

綠色永續下 創新水戰略

Innovative Strategies for Water Sustainability

International Forum 2022





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About

The United Nations' 17 Sustainable Development Goals (SDGs) are an urgent call for action by all countries to achieve sustainability, hoping to find a development model that meets the needs of the modern world without compromising the benefits of future generations. All living things need water to survive. Without water, civilization as we know it would not exist. However, extreme weather ramps up with devastatingly frequent floods and droughts that wreak havoc in different places globally. In the face of climate change, how to think outside the box and lay the foundation for sustainable development and an eco-friendly environment through innovative and forward-looking water strategies while keeping the global development going and taking into account the rights and interests of the next generation goes beyond just a philosophical question, and more of a critical issue for experts in the field of water resources.

According to the World Economic Forum's 2022 Global Risks Report, extreme weather events and climate action failure come in as top on the ranking of environmental risks, whereas the Sixth Assessment Report of the IPCC - Intergovernmental Panel on Climate Change also shows that increases in the intensity and scale of rainstorms or droughts more than ever should be expected in the future, which will lead to more uncertainty and climate risks to the water environment.

Taiwan is no stranger to climate extremes: repeated cycles of flooding and droughts, or the worst drought in a century that just went away not long ago. In response to severe weather events possibly to come in the future, the international forum of 2022 Taiwan International Water Week sets to spark 'cross-border' cooperation for the industry, government, academia and research institutes with the theme 'Innovative Strategies for Water Sustainability'. It's an opportunity for all participants to 'brainstorm' and 'put their heart' into water-related issues on environment, technology and culture, and discover some 'hands-on' solutions. Green sustainability as the starting point, it is hoped that a new and environmentally friendly thinking could be the core of planning and discussion on a more innovative, advanced and comprehensive water strategy. Through reducing demand, improving efficiency, recycling, cooperation and sharing, innovative use, environmental sustainability, it is possible that we and the next generation can have sufficient water resources, and a water environment where we co-exist and co-prosper with water.

Program at a Glance

Oct.12-14

	Oct.12	Oct.13		Oct.14
Venue	14:00 17:15	09:00 12:00	14:00 17:00	09:00 12:00
R101A	Water Leader Summit	Water and the Environment (1) Sustainable Development and Management of Groundwater Resources	Water and the Environment (3) Flood Resilience Forum	Water and the Culture (1) Sustainable Development of All People Flood Risk Management
R101B		Water and the Environment (2) Flood Prevention and Adaptation Strategies under Climate Change	Water and the Economy (1) Taiwan-Netherlands Water Conference - Smart Irrigation	Water and the Culture (2) Enhancing the Positive Benefits of Enterprise Water by ESG
R101C		Water and the Technology (1) Application of Remote Sensing and Geomatics in Water Resources Management	Water and the Economy (2) Sustainable Water Resources- Multiple Applications of Reclaimed Water	Water and the Culture (3) Water Culture of Jianan Irrigation System: the Past, the Present and the Future
R101D		Water and the Technology (2) Smart Water Resource Management	Water and the Economy (3) Emerging Water Resources Technology Trends and Applications	Water and the Economy (4) Low-Carbon Water Resource Recirculation Technology - Development and Implementation

Session Guide

Water and the Environment

Date	Time	Category	Venue
Oct.13	09:00 - 12:00	Sustainable Development and Management of Groundwater Resources	R101A
Oct.13	09:00 - 12:00	Flood Prevention and Adaptation Strategies under Climate Change	R101B
Oct.13	13:30 - 17:00	Flood Resilience Forum	R101A

Water and the Technology

Date	Time	Category	Venue
Oct.13	09:00 - 12:00	Application of Remote Sensing and Geomatics in Water Resources Management	R101C
Oct.13	09:00 - 11:55	Smart Water Resource Management	R101D

Water and the Economy

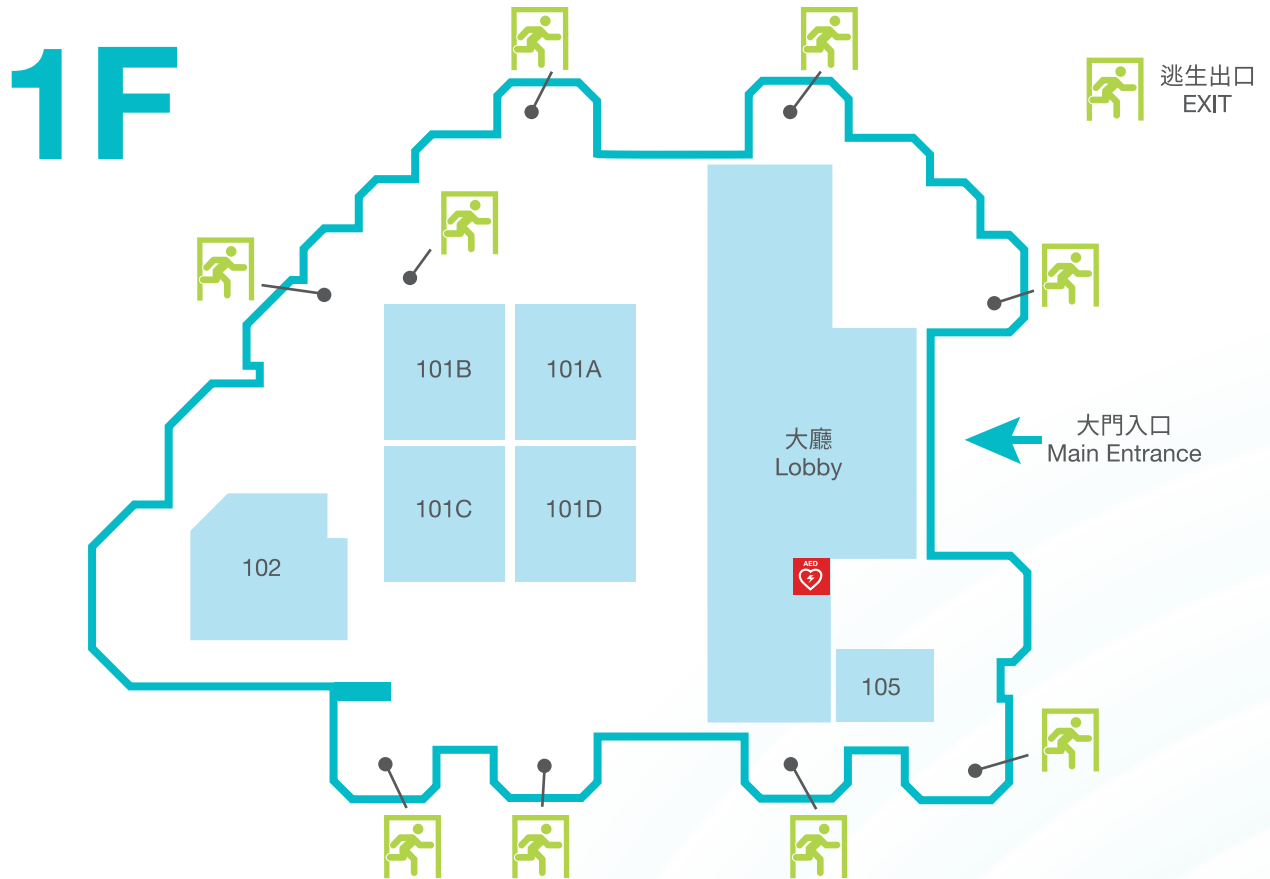
Date	Time	Category	Venue
Oct.13	15:00 - 17:00	Taiwan-Netherlands Water Conference - Smart Irrigation	R101B
Oct.13	14:00 - 16:40	Sustainable Water Resources- Multiple Applications of Reclaimed Water	R101C
Oct.13	14:00 - 17:00	Emerging Water Resources Technology Trends and Applications	R101D
Oct.14	09:00 - 12:00	Low-Carbon Water Resource Recirculation Technology - Development and Implementation	R101D

