

A total of 21 topics were presented at the meetings, with 12 participants from Japan and 11 from Germany. Of particular interest in the discussion were wastewater systems to separately treat human excreta and urine, the MBR, and pharmaceuticals and personal care products in wastewater.



A scene from the meeting

8th Japan-UK Workshop on Road Science and Technology (October 12 & 13, 2006 in the UK)

Traffic Engineering Division

The Ministry of Land, Infrastructure and Transport of Japan and the Highways Agency of the UK held a workshop on the road science and technology.

Participants from both Japan and the UK had presentations and actively exchanged opinions in five sessions: Performance Management, Operating the Network, Use of Information, Contingency Planning and Quality Infrastructure.

Reports by UK participants provided with the latest information on the operation of the traffic control system introduced by the agency and on public

relations and appealing activities for road users.

Both Japan and the UK agreed to continue to hold the Japan-UK workshop next year and beyond.



8th Japan-UK Workshop on Road Science and Technology

7th Canada-Japan R & D Workshop



The 7th Canada-Japan Research & Development Workshop was held in Ottawa October 3-4, 2006. Host organizations were National Institute for Land and Infrastructure Management, Building Research Institute, Institute for Building Environment and Energy Conservation, Natural Resources Canada and

Research Coordinator for Advanced Building Technology

National Research Council Canada. The workshop has been held by Japan and Canada since 1993, to cooperate in research and to exchange and spread information in the fields of environmental technology and building services for residential buildings.

Twenty-two researchers and experts participated in the workshop to present current research on topics of "District Energy Systems", "Human Behavior and Energy Efficiency", and "Ventilation and Indoor Air Quality". Especially active discussions were held in the presentations on fuel cells and the performance evaluation technology to conserve service-related energy. A research cooperation policy was discussed and confirmed, and the workshop ended successfully.

2006 Annual Report of NILIM – English version – (now available on our website)

An English version of the "2006 Annual Report of NILIM" is available on our website (www.nilim.go.jp) for your reference on our research activities and accomplishments.



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News Letter

We are discussing "Framework" and "Core" for problem solving.

MOCHIZUKI Tsuneyoshi, Director-General, NILIM



The mission of NILIM is research that has direct bearing on social issues. However, the reality is that we are busy solving problems at hand. Social issues are so deep that we cannot get to the heart of the matter by such way. Now, we are discussing getting started by setting "Framework" and "Core" for problem solving. Let's take safety and security as an example.

For example, assuming that we have set the goal of achieving a society with safety and peace of mind from natural disasters, we call the whole actions carried out for this goal over a few decades "Framework." In other word, we assume the "state"

of society to be achieved, describe it in detail, then we set up a "Framework" listing all actions that are considered necessary to achieve the state.

But this is just an assumption. We always need to change the state to be achieved and the framework of actions along the way, taking into account the progress of the actions and the reactions from society. We need to set, as an element for the "C (check)" of the PDCA Cycle (Plan, Do, Check, Act), "Core" focusing on continued data collection.

I expect that supporting actions and research activities will be organically integrated by combining "Framework" and "Core."

My message is a little abstract, and I would like to update you as we move forward.

The 15th Conference on Public Works Research and Development in Asia

International Research Division

The 15th Conference on Public Works Research and Development in Asia was held in Tsukuba, Tokyo, and Nagoya from Monday, November 6, 2006 to Friday, November 17, 2006.

The conference participants were executive officers and engineers responsible for infrastructure management of governmental administration and research organizations in 9 countries: China, Indonesia, Korea, Laos, Malaysia, Nepal, Pakistan, the Philippines, and Japan. The conference aims to exchange views and opinions on such common subjects in Asia as the environment, natural disasters, and infrastructure development and

furthermore to establish research networks among the participants' countries by building a common understanding of the subjects.

The theme of the 15th conference was 'Social and Economic Effects of Road Network Development.' Eight participants including Mr. Mochizuki, NILIM Director-General (Korea attended it in Nagoya), presented their reports on case studies in their own countries, followed by discussions, in the Session on Subjects of Common Interest held on November 8. (See Photo 1) They also attended the Sessions on Specific Subjects such as Effect and Evaluation of Road Network Development, Road Traffic Safety and

Road Environment, and Road Structures Management on November 9 and 10.

As a highlight of the conference, the 15th International Symposium on Land Development and Civil Engineering in Asia was held in Nagoya city in Aichi prefecture in conjunction with the Chubu Regional Bureau on November 16, 2006. (See Photo 2) The symposium subject was "Social and Economic Effects of Road Network Development in Asia." Mr. Neya, Deputy Director General for Engineering Affairs, MLIT Policy Bureau, on behalf of Mr. Taniguchi, MLIT Vice-Minister for Engineering Affairs, gave a special address at the conference.

Mr. Shigematsu, Managing Officer, Toyota Motor Corporation, presented on 'Automotive Safety Technologies toward Achieving Sustainable Mobility.' Mr. Mochizuki, NILIM Director General, Mr. Sakai, Director of Road Department, MLIT Chubu Regional Bureau, and Dr. KAN, Director of Highway Engineering Research Department of the Korea Institute of Construction Technology, presented their case studies.

