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ICHARM

INTERNATIONAL CENTRE FOR WATER HAZARD AND RISK MANAGAMNET
under the auspices of UNESCO

Newsletter



Message from the Director



On the occasions of the second anniversary of the establishment of ICHARM on 6th March and of the UN World Water Day on 22nd March, ICHARM would like to express our deep grief to those who suffered from natural disasters in the past years, and recommit ourselves to further devotion to the improvement of water management for disaster risk reduction in alliance with all the organizations sharing the common objectives.

These two years have been a difficult but steadily developing period for ICHARM. We now have 27 staff members with 21 professional researchers, including seven internationally recruited experts. Our three pillars of activities are research, training and information networking. Our research interests vary from flood risk analysis to flood hazard mapping, from climate change impact, glacier melting, to tsunami management as well as local studies in Nepal, Bangladesh, the Philippines, Sri Lanka and the Mekong River basin, based on the different abilities of ICHARM's researchers.

Developing an early flood warning system using satellite observations and advanced forecasting models together with information dissemination tools is one example of the ongoing research activities at ICHARM.

ICHARM has already achieved great success in the part of training. More than 50 trainers from over 10 countries have been trained in our Flood Hazard Mapping training course. We are especially happy to see the first year ICHARM Master's Course students (ten from five countries) working very hard towards successfully completing the course in September.



Regarding information networking, it is worth mentioning that ICHARM played an important role in the first Asia-Pacific Water Forum and is making a considerable contribution to the coming World Water Development Report. Moreover, signing the Memorandum of Understandings to develop mutual cooperation with various partners and hosting the International Flood Initiative (IFI) secretariat are some of the notable activities that ICHARM is currently prioritizing to develop more widespread and effective information networking.

ICHARM is stepping into its third spring since the foundation in March 2006. The ceremonial event will be held at the ICHARM auditorium on 17th April 2008 while beautiful cherry blossoms (so called *Sakura* in Japanese) cover many area of Japan. The event will be held in concurrent with the Tsukuba Science Week, inviting people from the local community, including many high school students. This is an open forum where ICHARM staff researchers will speak to the audience, especially to young people, and exchange dialogue on broad subjects on disasters, water, environment, climate, etc. The event will be repeated every year around the ICHARM foundation day.

With many hopes and enthusiasm, ICHARM has started its third year for water disasters reduction with you.

Takeuchi Kuniyoshi

Kuniyoshi Takeuchi
Director, ICHARM

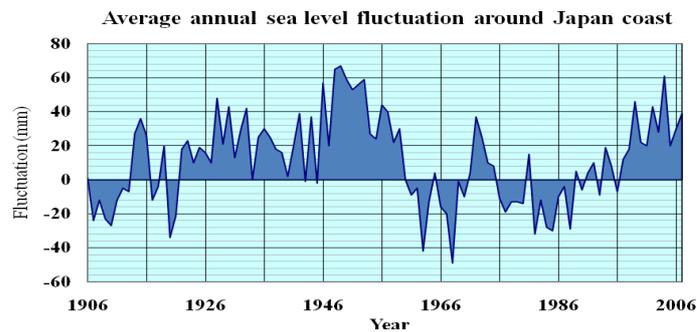


Survey Shows Different Perceptions to Sea Level Rise among Nations

In some European countries, sea level rise was part of the agenda for planning tidal flood defense and coast management even before global warming began being highlighted.

The River Bureau of the Japanese Ministry of Land Infrastructure and Transport (MLIT) has formed a sub-committee consisting of 13 academic experts to discuss a new policy for climate change adaptation for flood control. The policy is scheduled to be officially adopted in summer 2008 after reflecting public opinions. ICHARM is providing technical assistance to the sub-committee secretariat. One of the supports is to analyze other countries' adaptation strategies that can be useful to build public consensus when the Japanese government plans to implement similar strategies.

