TAIWAN INT'L WATER WEEK

Oct.28‣29
[台北南港展覽館2館]

Smart Watershed, AI-Driven Innovation

智慧流域 AI領航

International Forum 2025

Content

ABOUT Taiwan International Water Forum 2025

Global water governance is undergoing a critical transformation. In the face of intensifying climate change and rising global uncertainties, extreme hydrological events, regional water imbalances, and sustainable management challenges have become shared concerns.

As we navigate a pivotal era of digital transformation and the global push for net-zero emissions, smart technologies and artificial intelligence (AI) are key to advancing future water governance.

Centered on the theme “Smart Watershed and AI-Driven Innovation,” the 2025 International Water Forum will explore how AI, big data, and the Internet of Things (IoT) can enable real-time monitoring, enhance risk prediction, and improve decision-making. AI-powered smart watersheds mark a shift from passive response to proactive prediction, and from fragmented engineering to integrated planning.

We warmly invite global stakeholders—from industry, government, academia, research, and the next generation—to join us in shaping a resilient, efficient, and sustainable future for water governance.

Program at a Glance

Oct.28 29

10/28 (Tue.)

	am 9:30~12:00		pm 2:00~5:00
701AB	Water Leader Summit - Smart Watershed, AI-Driven Innovation	701E	Water Youth Forum: Sustainable Governance of Water Resilience — From Climate Challenges to the Future Blueprint of Rippling Impacts
		701F	Taiwan-Netherlands Dialogue-The Relationships between Nature-based Solutions and Environmental, Social, and Economic Systems
		701G	The Future of Water:Digital Trends and Innovations

10/29 (Wed.)

	am 9:00~12:00	pm 2:00~5:00
701E	Sustainable Water Resources Management: Advancements in Desalination and Water Reuse Technologies	Systematic Watershed Management and Smart Disaster Prevention
701F	Taiwan-Japan Dialogue-Water Resources Development and Adaptation Policies in Response to Climate Change	AI Applications in Reservoir Management and Safety Monitoring
701G	Water Innovation Technology and Industry Presentation	

Summit

Oct. 28 (Tuesday)

Water Leader Summit - Smart Watershed, AI-Driven Innovation

● 09:30 AM – 12:00 PM (Taipei time) (701AB)

Introducer

Yuan-Peng Lin
Director-General, Water Resources Agency, MOEA

Director-General Yuan-peng Lin, a graduate of the National Taiwan University's Graduate Institute of Civil Engineering, has served in Taiwan's water resources sector for over 30 years. He has held key positions including Deputy Director-General and Chief Engineer of the Water Resources Agency.
Since becoming Director-General in March 2025, he has focused on three core goals: New Water Governance, New Water Supply, and Reduced Water Leakage. He is also a strong advocate for using AI to build a more resilient and sustainable water management system for Taiwan.

Moderator

Chien-Hsin Lai
Vice Minister, Ministry of Economic Affairs

Dr. Chien-Hsin Lai, Vice Minister of the Ministry of Economic Affairs, has over 30 years of public service and engineering leadership. Starting at the Water Resources Agency (WRA) in 1992, he served as Director-General from 2016 to 2024. He holds a Ph.D. in Soil and Water Conservation from National Chung Hsing University, and completed programs at UC Berkeley and Harvard Kennedy School. A licensed hydraulic and soil conservation engineer, Dr. Lai has led major national initiatives, including Taiwan's net-zero strategy, renewable energy development, and critical drought responses in 2021 and 2023. His reforms to the Water Act and promotion of nature-based solutions highlight his commitment to resilience and sustainability. Recognized with the Presidential Innovation Award and Civil Service Outstanding Contribution Award, Dr. Lai also elevated the WRA to global leadership in carbon reduction, securing PAS 2080 certification. His vision and dedication continue to shape Taiwan's sustainable future.

Speaker / Panelists

Kalanithy Vairavamoorthy
Board of directors, Executive Management, IWA

Dr. Kalanithy Vairavamoorthy is a globally recognized expert in water resource management, specializing in urban water systems. With a strong engineering background and extensive international experience, he has worked closely with major organizations such as IWA, and the EU, leading numerous urban water projects worldwide.
Prior to leading the International Water Association, he was Deputy Director General at the International Water Management Institute and founding Dean of the Patel College of Global Sustainability at the University of South Florida. He has held academic positions at the University of Birmingham, UNESCO-IHE, and currently serves as an adjunct professor at IIT Madras.

Meng-Ru Shen
President and Chair Professor, National Cheng Kung University

Professor Meng-Ru Shen is currently the President of National Cheng Kung University and an Attending Physician at National Cheng Kung University Hospital.
He also serves as Chairman of the Taiwan Institute of Sports Science (TISS), Director of the Industrial Technology Research Institute (ITRI), Taiwan, and Board Member of the Institute for Biotechnology and Medicine Industry (IBMI).
Professor Shen has long focused on research in oncology and drug development. In recent years, he has been committed to advancing innovative applications of artificial intelligence in medicine, actively nurturing talent across generations and fostering interdisciplinary collaboration, creating an inclusive and mutually supportive environment, and fulfilling the university's commitment to social responsibility.

Ken Lin
Sr. Sales Director, Commercial Sales, AMD Taiwan

Mr. Ken Lin is Sr. Sales Director of Commercial Sales, AMD Taiwan, responsible for driving AMD's server and commercial business in Taiwan, covering both CPUs and GPUs. He leads cross-functional teams to expand business opportunities, strengthen collaboration with Taiwan's ODM/OEM partners, and promote AMD solutions in data centers, servers, edge computing, and the local commercial market. With over 35 years of experience in the IT industry, Mr. Lin has held leadership roles in sales, marketing, and business development across Taiwan and Greater China. He joined AMD in 2004 and has since led embedded, server, and commercial business development, contributing significantly to AMD's growth in Taiwan and global markets. Prior to AMD, he held management positions at Cypress, 3Com, Iomega, Imation, and 3M.Mr. Lin holds a bachelor's degree in Aerospace Engineering from National Cheng Kung University and is based in Taipei.

Oct. 28 (Tuesday)

Water Leader Summit - Smart Watershed, AI-Driven Innovation

● 09:30 AM – 12:00 PM (Taipei time) (701AB)

Agenda

Time	Topic	Moderator / Speaker
09:00~09:30	Registration	
09:30~09:40	Opening Remarks	**Chien-Hsin Lai** Vice Minister Ministry of Economic Affairs
09:40~09:50	Welcome Remarks	
09:50~10:05	Introduction Smart Watershed, AI-Driven Innovation	**Yuan-Peng Lin,** **Director-General,** Water Resources Agency, MOEA
10:05~10:35	Keynote Speech AI-Driven Resilient Water Management (TBC)	**Kalanithy Vairavamoorthy,** **Executive Director,** IWA
10:35~10:50	Tea break	
10:50~12:00	Panel Discussion Host: **Chien-Hsin Lai, Vice Minister** / Ministry of Economic Affairs Panelists: **Meng-Ru Shen, President** / National Cheng Kung University **Kalanithy Vairavamoorthy, Executive Director** / IWA **Ken Lin, Sr. Sales Director, Commercial Sales** / AMD Taiwan	

Daily Program

Oct. 28 (Tuesday)

Water Youth Forum: Sustainable Governance of Water Resilience — From Climate Challenges to the Future Blueprint of Rippling Impacts

- 2:00 PM – 4:30 PM (Taipei time) (701E)

Moderator

Yuan-Peng Lin

Director-General, Water Resources Agency, MOEA

Director-General Yuan-peng Lin, a graduate of the National Taiwan University's Graduate Institute of Civil Engineering, has served in Taiwan's water resources sector for over 30 years. He has held key positions including Deputy Director-General and Chief Engineer of the Water Resources Agency.
Since becoming Director-General in March 2025, he has focused on three core goals: New Water Governance, New Water Supply, and Reduced Water Leakage. He is also a strong advocate for using AI to build a more resilient and sustainable water management system for Taiwan.