Water and the Culture

Date	Time	Category	Venue
Oct.14	09:00 - 12:00	Sustainable Development of All People Flood Risk Management	R101A
Oct.14	09:00 - 12:20	Enhancing the Positive Benefits of Enterprise Water by ESG	R101B
Oct.14	09:00 - 12:00	Water Culture of Jianan Irrigation System: the Past, the Present and the Future	R101C

Floor Plan

Taipei International Convention Center



Water Leader Summit

● Time: October 12th 14:00~17:00 (Taipei time) ● Venue: R101

Moderators



Chien-Hsin Lai

Director-General, Water Resources Agency, MOEA, Taiwan

Dr. Lai has been the Director-General of WRA since 2016. Responding to climate change, he accomplished legal works of Reclaimed Water Resources Development Act and Runoff Distribution and Outflow Control policy. He also promotes Forward-looking Infrastructure Development Program for water environment to establish industrial sustainability and water resilience in Taiwan.



Fu-Yuan Xiao

Creative Director, Common Wealth Magazine

Educational background

Indiana University, Bloomington, Comparative Literature, Master
National Taiwan University, Department of Chinese Literature, Bachelor

Work Experience

Global Views Monthly/ Managing Editor
CommonWealth Magazine/ Editor-in-Chief & Director of the Publishing Department
CommonWealth Magazine/ Editor at Large
CommonWealth Magazine/ Senior Director of Research & Development
CommonWealth Magazine/General Consultant

Speakers



Jay Lund

Distinguished Professor of Environmental Engineering, University of California - Davis, UA

Systems engineering integrating economic and policy concerns and ideas for a wide range of water and environmental problems in California and elsewhere. Active in governmental, academic, and think tank settings to better understand, communicate, and discuss problems and potential solutions more productively. Numerous publications and former students specializing on these problems and methods internationally. Member, US National Academy of Engineering



Kalanithy Vairavamoorthy

Executive Director, International Water Association

Kala Vairavamoorthy is an internationally recognised water resource management expert, with particular expertise in urban water issues. He combines a strong engineering background with practical international experience. He has published extensively and has a strong international profile working closely with the World Bank, UN-Habitat, UNESCO, GWP, SIWI and the EU. This includes leading several urban water management projects for the World Bank, African Development Bank, Asian Development Bank and DFID.



Niven Huang

Managing Director of KPMG Sustainability Consulting Co., Ltd. in Taiwan,
ESG Leader for KPMG ASPAC

Dr. Huang is a pioneer in Taiwan for CSR, ESG, sustainability reporting, corporate sustainability strategy, sustainable finance and carbon management. Before joining KPMG, he was the Secretary General of the Business Council for Sustainable Development in Taiwan (BCSD-Taiwan) for 16 years. He sits in various committees of government and company in sustainable development or green economy and regularly presents on corporate sustainability in Taiwan and internationally.

Water Leader Summit

● Time: October 12th 14:00~17:00 (Taipei time) ● Venue: R101

Time	Program	Speaker	Topic
13:00-14:00	Registration		
14:00-14:15	How could Sustainable Water for Future Generations be?		
14:15-14:30	Introduction	Chien-Hsin Lai Director-General, Water Resources Agency	
14:30-15:00	Keynote Speech	Jay Lund Distinguished Professor, Environmental Engineering, University of California - Davis	Promoting Sustainability and Carbon Reduction in Water Management
15:00-15:30	Keynote Speech	Kalanithy Vairavamoorthy Executive Director, IWA	Scarcity as a Prompt to Pivot to a New Water Paradigm
15:30-15:45	Tea break		
15:45-16:15	Keynote Speech	Niven Huang Managing Director of KPMG Sustainability Consulting Co., Ltd. in Taiwan, ESG Leader for KPMG ASPAC	ESG, Net Zero and Water Resilience
16:15-17:15	Panel Discussion		
17:15	Farewell		

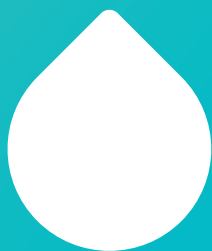
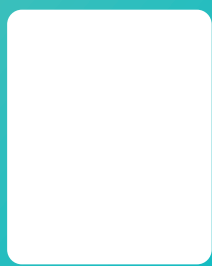
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Innovative Strategies for Water Sustainability

International Forum 2022

Oct. 12 ▶ 14
TICC台北國際會議中心

Daily Program



Water and the Environment (1)

Sustainable Development and Management of Groundwater Resources

● Time: October 13th 09:00~12:00 (Taipei time) ● Venue: R101A

Moderators



Hung-Pu Huan

Deputy Director General, Water Resources Agency, MOEA, Taiwan

Mr. Huang was in charge of several important water resources engineering plans, such as constructions of Hushan Reservoir, Niaozueitan Artificial Lake, and some reservoir renewal projects. He also developed the regulations and systems of emergency management during drought in Taiwan and involved in the Shihmen Reservoir Remediation Project.



