

NEWSLETTER



Volume 4 No.1 ISSUE No. 12

30 April 2009

Message from Director

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April is the start of a new fiscal year in Japan and comes around with cherry blossoms every year. ICHARM staff, including myself, and Master's course students celebrated the new start by viewing cherry blossoms while having a tea ceremony. It was an enjoyable and refreshing time in our busy schedule.

In March, I visited Leipzig in Germany to participate in Leipzig University's 600th anniversary and its memorial conference on "Risk and Planet Earth - Vulnerability, Natural Hazards, Integrated Adaptation Strategies." After that, I also attended the 5th World Water Forum in Istanbul, Turkey. In both cities, I witnessed a great mixture of cultures in spirit and power. All my visits were very successful in extending ICHARM contributions to a wider community and discussing the hottest matters with potential partners for future collaboration.

ICHARM considers that the following three events are particularly important: 1) the successful publication of the UNSGAB HLEP report on "Water and Disaster" presented at WWF5 by Dr. Han Seung-soo, HLEP founding-chair and currently prime minister of the Republic of Korea, 2) the implementation of the ICSU IRDR program guided by an ICSU report entitled "A Science Plan for Integrated Research on Disaster Risk - addressing the challenge of natural and human-induced environmental hazard," and 3) the UNESCO and NARBO publication of "IWRM Guidelines at River Basin level." They are important because they will surely promote the implementation of necessary actions that are already committed by policy makers.

Kuniyoshi Takeuchi, Director of ICHARM



Group photo on 1 April

News

ICHARM Open Day 2009



Let's try "Water Quiz" !

On 14 April 2009, ICHARM organized a special public event as part of the PWRI Science Week and invited students from Takezono High School and Namiki Junior and High schools. The occasion was also meant to celebrate the 3rd anniversary of ICHARM on 6 March and the World Water Day on 22 March. This is the second time that ICHARM invited high school students for a tailor-made two-hour program. For the first time, the ICHARM auditorium was packed to its full capacity with 65 students and three teachers.

After a welcome address by ICHARM Director Kuniyoshi Takeuchi, the visitors were treated to a two-hour program led by ICHARM Researcher Hironori Inomata, who is not only a serious researcher but also a gifted entertainer (a rare combination of talents!). The program included a video presentation on the 2004 Indian Ocean tsunami, quizzes about water, self and country introductions by researchers and graduate students from Bhutan, Ethiopia, Bangladesh, Indonesia, China, Thailand, Vietnam, Sri Lanka and Nepal, followed by poster presentations about natural disasters in their respective countries. Enthusiastic students continued their quest for knowledge on disasters at the poster session by having face to face conversations with foreign researchers.



Poster session by foreign researchers at ICHARM

ICHARM concludes MOU with Yamanashi University

Director Kuniyoshi Takeuchi visited the International Research Center for River Basin Environment (ICRE) of Yamanashi University on 27th March and signed Memorandum of Understanding on "Research cooperation for integrated water-related disaster management at river basins in developing countries" with Prof. Kengo Sunada, Director of the ICRE.

This research cooperation aims to promote collaboration between ICHARM and ICRE for interactive effect to achieve their missions.



Prof. Sunada of ICRE (left) and Takeuchi signing the MOU

Prof. Reiko Kuroda visits ICHARM

Prof. Reiko Kuroda of Tokyo University, Vice-President of ICSU, visited ICHARM and PWRI on 2nd April.

ICSU (International Council for Science) was founded in 1931 to promote international scientific activity in the different branches of science and its application for the benefit of humanity. On its 29th General Assembly in 2008, ICSU approved an international research program, **Integrated Research on Disaster Risk (IRDR)**, which addresses the challenge of natural and human-induced environmental hazards.



Prof. Kuroda (center) with Director Takeuchi (left) and a researcher Mr. Tanimoto of Soil Mechanics Research Team

Dr. Kuroda is a professor of the Department of Life Science, of the Graduate School of Arts and Sciences, the University of Tokyo. She obtained B.Cs. from Ochanomizu University and M.Sc. and Ph.D. from the University of Tokyo in Chemistry. Her research on chirality (left and right handedness) is widely known in the world and she was awarded prizes such as Saruhashi Prize and Nissan Science Prize. She served as a member of the Council for Science and Technology Policy of the Cabinet Office.

She gave a lecture entitled "Science in the 21st century" in the seminar (see also page 11). About 50 people attended the seminar and had an active discussion with her. She also visited PWRI laboratories concerning dams, earthquakes and water contamination, and exchanged views on the new ICSU program.



Prof. Kuroda (right) and Dr. Sakamoto, Chief Executive of PWRI

New members join ICHARM this April

Dr. Kazunori Wada, director of the Planning and Research Administration Department of PWRI, has been also assigned to be the observer of ICHARM activities.



