# Newsletter

unesco Centre Under the auspices of UNESCO

ICHARM International Centre for Water Hazard and Risk Management under the auspices of UNESCO

PWRI Public Works Research Institute National Research and Development Agency, Japan

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# ICHARM

International Centre for Water Hazard and Risk Management
under the auspices of UNESCO


## Message from Executive Director

### Capacity Development beyond Aid

With a UNESCO leader (second from left) and four facilitators from Kenya aboard the Sumida River Water Bus in Japan, on November 2, 2025
ケニアより来日したUNESCOの本研修リーダー（左から２人目）と４名のファシリテータの方々とともに、隅田川水上バスにて、2025年11月2日

It has been widely emphasized that the primary agents in solving diverse local challenges should be the people who live in those communities, and that developing their capacity requires strengthening local leadership and engaging a wide range of stakeholders. At the same time, the path from merely knowing about an issue to solving it through enhanced expertise involves both universal and context-specific dimensions, suggesting that experience in resolving diverse challenges can offer insights for addressing future issues before they become apparent. Therefore, capacity development should be understood as providing opportunities for co-evolution – a framework that transcends the traditional North-South dichotomy of “aid.”

Capacity development can also be viewed from another perspective. According to one educational theory, understanding is achieved by balancing the application of one's existing “knowledge framework” to new information and the adjustment of that framework in response to it. This “knowledge framework” is deeply connected to social factors such as individual experiences, culture, traditions, ethics, and history, which can sometimes be at odds with universal academic knowledge. Capacity development is therefore expected to play a vital role in bridging this gap.

With this understanding of capacity development, ICHARM undertook two challenging projects in 2025. One was carried out in collaboration with the World Bank. We organized visits to Kazo and Osaki, two local cities in Japan, for experts from five southeastern African countries. In these cities, both characterized by rich natural environments and expansive rural landscapes, communities and local governments work closely together to promote community development by leveraging water utilization and water-related disaster management, based on their historical backgrounds and geographical characteristics. Through meeting with local leaders and visits to various sites, many participants reported gaining insights that could help them address challenges in their own countries.

The other project was carried out in cooperation with UNESCO. We invited four Kenyan experts from the fields of meteorology, water utilization, disaster management, and energy to ICHARM, where we provided a program designed to enhance their expertise while integrating their knowledge. Through the program, they collaborated across their different institutional roles and experiences. One month after the program, they led hands-on training on flood early warning for experts from twelve Kenyan institutions.

Through these two capacity development programs, it is undoubtedly ICHARM itself that has learned the most. Building on these experiences, ICHARM, celebrating its 20th anniversary this year, intends to continue advancing efforts toward water disaster reduction over the next decade and beyond 2030.

January 30, 2026
KOIKE Toshio
Executive Director

### 能力開発 －援助を超えて

多様な地域課題の解決の主体はその土地の人々自身であり、その能力開発においては、地元のリーダシップを高め、様々な主体の参画の重要性が指摘されています。また、知っているという段階から専門性を高めて課題解決に至る道筋には普遍性と局所性の二面性があり、多様な課題の解決の経験は、顕在化前の将来課題の解決に示唆を与えるとも言われています。したがって、能力開発は援助という南北二分法を超えた、共進化の場と考えられます。

教育論によれば、理解とは、自身が持つ「知識の枠組み」を新たな情報に当てはめることと、その情報に照らして「知識の枠組み」を修正・変化させることの、双方をバランスさせることであると言われています。ここでいう「知識の枠組み」は、自身の経験や文化、伝統、倫理、歴史などの社会的要因とも深く関係しており、普遍的な学術的知識と相容れない場合もあります。能力開発においては、その溝を埋める努力も求められます。

このような背景の下、ICHARM では 2025 年に能力開発における２つのチャレンジを試みました。一つは世界銀行との協力で、南東アフリカ５か国の専門家を我が国に招いて、豊かな自然と農村風景の広がる地方都市、加須市と大崎市を訪れました。両市では、歴史的経緯や地理的特徴を踏まえて、コミュニティや行政の協働による水の利用と水災害の軽減を活かした地域づくりが行われています。各市のリーダーの方々との交流や現場視察を通して、参加者から課題解決への気づきを得たという感想が多く聞かれました。

他方は UNESCO との協力で、ケニアより気象、水利用、災害管理、エネルギーという異なる分野の４名の専門家を招聘し、知識を統合しながら専門性を高めるプログラムを提供しました。４名は国内での立場や経験の違いを超えて相互に協力、創意工夫を重ね、１か月後に、同国 12 機関の専門家を招いて洪水予警報のハンズオントレーニングを主導されました。

この２つの能力開発のプログラムを通して、最も多くの学びを得たのは ICHARM 自身であることは間違いありません。これらの経験を糧に、本年創立 20 周年を迎える ICHARM は、その後の 10 年、あるいはポスト 2030 における水災害軽減に向けて挑み続けたいと考えます。

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# Information Networking

## Meeting with officials from Iran's Ministry of Science, Research and Technology
## イラン科学研究技術大臣の来訪

In October 2025, a delegation of seven Iranian officials led by H.E. Professor SIMAEE-SARRAF Hossein, Iran's minister of Science, Research & Technology, met with ICHARM staff, as well as other Japanese officials and researchers, during their visit to Japan to participate in the 22nd Annual Meeting on Science and Technology in Society Forum, held on October 5-7 in Kyoto.

Since Iran's Ministry of Science, Research and Technology oversees the promotion of sustainable infrastructure development and management, the delegation took this opportunity to discuss issues with their Japanese counterparts. On October 7, they met with ICHARM staff at the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) in Tokyo. During this meeting, Executive Director KOIKE Toshio introduced Japan's efforts to manage flood risk, and both sides discussed the roles and collaboration of various stakeholders in climate change adaptation. They then paid a courtesy call on Mr. HIROSE Masayoshi, the vice minister for engineering affairs.

On October 8, they visited the Public Works Research Institute (PWRI) in Tsukuba, made a courtesy call on President FUJITA Koichi, and toured the institute's facilities. The visitors were shown around the Hydraulic Experiment Laboratory by ITAGAKI Osamu, the director of PWRI's Hydraulic Engineering Research Group, who explained the facility's features and provided a brief overview of a dam model experiment.

The Iranian side expressed strong interest in issues related to water use, including land subsidence, the impacts of drought caused by climate change, and the importance of utilizing data for cross-sectoral coordination and integration. ICHARM will continue to promote its activities and achievements to solve water-related issues worldwide through opportunities such as these.

Meeting with a delegation of Iranian officials
シーマーイ・サラーフ科学研究技術大臣と藤田理事長との意見交換の様子

*(Written by FURUMOTO Kazushi)*

イラン・イスラム共和国のシーマーイ・サラーフ科学研究技術大臣他計 7 名が 10 月 8 日に土木研究所を訪問し、藤田光一理事長への表敬、ならびに施設見学を行いました。また、前日の 7 日には国土交通本省会議室において、ICHARM 職員と意見交換を行い、続いて廣瀬昌由国土交通技監を表敬訪問しました。今回のシーマーイ・サラーフ大臣の訪日は、第 22 回科学技術と人類の未来に関する国際フォーラム（STS フォーラム）年次総会への参加を主な目的とするものですが、イラン科学研究技術省の所掌には、持続可能なインフラの開発と管理の推進も含まれることから、この機会を捉え、水分野に関する研究交流・技術協力等について意見交換等を行ったものです。

ICHARM 職員との意見交換では、小池俊雄センター長から水害リスク軽減に向けた日本の取組を紹介した後、気候変動適応における各主体の役割や連携等について意見交換を行いました。また、施設見学では、水理実験施設を訪れ、施設概要やダム模型実験について板垣修河道保全研究グループ長から説明を受けました。

イラン側からは、地盤沈下を含む水利用に関する課題、さらには気候変動による渇水への影響、およびセクター間の連携 / 統合におけるデータ活用の重要性等に強い関心がありました。今後もこのような取組を通じて、ICHARM の活動や成果を世界に発信していく予定です。

## Participation in the 17th AOGEO Symposium
## 第 17 回 AOGEO シンポジウムへの参加

The 17th Asia-Oceania Group on Earth Observations (AOGEO) Symposium was convened in Bangkok, Thailand, from October 15 to17, 2025. The AOGEO symposium has been held since 2007 with the aim of fostering the Earth observation community in the Asia-Oceania region and deepening the common understanding of Earth observation in the region. The 2025 event, themed "Envisioning Earth Intelligence Across Boundaries: Accelerating Impact in Asia-Oceania Region," was co-hosted by the GEO

2025 年 10 月 15 日から 17 日までタイのバンコクにおいて第 17 回アジア・オセアニア地域 GEO（AOGEO）シンポジウムが開催されました。AOGEO シンポジウムは、アジア・オセアニア地域における地球観測に関するコミュニティの育成や、同地域の地球観測に関する共通

理解を深めることを目的として平成19年度より開催されており、今回は「Envisioning Earth Intelligence Across Boundaries: Accelerating Impact in Asia-Oceania Region（境界を越えて地球インテリジェンスを構想する：アジア・オセアニア地域におけるインパクトの加速）」をテーマに、GEO事務局と文部科学省、タイ地理情報・宇宙技術開発機関の主催で開催されました。ICHARMからは小池俊雄センター長、日下部隆昭グループ長、宮本守主任研究員が参加し全体セッションにおける登壇やパラレルセッションのリードを行いました。

パラレルセッションはタスクグループごとに開催され、ICHARMはタスクグループ1であるアジア水循環イニシアティブ（AWCI）の実施をリードしました。AWCIセッションは2部構成とし、それぞれ水のレジリエンスと災害に関するプラットフォームの活動（パート1）と水災害レジリエンスに活用可能な新たな技術の開発（パート2）について議論しました。パート1では、タイ、フィリピン、スリランカ、インドネシアにおけるプラットフォームの活動の共有とWMOやESCAP、JAXA等による最新の開発動向の発表を踏まえて、プラットフォームの活動をEW4Allの取り組みに位置づけることでどのように加速させられるか議論しました。パート2では、タイ地理情報・宇宙技術開発機関（GISTDA）やJAXA、株式会社Synspectiveらの最新開発技術の発表を受け、地球インテリジェンス技術を活用した洪水レジリエンスの強化について議論しました。これらのAWCIセッションの成果は最終日の全体セッションで宮本主任研究員から報告され、2025 AOGEOステイトメントの一部として採択されることができました。

また、最終日の特別セッション2「Earth Intelligence for a Resilient Future: Understanding and Tackling Emerging Threats of Asia-Oceania region」においてもパネリストとして登壇し、水資源分野における地球観測データの利活用とレジリエンス強化の方向性について意見を述べ、他の地球観測コミュニティとの分野横断的な協力を検討することができました。

ICHARMではこのような機会を活用して水関連課題の重要性を発信するとともに国際社会に貢献していく所存です。

secretariat, Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT), and Thailand's Geo-Informatics and Space Technology Development Agency (GISTDA). From ICHARM, Executive Director KOIKE Toshio Koike, Deputy Director KUSAKABE Takaaki, and Senior Researcher MIYAMOTO Mamoru participated, presenting in plenary sessions and leading parallel sessions.

Parallel sessions were organized by task groups, with ICHARM leading Task Group 1 on the implementation of the Asian Water Cycle Initiative (AWCI). The AWCI session consisted of two parts: Part 1 discussed the activities of Platforms on Water Resilience and Disasters, and Part 2 explored the development of new technologies applicable to water-related disaster resilience. In Part 1, based on presentations on Platform activities from Thailand, the Philippines, Sri Lanka, and Indonesia and on the latest developments by organizations such as the World Meteorological Organization (WMO), the Economic and Social Commission for Asia and the Pacific (ESCAP), and the Japan Aerospace Exploration Agency (JAXA), participants discussed how Platform activities could be accelerated by aligning them with the Early Warnings for All (EW4All) initiative. In Part 2, following presentations on the latest technological developments by GISTDA, JAXA, Synspective Inc., and others, discussions focused on strengthening flood resilience through the application of Earth intelligence technologies. The outcomes of these AWCI sessions were reported by Senior Researcher Miyamoto in the plenary session on the final day and were adopted as part of the 2025 AOGEO Statement.


Participants in the AWCI Session
AWCIセッションの参加者

Additionally, in Special Session 2 on the final day, "Earth Intelligence for a Resilient Future: Understanding and Tackling Emerging Threats of the Asia-Oceania region," Miyamoto also presented as a panelist, expressing views on the utilization of Earth observation data in the water resources sector and directions for enhancing resilience, and explored opportunities for cross-disciplinary collaboration with other Earth observation communities.


Senior Researcher Miyamoto (second from left) participating in Special Session 2 with other panelists
特別セッション2にパネリストとして登壇した様子

ICHARM intends to continue leveraging such opportunities to communicate the importance of water-related issues and contribute to the international community.

*(Written by MIYAMOTO Mamoru)*

# The 32nd UNESCO IHP Regional Steering Committee Meeting for Asia and the Pacific
# 第 32 回ユネスコ IHP アジア太平洋地域運営委員会

The UNESCO Intergovernmental Hydrological Programme Regional Steering Committee for Asia and the Pacific (IHP RSC-AP) was established in 1993 to shape UNESCO's water programmes to address water issues, such as water scarcity, water-related disasters, and water education at a regional level.

The 32nd Regional Steering Committee Meeting was held in Hanoi, Vietnam, on October 21- 23, 2025, with the participation of Executive Director KOIKE Toshio and Deputy Director KUSAKABE Takaaki. The meeting was hosted by the Institute of Meteorology, Hydrology and Environment (IMHEN) under the Ministry of Agriculture and Environment of Vietnam.

On the morning of October 21, a scientific workshop on "Water Science and Management for Sustainable Development under Climate Change" was held to commemorate the 50th anniversary of the IHP program and 60 years of UNESCO's dedication to water sciences. Koike gave a lecture on "Hazard and Risk Management." In the afternoon, a conference was held on the Catalog of Hydrological Analysis (CHA), which aims to share information on water-related issues, such as disaster reduction, water environment conservation, and water resources management, across the Asia-Pacific region. The conference confirmed well-coordinated collaboration among researchers and engineers in this region in developing a hydrological analysis catalog to enhance their capacity to assess water-related disaster risks.

Executive Director Koike speaking at the Scientific Workshop
科学ワークショップで講演する小池センター長

On the 22nd, an RSC-AP meeting was held, with country reports presented in the morning and activity reports from water-related centers under the auspices of UNESCO, as well as from chairs and networks in Asia and the Pacific, in the afternoon. During the activity reports, Kusakabe reported on ICHARM's activities as a UNESCO Category 2 Center. Finally, the participants discussed future activities and proposed that RSC-AP establish a task force to make recommendations to important international events, such as the upcoming United Nations Water Conference and the World Water Forum.

On the 23rd, a field visit was conducted at the National Center for Water Resources Planning and Investigation (NAWAPI) and the Water Resources Monitoring Station in Tan Lap.

*(Written by KUSAKABE Takaaki)*

ユネスコ政府間水文学計画（UNESCO-IHP）アジア太平洋地域運営委員会（RSC-AP）は、1993 年に設立され、ユネスコ水プログラムを通じて、水不足、水災害、水教育といった水問題を地域レベルで議論しています。

2025 年 10 月 21 日～ 23 日に、ベトナムのハノイで第 32 回地域運営委員会が開催され ICHARM から小池俊雄センター長と日下部隆昭グループ長が出席しました。会議はベトナム農業環境省管轄の気象水文学気候変動研究所（IMHEN）が主催しました。

1 日目（10 月 21 日）午前中は、「気候変動下での持続的開発のための水科学とマネジメント」についての科学ワークショップが、IHP プログラム 50 周年とユネスコ水科学 60 周年を記念して開催されました。セッションでは小池センター長が「ハザードとリスクのマネジメント」について講演しました。午後は、アジア太平洋地域における防災、水環境保全、水資源管理などの水関連課題に関する情報を共有することを目的とした「水文解析カタログ（CHA）」に関する会議が開催され、水関連災害リスクの評価能力を高めるためアジア太平洋地域の研究者や技術者が連携して水文解析カタログを開発している状況が報告されました。

2 日目（10 月 22 日）はアジア太平洋地域運営委員会が行われ、午前中は国別レポートの発表、午後はユネスコ関連機関やその他ネットワーク機関の活動報告が行われ、活動報告の中で日下部グループ長が ICHARM のユネスコカテゴリー 2 センターとしての活動状況報告を行いました。最後に今後の活動についての討議が行われ、今後予定されている国連水会議や世界水フォーラムなどの国際的重要イベントに UNESCO-IHP アジア太平洋地域運営委員会として提言等を行うためのタスクフォースの設立が提案されました。

3 日目（10 月 23 日）はベトナム国立水資源計画調査センター（NAWAPI）および Tan Lap 水資源観測施設への現地調査が実施されました。

## SATREPS Ghana Project: Visit by a ACECoR delegation
## SATREPS ガーナプロジェクト：ACECoR の研究者一行が ICHARM を訪問

2025 年 10 月 23 日、SATREPS ガーナプロジェクトの一環として、プロジェクト代表である東京大学の田島芳満教授をはじめ、ケープコースト大学（UCC）Moses Jojo Eghan 教授および ACECoR（Africa Centre of Excellence in Coastal Resilience, Centre for Coastal Management）よりガーナ側のプロジェクトマネージャー Donatus Bapentire Angnuureng、Richard Adade と Ivy Akuoko Gyimah 研究員ら計 5 名が土木研究所水災害・リスクマネジメント国際センター（ICHARM）を訪問しました。

午前のセッションでは、小池俊雄センター長による開会挨拶と ICHARM の概要紹介が行われました。その後、土木研究所の水理実験施設を見学しました。

午後は「ガーナにおける ICHARM の研究活動」と題したワークショップが開催されました。前半では、南雲直子専門研究員がプロジェクトの概要を、玉川勝徳特任研究員（東京大学）がヴォルタ川流域における衛星降雨データの補正手法について発表を行いました。

後半の SATREPS ガーナプロジェクトに関するセッションでは、原田大輔准教授（法政大学）が降雨・土砂流出解析について、Kattia Rubi Arnez Ferrel 専門研究員が平面二次元河道変動計算についてそれぞれ紹介しました。続いて、秦梦露専門研究員より SATREPS ガーナプロジェクトの対象流域における観測や解析手法、既存データの収集などの詳細な研究計画について発表が行われました。

質疑応答および総合討論では、日本とガーナの水災害に関する活発な意見交換が行われ、次回の現地観測の内容およびスケジュールについても検討するなど、今後の共同研究の進展に向けた有意義な機会となりました。

On October 23, 2025, as part of the SATREPS Ghana Project, a delegation of five researchers visited ICHARM to discuss project details and other related matters. The group included TAJIMA Yoshimitsu (project representative), a professor of the University of Tokyo, Moses Jojo Eghan, a professor of the University of Cape Coast (UCC), Ghana, and three researchers from UCC's Africa Centre of Excellence in Coastal Resilience, Centre for Coastal Management (ACECoR): Donatus Bapentire Angnuureng (project manager), Richard Adade, and Ivy Akuoko Gyimah.

In the morning, Executive Director KOIKE Toshio delivered opening remarks and provided an overview of ICHARM and its activities. Following this, the group visited the hydraulics experimental facilities of the Public Works Research Institute (PWRI).

In the afternoon, a workshop titled ICHARM's Research Activities in Ghana was held. During the first session, Research Specialist NAGUMO Naoko outlined other Ghanaian research projects by ICHARM, and TAMAKAWA Katsunori, a project researcher of the University of Tokyo, presented satellite rainfall data correction methods for the Volta River basin.

The second session was regarding the SATREPS Ghana Project. HARADA Daisuke, an associate professor of the Hosei University, introduced rainfall and sediment runoff modeling, while Research Specialist Kattia Rubi Arnez Ferrel presented 2-D river morphological change simulations. Subsequently, Research Specialist QIN Menglu detailed a research plan for the SATREPS project, covering observation methods, analysis techniques, and the collection of existing data in the study basins.

During the Q&A session and general discussion, researchers on both sides actively exchanged questions and views regarding water-related disasters in Japan and Ghana. The participants also discussed the content and schedule for upcoming field surveys, making the meeting a meaningful opportunity to implement future joint research effectively.