Cheng-Yu Ku

Distinguished Professor and General Manager of the General Affairs Office/
Department of Hohai Engineering, National Taiwan Ocean University

Cheng-Yu Ku is the Distinguished Professor of the National Taiwan Ocean University (NTOU). Professor Ku is widely regarded as a leading expert in geotechnical engineering especially on hydrogeology, groundwater numerical modeling, and the meshless methods. Professor Ku also serves as the Vice President for General Affairs, Office of the General Affairs, NTOU. He has received numerous awards and recognition for his strong commitment to teaching and his profession, including the NTOU Distinguished Professor Award in 2019, the NTOU Distinguished Teaching Award in 2017, 2018 Excellent Paper Award in Taiwan Rock Engineering Symposium. Professor Ku has published more than 100 journal papers. In the last 5 years, Professor Ku has authored 38 SCIE papers.

Speakers



Alvar Escrivá-Bou

Senior Fellow, California Institute for Public Policy

Alvar Escrivá-Bou is a senior fellow at the PPIC Water Policy Center. His research explores integrated water, energy, and environmental resources management. Since joining PPIC in 2015 his research has explored the options and consequences of transitioning to groundwater sustainability in the San Joaquin Valley, analyzed California's water accounting system, studied urban drought resilience, and investigated energy and climate policies related to water use, among others. Previously, he worked as a civil engineer, managing and developing large infrastructure projects for local and regional governments and consulting firms in Spain. He holds a PhD and MS in water and environmental engineering and a BS in civil engineering from the Polytechnic University of Valencia in Spain, as well as an MS in agricultural and resource economics from the University of California, Davis.



Liang-Cheng Chang

Professor, Department of Civil Engineering, National Yang Ming Chiao Tung University, Taiwan.

Prof. Chang is the former chairman of the Taiwan Society of Groundwater Resources and Hydrogeology and former department chair of civil engineering at NCTU. He has dedicated himself to conjunctive use of surface and subsurface water, groundwater and contaminants transport modeling, water resources system modeling and planning, and parameters identification of groundwater model.



Jet-Chau Wen

Distinguished Professor, Department of Environmental and Safety and Health Engineering,
National Yunlin University of Science and Technology, Taiwan.

Prof. Wen is the chapter chairman of the Chinese Institute of Engineers and the Lifetime Distinguished Professor in the department of Safety, Health and Environmental Engineering at National Yunlin University of Science and Technology. He has dedicated himself to theoretical analysis and technology of groundwater flow and pollutant transport, hydrological analysis, and groundwater resources management. His current research interests include groundwater recharge and management, hydraulic tomography, data collection and information fusion of Hydrology, investigation and modeling for groundwater resources assessment.

Water and the Environment (1)

Sustainable Development and Management of Groundwater Resources

● Time: October 13th 09:00~12:00 (Taipei time) ● Venue: R101A

Time	Topic	Moderator/Speaker
09:00-09:05	Greeting	Hung-Pu Huang Deputy Director General, Water Resources Agency, MOEA
09:05-09:10	Introduction by Moderator	Cheng-Yu Ku Professor and Vice President for General Affairs, National Taiwan Ocean University
09:10-09:40	The Groundwater Resource Management in Practice: the Case of California	Alvar Escrivá-Bou Senior Fellow, Public Policy Institute of California
09:40-10:10	The Groundwater Resource Development and Management in Taiwan	Liang-Cheng Chang Professor, Department of Civil Engineering, National Yang Ming Chiao Tung University
10:10-10:30	Tea break	
10:30-10:35	Introduction by Moderator	Hung-Pu Huang Deputy Director General, Water Resources Agency, MOEA
10:35-11:05	The Evolutionary Principles and Application of Groundwater Level for Management in Taiwan	Jet-Chau Wen Lifetime Distinguished Professor, Department of Safety Health and Environmental Engineering, National Yunlin University of Science and Technology
11:05-12:00	Panel Discussion	
12:00	Lunch	

Water and the Environment (2)

Flood Prevention and Adaptation Strategies under Climate Change

● Time: October 13th 09:00~12:00 (Taipei time) ● Venue: R101B

Moderators



Hua-Ping Tsao

Deputy Director General, Water Resources Agency, MOEA, Taiwan

Deputy Director-General Hua-Ping Tsao has been engaged in the field of hydraulic engineering for 39 years, mainly dedicated to flood prevention and water management. Since 1999, he has planned and promoted important national construction projects such as the river, regional drainage, and seawall improvement projects, effectively improving and enhancing the overall water environment in Taiwan. Moreover, since 2014, he has successively established the Comprehensive River Basin Management Plan and Forward-Looking Water Environment Infrastructure Plan, and collaborated with other ministries and committees to carry out the related water work in order to make continuous progress toward the goals of resilient adaptation and sustainable development.



Shyh-Fang Kang

Professor, Department of Water Resources and Environmental Engineering, Tamkang University

Prof. Shyh-Fang Kang received his Ph.D. in Engineering from the Department of Civil Engineering, Tohoku University, Japan. Prof's expertise includes water pollution control, water quality management and water environment management. Before the current position, Prof. Kang was the Commissioner, Taipei Feitsui Reservoir Administration, Taipei City Government. Prof. Kang has extensive practical experiences in issues of water supply stabilization and adaptation. Now Prof. Kang is working in the Department of Water Resources and Environmental Engineering, Tamkang University, where he is dedicated to the research of water quality protection and drinking water management.

Speakers



Hiroshi Fumoto

Executive Chief Engineer, Japan RiverFront Research Center

2021 - Present Executive chief engineer, Japan RiverFront Research Center
 2019 - 2020 Director of Yamatosaka Dam Construction Office, Shikoku Regional Development Bureau, MLIT
 2018 - Senior Deputy Director, Seacoast Office, Water and Disaster Management Bureau, MLIT



Hung Chih Hung

Distinguished Professor, Department of Real Estate and Built Environment, National Taipei University

Hung-Chih Hung has been a Distinguished Professor at the Department of Real Estate and Built Environment, National Taipei University. He also serves as the convener of the Science & Technology for Disaster Reduction and Prevention Discipline, Ministry of Science and Technology. Dr. Hung's research mainly focuses on city and rural disaster risk analysis and management. He is especially interested in the interdisciplinary studies on climate change and disaster vulnerability, resilience, adaptive capacity assessment, disaster risk governance, and their application to ageing-friendly environment creating and land use planning to build more resilient and sustainable society.



Kentaro Taki

Associate Professor the University of Shiga Prefecture

Born on River Day (July 7th). After graduating from Kyoto University graduate school, Taki worked for the Shiga Prefectural Office (7 years) after working for a private company before assuming the current position. Taki has been in charge of river and basin policy for many years. Through encounters with many rivers and the people involved, Taki came to believe that the rivers loved by the region are the "good rivers".