He started his career at the Ministry of Construction (now MLIT). In 2001-2002, he was the Director of the MLIT Kofu Office. In 2003, he was transferred to the National Institute for Land and Infrastructure Management (NILIM) as a research coordinator for watershed management. He earned his doctoral degree from Yamanashi University in 2005, and became a professor of Ehime University in 2006, where he also served as the founding vice director of the Center for Disaster Management Informatics Research. In 2007, he came back to PWRI.

His specialty covers hydraulics, water resources, flood control, coastal management, history of civil engineering, and climate change caused by global warming.

In 2003, he was prized with the Seiko Nakamura Literature Award for his book, *Shingen Embankment*, which is a historical embankment along the Kamanashi River in Yamanashi Prefecture and has been protecting the area from flooding for more than 450 years.

Mr. Takahiro Kawakami (Exchange researcher, Hydrologic Engineering Research Team)



Mr. Kawakami studied the rainfall run-off process of a small head-water basin at the Graduate School of Environmental Sciences, University of Tsukuba. After graduating, he started working at an information system company and continued working there until he made a career change to the Japan Water Agency in October 2007.

At the agency, he was assigned to the Hitokura Dam Office in Hyogo Prefecture, where he was involved in a variety of work including general affairs, procurement, publicity, dam management, and low water management.

His main research theme at ICHARM is the improvement of reliability in flood assessment and run-off analysis using the Integrated Flood Analysis System (IFAS).



Mr. Kei Kudo (Chief Researcher)



At the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Mr. Kudo mainly worked in the area of river improvement works, including research, planning and implementation, at the MLIT headquarters and branch offices in Tohoku, Kanto, and Kyusyu regions.

For the last three years, he worked at the Planning Department of the Foundation of River & Basin Integrated Communications (FRICS).

At ICHARM, he is in charge of planning training programs in cooperation with the International Technical Exchange Team.

Mr. Go Ozawa (Exchange researcher, Hydrologic Engineering Research Team)



After graduating the Graduate School of Science and Engineering of Chuo University, Mr. Ozawa was employed by CTI Engineering Co., Ltd. in April 2006. He worked at the CTI Kyushu Office, where he was mainly involved in river planning, basic policy-making in river development, anticipated inundation area mapping, and flood-forecast system development for rivers in the Kyusyu region. He also conducted flow analysis for an optimal spawning habitat for ayu, or sweetfish.

His main research theme at ICHARM will be the use of satellite-based precipitation information in ungauged basins.

Ms. Akemi Saito, chief staff of PWRI, joined ICHARM as chief office manager.



In her previous position in the Research and Planning Section, she was mainly responsible for international projects and had many chances to work with ICHARM researchers and office assistants. At ICHARM, she will be continuously helping ICHARM staff with contracts and other office management duties.

Special Topic

5th WORLD WATER FORUM
I S T A N B U L 2 0 0 9



5th World Water Forum

-March 2009, Istanbul, Turkey-

ICHARM's Contribution to the forum

ICHARM organized "Managing Disasters" topic at the Fifth World Water Forum

The Fifth World Water Forum (WWF5) was held from 16 to 22 March 2009 in Istanbul, Turkey. ICHARM, together with the Japan Water Forum (JWF), served as a topic coordinator at the forum. This was the highlight of the continued activities with which ICHARM and JWF were tasked as the topic coordinators by the WWF5 organizers since 2008.

The sessions related to "Managing Disasters" were held from 17 to 19 March at the WWF5 venue in the Feshane area, including the opening and closing sessions and four specific sessions under this topic as follows:

- 1) Dialogue session (conveners: Ministry of Transport, Public Works and Water Management of the Netherlands, Commission of Scientific and Industrial Research of South Africa, Royal Haskoning),
- 2) Technologies for water-related disaster management (conveners: Ministry of Land, Infrastructure, Transport and Tourism of Japan, Ministry of Environment and Forestry of Turkey)
- 3) Managing water-related risks in changing climate (conveners: World Meteorological Organization, Ministry of Land, Transport and Maritime Affairs of Korea),
- 4) Water management during and after disasters/conflicts (conveners: International Committee of the Red Cross, etc.)

All sessions were fully attended and lively discussions were held. On 18 March, Deputy Director Akira Terakawa participated in the session "Technologies for water related disaster management" as one of the panel members, where he made a presentation on the outline and dissemination activities of Integrated Flood Analysis System (IFAS) as a tool for supporting the first step of flood forecasting effort even in the basin with no realtime hydrological data and geographical data. At the closing session on 19 March, Director Kuniyoshi Takeuchi introduced "Key Sound Bytes" and "Recommendations of the Topic," which were welcomed and accepted by the audience. The results of the topic discussions were then successfully fed directly into the thematic wrap-up and also the ministerial roundtable discussions.