ACECoR researchers (three in the center) with accompanying professors and ICHARM researchers
ACECoR 研究員（中央 3 名）、随行の教授と ICHARM 研究員

*(Written by QIN Menglu)*

## Task force meeting in Seoul on a pre-feasibility study for the UNESCO Water Sciences Report
## ユネスコ水科学報告書の実現予備調査に関するタスクフォース会議（ソウル）

2024 年 6 月、ユネスコ政府間水文学計画（IHP）は、ユネスコ水科学報告書を新たに発行するための実現予備調査を決定しました。これを受けて 2025 年 2 月、ユネスコ加盟国や国際機関に所属する専門家 24 名から成るタスクフォースが設立されました。その後、タスクフォースはオンライン会議を重ね、既存の水

In June 2024, the UNESCO Intergovernmental Hydrological Programme (IHP) decided to undertake a pre-feasibility study on the proposed UNESCO Water Sciences Report. To this end, a task force comprising 24 experts from UNESCO Member States and international organizations was established in February 2025. Since its formation, the task force has held a series of online meetings to discuss gaps in existing global water-related reports, as well as the scope, reporting framework, and financial mechanisms of the proposed report.

As a member of the task force, Chief Researcher OKADA Tomoyuki participated in the first in-person task force meeting, which was held in Seoul on October 27-28 with the support of the Ministry of Climate, Energy and Environment and the IHP National Committee of the Republic of Korea. The meeting focused on the draft scope of the Water Sciences Report proposed by the IHP Secretariat. The outcomes of the discussions are expected to support the Secretariat in finalizing the draft scope, which will be presented at the 27th session of the IHP Intergovernmental Council in June 2026.

On the afternoon of the second day, the task force members took part in a field visit to the Cheonggyecheon urban stream restoration project in central Seoul. The participants learned about not only the project's ecological functions but also its historical significance in flood observation, which dates back to the mid-15th century during the Korean dynasties.

Participation in the task force has provided a valuable opportunity to review major water-related reports and reaffirm the roles of key international organizations in the water sector.

Task force meeting
タスクフォース会議

Starting point of the Cheonggyecheon Stream
清渓川始点

Reconstructed Supyogyo (water measurement bridge) over the Cheonggyecheon Stream
清渓川の水標橋（架け替え後）


The oldest rain gauge (replica) displayed at the Gwanghwamun Plaza
最古の雨量計の模型（光化門広場）

*(Written by OKADA Tomoyuki)*

関連国際報告書に欠ける要素の他、ユネスコ水科学報告書の構成、報告手順、資金体制について議論してきました。

10 月 27 日～ 28 日、タスクフォースの一員として岡田智幸上席研究員が、ソウルで開かれた初めての対面会議に参加しました。この会議は、韓国気候エネルギー環境省と韓国 IHP 国内委員会の支援により開かれたものです。会議では、IHP 事務局が準備した水科学報告書の構成案について議論しました。この会議の結果を用いて、事務局が構成案を完成させ、2026 年 6 月に予定されている第 27 回 IHP 政府間理事会に報告します。

会議 2 日目の午後、タスクフォースのメンバーは、ソウル中心部の清渓川都市水路復元プロジェクトの視察に参加しました。清渓川では、生態系保全機能のほか、朝鮮王朝で 15 世紀中頃から行ってきた洪水観測の歴史的重要性についても学びました。

このタスクフォースに参加することにより、主な水関連報告書を概観し、水分野の国際機関の役割を改めて知る貴重な機会が得られました。

## Participation in the meetings of WMO Regional Association II
## 世界気象機関第 2 地域協会の会議への参加

Two meetings of the World Meteorological Organization (WMO) Regional Association II (RAII), which convenes hydrological and meteorological experts, were held in the second week of November 2025. The Hydrology Meeting was held in Siem Reap, Cambodia, on November 10-11, 2025, and the Chairs' Meeting was held in Shanghai, China, on November 13-14, 2025. Senior Researcher MIYAMOTO Mamoru participated in these meetings as the regional hydrological advisor of WMO RAII.

The Hydrology Conference is a meeting where representatives and experts from Asian member states gather to discuss the direction of hydrological activities and formulate operational plans to enhance water resources management under climate

世界気象機関（WMO）第 2 地域協会（RAII）の専門家が参加する 2 つの会議が、いずれも 2025 年 11 月第 2 週に開催されました。2025 年 11 月 10、11 日にはカンボジアのシェムリアップで水文会議、11 月 13、14 日には中国の上海で議長会議が開催され、ICHARM から宮本守主任研究員が WMO の地域水文アドバイザーとして参加しました。

水文会議は、アジア地域の各国代

表や専門家が集まり、気候変動下での水資源管理、洪水・渇水への適応、水文観測ネットワークの強化など水文活動の方向性を議論し運用計画を策定するための会議です。今回の会議では、第17期（2021-2024年）の成果を振り返り、第18期（2025-2027年）の運用計画の策定を行いました。宮本主任研究員からは、第17期に実施したタイにおける「水のレジリエンスと災害に関するプラットフォーム」の発足と関係機関による水災害レジリエンス強化のための連携機会の創出を報告し、18期におけるエネルギーや農業等への他分野との連携拡大の展望を共有しました。また、会議全体を通して、地域水文アドバイザーとして、活動方針、専門家体制、業務計画に関する議論を主導し、全体を取りまとめることができました。

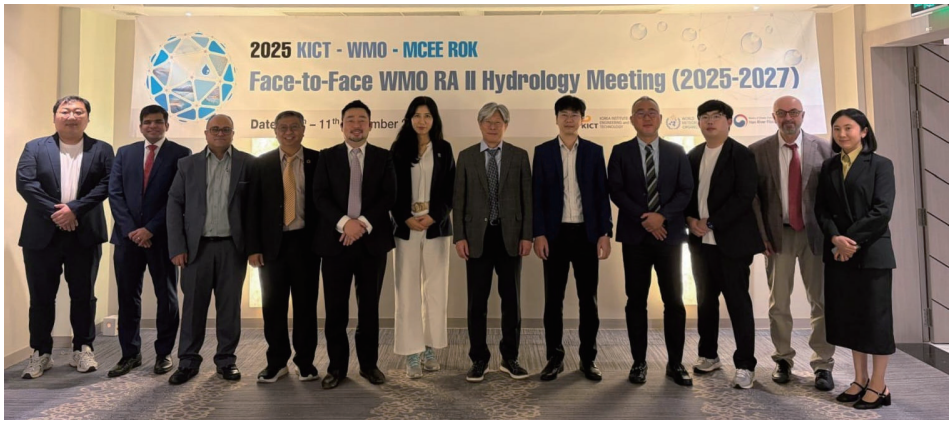
議長会議は、WMO RAIIの作業部会（WG）および調整パネル（CP）の議長および副議長が集結し、部会横断的に登録専門家やその体制構築、活動計画を議論する機会です。今回の第1回RA II WG/CP議長会議では、運営計画の進捗確認、アジア地域におけるEarly Warning for All（EW4All）の推進、AIを活用した革新的な早期警報システムなどが議論されました。宮本主任研究員は、水文会議の議論の成果を共有した上で水文学上の優先課題を示し、アジア地域の各国間の調整や全体活動計画の策定に貢献しました。これらの成果をグローバルスケールで共有することも予定されています。

ICHARMはWMOをはじめとする国際機関との連携を今後もより一層強化し、ローカル、リージョナル、グローバルな水災害レジリエンス強化に多層的に貢献する所存です。

change, strengthen adaptation to floods and droughts, and scale up hydrological observation networks. The participants reviewed the achievements of the 17th Session (2021–2024) and formulated the operational plan for the 18th Session (2025–2027). Miyamoto reported on the establishment of the "Platform on Water Resilience and Disasters" in Thailand during the 17th Session and the creation of collaboration opportunities among related organizations to strengthen water-related disaster resilience. He also shared prospects for expanding collaboration with other sectors, such as energy and agriculture, in the 18th Session. Furthermore, throughout the meeting, as the regional hydrological advisor, he led discussions on activity policies, expert structures, and operational plans, and coordinated the overall proceedings.

The RAII WG/CP Chairs' Meeting is an opportunity for the chairs and vice-chairs of WMO RAII Working Groups (WGs) and Coordinating Panels (CPs) to gather and discuss the roles and organizational arrangements of registered experts, as well as activity plans, across WGs. At this first meeting, discussions included progress on operational plans, promotion of Early Warning for All (EW4All) in the Asian region, and innovative early warning systems utilizing AI. Miyamoto shared the outcomes of the Hydrology Meeting and highlighted hydrological priority issues, thereby contributing to coordination among the member states in the Asian region and the development of the overall activity plan. He will also share the outcomes on a global scale.

ICHARM intends to further strengthen collaboration with international organizations, including WMO, and continue multi-layered contributions to enhancing water-related disaster resilience at local, regional, and global levels.




Participants in the Hydrology Meeting
水文会議の参加者

A scene of the Hydrology Meeting
水文会議の様子

A scene of the Chairs'Meeting
議長会議の様子

*(Written by MIYAMOTO Mamoru)*

# Special Session “Making Africa More Resilient to Hydro-Climatic Extremes” at IWRA’ s XIX World Water Congress in Marrakech
# 国際水資源協会第 19 回世界水会議特別セッション「アフリカの水文・気候の極端現象に対する強靭化」（マラケシュ）

On December 1, ICHARM, the UNESCO Intergovernmental Hydrological Programme (IHP), and the World Bank (WB) organized a special session entitled “Making Africa More Resilient to Hydro-Climatic Extremes” at the 19th World Water Congress of the International Water Resources Association (IWRA) in Marrakech, Morocco. The session aimed to share the achievements of various resilient projects in Africa and foster collaboration among relevant stakeholders.

Special session
特別セッション

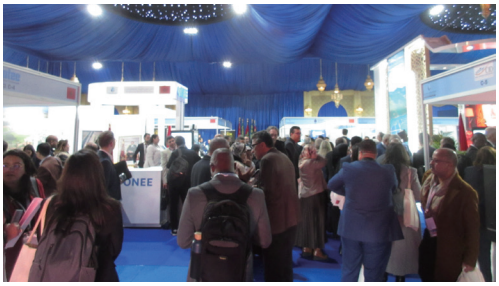
Research Specialist NAGUMO Naoko emceed the whole session. Executive Director KOIKE Toshio made opening remarks, followed by three keynote messages from Ms. Amal Talbi, a lead water specialist of WB, Mr. Abou Amani, the director of the Division of Water Sciences, UNESCO, and Mr. Koboji Charles Yakata, the director for Hydrology and Hydrogeology of the Ministry of Water Resources and Irrigation, South Sudan. Then, four speakers participated in a panel discussion on effective early warning information, which was moderated by Chief Researcher OKADA Tomoyuki. Key takeaways are as follows: Tailored information should be understandable to end users; the economic value of observation data needs to be recognized; and preparation and training lead to automatic emergency responses. The audience also commented on effective communication methods with farmers. Lastly, the session was concluded with remarks from Deputy Director KUSAKABE Takaaki.

Inviting speakers from African countries to Morocco was quite a challenging task for ICHARM. They appreciate everyone who worked hard to make the session successful.

XIX World Water Congress
https://worldwatercongress.com/

Speakers and partners of the special session
特別セッションの発表者と関係者

Opening of the World Water Congress
世界水会議の開会式



Exhibition
展示会

*(Written by OKADA Tomoyuki)*

12 月 1 日にモロッコ王国マラケシュで開かれた国際水資源協会第 19 回世界水会議において、ICHARM、ユネスコ政府間水文学計画、世界銀行が特別セッション「アフリカの水文・気候の極端現象に対する強靭化」を開催しました。セッションはアフリカの強靭化プロジェクトの成果を共有し、関係機関との協力関係を高める目的で行われました。

南雲直子専門研究員が司会を務め、小池俊雄センター長による開会スピーチの後、次の 3 名から事例発表がありました。アマル・タルビ世界銀行主任水専門官、アブー・アマニ ユネスコ水科学部長、コボジ・チャールズ・ヤカタ南スーダン水資源灌漑省水文・水文地質課長。続いて 4 名の発表者は、岡田智幸上席研究員がモデレーターを務める、効果的な予警報情報についてのパネルディスカッションにも参加しました。主な論点は次の通りです。利用者が理解できるように情報を工夫すべき。観測データの経済価値を認識する。事前準備や訓練によって、自然と避難行動がとれるようになる。聴衆からも、農家への効果的な情報伝達方法について発言がありました。最後に、日下部隆昭グループ長の挨拶でセッションが終了しました。

アフリカ各国からの発表者をモロッコへ招く手続きはかなり厳しいものでした。このセッションの成功に向けてご尽力頂いた方々に感謝いたします。

# Participation in the 20th Integrated Workshop of the Typhoon Committee
# 台風委員会第 20 回統合部会への参加

2025 年 12 月 2 日から 12 月 5 日まで台風委員会ハイレベルフォーラムおよび第 20 回統合部会が中国・マカオにおいて開催され、水文部会の議長を務める宮本守主任研究員が参加しました。第 20 回統合部会 は「"Closing Gaps and Creating Opportunities Together: Developing the Typhoon Committee's Future Strategy"」をテーマとし、台風委員会の 1 年間の実績報告と来年度の作業計画に関する協議とともに台風委員会の次期戦略計画の策定に向けた議論が交わされました。各部会に分かれて行われたパラレルセッションでは、宮本主任研究員が水文部会の議長を務め、各メンバー国における台風の影響に対する対応や年次運用計画（AOP）の進捗等を共有しました。さらに、マレーシアから提案された 2 つの新たな AOP についても議論し、来年度以降の活動方針についても協議しました。統合部会最終日には全体セッションにおいて水文部会の取り組みを総括し報告した結果、参加者からの高い関心や今後の強い協力意向が示されました。

このように、ICHARM では台風委員会を地域協力のための効果的かつ貴重な枠組みと位置づけ、国際的な連携や技術交流の強化に努めたいと思います。

The Typhoon Committee High-Level Forum and the 20th Integrated Workshop were held in Macao, China, from December 2 to 5, 2025. Senior Researcher MIYAMOTO Mamoru participated in these events as the chairperson of the Working Group on Hydrology (WGH).


Senior Researcher Miyamoto presenting WGH's efforts in the plenary
水文部会議長として活動報告する様子

The 20th Integrated Workshop, themed "Closing Gaps and Creating Opportunities Together: Developing the Typhoon Committee's Future Strategy," included reports on the activities through the Typhoon Committee during 2025 and discussions on the work plan for 2026 and the formulation of the committee's next strategic plan.

The committee's three working groups had parallel sessions separately during the same period. Miyamoto chaired the meeting of WGH, shared information on the responses of the member countries to typhoon impacts and their progress in implementing the group's Annual Operating Plans (AOPs). Additionally, the WGH members discussed two new AOPs proposed by Malaysia, as well as future activity policies for 2026 and beyond. On the final day of the Integrated Workshop, Miyamoto reported the WGH's efforts in the plenary session, which generated high interest among participants and strong expressions of intent for future cooperation.

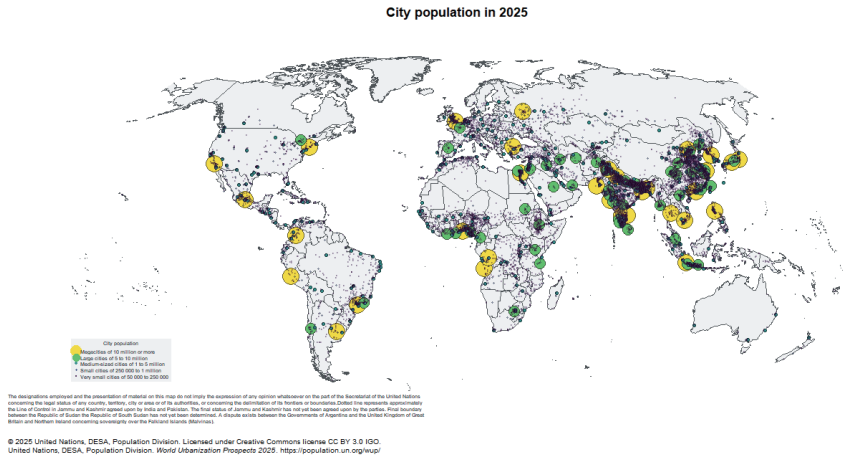
In this way, ICHARM regards the Typhoon Committee as an effective and valuable framework for regional cooperation and will strive to strengthen international collaboration and technical exchange through it.

Participants in the High-level Forum of the Typhoon Committee
台風委員会ハイレベルフォーラムの参加者

*(Written by MIYAMOTO Mamoru)*

# Participation in an international symposium on strengthening the resilience of megacities
# 国際シンポジウム「世界の防災の未来」―災害の経験を踏まえたメガシティの防災力強化に向けた科学技術イノベーション― での発表

According to the World Urbanization Prospects 2025, released on November 18, 2025, by the United Nations Department of Economic and Social Affairs (UN DESA), the world is becoming increasingly urbanized. Since 1950, the urban population has doubled, accounting for 45% of the global population of 8.2 billion. In line with this trend, the number of megacities – metropolitan areas with populations of over 10 million – has quadrupled from eight in 1975 to 33 in 2025, of which 19 are located in Asia. Currently, Jakarta, Indonesia, is the world's most populous city with about 42 million residents, followed by Dhaka, Bangladesh, with about 40 million, and Tokyo, Japan, with about 33 million.*1




City population in 2025
2025 年における都市人口

Source: United Nations, Department of Economic and Social Affairs, Population Division (2025). World Urbanization Prospects: The 2025 Revision, Online Edition.

Reflecting on this rapid urbanization worldwide, the Science Council of Japan is preparing to issue a recommendation in 2026 titled "Science, Technology and Innovation to Strengthen Disaster Resilience in Megacities Facing Catastrophic Disaster Risks." The recommendation is being developed primarily by the Integrated Research on Disaster Risk (IRDR) Subcommittee of the council's Civil Engineering and Architecture Committee.

This recommendation seeks to strengthen disaster resilience in the world's megacities, where catastrophic events are anticipated and could have far-reaching global consequences. It advocates a comprehensive approach that moves beyond traditional infrastructure-centered disaster measures, calling for risk-informed urban planning and development, the organization of medical-care, welfare, and public-health operations during disasters, the quantification of disaster risks and investment effectiveness, the improved use of disaster-related information, enhanced international cooperation, and the application of science and technology.

On December 9, 2025, the international symposium "The Future of Global Disaster Risk Reduction: Strengthening the Resilience of Megacities through Science, Technology and Innovation (STI)" took place at the Science Council of Japan's auditorium in Tokyo, Japan. Participants exchanged views on the council's proposal and engaged in discussions informed by practical insights from experts in Japan and overseas.