Chao-Yung Huang

Director, CSR@CommonWealth

With 22 years of journalism experience, he has served as Director of CRM & Strategy Development at United Daily News, Chief Editor of the Economics Desk, Editorial Writer at CommonWealth Magazine, and Head of the Securities Desk at Economic Daily News. A member of the Taiwan Social Enterprise Innovation & Entrepreneurship Society, he has received awards including the Cross-Strait News Award and the Global Chinese Sustainable Reporting Award. He believes accurate, insightful, and positive reporting is the foundation of social stability, and that responsible use of resources and value co-creation are key to sustainability.

Speaker / Panelists

Hsiao-Wen Wang

Professor and director of Disaster Prevention Research Center at National Cheng Kung University

Professor Wang's research focuses include water environment management, wetland and river restoration, disaster risk management, participatory planning, and climate change adaptation. With a training foundation in engineering and science, she emphasizes transdisciplinary research approach, dedicating her work to bridging science, policy, and society to address problems known today and predicted for the future for sustainable development

Ming-Hsuan Tsou

Secretary-General, Taiwan Rivers Network Association

Dedicated to Taiwan's rivers and watersheds, he promotes public participation in water governance. By linking communities, NGOs, and scholars, he advances cross-sector collaboration and knowledge sharing. Through social engagement, he highlights ways to balance ecology, resilience, and public interest toward a sustainable water future.

ZE-HAN WANG

Young Professionals in Water Resources

Ze-han Wang is a hydraulic engineer at Taiwan Integrated Disaster Prevention Engineering Consulting Co., Ltd., holding a master's degree from the Graduate Institute of Civil and Water Resources Engineering at National Chiayi University (NCYU). His expertise spans reservoir safety assessments, pump station inspections, and river monitoring, built upon years of experience in managing disaster prevention infrastructure. Recently, he has focused on the Tainan mobile pump project, personally guiding the transformation of Taiwan's largest pump fleet from traditional decentralized management to an intelligent, collaborative system.
Wang believes that passing on knowledge is the starting point for innovation. With deep affection for the land, he actively applies cloud computing, IoT, and artificial intelligence to hydraulic engineering not just to improve flood response efficiency, but to protect the safety of his homeland. He aspires to build a disaster prevention system that benefits all generations, while sharing this Taiwanese spirit of valuing both heritage and sustainability with the international community.

Wei-Chia Hsieh

Young Professionals in Water Resources

I am an undergraduate student in the Department of Computer Science at National Chung Cheng University, currently focusing on the applications of smart technologies and artificial intelligence (AI). As part of an interdisciplinary team, I am engaged in the "Water Environment" project, which explores aquatic biodiversity and ecological interactions with the goal of raising public awareness of sustainable water resources. In response to the trends of digital transformation and net-zero commitments, I have sought to integrate AI and big data into ecological guided tours of aquatic life, exploring how technology can enhance public engagement in environmental conservation and further promote ecological protection and sustainable governance. Through the International Water Forum, I look forward to sharing the perspectives of the younger generation on water governance and demonstrating how emerging technologies can be transformed into concrete actions for sustainability. For more about my research and projects, please visit my personal website: https://sites.google.com/csie.io/-wei-chia-hsieh

YING-XUE XU

Young Professionals in Water Resources

XU, Ying-Xue is the project leader of "Sapodang River Action Chronicle: Youth Memory and Reconstruction" and also runs Taihuiying Snack Shop. After the devastating Hualien 0403 Earthquake in 2024 severely impacted the Sapodang River, I initiated the "Memory Map" project, inviting elders, hunters, and youth to participate through interviews, mapping, and field surveys to preserve the community's valuable water culture and traditional knowledge. I believe that post-disaster reconstruction involves not only environmental restoration but also the rebuilding of culture and emotional connections. This initiative has fostered intergenerational dialogue, helped young people rediscover the value of the land, and laid the foundation for the community's self-governance and cultural continuity.

Oct. 28 (Tuesday)

Water Youth Forum: Sustainable Governance of Water Resilience — From Climate Challenges to the Future Blueprint of Rippling Impacts

- 2:00 PM – 4:30 PM (Taipei time) (701E)

Agenda

Time	Topic	Moderator / Speaker
14:00~14:10	Opening Remarks	**Yuan-Peng Lin** Director-General, Water Resources Agency, MOEA
14:10~14:30	Keynote Speech **Towards Coastal Resilience: From Defense to Working with Nature**	**Hsiao-Wen Wang** Professor and director of Disaster Prevention Research Center at National Cheng Kung University
14:30~14:50	Keynote Speech **Transforming Water Governance: Public Action for Change**	**Ming-Hsuan Tsou** Secretary-General, Taiwan Rivers Network Association
14:50-15:00	Networking Break	
15:00~15:15	Keynote Speech **Smart Water Infrastructure - The First Step in Transforming Traditional Engineering**	**Ze-Han Wang** Young Professionals in Water Resources
15:15~15:30	Keynote Speech **Ecological Water Environment - A Sustainable Bridge Between People and Nature**	**Wei-Chia Hsieh** Young Professionals in Water Resources
15:30~15:45	Keynote Speech **Local Water Culture – Inheriting and Innovating, Planting Water Back into the Heart**	**Ying-Xux Xu** Young Professionals in Water Resources
15:45~16:30	Panel Discussion **Moderator：** **Yuan-Peng Lin** / Director-General, Water Resources Agency, MOEA **Chao-Yung Huang** / Director, CSR@CommonWealth **Panelists:** **Hsiao-Wen Wang** / Professor and director of Disaster Prevention Research Center at National Cheng Kung University **Ming-Hsuan Tsou** / Secretary-General, Taiwan Rivers Network Association **Ze-Han Wang** / Young Professionals in Water Resources **Ying-Xux Xu** / Young Professionals in Water Resources **Wei-Chia Hsieh** / Young Professionals in Water Resources	

Oct. 28 (Tuesday)

Taiwan-Netherlands Dialogue — The Relationships between Nature-based Solutions and Environmental, Social, and Economic Systems

- 2:00 PM – 4:50 PM (Taipei time) (701F)

Moderator

Jian-Cheng Chen

Deputy Director-General, Water Resources Agency, MOEA

Mr. Chen, Chief Engineer of the Water Resources Department, has over 25 years of experience in hydraulic engineering. He has held various key positions in the Water Resources Bureau, including Director of Sixth River Management Branch, Deputy Chief Engineer, and Chief Secretary.
In 2025, he assumed the position of Deputy Director-General, where he is responsible for advancing water resource and flood control projects, operational management of water facilities, reservoir modernization and safety assessments, as well as water source scheduling and domestic water supply. He has been involved in projects such as the construction of the Niaozueitan Artificial Lake , river management and disaster preparedness and response.