Director Takeuchi reports the results at the thematic wrap-up session



The "Managing Disasters" sessions attracts a large audience



Mr. Yoshiro Mori, JWF President and former Prime Minister of Japan, speaks at the opening session



**IFI Workshop in the 5th World Water Forum
(21 March, Istanbul)**

The International Flood Initiative (IFI) workshop on “Charting Global Agenda for Meeting Today’s Flood Management Challenges” was held as one of the 5th World Water Forum side events in Istanbul on 21 March 2009. In response to increasing worldwide flood disasters and related damages, this workshop was organized by the IFI to catalyze global agenda toward Integrated Flood Management. The main conveners of the event were UNESCO, WMO, UNU, UN/ISDR, and ICHARM as the IFI Secretariat. Other IFI partners, such as IAHS, IAHR and ICLR, also took part in the workshop.

Mr. Bruce Stewart from WMO-CHy was the chair of the session at the workshop. The session had dual sections. In the first section, the workshop started with a presentation by Ali Chavoshian, research specialist of ICHARM, to introduce IFI activities. His presentation was followed by those of other representatives on their flood-related activities. The speakers included Bruce Stewart and Avinash Tyagi of WMO, Srikantha Herath and Janos Bogardi of UNU, Arthur Mynett of IAHR, Slobodan Simonovic of ICLR, and Kuniyoshi Takeuchi of ICHARM.

The second part started with a presentation by ICHARM Director Takeuchi on IFI commitments. He highlighted two specific IFI commitments in the “Water and Disaster” report published by the high-level expert panel on water and disaster of UNSGAB as follows:

- A- National government to promptly develop people-centered warning systems, comprehensive flood risk maps and assessments linked to communication systems such as cell phone networks. These systems to include observation and warning for flash floods. The panel requests WMO and UNESCO (via International Flood Initiative) to assist governments in undertaking the proposed actions and invite international financial institutions to support the fulfillment of the proposed actions. (Item No. 2 in annex 1, list of actions)
- B- International Flood Initiative and international hydrological and hydraulic institutes to examine the efficiency and effectiveness of disaster prevention measures and develop disaster preparedness indices for implementation by local authorities. (Item No. 30 in annex 1, list of actions)

The participants also reported progress and had discussions on three main IFI activities as well as discussions on future plans. Three main activities discussed in the workshop were:

- 1- IFI briefs: A multilingual publication (about 2, at most 4, pages) to communicate flood issues and available solutions to governments and policy makers.
- 2- IFI reference series: A kind of guidebooks and manuals to fulfill gaps and elaborate in detail on flood issues and solutions for practical use. (Reported by Mr. Tyagi)
- 3- IFI web tutorials: Web-based education and training. (Reported by Mr. Herath)



IFI workshop in Istanbul

Before closing the workshop, dates for the 5th International Conference on Flood Management (ICFM5) were discussed and decided to be 27-30 September 2011. The next meeting of the IFI AC/MC will be held at the WMO Headquarters in Geneva on the occasion of the 2nd Global Platform for Disaster Risk Reduction to be held on 16-19 June 2009.

**High-Level Expert Panel on
Water and Disaster**

The High-Level Expert Panel (HLEP) on Water and Disaster met on 17 March 2009 during the 5th World Water Forum held in Istanbul, Turkey. Kuniyoshi Takeuchi, Director of ICHARM is one of the 21 experts of HLEP in disaster preparedness and response and international issues. The panel declared six urgent imperatives and forty actions to alleviate human suffering and increase the resiliency of the global community to disasters. The panel was chaired by the H.E Han Seung-soo, prime minister of the Republic of Korea, and attended by high-level delegates, such as Mr. Salvano Briceno, former director of UNISDR, Loic Fauchon, president of WWC, and other high-level government officials and experts. The following are a few of the important actions formulated by the panel where ICHARM must play a role:

- National governments should mainstream and integrate disaster potential assessment and risk reduction within their development plans to promote economic growth.
- National governments must develop people-centered warning systems.
- IFI and international hydrological and hydraulic institutes should examine prevention measures and develop disaster preparedness indices.

HLEP was first convened at the request of the UN Secretary General’s Advisory Board on Water and Sanitation (UNSGAB) in 2007, and has been a very important platform where experts can advise high-level government officials on water and disaster.

Information Network

Date, Venue	Event
25-27 February 2009, Philippines	Meeting on Action Plan for Water and Climate Change
16-18 February 2009, Tokyo	4th International Workshop on Precipitation Retrieval Algorithms Using Satellite Microwave Radiometer, Radar and IR Data
9-13 February 2009, Vietnam	Field trip to Mekong Delta, Vietnam
4-7 February 2009, Kyoto	The 3rd Global Earth Observation System of Systems (GEOSS) Asia-Pacific Symposium and the 4th International Coordination Group Meeting of the GEOSS Asian Water Cycle Initiative (AWCI)
28 January-4 February 2009 Indonesia	CD Project for RBOs in Water Resources Management & Technology
19-24 January 2009, Thailand	The 41st Annual Session of the ESCAP/WMO Typhoon Committee (TC)
16 January 2009, Tokyo	Kakushin Research Activity Report Conference
15-16 January 2009, Singapore	Team meeting of the 1st Asian Water Development Outlook 2010
12-16 January 2009, Chile	International Conference on Hydroinformatics in Chile
10-24 January 2009, Jordan	ICHARM Researcher participated in JICA Project in Jordan for Arid Land Sabo and Water Management
8-9 January 2009, Tokyo	Third Annual Workshop on Disaster Reduction Hyperbase - Asian Application (DRH-Asia)