Chief Researcher KURIBAYASHI Daisuke, a member of the IRDR Promotion Group under the IRDR Subcommittee, spoke about Chapter 6 of the recommendation, "Dissemination and Distribution of Disaster Information," addressing the following topics:

国連経済社会局（UN DESA）が 11 月 18 日に発表した「World Urbanization Prospects 2025（世界都市化見通し 2025）」によると、世界はますます都市化が進み、現在世界人口 82 億人の 45% が都市に居住しており、都市に住む人々が占める割合は 1950 年以降 2 倍に増えています。また、人口 1,000 万人以上の都市圏である「巨大都市（メガシティ）」の数は、1975 年の 8 都市から 2025 年には 33 都市へと 4 倍に増加しました。この半数以上の 19 都市はアジアに位置しています。現在、世界最多の人口を擁するのはジャカルタ（インドネシア）でおよそ 4,200 万人、次いでダッカ（バングラデシュ）がおよそ 4,000 万人、東京が 3,300 万人で続いています。*1

このような状況のもと、日本学術会議　土木工学・建築学委員会 IRDR 分科会が中心となり、2026 年内に提言「壊滅的災害が想定されるメガシティの防災力強化に向けた科学技術イノベーション」（Science, Technology and Innovation to Strengthen Disaster Resilience in Megacities Facing Catastrophic Disaster Risks）の発出が予定されています。

本提言は、壊滅的災害発生が想定され、地球規模で大きな影響を及ぼす世界のメガシティの防災力強化を目的として作成されたもので、従来のインフラ中心の災害対策に加えて必要な、リスクを考慮した（risk-informed）都市の計画と開発、災害時の医療・福祉と公衆衛生、災害リスクと投資効果の定量化、防災情報の利活用、国際協力の強化、科学技術の活用といった包括的なアプローチを提案しています。

2025 年 12 月 9 日、日本学術会議講堂（東京都港区）において、標記国際シンポジウムが開催されました。シンポジウムにおいては、上記提言について関係者の考える場を提供するとともに、国内外の専門家による実践的知見の共有を行い、議論を行いました。

ICHARM の栗林大輔上席研究員は、日本学術会議　土木工学・建築学委員会　IRDR 分科会　IRDR 活動推進小委員会の委員であり、以下の項目に触れながら、提言の 6 章「防災情報の発信と流通」の紹介を行いました。

(1) 近年の情報ツール
(2) 壊滅的災害時の災害情報伝達に関する課題と対応の方向性
(3) AI の活用
(4) 国際社会、あるいは国内の異言語、異文化のコミュニティとの連帯

6 章の紹介の中では、事前防災の重要性に関連し、ICHARM が開発を進めている「仮想洪水体験システム」の取り組みについて簡単に紹介しま

した。

また、ICHARMの招へい研究員である大原美保教授（日本学術会議連携会員／東京大学大学院情報学環総合防災情報研究センター教授）からも上記提言の紹介を行いました。さらにICHARMが参画するSATREPSプロジェクト「気候変動下での持続的な地域経済発展への政策立案のためのハイブリッド型水災害リスク評価の活用」（Development of a Hybrid Water-Related Disaster Risk Assessment Technology for Sustainable Local Economic Development Policy under Climate Change：HyDEPP-SATREPS）の主要メンバーであるPatricia Ann J. Sanchez 教授（School of Environmental Science and Management, University of the Philippines Los Baños, Philippines）から、SATREPSプロジェクト紹介を含めた、フィリピンにおける水資源の脆弱性減少に向けた取り組みの紹介を行いました。

ICHARMは、これらのさまざまな機会を通じ、防災の主流化に努めて参ります。

発表資料等は、下記サイトでご覧いただけます。
＜日本学術会議　一般公開イベントのページ＞
https://www.scj.go.jp/ja/event/2025/386-s-1209.html

*1 世界人口の45%が都市に居住、巨大都市の成長が続く　国連報告書が発表（2025年11月18日付　国連経済社会局プレスリリース・日本語訳）
https://www.unic.or.jp/news_press/info/53356/

(1) Recent information tools

(2) Challenges and response directions for disaster information dissemination during catastrophic disasters

(3) Utilization of AI

(4) Solidarity with the international community and with domestic communities of different languages and cultures

In his presentation, Kuribayashi also briefly explained ICHARM's ongoing work on the Virtual Flood Experience System (VFES), highlighting its relevance to strengthening disaster preparedness during ordinary times.

Professors OHARA Miho and Patricia Ann J. Sanchez also spoke at the symposium. Professor Ohara discussed the council's recommendation from her perspective, while Professor Sanchez presented efforts to reduce water-resource vulnerability in the Philippines, including an overview of the Science and Technology Research Partnership for Sustainable Development (SATREPS) project named "Development of a Hybrid Water-Related Disaster Risk Assessment Technology for Sustainable Local Economic Development Policy under Climate Change (HyDEPP-SATREPS)," in which ICHARM also participates. (Professor Ohara is an invited researcher at ICHARM, an associate member of the council, and a professor at the Center for Integrated Disaster Information Research, Interfaculty Initiative in Information Studies, the University of Tokyo. Professor Sanchez is with the School of Environmental Science and Management, University of the Philippines Los Baños, and is a core member of the SATREPS project.)

Through various opportunities like this one, ICHARM will continue to play an active role in mainstreaming disaster management.

*1 Press release by UN DESA on November 18, 2025: "Cities are home to 45 per cent of the global population, with megacities continuing to grow, UN report finds."
https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/undesa_pd_2025_press_release_wup25.pdf

Speakers and secretariat staff (Provided by secretariat)
講演者・事務局メンバーによる集合写真（事務局提供）

*(Written by KURIBAYASHI Daisuke)*

# Research

## Introduction of ICHARM research projects / 研究紹介

ICHARMは、その使命を果たすため、世界及び地域での災害の傾向及び経験と災害対応に関する地域のニーズ、重要課題、開発段階等を踏まえつつ、自然、社会及び文化といった地域の多様性を考慮する原則というローカリズムを念頭に、研究、能力育成及び情報ネットワーク構築の3本柱を有機的に連携させて、現地実践活動を実施しています。

そのうち、研究としては

**(1) 水災害データの収集、保存、共有、統計化**
**(2) 水災害リスクのアセスメント**
**(3) 水災害リスクの変化のモニタリングと予測**
**(4) 水災害リスク軽減の政策事例の提示、評価と適用支援**
**(5) 防災・減災の実践力の向上支援**

の5つの柱のもと、革新的な研究活動を行っています。

本号では、(2)に関する取組例としてカティア　ルビ　アルネス　フェレル専門研究員より「Confluence Geometry Near Neck Cutoff Events in Meandering Rivers」を紹介します。

ICHARM sets three principal areas of activity: research, capacity building, and information network. It plans and implements projects in these areas in order to fulfill its mission, always keeping in mind "localism", a principle with which we respect local diversity of natural, social and cultural conditions, while remaining sensitive to local needs, priorities, development stages, and other factors, within the context of global and regional experiences and trends of disasters.

At present, ICHARM conducts innovative research in the following five major areas:

**(1) Data collection, storage, sharing, and statistics on water related disasters**
**(2) Risk assessment on water related disasters**
**(3) Monitoring and prediction of changes in water related disaster risk**
**(4) Proposal, evaluation and application of policy ideas for water related disaster risk reduction**
**(5) Support in constructing the applicability of water-related disaster management**

In this issue, Research Specialist Kattia Rubí ARNEZ FERREL shares her recent research, titled "Confluence Geometry Near Neck Cutoff Events in Meandering Rivers".

## Confluence Geometry Near Neck Cutoff Events in Meandering Rivers

**Kattia Rubí ARNEZ FERREL,** Research Specialist
カティア　ルビ　アルネス　フェレル専門研究員

In active meandering rivers of the Amazon basin, neck cutoffs are one of the key mechanisms controlling river morphology, as they modify channel slopes, flow patterns, and erosion and deposition processes. Previous studies have shown that the effects of cutoffs extend downstream over distances proportional to the cutoff length, with some reporting that erosion rates may increase by approximately 25% following cutoff events. In the case of confluences in meandering rivers, earlier research suggests that confluence location can be influenced by cutoff events in tributaries upstream of the confluence. In particular, the angle at which a tributary joins the main river is important due to the development of secondary flows, which promote the formation of scour zones downstream of the confluence [1].

The case investigated here focuses on two cutoff events that occurred upstream of a river confluence, with one cutoff developing in each branch of the confluence. The study examines how the confluence geometry, particularly the confluence angle, evolved following each cutoff event. The impacts of these morphological changes are of particular relevance given the proximity of a riverine community, Puerto Villarroel, located near the study reach. Despite the observed changes, the spatial extent and long-term influence of future cutoff events in this system remain uncertain.

The study area is located along the border between the departments of Cochabamba and Santa Cruz in Bolivia. The main river is the Ichilo River, which is joined by its tributary, the Sajta River. Both rivers are actively meandering rivers characterized by frequent planform adjustment and multiple cutoff events along their courses. The river originates in the Andes range and flows downstream to lower elevations, where the channel slope decreases notably and meandering starts.

Planform evolution was investigated using satellite imagery processed through the Google Earth Engine platform. Imagery from the Landsat and Sentinel satellites was used to extract one representative channel path per year, using an NDWI index. This approach provides a spatiotemporal overview of channel evolution and is suitable to capture gradual migration processes and cutoff events. Although exact cutoff moments cannot be captured due to the satellites' temporal resolutions, it is possible to estimate their dates.

**Cutoff in the Sajta River (2016)**

The cutoff in the Sajta River (Fig. 1a) occurred between late 2016 and early 2017, which corresponds to the rainy season in Bolivia. Following the cutoff, a point bar formed downstream of the former neck location, and a new meander began to form, gradually growing and eventually migrating downstream. Vegetation establishment was observed on the point bar, which may contribute to bar stabilization. The oxbow lake formed by the cutoff remained partially connected to the main channel, and flow was observed within the oxbow lake during periods of high discharge. These observations indicate that the confluence angle changed following the cutoff event from obtuse to acute [1]. Such a change has the potential to influence confluence dynamics and associated morphological processes.

**Cutoff in the Ichilo River (2025)**

The cutoff in the Ichilo River (Fig 1.b) has been monitored since 2019. During a field survey conducted in 2019 by [1], the distance across the neck was measured as 96.1 m. Based on these observations and long-term observation of satellite imagery, it was inferred that this cutoff was likely to occur preferentially relative to another potential cutoff in the same reach. During the 2025 rainy season, the cutoff event occurred and is currently progressing toward complete disconnection from the main channel and eventual formation of an oxbow lake. At this stage, the morphological effects of this cutoff cannot yet be fully assessed through satellite imagery; however, the local increase in channel slope associated with the cutoff formation is expected to influence downstream erosion processes leading to channel widening.

Together, these two cutoff events provide an opportunity to examine cutoff and confluence interactions within a single river system under different conditions, such as discharge and granulometry. Further analysis is required to quantify the extent of the effect of the cutoffs through subsequent hydrological events.

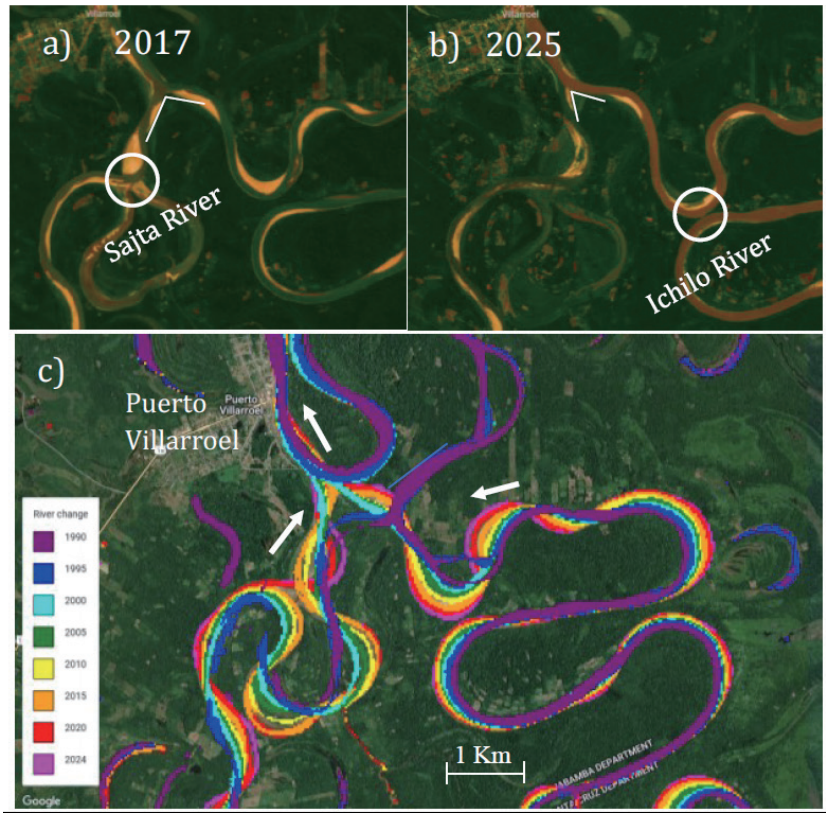



Figure 1. a,b) Change in the angle of the confluence after cutoff occurrence in the Sajta River, c) Planform evolution in the confluence between the Sajta and Ichilo Rivers in Puerto Villarroel, Bolivia (1990-2024) Source:[1]

References

[1] Arnez Ferrel K.R., Harada D. and Egashira S. (2025): Morphological changes before and after neck cutoffs in meandering rivers, 14th Symposium on River, coastal, and Estuarine Morphodynamics, RCEM 2025.

* At the moment that the article was written the cutoff of 2025 did not occur yet but it was imminent

[2] Arnez Ferrel K.R., Nelson J.M, Shimizu Y. and Kyuka T. (2020): Past, present and future of a meandering river in the Bolivian Amazon basin, J. of Earth Surface Processes and Landforms/Volume 4. https://doi.org/10.1002/esp.5058, 2020.

# SIP Activity Report: Outreach and Educational Activities Across Japan Using the Virtual Flood Experience System
# SIP 活動報告　～仮想洪水体験システムを用いた、日本各地におけるアウトリーチ活動および教育活動～

ICHARM is participating in the 3rd phase of the Cross-ministerial Strategic Innovation Promotion Program (SIP), a five-year project launched in September 2023 by the Cabinet Office of Japan. Its central involvement is in the sub-project "Promoting Disaster Prevention Actions Using Risk Information," under the broader project "Development of a Resilient Smart Network System against Natural Disasters."

More specifically, ICHARM is contributing primarily to the second R&D theme of this sub-project, "Risk and Damage Visualization." It is developing a platform system to support the assessment of water-related disaster risks and resilience. This system enables businesses to estimate potential damages from future water-related disasters by combining hazard information with their own data. It also supports their efforts to strengthen disaster resilience by calculating the cost-effectiveness of the damage-control measures they plan to implement. In addition, through this sub-project, ICHARM is developing and implementing the Virtual Flood Experience System (VFES), which allows people to experience flooding virtually and learn how to act during such events. Overall, ICHARM is making steady progress toward building a society in which people regard floods and other water-related disasters as personal concerns and are fully aware of the importance of taking preventive actions to minimize damage.

The following is a report on its recent activities.

ICHARM では、「戦略的イノベーション創造プログラム（Cross-ministerial Strategic Innovation Promotion Program：SIP）」 第 3 期に位置付けられた課題「スマート防災ネットワークの構築」を構成するサブ課題の一つである「リスク情報による防災行動の促進」に 共同研究機関として参加しています。

ICHARM は研究開発テーマ 2)「水災害リスク・被害影響可視化技術の開発」において、将来の水災害リスク情報と企業の自社データを活用して水災害想定被害額を算出するとともに、対策実施による費用対策効果を算出して企業のレジリエンス向上を支援するシステム「水災害リスク・レジリエンス評価支援基盤システム」の開発や、仮想空間での洪水体験を通じて住民の洪水に対する経験値を上げる「仮想洪水体験システム」の開発および実装を行っています。これらの活動を通して、洪水をはじめとする水災害が「ジブンゴト」として捉えられ、事前の防災行動が促進される社会づくりに取り組んでいます。

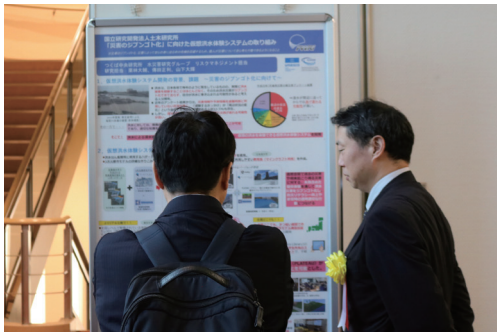
以下、最近の活動について報告します。

## Public Works Research Institute Symposium

On October 17, 2025, "Public Works Research Institute Symposium 2025" was held at the Hitotsubashi Hall in Chiyoda Ward, Tokyo. Chief Researcher KURIBAYASHI Daisuke gave a presentation titled "Efforts to Promote Personal Engagement with Disaster Awareness through the Virtual Flood Experience System." The event drew approximately 1,900 participants, including both in-person and online attendees.

A poster session was also held outside the main venue, where Kuribayashi exchanged comments and ideas with other participants.

The main venue of the symposium
会場の様子



Chief Researcher Kuribayashi (right) at the poster session
ポスター発表の様子

## 土木研究所講演会

10 月 17 日（金）、一橋講堂（東京都千代田区）にて「令和 7 年度土木研究所講演会」が開催され、『「災害のジブンゴト化」に向けた仮想洪水体験システムの取り組み』と題して、栗林大輔上席研究員が発表を行いました。会場参加・オンライン参加含めて計約 1,900 名の参加を頂きました。

また、会場外ではポスター展示も行い、参加者との意見交換も行いました。

当日の資料等は、下記ホームページからご覧いただけます。
https://www.pwri.go.jp/jpn/about/pr/event/2025/1017/index.html

## Science Agora 2025

On October 25 and 26, 2025, Science Agora 2025, organized by the Japan Science and Technology Agency (JST), was held at the Telecom Center Building in Koto Ward, Tokyo, attracting about 3,800 visitors. On the 25th from 15:30 to 17:00, PWRI hosted a seminar titled "How Do We Protect Our Lives and Infrastructure?: Solving

## サイエンスアゴラ 2025

10 月 25 日（土）・26 日（日）、テレコムセンタービル（東京都江東区）にて、科学技術振興機構（JST）が主催し「サイエンスアゴラ 2025」が開催されました（来場人数約 3,800

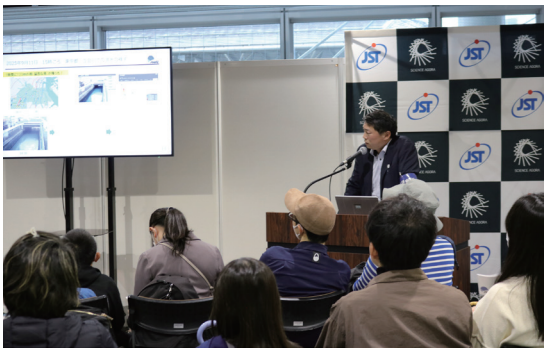
人）。土木研究所は 25 日の 15:30 ～ 17:00 において、「どう守る？くらしとインフラ～土木の力で解決～」と題したセミナーを開催し、土木研究所が実施する最先端の研究紹介と体験展示を行いました。栗林大輔上席研究員は『情報や経験で災害を「ジブンゴト化」!!　～仮想洪水体験システムの取り組み～』と題して、最近大雨が増えている事実とともに、ハザードマップやマイ・タイムライン、および仮想洪水体験システムの紹介を行いました。併せて仮想洪水体験システムの体験コーナーを設け、山下大輝研究員のサポートの元、計約 20 名の子供たちにマインクラフト版での大阪の洪水状況を体験いただきました。そばを通りかかった子供から「あ、マイクラだ」というつぶやきがきこえるほど、子ども層へのマインクラフトの訴求力は高いことが改めて伺えました。子供が体験することで、付き添っている親も体験できるという効果も期待できます。

参考）サイエンスアゴラ 2025HP：
https://www.jst.go.jp/sis/scienceagora/2025/

Challenges through Civil Engineering," where its researchers introduced their cutting-edge research along with hands-on demonstrations.

Chief Researcher KURIBAYASHI Daisuke delivered a presentation titled "Turning Disasters into Personal Concerns through Information and Experience: Initiatives Using the Virtual Flood Experience System," in which he discussed the recent increase in heavy rainfall events and introduced hazard maps, "My Timeline" (a personal chronological action plan for disaster preparedness), and VFES.

ICHARM also set up a VFES experience booth, where Researcher YAMASHITA Daiki helped about 20 children try the Minecraft-based simulation of a flood that occurred in Osaka City, Japan. During the event, the researchers were reminded of Minecraft's strong appeal to children, hearing some exclaim the name as they passed by. They also noted an additional positive effect: when children try the simulation, their parents often end up experiencing virtual flood conditions as well simply by watching.