Che-Hao Chang

Professor, Civil Engineering Department, National Taipei University of Technology

Director, Technology Center of Disaster Reduction and Engineering
 Researcher, Industrial Technology Research Institute
 Ph.D., Department of Civil Engineering, National Yang Ming Chiao Tung University
 Master, Department of Geomatics, National Chen Kung University

Water and the Environment (2)

Flood Prevention and Adaptation Strategies under Climate Change

● Time: October 13th 09:00~12:00 (Taipei time) ● Venue: R101B

Time	Topic	Moderator/Speaker
09:00-09:10	Opening Remarks Introduction by Moderator Group Photo	Hua-Ping Tsao Deputy Director General, Water Resources Agency, MOEA Hirokazu Tsukahara President, Japan RiverFront Research Center Takashi Hattori Deputy Representative, Taipei Office, Japan-Taiwan Exchange Association
09:10-09:40	Adaptation measures for Flood Planning and River Basin Disaster Resilience and Sustainability by All	Hiroshi Fumoto Executive Chief Engineer Japan RiverFront Research Center
09:40-10:10	Applying Agricultural Detention Areas to Flood Risk Management	Hung-Chih Hung Distinguished Professor, Department of Real Estate and Built Environment, National Taipei University
10:10-10:20	Tea break	
10:20-10:25	Introduction by Moderator	Shyh-Fang Kang Professor, Department of Water Resources and Environmental Engineering, Tamkang University
10:25-10:55	Risk Based Floodplain Manage- ment: Shiga Experience	Kentaro Taki Associate Professor, the University of Shiga Prefecture
10:55-11:25	An Approach to Hydro-Reality -The Integration of FAST and IOW	Che-Hao Chang Professor, Civil Engineering Department, National Taipei University of Technology
12:00	Q&A	

Water and the Technology (1)

Application of Remote Sensing and Geomatics in Water Resources Management

● Time: October 13th 09:00~12:00 (Taipei time) ● Venue: R101C

Moderators



Yuan-Peng Lin

Chief Engineer Water Resources Agency, MOEA, Taiwan

Lin becomes Chief Engineer of Water Resources Agency since 2021. He is dedicated to implementing projects of water resources development and management, construction of flood prevention, water work facility operation and management, rehabilitation and safety assessment of reservoir, water resources allocation during drought, and water supply.



Ke-Sheng Cheng

Professor, Department of Bioenvironmental Systems Engineering/Master Program in Statistics, National Taiwan University

Chairperson, Dept. of Bioenvironmental Systems Engineering, NTU (2003-2006)
 Director, Hydrotech Research Institute, NTU (2018 – 2021)
 Chairperson, Master Program in Statistics, NTU (2019 – 2021)

Speakers



Tee-Ann Teo

Professor, Department of Civil Engineering, National Yang Ming Chiao Tung University

Tee-Ann TEO received his M.S.E. and Ph.D. degrees from the Department of Civil Engineering, National Central University (NCU), Taiwan, in 2002 and 2008, respectively. He was with the Center for Space and Remote Sensing Research, NCU, as a Postdoctoral Research Fellow in 2008. He is currently a Professor with the Department of Civil Engineering, National Yang Ming Chiao Tung University (NYCU), Taiwan. He is also a member of Disaster Prevention and Water Environment Research Center (DPWE) in NYCU. His research activities are focused on remote sensing for environmental monitoring, and AI4EO: connecting earth observation (EO) and artificial intelligence (AI) for sustainable development goals (SDGs).



Tien-Yin Chou

Director/Lifetime Distinguished Professor, GIS Research Center, Feng Chia University

Chair, Open Geospatial Consortium (OGC) Asia Forum
 President, Taiwan Agricultural Information Technology Association
 Secretary-General, Asia-Pacific Federation for Information Technology in Agriculture (APFITA)

Education Background

Ph.D.: Dept. of Resources Development, Michigan State University
 M.S./B.S.: Dept. of Soil and Water Conservation, Chung-Hsing University



Hone-Jay Chu

Associate professor, Department of Geomatics, National Cheng Kung University

Hone-Jay Chu received the Ph.D. degree in Civil Engineering from National Chiao Tung University, Hsinchu, Taiwan, in 2008. He became an assistant professor in National Cheng Kung University, Taiwan in 2011. He is currently an associate professor with the Department of Geomatics, National Cheng Kung University, Tainan, Taiwan. His research work involved artificial intelligence and optimization for management. His research interests include spatio-temporal informatics such as spatial data science, land use/ cover change, water quality mapping, object detection, historical image registration, and data fusion. He was a guest editor for special issue "Spatio-temporal environmental monitoring and social sensing" in IJERPH. Dr. Chu has dedicated to the change detection, spatial data integration, groundwater and environmental management.



Tang-Huang Lin

Director, Center for Space and Remote Sensing Research, National Central University

Dr. Tang-Huang Lin is a Professor at the National Central University (NCU) since 2018, and received an appointment as Director of Center for Space and Remote Sensing Research (CSRSR) in Feb., 2021. His research interests focused on the monitoring of environmental and climate changes via satellite observations and the impacts of analysis, including aerosol partition (type and mixed status), ambient PM2.5 exposures on public health, urbanization effects on heat island and regional weather, monsoon effect on typhoon rainfall potential. To construct 3D distributions of global and regional PM2.5 from satellite and ground based observations with remote sensing technology could be his current achievements.

Water and the Technology (1)

Application of Remote Sensing and Geomatics in Water Resources Management

● Time: October 13th 09:00~12:00 (Taipei time) ● Venue: R101C

Time	Topic	Moderator/Speaker
09:00-09:05	Introduction by Moderator	Yuan-Peng Lin Chief Engineer, Water Resources Agency, MOEA
09:05-09:35	Global Water Monitoring using Multi-sensor Satellite Remote Sensing	Tee-Ann Teo Professor, Department of Civil Engineering, National Yang Ming Chiao Tung University
09:35-10:05	Spatial Information Technology for Intelligent Watershed Reservoir Management	Tien-Yin Chou Director/Lifetime Distinguished Professor, GIS Research Center, Feng Chia University
10:05-10:25	Tea break	
10:25-10:30	Introduction by Moderator	Ke-Sheng Cheng Professor, Department of Bioenvironmental Systems Engineering/Master Program in Statistics, National Taiwan University
10:30-11:00	Sensing spatio-temporal changes for water resource management	Hone-Jay Chu Associate professor, Department of Geomatics, National Cheng Kung University
11:00-11:30	Satellite Remote Sensing of Blowing Dust and Impact Assessment Around Riverside in Central Taiwan	Tang-Huang Lin Director, Center for Space and Remote Sensing Research, National Central University
11:30-12:00	Panel Discussion	
12:00	Farewell	

