

Message from Director

Flood disasters in northern Japan

In late summer, three typhoons consecutively hit Hokkaido, Japan's northern island. Another typhoon heading north in the Pacific Ocean made landfall on Tohoku, the northern part of the main island of Japan. Typhoons with unusual trajectories like these have never been observed since 1951, when the Japan Meteorological Agency started taking statistics. The damage was substantial. The transportation networks were disrupted by levee breaches and bridge collapses in many places. Agricultural products ready for harvest were devastated. Several nursing-home residents fell victim to a flood when it hit their facility, leaving little time for safe evacuation.

In Japan, rivers have been categorized into different classes and managed accordingly since 1874. The River Law was enacted in 1896 and has since assigned the competent minister the responsibility for the river classification. Today, 109 river systems are categorized as the highest class, and some sections of those rivers that are considered of critical importance are directly managed by the central government. During the rapid economic growth from the mid 1950s to the early 1970s, intense urbanization was found to compound the impact of floods. This eventually led to the conception of comprehensive flood control focusing not only river channels but also basins. Further efforts have been made in taking effective measures to prevent flash flood disasters due to sudden localized torrential rainfall because of four tragic events in 2008, in which people including children were victimized.

This time, however, typhoon-led disasters occurred in tributaries of the highest class rivers, river sections managed by not the central government but prefectural governments, or the secondary class rivers. In other words, the damage concentrated in rivers and areas that have not received substantial attention or resources for disaster prevention. There are grave concerns that cases like these will be increasingly frequent due to prospective climate changes. We need to revisit the significance of the roles those damaged areas play and also reflect on how they really should be, and then make national strategy to determine what measures are possible in consideration of budget constraints. In addition, the situations we face have a lot in common with situations often found in developing countries. In this respect, further cooperation through an international framework needs to be accelerated to effectively transfer practical knowledge that Japan can offer.



ICHARM Director Toshio Koike
at closing ceremony of summer seminar
organized by ICHARM and University of Tokyo

地方の水害

本年は3つの台風が立て続けに北海道の中部から東部を襲い、また太平洋を北上していた東北地方に上陸しました。これらは気象庁が統計を開始した1951年以来初めてのことで、各所で破堤、落橋による交通網の寸断が相次ぎ、農作物が壊滅的な被害を受け、要配慮者利用施設において入所者が避難できずに犠牲になるなど、甚大な被害が発生しました。

我が国では、1874年以降河川を等級に分けて管理し、1896年に制定された河川法以降は主務大臣がその指定を行うこととなりました。現在では109の水系が一級河川として指定され、中でも重要区間については国が直接管理しています。また、高度成長期には都市化が洪水に与える影響が深刻となって、河道だけでなく流域全体で対処する総合的な治水が考えられるとともに、2008年に生じた4件のゲリラ豪雨災害を契機として都市における局所的集中豪雨への対策も考えられ始めました。

今回の台風災害は、上記のようにこれまで我が国が重点を置いてきた対象地以外、つまり一級河川の支川部や国ではなく都道府県が管理する区間、あるいは二級河川で発生しており、気候の変化に伴ってその頻繁の増加が懸念されます。これらの地域の役割の重要性とあるべき姿を再考し、財政制約の中において国としての対応を考えなければなりません。またこれらの状況は多くの途上国と共通する面が多く、我が国の経験を踏まえて国際的な枠組みを通じた協力を加速することが必要です。

October 29, 2016
Toshio Koike
Director of ICHARM

Advisor Takeuchi's Activities

筆者はこの3ヶ月の間に3回、アジア土木技術連合第21技術委員会(ACECC TC21)の活動について発表、発言する機会を得ました。

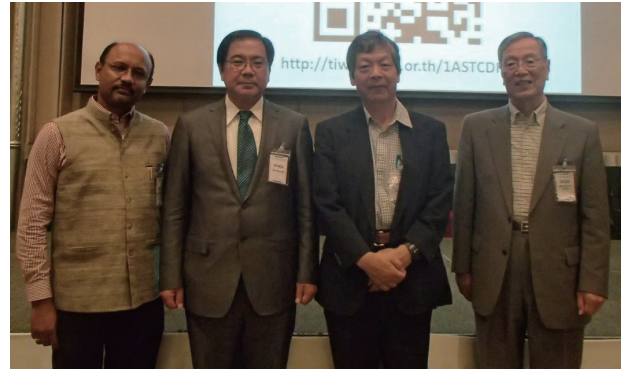
一つ目は、8月23～24日バンコクで開かれた、国連防災戦略事務局アジア事務所主催の第一回アジア防災科学技術会議でした。これは仙台枠組みの実行に向けた、科学技術部門の行動案として、11月にニューデリーで行われる防災大臣会合に提案される準備会合の位置づけですが、27カ国から約300人が集まり、科学と政策の関係、成功事例、仙台枠組み優先課題それぞれについて議論が行われました。ACECC TC21は、「防災政策の意思決定に、科学的知見が反映されるようにするためには、分野間・部門間の枠を超えた協働(トランス・ディシプリナリ・アプローチ)体制が必要であり、その認識の下に各国で土木学会が中心になって、分野・部門横断的タスクチームを立ち上げ、自国の「能力開発」、「知のフローのインフラ建設」に寄与しよう」というものですが、この発表にはかなりの手ごたえがありました。フィリピンやネパールからは、類似の活動があるので協働したい、ミャンマーやフィジーからは、これこそ必要としているものだから活動対象に加えて欲しいというものでした。

二つ目は8月31日～9月1日、ホノルルでの第7回ACECC総会での、第一回TC21委員会とキックオフ・シンポジウムでした。委員会では、筆者とフィリピン公共事業・高速道路省のモモ次官が共同議長を務め、事務局原案のTORが原則了承され、詳細行動計画はWorking documentとして、実行に合わせて整備していくことになりました。一方キックオフ・シンポでは、日本、台湾、フィリピン、韓国の部門間協働による復興過程や、科学技術の生かされた防災インフラ整備の事例が発表されましたが、質疑はレジリエンスの定義から災害被害のアセスの範囲まで、多岐にわたり、同床異夢の感がありました。しかしながら他のセッションに比べ際立って大勢が参加し、明確に関心の高さを示していました。ここでも、類似の意図を持った活動があるので、協働したいとのアメリカの若い女性の発言もあり、連帯の可能性広がりを感じました。

三つ目は10月24～26日、ウランバートルで行われたユネスコ国際水文学計画(IHP)第24回東南アジア太平洋地域運営委員会(RSC)でした。ここでのテーマは科学技術がいかにモンゴルのSDC6の達成に貢献できるかということでしたが、分野間・部門間の協働の重要性が、ハ

In the last three months, I had three occasions to present the activities of Asian Civil Engineering Coordinating Council (ACECC) Technical Committee 21 (TC21) Transdisciplinary Approach for Building Societal Resilience to Disasters.

On 23-24 August in Bangkok, the 1st Asian Science and Technology Conference for Disaster Risk Reduction was organized by the UNISDR Asian Office and the Hydro and Agro Informatics Institute (HAI) of the Ministry of Science and Technology, the Philippines, with support from UNISDR, Future Earth, and IRDR. The conference



On 24 August 2016 in Bangkok. From left, Rajib Shaw, Kaoru Takara, Tetsuzo Yasunari and Kuniyoshi Takeuchi

was a follow-up of the 3rd UN World Conference on Disaster Risk Reduction and discussed the role of science and technology for the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030. It was delightful to see the joint work of Future Earth and IRDR realized. About 300 people from 27 nations gathered and discussed the science and policy nexus, good practices, and the Sendai Framework. Among the good practices, efforts of the private entities such as Coca Cola Co. and the Rockefeller Foundation were presented as successful collaboration with local communities.

My contribution was to introduce activities of ACECC TC21, which unexpectedly attracted strong and wide interests including the Philippines, Nepal, Myanmar and Fiji. It was a great experience for me to learn that many countries commonly see the transdisciplinary approach as an effective solution to building a resilient society.

