International Workshop on Water Hazard and Risk Management

Date: January 20-22, 2004
Venue: Public Works Research Institute, Tsukuba, Ibaraki, Japan
Organized by: Public Works Research Institute (PWRI)
Sponsored by: Ministry of Education, Culture, Sports, Science and Technology (MEXT) and PWRI
Cooperation: National Institute for Land and Infrastructure Management (NILIM)

Background of PWRI

For more than 80 years, the Public Works Research Institute (PWRI), a national institute of Japan, has been carrying out multidisciplinary research and development for enhancing civil engineering technologies and providing quality infrastructure. Many large-scale testing facilities, a wealth of research literatures and abundant practical problem-solving experiences are made available to support our activities. PWRI has often worked with national organizations, specialized in construction and management of infrastructures, and cooperated with academic institutions and private companies. The fruits of our efforts have significantly been utilized through improving practical standard specifications and manuals, and providing technical guidance and training for infrastructure managers in Japan, and partially to developing countries through the Official Development Scheme of the Japanese Government. The PWRI has been also in the forefront of the development of water hazard mitigations and risk analysis in response to immediate needs to cope with government water managers working on floods, water shortage, sediment disaster, and other water hazard.

In April 2001, the PWRI attached to the Ministry of Land, Infrastructure and Transport (originally Ministry of Construction) was reorganized as part of sweeping government reforms into a new type of organization not administratively belonging to the Ministry. Although our staff remains governmental employees, the management procedures have dramatically changed. For instance, while PWRI must work diligently and more efficiently toward its establishment goals, research grant, provided by the Ministry, can now be flexibly invested.

Taking advantage of the new flexible administrative system, PWRI is determined to extend and share the experience and expertise on water hazard and risk management
developed in Japan with the international community. Further information on PWRI activities and future visions can be found at the institute web homepage: http://www.pwri.go.jp/eindex.htm

**A new UNESCO Center in PWRI in the pipeline**

UNESCO established the International Hydrological Programme (IHP) in 1975, as the single intergovernmental programme of the UN system devoted to scientific study of the hydrological cycle and to formulating strategies and policies for sustainable management of water resources. IHP has a network of seven regional and international centers. The centers are a cornerstone of UNESCO’s strategy to improve scientific understanding of the water cycle and water resources management.

At the World Summit on Sustainable Development held in Johannesburg, 2002, the necessity to develop programmes for mitigating the effects of extreme water-related events was recognized and described in the Plan of Implementation as an important result of the Summit. In order to further promote the commitment in water-related area, at the 32nd UNESCO General Conference held in Paris, October 2003, the Government of Japan stated that continuing efforts are on course to study the possibility of establishing a Center dedicated to the field in PWRI. The General Conference has warmly welcomed this statement. At the 3rd World Water Forum and its Ministerial Conference, Japan, March 2003, the intention of establishing a new global IHP Center in PWRI targeting autumn 2005, was announced. It is planned that the Center focuses on water hazards and risk management and that PWRI will further contributes for the benefits of the international community, especially practitioners from developing countries, by utilizing its past experience on research and capacity building, through the network of IHP Centers.

**Objectives of the Workshop**

The International Workshop on Water Hazard and Risk Management aims: (1) to deliver PWRI’s experience and potential to world renowned scientists in the field of water hazard and risk management; (2) for PWRI researchers to learn world’s leading technologies and trends; and most importantly (3) based on presentations in Day 1 and 2 to discuss the areas of focus and future directions in this field through the Plenary Session as wise-men’s input to the International Center for Water Hazard and Risk Management.
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<td>January 20, 2004</td>
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<td>8:30 – 9:30</td>
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<td>9:30 – 9:35</td>
<td>Opening and Welcome, Chief Executive, Tadahiko Sakamoto</td>
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<td>9:35 – 9:40</td>
<td>Introductory Message from UNESCO, Yoshiyuki Imamura</td>
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<td>9:40 – 10:00</td>
<td>Introduction to PWRI and Workshop Schedule, Junichi Yoshitani</td>
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<td>10:00 – 10:45</td>
<td>Keynote Lecture, Prof. M. Levent Kavvas</td>
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<td>Parallel sessions</td>
<td>Water Hazard: Experience and Strategies at 8F Meeting Room</td>
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| 11:00 – 13:00 | Session 1  
Chairperson: Prof. Janos J. Bogardi  
Presenters:  
- Mr. Takaaki Kusakabe  
- Dr. Joanne Linnerooth-Bayer  
- Prof. William J. Alexander  
- Dr. Xiaotao Cheng |
| 11:00 – 13:00 | Session 3  
Chairperson: Mr. Robert J. Moore  
Presenters:  
- Prof. Soontak Lee  
- Prof. Erich J. Plate  
- Mr. Kazuhiro Fukami  
- Prof. Nguyen Tat Dac |
| 13:00 – 14:30 | Lunch |
| 14:30 – 16:30 | Session 2  
Chairperson: Prof. Pierre Hubert  
Presenters:  
- Mr. Kenzo Hiroki  
- Prof. Carlos E. M. Tucci  
- Mr. Yoshiyuki Imamura  
- Dr. Sung Kim |
| 14:30 – 16:30 | Session 4  
Chairperson: Prof. William John Alexander  
Presenters:  
- Dr. Heng Liu  
- Mr. Victor Pochat  
- Dr. Jaroslav Vrba  
- Mr. Hideaki Mizuno |
| 18:00 – | Dinner Reception |
| January 21, 2004 | **Workshop DAY 2** |
| 9:00 – 11:00 | Session 5  
Chairperson: Prof. Erich J. Plate  
Presenters:  
- Prof. Janos J. Bogardi  
- Dr. Deuk-Koo Koh  
- Dr. Keizrul Abdullah  
- Mr. Junichi Yoshitani |
| 9:00 – 11:00 | Session 6  
Chairperson: Dr. Jaroslav Vrba  
Presenters:  
- Mr. Takao Yamakoshi  
- Prof. Pierre Hubert  
- Dr. A. W. Jayawardena  
- Mr. Robert J. Moore |
| 11:00 – 11:15 | Coffee Break |
| 11:15 – 12:30 | Report from each Session & General Discussion (8F Meeting Room) |
| 12:30 – 14:00 | Lunch |
| 14:00 – 16:00 | Plenary Meeting (8F Meeting Room) |
| January 22, 2004 | **Workshop DAY 3** |
| 9:00 – 12:00 | Tour of Tsukuba |
| 13:30 – | Tour of PWRI/NILIM laboratories  
Move from PWRI to Tokyo for International Symposium on 23 January |
Workshop DAY 1