Water and the Technology (2)

Smart Water Resource Management

● Time: October 13th 09:00~11:55 (Taipei time) ● Venue: R101D

Moderators



Yi-Fung Wang

Deputy Director General, Water Resources Agency, MOEA, Taiwan

Deputy Director Yi-Fung Wang received his Ph.D. degree in Civil Engineering at National Taiwan University. He was awarded by the Water Resources Agency as Outstanding Personnel in 2001 and by the Ministry of Economic Affairs as Model Civil Servant in 2010. Dr. Wang's dedication in Water Resources Agency are respectable including development of science and technology in water resources, water conservation, water-saving policy, inundation warning system, and emergency response to drought.



Chih-Ping Lin

Dean, College of Engineering, 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. He currently also serves as the global vice chair of Near-surface geophysics Technical Section of Society of Exploration Geophysicists. 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, non-destructive evaluation of dams, subsurface imaging of soil moisture, investigation of soil and groundwater contamination, landslide monitoring, suspended sediment monitoring in rivers and reservoirs, and scour monitoring. He received the ASTM Hogentogler Award in 2008 and the 2020 Outstanding Research Award from the Ministry of Science and Technology, Taiwan.

Speakers



Christine A. Shoemaker

Distinguished Professor, National University of Singapore & Emeritus Ripley Professor Cornell University

Prof. Shoemaker received her BS & PhD in mathematics. As professor at Cornell University she did research on mathematical optimization algorithms and their application to environmental issues including decontaminating groundwater and managing carbon sequestration. At National University of Singapore, she has continued research on optimization algorithms (parallel, multi objective, noisy, etc.) and application to systems of partial differential equations including hydrodynamics and water quality in lakes and for green infrastructure. Prof. Shoemaker is a member of the USA National Academy of Engineering and a Fellow in professional organizations (AGU, ASCE, INFORMS, SIAM). She is Distinguished Member of ASCE.



Fi-John Chang

Distinguished Professor, Department of Bioenvironmental Systems Engineering, National Taiwan University

Prof. Chang has been long-term devoted to the research and development of Artificial Intelligence (AI) technology for smart water resources management and environmental sciences. In recent years, he has extended to the pioneering cross-disciplinary research on the Water-Energy-Food Nexus in collaboration with local and international experts from Japan, US and Brazil. His seeking theoretical innovations and breakthroughs and creating novel methods suitable for Taiwan's management on water and soil resources and ecological environment has gained plenty of successful case studies, which greatly improves hydro-informatics technology, strengthens smart water resources management, and creates practical application values. He has received twice the Outstanding Research Award from the Ministry of Science and Technology (MOST). His research outcomes have been aggregated in more than 160 papers published in leading SCI journals in the fields of hydrology, environmental engineering and computer science, with more than 6,200 citations and an h-index of 46 to date. Prof. Chang has effectively promoted Taiwan's visibility and influence in international communities.



Jay Nemeth, P.E.

Water Systems Engineering Group Manager, Yuma Area Office, Bureau of Reclamation

Jay is a specialist in hydrology and hydraulics, and has extensive experience in water resources engineering design, asset management, infrastructure inspection, groundwater management, and water treatment. Jay and his team provide engineering support for water delivery and associated infrastructure along 276 miles of the lower Colorado River. Jay received his B.S. in Agricultural Engineering from the University of Illinois at Urbana-Champaign.



Hwa-Lung Yu

Professor and Chair, Dept of Bioenvironmental Systems Engineering, National Taiwan University

Hwa-Lung Yu graduated with Bachelor and Master degrees from the Department of Agricultural Engineering, National Taiwan University. He got his Ph.D. degree at the Department of Environmental Sciences and Engineering, University of North Carolina at Chapel Hill. After Ph.D. program, he conducted post-doctoral studies at the Department of Geography, San Diego State University, and Department of Epidemiology, University of North Carolina at Chapel Hill. He joined the Department of Bioenvironmental Systems Engineering, National Taiwan University, in 2007. Now, he is a full professor and serves as the Department head of Department of Bioenvironmental Systems Engineering, National Taiwan University. His research group focuses on water resources, groundwater, stochastic hydrology, space-time data analysis, and Geographical information system.



Shie-Yui Liong

Consultant to Tropical Marine Science Institute (TMSI), National University of Singapore

Professor Liong was with NUS for over 35 years till his retirement in September 2019; he then becomes a consultant to TMSI. His areas of expertise cover Hydro-informatics, flooding, climate change projections and their impacts on floods and droughts related issues. He recently led a team of TMSI researchers to successfully complete an AI Singapore (AISG) funded project on a novel Satellite DEM data improvement scheme using Neural Network approach. The low cost DEM improvement scheme is extremely both effective and efficient. The model trained in Europe also able to yield the much needed high accuracy DEM at many countries in Southeast Asia.

Water and the Technology (2)

Agenda

Smart Water Resource Management

● Time: October 13th 09:00~11:55 (Taipei time) ● Venue: R101D

Time	Topic	Moderator/Speaker
09:00-09:05	Opening Remarks	Yi-Fung Wang Deputy Director General, Water Resources Agency, MOEA
09:05-09:10	Introduction by Moderator	Yi-Fung Wang Deputy Director General, Water Resources Agency, MOEA
09:10-09:30	New Global Surrogate Optimization Algorithm with Application to Parameter Estimation for Water quality models and Other Fluid Dynamic Applications	Prof. Christine Ann Shoemaker Cornell University
09:30-09:50	Review and Prospect of Artificial Intelligence in Water Resources Management	Prof. Fi-John Chang National Taiwan University
09:50-10:10	Managing Yuma Area Water Resources Through a Historic Colorado River Drought	Jay Nemeth P.E. Bureau of Reclamation, Yuma Area Office
10:10-10:30	Tea break	
10:30-10:35	Introduction by Moderator	Chih-Ping Lin Dean, College of Engineering, National Yang Ming Chiao Tung University
10:35-10:55	A Data-driven Approach for Hydrogeological Parameters and Groundwater with Drawal Estimation	Prof. Hwa-Lung Yu National Taiwan University
10:55-11:15	Cost Effective Satellite DEM Accuracy Improvement Scheme using Machine Learning Technique: Relevant Data for Flood Simulations	Shie-Yui Liong Consultant to Tropical Marine Science Institute (TMSI), National University of Singapore
11:15-11:45	Panel Discussion	
11:45-11:55	Closing Remarks	

Water and the Environment (3)

Flood Resilience Forum

● Time: October 13th 13:30~17:00 (Taipei time) ● Venue: R101A

Moderators



Chien-Hsin Lai

Director-General, Water Resources Agency, MOEA, Taiwan

Dr. Lai has been the Director-General of WRA since 2016. Responding to climate change, he accomplished legal works of Reclaimed Water Resources Development Act and Runoff Distribution and Outflow Control policy. He also promotes Forward-looking Infrastructure Development Program for water environment to establish industrial sustainability and water resilience in Taiwan.