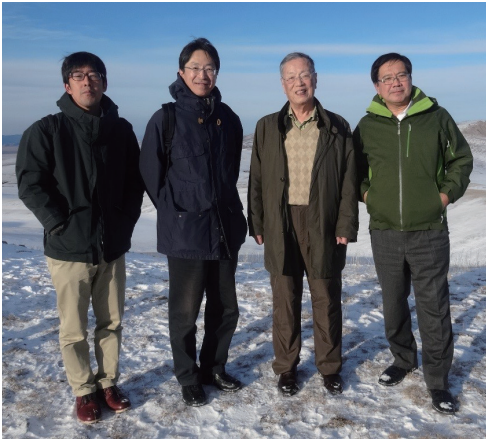
The 2nd Asian Science and Technology meeting will be held in Beijing in 2018. It seems that Asia is running ahead of the rest of the world in the implementation of the Sendai Framework in the science and technology sector.

From 30 August to 2 September in Honolulu, the 7th ACECC General Assembly (CECAR7) was held and kicked off the TC21 successfully. Again, quite a few people from many countries gathered and expressed interest in the transdisciplinary approach to scientific knowledge-based decision making. The first concrete plan decided for implementation is to compile country reports on the mechanism for ensuring scientific knowledge-based decision making in disaster risk reduction. The compilation is scheduled to be presented in Davao, the Philippines, on 18 November 2016.



On 31 August 2016 at Hanauma Bay, Hawaii

I also visited Hanauma Bay in Hawaii, hoping to see beautiful coral and fish as I once did three decades ago. Very unfortunately, I could find hardly any live coral or fish this time. It was a great disappointment to see such degradation in progress since the last time Prof.



On 26 October 2016 near the Khundlun Mountain river divide for the Antarctic Ocean, Ohotuk and Yellow Sea, north Uraanbaatar, Mongolia (from right, Kaoru Takara, the writer, Yasuto Tachikawa and Kenichiro Kobayashi)

and Mrs. Maynard M. Hufschmidt of East and West Centre of Hawaii University took me there. The guide said that it was no wonder because 3,000 people every day, or a million people a year, visit the bay.

On 24-26 October at the occasion of the UNESCO IHP 24th Regional Steering Committee for Southeast Asia and the Pacific (RSC), held in Ulaanbaatar, Mongolia, I had an opportunity to present the aims of TC21 again. The presentation received very positive reactions and generated great interests,

and even led to potential collaboration with the Mongolian association of civil engineers in the future.

(Written by Kuniyoshi Takeuchi)

イライトされました。モンゴルではトップダウンの習慣が根強く、市民社会を含めたボトムアップ、部門間協働は難しいという、現実的問題意識からの発言もありました。ここでは、産学官民よりなる学会の活動、民間産業界との協働から始めるのが現実的ではないかと答えました。

写真はバンコク会議場、ハワイのハナウマ湾とモンゴルの高原です。ハナウマベイは、もう30年以上前になりますが竜宮城のようだった珊瑚の海が、今では観光客が増えたおかげで死の海も同然になっている悲しい現実を目にしました。雪をいただいたモンゴル高原は北海、オホーツク海、黄海に旅立つ三川分水嶺のフントウルン山の近くでのショットです。

Information Networking

National Institute of Technology, Oyama College visit ICHARM

About 30 college students from many different countries and regions, including Japan, Indonesia, Malaysia, and Taiwan visited ICHARM on July 6. The Japanese students were mostly from the Oyama College of the National Institute of Technology. Their visit was planned as part of the Japan Symposium on Technology for Sustainability, an international event organized by the National Institute of Technology, Japan. In this visit, they learned about ICHARM and issues on water-related disasters in Japan and overseas, including efforts in reducing disaster damage.



ICHARM staff introduce research activities

The students received lectures on ICHARM and flood-related issues in Japan and Thailand. Chief Researcher Yoshio Tokunaga opened the series of lectures by explaining activities of ICHARM, Senior Researcher Hitoshi Umino made a presentation on the Kinugawa River flood disaster in 2015, and Research Specialist Yoko Hagiwara on the Chao Phraya River flood disaster in Thailand in 2011 and preventive measures implemented after the flood. Encouraged to share opinions and

2016年7月6日に国立小山工業高等専門学校を以て中心に、日本、インドネシア、マレーシア、台湾などの高等専門学校生と大学生、合わせて約30名がICHARMを訪問しました。これは、独立行政法人国立高等専門学校機構が主催して開催した“Japan Symposium on Technology for Sustainability”の一環として訪問したものです。この訪問において、参加者はICHARMの活動ならびに国内外の水災害とその被害軽減に関する講義を受講しました。

当日は、徳永上席研究員によるICHARMの活動紹介、海野主任研究員による2015年鬼怒川水害の報告、萩原専門研究員による2011年タイ王国チャオプラヤ川水害とその後の対策などの講義が行われました。参加型講義を展開したこともあり、参加者は和やかに受講しました。

訪問者を引率した小山工業高等専門学校の先生からは、「タイの2011年の洪水について参加者は今までほとんど知らなかったが、わかりやすい説明だった」などの講義を好感する感想が寄せられました。

Information Networking

ICHARM は今後も幅広い層に対し、水災害とその軽減に関する情報の提供や研究成果の普及に努めてまいります。

comments with the lecturers and other participants, the students were relaxed and enjoyed themselves throughout the lectures.

The lectures received positive feedback from the participants. A Professor who accompanied the participants commented that the presentation was easy to understand even for them who had known little about the Thai flood in 2011.

ICHARM will continue providing information and research achievements on water-related disasters and risk reduction efforts for a wide range of audience.

(Written by Hitoshi Umino)

Visit by researchers of Asian Institute of Technology

2016年7月20日、アジア工科大学地理情報センター一行が ICHARM を訪れ、今後の協力関係強化について、意見交換を行いました。

双方より、それぞれの研究活動内容の紹介があり、水災害の多発するアジアにおいて、リモートセンシング技術と水文モデルの連携などの連携を行っていく意義等について有意義な議論を交わしました。

Researchers from the GeoInformatics Center of the Asian Institute of Technology visited ICHARM on July 20, 2016, and talked with researchers of ICHARM about strengthening the tie between the two institutes.

After presentations on research activities from both sides, they discussed how important the bilateral cooperation is for flood-prone Asia and how they can collaborate in the development and effective use of remote sensing technologies and hydrological models.



Researchers from GI Center of AIT with ICHARM counterparts

(Written by Yoichi Iwami)

Participation in Workshop on “Fostering Collaboration between UNESCO in the Field and Networks towards the 2030 Agenda” in Indonesia

2016年7月21日から24日、インドネシア・バリ島にて UNESCO 主催の本ワークショップが開催され、三宅グループ長が UNESCO の招へいを受け出席しました。

UNESCO の国際科学プログラムのうち「MAB (Man and Biosphere) 計画」は持続可能な生物圏・生態系を追求している活発なプログラムです。ICHARM が主にコミットしている IHP (国際水文学計画) も同様のプログラムであり、この会議には普段接触を持つことが稀である両プログラムの関係者、また政府、UNESCO 事務所やカテゴリー 2 センターからの 80 名が参加しました。

An international workshop, “Fostering Collaboration between UNESCO in the Field and Networks towards the Agenda 2030,” was held on July 21-24, 2016, in Bali Island, Indonesia. Mr. Katsuhito Miyake, the deputy director of ICHARM, participated in this workshop in response to the invitation from the UNESCO Jakarta Office. It was organized as part of the effort made by the Man and the Biosphere (MAB) Programme, which is one of the Intergovernmental Scientific Programmes of UNESCO and specifically aiming to set a scientific basis for the improvement of the relationship between people and the environment on a global basis. ICHARM was invited for its strong commitment to the International Hydrological Programme (IHP), which is also a UNESCO Scientific Programme.