FOCUS

The 3rd Global Earth Observation System of Systems (GEOSS) Asia-Pacific Symposium and the 4th International Coordination Group Meeting of the GEOSS Asian Water Cycle Initiative (AWCI)

The 3rd GEOSS Asia-Pacific Symposium was held on 4-6 February 2009 at the Kyoto Research Park in Kyoto, Japan, followed by the 4th International Coordination Group Meeting of the GEOSS Asian Water Cycle Initiative (AWCI) on 6-7 at the same venue. Team Leader Kazuhiko Fukami and Senior Researcher Tomonobu Sugiura of ICHARM participated in those two conferences.

At the GEOSS Symposium, the following six sub-sessions were held to explore how to strengthen collaboration in the improvement of observation, prediction and data sharing in the fields of climate change, water resource management, ecosystem maintenance, and disasters under the theme of "Cross-cutting Data Sharing in the Asia-Pacific Region."

- WG1: Monitoring and Predicting Climate Change
- WG2: Water Cycle in the Asia-Oceanic Region
- WG3: Monitoring Changes in Ecosystem, Biodiversity and Ecosystem Services
- WG4: Earth Observation and Data Sharing for Disaster Management
- WG5: Toward Actual Collaboration among Climate, Water Cycle and Disasters
- WG6: Necessity and Possibility of Observation, Forecast, and Data Sharing through the Interdisciplinary Collaboration of "Ecosystem - Climate Change - Disaster"

Fukami explained ICHARM's activities as an example of regional coordination in the WG5 session, while Sugiura delivered a presentation entitled "IFNet-GFAS" in WG4 to explain about the utilization of satellite information to reduce flood hazards.

In the meantime, the GEOSS-AWCI meeting focused on data archiving and integration, prediction model applications and capacity building programs. At this meeting, Fukami played a leading role in "Floods WG" and made a proposal of holding training seminars using the Integrated Flood Analysis System (IFAS), which has been developed by ICHARM as a flood forecast system using satellite-based rainfall data for poorly gauged basins in developing countries.

Related website: <http://www.editoria.u-tokyo.ac.jp/awci/4th/index.html>

FOCUS

ICHARM Researcher participates in JICA Project in Jordan for Arid Land Sabo and Water Management

Deputy Team Leader Tomoyuki Noro of ICHARM visited Jordan for two weeks (10-24 January) as one of the short-term experts for the project which the Japan International Cooperation Agency (JICA) started there two years ago. This JICA project is to implement sediment erosion control technology for sediment-related disaster prevention and water resources management in the arid land. Noro was sent there for a short-term assignment as one of the four experts in debris flow, landslide, and sabo planning, observation and monitoring. In charge of observation and monitoring, he checked the results of the reservoir depth measurement conducted by the Jordanian team and confirmed that they were satisfactory. He also explained the need for a survey in the upstream area of the reservoir to estimate the unstable sediment volume in the valley. In addition, he made a presentation to introduce the ICHARM-developed Integrated Flood Analysis System (IFAS), which can help improve



The Mujib Dam, one of the project's model sites, is located in the central part of Jordan

hydrological measurement in sparsely gauged countries. Jordan is one of such countries with less than ten ground rain gauges covering in its widespread catchment of 4,500 km².

JICA is planning to provide a capacity development program for the country to become able to independently conduct sabo planning and facility design, as well as training programs for arid-area afforestation planning and water resources management technology. The entire project is scheduled to end in March 2010.

For more details and information, visit our website:

<http://www.icharm.pwri.go.jp/news/activities.html>

Training programs

Third East & Southeast Asia Regional Seminar on Flood Hazard Mapping in the Philippines 17-19 February 2009, Manila, The Philippines

ICHARM co-hosted the 3rd East & Southeast Asia Regional Seminar on Flood Hazard Mapping on 17-19 February 2009 at Edsa Shangri-la Hotel in Manila, the Philippines, with the Japan International Cooperation Agency (JICA) and the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA).

ICHARM has held this annual event since 2007 to provide an opportunity for those who completed the JICA Flood Hazard Mapping (FHM) training course to get together to report and discuss the current progress and issues on FHM and to promote FHM-related activities in the participating countries. The training course was conducted by ICHARM for the past five consecutive years.

Thirty-one people, mainly ex-trainees, participated in the seminar from various Asian countries, including Bangladesh, China, Indonesia, Nepal, Laos, Malaysia, the Philippines, Thailand, Vietnam, and Japan. The diversity of the participants' nationalities and viewpoints made discussions interesting and insightful.