Chief Researcher Kuribayashi delivering a presentation
講演する栗林上席研究員

Researcher Yamashita helping children simulate flood conditions
山下研究員のサポートによる体験コーナーの様子

## 土木の日　研究所大公開

11 月 18 日は社団法人土木学会が制定した「土木の日」です。この日前後に、広く多くの皆さまに、私たちの研究所と土木について理解を深めていただくことを目的に、土木研究所・国土技術政策総合研究所は毎年「土木の日　研究所大公開」という一般公開イベントを開催しています。今年は 11 月 15 日（土）に開催され、約 1,400 名の来場を頂きました。ICHARM は ICHARM 講堂において体験教室「マインクラフトで洪水を体験しよう！」を開催しました。山下大輝研究員と 3 名のサポートスタッフの指導の元、9 サイクル実施した体験会では、事前に予約された 20 人×9 サイクル＝約 180 名に、マインクラフト版での大阪の洪水状況を体験いただきました。

事後に参加者に依頼したアンケート「体験教室でおもしろかったものを選んでください（複数回答）」の設問では、他の体験教室もあるなかで最も高い評価を頂きました。小学生だけではなく、大人からも高い評価を頂いており、マインクラフトを活用した洪水体験は幅広い層に効果的であることが伺われました。

9 月の万博関連イベントで作成した、フォトスポットも大いに活用されました。

参考）土木学会 HP「土木の日の由来」
https://ftp.jsce.or.jp/committee/day/index.html

## Open house events on Civil Engineering Day

November 18 is designated as "Civil Engineering Day" by the Japan Society of Civil Engineers. Around this date each year, PWRI and the National Institute for Land and Infrastructure Management (NILIM) hold open house events titled "Research Institute Open House on Civil Engineering Day" to help visitors gain a deeper understanding of these institutes and civil engineering. In 2025, the events were held on November 15 and welcomed approximately 1,400 visitors.

Visitors at the auditorium
体験の様子

ICHARM hosted a hands-on workshop in the ICHARM Auditorium titled "Experience a Flood in Minecraft!" Led by Researcher Yamashita and three support staff members, the workshop was conducted in nine cycles. With 20 participants per cycle, about 180 pre-registered children experienced a flood that occurred in Osaka City, Japan, through the Minecraft-based version of VFES.

Visitors at the photo spot
フォトスポットでの写真撮影の様子

In the post-event questionnaire asking participants to select the activities they enjoyed most (multiple responses allowed), ICHARM's workshop received the highest number of votes from both elementary school students and adults, indicating that the Minecraft-based virtual flood experience is effective across a wide range of age groups.

The photo spot created for an Osaka Expo-related event held in 2025 was also popular among participants.

## Osaka City Fukushima Elementary School

On November 17, ICHARM held a VFES workshop at Osaka City Fukushima Elementary School as part of the school's fun activity program. About 20 students participated, mainly lower-grade elementary school children. The workshop was organized at the request of a local teacher who happened to see the VFES demonstration at the Osaka Expo-related event ICHARM organized on September 27. The event was also supported by the National Research Institute for Earth Science and Disaster Resilience (NIED), which serves as the secretariat for the SIP Smart Disaster Prevention Network.

First, Chief Researcher Kuribayashi gave an overview of Osaka's geography, including areas prone not only to flooding but also to tsunamis and storm surges, as well as information on past water-related disasters. Then, Researcher Yamashita explained VFES (a Minecraft version tailored to the Osaka area), after which participants tried the system in two groups. After trying the simulation, many participants commented that the activity was interesting and fun. Alongside the flood simulation, the participants also created their own "My Timeline" (a personal chronological action plan for disaster preparedness). They enjoyed working through activities with support from the instructors.


Group Photo
参加者との集合写真

*(Written by KURIBAYASHI Daisuke, DENDA Masatoshi and YAMASHITA Daiki)*

## 大阪市立福島小学校

11 月 17 日、大阪市立福島小学校において、いきいき活動室の活動の一環として、仮想洪水体験システムの体験会を開催しました。参加者は、小学生低学年生を中心とする約 20 名でした。これは、9 月 27 日に開催された万博関連イベントでの仮想洪水体験システムの体験展示を、たまたまご覧になった地元小学校の先生からのご要望を受け、実施したものです。実施には、SIP スマート防災ネットワーク事務局である防災科学技術研究所からのサポートも受けました。

まず、栗林大輔上席研究員から、洪水だけでなく津波や高潮などの水災害を受けやすい大阪の地理、過去の水災害などの紹介の後、山下大輝研究員から仮想洪水体験システム（大阪・マイクラ版）の説明を行い、2 グループに分けて体験いただきました。参加者からは、おもしろかったと・楽しかったとの声を多くいただきました。また洪水体験と並行して、マイ・タイムラインの作成もしていただき、参加者のみなさんは指導を受けながら熱心に取り組んでいました。

SIP「スマート防災ネットワークの構築」イベント紹介ページでも本取り組みが紹介されています！
https://www.nied-sip3.bosai.go.jp/news/news-event.html

# Activities using VFES in 2025 on Education
# 仮想洪水体験システム（VFES）を活用した 2025 年内の教育活動

In 2025, as part of the SIP program, ICHARM provided water-related disaster risk education workshops using the Virtual Flood Experience System (VFES). The workshops aimed to give young students an opportunity to explore effective approaches to risk communication. Designed in an inquiry-based learning framework, the workshops focused on developing and refining educational content on water-related disaster risks that reflects local characteristics.

In this context, we conducted school-based workshops in two contrasting locations in Nagano Prefecture, Japan: Nagano City, which suffered severe damage from Typhoon No. 19 in 2019, and Matsumoto City, which has not experienced large-scale water-related disaster damage for many years. The workshops were held at Sugano Junior High School in Matsumoto City and at Matsushiro Elementary School and Toyono Junior High School in Nagano City. The curriculum combined conventional classroom learning – lectures on local topography and history and exercises using hazard maps – with flood-simulation activities using VFES.

Through these workshops, we identified a clear direction for developing practical approaches to water-related disaster education.

As a new initiative in 2025, we expanded our target group to include high school students and began a collaboration with Aoyama Gakuin Senior High School. This initiative originated when an ICT teacher of the school, who became interested in

本活動は，SIP に関連する 2025 年の取組として，仮想洪水体験システム（VFES）を活用した水災害リスク教育を実施し，若年層を対象とした水災害リスクコミュニケーションの手法を検討することを目的としています。特に，探究学習の枠組みを通じて，地域特性を踏まえた水災害リスク教育コンテンツの検討および改善を主眼としています。この目的のもと，2019 年の台風第 19 号による甚大な被害を受けた長野市と，同一県内でありながら長期間にわたり大規模な水災害の被害を受けていない松本市を対象に，地域背景の違いに着目した取組を行いました。松本市の菅野中学校，長野市の松代小学校および豊野中学校において，地域の地形や歴史に関する学習やハザードマップを用いた座学に加え，VFES による洪水再現を組み合わせたカリキュラムを実施しました。これらの実践を通じて，水災害教育の方法について一定の方向性を見いだすことができました。

今年度の新たな取組として，若年層から青年期へと移行する高校生に対象を広げ，青山学院高等部との協働を開始しました。本取組は，SIP関連イベントをきっかけにVFESに関心を示した情報担当教員からの声掛けにより実現したものです。授業は，「プログラミング入門（高２選択科目）」の授業枠を活用し、VFESの適用方法、習得技術及びテーマ設定等の企画段階から生徒が参加する流れで授業・演習を企画しました。VFESには，立方体ブロックを用いて自由に仮想空間を構築できる創造性に特徴を持つマインクラフト版と，都市構造や浸水状況のリアリティに強みを持つゲームエンジン版があります。授業では両者の概要を紹介しましたが，生徒はマインクラフト版のようなデフォルメされた表現よりも，ゲームエンジン版VFESにおいて採用している高精度な3Dモデルや，仮想空間内での行動シミュレーションといった，情報学的により高度な技術要素に強い関心を示しました。この点は，小中学生を対象とした取組とは異なる特徴として確認されました。

生徒からは、人と人との関係性に着目した危険性の表現や、避難経路および人の動きを再現するシミュレーション、季節や時間帯の違いを反映した街の構成といった発想が示された。こうした発想と親和性の高い内容として、マルチエージェントシミュレーションの基本技術として，Pythonを用いたエージェントシミュレーションの基礎学習を導入した上で，PLATEAUデータを基盤とした仮想空間の構築については生徒が主体的に企画し，学校周辺の空間を再現しながら都市水害について考える探究型の学習を実施しました。これらの取組を通じて，洪水現象単体への関心にとどまらず，自らの行動圏である都市構造や地域社会全体に関心を持ち，その一要素として水災害を捉えている様子がうかがえました。

本取組を通じて，VFESは学齢に応じて異なる関心の持たれ方を示すことが確認されました。今後も，水災害リスクコミュニケーションの手法としてVFESを位置づけ，地域特性を踏まえた水災害リスク教育コンテンツの検討および修正を継続していく予定です。

VFES through a SIP-related event, reached out to us.

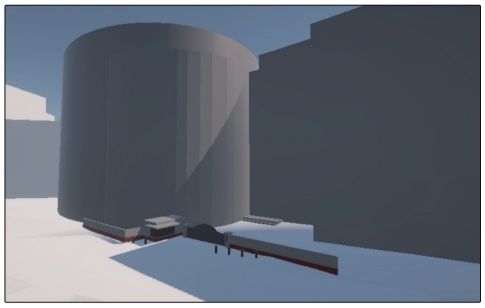
The VFES workshop was offered within the “Introduction to Programming” course, and we designed it so that students could participate from the planning stage – deciding what lectures and exercises should be included, how VFES could be applied, what skills would be required, and how project themes should be set. We provided two types of VFES: a Minecraft-based version, which emphasizes high operability and allows users to freely build virtual spaces using cube blocks, and a game-engine-based version, which excels in the realistic rendering of urban structures and flood conditions.

Although both versions were introduced, the students showed a stronger interest in the game-engine version, particularly for its more advanced informatics-oriented technical features such as high-precision 3D models and the ability to simulate human behavior within the virtual environment. The Minecraft version is less preferred due to its more stylized and simplified visuals. Their preference differed notably from what we have observed among elementary and junior high school students.

Students proposed ideas such as expressing risks by focusing on human-human interactions, simulating evacuation routes and human movement, and designing cityscapes that reflect seasonal and time-of-day differences. In response, we introduced multi-agent simulation techniques well-suited to implementing these ideas and provided basic training in Python-based agent simulation. The students then took the lead in planning how to construct virtual spaces using PLATEAU data, carrying out an inquiry-based learning activity in which they recreated the area around their school and explored issues related to urban flood disasters.

Through these activities, we observed that the students’ interests extended beyond the flood phenomenon itself. They began to engage with the broader urban structure and local community that form their everyday environment, viewing water-related disasters as one component within that larger context.

Through this initiative, we confirmed that students’ interest in VFES varies depending on their grade level. Moving forward, we will continue developing and refining educational content on water-related disaster risks that reflects local characteristics, using VFES as a tool for disaster risk communication.



A 3D model created by an Aoyama Gakuin student: structures around the main entrance gate
授業で生徒が作成した 3D モデル（青山学院高等部正門付近）

*(Written by KURIBAYASHI Daisuke, DENDA Masatoshi and YAMASHITA Daiki)*

## HyDEPP-SATREPS project meetings in the Philippines
## フィリピン HyDEPP-SATREPS プロジェクト出張報告

ICHARMでは、国際協力機構（JICA）および科学技術振興機構（JST）のSATREPS事業（地球規模課題対応国際科学技術プログラム）として進めている研究プロジェクト「気候変動下での持続的な地域経済発展への政策立案のためのハイブリッド型水災害リスク評価の活用（研究代表者：大原美保東京大学教授、プロジェク

ICHARM has been conducting various activities for a research project entitled “Development of a Hybrid Water-Related Disaster Risk Assessment Technology for Sustainable Local Economic Development Policy under Climate Change (HyDEPP-SATREPS).” This project is led by Principal Investigator Miho Ohara, a professor at the University of Tokyo, under the Science and Technology Research Partnership for Sustainable Development (SATREPS), a joint initiative of the Japan International Cooperation Agency (JICA) and the Japan Science and Technology Agency (JST). As

part of this research project, ICHARM researchers recently visited the Philippines: Research Specialist NAGUMO Naoko last October and November, and Senior Researcher Mohamed Rasmy, Research Specialist Ralph Acierto, and Research Assistant Thilini Kaushalya Ranapura Dewage last November.

During the October visit, Nagumo attended the "HyDEPP-SATREPS Policy Workshop on Climate Change: Floods and Droughts in the Laguna Lake Basin," which was held on October 28 in Municipality of Bay, Laguna Province. The workshop was organized to gather feedback on the draft policy recommendations developed for the Pasig–Marikina River–Laguna Lake Basin, one of the project's target areas. At the beginning of the workshop, project members presented scientific research outcomes related to the draft recommendations. From ICHARM, Research Specialist Ralph Allen Acierto, speaking in a recorded video, explained the simulation results using climate models for the basin. Research Assistant Jonathan Serrano, who happened to be back home, also joined the meeting and explained the results of the assessment of future climate change impacts on flooding in the basin. Subsequently, participants from local governments, provincial offices, and relevant organizations in the basin engaged in discussions on current regional conditions and necessary countermeasures in a world-café style, and then exchanged views with other project members by presenting the outcomes of their discussions (Photo 1).

Photo 1 Participants in the workshop in October 2025
写真 1　ワークショップの集合写真（2025 年 10 月）

During the November visit, ICHARM researchers attended the 9th Joint Coordination Committee meeting held on the morning of November 12. Together with Philippine project members and representatives from JICA and JST, the researchers reviewed the outcomes of the October workshop, the schedule until the end of the project, and the plan for compiling the project's final deliverables. On the afternoon of the same day, the researchers also participated in the workshop entitled "HyDEPP-SATREPS Policy Workshop on Climate Change: Floods and Droughts in the Pampanga River and Pasig–Marikina River and Laguna Lake Basin." In addition to project members and representatives from JICA, JST, and other cooperative organizations, national-level stakeholders attended this meeting, including officials from relevant Philippine government agencies, such as the Department of Agriculture, the Department of Economy, Planning, and Development, and the National Irrigation Administration. As a result, valuable feedback related to the project's research outcomes was collected (Photo 2). Based on the outcomes and feedback, the project members are currently finalizing the policy recommendations, one of the project's final deliverables. Although the research project as a JICA project is scheduled to be completed in approximately four months, ICHARM will continue to work toward achieving the project's goals in cooperation with the Philippine counterparts.

Photo 2 The Philippine national-level workshop in November 2025
写真 2　フィリピン国内ワークショップの様子（2025 年 11 月）

*(Written by NAGUMO Naoko)*

ト略称：HyDEPP-SATREPS）」における研究活動を進めています。その一環として、2025 年 10 月に南雲直子専門研究員が、2025 年 11 月に Mohamed Rasmy 主任研究員、Ralph Acierto 専門研究員、南雲直子専門研究員、Thilini Kaushalya Ranapura Dewage リサーチアシスタントがフィリピンに出張しました。

10 月の出張では、10 月 28 日にラグナ州ベイ市で開催された、「HyDEPP-SATREPS 気候変動政策ワークショップ：ラグナ湖流域の洪水と渇水」に出席しました。このワークショップは、研究対象地域の一つであるパッシグ・マリキナ川ーラグナ湖流域を対象に作成された政策提言案に関する意見収集を目的に開催されました。まず、本プロジェクトの政策提言案に関わる科学的研究成果が紹介されました。ICHARM からは、Acierto 専門研究員が同流域における気候モデルを用いたシミュレーション結果を説明しました。また、Jonathan Serrano リサーチアシスタントは、気候変動が同流域の洪水に及ぼす影響評価を説明しました。その後、同流域の自治体や州、関係機関の出席者がワールドカフェスタイルで地域の現状や必要な対策などについて意見を出し合い、それを発表する形でプロジェクトメンバーと意見交換を行いました（写真 1）。

11 月の出張では、11 月 12 日の午前に開催された第 9 回合同調整委員会に出席し、フィリピン側メンバーや、JICA および JST の担当者と、10 月に開催された上述のワークショップの成果や、研究プロジェクト終了までのスケジュール、成果取りまとめ方針を確認しました。また、同日午後には、フィリピン国内の関係者を集めたワークショップ「HyDEPP-SATREPS 気候変動政ワークショップ：パンパンガ川流域およびパッシグ・マリキナ川ーラグナ湖流域の洪水と渇水」に参加しました。このワークショップには、本プロジェクトのメンバーや JICA、JST、連携機関のみならず、農業省、経済企画開発省、国家灌漑局など、プロジェクトの研究成果に関連するフィリピンの行政機関の担当者にも参加いただき、意見を収集することができました（写真 2）。これを踏まえ、本プロジェクトの最終成果の一つである政策提言のとりまとめを進めているところです。JICA 事業として研究が終了するまで、残り約 4 か月となりましたが、ICHARM では、フィリピン側メンバーと協力しながら、プロジェクトの目標達成に向けて研究に取り組んでいきます。

# Implementation of the Training of Facilitators for Kenyan experts
# ケニア人専門家のためのファシリテーター研修の実施

2025 年 10 月 27 日から 11 月 7 日までの約 2 週間、ケニアの専門家を対象としたファシリテーター研修を東京大学と協力して日本国内で実施しました。ファシリテーター研修には、分野横断的な取り組みを強化することを目的として、ケニアの気象局、水・衛生・灌漑局、ケニア電力公社、タナ川郡政府から 1 名ずつの専門家を招へいしました。さらに、ユネスコ東アフリカ地域事務所からも講師兼コーディネーターが 1 名参加しました。

ファシリテーター研修のプログラムは、気象、水文、防災に関する入門講義と試験、ハンズオントレーニング、現地視察、グループワークで構成されました。ハンズオントレーニングでは、予測雨量の活用、水文モデリング、リスクマッピングを実践し、グループワークではケニアにおける専門家トレーニングの実施を想定し、具体的なコンテンツと構成をデザインしました。

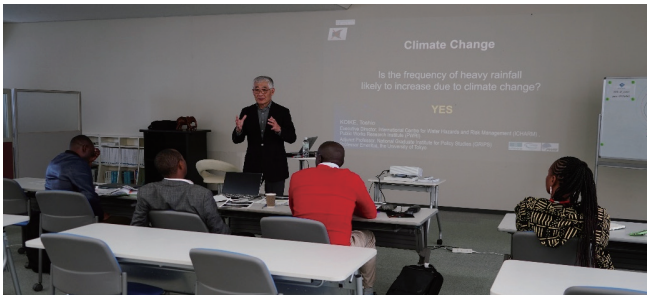
これらのプログラムを修了した専門家は、帰国後にケニアにおける専門家研修をファシリテーターとして主導し、ケニアの降雨予測、洪水予測、リスクコミュニケーション、地域の洪水レジリエンスを向上させる波及効果をもたらす役割が期待されます。

ICHARM provided four Kenyan experts with the “Training of Facilitators” program in Japan for two weeks, from October 27 to November 7, 2025, in cooperation with the UNESCO Regional Office for Eastern Africa and the University of Tokyo. To enhance cross-cutting initiatives, these experts were invited to this program from separate organizations: the Kenya Meteorological Department (KMD), the State Department for Water and Sanitation, the Kenya Electricity Generating Company (KenGen), and the Tana River County Government. A UNESCO coordinator was also invited to serve as an instructor and help strengthen the program.

The program consisted of introductory lectures and examinations on meteorology, hydrology, and disaster prevention, hands-on training, field visits, and group work. The hands-on training involved practical exercises in the application of predicted rainfall, hydrological modeling, and risk mapping. In the group work, the participants designed the content and structure for the “Training of Experts” program, which they were expected to implement for local experts in Kenya.

After completing the facilitator training, they served as facilitators and conducted a training program for local experts upon their return, helping to create a ripple effect to enhance rainfall prediction, flood forecasting, risk communication, and local flood resilience in their home country. (See the article on “Training of Experts” on page 25.)