The objectives of the workshop were to elaborate strategies for fostering dialogues, cooperation, networking, and sharing of knowledge and resources among the

UNESCO field offices and to strengthen its network to support the delivering of Agenda 2030 and SDGs through the UNESCO mandate on Natural Sciences. Approximately 80 participants gathered in this workshop, including representatives from countries, UNESCO field offices and category 2 centers. MAB- and IHP-related participants mixed well. Through over 50 presentations and intensive discussions, participants were able to share a lot of knowledge and implications on activities under both MAB and IHP programmes, which was rarely done before.



Deputy director Miyake delivers presentation

期間中 50 以上の発表と意見交換を通じてアジア太平洋地域において実施される IHP 及び MAB の活動についてよく知ることが出来たとともに、多大な情報が共有された有意義な会議となりました。



Participants of UNESCO workshop

(Written by Katsuhito Miyake)

Visit by the International Knowledge Centre for Engineering Sciences and Technology (IKCEST)

On July 27, 2016, a party of four researchers from Chinese academic institutions visited ICHARM. The group was led by Mr. Song Dexiong, the executive deputy director of IKCEST, and consisted of two researchers from IKCEST and one from the Institute of Geographic Sciences and Natural Resources Research (IGSNRR).

ICHARM Advisor Kuniyoshi Takeuchi, Deputy Director Katsuhito Miyake and three other researchers met with the Chinese counterparts. In the meeting, they shared the missions and activities of both centers in detail. Recently established under the Chinese Academy of Engineering as a UNESCO category 2 center, IKCEST is eager to deepen relationships with research institutes around the world. Both parties agreed to explore opportunities for future collaboration.

2016年7月27日、中国の研究機関からの一行が ICHARM を来訪しました。彼らは IKCEST 上級副所長の SONG Dexiong 氏をヘッドとし、IKCEST から 3 名、地理科学・天然資源研究所から 1 名の 4 名の構成でした。

ICHARM から竹内顧問、三宅グループ長他 3 名で対応し、双方のミッションや活動内容の紹介が行われました。IKCEST は中国工学アカデミーに新たに設立された UNESCO カテゴリー 2 センターで、世界の研究機関との関係強化に努めています。双方のセンターは将来の協力について模索してゆくこととなりました。



Group photo with IKCEST delegators

(Written by Katsuhito Miyake)

Workshop on flood forecasting system operation for the Kalu Ganga River and a meeting with local organizations

2016年8月22～24日にスリランカのコットマレの灌漑局研修所において、同局職員15名を対象に、カルガンガ川での洪水予測システム運用に必要な衛星観測雨量データ(GSMaP)の補正手法及びRRIモデル(降雨流出氾濫モデル)に関する研修を実施しました。本研修は、JAXA-SAFE-Prototypeの一環で、ICHARMから岩見上席研究員、Rasmy主任研究員、津田主任研究員が講師を務めました。参加者は、最新科学ツールを活用した洪水氾濫計算手法を学習しました。なお、AIT(アジア工科大学)もリモートセンシングの技術アドバイザーとして連携しています。

25～26日は、首都コロンボにて、スリランカ政府関係者とICHARMの研究成果の普及、活動促進のための議論を行いました。

25日午前、岩見上席研究員とRasmy主任研究員は、洪水予測情報の伝達が重要であることから、灌漑局と連携する防災管理省の防災管理センター(DMC)を訪問し、防災情報収集・提供システムに関し意見交換を行いました。また、IWMI(国際水管理研究所)を訪れ、スリランカにおける水文観測データの共有について意見交換を行いました。

25日午後からは、小池ICHARMセンター長と共に、大都市省次官Eng. Rupasinghe氏を表敬訪問しました。小池センター長から、国際的な水と防災に係る動き、ICHARMが事務局を務める国際洪水イニシアチブ(IFI)の新戦略等を紹介し、スリランカにおける今後の水関係プロジェクトの推進について議論しました。また、灌漑省次官Eng. Ratnayake氏を表敬訪問し、灌漑局からのICHARM修士学生の活動等も含め、今後の協力強化について意見交換を行いました。

26日午前は、灌漑省のEng. Weerasinghe局長以下技術職員と更に実務的な課題等について議論を行い、双方の理解と協力推進の方向を一層深める有意義な場となりました。

さらに午後からは、スリランカ工学会(The Institution of Engineers Sri Lanka)にて、小池センター長が気候変動解析やDIAS(データ統合・解析システム)などの最新技術について講演を行い、Peradenia大学のWeerakoon教授や大都市省のHerath教授等と有意義な議論を展開しました。

On August 22-24, 2016, ICHARM held a technical workshop for 15 officials of the Irrigation Department at a training center in Kotmale, Sri Lanka. The workshop was organized as part of the JAXA-SAFE-Prototype project specifically for the participants to learn about the rainfall-runoff-inundation (RRI) model and a correction method for satellite rainfall data (GSMaP), both of which are vital components for effective operation of a flood forecasting system to be installed for the Kalu Ganga River. Chief Researcher Yoichi Iwami and Senior Researchers Mohamed Rasmy Abdul Wahid and Morimasa Tsuda were invited from ICHARM to join the workshop as instructors. This time, the participants learned how to perform flood inundation simulation using the latest scientific tools. The Asian Institute of Technology also supported the workshop by sending a technical adviser in remote sensing.



Training on correcting GSMaP data



Instructors from ICHARM with workshop participants

On the 25th and 26th, Mr. Iwami and Dr. Rasmy met with government officers of Sri Lanka in Colombo to introduce research achievements by ICHARM and discuss further promotion of collaborative projects.

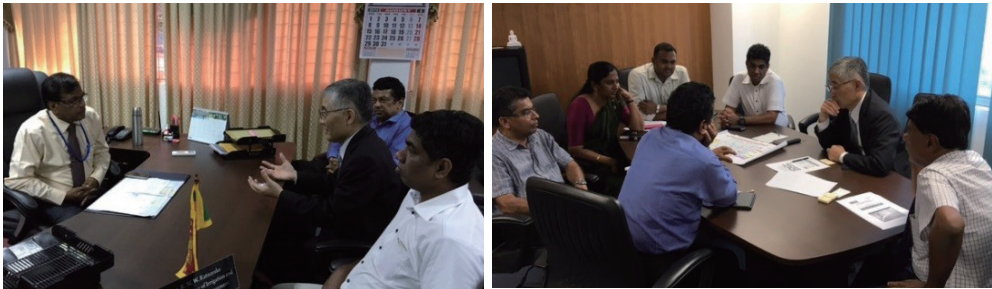
On the morning of the 25th, the two ICHARM researchers visited the Disaster Management Center (DMC) of the Ministry of Disaster Management, which is closely working with the Irrigation Department. Stressing the importance of communicating flood forecasting information to residents, they discussed issues concerning a system for collecting and providing disaster information with local counterparts. They also visited the International Water Management Institute (IWMI) and exchanged views and ideas about sharing hydrological data among local organizations.

In the afternoon, ICHARM Director Toshio Koike joined the two researchers in a courtesy visit to Eng. Rupasinghe, the deputy director of the Ministry of Urban Development. Director Koike explained to the deputy director about a new strategy developed by the International Flood Initiative (IFI), for which ICHARM has been the secretariat, and discussed how future water projects should be implemented in Sri Lanka. The researchers of ICHARM also paid a courtesy visit to Eng. Ratnayake, the deputy director of the Irrigation Department, and talked about further collabora-

tion between the two organizations, as well as about the students from the department currently enrolled at ICHARM master's degree program.

On the morning of the 26th, another meeting was held with Eng. Weerashinghe, the director of the Irrigation Department, and its engineers to discuss practical issues. The meeting turned out to be a great opportunity to deepen mutual understanding and strengthen ties towards closer collaboration.