Bas Pulles

Netherlands Representaive, Netherlands Office Taipe

- Representative, Netherlands Office Taipei (2025–present)
- Director for Energy Transition and Program Director, Delta Rhine Corridor, Ministry of Climate Policy and Green Growth (2022–2025)
- Deputy Ambassador to the People's Republic of China, Ministry of Foreign Affairs (2017–2021)
- Director of International Affairs, Netherlands Enterprise Agency (RVO), Ministry of Economic Affairs (2014–2017)
- Director, Netherlands Export Promotion Agency (EVD), Ministry of Economic Affairs (2013–2014)
- Commissioner for Foreign Investments, Netherlands Foreign Investment Agency (NFIA), Ministry of Economic Affairs (2005–2013)
- Head of Emerging Markets, Department of Foreign Economic Relations, Ministry of Economic Affairs (2003–2005)
- Head of Emerging Markets Cooperation Program (Private Sector Development Program), SENTER, Executive Agency of the Ministry of Economic Affairs (1999–2003)
- Head of EUREKA Secretariat in the Netherlands (European Technology Program), SENTER, Executive Agency of the Ministry of Economic Affairs (1998–1999)
- Consultant to the EUREKA Office in Brussels, BCM Pulles Consultancy (1994–1998)
- Consultant to the EUREKA Secretariat in the Netherlands, Prisma Consultancy (1987–1993)

Speaker / Panelists

Chin-Ming Lo

Division Chief, Marine Environment Management Division, Ocean Conservation Administration, Ocean Affairs Council

Former Senior Specialist, Ministry of Justice.
Currently Division Chief at Ocean Conservation Administration.

Liliane Geerling

Programme Coordinator Partners for Water, Netherlands Enterprise Agency

Partners for Water works alongside local governments and partners in collaboration with the Dutch water sector, prioritising co-creation and long-term partnerships to enhance international water security. By facilitating strategic planning and support in the early stages of innovation, and encouraging nature-based approaches and a focus on biodiversity within water management and infrastructure projects, the programme aims to contribute to systemic change. Liliane is trained as a strategic spatial planner and designer at the Technical University of Delft and always had a focus in her professional career on socially inclusive and environmental planning. Planning with and for water became a recurrent theme the last twenty years. Before joining RVO she worked as a project and programme manager in urban and policy developments for the city of Rotterdam and for private spatial advisory firms and as a professor and researcher in international water management.

Jasper R.F.W. Leuven

Nature-Based Solutions specialist APAC, Haskoning (Member of EcohShape in the Netherlands)

Jasper Leuven works as a Nature-based Solutions specialist at Haskoning. He holds a Cum Laude PhD degree awarded for his research on coastal resilience and rising sea levels. He has extensive knowledge and experience in preparation, design and implementation of nature-based solutions. Recently, he has been focusing on implementing NbS in South-East Asia to solve water-related problems in the region.

Kuei-Hsien Liao

Professor, Graduate Institute of Urban Planning, National Taipei University

Professor, Graduate Institute of Urban Planning, National Taipei University. August 2022 ~
Associate Professor, Graduate Institute of Urban Planning, National Taipei University. August 2017 ~ August 2022
Visiting Fellow, Department of Architecture, National University of Singapore (NUS). January 2017 ~ May 2017.
Assistant Professor, School of Architecture, Chinese University of Hong Kong (CUHK). December 2013 ~ January 2017. Other academic affiliations at CUHK: Urban Studies Programme; Center for Land Resources and Housing Policy, Institute of Future Cities
Assistant Professor, Department of Architecture, National University of Singapore (NUS). July 2012 ~ December 2013.

Oct. 28 (Tuesday)

Taiwan-Netherlands Dialogue — The Relationships between Nature-based Solutions and Environmental, Social, and Economic Systems

- 2:00 PM – 4:50 PM (Taipei time) (701F)

Agenda

Time	Topic	Moderator / Speaker
13:00~14:00	Registration	
14:00~14:15	Opening Remarks	**Jian-Cheng Chen** **Deputy Director-General** Water Resources Agency, MOEA **Bas Pulles, Representative** Netherlands Office Taipei
14:15~14:35	Keynote Speech **Upscaling nature-based approaches**	**Liliane Geerling,Program Coordinator** Partners for Water, Netherlands Enterprise Agency RVO
14:35~15:00	Keynote Speech **Climate resilience and marine conservation strategies**	**Lo, Jenn-Ming, Division Chief** Ocean Conservation Administration, Ocean Affairs Council
15:00~15:20	Networking Break	
15:20~15:40	Keynote Speech **From Grey to Green: Designing Resilient Water Systems with Nature-Based Solutions**	**Jasper R.F.W. Leuven,** **Nature-Based Solutions specialist APAC,** Haskoning (Member of EcohShape in the Netherlands)
15:40~16:05	Keynote Speech **Making Space for floodwater in Taiwan: Opportunities and Challenges**	**Liao Kuei-Hsien, Professor** Graduate Institute of Urban Planning, National Taipei University
16:05~16:50	Panel Discussion **Moderator：** **Jian-Cheng Chen, Deputy Director-General** / Water Resources Agency, MOEA **Panelists:** **Liliane Geerling, Program Coordinator** / Partners for Water, Netherlands Enterprise Agency RVO **Lo, Jenn-Ming, Division Chief** / Conservation Administration Ocean Affairs Council **Jasper R.F.W. Leuven, Nature-Based Solutions specialist APAC** / Royal HaskoningDHV (Member of Ecohshape in the Netherlands) **Liao Kuei-Hsien, Professor** / Graduate Institute of Urban Planning, National Taipei University	

Oct. 28 (Tuesday)

Digital Development of the Water Industry

- 2:00 PM – 5:00 PM (Taipei time) (701G)

Moderator

Chen-Yuan Chien

Secretary General, Water Resources Agency, MOEA

A Chief Secretary of Water Resources Agency with more than 29 years of experience in water resources planning, water resources construction, dam safety evaluation and water resources management.

Dong-Jiing Doong

Professor & Department Chair, Department of Hydraulic and Ocean Engineering,
National Cheng Kung University

Prof. Doong is Chair of the Department of Hydraulic and Ocean Engineering and Director of the Coastal Ocean Monitoring Center at NCKU. Prior to joining NCKU, he held academic and administrative positions at National Taiwan Ocean University. He led research on coastal protection and marine hazards, advancing monitoring networks and early warning systems. He holds over 20 patents and has received several national awards, including the Disaster Prevention Contribution Award, the Outstanding Contribution to Water Resources Award, and the Engineering Professor Award.

Speaker / Panelists

Jing-Wen Wu

Deputy General Manager, Taiwan Water Corporation

Mr. Jing-Wen Wu is currently the Deputy General Manager of Taiwan Water Corporation. With a long career in the water supply sector, he has served as Chief Engineer, Director of the 7th District Management Office, Director of the Water Supply Department, Deputy Chief Engineer, and Deputy Director of the 4th District Office. He has extensive experience in hydraulic and water supply system planning, management, and practice, with a solid foundation in both professional and administrative fields.

Chuin-Shan Chen

Distinguished Professor, National Taiwan University

Prof. Chuin-Shan (David) Chen is a Distinguished Professor in the Department of Civil Engineering and a Distinguished Professor in the Department of Materials Science and Engineering at National Taiwan University (NTU). He is also the Director and Co-Founder of NCREE-NTUCE Joint Artificial Intelligence Research Center and the Chief Executive Officer and Co-Founder of iNSIGHT Center, NTU. Prof. Chen's research interests are associated with artificial intelligence for engineering applications. Prof. Chen has received numerous awards, including the International Association for Computational Mechanics (IACM) Fellow Award, Life-Long NTU Distinguished Teaching Award, CICHE AI Application Award, among others.