Group discussion

The opening ceremony was held in the presence of honorable guests. The participants sang the Filipino national anthem and were greeted by Dr. Prisco D. Nilo, director of PAGASA, and Dr. Jayawardena Amithirigala, Research and training advisor of ICHARM. A few other guests, including Mr. Norio Matsuda (manager of JICA Philippine Office), Mr. Hiroshiro Yoshino (second secretary of the Japanese Embassy), and Hon. Estrella F. Alabastro (secretary of the Department of Science and Technology of PAGASA), also made an opening speech at the ceremony. The seminar was televised in a local news program.

The opening ceremony was followed by a special lecture by Ms. Susan R. Espinueva of PAGASA on "Community-Based Early Warning System." She concluded her lecture by saying, "The success of an

early warning system is implicit in the operative capability and the response of the community which operates it." Her remark was of great importance especially to the ICHARM staff, because the concept was exactly in line with the promotion of "Local Practices," one of ICHARM's focus areas. It certainly reminded them of the crucial role of the community in disaster management.

On the following day, the participants visited Kawit City in Cavite Province, located south of Metro Manila, and received a presentation by Ms. Anabelle L. Cayabyab on community-based FHM activities led by JICA. Her presentation revealed that the community was involved in not only hazard mapping itself but also activities to enhance disaster preparedness on a local basis, including the Town Watching exercise as part of the mapping process. The seminar participants also learned that community leaders felt grateful for the FHM activities. It was a pleasant surprise to find out that FHM had made more progress in the Philippines than expected.

On the last day, five primary issues on FHM were given to the participants for discussions, which helped them learn more about and gain better understanding of FHM.



Participants of the regional seminar



The participants exchanged various views in the general discussion.



Ms. Susan R. Espinueva of PAGASA giving a lecture

One of the findings from this seminar was that the participating countries have already demonstrated a fairly high FHM capability, although they are not still fully self-sustainable and need support from overseas organizations such as JICA. The next step should be to promote the effective use of flood hazard maps to mitigate flood damage. In this sense, the Philippine's Kawit City is an excellent pilot case of FHM, which should be introduced as a good example to other countries to disseminate FHM.

For more details: <http://www.icharm.pwri.go.jp/training/2009-seminar.html>

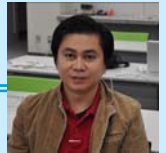
Training programs

Water-related Risk Management Course Disaster Management Policy Program 2008-2009

Message from Master's students

It has been six months since the 2008-2009 Master's course students joined. They have completed a series of lectures, experienced field surveys, and now started to work on their own research topics. They have already got used to the life in Japan and well prepared for the remaining six months, which will be their hardest but most productive period.

Khorsuk Banluesak (Meteorologist/Hydro-Meteorological Group, Thai Meteorological Department, Ministry of Information and Communication Technology), Thailand



Living and studying in ICHARM are extremely far away from my normal life.

We have to do everything in the short time which is tough for me. However, among the experts here, it is a very good opportunity to gain knowledge from them then apply that to our individual study and our work. This course is aiming to countermeasure for flood-related disaster. So far, we have learned a lot of things in various subjects, some are fundamental and others are applications. To be successful in disaster mitigation, we need both of them.



Biswas Robin Kumar (Assistant Engineer/ Bangladesh Water Development Board), Bangladesh

Technology is always advancing for the betterment of mankind. Being a citizen of a developing country like Bangladesh, I was not well up to date regarding the modern technological development all around the world in the field of disaster countermeasures. I am extremely elated to pick the opportunity to study about the disaster in ICHARM. The designed course of this organization is practical oriented and will be helpful for me in coming days to serve my country effectively and efficiently.

I am thankful to all the members of ICHARM for providing a pleasant environment of knowledge accumulation.

Jin Ke (Section Staff of Office of Flood Control and Drought Relief/Taihu Basin Authority of Water Resources), China



I am so proud to participate in this Master Program. China is a developing country which is suffering from frequent natural disasters. Huge amount of losses are caused by natural disasters each year. Japan is a developed country which has abundant experiences of disaster management and mitigation. Learning advanced technologies and experiences from Japan would surely contribute to the sustainable development of China.

During my stay, ICHARM invited professors from different research institutes. They taught me lots of related theories, together with the causes, phenomena and prevention methods of different natural disasters. Theoretically discussing and practically application combined perfectly.

This is my first chance to study abroad. I learned plenty of specialized theories and advanced disaster mitigation methods, and have formed a scientific way of thinking. Thanks to JICA, thanks to ICHARM, thanks to GRIPS, for giving me such a great learning opportunity. I would go on devoting myself to hard studying and striving for more progress.

I believe in that the learning experiences here would momentarily impact on my working ability after my returning to China.