Participants and lecturers of the “Training of Facilitators” program
ファシリテーター研修の参加者と講師達




Executive Director Koike delivering a lecture
小池センター長による講義

At the Watarase Retarding Basin (left) and the Kusaki Dam during the field trip
現地視察の様子（左：渡良瀬遊水地、右：草木ダム）

*(Written by MIYAMOTO Mamoru)*

# Site visit and workshop on integrated reservoir operation for cascading dams in Japan
# 日本のダム群における統合貯水池運用に関する現地視察とワークショップ

ICHARM led the "Site Visit and Workshop on Integrated Reservoir Operation for Cascading Dams in Japan" on November 18-21, 2025, as part of the "Technical Support for Advanced Forecast of Rainfall and Reservoir Inflow for Optimized Reservoir Operation," a project commissioned by the World Bank (WB). Its purpose was to strengthen the foundational dam reservoir management capabilities of Indian government officials through on-site observation of Japan's advanced rainfall forecasting and reservoir operation systems, as well as through technical training sessions carried out by ICHARM and the Japan Water Agency (JWA). The participants included eight from the Indian government and WB, three from JWA, and five from ICHARM: Executive Director KOIKE Toshio, Chief Researcher OKADA Tomoyuki, and Senior Researchers Mohamed Rasmy, USHIYAMA Tomoki, and TAKEGAWA Shinya.


Locations of site visits
現地視察箇所

[November 18]

The participants visited the Kagawa Irrigation Memorial Park, managed by Kagawa Prefecture, and the Sameura Dam, managed by JWA, a multipurpose dam located upstream on the Yoshino River. At the Kagawa Irrigation Memorial Park, the JWA staff provided an overview of the facilities and their maintenance, and explained how the ingenuity and technology developed by predecessors in their struggle to overcome chronic water shortages have contributed to improving the quality of life for current residents of the prefecture. At the Sameura Dam, the JWA staff also presented an overview of the Sameura Dam Upgrading Project, which aims at increasing the dam's flood control capacity to mitigate flood damage in its downstream areas. They also mentioned the construction challenges of this globally rare project: installing new discharge facilities by drilling into the existing dam embankment while the dam remains operational.

Field visit to the Kagawa Canal Memorial Park
香川用水記念公園の視察

Field visit to the Sameura Dam
早明浦ダムの視察

[November 19]

The participants visited the Yodogawa Integrated Dam and Reservoir Group Management Office of the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) and Hiyoshi Dam, managed by JWA. At the dam management office, office staff presented an overview of dams in the Yodo River system and explained integrated flood control operations and information sharing, which they conduct in coordination with other JWA-managed dams. They also illustrated the coordinated operation between Amagase Dam and the Seta River Weir, which utilizes the time

2025 年 11 月 18 日から 21 日にかけて、ICHARM が主体となり「日本のダム群における統合貯水池運用に関する現地視察とワークショップ」を実施しました。本現地視察とワークショップは、世界銀行からの委託業務である「貯水池運用の最適化のための降雨量と貯水池流入量の高度予測に関する技術支援」の一環であり、日本の先進的な降雨予測と貯水池運営システムの視察や、ICHARM、水資源機構（JWA）による技術講習を通し、インド政府職員のダム貯水池管理の基礎的能力を強化することを目的に実施したものです。インド政府及び世界銀行から計 8 名が参加し、ICHARM からは小池俊雄センター長、岡田智幸上席研究員、Mohamed Rasmy 主任研究員、牛山朋來主任研究員、武川晋也主任研究員が、JWA からは 3 名が参加しました。

【11 月 18 日（火）】

香川県が管理する香川用水記念公園と、吉野川上流にある JWA の早明浦ダムを訪問しました。香川用水記念公園では、施設の概要や維持管理に加えて、慢性的な水不足を工夫して乗り越えてきた先人の知恵と技術が、現在の県民の生活の質向上につながっていることについて説明を受けました。早明浦ダムでは、洪水調節容量を増大して被害の軽減を図ることを目的とした早明浦ダム再生事業を視察しました。また、ダムを運用しながら既存のダム堤体を削孔して放流設備を新設するという世界でも珍しい工事の施工上の苦労についても説明を受けました。

【11 月 19 日（水）】

国土交通省淀川ダム統合管理事務所と JWA の日吉ダムを訪問しました。淀川ダム統合管理事務所では、淀川水系ダム群の概要に加えて、JWA 管轄のダムと連携した洪水時の統合操作や情報伝達、淀川の水位と琵琶湖の水位のピーク時間差を活用した天ヶ瀬ダムと瀬田川洗堰との連携操作について説明を受けました。日吉ダムでは、施設の概要に加えて、下流の桂川の整備状況に合わせた現状の洪水調節計画、事前放流の実績、2013 年の台風 18 号の際のダムによる下流の水位低減効果について説明を受けました。

【11 月 20 日（木）】

牛山主任研究員は降雨予測に関する講義を行い、降雨のアンサンブル予測手法を複数紹介するとともに、インドでの 2019 年と 2024 年の洪水を対象に、予測手法やリードタイムの違いによる予測結果の比較を行いました。Rasmy 主任研究員は貯水池流入量予測に関する講義を行い、WEB-RRI モデルの仕組みとダム操作支援への活用方法を紹介するとともに、対象とするクリシュナ川流域で構築したモデルに上記の降雨予測結果を入力して流量の予測結果を比較しました。小池センター長は気候変

動によって頻発化・激甚化する水関連災害に関する講義を行い、気候変動を踏まえた利水ダムの洪水調節への活用や事前放流など、日本における具体的な対策を説明しました。また、京都大学の角哲也特定教授が日本におけるダムの堆砂対策を説明しました。

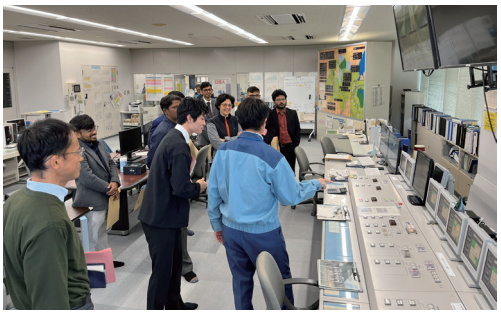
【11 月 21 日（金）】

午前中は JWA から、ダムの安全管理に関する説明と、予測情報に基づくダムの統合操作や最適操作に関する講義を行いました。続いてとりまとめのセッションでは、小池センター長が世界銀行の支援による ICHARM および JWA との協力枠組みを説明し、本プロジェクトの今後の進め方についてインド側と合意しました。午後は国土交通省水管理・国土保全局との打合せや廣瀬昌由技監への表敬訪問を行いました。国交省との打合せでは、日本側から水関連災害リスク軽減に関する日本の国際貢献や流域総合水管理をはじめとする施策を紹介し、インド側からは 2021 年のダム安全法の施行やダム機能回復・改修プロジェクト（DRIP）の概要について説明を受けました。表敬訪問では、廣瀬技監がインド代表団を歓迎し、これまでの両国の共同活動を紹介するとともに、日本の技術がインドの水資源管理と洪水対策に貢献することを期待すると述べました。インド水省の Shri V.L. Kantha Rao 事務次官は、国土交通省との覚書に基づく協力活動の枠組みが非常に効果的であるとともに、本プロジェクトを通じて新しいダム運用システムを日本からインドに導入する計画であると述べました。

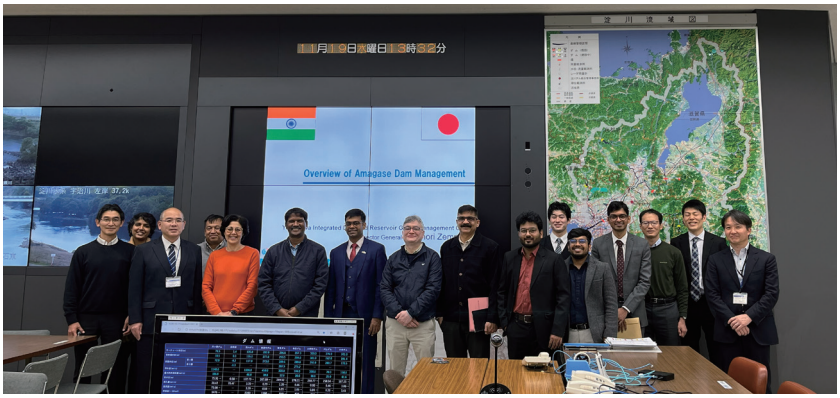
今回の現地視察とワークショップを通じて、日本の治水対策及び ICHARM の知見の普及を図ることができました。また、Rao 事務次官が本プロジェクトの意義を認め、自らリーダーシップをとって推進することを表明したことで、大変実りある成果が得られました。ICHARM は今後もインドの水関連災害の被害軽減や人材の育成に貢献していく予定です。

最後に、現地訪問にご対応頂いた関係者の皆様に深い感謝の意を表します。

difference between peak water levels in the Yodo River and Lake Biwa. At Hiyoshi Dam, dam staff provided an overview of the facilities and explained other topics related to dam operations, including the current flood control plan tailored to the development status of the downstream Katsura River, the historical record of pre-releases, and the dam's effectiveness in reducing downstream water levels during Typhoon No. 18 in 2013.



Field visit to the Hiyoshi Dam Management Office
日吉ダムの管理所の視察

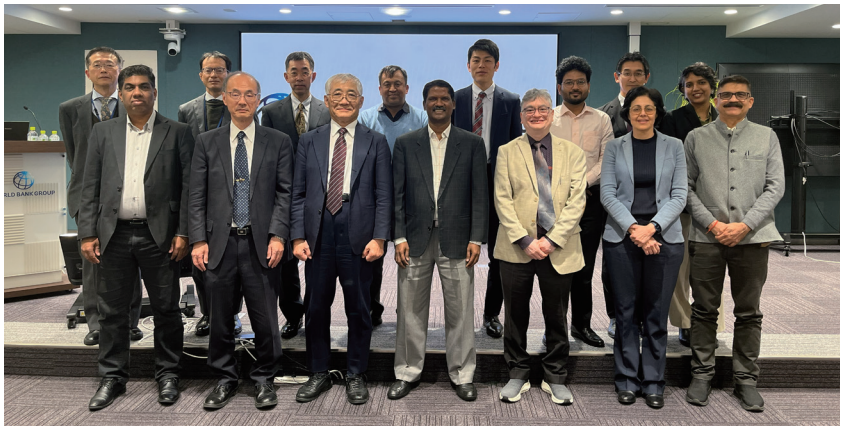



Participants at the Yodogawa Integrated Dam and Reservoir Group Management Office
淀川ダム統合管理事務所での集合写真

[November 20]

A series of lectures was conducted by ICHARM researchers. Ushiyama delivered a lecture on rainfall forecasting, introducing several ensemble methods. He compared forecast results across different forecasting techniques and lead times, using the 2019 and 2024 flood events in India as case studies. Rasmy gave a lecture on reservoir inflow forecasting, introducing the mechanism of the WEB-RRI model and its application for dam operation support. He compared flow forecasts by inputting Ushiyama's rainfall forecasts into a model constructed for the Krishna River basin. Koike gave a lecture on water-related disasters becoming more frequent and severe due to climate change. He explained specific countermeasures in Japan, such as utilizing water supply dams for additional purposes, including flood control and pre-releases, to address anticipated climate changes. Additionally, Program-Specific Professor SUMI Tetsuya of Kyoto University explained reservoir sediment management in Japan.

Lecture at the World Bank Tokyo Disaster Risk Management Hub
世界銀行東京防災ハブでの講義風景



Participants after the lecture from Program-Specific Professor Sumi
角先生の講義後の集合写真

[November 21]

In the morning, JWA staff conducted lectures on dam safety management and on integrated, optimal dam operations based on predictive information. During the subsequent summary session, Koike explained the cooperation framework between ICHARM and JWA supported by WB for this Indian project, and the Indian side agreed on the future direction of this project. In the afternoon, meetings were held with the Water and Disaster Management Bureau of MLIT, followed by a courtesy call on Vice Minister for Engineering Affairs HIROSE Masayoshi. During a meeting, the Japanese side highlighted Japan's international contributions to water-related disaster risk reduction, as well as policies such as integrated river basin management for all. The Indian side provided an overview of the implementation of the Dam Safety Act of 2021 and the Dam Rehabilitation and Improvement Project (DRIP). During the courtesy call, the vice minister welcomed the Indian delegation, referring to past joint activities between the two countries and expressing hope that Japanese technology would contribute to India's water resources management and flood control efforts. Shri V.L. Kantha Rao, the secretary of India's Ministry of Jal Shakti (MoJS), stated that the framework for collaborative activities based on the Memorandum with MLIT has been highly effective. He also mentioned a plan to introduce a new dam operation system from Japan to India through this project.

Lecture from JWA
水資源機構の講義

Meeting with MLIT and a courtesy call on the vice minister for engineering affairs
国土交通省との打合せ、廣瀬技監への表敬訪問

These field visits and workshops were also excellent opportunities for ICHARM to disseminate Japan's flood control measures and expertise. Furthermore, the occasion was highly rewarding as Secretary Rao recognized the significance of this project and expressed his commitment to taking the lead in advancing it. ICHARM plans to continue contributing to reducing water-related disaster damage and developing human resources in India.

Finally, ICHARM was very thankful to all the staff and officials for their excellent cooperation during the field visits.

*(Written by TAKEGAWA Shinya)*

## Onsite training under the UNESCO Ghana Project
## UNESCO ガーナプロジェクトにおける現地研修の実施

ICHARM has been conducting an assignment "Development of an Integrated Early Warning System for water-related hazards in Ghana" in collaboration with the University of Tokyo. As part of this assignment, in November 2025, Executive Director KOIKE Toshio, Chief Researcher OKADA Tomoyuki, Senior Researcher Mohamed Rasmy, and Research Specialists TSUTSUI Hiroyuki, Ralph Acierto, and NAGUMO Naoko visited Accra, the capital city of Ghana, and provided a training program for officials from Ghanaian agencies responsible for meteorology, hydrology, and disaster management (Photo 1).

ICHARM では、UNESCO から受託した「ガーナにおける水関連災害の統合型早期警戒システムの開発」業務を東京大学と協力しながら進めています。この業務の一環として、小池俊雄センター長、岡田智幸上席研究員、Mohamed Rasmy 主任研究員、筒井浩之専門研究員、Ralph Acierto 専門研究員、南雲直子専門研究員が 2025 年 11 月にガーナの首都アクラ

を訪問し、同国の気象、水文、災害対応機関の関係者らを対象とした研修を行いました（写真 1）。

この研修は、ボルタ川下流域を対象に ICHARM と東京大学が開発した、洪水・渇水に関する統合型早期警戒システムに基づくもので、11 月 14 日に開催した事前オンライン研修に続くものです。11 月 26 日には、UNESCO Accra 所長の Edmond Moukala 氏、および、ガーナ水文 局 Chief Executive Officer の Dr. Sylvester Darko 氏に挨拶いただいた後、本システム操作のデモンストレーションを行うとともに、気候変動、衛星降雨データのバイアス補正、降雨予測に関する講義を実施しました。11 月 27 日には、洪水および農業渇水のモニタリングと予測に関する講義を行いました。なお、この日は、駐ガーナ特命全権大使の義本博司氏にもご出席いただきました。そして、11 月 28 日には、参加者が実際にシステムを操作するハンズオン研修を実施しました（写真 2）。

参加者は非常に熱心に研修に取り組み、意見交換では、システムの表示方法に関する具体的な要望に加え、フォローアップ研修や気象・水文モデリングに関する発展的な研修の実施、今後の研究・研修協力等について、多くの意見を収集することができました。また、研修参加者は後日オンライン試験を受験し、16 名が合格しました。

研修に先立つ 11 月 25 日には、ボルタ川下流域を訪問し、ボルタ川公社の協力の下、気象観測施設およびダム施設の視察を行いました。ダム管理者との意見交換を通じて、ダムの構成、平常時および洪水時における操作や放流実績の現状、ならびにガーナにおけるボルタ川の重要性について理解を深めることができました（写真 3）。これらの研修および視察を踏まえ、ICHARM では本業務の完了に向けて引き続き取り組んでいきます。

Photo 1 The training participants and the project team members
写真 1　研修参加者との集合写真

This training was conducted as a continuation of the preliminary online training on November 14 using the Integrated Early Warning System (IEWS) for floods and droughts developed by ICHARM and the University of Tokyo for the lower Volta River basin. On November 26, following opening remarks by Mr. Edmond Moukala, the director of the UNESCO Accra Office, and Dr. Sylvester Darko, the chief executive officer of the Ghana Hydrological Authority, the ICHARM project team demonstrated the system and delivered lectures on climate change, bias correction of satellite-based rainfall data, and rainfall prediction. On November 27, the team also provided lectures on flood monitoring and forecasting, as well as agricultural drought monitoring and prediction, and explained how to interpret the information displayed on each page of the IEWS. Mr. YOSHIMOTO Hiroshi, the ambassador extraordinary and plenipotentiary of Japan to Ghana, was also present at the training to observe. On November 28, a hands-on training session was conducted, during which participants operated the system themselves (Photo 2).

Photo 2 The training in session (left: lecture, right: hands-on training)
写真 2　研修の様子（左：講義、右：ハンズオン研修）

The participants actively engaged in the training. During the discussion, the project team collected a wide range of valuable feedback, including specific requests regarding the system's display functions, suggestions for follow-up training, requests for advanced training on meteorological and hydrological modeling, and ideas for future research and training collaboration. The training participants were required to take an online examination later, and 16 participants successfully passed it.

Prior to the training, on November 25, the team visited the lower Volta River basin, including a meteorological observation station and dam facilities with the cooperation of the Volta River Authority. Through discussions with dam operators, the team gained a better understanding of the dam structures, their operational practices and water release records under both normal and flood conditions, and the importance of the Volta River in Ghana (Photo 3). Based on these training activities and site visits, ICHARM will continue to work toward the completion of the assignment.


Photo 3 The project team on a field visit (left: meteorological observation station, right: Akosombo Dam)
写真３　現地視察の様子（左：気象観測施設、右：アコソンボダムでの集合写真）

*(Written by NAGUMO Naoko)*

## Training of Experts in Malindi, Kenya
## ケニア・マリンディにおける専門家トレーニング

One of the facilitators leading the hands-on training
ファシリテーターによる実践演習

ICHARM supported the delivery of the "Training of Experts" program held in Malindi, Kenya, on December 9-11, 2025, for local experts from various water management organizations across the country, in collaboration with the UNESCO Regional Office for Eastern Africa. The program was organized by four Kenyan experts who completed the Training of Facilitators program in Japan in October 2025. (See the article on "Training of Facilitators" on page 20.) A total of 27 participants from 16 offices across 12 organizations comprehensively learned about strengthening flood resilience through the program comprising keynote lectures, system demonstrations, examinations, hands-on training, and the presentation of certificates.

During the system demonstrations, focusing on the Tana River basin as a prototype, ICHARM researchers demonstrated how to display real-time flood forecasting information generated from predicted rainfall produced by the Data Integration and Analysis System (DIAS). In this training, the four facilitators also played vital roles, delivering the keynote lecture on the basin's flood characteristics and leading hands-on training on climate change impact assessment, hydrological modeling, and risk mapping. It is particularly noteworthy that the entire content and structure of this training were mainly developed by the facilitators, who used the knowledge and skills they acquired through the training in Japan to apply advanced technologies to the local basin.

Such locally adapted initiatives are only possible through collaboration with local experts, and ICHARM intends to continue contributing to strengthening water disaster resilience through an approach that emphasizes local characteristics in both system development and capacity building.