Hua-Ping Tsao

Chief Engineer Water Resources Agency, MOEA, Taiwan

Deputy Director-General Hua-Ping Tsao has been engaged in the field of hydraulic engineering for 39 years, mainly dedicated to flood prevention and water management. Since 1999, he has planned and promoted important national construction projects such as the river, regional drainage, and seawall improvement projects, effectively improving and enhancing the overall water environment in Taiwan. Moreover, since 2014, he has successively established the Comprehensive River Basin Management Plan and Forward-Looking Water Environment Infrastructure Plan, and collaborated with other ministries and committees to carry out the related water work in order to make continuous progress toward the goals of resilient adaptation and sustainable development.



Sue-Ching Jou

Professor, Department of Geography, National Taiwan University

Dr. Jou is Professor of Urban Geography at NTU. Her recent research focuses on participatory river governance and NbS for climate change adaptation. She has been dedicated to interdisciplinary education and research, so as science-policy-practice nexus for more than a decade. She was chairs of Department of Geography and International Degree Program in Climate Change and Sustainable Development, Associate Dean of College of Science at National Taiwan University and Deputy Director of Research Institute for the Humanities and Social Sciences, Ministry of Science and Technology.

Speakers



Ling-Ling Lee

Professor, Institute of Ecology and Evolutionary Biology, National Taiwan University

Councilmember, National Council for Sustainable Development, Executive Yuan
Committee member, National Committee of Future Earth, Taipei
Evaluator, Public Construction Golden Quality Award, Public Construction Commission, Executive Yuan
Director, Biodiversity Research Center, National Taiwan University
Steering Committee member, Species Survival Commission, IUCN



Cheh-Shyh Ting

Professor Emeritus, National Pingtung University of Science and Technology (NPUST)

He served as Chairman of Dept. of Civil Engineering and Dean, College of Engineering, NPUST. He received Dr. Degree on Hydrogeology from Free University, Amsterdam in 1997. He is the author of two books (in English) and over 300 technical papers on groundwater resources management, artificial recharge of groundwater. He was awarded the Outstanding Engineering Professor by the Chinese Institute of Engineers, Kaohsiung Division in 2014, the Water Resources Achievement Outstanding by the Chinese Water Resources Management Society in 2014 and the National Water Resources Outstanding Contribution by the Water Resources Agency, Ministry of Economic Affairs in 2018 respectively.



Jen-Yang Lin

Distinguished professor, Department of Civil Engineering, National Taipei University of Technology

1. Director, Water Environment Research Center
2. Dean of R&D Center, National Taipei University of Technology, 2011~2014.
3. Dean of General Affairs, National Taipei University of Technology, 2009~2011.
4. Visiting Scholar, Institute of Hydraulic Eng., Kassel University, Germany, July ~ Aug. 2007.



Chung-Liang Wen

Executive Director, Kaohsiung Rural Meinung Field Learning Society, Taiwan

1. Kaohsiung Rural Meinung Field Learning Society, Executive Board Director
2. Meinung District Rural Comprehensive Spatial Planning Project, project entrusted by Construction and Planning Agency under Ministry of Interior, Co-principal Investigator (2022)
3. Flood Detention Demand Investigation into Local Stakeholders and the Mode of Public-Private Collaboration: Case Study in Farmland of Meinung, project entrusted by Water Resources Agency under Ministry of Economic Affairs, Principal Investigator (2022)
4. Rural Area Comprehensive Spatial Planning Implementing Strategy Project: Meinung as the Pilot Site, project entrusted by Construction and Planning Agency under Ministry of Interior, Co-principal Investigator (2020)

Water and the Environment (3)

Agenda

Flood Resilience Forum

● Time: October 13th 13:30~17:00 (Taipei time) ● Venue: R101A

Time	Topic	Moderator/Speaker
13:00-13:30	Registration	
13:30-13:35	Opening Remarks	Chien-Hsin Lai Director-General, Water Resources Agency, MOEA
13:35-14:00	Living with Water-Premiere Screen Debut	
14:00-14:20	Film Review	Chien-Hsin Lai Director-General, Water Resources Agency, MOEA
14:20-14:30	Introduction by Moderator	Hua-Ping Tsao Deputy Director General, Water Resources Agency, MOEA
		Sue-Ching Jou Professor, Department of Geography, National Taiwan University
14:30-14:50	Challenges to Implementing Nature-based Solutions in Flood Risk Management	Ling-Ling Lee Professor, Institute of Ecology and Evolutionary Biology National Taiwan University
14:50-15:10	Integrating Green and Gray Infrastructure for Unban Storm-water Management	Jen-Yang Lin Distinguished professor, Department of Civil Engineering, National Taipei University of Technology
15:10- 15:40	Tea break	
15:40- 16:00	Beneficial Reuse from Storm Water -Basic Thinking of the Promotion Plan For On-Site Flood Retention in the Upper Meinong Stream	Cheh-Shyh Ting Professor Emeritus, National Pingtung University of Science and Technology
16:00- 16:20	Local Flood Detention and Varieties of Farm Land Usage: Making Farm Land into Detention Basin and its Agricultural Transformation	Chung-Liang Wen Executive Director, Kaohsiung Rural Meinung Field Learning Society
16:20- 17:00	Panel Discussion	

Water and the Economy (1)

Taiwan-Netherlands Water Conference – Smart Irrigation

● Time: October 13th 15:00~17:00 (Taipei time) ● Venue: R101B

Moderators



Chien-Hsin Lai

Director-General, Water Resources Agency, MOEA, Taiwan

Dr. Lai has been the Director-General of WRA since 2016. Responding to climate change, he accomplished legal works of Reclaimed Water Resources Development Act and Runoff Distribution and Outflow Control policy. He also promotes Forward-looking Infrastructure Development Program for water environment to establish industrial sustainability and water resilience in Taiwan.