Zoran Vojinovic

Associate Professor, IHE Delft, Netherlands / Honorary Professor, University of Exeter,
UK / Adjunct Professor, NCKU, Taiwan

Zoran Vojinovic is an expert in flood modelling, risk analysis, climate adaptation, and hydroinformatics, with more than 25 years of global experience. He has advised governments and collaborated with leading organisations including the European Commission, Asian Development Bank (ADB), World Bank, and UNDP on innovative water management, flood risk mitigation, and climate change adaptation. Recognized as a Water Champion by the ADB in 2013, Zoran pioneered a holistic flood-risk approach in Asia, integrating economic, social, cultural, and ecological dimensions, and led a large team to protect heritage while managing floods in the historic city of Ayutthaya (Thailand). He has led major EU-funded initiatives such as PEARL and RECONECT, the latter bringing together 37 global partners to advance large-scale Nature-Based Solutions for hydro-meteorological risk reduction. Most recently, he organized and chaired the international conference on Nature-Based Solutions as part of the RECONECT project.

Bo-Chuan Cho

CTO, GSD Enviro Tech (Taiwan) Co., Ltd.

Dr. Bo-Chuan Cho, Technical Director of GSD Environmental Technology, holds a Ph.D. in Environmental Engineering from National Central University and is a licensed Professional Engineer. His career spans academia, practice, and R&D, contributing to the planning and design of multiple water and wastewater treatment plants, reuse systems, and industrial wastewater management frameworks. In recent years, he has focused on advancing smart water management, leading the development of the "WaterOps Smart Water Service Platform." This platform integrates AIoT, edge computing, and digital twin technologies to achieve precise process control, energy savings, carbon reduction, and full life-cycle management of water resources. Widely applied in high-tech plants and reclaimed water centers, his work has significantly improved operational efficiency and environmental performance, driving Taiwan's water sector toward sustainability and international recognition.

Oct. 28 (Tuesday)

Digital Development of the Water Industry

- 2:00 PM – 5:10 PM (Taipei time) (701G)

Agenda

Time	Topic	Moderator / Speaker
13:00~14:00	Registration	
14:00~14:05	Opening Remarks	**Chen-Yuan Chien , Secretary General** Water Resources Agency, MOEA **Dong-Jiing Doong, Professor & Department Chair** NCKU
14:05~14:30	Keynote Speech **Neural Network-Based Dynamic Water Supply Information - AI Applications in Taiwan Water Corporation**	**Jing-Wen Wu, Deputy General Manager** Taiwan Water Corporation
14:30~14:55	Keynote Speech **Turning General Intelligence into Domain Experts in the AI 2.0 Era**	**Chuin-Shan Chen, Distinguished Professor Department of Civil Engineering** NTU
14:55~15:25	Coffee Break	
15:25~15:50	Keynote Speech **Green & Smart: Unlocking Climate Resilience through Nature-Based Solutions and Digital Technology**	**Zoran Vojinovic, Associate Professor / Hydroinformatics, UNESCO-IHE, Delft, The Netherlands** Department of Civil and Environmental Engineering, Penn State University
15:50~16:15	Keynote Speech **AI Empowerment for Smart Water Governance: From Data to Resilience Management**	**Bo-Chuan Cho, CTO** GSD Enviro Tech (Taiwan) Co., Ltd
16:15~17:00	Panel Discussion **Moderator：** **Chen-Yuan Chien, Secretary General** / Water Resources Agency, MOEA **Dong-Jiing Doong, Professor & Department Chair** / National Cheng Kung University **Panelists:** **Jing-Wen Wu, Deputy General Manager** / Taiwan Water Corporation **Chuin-Shan Chen, Distinguished Professor of Computer-Aided Engineering, Department of Civil Engineering** / National Taiwan University **Zoran Vojinovic, Associate Professor/ IHE Delft, Netherlands、Honorary Professor, University of Exeter, UK** / Adjunct Professor, NCKU, Taiwan **Bo-Chuan Cho, CTO** / GSD Enviro Tech (Taiwan) Co., Ltd	

Oct.29 (Wednesday)

Sustainable Water Resources Management — Advancements in Desalination and Water Reuse Technologies

● 9:00 AM – 12:00 PM (Taipei time) (701E)

Moderator

Hong-Pu Huang

Deputy Director-General, Water Resources Agency, MOEA

Mr. Hong-Pu Huang has served as Deputy Director-General of the Water Resources Agency, Ministry of Economic Affairs, since January 19, 2021. He is also the 10th President of the Chinese Water Resources Management Society (2024–present).
During Taiwan's historic drought, he led the establishment of emergency seawater desalination units in Taichung and Hsinchu, which effectively shortened construction time and increased water supply capacity. He has overseen major water projects, including the construction of Hushan Reservoir, Niaozueitan Artificial Lake, and several reservoir renewal initiatives.

Sheng-Chieh Yu

Professor, Department of Environmental Engineering, Chung Yuan Christian University

Dr. Sheng-Jie You is the professor of the Department of Environmental Engineering, Chung Yuan Christian University. He has published over 150 SCI papers and has been recognized as one of the World's Top 2% Scientists. Prior to the current position, Prof. You was the Chair of the Department of Bioenvironmental Engineering.
In addition to academic research, Prof. You currently serves as the Secretary-General of the Taiwan Water Environment Renewal Association. Prof's expertise includes the application of membrane and photocatalytic technologies in wastewater treatment, groundwater remediation, and resource recovery from waste.

Speaker / Panelists

How Yong Ng

Adjunct Professor, National University of Singapore -Professor, Beijing Normal University at Zhuhai

Dr. How Yong Ng is an Adjunct Professor at NUS Civil and Environmental Engineering and a Professor at Beijing Normal University, Zhuhai. Formerly Director of NUS Environmental Research Institute and Sembcorp-NUS Corporate Lab, his research focuses on sustainable water management, reuse and desalintion. Author of 300+ publications, he invented the I2BioS biosensor for real-time water monitoring, commercialised via EnvironSens Pte Ltd. He advises WaterROAM Pte Ltd, a social enterprise for humanitarian water filters. A Fellow of the Academy of Engineering Singapore and IWA, he is an Editor of Water Research, chairs the IWA Specialist Group on Membrane Technology, and has received multiple awards including the 2014 IWA Pacific Project Innovation Award, and 2020 Institute of Engineering Singapore Prestigious Engineering Achievement Award.

Miguel Angel SANZ

President, MS Water Consult – Director and Former President, IDRA

42 years' experience in Water Market. Prior to MSWC, 39 years working in SUEZ group in Spain and France HQ, working in the International Water Market (Desalination, Drinking and Wastewater). He has been in several management positions in the Technical, Proposals and Business Development areas.
He is very active in Professional Associations, and he has been on the Board of Directors in several associations in the last 20 years. Still on the Board of Directors of AEDyR (Spanish Desalination and Water Reuse Association) and IDRA (International Desalination and Reuse Association), where he has been VP and President.

Chun-Ling Kuo

Director, Water Resources Management Division, WRA

Since July 2023, she has served as Division Chief of Water Resources Management at the Water Resources Agency, Ministry of Economic Affairs, overseeing national water resources planning and allocation, major project implementation, and reservoir safety management.
During her tenure, she has focused on promoting reclaimed water, seawater desalination, and other diversified water sources, advancing inter-regional pipeline networks, reservoir sediment removal, and backup water source development, while establishing an industrial collaboration platform to enhance supply stability and resilience, and to foster sustainable water resource development.