In the following afternoon, Director Koike spoke at the Institution of Engineers Sri Lanka on climate change analysis and the latest technologies in the field such as DIAS, and then had an insightful discussion with Professor Weerakoon of Peradenia University and Professor Herath of the Ministry of Urban Development.



(left photo) Meeting at the Irrigation Ministry
(right photo) Meeting at the Urban Development Ministry

(Written by Yoichi Iwami)

Drainage Systems Asia Summit 2016 in Singapore

ICHARM Researcher Mamoru Miyamoto was invited as a guest speaker to Drainage Systems Asia Summit 2016 held by Equip Global in Singapore on August 24-25, 2016. Government officials of several countries, including Singapore, Australia, Oman, Thai and Vietnam, gathered in this meeting, and reported and discussed issues on their past activities and future visions in flood forecasting and warning.

Dr. Miyamoto spoke about projects in which ICHARM assisted developing countries in the implementation of flood forecasting and warning systems using flood forecasting technologies. The participants were particularly interested in the practicality of a flood forecasting and warning system promoted by ICHARM that uses satellite rainfall data such as GSMaP in addition to ground radar rainfall data. They had good discussions on various topics in response to Dr. Miyamoto's presentation on the projects led by ICHARM in the Philippines, Indonesia and Malaysia.



Presenters of Drainage Systems Asia Summit 2016

Moreover, he introduced the Integrated Flood Analysis System (IFAS) and the Rainfall-Runoff-Inundation (RRI) model, advanced technologies developed by ICHARM. The participants also showed a strong interest in those tools and asked many questions.

シンガポールで2016年8月24、25日に開催された Drainage Systems Asia Summit 2016 (Equip Global 主催) において宮本研究員がゲストスピーカーとして招待され講演しました。講演では、これまでに ICHARM で取り組んできた、洪水予測技術に基づく予警報システムの途上国における実装に関する活動が紹介されました。

本サミットにはシンガポール、オーストラリア、オマーン、タイ、ベトナムなどの政府関係者が参加しており、洪水予警報に関するこれまでの活動や今後の方向性に関して活発な議論が行われました。特に GSMaP 等の人工衛星雨量データや地上レーダ雨量データを活用した洪水予警報システムの実用性に関して参加者の関心が高く、これまでの ICHARM のフィリピンやインドネシア、マレーシアにおける活動事例に基づいた有意義な議論が行われました。

さらに、ICHARM で開発している IFAS (総合洪水解析システム) や RRI モデル (降雨流出氾濫モデル) の紹介に対しても参加者の関心が高く、使用方法などに関する多くの質問がなされました。

(Written by Mamoru Miyamoto)

Manila officials visit ICHARM

2016年8月29日、フィリピン共和国マニラ首都圏マニラ市の訪問団が ICHARM を訪問し、意見交換を行いました。団員はマニラ市助役、市議会議員、警察、経済産業、保健福祉、救難に関する幹部他9名です。来所の目的は、台風等により度々、洪水が発生して都市の経済活動が停滞するマニラ市における、将来の政策の参考のため、防災・減災に関する日本の先進的な取組みや研究成果について聞き取りを行なうというものでした。

意見交換の場では、澤野上席研究員、徳永上席研究員、Shrestha 主任研究員が参加し、ICHARM の活動概要及びフィリピン共和国カルumpit 市を対象として行なった現地実践を通じた洪水時対応計画づくり (Evidence-based Flood Contingency Planning) の研究説明を行うとともに、フィリピンの首都圏の洪水対策や事前投資の重要性などについて熱心な議論を行いました。

On August 29, 2016, a party of officials from Manila City, the Philippines, visited ICHARM and discussed issues on disaster management with researchers of ICHARM. The party led by the deputy mayor consisted of nine other members including city councilors and officials overseeing different departments of police, economy and industry, health and welfare, and rescue. The purpose of their visit was to gather information on Japan's latest projects and research achievements in disaster prevention and mitigation to develop effective policies for building a disaster-resilient city. Manila City is frequently hit by typhoons and resultant flood events, which always disrupt the city's socio-economic and other activities.

Chief Researchers Hisaya Sawano and Yoshio Tokunaga and Senior Researcher Badri Bhakta Shrestha joined the meeting with the Manila City officials. After providing a general explanation of ICHARM, they explained about the Evidence-based Flood Contingency Planning, which was recently implemented by Calumpit City of the Philippines with the technical assistance of ICHARM. They also had substantial discussions on flood management for Metro Manila and the importance of preventive investment in disaster management.



Manila officials and ICHARM researchers

(Written by Yoshio Tokunaga)

Typhoon Committee holds an annual workshop in Seoul, Korea

2016年9月6日～7日にかけて、韓国ソウル市において台風委員会 (TC) 水文部会第5回年次ワークショップが開催されました。本ワークショップは、韓国国土交通部漢江洪水事務所が主催者となり、米国、日本、中国、タイ、ベトナム、ラオス、マレーシア、フィリピンの8ヶ国と台風委員会事務局 (TCS)、アジア太平洋経済社会委員会 (ESCAP) の2つの組織から20名を超える参加がありました。日本からは、ICHARM の徳永上席研究員が水文部会の議長として参加しました。

会期中、参加者は台風委員会事務局、韓国、日本、中国が行なう6つのAOP(年間実行計画)についての議論を行いました(表1)。台風委員会事務局からは「分野横断的標準運用手順(III)」、韓国からは「大規模洪水警報システム」、「台風地域にお

The fifth Annual Workshop of the Hydrology Working Group (HWG) of the Typhoon Committee was held in Seoul, Korea, on September 6-7, 2016. The workshop was organized by the Han River Flood Control Office of Korea's Ministry of Land, Infrastructure and Transport and attended by over 20 participants from 8 countries and 2 organizations including the United States, Japan, China, Thai, Vietnam, Laos, Malaysia, the Philippines, the Typhoon Committee Secretariat (TCS), and the Economic and Social Commission for Asia and the Pacific (ESCAP). ICHARM Chief Researcher Yoshio Tokunaga participated as the chair of HWG.

During the workshop, the participants discussed six "Annual Operating Plans (AOP)" presented by Korea, China, Japan and TCS (see Table 1). Mr. Tokunaga delivered a presentation on the case study recently conducted by ICHARM in Calumpit City, in which ICHARM assisted the municipality in strengthening local disaster preparedness through effective data collection and risk analysis. He also introduced a new project that Japan is planning to start in 2017.

The Typhoon Committee will continue working to organize a joint meeting of the working groups in the Philippines in September 2016 and the annual general meeting scheduled to be held in Japan in 2017.

Table 1: Summary of WGH Annual Operating Plans (AOP)

	Projects	Organizer	Duration
AOP1	Synergized Standard Operating Procedures(SSOP)-II	TCS	2016-2017
AOP2	Extreme flood forecasting system	Korea	2012-2017
AOP3	Estimation for Socio-economic Impact of Sediment-related Disaster	Japan	2013-2016
AOP4	Development and Application of Operational System for Urban Flood Forecasting and Inundation Mapping (OSUFFIM) for TC Members	China	2014-2017
AOP5	Extension of Xin'anjiang Model Application in Selected River Basins in TC Members	China	2013-2016
AOP6	Guidelines for extreme flood risk management in TC region	Korea	2013-2016



Participants of the workshop

(Written by Yoshio Tokunaga)

ける大規模洪水リスクマネジメントガイドライン」、中国からは「台風委員会メンバーの都市洪水予測と浸水地図作成のための手法開発」「台風委員会のメンバーの選定河川におけるリアルタイム洪水予測手法(Xin'anjiangモデル)の適用に関する研究」の発表が行われました。徳永上席研究員から、ICHARMの行ったフィリピン共和国カルピット市を対象とした、データ収集〜リスク解析〜地域防災力強化活動に関する研究の成果を紹介するとともに、2017年から日本が取り組むべき、新たなプロジェクトについて紹介し、それについて議論を行いました。

今後、本年10月のフィリピンでの統合部会、2017年日本での年次総会に向けて作業が進められる予定です。

Joint effort between World Bank and ICHARM in flood early warning

On September 12-16, 2016, Technical Deep Dive (TDD) on Hydromet Services for Early Warning was held at the World Bank Tokyo Office. This was an innovative knowledge exchange program organized by the World Bank in which experts in flood early warning involved in the World Bank's projects gathered from all over the world and exchanged views and ideas to maximize the effect of the projects.