A joint team of the River Bureau, the National Institute for Land and Infrastructure Management and ICHARM conducted a survey on adaptation policy/planning examples, such as the Thames River 2100, in European countries by interviewing with key persons. One of the unexpected findings is that European countries have different perceptions to sea level rise than that of Japan. The Japan Meteorological Agency reports in a climate watch report that no significant sea level rise has been observed in seas around Japan because of complex tidal currents (see figure), while Europe sees clear sea

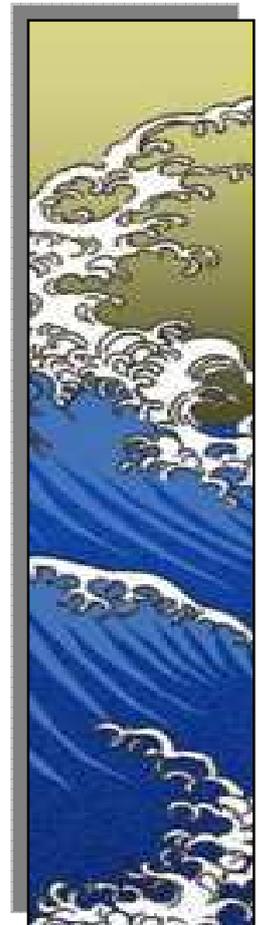


Source data for the graph at:

WWW.DATA.KISHOU.GO.JP/KAIYOU/SHINDAN/A_1/SL_TREND/SL_TREND.HTML

level rise throughout the last century. In Europe, sea level rise was always part of the agenda for planning tidal flood defense and coast management even before global warming began being highlighted.

Another interesting finding is that retreat plans based on the "Making Space for Water" policy are generally highly regarded by experts but not always supported by the public. This finding could affect a decision-making process when a possible retreat plan is discussed with the Japanese public.



THE HIGH-LEVEL PANEL ON WATER DISASTERS, UNSGAB

2nd meeting

28-29 January, 2008

Seoul, S. Korea



The 2nd meeting of the High-Level Panel on Water Disasters/UNSGAB (United Nations Secretary General Advisory Board) was held in Shilla Hotel in Seoul, hosted by chairman Han Seoun Soo, president of the Korean Water Forum. The chairman opened the meeting with warm greetings. He informed that he would be nominated as the prime minister by President-elect Lee Myung-bak that morning. He requested his excuse and asked Mr. Salvano Briceno, Director of UN/ISDR to serve as the chair. Mr. Salvano accepted and the meeting went on for one day and a half. Mr. Han again welcomed high-level experts in his dinner reception that evening, where all of the participants had an opportunity to congratulate him for his official appointment the next day. It was the greatest and most exciting experience for the Panel. The Panel discussed many subjects and produced a list of ideas that should be included in the final recommendation. One of them was the proposal of introducing Disaster Risk Assessment as a compulsory step to proceed any development projects including those of ODAs. The next meeting is scheduled on 9-10 June in Marseille. More information can be found in Newsletter Vol. 41 of the Japan Water Forum at: <http://www.waterforum.jp/eng/newsletter.html>

ICHARM Sends Researchers to Nyuzen for High-Wave Damage Assessment

“Even concrete blocks covering the gentle slope revetment and a steel inland lock were blown away and destroyed, which clearly indicated how strong the waves’ impact was.”



High waves caused serious damage to part of Nyuzen Town in Toyama Prefecture on 24 February 2008, when an intense winter pressure system moved in over Japan. The huge waves totally destroyed one private house; half destroyed two, partially damaged four, and flooded 53 above and 83 below the floor level. On 29 February, ICHARM sent a team of researchers for damage investigation and interviews with local municipal personnel. The following is the outline of the results.

Of the investigation points in Nyuzen, Ashizaki was the most seriously affected. Even concrete blocks covering the gentle slope revetment and a steel inland lock were blown away and destroyed, which clearly indicated how strong the waves’ impact was. The team conducted interviews at Nyuzen Town Office and the Kurobe River Office of the Ministry of Land, Infrastructure, Transport and Tourism (MLIT). The interview results revealed the following facts:

- In general, when a river is under the national government’s direct management, the government is responsible for providing the river’s water level information to relevant municipal offices in case of flood. Municipal heads will then decide, based on the provided information, whether evacuation recommendations or orders should be issued or not. On the other hand, in case of high wave, wave height information is available on MLIT’s web site but is not provided directly to municipal offices, although such information is necessary for those offices to alarm residents or to encourage evacuation.