Ming-Lang Chiang

Director, Northern Region Water Resources Office, WRA

Director, Water Resources Planning Institute, WRA
Deputy Chief Engineer, WRA
Section Chief, WRA
Deputy Director, Central Region Water Resources Office, WRA
Chief Engineer, Central Region Water Resources Office, WRA

Jin-Ching Lee

Deputy Director-General, Department of Water Resources, Taoyuan City Government

Education:
Ph.D., Department of Bioenvironmental Systems Engineering, National Taiwan University
M.B.A., Department of Business Administration, National Taipei University
M.S., Department of Environmental Engineering, National Central University
Experience:
Deputy Director General, Department of Water Resources, Taoyuan City Government
Deputy Director General, Water Resources Bureau, Taichung City Government
Senior Technical Specialist, Environmental Protection Administration, Executive Yuan
Division Chief, Environmental Professionals Training Institute, Environmental Protection Administration, Executive Yuan

Oct.29 (Wednesday)

Sustainable Water Resources Management — Advancements in Desalination and Water Reuse Technologies

● 9:00 AM – 12:00 PM (Taipei time) (701E)

Agenda

Time	Topic	Moderator / Speaker
08:00~09:00	Registration	
09:00~09:05	Opening Remarks	**Sheng-Chieh Yu, Professor** Department of Environmental Engineering, Chung Yuan Christian University
09:05~09:35	Keynote Speech **Water Reuse and Desalination to Mitigate the Impact of Climate Change on Water Scarcity**	**How Yong Ng , Adjunct Professor** National University of Singapore -Professor, Beijing Normal University at Zhuhai
09:35~10:05	Keynote Speech **Desalination and Water Reuse: Market Global View, Technologies and Actual Trends**	**Miguel Angel SANZ, Founder & CEO** MS Water Consult
10:05~10:25	Networking Break	
10:25~10:30	Opening Remarks	**Hong-Pu Huang, Deputy Director-General** Water Resources Agency, MOEA
10:30~10:50	Keynote Speech **Policy Evolution and Promotion Strategies for Seawater Desalination in Taiwan**	**Chun-Ling Kuo, Director** Water Resources Management Division, WRA
10:50~11:10	Keynote Speech **Experience Sharing on the Hsinchu Seawater Desalination Plant**	**Ming-Lang Chiang, Director** Northern Region Water Resources Office, WRA
11:10~11:30	Keynote Speech **Overall Planning and Experience Sharing of Reclaimed Water in Taoyuan City**	**Jin-Jing Lee, Deputy Director-General** Department of Water Resources, Taoyuan City Government
11:30~12:00	Panel Discussion **Moderator：** **Hong-Pu Huang Deputy Director-General** / Water Resources Agency, MOEA **Sheng-Chieh Yu Professor** / Department of Environmental Engineering, Chung Yuan Christian University **Panelists:** **How Yong Ng Professor** / NUS、BNU Zhuhai、IWA Specialist Group on Membrane Technology **Miguel Angel SANZ MS** / Founder and CEO, MS Water Consult、Director and Former President of IDRA **Ming-Lang Chiang Director** / Northern Region Water Resources Office, WRA **Ji-Jin Lee,Deputy Director-General** / Department of Water Resources, Taoyuan City Government	

Oct.29 (Wednesday)

Taiwan-Japan Dialogue — Strategies for Water Resources Development and Adaptation in Response to Climate Change

● 9:00 AM – 12:00 PM (Taipei time) (701F)

Moderator

Wen-Hsiang Chou
Deputy Chief Engineer, Water Resources Agency, MOEA

Deputy Chief Engineer Wen-Hsiang Chou holds a Ph.D. in Engineering Technology from the College of Engineering, National Taipei University of Technology, and a Master's degree in Civil Engineering from National Central University.He is also a certified Professional Environmental Engineer and has passed the national Senior Examination for Environmental Engineering.
Deputy Chief Engineer Chou has served in multiple key positions at the Water Resources Agency, including Director of the Taipei Water Source Special Area Management Bureau, Deputy Director, Secretary, and Section Chief of various departments.

Chih-Ping Lin
Distinguished Professor, National Yang Ming Chiao Tung University

Dr. Chih-Ping Lin is currently a Distinguished Professor of Civil Engineering, Dean of the Engineering College, and Director of the Disaster Prevention and Water Environment Research Center at National Yang Ming Chiao Tung University (NYCU), Taiwan. His primary research interests are engineering monitoring based on electromagnetic waveguide and developments and applications of near-surface geophysics for solving geotechnical, geo-environmental, and water resources-related problems, such as quality inspection of ground improvement, landslide monitoring, subsurface imaging of soil moisture, investigation of soil and groundwater contamination, non-destructive evaluation and monitoring of dam safety, and suspended sediment monitoring in rivers and reservoirs.

Speaker / Panelists

Frederick Nai-Fang Chou, Ph.D.
Senior Researcher,NCKU Research and Development Foundation

Dr. Chou was an engineer of the Hydraulic Engineering Section, Sinotech Engineering Consultants, Inc. in 1981. He served as a professor and heads of the Department of Hydraulic and Ocean Engineering, Research Center of Water Science and Technology of the National Cheng Kung University. He was a member of several committees of the Executive Yuan, Economic Construction Council, Ministry of Economic Affairs (MOEA) of Taiwan. He was honored for Da-Yu prize of MOEA in 2020. He studied regional water resources planning and management, smart water management for water resources allocation, reservoir operation, irrigation and drainage systems in recent years.

Masahiko Naito
Executive Director, Japan Riverfront Research Center (RFC)

Career History:
Sep 2023 – Present: Executive Director, RFC
Jun 2022 – Director-General, Hokuriku Regional Bureau, MLIT
Apr 2021 – Director, River Environment Division, Water and Disaster Management Bureau, MLIT
Aug 2020 – Director, Disaster Prevention and Relief Division, Water and Disaster Management Bureau, MLIT
Biography:
Mr. Naito formerly served as Director-General of the Hokuriku Regional Bureau of MLIT. He has extensive experience in policymaking on river improvement and management, particularly in the areas of basin-wide flood risk management (so-called "River Basin Disaster Resilience and Sustainability by All" in Japan), river and waterfront environment, and disaster prevention. He is currently engaged in leading research and guidance in the fields of water cycle management, community development, disaster prevention, and river environments.

Dong-Sin Shih
Professor, Department of Civil Engineering, National Yang Ming Chiao Tung University

Dr. Shih is Chair and Professor in the Department of Civil Engineering at National Yang Ming Chiao Tung University, specializing in Hydrology and Hydraulics. He earned his Ph.D. from National Central University in 2006 and began a research career at the National Center for High-Performance Computing. In 2008, he joined the Taiwan Typhoon and Flood Research Institute to conduct national flash flood simulation projects. He has served a faculty position at National Chung Hsing University since 2013, and joined National Chiao Tung University in 2019. His research focuses on river and pier scouring, flood simulations, water resource management, and climate-related disaster prevention works.

Akira Shimizu
Director, Division of Water Cycle, Community Development and Disaster Prevention, Japan Riverfront Research Center (RFC)

Career History:
Jul 2021 – Present: Director, RFC
Jul 2018 – Director, Construction Management Center, NILIM, MLIT
Apr 2016 – Director, Iwate River and National Highway Office, MLIT
Biography:
Mr. Shimizu previously served in key positions at MLIT, working on public works policy and river management. He has practical experience in flood response, water use, and local government operations. Currently, he conducts research in water cycle management, urban development, and disaster resilience at RFC.