ICHARM Chief Researcher Yoichi Iwami was invited to an event on the 12th and spoke about the development of a hydrological runoff-inundation model and data collection technologies.

After the presentation, the participants made a spontaneous request to visit ICHARM, and the World Bank quickly responded and arranged a short tour for them. At ICHARM, the participants were welcomed by Deputy Director Katsuhito Miyake

2016年9月12日〜16日、世界銀行は、Technical Deep Dive (TDD) on Hydromet Services for Early Warningと題し、世界銀行プロジェクトに係わる同分野の各国の専門家が一同に会し、意見交換を行うことで、プロジェクトの効果を最大化することを目的に、世界銀行 東京事務所に各国の関係者を集めたプログラムを実施しました。ICHARMから講師として岩見上席研究員が招かれ、12日には水文流出氾濫モデル構築及びデータ観測技術に関する紹介を行いました。

Information Networking / Research

その後、各参加者からの要望もあり、世界銀行のアレンジにて、各国代表者が ICHARM を訪れ、三宅グループ長の歓迎のもと、津田主任研究員及び Duminda 専門研究員による IFAS（総合洪水解析システム）、RRI モデル（降雨流出氾濫モデル）のデモンストレーションを行い、モデル活用についての意見交換を行いました。更に、16 日午後、小池センター長が世界銀行 東京事務所に参加者に講演を行いました。

今後、各国の水災害軽減に向けた世界銀行との新たな協力の進展が期待されます。

and other staff members. Then, Senior Researcher Morimasa Tsuda and Research Specialist Duminda Perera introduced the Integrated Flood Analysis System (IFAS) and the Rainfall-Runoff-Inundation (RRI) model, and explained and answered questions about their workings and applications. On the afternoon of the 16th, ICHARM Director Toshio Koike also delivered a presentation at the World Bank Tokyo Office. We believe that this TDD event was a great opportunity for us to support countries all over the world in their effort to reduce water-disaster damage, as well as to deepen our partnership with the World Bank.



Participants of Technical Deep Dive and World Bank staff

(Written by Yoichi Iwami)

Research

International Society for Photogrammetry and Remote Sensing Congress 2016

ICHARM では、郭栄珠専門研究員を研究責任者として、科研費研究課題「基盤研究 B 海外学術調査：気候変動及び社会経済シナリオを考慮した広域河川氾濫リスク予測モデル開発」に取り組んでいます。その進展を踏まえ、郭専門研究員は 2016 年 7 月 12 日～19 日にチェコ共和国のプラハ市で開催された ISPRS Congress 2016 に出席し、その研究成果を発表しました。

本学会は、写真測量及びリモートセンシング分野では世界最大級の研究集会で、4 年に一度開催されています。今年も、8 日間で参加者は 2 千人を超え、口頭発表は 1,500 件、ポスター発表は 600 件以上となりました。会議は、情報ネットワークおよび航空宇宙分野の先端的課題に取り組む研究者や専門家にとって、非常に貴重な意見交換の場であり、人的ネットワークを広げる場となっています。

郭専門研究員の研究発表は、スペシャルセッション内の災害リスク管理に関連する課題として、今回学会発表に選出された査読つき論文にもとづいて行われました。この研究で、郭専門研究員らは、リモートセンシ

ICHARM Research Specialist Youngjoo Kwak delivered a presentation at the 23rd International Society for Photogrammetry and Remote Sensing (ISPRS) Congress 2016, held at Prague, Czech Republic, on July 12-19, 2016. He is the principal investigator for an ongoing Grant-in-Aid for Scientific Research B studying the development of a model for forecasting flood risk of large rivers in consideration of climate change and socioeconomic scenarios, and the presentation was as part of this project to share the results with international experts.



At the ISPRS Congress after the presentation

The ISPRS Congress is a quadrennial event and one of the world's largest research meeting in the field of photogrammetry and remote sensing. This year, it had a turnout of over 2,000 participants for eight days with 1,500 oral presentations and more than 600 poster presentations. It was a great occasion to strengthen ties with world-leading researchers and experts in information networking and aerospace-related fields.

Dr. Kwak spoke at the special session on disaster risk management based on his peer-reviewed paper accepted by the ISPRS Congress, entitled "Rapid Exposure Assessment of Nationwide River Flood for Disaster Risk Reduction," in which his team assessed the number of victims in the 2007 and 2015 flood disasters in Bangladesh. He had insightful discussions with other experts and contributed to increasing the presence of ICHARM in this field.

Prior to the conference, Dr. Kwak also attended a summer school organized by the congress from July 5 to 11 in Telc, Czech Republic. With eminent professors, Dr. Martin Isenburg of the University of California Berkeley, USA, and Dr. Nobert Müller of Wien University, Austria, and other invited young researchers, he learned analysis methods for satellite data such as LiDAR and GIS and the latest skills for teaching those methods.



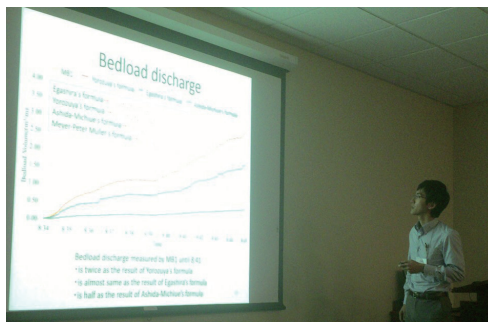
With participants of the ISPRS2016 summer school

(Written by Youngjoo Kwak)

ング技術を駆使して、バングラデシュ共和国で2007年と2015年に発生した洪水による被害者数の評価を試みています。発表は、参加者と活発に質疑応答、意見交換を行うと同時に、ICHARMの研究活動を世界に発信する良い機会となりました。

郭専門研究員はまた、この分野で著名な専門家や優秀な若手研究者らと共に、LiDAR、GISなどの衛星データ解析や最新ティーチングスキルの習得を目的に学会が主催した夏期講座（7月5日～11日、テルチ市）にも参加しました。

International conference on fluvial hydraulics held in USA



Mr. Koseki delivers presentation

ICHARM Researcher Hiroshi Koseki delivered a presentation at an international conference, "River Flow 2016, the Eighth International Conference on Fluvial Hydraulics," convened in St. Louis, Missouri, USA, on July 12-15, 2016. He has been involved in the development of technology capable of simultaneous observation of riverbed distribution and vertical water velocity profiles in an actual river.

He spoke about the practicality of this technology while comparing the observation results with current knowledge on sediment hydraulics.

During the conference, the IAHR Fluvial Hydraulic Committee Meeting was also organized with Dr. Marian Muste, an adjunct professor of Iowa University, as the principal instructor. It was attended by a number of experts from all over the world representing institutes involved in river management, such as WMO and USGS. Mr. Koseki also participated in this meeting along with Mr. Shun Kudo, a researcher of the Hydraulic Engineering Research Group of PWRI, and Professor Ichiro Fujita of Kobe University. On behalf of ICHARM as the secretariat of the International Flood Initiative (IFI), Mr. Koseki explained about "IFI Strategy 2016-2022," a new global project for flood risk reduction just launched in June 2016.

ICHARM will continue to promote various activities such as IFI, leading the IHP strategic plan to manage flood risk in the world.