- Nyuzen Town Office does not have quantitative criteria for appropriate actions in case of coastal disasters, such as high waves. Because of that, although a high wave warning had been issued by the Japan Metrological Agency before the issuance of an evacuation recommendation, the town couldn’t make critical decisions based on the warning. Instead, the town issued an evacuation recommendation and order based on the actual wave overtopping status of that time.

- The evacuation recommendation and order were notified to Nyuzen residents through a disaster management communications system uniquely developed in the area and public relation vehicles, as well as the town’s broadcasting facilities. However, some of the residents did not evacuate.

- As for the evacuation of those requiring assistance during a disaster, the town had already made a list of them before and prepared a pilot assistance system to provide them with necessary help in time of emergency. The system worked successfully as planned.

Based on the investigation and interviews, the team pointed out the following:

- Information sharing and cooperation should be further enhanced between national organizations and disaster mitigation personnel in prefectural and local municipal offices.

- One man in his 80s was reported to die during high waves. He went out to see how the ocean looked like after the evacuation recommendation was issued, and went missing. He was later found dead near a destroyed shed. A high-wave disaster like the recent one rarely occurs; the last time it occurred was 31 January 1970, about 40 years ago. The key is how to increase residents’ awareness towards such a disaster as can be easily slipped away from people’s memory.

- Quantitative criteria for public offices to make appropriate decisions concerning coastal disasters, such as tsunamis and high waves, should be developed as they have concerning flood disasters in rivers, so that the offices will be able to make decisions based on data and provide a better timing for evacuation.

- There is a pine-tree forest near a Nyuzen settlement. The forest is one to two meters higher than the surrounding ground and is considered to be an effective protection against high waves, storm surges and tsunamis.



How is the Master's course going? (See also ICHARM Newsletter No.7)

ICHARM is conducting a Master's course, "Water-related Disaster Management, Disaster Management Policy Program," jointly with Japan International Cooperation Agency (JICA) and the National Graduate Institute for Policy Studies (GRIPS). Students are working very hard on their assignments!



Yasuo Kannami, Pacific Consultants Co., LTD., Japan

It is a great opportunity for me to participate in this program because not only I can learn special knowledge about disaster management policy, but also can exchange ideas or information with overseas participants and experts in ICHARM.

I am studying in Tsukuba, Japan, but I can experience the atmosphere of studying abroad to some extent because the participants are from different parts of the world.

I hope I can earn a master's degree in disaster management successfully and put my knowledge to practical use in various opportunities.



Md. Aminul Islam, Assistant Engineer, Bangladesh Water Development Board, Bangladesh

I came to Japan on 30th September, last year for the one-year Masters Program on Flood-related Disaster Mitigation. It is a great opportunity for me to study in a foreign country and to gather knowledge and experience. I feel proud as a participant of this course conducted by ICHARM. I am grateful to all experts and staff of ICHARM for kind cooperation regarding my study. I am also enjoying my stay in Japan because of different tours and festivals organized by JICA. I am studying well here in a comfortable environment of the Tsukuba International Centre (TBIC).



Ye Li Li, Bureau of Hydrology, Ministry of Water Resources, China

It's a great pleasure for me to get such a great opportunity to participate in this Master's degree course in Disaster Management. As all know, China is suffered from water-induced disasters every year, and sustainable mitigation work is essential to us. I am really thankful to JICA, PWRI and ICHARM, which are transferring practical as well as technical knowledge related to such mitigation measures to us, which are going to be very useful to me and to my nation.

Japan is suffered from almost all types of water-induced disasters, and Japanese people have much more knowledge and experience in this field. Gaining knowledge by learning here is really upgrading my knowledge in this field. Application of this upgraded knowledge is going to be very useful later on to conduct water-induced disaster mitigation work in my professional career.

Last but not least, I would like to pay my sincere thanks to all the members of ICHARM and JICA who have been making such a great effort to support our studies.



What's this ?



"Sazare Ishi"

Izumo Shrine



Sightseeing Ship
in Matsue

Field Trip in Izumo and Hiroshima on 12-14 March



**Dai Minglong, Division of Hydrology and Water Resources,
Bureau of Hydrology, ChangJiang Water Resources Commission**

As a participant from China, I'm very happy to have an experience of studying and living in our neighboring country — Japan.