Simatupang Maruli Tua Gregorius (Engineer / Directorate River, Lake and Reservoir DG of Water Resources, Ministry of Public Works), Indonesia

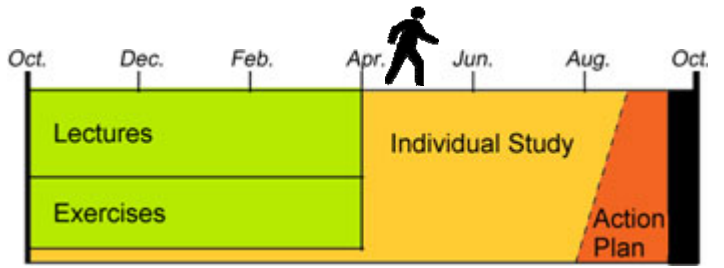
To be one of the participants in this "Flood-related Disaster Mitigation Master Program" is a great promising opportunity. I can learn a lot about flood and its mitigation and also special knowledge about mitigation policy. It is an interesting experience to study in Japan especially in ICHARM. Change information, experience and knowledge between all participants from other countries are one of the valuable things. Study in ICHARM is a big challenge because I can learn about flood from the experts. I hope all the knowledge which I acquire here can be implemented in my works specially to reduce the flood hazard in my country. Study in Japan is a thrilling and excited, because everything are organized well by ICHARM and JICA. The hospitality of Japan makes my stay become more pleasant.

Last but not least, I would like to say sincerely thanks to all of lecturer and staff in ICHARM for great support during my study and to JICA by giving me a chance to study in Japan. And also for all my friends, participants, for the great time that we spent together, helping and support each other, this is an unforgettable moment in my life.

Training programs

Current situation

Master's course students has just started their individual studies to make master thesis. They work with an assigned ICHARM researcher. The researcher gives professional advice and support. That will help students to acquire proper skills to conduct surveys and write reports.



Course structure

Snapshots



Lecture by Prof. Fukuoka, Chuo Univ.



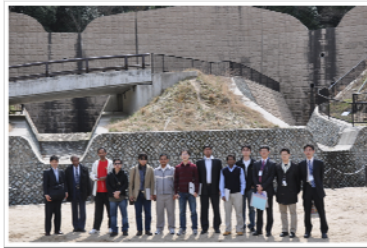
Lecture by Prof. Oki, Tokyo Univ.



Discharge channel in Metropolitan Area Outer Underground



Lecture on Ohashi river improvement works



In front of "Sabo dam" at Hiroshima city

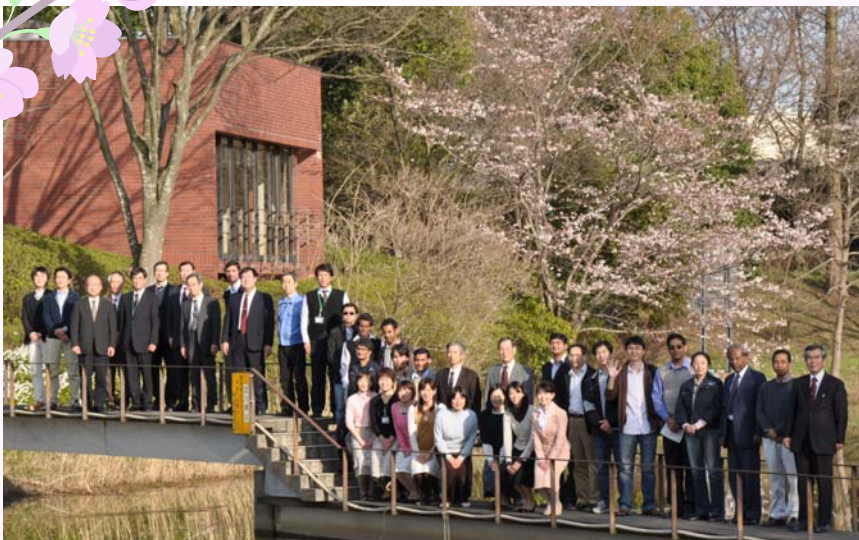


Construction of Hii river divergent channel

Cultural activities

Cherry blossom viewing

PWRI Chief Executive Tadahiko Sakamoto and ICHARM Director Kuniyoshi Takeuchi invited foreign researchers at PWRI, including the Master's course students, to a tea ceremony and cherry blossom viewing on 4 April.



Research activities

ICHARM Research & Development Seminar

ICHARM R&D seminars are held regularly at the ICHARM auditorium and give informative lectures about various topics. This issue reports the 15th-19th seminars.

15th A special Lecture on Sediment Hazard Management -Dr. Shinji Egashira (23 January 2009)

Dr. Egashira, a Japan's leading expert in sediment hazard management, gave interesting lectures on two research topics: "Importance of Introducing Sediment Transport Process in River Planning" and "Theoretical Tools for Sediment Management." The lectures were well received by the audience, including ICHARM researchers and students currently enrolled in the ICHARM Master's degree program in disaster management.