Oct.29 (Wednesday)

Taiwan-Japan Dialogue — Strategies for Water Resources Development and Adaptation in Response to Climate Change

● 9:00 AM – 12:00 PM (Taipei time) (701F)

Agenda

Time	Topic	Moderator / Speaker
08:00~09:00	Registration	
09:00~09:10	Opening Remarks	**Wen-Hsiang Chou, Deputy Chief Engineer** Water Resources Agency, MOEA
09:10~09:35	Keynote Speech **Water Resources Development Strategies in Response to Climate Change**	**Frederick Nai-Fang Chou, Ph.D., Senior Researcher** NCKU Research and Development Foundation
09:35~10:00	Keynote Speech **Japan's Water Resource Policy and the Development of Integrated Watershed Management**	**Masahiko Naito, Executive Director** Japan Riverfront Research Center(RFC)
10:00~10:20	Networking Break	
10:20~10:30	Opening Remarks	**Chih-Ping Lin, Distinguished Professor** Civil Engineering, NYCU
10:30~10:55	Keynote Speech **Water Resource Risk Assessment and Adaptation Under Climate Change: A Case Study of the Tsengwen - Wusanto Reservoir System**	**Dong-Sin Shih, Professor** Department of Civil Engineering, National Yang Ming Chiao Tung University
10:55~11:20	Keynote Speech **Challenges and Case Studies in Japan's Water Resource Management**	**Akira Shimizu, Director** Division of Water Cycle, Community Development and Disaster Prevention, Japan Riverfront Research Center(RFC)
11:20~12:00	Panel Discussion **Moderator：** **Wen-Hsiang Chou, Deputy Chief Engineer** / Water Resources Agency, MOEA **Chih-Ping Lin, Distinguished Professor** / Civil Engineering, NYCU **Panelists:** **Frederick Nai-Fang Chou, Ph.D.,Senior Researcher** / NCKU Research and Development Foundation **Masahiko Naito, Executive Director**/ Japan Riverfront Research Center **Dong-Sin Shih, Professor** / Department of Civil Engineering, National Yang Ming Chiao Tung University **Akira Shimizu, Director**/ Division of Water Cycle Community Development and Disaster Prevention, Japan Riverfront Research Center (RFC)	

Oct.29 (Wednesday)

Water Innovation Technology and Industry Presentation

● 9:00 AM – 12:00 PM (Taipei time) (701G)

Moderator

Kuang-Chih Chang
Director, Water Resources Planning Branch, WRA, MOEA

Director Kuang-Chih Chang earn his master's degree in Civil Engineering from National Taiwan University. He dedicated over 30 years of his career to the Water Resources Agency of the Ministry of Economic Affairs. He held various positions include Deputy Chief Engineer, Division Director, Division Deputy Director of the Water Resources Agency, MOEA, and Director of The Third River Management Office, Water Resources Agency, MOEA.
Throughout his career, he contributed significantly to various aspects of water resources management. He involved in the formulation of water resources policies, the management of river systems, and efforts to prevent land subsidence. Additionally, he played a key role in promoting hot springs management and the reuse of recycled water.

Chih-Pin Huang
Chairman, Taiwan Water Industry Development Association

Dr. Huang received his B.Sc. and M.S. degrees from National Cheng Kung University in 1981 and 1983, respectively. He earned his Ph.D. from the University of Delaware before joining the faculty at NYCU in 1990.
Since 2019, he has served as the President of the Water Affairs Organization, Taiwan (WAOT). Dr. Huang has been recognized for his outstanding academic research and service achievements with many awards and honors, including being named an International Honorary Member of AAEES in 2019 for his sustained leadership in advancing the professional practice of water engineering and science in Taiwan.

Speaker / Panelists

Ričardas Valančiauskas
Director, Lithuanian Hydrometeorological Service

Mr. Valančiauskas leads the Lithuanian Hydrometeorological Service, driving advancements in environmental monitoring and climate-related services. He represents Lithuania in the World Meteorological Organization (WMO), contributing to international cooperation on climate and weather resilience.
Previously, he served in the Ministry of Economy and Innovation, national innovation agencies, and regional development administration, with expertise in innovation ecosystems, technology transfer, and startup growth.

Anh Quach Crandall
Technical Program Manager, Water Risk & Replenishment

Anh Quach Crandall has led the Water Risk and Water Replenishment Programs within the Google Data Center Sustainability team for 3 years. In her role, she developed and operationalized Google's Water Risk Framework ensuring responsible water use at all new data center sites. She's also charged with scaling Google's water replenishment program to meet their goal of replenishing 120% of the water they consume, on average, by 2030. Anh's background in municipal water and wastewater engineering consulting enables her unique insight into water resource management and system resiliency, as well as identifying opportunities for public-private partnership.

Joseph Tsai
Founder / CEO, Aeon Matrix Inc.

Our mission is to care for people and the planet we share. We are dedicated to developing innovative products and services that conserve water and energy, protect the environment, and enhance quality of life for all. At Aeon Matrix, we create data-driven smart control solutions for irrigation, agriculture, and other applications, aiming to save water, energy, and labor while promoting sustainable and efficient practices.

Debbie Shi
Vice President, Administration, Layana Co., Ltd.

I serve as the Vice President of Administration at Layana Co., Ltd., with prior experience as Brand Director and Digital Brand Manager. As a certified Six Sigma Black Belt, my expertise lies in brand strategy, cross-border e-commerce, and sustainable manufacturing. I also initiated the "Walk Taiwan Certification Platform," reflecting my commitment to ESG and community engagement. Beyond my professional role, I have completed a 1,172 km walking tour around Taiwan, a cycling tour, and climbed 36 high peaks, integrating resilience and sustainability into both work and life.

Jui-Chen Chen
General Manager, Chyi Shyang Co., Ltd.

Chyi Shyang Co., Ltd., established in 1993, specializes in eco-friendly building materials and ecological engineering. With exclusive rights to the JW Ecological Method from Ding Tai CO., LTD., we offer integrated services from R&D, production, export, and distribution to market education and training for marketing and technical professionals. We also represent top-quality construction products from domestic and international brands.

Oct.29 (Wednesday)

Water Innovation Technology and Industry Presentation

● 9:00 AM – 12:00 PM (Taipei time) (701G)

Agenda

Time	Topic	Moderator / Speaker
09:00~09:10	Introduction	**Kuang-Chih Chang, Director,** Water Resources Planning Branch, WRA, MOEA
09:10~09:30	Keynote Speech **Turning the Tide: Innovative Water Management and Climate Adaptation in Lithuania**	**Ričardas Valančiauskas, Director,** Lithuanian Hydrometeorological Service
09:30~09:50	Technology Presentation **Google's Water Stewardship for a Sustainable Future (TBC)**	**Anh Quach Crandall** Technical Program Manager Water Risk & Replenishment , Google
09:50~10:10	Technology Presentation **Smart Water Management and Monitoring Systems**	**Joseph Tsai, Founder,** Aeon Matrix Inc.
10:10~10:25	Tea Break	
10:25~10:35	Introduction	**Alex Lai Presdent,** Taiwan Water Industry Development Association
10:35~10:55	Technology Presentation **Smart Water Efficiency and Precision Manufacturing: The Sustainable Journey of Changhua's First Green Factory**	**Debbie Shi, Vice President Administration,** Layana Co., Ltd.
10:55~11:15	Technology Presentation **JW Eco-Technology**	**Jui-Chen Chen, General Manager,** Chyi Shyang Co., Ltd.
11:15~12:00	Panel Discussion **Moderator：** **Kuang-Chih Chang, Director** / Water Resources Planning Branch, Water Resources Agency, MOEA **Chih-Pin Huang, Chairman** / Taiwan Water Industry Development Association **Panelists:** **Ričardas Valančiauskas, Director** / Lithuanian Hydrometeorological Service **Anh Quach Crandall,Technical Program Manager** / Water Risk & Replenishment , Google **Joseph Tsai, Founder** / Aeon Matrix Inc. **Debbie Shi, Vice President, Administration** / Layana Co., Ltd. **Jui-Chen Chen, General Manager** / Chyi Shyang Co., Ltd.	