Participants in the "Training of Experts" program
専門家研修の参加者

*(Written by MIYAMOTO Mamoru)*

日本において 2025 年 10 月に実施されたファシリテーター研修を修了した４名のケニア人専門家と ICHARM および UNESCO 東アフリカ地域事務所が協力して、ケニアの水マネジメントに関係する多様な機関を対象とした専門家研修を 2025 年 12 月 9 日から 11 日までケニアのマリンディにおいて開催しました。本研修には、ケニア国内の 12 機関 16 事務所から計 27 名が参加し、基調講義、システムデモンストレーション、試験、実践演習、修了証授与から成るプログラムを通じて、洪水レジリエンスの強化について体系的に学びました。

システムデモンストレーションでは、DIAS 上に開発された予測降雨を活用したタナ川流域のリアルタイム洪水予測情報の表示を ICHARM メンバーが実演しました。そして、この研修では４名のケニア人ファシリテーターも重要な役割を果たしており、タナ川の洪水特性に関する基調講義と気候変動影響評価、水文モデリング、リスクマッピングに関する実践演習を行いました。特に注目すべきは、4 名のケニア人ファシリテーターが日本で学んだ知識と技術を基にタナ川流域への適用技術としてこれらの研修コンテンツと構成を考案し主導したことです。

このような地域適応を想定した取り組みは、現地専門家との協働であるからこそ実施可能であり、ICHARM は今後もシステム開発と能力開発の両面において地域性を重視したアプローチを通じ、水災害レジリエンスの強化に貢献していく所存です。

# Training & Education

https://facebook.com/icharmtrainingcourse/

ICHARM では、2007 年以降、（独）国際協力機構 (JICA) 及び政策研究大学院大学（GRIPS）と連携して、主に外国人行政職員を対象として、約 1 年間で学位を取得できる修士課程「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」）を実施しています。例年、10 月から翌年 3 月までの 6 カ月は主に講義や演習が行われ、4 月から 8 月にかけて学生は論文執筆に取り組みます。今年度は第 19 年目を迎え、2025 年 10 月 1 日より新たに 14 名（バングラデシュ 1 名、ブータン 1 名、インドネシア 2 名、ケニア 1 名、マダガスカル 2 名、マラウイ 3 名、スリランカ 2 名、東ティモール 1 名、ブータン 1 名）の修士学生が本コースに参加しています。

また、ICHARM では、2010 年から GRIPS と連携して、博士課程の学生も受け入れており、2015 年からは JICA による奨学金制度の導入がなされるなど財政的サポートも充実させてきました。今年度は 10 月 1 日より 3 名（ネパール 1 名、ベトナム 1 名、バングラデシュ 1 名）の博士学生が加わり、三学年合わせて 9 名となりました。

Since 2007, ICHARM, in cooperation with the Japan International Cooperation Agency (JICA) and the National Graduate Institute for Policy Studies (GRIPS), has provided a master's program, "Water-related Disaster Management Course, Disaster Management Policy Program (JICA Knowledge CO-Creation Program on Flood Disaster Risk Reduction)," which is mainly designed for foreign government officers to obtain a degree in one year. The students learn theories and practices in the first half from October to March and work on their theses in the second half from April to August. The program has started its 19th year on October 1, 2025, welcoming 14 new students (one each from Bangladesh, Bhutan, Kenya, Timor-Leste, and Viet Nam, two each from Indonesia, Madagascar, and Sri Lanka, and three from Malawi).

In addition, ICHARM has been accepting doctoral students in collaboration with GRIPS since 2010. In 2015, the doctoral program upgraded its financial support, including a scholarship from JICA. In October, three new students joined from Nepal, Vietnam, and Bangladesh, which bringing the total to nine students enrolled in this three-year program.

## Comments from new doctoral course students
## 博士課程　新入学生からのコメント

### Mr. Nirakar Thapa from Nepal

*Supervisor: Abdul Wahid Mohamed RASMY*

I work as a hydrologist at the Department of Hydrology and Meteorology (DHM), Nepal, and am currently a first-year PhD student at ICHARM.

Nepal's high mountain basins are experiencing rapid cryosphere change, with expanding glacial lakes and increasing outburst flood hazards posing growing risks to hydropower facilities, critical riverine infrastructure, and downstream communities. Steep topography and accelerating climate impacts demand deeper scientific understanding to guide water resources planning, disaster preparedness, and long-term resilience. My research focuses on the evolution of glacial lakes and the assessment of associated hydrological and geomorphological hazards, with the aim of improving understanding of climate-induced risks in snow- and glacier-fed river systems.

Studying at ICHARM and GRIPS, with the support of JICA, provides an exceptional environment to advance this work through state-of-the-art analytical tools, field-based knowledge, and global expertise in water-related disaster management. This program offers a unique opportunity to broaden my perspective on integrated risk reduction and strengthen the scientific foundation needed for effective policy and infrastructure planning.

I look forward to deepening my understanding of these critical processes and contributing to the development of resilient water resources management in Nepal and other vulnerable mountain regions.

### Ms. PHAM THI THU HUYEN from Vietnam

*Supervisor: MIYAMOTO Mamoru*

I am Pham Thi Thu Huyen, a Ph.D. student in the Disaster Management Program at GRIPS and ICHARM, supported by the JICA Scholarship. I have professional experience at the Water Resources Institute under the Ministry of Agriculture and Environment of Vietnam and the Mekong River Commission Secretariat (MRCS), where I worked on flood forecasting, water resources planning, and transboundary disaster risk management. These experiences enhanced my understanding of practical challenges in regional water governance and disaster risk reduction.

My academic background is in hydrology and water resources engineering, with a focus on applying scientific and data-driven approaches to address flood risks and water security challenges. My doctoral research centers on the integration of hydrological–hydraulic modeling, multi-criteria decision-making, and artificial intelligence to develop an advanced decision-support system for optimizing reservoir operations and reducing flood risks under the impacts of climate change.

Participating in this Ph.D. program is a crucial step in my career, enabling me to strengthen my technical expertise, expand my international perspective, and develop leadership capacity in disaster risk reduction. The knowledge and experience gained at ICHARM will support me in advancing sustainable water management practices and contributing more effectively to resilient development in Vietnam.

### Mr. Al Biruni Abu Raihan Mohammad from Bangladesh

*Supervisor: SHIMIZU Yoshihiko*

I am Abu Raihan Mohammad Al Biruni, working as an executive engineer at the Bangladesh Water Development Board (BWDB) under the Ministry of Water Resources (MoWR) since 2012. I completed my master's degree in civil and environmental engineering from Saitama University, Japan, in 2023, and I am currently pursuing my PhD degree in disaster management at GRIPS in collaboration with the International Centre for Water Hazard and Risk Management (ICHARM) under the Public Works Research Institute (PWRI), Japan. Being part of ICHARM, a global center of excellence for water-related disaster management under UNESCO, provides me with valuable opportunities to learn advanced DRR methodologies and innovative analytical tools.

My research focuses on sediment-related challenges in the southern part of Bangladesh, particularly in the Tetulia River system. This region faces significant sedimentation issues that affect river morphology, navigation, and disaster risks in the surrounding coastal areas. Through my PhD work, I aim to examine sediment dynamics, assess long-term geomorphological changes, and develop sustainable, DRR-oriented strategies to mitigate sediment-induced hazards and enhance community resilience. I believe that the advanced knowledge and research experience gained through GRIPS and ICHARM–PWRI will contribute meaningfully to long-term sediment management and DRR planning in Bangladesh.

## Comments from new master's program students
## 修士課程　新入学生からのコメント

### Mr. MOHAMMAD Noor from Bangladesh

I am Noor Mohammad, a civil engineer currently working within the Design and Research Circle-4 of the Bangladesh Water Development Board (BWDB).

A significant part of my work includes developing sophisticated Python-based software for one-click drafting and design of civil engineering projects, such as generating long and cross sections from Excel, designing and drafting riverbank protection work, designing and calculating earth volumes for cutting and filling in re-excavation projects, and road and embankment development projects. This software uses raw field survey data for faster, single-click design and plotting in AutoCAD, resulting in faster design and estimation. Additionally, I have conducted the numerical analysis of simple supported beams resting on an elastic foundation using Mathcad during my undergraduate studies.

My research interest is modeling climate change impacts on the hydrology of the Feni River basin's future flow extremes.

I am really thankful to JICA, ICHARM, PWRI, and GRIPS for giving me this excellent chance to study alongside such accomplished peers and faculty. I am excited to learn new techniques from ICHARM to produce high-quality, practical results to make a significant contribution to building a disaster-resilient Bangladesh and supporting global efforts to construct safer and more sustainable disaster-resilient communities.

## Mr. TENZIN Sangay from Bhutan

Kuzu Zangpo! I am Sangay Tenzin from Bhutan. I am a civil engineer serving with the Ministry of Infrastructure and Transport. I am grateful for the opportunity to pursue a master's degree in disaster management policy (flood disaster risk reduction). I believe it will be highly beneficial given Bhutan's vulnerability to floods.

The highly knowledgeable professors and the occasional excursions to view ingenious designs and measures adopted by the Japanese people for disaster mitigation have further bolstered my desire to learn as much as possible during the short period of study here.

I enjoy reading, music, and football.

## Mr. RIYADI Farhan Putra from Indonesia

I am Farhan Putra Riyadi from Indonesia, and I have worked for over five years at the Directorate of Rivers and Coasts under the Ministry of Public Works. My work focuses on coastal and river development, including flood protection and early warning systems.

Growing up near a river, I experienced floods firsthand—from minor inundations after heavy rain to devastating events that swept away everything in their path. This sparked my interest in understanding flood dynamics, leading me to earn a bachelor's degree in water resources engineering and management from the Institute of Technology Bandung (ITB).

Dealing with flood-related disasters in my career has strengthened my motivation to learn more about flood risk management. Studying flood disaster risk reduction at GRIPS and PWRI-ICHARM is a valuable opportunity to collaborate with leading researchers and deepen my knowledge. I sincerely thank JICA, PWRI-ICHARM, and GRIPS for this unique chance to learn not only about flood management but also about Japanese culture and policies on disaster risk reduction.

I look forward to applying these insights to improve flood resilience in Indonesia.

## Ms. OCTAVIA Tari Azanna from Indonesia

Hello! My name is Tari Azanna Octavia, and I am from Jakarta, Indonesia. I currently work as a junior expert in water resources management at the Ministry of Public Works in Indonesia. In my daily work, I am involved in planning and managing water-related programs, particularly those aimed at reducing disaster risks in rivers, coastal areas, and urban drainage systems.

Given that both Indonesia and Japan are disaster-prone countries, particularly when it comes to water-related hazards such as floods and tsunamis, I've become deeply interested in studying how Japan approaches disaster risk reduction and water management. Japan's methods and proactive disaster preparedness strategies have always fascinated me, and I'm eager to learn more about how they manage and mitigate such risks.

I would like to express my sincere gratitude to JICA for giving me the opportunity to study at GRIPS, in collaboration with ICHARM–PWRI. Through this learning experience, I hope to gain advanced insights, technical skills, and practical knowledge that I can apply to improve water resource management and strengthen disaster preparedness efforts in Indonesia.

I am also excited about the chance to learn in an international environment where I can exchange ideas, share experiences, and collaborate with colleagues who have similar interests and a shared commitment to disaster risk reduction.

## Mr. DAHIR Yahya Aden from Kenya

I am Dahir Yahya Aden, currently working as a hydrologist at the Coastal Athi Sub-Basin office in Mombasa, Kenya. My duties include analyzing hydrological data, performing real-time hydro-meteorological monitoring, and supporting flood early-warning systems through platforms like MIKE INFO and MIKE Operations. I also compile water situation reports that assist in basin-level and national water management decisions.

Growing up in a region heavily impacted by water scarcity sparked my interest in water resources and motivated me to pursue a career focused on sustainable water management and governance. I hold a Bachelor of Science in Hydrology and Water Resources Management from the University of Eldoret, Kenya. Over the years, I have strengthened my technical skills through various professional training programs, including WEAP modeling and integrated water resources management. I have also been part of the Young Expert Programme (YEP), which gave me valuable experience in collaborative water management practices during training in the Netherlands.

I am currently pursuing a master's degree in water-related disaster management at ICHARM, PWRI, and GRIPS under the esteemed PWRI–JICA scholarship program. My studies focus on flood risk management, hydrological modeling, and disaster resilience. I aim to apply the knowledge and skills gained at ICHARM/GRIPS to enhance Kenya's capacity in flood management and contribute to more resilient and sustainable water resources systems.

## Ms. RAMBOLAMANANA Faranirina Sarindra from Madagascar

My name is Rambolamanana Faranirina Sarindra, and I am from Madagascar. I am a civil engineer working at the Ministry of Public Works (MTP), specifically at DRTP Analamanga. My professional responsibilities include the design and supervision of road infrastructure and urban drainage systems, particularly in areas frequently affected by flooding. I completed my bachelor's degree in civil engineering in Madagascar and have since gained practical experience in projects related to flood-prone urban environments.

I would like to express my sincere gratitude to ICHARM, GRIPS, and JICA for providing me with the opportunity to study and work closely with experts in water-related hazard management at ICHARM, a global center of excellence in disaster risk reduction. My research interests focus on climate-resilient urban drainage and the increasing challenges of urban flooding in Antananarivo under climate change. I aim to analyze the factors contributing to severe urban floods and explore practical solutions to improve the resilience of drainage networks in rapidly growing cities.

Studying at ICHARM allows me to learn from world-class experts, use advanced tools and technologies, and collaborate with international colleagues who share the same passion for disaster risk reduction. I am truly grateful to ICHARM, GRIPS, PWRI, and the people of Japan for offering me this valuable opportunity. I believe that the knowledge, technical skills, and advanced DRR practices I will gain in Japan will greatly support my work and contribute to improving disaster management strategies in my department and my country.

## Ms. RAZAFINDRAMASY Hortencia from Madagascar

My name is RAZAFINDRAMASY Hortencia, and I am from Madagascar. I work with the Disaster Management Organization in my country, which is called "Bureau National de Gestions des Risques et Catastrophes (BNGRC)". My duties focus on protecting people from incoming disasters, answering emergency calls, offering adapted solutions, and closely monitoring the situations of communities in vulnerable areas. It is a post that makes me close to communities at risk.

About my study background, I completed my master's degree in environmental sciences and management at "Institut Superieur en Sciences de l'Environnement et de Gestion (ISSEG)" in Antananarivo, Madagascar.

I am sincerely grateful to JICA, PWRI, ICHARM, and GRIPS for giving me this opportunity to study water-related hazards and management in Japan. The knowledge that I will acquire here will be useful for my country, which is extensively impacted by severe floods and droughts every year. I would like to focus my research on improving early warning systems by integrating flood detection and simulation using GIS tools. It will save not only human lives but also influence and orient environmental protection policies.

During my stay, I hope to fully enjoy Japan.

## Mr. KAPATSA Jonathan from Malawi

My name is Jonathan Kapatsa from Malawi. I have been working with the Department of Disaster Management Affairs (DoDMA) as a disaster risk management officer for the past 5 years. My work involves coordinating and implementing disaster risk management activities at the district level, conducting activities starting from disaster preparedness to recovery interventions. My work mostly involves working with local communities, particularly those vulnerable and at risk. I have a BSc in Environmental Science from the Lilongwe University of Agriculture and Natural Resources (LUANAR).

I am excited to come to Japan to learn about disaster risk management, as I consider Japan to be a pioneer in the field, given its resilience to the multiple natural hazards it faces. I'm grateful to JICA, ICHARM, GRIPS, and PWRI for the opportunity to study for my master's degree in disaster risk management. This will help deepen my understanding of disaster risk management through lectures, study trips, and research during the study period. In turn, I'll be returning home with the valuable knowledge to build a more disaster-resilient Malawi.

Outside of my professional work, I enjoy listening to music, writing poetry, taking photographs, as well as travelling to scenic sites.

## Mr. NEDSON Mphatso Kapako from Malawi

Hello, My name is Nedson Mphatso Kapako. I currently serve as a disaster risk management officer with Malawi's Department of Disaster Management Affairs (DoDMA), working at the Chitipa District Council duty station. In this role, I am involved in coordinating disaster preparedness, response, and risk reduction initiatives aimed at safeguarding communities from various hazards.

I hold a bachelor's degree in meteorology and climate science obtained from the Malawi University of Science and Technology (MUST), a foundation that has strengthened my understanding of weather-related hazards and their impacts on vulnerable populations. I am currently pursuing a master's degree in disaster management policy with a focus on water-related disasters at the National Graduate Institute for Policy Studies (GRIPS) in collaboration with the International Centre for Water Hazard and Risk Management (ICHARM) in Japan.

I am deeply grateful to GRIPS and ICHARM for granting me the opportunity to advance my knowledge and professional skills through this program. My sincere appreciation also goes to JICA for generously sponsoring my studies through the Knowledge Co-Creation Program (KCCP).

Outside my professional and academic work, I remain passionate about contributing to resilient communities and applying evidence-based approaches to disaster risk management in Malawi and beyond.

Warm regards,

## Mr. MANDALA Daniel Issac from Malawi

My name is Daniel Isaac Mandala. Since 2020, I have been working as a disaster risk management officer at the Ministry of Local Government with technical support from the Department of Disaster Management Affairs (DoDMA). My main duty is to coordinate and direct the implementation of all disaster risk management programs at the local authority level. I have vast experience working in disaster preparedness, response, and community resilience building. I have also demonstrated a commitment to supporting communities that are most vulnerable to various hazards like floods, which continue to affect many regions across the country. Before joining DoDMA, I worked with other local and international organizations, including the United Nations Development Programme (UNDP) as a UNV disaster risk management officer from 2017 to 2020.

I obtained a bachelor's degree in environmental science and technology in 2015 from the Malawi University of Business and Applied Sciences (MUBAS), which was formerly called the Polytechnic. The academic background has provided me with a solid foundation in disaster risk reduction, climate resilience, and policy analysis, enabling me to contribute effectively to national disaster management initiatives.

## Mr. WELIWITA Prageeth Chanaka from Sri Lanka

My name is Prageeth Chanaka Weliwita, and I am from Sri Lanka. I am a chartered civil engineer working in the Irrigation Department of Sri Lanka, where I serve as chief engineer, responsible for water resource planning, design, and management. I hold a Bachelor of Science in civil engineering from the University of Peradeniya. I am honored to be selected for a master's degree in disaster management at GRIPS, Japan, through the ICHARM/GRIPS master's program.

My current research focuses on developing an optimized integrated reservoir flood operation system for the Malwathu Oya Upper Basin in Sri Lanka. This includes creating a Socio-Economic Vulnerability Index (SVI) to design a foresight framework aimed at minimizing socio-economic impacts in Anuradhapura City under climate change conditions.

Studying at ICHARM, PWRI, and GRIPS provides an exceptional academic environment along with valuable cultural experiences. It is a privilege to continue my studies in Japan, a nation known for its rich heritage and advanced technology. I am deeply grateful to ICHARM, PWRI, GRIPS, and the people of Japan for this invaluable opportunity. At present, Sri Lanka is experiencing severe floods and landslides, making it an ideal time to develop futuristic, resilient models and designs that support sustainable "build back better" solutions.

## Mr. NADARAJAH Arunaruban from Sri Lanka

My name is Nadarajah Arunaruban, and I am from Sri Lanka. I am currently pursuing a master's degree under the scholarship of the JICA Knowledge Co-Creation Program. This MSc program in flood disaster risk reduction is jointly coordinated by ICHARM, the Public Works Research Institute (PWRI), and the National Graduate Institute for Policy Studies (GRIPS). Studying at ICHARM offers a distinguished environment that nurtures academic excellence while also enriching sociocultural understanding.

Currently, I work as a civil engineer at the Mahaweli Authority of Sri Lanka, where my responsibilities have provided me with extensive experience in water infrastructure development, flood management, and disaster risk reduction while also coordinating with communities and government agencies to ensure resilience and sustainability.

My current research focuses on integrating climate change adaptation and the development of hydrodynamic modelling for flood management in the Kala Oya basin downstream of Kala Wewa. The central concept is "Living with floods," which emphasizes coexistence with natural hazards. As part of this, I propose flood-lifting houses to support communities in flood-prone areas, aiming to reduce vulnerability.

Through this program, I aspire to combine my professional experience with advanced academic knowledge to contribute innovative solutions for flood risk reduction in Sri Lanka and beyond.

## Ms. BAPTISTA FREITAS Angelina from Timor-Leste

My name is Angelina Baptista Freitas, and my nickname is Ange. I am from Timor-Leste. Before coming to Japan to pursue a master's degree in disaster management policy for water-related hazards, I worked as a meteorologist for five years at the National Directorate of Meteorology and Geophysics (DNMG) under the Ministry of Transport and Communications (MTC), and I was responsible for public weather forecasting.

My main duty was to collaborate with key stakeholders, including disaster management institutions, NGOs, and agencies such as Red Cross Timor-Leste (CVTL), World Vision Timor-Leste, and Mercy Corps, which focus on disaster prevention, mitigation, and adaptation in Timor-Leste. Through these collaborations, from the national to community levels, my colleagues and I aimed to enhance public awareness and advisory systems for improving resilience to hydrometeorological disasters through anticipatory action initiatives.