Water Hazard Experience and Strategies (8F Meeting Room)

Session 1
11:00 – 13:00 / 4 Presentations (30 min each)
Chairperson: Prof. Janos Bogardi
Rapporteur: Volunteer (to be decided by the Chairman)
Presenters:
- Mr. Takaaki Kusakabe
  “Risk Management Analysis toward Plain Risk Management”
- Dr. Joanne Linnerooth-Bayer
  “Flood Risk Management: A Model-Based, Stakeholder Approach”
- Prof. William J. Alexander
  “Risk and Society-an African Perspective”
- Dr. Xiaotao Cheng
  “Sharing Both Risks and Benefits, and Holding Moderation on Flood Risk Management”

Session 2
14:30 – 16:30 / 4 Presentations (30 min each)
Chairperson: Prof. Pierre Hubert
Rapporteur: Volunteer (to be decided by the Chairman)
Presenters:
- Mr. Kenzo Hiroki
  “Flood Management in South America”
- Mr. Yoshiyuki Imamura
  “Mitigating Risk and Coping with Uncertainty: Global Crisis and our Future”
- Dr. Sung Kim
  “Research Strategy to Cope with Water Shortage Problem during Drought in Korea”
Water Hazards Modeling and Management (5F Room 526)

Session 3
11:00 – 13:00 / 4 Presentations (30 min each)

Chairperson: Mr. Robert J. Moore
Rapporteur: Volunteer (to be decided by the Chairman)

Presenters: - Prof. Soontak Lee
“Dam-Break Flood Risk Management in Nakdong River, Korea”
- Prof. Erich J. Plate
“Risk and Decision in Water Resources Management”
- Mr. Kazuhiko Fukami
“Development of Simple Models to Evaluate the Role of the Tonle Sap Lake
as a Flood Retarding Lake for the Mekong River”
- Prof. Nguyen Tat Dac
“Flood in the Mekong Delta and Modelling Approach Requirements”

Session 4
14:30 – 16:30 / 4 Presentations (30 min each)

Chairperson: Prof. William John Alexander
Rapporteur: Volunteer (to be decided by the Chairman)

Presenters: - Dr. Heng Liu
“Flood Management in China”
- Mr. Victor Pochat
“Some Experiences of Flood Management in Argentina”
- Dr. Jaroslav Vrba
“Groundwater in Emergency Situations”
- Mr. Hideaki Mizuno
“Application to Past Disasters of a Method of
Setting the Range of Debris Flow Damage to Houses”
Workshop DAY 2

Water Hazard Experience and Strategies (8F Meeting Room)

Session 5
9:00 – 11:00 / 4 Presentations (30 min each)
Chairperson: Prof. Erich J. Plate
Rapporteur: Volunteer (to be decided by the Chairman)
Presenters:
- Prof. Janos J. Bogardi
  “Hazards, Risk and Vulnerability: a New Look on the Flood Plains”
- Dr. Deuk-Koo Koh
  “Prospective Non-structural Measures for Flood Damage Mitigation in Korea”
- Dr. Keizrul Abdullah
  “Floods in Malaysia”
- Mr. Junichi Yoshitani
  “Issues of Public Discussion over a Flood Control Project”

Water Hazards Modeling and Management (5F Room 526)

Session 6
9:00 – 11:00 / 4 Presentations (30 min each)
Chairperson: Dr. Jaroslav Vrba
Rapporteur: Volunteer (to be decided by the Chairman)
Presenters:
- Mr. Takao Yamakoshi
- Prof. Pierre Hubert
  “Predetermination of Floods”
- Dr. A. W. Jayawardena
  “The Role of Hydro-Meteorological Models in Flood Hazard Mitigation”
- Mr. Robert J. Moore
  “Priority Issues and Technologies in Forecasting for Flood Warning”