Oct.29 (Wednesday)

Systematic Watershed Management and Smart Disaster Prevention

● 2:00 PM – 5:00 PM (Taipei time) (701E)

Moderator

Yi-Fung Wang

Deputy Director-General, Water Resources Agency, MOEA

Received Ph.D. in Civil Engineering from National Taiwan University.
Awarded as Outstanding Personnel (2001) and Model Civil Servant (2010).
Dedicated to the development of water resources technology, conservation, water-saving policies, inundation warning system, and drought emergency response.

Dong-Jiing Doong

Professor & Chair, Department of Hydraulic and Ocean Engineering, NCKU

Prof. Doong is Chair of the Department of Hydraulic and Ocean Engineering and Director of the Coastal Ocean Monitoring Center at NCKU. Prior to joining NCKU, he held academic and administrative positions at National Taiwan Ocean University. He led research on coastal protection and marine hazards, advancing monitoring networks and early warning systems. He holds over 20 patents and has received several national awards, including the Disaster Prevention Contribution Award, the Outstanding Contribution to Water Resources Award, and the Engineering Professor Award.

Speaker / Panelists

Koji Ikeuchi

President, Japan Society of Civil Engineers / President, FRICS / Emeritus Professor, UTokyo

Koji Ikeuchi is President of the Foundation of River & Basin Integrated Communications (FRICS), President of the Japan Society of Civil Engineers (JSCE), and Emeritus Professor at the University of Tokyo. For over 40 years, he has been engaged in disaster risk reduction and flood management policies and projects. At the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), he served as Director General of the Water and Disaster Management Bureau and as Vice Minister for Engineering Affairs. After retiring from government service, he served as a professor at the University of Tokyo for six and a half years before assuming his current roles.

Peter Fröhle

Full Professor Hydraulic Engineering, Hamburg University of Technology, Member WRA International Advisory Board

Peter Fröhle is a Civil Engineer with specialization in Hydraulic Engineering and has studied in Bochum and Hannover. He worked as a researcher at University of Hannover and University of Rostock, where he obtained his PhD in Hydraulic Engineering. In Addition, he was head of the Coastal Engineering group of University of Rostock.
Peter Fröhle serves in several public boards, e.g. i) the Scientific Advisory Board on Climate Impacts and Climate Change to the Senate of the Federal State of Hamburg and ii) the Joint Board of the German Port Technology Association.
Since 2017 Peter Fröhle is an Adjunct Professor in the Department of Hydraulic and Ocean Engineering of NCKU

Hao-Che Ho

Associate Professor, Department of Civil Engineering, National Taiwan University

I am an associate professor at National Taiwan University's Department of Civil Engineering, specializing in urban disaster prevention engineering and water resources management. I have pioneered the integration of IoT technology, AI prediction models, and disaster prevention engineering to establish a flood resilience indicator system, making significant contributions to urban disaster prevention.
Professor Ho maintains long-term partnerships with Taiwan's Water Resources Agency and Soil and Water Conservation Bureau, leading multiple disaster prevention projects. His team's IoT smart monitoring platform has been deployed across Taiwan, enhancing disaster response efficiency.
In international cooperation, Professor Ho has assisted Taiwan's ICDF in exporting comprehensive disaster prevention solutions to diplomatic allies, including successful projects in Belize and Guatemala, demonstrating Taiwan's global impact in disaster risk reduction.

Yuan-Fong Su

Assistant Professor, Department of Harbor and River Engineering, NTOU

Dr. Yuan-Fong Su specialized in remote sensing for environmental monitoring. After obtaining his Ph.D. in 2009 from National Taiwan University, he joined the School of Geography at the University of Nottingham, UK, as a postdoctoral research fellow, working with Professor Giles Foody on the development of remote sensing image analysis techniques. He subsequently joined the National Science and Technology Center for Disaster Reduction in 2012, conducting research on the applications of remote sensing in slopeland hazard, flood disaster assessment, and climate change issues. Since 2021, he has been with the Department of Harbor and River Engineering at National Taiwan Ocean University, focusing on research related to the application of AI and remote sensing technologies in environmental issues.

Oct.29 (Wednesday)

Systematic Watershed Management and Smart Disaster Prevention

● 2:00 PM – 5:00 PM (Taipei time) (701E)

Agenda

Time	Topic	Moderator / Speaker
13:30~14:00	Registration	
14:00~14:05	Opening Remarks	**Yi-Fung Wang, Deputy Director-General** Water Resources Agency, MOEA
14:05~14:10	Introduction of the Speaker	**Dong-Jiing Doong, Professor&Chair** Department of Hydraulic and Ocean Engineering, NCKU
14:10~14:35	Keynote Speech **Development of Realistic and Personally Relevant Risk Information Systems for Enhanced Evacuation and Preparedness**	**Koji Ikeuchi, Emeritus Professor** The University of Tokyo / President, FRICS
14:35~15:00	Keynote Speech **Flood Risk - Analysis and Management on Watershed Scale in Times of Change**	**Peter Fröhle, Director** Institute of Hydraulic Engineering, Hamburg University of Technology
15:00~15:15	Tea Break	
15:15~15:20	Introduction of the Speaker	**Yi-Fung Wang, Deputy Director-General** Water Resources Agency, MOEA
15:20~15:45	Keynote Speech **Integrating IoT-Enabled Smart Monitoring with Flood Resilience Indicators for Comprehensive Disaster Management Strategy**	**Hao-Che Ho, Associate Professor** Department of Civil Engineering, National Taiwan University
15:45~16:10	Keynote Speech **Artificial intelligent for disaster monitoring and future challenge of climate change**	**Yuan-Fong Su, Assistant Professor** Department of Harbor and River Engineering, NTOU
16:10~17:00	Panel Discussion **Moderator：** **Yi-Fung Wang, Deputy Director-General** / WRA **Dong-Jiing Doong, Professor & Chair** / NCKU **Panelists:** **Koji Ikeuchi, Emeritus Professor** / The University of Tokyo, FRICS **Peter Fröhle, Director** / Hamburg University of Technology **Hao-Che Ho, Associate Professor** / NTU **Yuan-Fong Su, Assistant Professor** / NTOU	

Oct.29 (Wednesday)

AI Applications in Reservoir Management and Safety Monitoring

● 2:00 PM – 4:35 PM (Taipei time) (701F)

Moderator

Chao-Chung Chien
Deputy Chief Engineer, Water Resources Agency, MOEA

Chief of the Hydrological Technology Group and Conservation Group of the Water Resources Agency, Ministry of Economic Affairs

Wei-Cheng Lo
Distinguished Professor & Chief Secretary, National Cheng Kung University

Dr. Lo is a Distinguished Professor in the Department of Hydraulic and Ocean Engineering at National Cheng Kung University, where he has served since 2005 following the completion of his Ph.D. at the University of California, Berkeley. His research focuses on inundation modeling, land subsidence analysis, and he specializes in theoretical and computational subsurface hydrology, geomechanics, and geosciences. Professor Lo's expertise has earned him appointments to several high-level government advisory boards, including his role as convener of the Flooding Group within the Disaster Prevention and Protection Expert Advisory Committee of the Executive Yuan. He also contributes to the advancement of his field as an associate editor for two leading international journals: Journal of Hydrology and Advances in Water Resources.