For more information about IFI, visit web site: <http://www.ifi-home.info/>

(Written by Hiroshi Koseki)

2016年7月12日から15日、アメリカ合衆国ミズーリ州セントルイスにおいて River Flow 2016, the Eighth International Conference on Fluvial Hydraulics が開催され、ICHARM からは小関研究員が参加し口頭発表を行いました。発表内容は実河川における河床高分布と流況の同時計測技術の開発に関する研究成果で、既往の土砂水理学の知見と実測結果を比較しながら、本観測技術の有用性を示しました。

また、本学会においては13日にIowa大学Marian Muste准教授の主導により、IAHR Fluvial Hydraulic Committee Meeting が開催されました。本会議にはWMOやUSGS等の河川管理に関わる機関が世界各地から参加し、各機関における実務上の課題に関する議論が行われました。日本からはICHARMの他、土木研究所水工研究グループの工藤俊研究員や神戸大学の藤田一郎教授が参加しました。ICHARMは事務局を務める国際洪水イニシアチブ(IFI)に関連して、2016年6月に開始された「IFI戦略2016-2022」を紹介しました。

ICHARMは今後も、IFIなどを通じて世界の水災害被害軽減のための活動を進め、国際機関の中でリーダーシップを発揮していく所存です。

IFIの詳細は下記サイトを参照ください。 <http://www.ifi-home.info/>

56th ICHARM R&D seminar held

ICHARM では、水文分野や水災害分野に関する国内外の専門家を招へいし、ICHARM 内外の研究が最新の知識や知見を入手できる機会として「ICHARM R&D Seminar (ICHARM 研究開発セミナー)」を不定期に開催しています。

2016年7月21日には米国セントラル・フロリダ大学 水資源工学部から Kelly M. Kibler 准教授をお迎えして、ご講演をいただきました。Kibler 氏は水資源利用に関する研究に優れ、過去には中国・雲南大学や、日本・ICHARM での勤務の経験も有しています。第56回セミナーでは、「水力発電転流の水流変化の特徴：中国南西部における32河川の分析」と題し、水力ダムの転流に伴う河川流量の変化を、実観測データが乏しい中で推計するモデル開発を行い、32河川を対象とした水量解析の結果を報告しました。

ICHARM では今後も様々な機会を捉え、セミナーを開催していく予定です。

ICHARM holds an R&D seminar at various occasions by inviting a domestic or overseas expert in the field of hydrology and water-related disaster management. The seminar is open for researchers and practitioners of ICHARM and other institutes to learn the latest research trend and achievements in the area.

The 56th ICHARM R&D Seminar was held on July 21, 2016, by inviting Dr. Kelly M. Kibler, an assistant professor of Water Resources Engineering, University of Central Florida. She has been studying issues on the use of water resources and has international work experience at Yunnan University in China and ICHARM in Japan. In her presentation, "Flow alteration signatures of diversion hydropower: an analysis of 32 rivers in southwestern China," she explained about the model development for estimating changes in river discharge due to flow alternation caused by a hydropower dam even when observed data are not sufficiently available. She also presented the results of discharge analysis obtained from applying the model to the 32 rivers. ICHARM will continue to plan the R&D seminar at various occasions to further strengthen expertise of researchers inside and outside ICHARM.



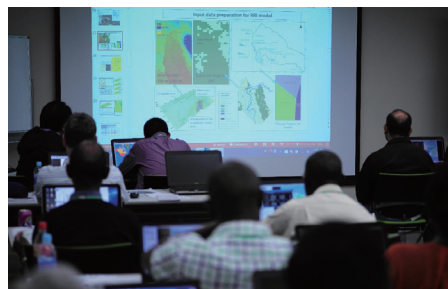
Assistant Professor Kelly M. Kibler

(Written by Yoshio Tokunaga)

Training

FY2016 JICA Training Program: Capacity Development for Flood Risk Management

ICHARM における研修活動の一環として、2016年7月4日から29日にかけて JICA 研修「統合洪水解析システム (IFAS) を活用した洪水対応能力向上」を実施しました。本研修の目的としては、途上国の洪水脆弱地域における気象関係者・河川管理者・住民避難に責任を持つ者の3主体を対象として、我が国における洪水対応技術・事例及び防災・避難計画の概要を学び、アクションプランとして自国の洪水脆弱地域を対象とした地域洪水防災計画案を策定し彼らの洪水対応能力向上を図り、ひいては洪水被害軽減に資することとしています。本研修は更新され、2015年から新たな3ヶ年計画で実施しており本年度は2年目となっていますが、本年度はブータン、ボスニアヘルツェゴビナ、インド、ケニア、ミャンマー、ナイジェリア、フィリピン及びスリランカから計18名の研修員が参加しました。IFAS (総合洪水解析システム) の演習を中心として、土浦市における防災マップ演習、国土交通省北陸地方整備局管轄の信濃川における現地視察などを行い、IFAS について習熟するとともに、日本における防災対策についても学びました。



Practice on IFAS

ICHARM conducted the JICA training program, "Capacity Development for Flood Risk Management with IFAS," from July 4 to 29, 2016. The training is designed to provide opportunity for meteorologists, river administrators, and disaster managers in flood-vulnerable developing countries to learn about disaster management, including evacuation plans and flood response cases in Japan, as well as to develop an action plan for local flood management of flood-vulnerable areas in their countries. These training activities also aim to enhance individual flood-coping capacities and eventually to contribute to flood damage mitigation in their countries.

The renewal version of this three-year training program started last year. Eighteen trainees participated from Bhutan, Bosnia and Herzegovina, India, Kenya, Myanmar, Nigeria, the Philippines and Sri Lanka. They mainly learned how to operate the Integrated Flood Analysis System (IFAS) along with additional training, such as disaster prevention map training in Tsuchiura City and a study trip to the Shinanogawa River under the management of the Hokuriku Regional Development



Discussion for making a disaster prevention map

opment Bureau of MLIT. Through the training, they made a great improvement in operation of IFAS and gained useful knowledge from Japan's disaster management.

(Written by Takashi Shirai)

Joint international summer program with Tokyo University

An international summer program, "Sustainable Water Management in an Era of Big Data," was held from July 25 to August 5, 2016. The summer program was jointly organized by ICHARM and the University of Tokyo and attended by 17 undergraduate and graduate students and junior experts from Japan, China, Indonesia, South Africa, Korea, Afghanistan, Taiwan, the Philippines, India, and Vietnam.

The program was designed for participants to increase understanding of sustainable water resources management and the importance of use of big data while making full use of the Data Integration and Analysis System (DIAS) developed in Japan. During the first week, the participants learned about water issues, global water cycle, DIAS and GIS through expert lectures from Professors Toshio Koike and Taikan Oki and Associate Professor Akiyuki Kawasaki, and took a study trip to Shimokubo Dam in Tokyo's neighboring prefecture Gunma. During the second week, they were at ICHARM in Tsukuba City, about an hour away by train from Tokyo, receiving another series of lectures from ICHARM Advisor Kuniyoshi Takeuchi, ICHARM Chief Researcher Yoichi Iwami, NIED president Haruo Hayashi and DPRI associate professor Muneta Yokomatsu, as well as went on another study trip to the Metropolitan Area Outer Underground Discharge Channel.

On the last day of the program, each group of the participants prepared a presentation using all information and skills they had learned during the two weeks, and delivered it in front of the professors and other experts, each of whom pretended to be a representative of a government, the United Nations or an international donor organization. Each group analyzed a selected basin using multiple types of data such as topography and rainfall, presented recommendations to solve problems, and answered questions asked by the "representatives." The organizers hope that the program gave an inspiration for the participants to move further on with their own research.