ICHARM gave us a well organized course. Many famous professors, scholars, and experts gave us interesting lectures, which expand my mind and gave me lots of new knowledge, and I greatly appreciate the well considered schedule. Before coming to Japan, I worked as a designer, and sometimes I needed hydraulic formulas. Because of my lack of hydraulic knowledge, I only calculated just following certain procedures, not deeply understanding why. I have learned from Prof. Ishikawa how these formulas were developed. I now also know some new hydrological developments, technologies and how to express many hydrological terminologies in English, which I have learned from Prof. Jaya. I have also learned from Prof. Fukuoka the fundamental concepts on how Japanese have developed their rivers. In addition, I come to learn about many new fields such as sabo works, super levees, reservoir management, environment science, policy making, community capacity building, flood hazard mapping, etc. All of them can help me greatly after I return to China.

Tsukuba International Center (TBIC) is a comfortable place with good living conditions. I can exercise, take part in some cross-cultural activities, visit primary schools, take a bus tour to some beautiful places, and make foreign friends.

This will be a memorable experience in my life.



Khanindra Barman, Water Resources Department, Govt of Assam, India

It is a great opportunity for me to participate in the one-year Master's degree program of Water-related Risk Management Course of Disaster Management. Secondly, I am feeling proud to be the first batch of the above program of ICHARM. The program of this course is very well organized by GRIPS, ICHARM and JICA. This program is very encouraging and challenging. Professors and researchers of ICHARM, PWRI, GRIPS, and different national and international organizations (Tokyo University, UNESCO, etc.) are very experienced and helpful to us. Stay in Japan (Tsukuba, Tokyo etc) is also very interesting because I can interact with so many friends from different parts of the world.

This training program gives me an opportunity to learn about various disasters and its mitigation measures. My participation in this program will give me additional knowledge and skills for my future flood management work. I will be always grateful to ICHARM, GRIPS, JICA and the Japanese government for offering me this nice opportunity.



Discussing on the Plan of Hii River in Izumo City



Group Photo at Nukui Dam

Professor Emeritus Takahasi Lectures on “Men who Worked for Mankind”



ICHARM invited Dr.Yutaka Takahasi, professor emeritus of Tokyo University and senior programme adviser of United Nations University, to give a lecture entitled “Men who Worked for Mankind (Civil engineers who worked for people)” on 22 January 2008. The professor's lecture followed a movie with the same title.

He has lectured over 50 times on this topic in Japanese, but it was the first time for him to do it in English. It was a truly rare opportunity for the audience as well as for him.

Professor Takahasi highly praised three Japanese engineers for their achievements in his lecture. He also encouraged civil engineers and researchers in the audience to take pride in their current and future civil engineering works.

ICHARM Welcomes New Members



Dr. Pham Thanh HAI,
Researcher,
Hydrologic
Engineering
Research Team

Dr. Pham Thanh HAI from Hanoi, Vietnam, joined ICHARM as a researcher for the Hydrologic Engineering Research Team in February 2008. In the team, he is involved in the development of worldwide flood and inundation analyses and simulations, as well as the generation of global flood risk maps.

In 1992 after gaining his Bachelor of Engineering at Vietnam Water Resources University, he worked for the Vietnam National Institute for Hydraulic Engineering Investigation and Design of the Ministry of Agriculture and Rural Development (MARD), Vietnam. He got his master's degree in engineering in 1999 and doctoral degree from Gifu University in 2002. During that time he focused his research on methods to predict and evaluate multifunctional roles of forests, flood prevention capacities of watersheds, erosion processes of river banks, and stream channel changes during floods.

From June 2003 to March 2006, he worked as a post-doctoral researcher for the National Institute for Rural Engineering, Japan. He was involved in the development of a 2D-FEM simulation model for inundation processes in low-lying areas and applied it to Tonle Sap and the upper part of the Mekong Delta.

After that, he went back to Vietnam and worked as a lecturer in the Laboratory of River and Coastal Engineering, Faculty of Hydrology and Water Resources, Water Resources University, MARD-Vietnam.

Mr. Yuya Kanno joined ICHARM as a researcher for Hydrologic Engineering Research Team on 1st April 2008. He is currently involved in research on reliability improvement of discharge observation data using innovative sensor technology.

