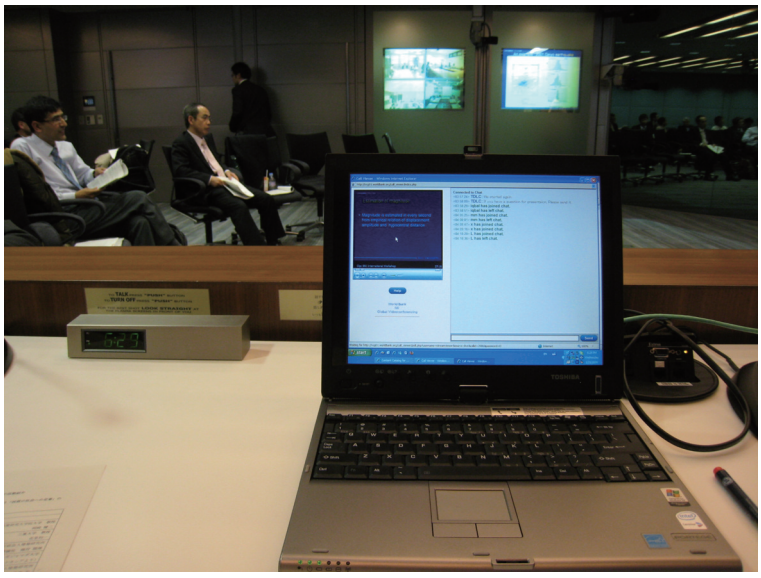
➢ ***Difficulties in developing administration and enforcement capacity***

There are many difficulties but the main difficulty is that each of the twenty-eight local governments has different local regulation on building permit and we have to arrange / prepare documents for all of them. / ***Mr. Yasuyuki KAMEMURA***

In Nepal, in order to generalize administration and enforcement capacity development, the best practice in introducing building permit system had been introduced to other municipality through national workshop or government information system. / ***Dr. Dr. Shoichi ANDO***

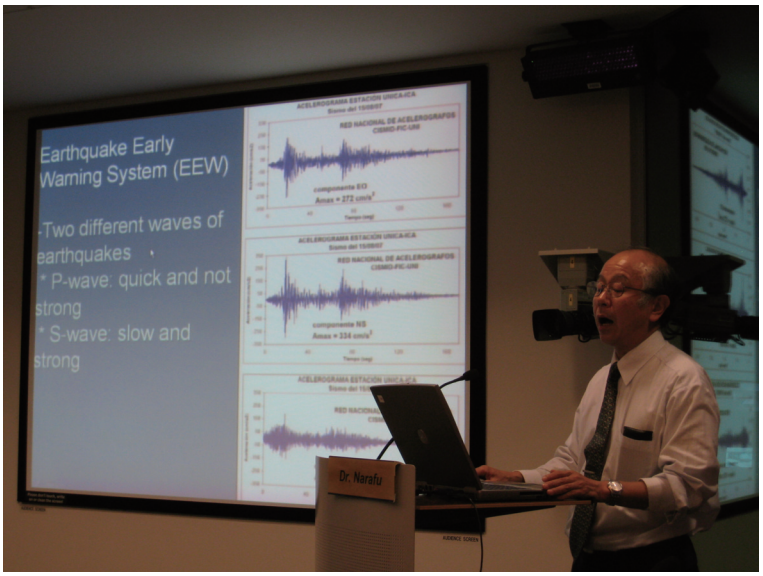
東京会場風景

各会場風景



ウエブストリーミングス風景

発表風景１



発表風景２

会場風景（質疑応答、コメント）