In his first lecture, Dr. Egashira presented the actual cases of sediment-related disasters around the world: a debris-flow disaster in Venezuela, Nagano landslides in Japan, river-bank cutting in the Mekong delta, river shifting in the Kizu River of Japan, sediment-related problems in the Juho River of Taiwan, etc. He emphasized the importance of maintenance of river environment and morphology while considering sediment hazard management. Later, he introduced the theoretical basis for analyzing sediment transport processes, including debris-flow models, and their roles in predicting such natural phenomena.

Sediment-related hazards are serious concerns worldwide because a large portion of the world population facing these problems. Mud and rock slides, landslides and debris flows occur very frequently and cause devastating impacts on mountain regions. River-bank cutting and river aggradation or degradation pose major threats to low-lying areas. They are extremely challenging issues to scientists and engineers. Despite this reality, there are very few researchers working in the field, and Dr. Egashira, a former professor of Kyoto and Ristumeikan Universities in Japan, is one of the precious few.

16th Debris-flow dewatering brakes -a promising tool for disaster management in developing countries- -Mr. Masayuki Watanabe (27 January 2009)

Mr. Watanabe, coordinator of disaster mitigation research at ICHARM, spoke about the recently-completed "debris-flow dewatering brake" pilot project. The project was conducted at a debris flow-prone site on Kennon Road connecting Manila and Baguio City in the Philippines. Watanabe led the project in collaboration with ADB and the Philippines' Flood Control and Sabo Engineering Center of the Department of Public Works and Highways.

In the seminar, he emphasized the importance of dewatering brakes to secure road communications in the mountainous region, stating that brakes would be efficient and effective to prevent sediment-related disasters. He also listed advantages of debris-flow brakes, such as low cost, simple design, easy repair and maintenance, and use of local materials for construction. Elaborating on their mechanism and functions, he also told the audience how the structure first came into being and stated that it had been tested in three pilot projects in Japan and proven effective.

The pilot project was completed in November 2008, which was actually earlier than planned thanks to great local cooperation. A ceremony to hand over the facility to the Filipino Government and a seminar on the importance and effectiveness of the project and debris-flow brakes were held in March 2009 (see also page 11).



Mr. Watanabe giving a lecture.

17th Koshi Flood Disaster 2008 -Ms. Mandira Shrestha (9 February 2009)

ICHARM invited Ms. Shrestha, water resources specialist of the International Centre for Integrated Mountain Development, Nepal, to speak at the 17th ICHARM R&D.

The Koshi River is a transboundary river originating from the Tibetan Plateau of China through Nepal to India. It forms the largest river system in Nepal, draining a total area of around 60,000 km². The river is also known as the "Sorrow of Bihar". After a catastrophic flood in 1954, Nepal and India signed a treaty in flood management, and built a barrage across the river for flood control and implemented an irrigation system by building several kilometers of river embankments to protect people, infrastructure and fertile agricultural land.



Flood situation of Koshi river (2008.8)

On 18 August 2008, in the middle of the monsoon, the left embankment about 12 km from the barrage breached, which led to another catastrophic flood in Nepal and India. The Koshi River completely changed its course, flowing through villages and settlements and inundating fertile land. About 200 people lost their lives in Nepal and India, 70,000 were displaced in Nepal, and over four million were affected in India. The presentation by Ms. Shrestha provided the audience with the details of the Koshi flood disaster, the mitigation measures taken, and the present status of the river.



Ms. Shrestha giving a lecture.

18th Science in the 21st century -Dr. Reiko Kuroda (2 April 2009)

Dr. Kuroda, professor of the Department of Life Science of the Graduate School of Arts and Sciences, the University of Tokyo, and vice president of the International Council for Science (ICSU), visited ICHARM and gave a lecture entitled "Science in the 21st century" in the 18th ICHARM R&D Seminar. She introduced the World Conference on Science, which UNESCO and ICSU co-organized at Budapest, Hungary, in 1999. The Conference adopted the "Declaration on Science and the Use of Scientific Knowledge". The preamble of the declaration has four pillars: (1) Science for knowledge; knowledge for progress, (2) Science for peace, (3) Science for development, and (4) Science in society and science for society. She emphasized the importance of the fourth pillar and explained that the statement actually reflects her original idea about science and society. She told the audience that she had written a newspaper article on the very same idea in 1996.



Prof. Kuroda giving a lecture.

In addition, she introduced ICSU and its activities. ICSU's mission is "strengthening international science for the benefit of society". To do this, ICSU mobilizes the knowledge and resources of the international science community for the benefit of society. She also put stress on the importance of monitoring and talked about a new research program called the International Research on Disaster Risk (IRDR) led by ICSU on a global scale.