He was first assigned to the Ishikarigawa Development and Construction Department of the Hokkaido Regional Development Bureau after graduating from the Civil Engineering Department of the Nippon Engineering College of Hokkaido. At his first office, he contributed his expertise to Ishikari River improvement projects and sabo projects in the upper Toyohira River. He was also engaged in flood control and facility management of the Kanayama Dam in the upper Karachi River. For a last few years, he was involved in planning a low water management project which is part of a river development plan for the Ishikari River system.



Mr. Yuya Kanno, Researcher,
Hydrologic Engineering
Research Team



Mr. Tomoyuki Noro,
Deputy Team Leader,
Disaster Prevention Team

Mr. Tomoyuki Noro joined ICHARM from April 2008 as a Deputy Team Leader of Disaster Prevention Team.

He has been working for investigating and planning of sediment related disaster countermeasures at the branch offices of MLIT in Kagoshima, Niigata, Tokushima .

After working at the Secretariat of The Central Disaster Management Council of the Cabinet Office since 2001, he moved to the Erosion and Sediment Control Division, NILIM where he had been studying a precipitation index for the early warning system.

Until March this year, he had been dispatched as a JICA expert to Yogyakarta, Indonesia for 2 years to help the sediment related disaster countermeasures which the Indonesian government pushed forward.

It is his honor to work in ICHARM and help making a global network to reduce the water related disaster, which is the ICHARM's goal.

Mr. Yoshiki Shiraishi joined ICHARM as an interchange researcher of the Hydrologic Engineering Research Team.

His main research theme now is to make a flood risk evaluating system using the precipitation data.

After graduating the Graduate School of Engineering, Hiroshima University, he entered CTI Engineering Co., Ltd. in April 2001. He worked Kyushu Office of CTI, where he was assigned river planning, river development basic policy, the flood assumption area mapping in Kyushu.



Mr. Yoshiki Shiraishi,
Interchange
researcher,
Hydrologic
Engineering
Research
Team



Dr. Jun Magome,
Researcher, Hydrologic
Engineering Research
Team

Dr. Jun Magome joined ICHARM as a researcher for Hydrologic Engineering Research Team.

He was awarded the Doctoral Degree in 2004 from University of Yamanashi in the field of Hydrology and Water Resource Engineering, and continued to work for Research & Education on Integrated River Basin Management in Asian Monsoon Region as a COE researcher. Main research topics are establishment of hydrological databases especially for GIS based global reservoirs and lakes database, development of surface water quantities e.g. water storage in reservoirs and lakes by satellite remote sensing, development of hydrological model for integrated river basin management and education activities on advanced hydrological technology based on internet and on-site training.

With these backgrounds, he is willing to contribute to the ICHARM – development of real time global monitoring and forecasting system on flood disaster etc.



Cyclone Sidr Investigation in Bangladesh

The Cyclone Sidr investigation team was organized by the Japan Society of Civil Engineers (JSCE) from 17 to 24 January 2008. This team was composed of eight members from various universities and organizations. Katsuhito Miyake, senior researcher of ICHARM, was one of them.

The team first visited some of the heavily-hit towns/villages by Sidr, such as Sharankola, Pirojpour and Mathbaria. They are located alongside of the Baleswar River in the south-western part of Bangladesh.

The team collected many pieces of important information through the field survey, some of which are: (1) towns/villages along the Baleswar River were heavily-hit by storm surges which deeply intruded (over 100km) from the river mouth; (2) cyclone warnings reached many local people through the effective efforts of CPP (Cyclone Preparedness Program) and other information channels; (3) the level of structural protection, such as river dikes/polders and cyclone shelters, in the affected areas, local resident expert most of them to be improved.

The team then had a series of meetings with disaster-related organizations located in Dhaka, which was also fruitful. The team members are currently working on a joint report on the investigation, which will include some suggestions for improving Bangladesh's preparedness for cyclones. The report is scheduled to be presented in Dhaka this spring

(Also see a report by senior researcher Tanaka in ICHARM Newsletter No.7)



SATELLITE-BASED PRECIPITATION GSMaP

ICARM has conducted joint research with JAXA, one of the GSMaP developers, to verify the applicability of GSMaP for early flood warnings in developing countries with scarce rainfall information.