In the final program of the symposium, a panel discussion was held on 'Social and Economic Effects of Road Network Development in Asia' chaired by Mr. Sato, NILIM Director of Road Department, and participants from China, Indonesia, Laos, Malaysia, Nepal, Pakistan, and the Philippines in particular

reported on the status of their countries and their views on the subject. Almost 100 people who were involved in public works in the Chubu region attended the symposium.

The conference, through the discussions, site visits and the symposium, is summarized as follows:

- The participants recognize the "Social and Economic Effects of Road Network Development" as well as the importance of conducting researches for them.

- The participants recognize that each country should learn from the insights and experiences of countries in Asia, to enhance and support the road network development.

- The participants recognize the needs to cooperate with each other and continue the conference in the future.

All the participants agreed on the need to continue the conference and to set up a network in future among the participants' countries.



Implementation and Introduction of Portable Structural Testing Equipment (PSTE) for Improvement of Masonry Earthquake Resistant Houses and Buildings in relation to the May 27, 2006 Jogjakarta Earthquake in Indonesia

Housing Production Division

During the May 27, 2006 Jogjakarta Earthquake, the building that had severe damage were those which were constructed by using burned brick or block as partitions or bearing walls. Those damaged buildings also caused human casualties during the disaster.

Brick and block walls are familiar and represent a standard construction method that has been used for hundreds of years. In the past, masonry walls usually were used for housing, and at present are used for many kinds of buildings, including high rise buildings.

Sixth months after the disaster, reconstruction work has been carried out in those damaged areas. It appears that those masonry construction styles are still the method chosen by most people. The Government of Japan, through the Embassy of Japan (EOJ), has conducted a "Grant Assistance for Grass-roots Human Security Projects" by cooperation with the Center for Earthquake Engineering, Dynamic Effect and Disaster Studies (CEEDEDS) of the University of Islamic Indonesia (UII) Jogjakarta on improvement of foremen's skill workmanship. This program was carried out by considering the damage due to low quality of construction work and the lack of earthquake-proof housing technology.

In order to give more understanding to construction foremen and the community, Tetsuro Goto of the National Institute for Land and Infrastructure Management (NILIM) of Japan has developed a very simple tool, namely Portable Structural Testing Equipment (PSTE) for testing masonry performance against earthquake force



Fig. 1 PSTE Unit

(Figure 1). There were 160 foremen trainees and 23 among of them were selected for the advanced workshop. At least 100 people attended the workshop, including community and institution representatives such as government officers, NGO members, students and journalists.

Two districts were selected from Jogjakarta and Central Java Provinces. Klaten and Bantul were the two districts that represented the most severe damage during the quake (Figure 2).

For testing purposes, brick quality, mixing ratio of mortar, and plaster effect were selected. The brick



Fig. 2 Workshop Location

used was hand-made bricks.

specimens were prism and diagonal types. Those parameters give an understanding that material and workmanship play an important role in masonry performance. This activity was done from 13-16 November, 2006 in both districts.

Those foremen and communities have a chance to test by using PSTE. The designed test procedure is very simple and can be done by foreman, man, woman, or child (Figure 3 and 4). Figure 5 shows the result on masonry after



Fig. 3 Test by a lady



Fig. 4 Test by an elderly

Fig. 5 Test Result

testing.

A very small amount of electric power was used for data recording, and to generate the load a hydraulic pump was used that operated by manpower. Figure 6 shows a foreman conducting the diagonal test. This kind of field test has been applied for the first time in Indonesia and the specimen used was done by the foreman himself.



Fig. 6 Test by a foreman (mandor)

"Disaster Information Sharing System" plays active part in emergency drill

Research Coordinator for Advanced Information Technology

When disaster happens, all concerned want to share information quickly for the right decision making. Therefore a "disaster information sharing system" was jointly developed by the Earthquake Disaster Prevention Division and the Information Technology Division. This is a Web system combining a geographic information system (GIS) with an electronic bulletin board system (BBS). The GIS shows positions of disaster information, and the BBS manages the event time, contents and changes, and the sequence of each

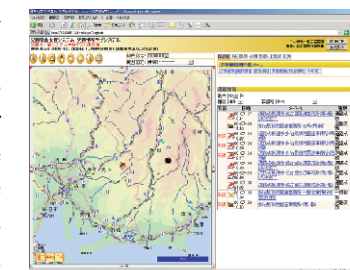


Fig. 1 Disaster Information Sharing System

related event.

In an earthquake emergency drill which the Chubu District Development Bureau performed on September 1, 2006, this system was used for the first time. As local offices input disaster information such as damage or inspection reports, they were automatically arranged and displayed on PCs and projection screens at disaster control headquarters and related offices. The drill participants evaluated it highly, reporting, "We are able to share a great deal of information smoothly through this system".



Fig. 2 Earthquake emergency drill

Japan-Germany Workshop on Effluent and Sludge Treatment

Water Quality Control Department

The 10th Japan-Germany Workshop on Wastewater and Sludge Treatment was held October 9-13th, 2006. Meetings were held in Berlin, Germany on October 9 and 10th. Following the meetings, we visited an experimental site of new sanitation

concept on the separate collection of gray water, brown water and yellow water at the Berlin-Stahnsdorf treatment facility, a flushing system in Prichsenstadt, and Membrane Bio-Reactor (MBR) experiment by Huber AG in Berching.