19th TPU Global COE Program: New Frontier of Education and Research in Wind engineering and IAWE Activities on Wind-related disaster reduction - Prof. Yukio Tamura (7 April 2009)

The speaker was Professor Tamura of Tokyo Polytechnic University (TPU), who is also the Director of the TPU Global Centre of Excellence (GCOE) on the "New Frontier of Education and Research in Wind Engineering", and is the current President of the International Association for Wind Engineering (IAWE). During his lecture, in addition to giving a historical background to "Wind Engineering" and the establishment of IAWE in general, he highlighted the specific efforts made by his research team towards mitigating wind related disasters in collaboration with international research teams from around the world. It was interesting to note the link between fluid mechanics related to wind engineering and the structural design of buildings. In the education and capacity building front, the activities that Professor Tamura's GCOE is pursuing are inspiring to ICHARM, which also aims to become a GCOE in water related disaster management.

► **20th ICHARM R&D Seminar 11 June 2009 (Thu) at ICHARM**

Mr. Neil R. Britton of the Asian Development Bank (ADB) is scheduled to speak on ADB's disaster management policies.

Turn-over ceremony and Seminar on Debris-flow Countermeasures in the Philippines

The project of "Testing and Demonstrating a Technology to Cope with Debris-flow in Mountainous Regions"

ICHARM held a ceremony on 25 March 2009 in Baguio, the Philippines, to turn over a debris-flow control structure to the Department of Public Works and Highways (DPWH) of the Philippines. ICHARM provided technical assistance to construct the structure, which completed in December 2009. This type of structure is called "debris-flow brakes" and designed to reduce the energy of debris flows by removing their water content. They are expected to be an efficient debris-flow control tool for disaster-prone areas in developing countries because of their structural simplicity and low construction cost.

ICHARM also held a project report seminar on March 27 in Manila. At the seminar, ICHARM staff reported on the debris-flow brake project and exchanged opinions and issues in disaster management with participants from the Philippine Institute of Volcanology and Seismology (PHILVOCS) and others.

The Flood Control and Sabo Engineering Center of DPWH, which took over the structure from ICHARM, will play the central role in monitoring the structure to verify whether it can stop debris flows safely.



Debris-flow dewatering brake, or "Debris-flow break" from downstream



Turn-over ceremony in Baguio, Mr. Masayuki Watanabe, Coordinator for disaster mitigation research of ICHARM (left) and Mr. Resito V. David, Director of FCSEC (right)



Discussion at the seminar in Manila



IFI Newsletter

The first issue of the IFI Newsletter has been published in March 2009 by the IFI Secretariat at ICHARM. In this issue you will read about IFI news and coming events as well as two interviews with IFI partners. IFI Newsletter is a semiannual and non-commercial publication to develop information networking and promote the exposure of IFI activities. It is distributed via e-mail. For subscription please send your request to info@ifi-home.info

It can also be downloaded from the IFI website (<http://www.ifi-home.info>).

Now accepting applications for admission of 2009-2010 GRIPS and ICHARM/PWRI Disaster Management Policy Program Water-related Risk Management Course till 5 June.

This course is jointly offered by ICHARM/PWRI and the National Graduate Institute for Policy Studies (GRIPS) with support from the Japan International Cooperation Agency (JICA).

The course is conducted in English and helps students earn a Master's degree in disaster management in one year after acquiring required credits. (See activities reports of the course 2007-2008 at http://www.icharm.pwri.go.jp/training/masters_course.html)

The admissions office is accepting applications for the term 2009-2010.

Course period : from October 2009 to September 2010

Application deadline : 5th June 2009(Fri) 16:00

Apply to : Admissions Office, National Graduate Institute for Policy Studies

For more information including eligibility and necessary documents for application, visit http://www.grips.ac.jp/pstudents/inter_programs/disaster.html



Coming Events

7th Annual Mekong Flood Forum 13-14 May 2009, Bangkok, Thailand

The Mekong River Commission (MRC) will conduct the 7th Annual Mekong Flood Forum on 13-14 May 2009 in Bangkok, Thailand. The theme for the forum is the "Integrated flood risk management in the Mekong River Basin". This year's theme reflects the need for integrated approaches to flood risk management in the Mekong River Basin. ICHARM is planning to make a presentation at the forum and introduce our various activities related to flood risk management. For details, visit the forum website: http://www.mrcmekong.org/MRC_news/7th-annual-mekong-flood-forum.htm

GPM Asia Workshop on Precipitation Data Application Technique 13-15 May 2009 Tokyo, Japan

"GPM Asia Workshop on Precipitation Data Application Technique" will be held from 13th to 15th May in Tokyo, Japan. The study on applicability of satellite-based precipitation data to flood forecasting in developing countries and the development of the "Integrated Flood Analysis System (IFAS)" will be presented at the workshop.

20th ICHARM Research & Development Seminar 11 June 2009 Tsukuba, Japan

Mr. Neil R. Britton of the Asian Development Bank (ADB) is scheduled to speak on ADB's disaster management policies.

Seminar on "Debris-flow break" 12 June 2009 Tokyo, Japan

Lecture by Mr. Masayuki Watanabe, Coordinator for disaster mitigation research of ICHARM on the outline of Debris-flow break technologies mainly targeted to the members of foreign Embassies in Tokyo.

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