The final report of the "Global Satellite Mapping of Precipitation (GSMaP)" was presented at the Japan Aerospace Exploration Agency (JAXA), Tsukuba Space Center on the 13th and 14th of February. "GSMaP" is global rainfall distribution data observed using artificial satellites.

In this report symposium, presentations were made on each process to estimate global rainfall for GSMaP. More information about GSMaP is available at:

<http://www.radar.aero.osakafu-u.ac.jp/~gsmap/>

Community-based Flood Hazard Mapping Project in Nepal

A week long field survey in the West-Rapti River basin in Banke, Nepal, was conducted by ICHARM jointly with the Nepal Development Research Institute from 18 to 24 March 2008. The main objectives of the survey were to observe the situations of recent flood disasters in the basin and to validate the results produced through inundation models and remote sensing. This event was also used to identify agenda items for the next phase research. The ongoing research in the West-Rapti River basin is a part of local flood study series of ICHARM, and a first phase study report is yet to be prepared. The survey team comprised three ICHARM researchers – Dr. Rabindra Osti, Hironori Inomata and Toshikazu Tokioka – and Nepal-NDRI researchers.



2nd Coordination Meeting for 5th World Water Forum

The 2nd Coordination Meeting for the 5th World Water Forum (WWF5) was held in Istanbul, Turkey, on 7-8 February 2008. Senior Researcher Katsuhito Miyake attended the meeting from ICHARM. The Ministry of Land, Infrastructure, Transport and Tourism (MLIT) and the Japan Water Forum (JWF) also sent members to the meeting. This meeting was attended by some 400 participants from 221 organizations, according to the Forum organizer. It was announced that six key themes and 22 topics were already identified for discussion during WWF5, which will be held in 16-22 March 2009. In this coordination meeting, discussions were centered on the following points: (1) Framing of the issues; (2) Formulation of topic questions; (3) Provision of a list of session ideas; (4) Identification of stakeholders. Miyake served as chair for one of the topic discussion on "Managing Disasters" under the theme of "Global Changes and Risk Management." Enthusiastic discussion by approximately 60 participants successfully brought out concrete ideas for organizing this important topic. It is expected that session plans and expected outputs from WWF5 will be crystallized at the next coordination meeting, which is planned to be held in June 2008.

NARBO GENERAL MEETING

The 3rd General Meeting and workshops of the Network of Asian River Basin Organizations (NARBO) were held in Solo/Surakarta, Indonesia, on 20-22 February 2008. Deputy Director Akira Terakawa of ICHARM, participated in the meeting along with some 100 people from 61 organizations in 14 countries. He made an official announcement about ICHARM's participation in NARBO to promote risk management of water-related disasters as part of integrated water resources management. The general meeting accepted nine new members including ICHARM; now the NARBO members have reached 65 in total. As an Interregional Knowledge Partner, ICHARM will contribute to the organization, for example, by sending lecturers to workshops and accepting trainees in its training courses.



PWRI and ICHARM Foreign Researchers Enjoy a Flavorful and Beautiful Spring

Dr. Tadahiko Sakamoto, PWRI chief executive, and Professor Kuniyoshi Takeuchi, ICHARM director, invited foreign researchers in PWRI, including the master's course students, to a tea ceremony and cherry blossom viewing on 4th April.



Coming Events:

- ✓ ICHARM's open day for public visit on 17 April 2008
- ✓ 2nd meeting of the Advisory, Management Committee of International Flood Initiative prior to the 4th International Symposium on Flood Defence in Toronto Canada 5-8 May, 2008
- ✓ International Conference on Water Related Disaster Reduction, Tajikistan , 27-28 June 2008

ABOUT US

The International Centre for Water Hazard and Risk Management (ICHARM) is under the auspices of UNESCO in Tsukuba, Japan. The mission of ICHARM is to function as the Centre of Excellence to provide and assist implementation of best practicable strategies to localities, nations, regions, and the globe to manage the risk of water related disasters. ICHARM Newsletter is quarterly and non-commercial publication to develop information networking on water-related disaster. It is distributed via e-mail. They can also be downloaded from our website.

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