I would like to express my sincere gratitude to the Japan International Cooperation Agency (JICA), in collaboration with GRIPS and ICHARM, for giving me this valuable opportunity to broaden my knowledge especially in water-related hazard management. During this program, I will learn how Japanese society, particularly in the field of science, inspires me to become a better professional dedicated to developing science and technology in my country, with a special focus on disaster preparedness, readiness, and community resilience in the future.

Although it is not easy to fully understand all aspects of water-related hazards and their linkages to community resilience, I have already gained many valuable insights from lectures and field visits. I truly appreciate how tirelessly the Japanese government works to help communities become resilient to such hazards; for example, in Shikoku Island, where many communities face major hazards such as tsunamis and earthquakes, the government has implemented various countermeasures to strengthen resilience against future climate change impacts. These strategies include constructing gravity dams upstream to reduce flood risks and sediment deposition downstream, while also providing water for agricultural irrigation and community use during the dry season.

In Timor-Leste, especially in the municipality where I come from, communities face water scarcity during the dry season. Therefore, the construction of dams would be a highly valuable project to support and strengthen community resilience in the future.

Muita Obrigada!!!

Dōmo arigatōgozaimasu!!!

## Mr. TRAN Ba Hoang Long from Vietnam

Xin chào! My name is Tran Ba Hoang Long, and I am from Vietnam. I have worked as a researcher at the Southern Institute of Water Resources Research (SIWRR) for 5 years. I earned my bachelor's degree in civil engineering from Thuy Loi University in Viet Nam in 2020. My main duty is working with water-related disasters. I am interested in learning software such as numerical models, GIS, Google Earth Engine, and disaster risk reduction.

I'm deeply grateful to SIWRR for supporting me from the very beginning. Moreover, I am especially thankful to JICA for providing me with an opportunity to study at GRIPS and PWRI-ICHARM.

In my opinion, studying in Japan is both an honor and a challenge. I must make every effort to acquire new knowledge and skills. The expertise I gain here will be invaluable to me and to my country, Vietnam. When returning, I will share what I will have learned with researchers at my institution and across Vietnam.

In addition, I have the chance to interact with people from diverse backgrounds, learning and experiencing together. I also enjoy life in Japan and the chance to explore its advanced technologies, architecture, and engineering works.

Thank you for giving me this invaluable opportunity.

# Educational program updates
# 教育・研修活動報告

### 10 月 1 日：第 19 期研修　開講式

10 月 1 日に ICHARM 講堂において、2025 年度修士コース開講式を実施しました。JICA 筑波から山口和敏課長、GRIPS からは田村英之教授、土木研究所からは藤田光一理事長より歓迎の挨拶を頂きました。また、学生を代表して、BAPTISTA FREITAS Angelina 氏（東ティモール）が挨拶を行いました。

### October 1: The 19th opening ceremony

On October 1, 2025, the 19th opening ceremony of the master's course for the 2025-2026 academic year was held at the ICHARM auditorium. JICA Tsukuba Director of Training Program Division YAMAGUCHI Kazutoshi, GRIPS Professor TAMURA Hideyuki, and PWRI President FUJITA Koichi gave a warm welcome speech to the new students. In return, Ms. BAPTISTA FREITAS Angelina from Timor-Leste spoke on behalf of the students.

At the opening ceremony
開講式にて

*(Written by HERAI Masahiko)*

### 講義

通常講義は、清水義彦研究・研修指導監による「Hydraulics」、Shrestha Badri Bhakta 専門研究員による「Open Channel Hydraulics and Practice」、小池俊雄センター長及び宮本守主任研究員による「Hydrology」から始まりました。10 月中旬からは江頭進治元 ICHARM 研究・研修指導監及び秦梦露専門研究員による「Sediment transport mechanics」　と、Abdul Wahid Mohamed RASMY 主任研究員による

### Lectures

The regular lectures started with "Hydraulics" by Research and Training Advisor SHIMIZU Yoshihiko, "Open Channel Hydraulics and Practice" by Research Specialist Shrestha Badri Bhakta, and "Hydrology" by Executive Director KOIKE Toshio and Senior Researcher MIYAMOTO Mamoru. From mid-October, "Sediment Transport Mechanics" by Former Research and Training Advisor EGASHIRA Shinji and Research Specialist QIN Menglu and "Geographic Information Systems and Remote Sensing Technique" by Senior Researcher Abdul Wahid Mohamed RASMY with Professor KAWASAKI Akiyuki of the Institute for Future Initiatives, the University of Tokyo, started.

The intensive lectures at the National Graduate Institute for Policy Studies were held from November 1 to 14. The students attended the lectures while staying at the Tokyo office of the Japan International Cooperation Agency, together with students from the International Institute of Seismology and Earthquake Engineering (IISEE) of the Building Research Institute and Japanese students from other organizations.

In December, Research Specialist NAGUMO Naoko and Professor SUGAI Toshihiko of the University of Tokyo began lecturing on "Geography on Flood Disaster Management." As part of this lecture, the students visited the Geospatial Information Authority of Japan, located in Tsukuba City. Also underway is the lecture on "River Engineering" by Research and Training Advisor SHIMIZU and Professor FUKUOKA Shoji of Chuo University. Most recently, "Numerical Analysis Method and Practice" by Senior Researchers Rasmy and USHIYAMA Tomoki and Research Specialist QIN began in late December.

*(Written by HERAI Masahiko)*

「Geographic Information Systems and Remote Sensing Technique」が始まり、川崎昭如東京大学未来ビジョン研究センター教授にも講義を担当いただきました。

また、11 月 1 日から 14 日まで GRIPS 集中講義が対面で開催されました。学生たちは JICA 東京に滞在しながら、建築研究所国際地震工学センター（IISEE）の学生や他所属機関の日本人学生と共に、出席しました。

12 月には南雲直子専門研究員による「Geography on Flood Disaster Management」の講義も始まり、講義内では国土地理院を視察したほか、須貝俊彦東京大学教授も講義を担当しました。また、清水義彦研究・研修指導監による「River Engineering」の講義が始まり、講義内では、福岡捷二中央大学研究開発機構教授にも講義を担当いただきました。さらに、12 月末には牛山朋來主任研究員、秦梦露専門研究員及び Abdul Wahid Mohamed RASMY 主任研究員による「Numerical Analysis Method and Practice」も始まりました。

## October 24: Visit to Ninomiya Sontoku Museum

ICHARM upholds the teachings of NINOMIYA Sontoku as the philosophy guiding its training programs. Ninomiya Sontoku was a prominent 19th-century social reformer who, through his extensive agricultural knowledge, civil engineering skills, and unique management abilities, revived numerous villages devastated by floods, famines, and other disasters. His spirit lives on in ICHARM's mission of "localism and human empowerment," fostering the development of individuals who aspire to become effective leaders and contribute to their communities.

On October 24, 2025, master's and doctoral students attended a lecture on this exceptional social reformer delivered by Executive Director KOIKE Toshio, and then visited the Ninomiya Sontoku Museum in Moka City, Tochigi Prefecture. On the return bus, each student spoke for a minute, sharing insights and inspirations gained from learning about him, an important step in internalizing their reflections.

With the Sontoku spirit in their hearts, doctoral students will pursue their academic endeavors over the next three years. Among the master's students, the one judged to have best practiced his teachings will be selected by peers to receive the Sontoku Award during the graduation ceremony at JICA. ICHARM would like readers to look forward to finding out which student will receive the award at the end of the course.

In front of the restored old house that once served as Sontoku's office
尊徳が仕事場として使用していた民家の前で

The statue of Sontoku accompanied by a brief description of his deeds
尊徳像と彼の功績を記した石碑

*(Written by NAKAMURA Mikiko)*

## 10 月 24 日：二宮尊徳資料館視察

ICHARM は二宮尊徳の教えを研修の Philosophy として掲げています。二宮尊徳は、19 世紀の著名な社会改革者で、その豊富な農業知識、土木の才能及び独特な管理力により、洪水、飢饉等で荒廃した多くの町村を復興させた人物です。彼の精神は ICHARM の使命である「ローカリズムとヒューマンエンパワーメント」に受け継がれ、良きリーダーとして地域に貢献する人材の輩出に繋がっています。

10 月 24 日、小池センター長による二宮尊徳に関する講義が行われ、栃木県真岡市にある二宮尊徳資料館を視察しました。帰りのバスの中では、1 分間の感想スピーチが行われ、知識の定着が図られました。

博士学生は、この尊徳の精神をもって 3 年間の学業に励みます。修士学生においては、一番クラスのために貢献した人を学生同士の投票で決定し、JICA 修了式の際に受賞される「Sontoku Award」に繋がっていきます。本年度のコース終了時に、本 19 期の学生の誰が Award を受賞するか、ご期待ください！

## 11 月 19 日～ 21 日：鬼怒川流域視察

3 日間の現地視察において、国土交通省関東地方整備局の職員、ICHARM の清水義彦研究・研修指導監、秦梦露専門研究員、原田大輔招へい研究員同行のもと、学生は、鬼怒川流域を訪れました。鬼怒川流域では、最上流部のダム建設及びダム群連携事業、上流部の霞堤、下流部の連続堤防の整備、さらに 2015 年の堤防決壊と洪水氾濫そしてその復興やソフト水防災対策について学びました。

また、利根川改修の祖である徳川家康を偲び、日光東照宮を参拝し、日本の文化についても触れました。

## November 19-21: Field Trip to the Kinugawa River basin

On November 19-21, the students took a three-day field trip to the Kinugawa River basin, accompanied by Research and Training Advisor SHIMIZU Yoshihiko, Research Specialist QIN Menglu, Invited Researcher HARADA Daisuke, and officials from the Kanto Regional Development Bureau of the Ministry of Land, Infrastructure, Transport and Tourism. In the Kinugawa River basin, the students learned about dam projects implemented in its uppermost reach and the Kinugawa Dam Network, which aims to coordinate multiple dams to manage water storage for more effective water use. They were also given an overview of the area's river improvement projects, in which open levees were installed in the upper reach and continuous levees in the lower reach. In addition, they received explanations about the levee breach and flood inundation in 2015 and the subsequent restoration project, as well as about non-structural flood control measures.

The trip was also a good opportunity to learn about Japanese culture. The students visited the Nikko Toshogu Shrine, which enshrines Tokugawa Ieyasu, the founder and first shogun of the Tokugawa Shogunate of Japan, who started the Tone River improvement project.

At the Kawaji Dam
川治ダムにて

At the Tagawa Sluice
田川水門にて

*(Written by HERAI Masahiko)*

## 12 月 2 日～ 4 日：四国河川流域 視察

12 月初旬、学生は、竹内邦良 山梨大学名誉教授（前 ICHARM センター長）、清水研究・研修指導監同行のもと、3 泊 4 日で四国地方を訪れました。

1 日目は、高知県職員による案内のもと、南海トラフ巨大地震の津波から高知市内を守る三重防護による対策について学びました。まず、高知市内と浦戸湾を一望できる五台山展望台において、津波による市街地の浸水を防ぐため浦戸湾に整備された第三ラインの護岸について説明を受けました。その後は高知新港に移動し、三重防護のうち津波エネルギーの減衰と高知新港の港湾機能の確保を目的とする第一ラインの防波堤、津波の浸入防止と低減を目的とする第二ラインの海岸堤防を見学しました。

2 日目は、まず、日高村にて仁淀川に架かる名越屋沈下橋を視察しました。その後、近代土木の礎を築いた廣井勇の生誕地で記念像がある佐

## December 2-4: River basins in Shikoku

On December 2-4, the students took a three-day study trip to the Shikoku region, accompanied by Professor Emeritus TAKEUCHI Kuniyoshi of the University of Yamanashi, who was the founding director of ICHARM, and Research and Training Advisor SHIMIZU Yoshihiko.

On the first day, the students visited Kochi City, Kochi Prefecture. Guided by prefectural officials, they learned about the triple protection system installed to protect the city from tsunamis likely to follow a Nankai Trough mega-earthquake. They first visited the Mt. Godai Observation Deck, which offers a panoramic view of the city and the Urado Bay. The officials explained the third-line protection, seawalls installed to prevent tsunamis from reaching downtown Koch City. After that, they moved to Kochi New Port and observed the first-line protection, breakwaters built offshore to attenuate tsunami energy and ensure the port functions, as well as the second-line protection, tsunami walls designed to prevent and reduce tsunami intrusion into the bay.

On the second day, the students visited the Nagoya Chinka-bashi bridge, a type of submersible bridge over the Niyodo River in Hidaka Village, Kochi Prefecture. After that, they visited Sagawa Town, the birthplace of HIROI Isamu, where his commemorative statue stands. He is credited with laying the foundation for Japan's modern civil engineering. Finally, guided by a Kochi City official, they received an explanation

about the city's tsunami evacuation measures at the tsunami evacuation center.

On the third day, the students moved to the Sameura Dam, a multi-purpose dam completed in 1973 to serve as a water source for Shikoku. They were briefed by officials from the Japan Water Agency on the dam's roles and restoration project. They then visited the Ikeda Dam, which is used to distribute the water stored at the Sameura Dam. Furthermore, they toured the Kagawa Irrigation East-West Diversion Works in Kagawa Prefecture. Afterwards, they went to the Manno Pond, a reservoir over 1,000 years old and recognized as one of Japan's largest and historic structures. They received explanations from Kagawa prefectural officials and the executive director of the Manno-ike Land Improvement District.

ICHARM was very thankful to all the staff and officials for their excellent cooperation during the field trip.

At the Kochi New Port
高知新港にて

At the Tsunami Evacuation Tower in Kochi City
高知市津波避難タワーにて

At the Kagawa Irrigation East-West Diversion
香川用水東西分水工にて


At the Manno Pond
満濃池にて

*(Written by HERAI Masahiko)*

川町を訪れました。最後に、高知市役所の職員による説明のもと、津波避難センターにて、高知市の津波避難対策について説明を受けました。

３日目は、早明浦ダムに移動し、水資源機構の職員から、早明浦ダムの役割と再開発事業について説明を受け、続けて早明浦ダムで蓄えた水資源を配分するための池田ダムを視察しました。さらに、香川用水東西分水工を見学し、その後は、香川県職員及び満濃池土地改良区事務局長より日本最大級であり、歴史的建造物でもあるため池の満濃池について説明を受けました。

最後に、現地訪問にご対応頂いた関係者の皆様に深い感謝の意を表します。

# The 6th ICHARM Alumni Webinar on Sediment
# ICHARM 第 6 回 Alumni Webinar（Sediment）

2024 年 5 月からスタートした ICHARM Alumni Webinar* は、第二周目に入りました。第 6 回 ( 二周目の第二回 ) は、2025 年 12 月 23 日午後 2 時 30 分～ 4 時 30 分、完全オンラインで開催し、土砂分野について ICHARM 側と卒業生側から最新の研究や社会実装状況に関して発表し、開発状況や最新情報を共有して意見交換を行いました。

冒頭の清水義彦研究・研修指導監から開会のあいさつがあり、最近頻発している土砂洪水氾濫のうち、流木が深刻な被害をもたらした 2024 年 9 月の能登半島における事例の紹介があり、その対策も含めて、日本では近年山地流域で貯木施設が導入され始めており、その設計が重要になっていることが示されました。

その後、まず ICHARM の秦梦露専門研究員から ICHARM の土砂に関する最新研究の紹介がありました。具体的には RRI モデルに単位河道の土砂流出課程を盛り込んだ RSR モデルの開発が進んでいること、2019 年阿武隈川五福谷川内川での台風 19 号の降水土砂氾濫を RSR モデルが良好にシミュレートしたこと、そして、iRIC と連携した RSR モデルの GUI 化について紹介がありました。

その後、右の表のアルムナイの三人から報告がありました。

最後に小池俊雄センター長から、「今回は、土砂に関連した河岸崩壊、地下水挙動と道路維持、海岸保全と多岐にわたるトピックについて発表があった。流木を伴った土砂洪水氾濫による災害がアジアにおいて深刻な課題になっており、これは気候変動に伴う降雨の増加に伴って世界中に拡大していっているので、この経験は災害の軽減に役立てていくことができる。」「2026 年は ICHARM の 20 周年であり、世界中で頻発する水災害の軽減にむけてターニングポイントになるであろう」とまとめの挨拶をいただきました。

参加者は、アルムナイ、現役学生、ICHARM 関係者のみならず、GRIPS、JICA、ICHARM の OB にも参加いただき合計 84 人でした。

*水災害管理に関する最新の動向や技術革新に関する知識と情報を共有し、交流を深めることで卒業生と在校生のネットワークを強化し、ICHARM卒業生の活動を支援することを目的にオンライン開催するもの。

The ICHARM Alumni Webinar*, which began in May 2024, has now entered its second round. The 6th session (the 2nd session of the 2nd round) was held entirely online from 2:30 PM to 4:30 PM on December 23, 2025, focusing on sediment-related issues. Participants from ICHARM and its alumni community presented their latest research and shared updates on the social implementation of their findings in sediment-related fields, while also exchanging ideas on new developments and recent trends.

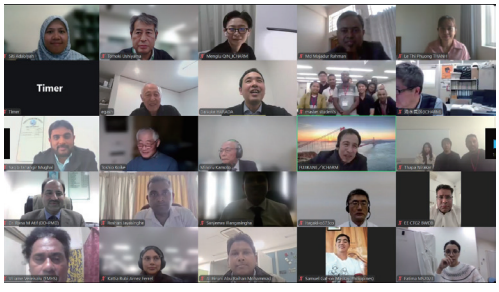
Research and Training Advisor SHIMIZU Yoshihiko opened the event with an address that included a case of sediment-and-water flooding, a type of disaster that has been reported frequently across Japan. He presented the event that occurred in the Noto Peninsula in September 2024 and explained how driftwood carried by the flood caused serious damage to areas along rivers. He also noted that "driftwood storage facilities" recently began to be constructed in mountainous rivers in Japan, emphasizing the importance of proper design.

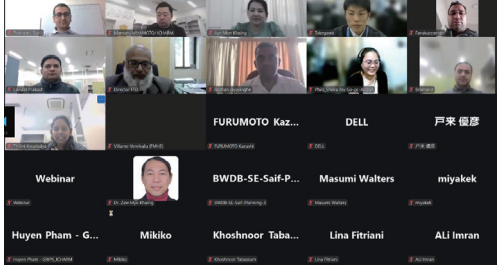
Presentations started with Research Specialist QIN Menglu, who introduced ICHARM's latest research on sedimentology. She highlighted recent progress in developing the RSR model, which incorporates the sediment runoff processes of unit river channels into the RRI model. She also explained that the RSR model successfully simulated the precipitation-induced sediment flooding caused by Typhoon No. 19 in 2019 in the Gofukuya and Uchi Rivers of the Abukuma River system in northern Japan. Finally, she briefly introduced the GUI version of the RSR model developed in collaboration with iRIC.

Then, three alumni gave reports as follows:

| | |
|---|---|
| 1 | Ms. **LE Thi Phuong Thanh** (MS 2016-2017) in Vietnam (15:05-15:25)<br>An Assessment of Morphological Change in the Estuaries of Ba Ria – Vung Tau Province |
| 2 | Ms. **SITI Adabiyah Binti Sulaiman** (MS 2021-2022) in Malaysia (15:25-15:45)<br>The Effect of Groundwater Flow on Slope Stability at Aring-Jeneris Highway, Kelantan |
| 3 | Dr. **Md Majadur Rahman** ( Ph.D. 2020-2023) in Bangladesh (15:45-16:05)<br>Sediment Transport Modeling Challenges and Solutions: A Case Study of the Matamuhuri River |

Executive Director KOIKE Toshio delivered the closing remarks, saying: "This time, the presentations covered a wide range of sediment-related topics, including riverbank collapses, groundwater behavior and road maintenance, and coastal conservation. Disasters caused by sediment flooding accompanied by driftwood have become a




Webinar participants
ウェビナー参加者

serious issue in Asia, and are spreading worldwide due to increased rainfall driven by climate change. What we have experienced in our region can be applied to disaster mitigation efforts globally." He concluded by saying: "The year 2026 marks ICHARM's 20th anniversary and will be a turning point in mitigating the increasingly frequent water-related disasters occurring around the world."

A total of 84 people participated in the alumni webinar, including current students, ICHARM affiliates, and alumni from GRIPS, JICA, and ICHARM.