Guido Tielman

Representative, Netherlands Office Taipei

Before taking up his current assignment as the Representative of the Netherlands Office Taipei, Guido Tielman has worked with Dutch representations in Brussels, North-Macedonia, Chongqing and Mumbai and also for a few stints in The Hague. His expertise includes European Union related issues and promoting trade and investment in an Asian context. It is almost 30 years to the day that Guido returns to Taiwan. From 1991-1992, he obtained a one-year scholarship at the Political Science Faculty of the National Taiwan University, having finished his master's degree in Sinology at the University of Leiden prior to that.

Speakers



Nai-Fang Chou

Adjunct Professor, Department of Hydraulic Engineering, National Cheng-Kung University

Prof. Chou was an engineer of the Hydraulic Engineering Section, Sinotech Engineering Consultants, Inc. in 1981. He served as the 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, National Development Council, Ministry of Economic affairs (MOEA) of Taiwan. He was honored for Da-Yu prize of MOEA in 2020. He studied smart water management for reservoir operation, regional water resources allocation, irrigation and drainage systems in recent years.



Jonna van Opstal

Agricultural Hydrologist, Wageningen University & Research

Dr. Jonna van Opstal is the expert in irrigation engineering and water management. She has contributed and managed several major international projects. Her main focus is on crop water productivity and using open access spatial data for irrigation performance assessment. Both research and capacity building projects are executed in various countries. During her research she focused on evaluating irrigation district performance using field measurements (irrigation evaluations, flux towers), energy balance modelling with satellite remote sensing, and irrigation system simulation modelling. Her ambition is to enhance interactions between science and practitioners in the field of agricultural water management, using innovative spatial analysis tools.



Chih-Hung Tan

Technology Director, Agricultural Engineering Research Center

Dr. Tan graduated from the Department of Agricultural and Biological Engineering of the University of Florida, and has been committed to the research of agricultural water resources. His research focused on agricultural water resources management, irrigation technology, geographic information system, remote sensing, and is interested to new technologies that can be applied to the improvement of irrigation efficiency.



Manuel Madani

Head, PRIVA SE ASIA

Manuel is a community-builder in the horticultural scene in Asia for the past 12 years. Apart from his role as head of Priva SE ASIA, he played an instrumental role in co-creating the HortiAsia, VIV Asia tradeshows during his days at VNU Exhibitions. He currently is also the Vice-President of the Netherlands-Thai Chamber of Commerce, connecting agrofood/horticultural entrepreneurs, global players, governments, and research institutes to knowledge and expertise in the chamber's ASEAN and international network. He has a passion for tech and sustainability and is committed to support all stakeholders build a strong foundation towards sustainable horticulture in Asia and beyond.



Michel de Zwart

Senior Project Advisor, Global Public Goods – Water, Netherlands Enterprise Agency (RVO)

Mr De Zwart is a senior water expert at the Netherlands Enterprise Agency, RVO. Michel is involved in water-agriculture nexus projects as well as small-scaled renewable energy projects in several countries. Conservation of groundwater is his key focus. He has over 15 years of experience in relevant programme and project development.

Water and the Economy (1)

Taiwan-Netherlands Water Conference – Smart Irrigation

● Time: October 13th 15:00~17:00 (Taipei time) ● Venue: R101B

Time	Topic	Moderator/Speaker
15:00- 15:10	Opening Remarks	Chien-Hsin Lai Director General, Water Resources Agency, MOEA
		Guido Tielman Representative, Netherlands Office Taipei
15:10- 15:30	Paddy Irrigation System and Smart Irrigation Management	Nai-Fang Chou Agricultural Hydrologist, Wageningen University & Research
15:30- 15:50	Climate Smart Agriculture with Innovative Geodata Technology	Jonna van Opstal Agricultural hydrologist, Wageningen University & Research
15:50- 16:10	Expanding Irrigation Services by Technological Means	Chih-Hung Tan Technology Director, Agricultural Engineering Research Center
16:10- 16:30	Climate Change Impacts on the Water Irrigation: What We Can Do Today to Build It Sustainably?	Manuel Madani Head, PRIVA SE ASIA
16:30-17:00	Panel Discussion	
17:00	Farewell	

Water and the Economy (2)

Sustainable Water Resources- Multiple Applications of Reclaimed Water

● Time: October 13th 14:00~16:40 (Taipei time) ● Venue: R101C

Moderators



Yi-Fung Wang

Deputy Director General, Water Resources Agency, MOEA, Taiwan

Deputy Director Yi-Fung Wang received his Ph.D. degree in Civil Engineering at National Taiwan University. He was awarded by the Water Resource Agency as Outstanding Personnel in 2001 and by the Ministry of Economic Affairs as Model Civil Servant in 2010. Dr. Wang's dedication in Water Resources Agency are respectable including development of science and technology in water resources, water conservation, water-saving policy, inundation warning system, and emergency response to drought.



Tien-Jin Chang

Distinguished Professor, Institute of Environmental Engineering and Management, National Taipei University of Technology

Dr. Chang is the distinguished professor of the Institute of Environmental Engineering and Management, National Taipei University of Technology. Prior to the current position, Prof. Chang was the dean, college of engineering, National Taipei University of Technology, the head of Institute of Environmental Engineering and Management, president of the Chinese Institute of Environmental Engineering and Taiwan Water Environment Association. Prof's expertise includes water reclamation and reuse, advanced wastewater treatment and resource recovery.

Speakers



Jae-Woo Park

Professor, Department of Civil and Environmental Engineering, Hanyang University

Professor Park, Jae-Woo's research interests include contaminated soil and groundwater remediation, fate and transport of contaminants in natural systems, and optimization in environmental systems. His recent interest also includes nano-materials for environmental applications. He served as the director of Green Remediation Research Center by Korea Ministry of Environment and as the President of the Korean Society of Soil and Groundwater Environment. He is currently the President of the Korea Environmental Dredging Society. He is a member of National Academy of Engineering of Korea and Korea Academy of Environmental Science.



NG How Yong

Professor, Department of Civil and Environmental Engineering, National University of Singapore

Prior to joining NUS as an Assistant Professor, Prof. Yong engaged in post-doctoral research in environmental engineering at Yale University in 2003. Dr. Ng's core research interest is in membrane science and technology, focusing on membrane fouling – elucidating its mechanisms and minimizing its occurrence. Dr. Ng graduated from the National University of Singapore with a BEng (Civil Engrg) and a MEng (Civil Engrg) in 1997 and 2000, respectively. He received his Ph.D. (Environmental Engrg) from the University of California, Berkeley in 2002.