Speaker / Panelists

Cameron Carpenter
Civil Engineer. Dam Safety Office, United States Bureau of Reclamation

Cameron Carpenter is a seasoned civil engineer with a strong background in dam safety, hydraulic modeling, and infrastructure rehabilitation. With experience spanning federal agencies, academia, and private consulting, Cameron has led multidisciplinary teams, managed multimillion-dollar research programs, and developed innovative tools for risk assessment and asset management. He holds a master's in civil engineering from UC Davis and a dual bachelor's in civil and environmental engineering from the University of Michigan.

Li-Chiu Chang
Professor, Department of Water Resources and Environmental Engineering, Tamkang University

This presentation introduces the development of an AI-driven full-hydrograph flood forecasting system for reservoir catchments. It addresses the challenges of rainfall–runoff forecasting and recession flow estimation by integrating the strengths of AI technologies with traditional hydrological methods. A Hybrid Model is proposed, combining Recurrent Neural Networks (RNN) with the storage function method, to achieve accurate prediction of the entire flood hydrograph. Case studies in Taiwan's reservoirs and river basins will be highlighted, demonstrating the effectiveness of this approach in operational flood forecasting. The talk will further explore how AI-enhanced forecasting supports decision-making in reservoir operations and flood risk management, contributing to resilient and sustainable water resource strategies under climate change.

Li-Pen Wang
Associate Professor, Department of Civil Engineering, National Taiwan University

Dr. Li-Pen Wang is an Associate Professor in Civil Engineering at National Taiwan University (NTU) and Deputy Director of the NTUCE-NCREE Joint AI Research Centre. He specializes in hydrometeorology and computational statistics, with research interests in rainfall modelling, climate risk assessment, and sensor development. He also serves as an external consultant for the UK Met Office and the International Monetary Fund (IMF). Prior to joining NTU, he held postdoctoral positions at Imperial College London and KU Leuven, led catastrophe risk modelling at MiCRO, and co-founded the UK-based start-up Rain++.

Oct.29 (Wednesday)

AI Applications in Reservoir Management and Safety Monitoring

● 2:00 PM – 4:35 PM (Taipei time) (701F)

Agenda

Time	Topic	Moderator / Speaker
13:30~14:00	Registration	
14:00–14:05	Opening Remarks	Chao-Chung Chien, Deputy Chief Engineer Water Resources Agency, MOEA
14:05~14:10	Introduction of the Speaker	Wei-Cheng Lo, Distinguished Professor & Chief Secretary National Cheng Kung University
14:10~14:35	Keynote Speech (Pre-Recorded) Using machine learning to screen dams for seismic vulnerability	Cameron Carpenter, Civil Engineer U.S. Bureau of Reclamation
14:35~15:00	Keynote Speech Hybrid AI-Hydrological Models for Full-Hydrograph Flood Forecasting in Reservoir Catchments	Li-Chiu Chang, Professor Tamkang University
15:00~15:15	Tea Break	
15:15~15:20	Introduction of the Speaker	Wei-Cheng Lo, Distinguished Professor & Chief Secretary National Cheng Kung University
15:20~15:45	Keynote Speech AI in hydrometeorological applications: From nowcasting to climate modelling	Li-Pen Wang, Associate Professor National Taiwan University
15:45~16:35	Panel Discussion Moderator： Chao-Chung Chien, Deputy Chief Engineer / WRA Wei-Cheng Lo, Distinguished Professor & Chief Secretary / NCKU Panelists: Cameron Carpenter, Civil Engineer / U.S. Bureau of Reclamation Li-Chiu Chang, Professor / Tamkang University Li-Pen Wang, Associate Professor / National Taiwan University	

Conference Organization

- Advisor

經濟部
Ministry of Economic Affairs

- Organizer

經濟部水利署
Water Resources Agency, MOEA

- Co-organizer

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2025 10/29-10/31 TAINEX 1

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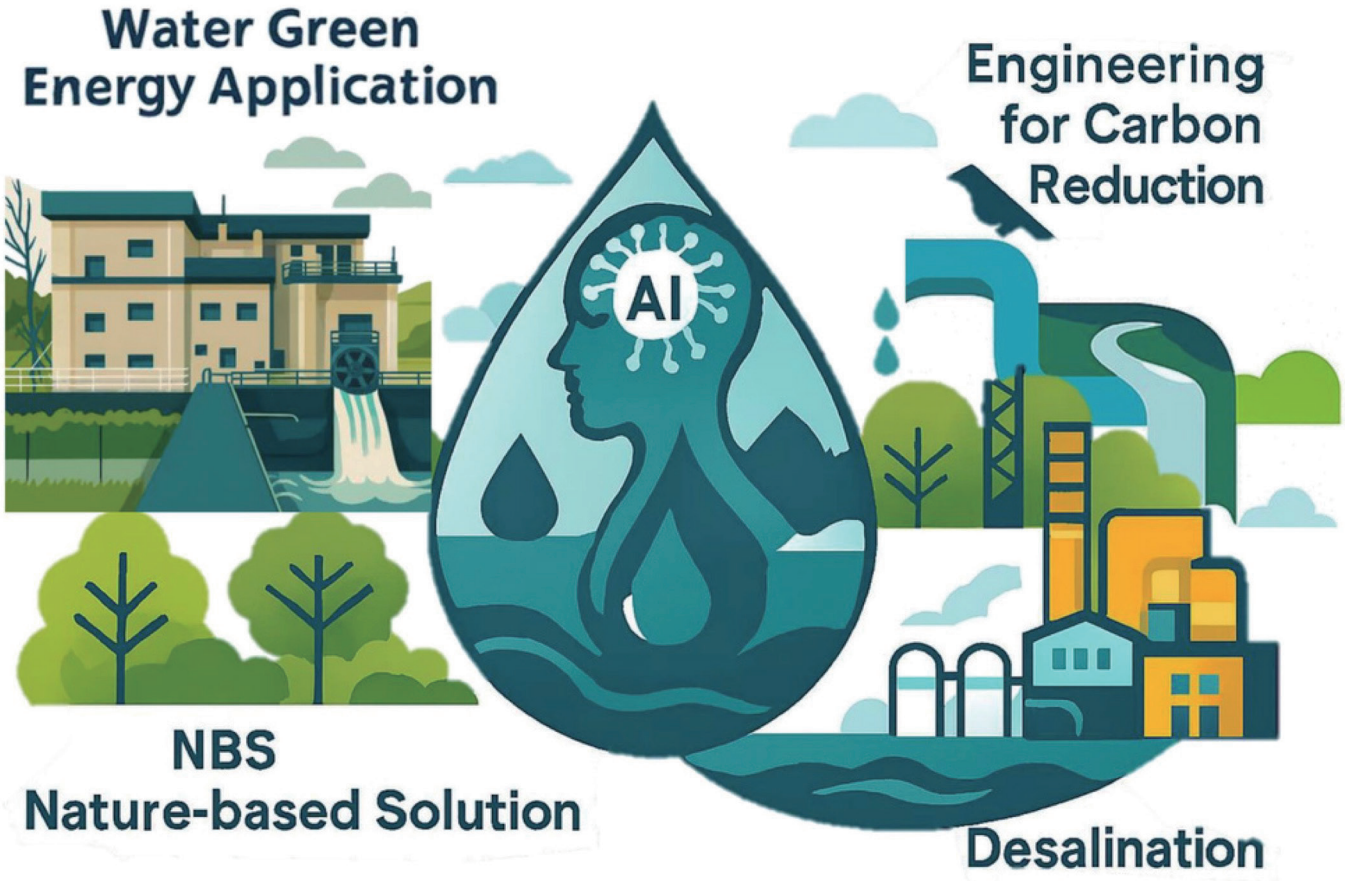
經濟部水利署 Water Resources Agency, MOEA

水利署主題館



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TAIWAN INT'L
WATER WEEK