* This online event aims to strengthen networking between former and current students of ICHARM's educational programs and, through these interactions, support them in their professional duties by sharing knowledge and insights on the latest trends and innovations in water-related disaster management.

*(Written by FUJIKANE Masakazu)*

# Public Relations

## ICHARM Open Day 2025 held for local school students
## ICHARM Open Day 2025 ～茨城県立竹園高等学校・茨城県立並木中等教育学校が参加～

On September 8, 2025, the ICHARM Open Day was held as part of its community contribution activities, inviting students from schools in Tsukuba City, where the center is based, to provide an opportunity to learn about ICHARM and interact with international students studying there. A total of 108 people participated in the event: 88 students from the Ibaraki Prefectural Takezono High School and the Ibaraki Prefectural Namiki Secondary School, four teachers, and 16 ICHARM master's and doctoral students from eight countries. The program was conducted entirely in English.

The open day began with the opening keynote speech by Executive Director KOIKE Toshio, who introduced the 1950 Bandung Conference, a milestone event marking the start of Japan's official development assistance following postwar independence. He explained that ICHARM accepts students from developing countries as part of Japan's development assistance. He also referred to the 2024 World Water Conference, held at the United Nations while carrying on the spirit of the Bandung Conference. Moreover, he shared with the young students part of the speech given by Sri Lankan President Jayewardene at the San Francisco Peace Conference in 1951: Hatred ceases not by hatred but by love.* Perhaps due to the recent tense international situation, many students seemed particularly moved by this quotation.

In the poster session that followed, master's and doctoral students from eight countries (Afghanistan, Bangladesh, Mexico, Peru, the Philippines, Sri Lanka, Nepal, and Timor-Leste) gave poster presentations focusing on water-related disasters in their countries, in addition to the countries' features, lifestyle, and culture. The local school students went around each poster and enjoyed international exchanges by listening to presentations and asking many questions.

Local students listen to ICHARM students at a poster presentation
ICHARM の学生によるポスター発表を聞く つくば市の中高生

2025 年 9 月 8 日、ICHARM は「ICHARM Open Day」を開催しました。このイベントは、ICHARM の地域貢献活動として、つくば市内の学校の生徒を招待し、国際交流の機会を提供しようとするもので、茨城県立竹園高等学校・茨城県立並木中等教育学校の生徒 88 名と引率の先生 4 名、ICHARM の修士課程・博士課程の学生 8 か国 16 名の 合 計 108 名が参加しました。プログラムはすべて英語を使って行われました。

イベントではじめの基調講演で、ICHARM 小池俊雄センター長が、終戦後日本が独立し政府開発援助をするきっかけとなった 1950 年のバンドン会議について紹介され、ICHARM はそれを受けて途上国から学生を受け入れていること、2024 年に国連で行われた世界水会議においてバンドン会議の精神が受け継がれたことなどが解説されました。特に 1951 年のサンフランシスコ講和会議でスリランカのジャヤワルダナ氏が行ったスピーチの一節である " hatred ceases not by hatred but by love（憎しみは憎しみによっては止まず、ただ愛によってのみ止む）*" については、最近の緊迫した国際情勢の影響もあるのか、多くの生徒が感銘を受けているようでした。

その次のポスターセッションでは、8 カ国（アフガニスタン、バングラデシュ、メキシコ、ペルー、フィリピン、スリランカ、ネパール、東ティモール）の修士課程・博士課程の学生が各国の概要、生活、文化の紹介のほか、水災害をテーマとしたポスター発表を行いました。生徒た

ちは、各国のブースでの ICHARM 学生の説明に多くの質問をし、国際交流をしました。 ICHARM の学生の中には民族衣装を身につけた学生もいたことから、国際交流イベントらしくなりました。

参加した生徒から開催後にいただいたアンケート結果では、「日本の独立時に東南アジア、南アジアの国々からの支援があったことを学んで、国どうしの助け合いの大切さが良く分かった」「各国の災害と日本の災害に共通点を見出し、日本の優秀な災害対策の技術を学んで自国に貢献しようとする研修生の方々の素晴らしい志に感銘を受けるとともに、それを応援し、学習の場を積極的に提供する ICHARM の姿勢にも同じ日本国民の一員として誇らしさを抱きました」などの感想がありました。

* ICHARM ニュースレター 78号 センター長からのご挨拶「憎しみは憎しみによっては止まず、ただ愛によってのみ止む」参照
https://www.pwri.go.jp/icharm/publication/newsletter/pdf/icharm_newsletter_issue78.pdf

Some ICHARM students even wore national costumes, adding to the event's international atmosphere.

In the post-event questionnaire, one student commented: "Learning about the support that Southeast Asian and South Asian countries provided to Japan at the time of its independence really helped me understand the importance of mutual assistance between countries." Another student wrote: "I am impressed by the wonderful aspirations of the students studying at ICHARM. They find commonalities between the disasters in their respective countries and those in Japan, and want to contribute to their own countries by learning Japan's excellent disaster prevention techniques. ICHARM's support for them, including actively providing learning opportunities, makes me proud as a fellow Japanese."

* See Message from Executive Director, "Hatred ceases not by hatred, but by love," in ICHARM Newsletter No.78.
https://www.pwri.go.jp/icharm/publication/newsletter/pdf/icharm_newsletter_issue78.pdf

All participants gather at ICHARM's entrance hall
ICHARM エントランスホールでの集合写真

*(Written by FUJIKANE Masakazu)*

# Miscellaneous

## Comments from visiting researchers
## 受け入れ研究者からのコメント

ICHARMでは、SATREPSアルゼンチン・プロジェクト「PREVENIR」の研究員交流の一環として、アルゼンチンから研究員3名を受け入れ研究者として受け入れました。(Marina Logos 氏 、Sebastián López氏、Daniel Grigera氏)。

ICHARMでの活動を振り返ってコメントをいただきました。

ICHARM welcomed three researchers from Argentina as visiting researchers this autumn: Ms. Marina Logos, Mr. Sebastián López, and Mr. Daniel Grigera. They were invited under the researcher exchange framework of the SATREPS Argentina project, PREVENIR.

They have kindly shared the following messages reflecting on their research activities at ICHARM.

## Ms. Marina Logos

(Argentina's National Water Institute / PREVENIR Project) *Duration: September 11-October 17, 2025*

As part of the PREVENIR project under the framework of the SATREPS program, I had the opportunity to carry out a second research stay at ICHARM. The main objective of this project is to develop an early warning system for two densely populated basins in Argentina.

Over five productive weeks, ICHARM staff and I worked on improving the hydrological-hydraulic modeling of an urban basin in the Metropolitan Region of Buenos Aires. To optimize both accuracy and computational efficiency for forecasting purposes, we coupled the Rainfall-Runoff-Inundation (RRI) model for 2D surface flow with the Storm Water Management Model (SWMM) for 1D drainage network simulation. The preliminary results are promising, with this new approach reducing computational time by 40% compared to the preexisting high-resolution 1D/1D SWMM model.

Working alongside researchers at ICHARM has been a truly enriching experience, enabling the integration of diverse perspectives. Additionally, meeting master's and PhD students from various countries and cultures was also a very rewarding aspect of my stay.

I would like to express my gratitude to Professors Ushiyama-sensei, Qin-sensei, and Rasmy-sensei for their ongoing support and guidance. I extend my sincere thanks to the entire ICHARM team for their warm hospitality and to Sebastián López, an Argentinian colleague, for his valuable contributions throughout our stay.

I look forward to continued collaboration between ICHARM and Argentina's National Water Institute (INA) beyond the scope of the SATREPS project.

## Mr. Sebastián López

(Argentina, National University of Córdoba / PREVENIR Project) *Duration: September 22-October 17, 2025*

During my second research stay at ICHARM, I focused on advancing methods to improve hydrological forecasting for the PREVENIR SATREPS project. In my previous visit, I implemented and calibrated an RRI model for the Suquía River basin (Córdoba, Argentina). This time, I worked on implementing ICHARM's Particle Filter (PF) system to generate reliable initial hydrological conditions for real-time forecasting.

My activities included learning the PF framework developed at ICHARM, adapting and applying it to the Suquía basin, tuning key parameters to fit the river's characteristics, and assessing the sensitivity of the system. This experience was especially valuable because PF is still used at few institutions worldwide; working with ICHARM's cutting-edge implementation allowed me to gain hands-on expertise and understand its impact on real-time forecasting practice.

I would like to express my sincere gratitude to Prof. Miyoshi, Prof. Koike, Prof. Carlos Marcelo García, Prof. Ushiyama, Prof. Qin, Prof. Rasmy, and Prof. Kakinuma for their guidance and support. It is always a pleasure to return to ICHARM, an internationally recognized institution where I feel truly welcomed and at home. I look forward to continuing our collaboration and sharing results with the community.


Ms. Marina Logos (fifth from left) and Mr. Sebastián López (sixth from right) with ICHARM staff at the entrance of the ICHARM building

## Mr. Daniel Grigera

(Argentina, IDIT-CONICET / PREVENIR Project) *Duration: November 11-18, 2025*

During my first research stay at ICHARM, my main objective was to implement different modelling schemes for simulating the behavior of the San Roque Dam, located in the mountainous upper basin of the Suquía River in Córdoba Province, Argentina. This work was carried out within the framework of the PREVENIR project, which, amongst its interests, includes the development of an operational hydrological model to represent the dam's dynamics using ICHARM's RRI model as a foundation.

My activities focused initially on learning the operation of RRI's dam module and integrating it into the existing basin model. Subsequently, I used RRI's discharge outputs to drive an external water-balance model, assessing the influence of additional hydrological processes across different simulation periods.

I would like to express my sincere gratitude to Prof. Miyoshi, Prof. Koike, Prof. Ushiyama, Prof. García Rodríguez, Prof. Qin, and the entire ICHARM team for the invaluable opportunity to learn about cutting-edge hydrological modelling techniques, and for the warm welcome and continuous support throughout my stay.

Mr. Daniel Grigera (forth from right) with ICHARM staff at the entrance of the ICHARM building

## Business trips / 海外出張リスト

* October - December 2025

- *September 30-October 5, KOIKE Toshio, Geneva, Switzerland, to participate in the Fourth Session of the SAP and Joint RB/SAP Meeting*
- *October 12-14, KOIKE Toshio, Beijing, China, to participate in the 3rd Global River Symposium and deliver a keynote speech*
- *October 12-18, KOIKE Toshio (October 15-16), KUSAKABE Takaaki (October 14-18) and MIYAMOTO Mamoru, Bangkok,Thailand, to participate in the 17th Asia-Oceania Group on Earth Observations (AOGEO) Symposium*
- *October 20-24, KOIKE Toshio (October 20-22) and KUSAKABE Takaaki, Ha Noi, Viet Nam, to participate in the UNESCO-IHP 32th RSC*
- *October 22-26, OKADA Tomoyuki, Seoul, South Korea, to participate in the UNESCO Water Science Report Taskforce Meeting*
- *October 27-30, NAGUMO Naoko, The Philippines, Meeting with UPLB team*
- *November 10-14, NAGUMO Naoko (November 10-13), Ralph Allen Acierto (November 10-13), Abdul Wahid Mohamed RASMY (November 11-14) and Ranapura Dewage Thilini Kausyalya (November 11-14), The Philippines, (1) JCC Meeting (2) National Level Work shop (3) Meeting with Dr. BALLARAN Vicente, Jr. and Field trip (RASMY and Thilini)*
- *November 9-11, MIYAMOTO Mamoru, Siem Reap, Cambodia, to participate in the WMO RAII Face-to-face meeting of Hydrology*
- *November 12-14, MIYAMOTO Mamoru, Shanghai, China, to participate in the Joint Meeting of RA II Working Group and Coordination Panel chairs*
- *November 23-29 OKADA Tomoyuki, Abdul Wahid Mohamed RASMY, TSUTSUI Hiroyuki, Ralph Allen Acierto and NAGUMO Naoko, Accra, Ghana, for Training and Field Visit on the Integrated Early Warning System for the UNESCO Ghana Project*
- *November 24-25, KOIKE Toshio, Bangkok, Thailand, to participate in the 26th HELP meeting*
- *November 26-29, KOIKE Toshio, Accra, Ghana, to conduct an on-site session on Development of an Integrated Early Warning System for Water-Related Hazards*
- *November 30-December 1, KOIKE Toshio, Marrakech, Morocco, to hold a special session at the XIX World Water Congress*
- *November 30-December 7, KUSAKABE Takaaki (November 30-December 3), OKADA Tomoyuki (November 30-December 3) and NAGUMO Naoko, Marrakesh, Morocco, to participate in the XIX World Water Congress*
- *November 30-December 6, MIYAMOTO Mamoru, Macao, China, to participate in the 20th IWS, Typhoon Committee*
- *December 2-3, KOIKE Toshio, Koblenz, Germany, to participate in the Governing Board of ICWRGC and hold a workshop on the C2C cooperation in Africa*
- *December 4-6, KOIKE Toshio, Paris, France, for the meeting with OECD for the cooperation on IFI and research Africa*
- *December 7-9, KOIKE Toshio, Malindi, Kenya, to hold a training for early flood warning system*
- *December 7-14 , MIYAMOTO Mamoru and USHIYAMA Tomoki (December 7-12), Kenya, For Development Conference and Training on Flood Early Warning Systems for Kenya UNESCO Project*
- *December 10-16, KOIKE Toshio, Washington D.C., USA, to hold a meeting for the preparation for contracting MoU with The World Bank*
- *December 15-22, Shrestha Badri Bhakta, New Orleans, USA, to participate in the AGU Annual Meeting 2025*

# Visitors / 訪問者リスト

* October - December 2025

- *October 8, Seven delegates of Iranian officials led by H.E. Professor SIMAEE-SARRAF Hossein, Iran's minister of Science, Research & Technology*
  *- Pay courtesy call on PWRI President FUJITA and visit the hydraulic experiment laboratory*
  **See "**Meeting with officials from Iran's Ministry of Science, Research and Technology**" on page 3*
  *3ページ「**イラン科学研究技術大臣の来訪**」参照*
- *October 5, Delegation of SATREPS Ghana Project researchers*
  *- To discuss project details and other related matters*
  **See "**SATREPS Ghana Project: Visit by a ACECoR delegation**" on page 6*
  *6ページ「**SATREPS ガーナプロジェクト：ACECoR の研究者一行がICHARM を訪問**」参照*
- *October 27-November 7, one coordinator and four facilitators from Kenya*
  *- For the Training of Facilitators for Kenyan experts*
  **See "**Implementation of the Training of Facilitators for Kenyan experts**" on page 20*
  *20ページ「**ケニア人専門家のためのファシリテーター研修の実施**」参照*

# Publications / 対外発表リスト

* October - December 2025

## 1. Journals, etc. / 学術雑誌（論文誌、ジャーナル）

- *Ralph Allen Acierto, KOIKE Toshio, USHIYAMA Tomoki, TANAKA Yozo and KUBOTA Keijiro, Evaluating future warming impacts on probable maximum precipitation using DAD analysis: insights from 5-km d4PDF ensembles in Kyushu, Hydrological Research Letters, August 9, 2025, https://doi.org/10.3178/hrl.25-00003*
- *Badri Bhakta Shrestha, Mohamed RASMY, TAMAKAWA Katsunori, Sauhardra Joshi and KURIBAYASHI Daisuke, Impact of Urbanization on Flooding and Risk Based on Hydrologic–Hydraulic Modeling and Analytic Hierarchy Process: A Case of Kathmandu Valley of Nepal, Hydrology, MDPI, Volume 12, Issue 11, October 30, 2025, https://doi.org/10.3390/hydrology12110283*
- *南雲 直子、江頭 進治、久保 純子、川幅と流域面積の関係に係る要因分析、地理学評論98巻6号、日本地理学会、363-377、2025年11月*

## 2. Oral Presentations (Including invited lectures) / 口頭発表（招待講演含む）

- *KOIKE Toshio, Keynote Speech: Building sustainable, resilient and balanced urban and rural landscapes in the context of water-related disasters intensified by climate change, UN-HABITAT 16th Expert Group Meeting, Nagoya City, Japan, October 17, 2025*
- *OHARA Miho and KURIBAYASHI Daisuke, Emergency Response Training for Local Government Officers to Effectively Learn Lessons from After-Action Reports of Past Disasters, CECAR10（第10回アジア土木技術国際会議）, Jeju, South Korea, October 21-24, 2025*
- *小池 俊雄、基調講演「安全で親しみのもてる関川・保倉川を目指して」、関川・姫川 7.11水害から30年シンポジウム、関川・姫川流域治水協議会、新潟県 上越市 高田城址公園オーレンプラザ ホール、2025年11月23日*
- *KOIKE Toshio, Making Africa more resilient to hydro-climatic extremes, XIX World Water Congress Special Session, Marrakech, Morocco, December 1, 2025*
- *SERRANO Jonathan Suba, BALLARAN Vicente, Jr., OHARA Miho, Abdul Wahid Mohamed RASMY, USHIYAMA Tomoki and Ralph Allen ACIERTO, DEVELOPMENT OF FLOOD EXPOSURE CURVES FOR CLIMATE CHANGE IMPACT ASSESSMENT OF PASIG-MARIKINA-LAGUNA LAKE BASIN, 70th Conference on Hydraulic Engineering, JSCE, Fukushima prefecture, Koriyama Central Community Hall, December 10-12, 2025*
- *原田 大輔、秦 梦露、江頭 進治、砂州・河床波上の流れにおける流木の挙動、第70回水工学講演会、土木学会水工学委員会、福島県 郡山市立中央公民館、2025年12月10～12日*

## 3. Poster Presentations / ポスター発表

- *Shrestha Badri Bhakta, Abdul Wahid Mohamed RASMY, TAMAKAWA Katsunori, JOSHI Sauhardra and KURIBAYASHI Daisuke, Assessing the characteristics and impact of unexpected 2024 flood in the Bagmati River basin of Nepal, AGU Annual Meeting 2025, New Orleans, USA, December 15-19, 2025*

## 4. Magazines, Articles / 雑誌、記事（土技資含む）

*None / 該当者無し*

## 5. PWRI Publications / 土研刊行物（土研資料等）

- *栗林 大輔、成果報告書「水災害に対する社会の強靭化に関する研究」、2025年10月1日*
- *久保田 啓二朗、成果報告書「気候変動の影響を考慮した最大降雨量の推定方法に関する研究」、2025年10月1日*
- *小石 一宇、降雨−流出−氾濫一体型の分布型流出モデルの予測精度向上に資する基礎的研究、土木研究所資料 第４４６１号、令和６年度交流研究員報告書概要版、pp.151-154、2025年10月、https://thesis.pwri.go.jp/files/787829164691bbf202009b.pdf*

## 6. Other/ その他

*None / 該当者無し*

# Editor's Note
## 編集後記

Last year, 2025, I had the opportunity to accompany overseas government officials during their site visits to learn about Japan's flood and drought countermeasures. As the work was unfamiliar, different from my usual desk duties, it was sometimes mentally tiring. But after the entire itinerary concluded smoothly, many participants said to me, "Arigato gozaimasu." I was delighted that they chose to express their thanks in Japanese, and the way they tried to use honorific expressions made everyone there smile.

Even a single word spoken in a local language seems to instantly bridge emotional distance. Words of gratitude, especially, can be used in many situations and show consideration for others.

The power of "Arigato gozaimasu" is truly remarkable. I want to cherish these insights I encounter as I continue my work.

ICHARM Newsletter Editorial Committee
TAKEGAWA Shinya

昨年、日本の洪水・渇水対策を学ぶために訪日した海外の政府関係者の現地視察に同行する機会がありました。普段のデスクワークとは異なる慣れない仕事に気疲れする時もありましたが、一連の行程が無事終わった後、多くの参加者が「Arigato gozaimasu」と声をかけてくれました。日本語で伝えてくれたことを嬉しく思うとともに、敬語がその場を和ませました。

例え一言であっても、現地の言葉を使うことで心の距離が一気に縮まる気がします。特に感謝の言葉は使える場面が多く、相手への気遣いも示せます。

「Arigato gozaimasu」の力、恐るべし。今後も気づきを大切にしながら仕事に取り組んでいきたいと思います。