(left photo) NIED president Haruo Hayashi
(right photo) DPRI associate professor Muneta Yokomatsu

ICHARM は東京大学と共催で、国際サマープログラム「ビッグデータ時代における持続可能な水管理」を2016年7月25日～8月5日に実施しました。参加者は、日本、中国、インドネシア、南アフリカ、韓国、アフガニスタン、台湾、フィリピン、インド、ベトナムから学部生、大学院生、若手専門家など合計17名です。

このプログラムは、日本が提供するDIAS(データ統合・解析システム)の機能を駆使して持続的な水資源管理に関する理解とビッグデータの活用意義について学ぶことが狙いとされています。前半1週間は、東京大学において小池俊雄教授、沖大幹教授、川崎昭如准教授他による、水に関する課題、地球水循環、DIAS、GISに関する講義と下久保ダム見学などが行なわれました。後半1週間は ICHARM において、竹内顧問、岩見上席研究員、防災科学技術研究所(NIED)の林春男理事長、京都大学防災研究所(DPRI)の横松宗太准教授による講義と JAXA 及び首都圏外郭放水路の見学を行いました。

最終日には、参加者はグループ毎に、それまでの学習の成果を活用して、教授陣を政府や国連、ドナー機関の責任者に見立て、その前で選定された流域の地形、降雨その他さまざまなデータを分析した上で、対策の提言を行い、各組織の責任者と活発な質疑応答を行いました。



Participants and organizers at closing ceremony

(Written by Yoshio Tokunaga)

Educational Program Updates

ICHARM は、2015 年 10 月 6 日から 2016 年 9 月 14 日まで約 1 年間、(独) 国際協力機構 (JICA) および政策研究大学院大学 (GRIPS) と連携し、9 期目の修士課程「防災政策プログラム 水災害リスクマネジメントコース」(JICA 研修「洪水防災」) を実施しました。9 月 13 日には JICA 筑波にて閉講式が行われ、ICHARM の竹内顧問、JICA 筑波の芳賀所長、GRIPS の春原教授による祝辞が贈られ、研修生からは代表として SHARMA Gopal 氏 (ネパール) が答辞を行いました。さらに、優秀研究者賞が Ahmed Tanjir Saif 氏 (バングラデシュ)、Babarande Guruge Thanura Lasantha 氏 (スリランカ) の 2 名に贈られ、研修中に最も参加者全体のために貢献した研修生に対して ICHARM から授与される「Sontoku Award」は Sinnappoo Kokularamanan 氏 (スリランカ) に贈られました。

また、9 月 14 日には GRIPS にて博士課程及び修士課程の学位授与式が行われ、修士課程の研修生 13 名に「修士 (防災政策)」の学位が、博士課程の Andrea Mariel Juarez Lucas 氏、Nasif Ahsan 氏及び Robin Kumar Biswas 氏に「博士 (防災学)」の学位が授与されました。

10 月から 10 期目の修士課程が開始され、10 月 4 日に開講式を行い、JICA 筑波から洪澤次長及び事務担当者並びに GRIPS から春原教授が参加されました。本年度 11 名が 1 年間の研修を受けます。また、10 月に 7 期目の博士課程 2 名も入学しました。



Ph.D. and M.Sc. students after the graduation ceremony

ICHARM provides the one-year M.Sc. program, “Water-related Disaster Management Course of Disaster Management Policy Program (JICA Training Program: Training for Expert on Flood Related Disaster Mitigation),” as a joint program with the Japan International Cooperation Agency (JICA) and the National Graduate Institute for Policy Studies (GRIPS). The program started its ninth year on October 6, 2015, and ended on September 14, 2016.

On September 13, the closing ceremony of the program was held at the JICA Tsukuba office, where ICHARM Advisor Kuniyoshi Takeuchi, JICA Tsukuba Director Katsuhiko Haga and GRIPS Professor Hiroki Sunohara made a congratulatory speech, and Mr. Sharma Gopal of Nepal spoke in return on behalf of the students. This year’s Excellent Researcher Award was presented to Mr. Ahmed Tanjir Saif of Bangladesh and Mr. Babarande Guruge Thanura Lasantha of Sri Lanka. The Sontoku Award, which is given by ICHARM to the student that made the most contribution to the entire class during the program, was presented to Mr. Sinnappoo Kokularamanan of Sri Lanka.



Dr. Andrea Mariel Juarez Lucas (left) receives a doctoral diploma.

On September 14, the graduation ceremony was held at GRIPS. The thirteen students were finally awarded a hard-earned Master’s degree. In this ceremony, Ms. Andrea Mariel Juarez Lucas, Mr. Nasif Ahsan and Mr. Robin Kumar Biswas were also awarded a doctoral degree in Disaster Management.

Meanwhile, a new set of 11 students started the tenth year of the Master’s program. On October 4, the opening ceremony was held at ICHARM in the presence of JICA Tsukuba Vice Director General Takao Shibusawa, Prof. Sunohara and other JICA staff. Also in October, two more students joined the seventh-year doctoral program.



Master course opening ceremony

(Written by Takashi Shirai)

Others

Comments from graduated students of Ph.D. course

The Ph.D. students of the Disaster Management Program, Dr. Andrea, Dr. Robin and Dr. Nasif, successfully completed all requirements and received a doctoral degree in disaster management at the graduation ceremony held at GRIPS on September 14, 2016. They contributed brief comments as below.



Andrea Mariel Juarez Lucas

Over the past three years, I worked in ICHARM as a research assistant while pursuing my Ph.D. degree in water-related disaster management at GRIPS. During this period, I developed a framework for the integrated assessment of flood risk and probabilistic benefits of flood-prone land use. My research work also included evaluating the effect of increased coping capacity. In ICHARM, I had a unique opportunity to learn and apply novel approaches in rainfall-runoff-inundation modelling and characterization of flood risk targeting developing countries. I also conducted research in the Philippines, which provided me with valuable insights on local perceptions to floods and experiences to support efforts/pathways aimed at flood risk management and sustainable development.

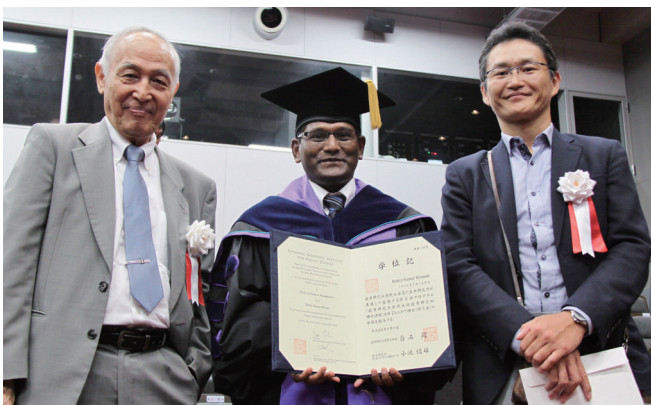
I would like to express my gratitude to everyone in ICHARM for making this an experience of much professional and personal growth. I particularly thank my advisors (Dr. Kelly Kibler, Dr. Shinji Egashira, Dr. Takahiro Sayama and Dr. Miho Ohara) for being exceptional mentors and for all their support.



Dr. Andrea Mariel Juarez Lucas

Robin Kumar Biswas

Seasons come and go, leave memories and enrich life with experiences. Last three years was just like a season for me. During this time, I faced many difficulties, tasted the sweetness of the achievements, gained knowledge, and learned more



Dr. Robin Kumar Biswas (center) with Research and Training Advisor Shinji Egashira (left) and Supervisor Atsuhiro Yorozuya (right)

about life. In all stages, I was supported by the Public Works Research Institute (PWRI) and all members of the ICHARM family.

My task was to develop a numerical model which can be applied to manage the large rivers like the mighty Brahmaputra. The three year Ph.D. program of ICHARM enable me to work with some of the excellent researchers and scholars in the world which help me to achieve my target. Besides, I learned the importance of the research, information networking and training for efficient disaster management.

I would like to especially thank to Shinji Egashira sensei and Atsuhiro Yorozuya sensei for their support, training and discussions. Finally, I am proud to be a member of the ICHARM family.

Others

Md. Nasif Ahsan

Craving for a doctoral degree on disaster management, I started my journey with ICHARM in October 2013. Honestly, it was not an easy ride for me being from a heterogeneous background. But after three years as I glimpse at the hindsight, I discover that some of my personal and professional remarkable breakthroughs were accomplished during my stay in ICHARM, and this is how this organization becomes an unforgettable chapter for the rest of my life.

I met some of the finest scholars and researchers in ICHARM from whom I learned a lot. My sincere thanks to all ICHARM people during my tenure, especially Takeuchi Sensei for always holding my hand in difficult times, Okawa San for providing all possible supports, Ohara San and Karina San for the academic supports. Furthermore, I am also grateful to Koike Sensei, Egashira Sensei, Tokunaga San, Shibuo San, Miyake San, Mie San, and all my fellow colleagues for their utmost supports. I wish all the best for the brighter future of ICHARM in coming years.



Dr. Md. Nasif Ahsan (right) with ICHARM advisor Kuniyoshi Takeuchi (left)

Personnel change announcement

New ICHARM Member

One new member joined ICHARM. He would like to say brief hello to the readers around the world.



Daisuke Harada / 原田 大輔

Research Specialist

Japan

I am pleased to be a member of ICHARM from September 2016, as a Research Specialist. In the ICHARM, I would like to develop a new scheme of sediment transportation model which support safer and more sustainable river management.

I am looking forward to working in collaboration with new colleagues for the better research activities and results.

Comments from the summer course students

ICHARM accepted three students of summer course on last summer.

Ms. Imaizumi, Ms. Yohena and Mr. Furukawa contributed a short messages to this volume of ICHARM Newsletter while looking back at their summer course.



Michika Imaizumi / 今泉 光華

Tsukuba University

As I had had no experience with GIS before, it took a while for me to get used to it. But it was quite amusing to place layers of different information one over another on the base map. In this internship, I learned a lot about GIS and how to use it for data analysis. As I am thinking about writing a graduation thesis on how local governments should respond to a flood disaster, I am hoping to make the most of this tool and everything I learned in the internship.



Aozora Yohena / 饒平名 青空

Tsukuba University

During this internship, I learned how to use GIS for flood analysis with kind help from researchers of ICHARM. With GIS, I was able to superimpose different types of maps that are created from different sets of data. In fact, I had some new findings by comparing the inundation depth distribution of an actual flood with the simulated distribution used for a hazard map. The internship was also an opportunity for me to reconfirm how devastating a flood can be through data analysis and interview survey. As I am planning to study how to promote the use of hazard maps among local residents, I am sure that the experience from this internship will help my research a great deal.



Shohei Furukawa / 古川 将平

Osaka City University

I didn't know anything about Joso City Flood. I heard the news about the flood damage in the Kanto region at that time but I had forgotten. I had been misunderstood that reconstruction has been finished because it is not reported now. I was able to learn a lot of surprising things through joining interview surveys in the affected area because I have never experienced a great disaster.

In addition, I again realized the importance of learning English. I think that I will utilize the experiences and try to think about my future.

Comments from the internship students

ICHARM accepted three internship students on last summer.

Mr. Youngjoon Ji from Republic of Korea stayed at ICHARM from March 7 to August 31, 2016. Furthermore, Mr. Abebe Anteneh Wolde is from Ethiopia and also stayed from August 1 to 24, 2016. Mr. Sarawut Jamrussri is from Thai and also stayed from August 22 to September 2 2016. They contributed a short messages to this volume of ICHARM Newsletter while looking back at their internships.



Youngjoon Ji

Kyungpook National University

It was March 7th when I came to ICHARM and said hello to employee. But the time goes too fast and now I am writing the impression comments. To begin with, I really appreciate to all of the ICHARM staffs. As an intern, there are many things which are out of my capability so I didn't contribute to advance of ICHARM and I also acted too passive and to be careful because it was my first life in the foreign country. But ICHARM gave me a lot of valuable experience. First, ICHARM provided not only the indirect major knowledge but also the practical, business experience. Through many seminars and field trips, I felt that the water management technique of Japan already developed a lot, so I want to give this information to the Korea as soon as possible. Besides, I studied and learned many kinds of numerical models and graphic tools that I can apply to my major. Above all things, experiencing the political issues and historical conflicts that I saw in the books was the most precious things in this neighborhood country. I think ICHARM is very special and global institution because unlike the other company that always seek the benefit, ICHARM provide many kinds of help including numerical model, education and support for nothing. That is the reason why ICHARM can affiliate with UNESCO. I would like to make my country's company to do more ethically same as ICHARM. Lastly, thank you very much to ICHARM and Korea Meteorological Administration for accepting me as an intern and also Rasmy sensei, Shirai san, Okawa san, master course students and all of the ICHARM staffs who always be kind to me. I am really proud to work as an intern in ICHARM. Based on experience during 6 months in Tsukuba, I will do my best to study the water hazard management for the developing country.



Abebe Anteneh Wolde

Sophia University

My internship at ICHARM was short and lasted only one month, but during this short period I gained valuable and unforgettable experience. My main internship objective for this short period was to learn about RRI GUI model in general and preparation of flood inundation map for Kelani river basin in Sri Lanka in particular. In line with this objective, I have managed to develop step by step knowledge about RRI GUI model and finally managed to develop flood inundation model for Kelani river basin using 2008 rain fall data, with overall target of reducing frequent flood occurrence in the area. Besides this demanding model training, I had also an opportunity to attend master course graduating student final presentation and hear their professor comments, which is interesting experience for me. The knowledge I gained at ICHARM is not only limited on RRI GUI model but it also helped me to observe the unique working atmosphere in Japan & more importantly, showed me different perspective for my future Ph.D. research idea and professional carrier. I would like to thank ICHARM for this unique opportunity and I would like specially thank Dr. Duminda Perera , who was the head supervisor for my internship, for his day to day support, knowledge sharing & follow up. I would also like to thank Professor Guangwei Huang, who is my professor and supervisor at Sophia University, for his overall support and recommendation for this internship. I would also like to extend my gratitude to Mr. Yoshio Tokunaga, who is chief researcher at ICHARM and was in charge of my overall internship process. Finally I would like to thank all ICHARM staff and students, whom their dedication and commitment impress me a lot, for their friendly support during my internship period.



Sarawut Jamrussri

Nagoya University

I would like to express my cordial thanks and gratitude to ICHARM for giving this opportunity and accepting me as intern. Even though 2 week internship is not a long time but it was memorable and I gained new experiences and perspectives. During internship program, my research topic is about the Rainfall-Runoff-Inundation (RRI) model for Chao Phraya River basin not only in the present climate condition but also in the future climate condition. This opportunity provided such an important step of my research which could help me to generate more excellent research outcome. Moreover, I would like to thank Mr. Yoshio Tokunaga for the kind support and preparing everything for me in this program. Special thanks to Kuwayama san for giving me the information of transportation from my accommodation to ICHARM, it made my daily life in Tsukuba became easier. Most importantly, I would like to thank my supervisor in ICHARM, Dr. Yusuke Yamazaki, who guided me a lot how to use and apply RRI model to my study area. I was very impressed with opportunity of exchanging research ideas and information with him. Finally, I really appreciated all staff and students in ICHARM who are friendly, gentle and very kind to me. This experience will be the one of the precious memories in my life.

Publication List * July - September 2016.

A: Peer Reviewed Paper / 査読付論文

- 萬矢敦啓, 墳原学, 工藤俊, 小関博司, 苗田俊治, 電波式流速水位計の開発, 土木学会, 土木学会論文集G (環境), Vol.72, pp.1_305-1_312, 2016年8月
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B: Non-peer Reviewed Paper / 査読無し論文

None / 該当無し

C: Oral Presentation / 口頭発表

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D: Poster Presentation / ポスター発表

None / 該当無し

E: Paper in technical magazine / 技術雑誌論文

None / 該当無し

F: PWRI Publication / 土木研究所刊行物

- ICHARM, Meeting material of The 2nd ICHARM Governing Board, Technical Note of PWRI, No. 4337, Public Works Research Institute (PWRI), July 2016

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