Rong-Hwa Han

Director-general, Water Resources Bureau, Tainan City Government

Director Han is the Director-general, Water Resources Bureau, Tainan City Government. Prior to the current position, Director Han was the Acting Director-general, Water Resources Bureau, Kaohsiung City Government, the Deputy Director, Water Resources Bureau, Kaohsiung City Government and the Chief Engineer, Water Resources Bureau, Kaohsiung City Government. Director Han has been honored as a model civil servant by the Executive Yuan and the outstanding servant in water resources by the Ministry of Economic Affairs.



Chia-Hung Hou

Professor, Graduate Institute of Environmental Engineering, National Taiwan University

Dr. Chia-Hung Hou is a professor at National Taiwan University. He currently also serves as the chief executive at NTU Water Innovation, Low Carbon and Environmental Sustainability Research Center. His research group focuses on advanced carbon nanomaterials, electrochemical desalination, water reclamation, and resource recovery from wastewaters. His group is pioneering in developing water-energy sustainable technologies. Specially, the pilot-scale membrane capacitive deionization (MCDI) for energy-effective ion separation has been demonstrated in the municipal wastewater treatment plants and high-tech industry for water reclamation.

Water and the Economy (2)

Sustainable Water Resources- Multiple Applications of Reclaimed Water

● Time: October 13th 14:00~16:40 (Taipei time) ● Venue: R101C

Time	Topic	Moderator/Speaker
14:00- 14:10	Opening Remarks	Yi-Feng Wang Deputy Director General, Water Resources Agency, MOEA
		Tien-Jin Chang Distinguished Professor, National Taipei University of Technology
14:10- 14:35	Multiple Applications of Reclaimed Water in South Korea	Jae-Woo Park Professor, Hanyang University, South Korea
14:35- 15:00	Technology and Strategies to Mitigate the Impact of Climate Change on Water Scarcity – A Singapore Experience	NG How Yong Professor, National University of Singapore, Singapore
15:00- 15:15	Tea break	
15:15- 15:40	The Future of Reclaimed Water Development and Trend of Multiple Application	Rong-Hwa Han Director-general, Water Resources Bureau, Tainan City Government, Taiwan
15:40- 16:05	Capacitive Deionization as an Energy-efficient Approach to Reclaim Wastewaters for Diversifying Water Sources	Chia-Hung Hou Professor, National Taiwan University, Taiwan
16:05- 16:30	Q&A	<ol style="list-style-type: none"> 1. Israel Water Authority (TBC) 2. Yi-Feng Wang, Deputy Director General, Water Resources Agency, MOEA 3. Tien-Jin Chang, Distinguished Professor, National Taipei University of Technology 4. Speakers
16:30- 16:40	Closing Remarks	<ol style="list-style-type: none"> 1. Yi-Feng Wang, Deputy Director General, Water Resources Agency, MOEA 2. Tien-Jin Chang, Distinguished Professor, National Taipei University of Technology

Water and the Economy (3)

Emerging Water Resources Technology Trends and Applications

● Time: October 13th 14:00~17:00 (Taipei time) ● Venue: R101D

Moderators



Hung-Pu Huang

Deputy Director General, Water Resources Agency, MOEA, Taiwan

Mr. Huang was in charge of several important water resources engineering plans, such as constructions of Hushan Reservoir, Niazueitan Artificial Lake, and some reservoir renewal projects. He also developed the regulations and systems of emergency management during drought in Taiwan and involved in the Shihmen Reservoir Remediation Project.



Tin-Lai Lee

Vice President, Taiwan Water Corporation

Mr. Lee joined Taiwan Water Corporation as a water supply engineer in 1988, since then he has dedicated to the water treatment technology, water supply engineering & operation, water loss management for more than 33 years. He received B.Sc. and M.Sc. in Environmental Engineering from National Cheng-Kung University in 1984 and 1986. He also received Ph.D. in Environmental Engineering from National Chiao-Tung University in 2007.

Speakers



Chen-Yuan Chien

Deputy Chief Engineer, Water Resources Agency, MOEA, Taiwan

A deputy chief engineer of Water Resources Agency with more than 26 years of experience in water resources planning, water resources construction, dam safety evaluation and water resources management.



Chia-Hung Hou

Professor, Graduate Institute of Environmental Engineering, National Taiwan University

Dr. Chia-Hung Hou is a professor at National Taiwan University. He currently also serves as the chief executive at NTU Water Innovation, Low Carbon and Environmental Sustainability Research Center. His research group focuses on advanced carbon nanomaterials, electrochemical desalination, water reclamation, and resource recovery from wastewaters. His group is pioneering in developing water-energy sustainable technologies. Specially, the pilot-scale membrane capacitive deionization (MCDI) for energy-effective ion separation has been demonstrated in the municipal wastewater treatment plants and high-tech industry for water reclamation.



Simon Breese, M.A.Sc., P.Eng.

Vice President / Global Technical Director, Water Treatment, AECOM

Simon is a chemical engineer with over 36 years of experience in drinking water treatment and desalination, based near Toronto, Canada. He leads AECOM's water treatment and desalination technical practice globally and has completed water treatment and desalination projects in 25 countries. He is particularly passionate about seawater desalination, and is delighted to be presenting today on a subject close to his heart.



Chen Rosenfeld

Business Development Manager, IDE Technologies

Mr. Rosenfeld has been with IDE since 2014 and currently serves as a Business Development Manager. His previous role as sales and solutions manager focused on providing customers with tailored, comprehensive solutions for their water needs. Chen has accumulated over a decade of in global sales, business development, and marketing in the desalination segment. He specializes in technologically advanced, large scale infrastructure projects in the private & public sectors. Chen is a graduate of the Technion - Israel Institute of Technology and holds a B.Sc. in Environmental Engineering. He also has an MA in Legal Studies from Bar-Ilan University.

Water and the Economy (3)

Emerging Water Resources Technology Trends and Applications

● Time: October 13th 14:00~17:00 (Taipei time) ● Venue: R101D

Time	Topic	Moderator/Speaker
14:00-14:05	Introduction by Moderator	Hung-Pu Huang Deputy Director General, Water Resources Agency, MOEA
14:05-14:35	Promotion Strategies and Planning of Desalination Plants in Taiwan	Chen-Yuan Chien Deputy Chief Engineer, Water Resources Agency, MOEA
14:35-15:05	Advanced Water Technologies for Seawater Desalination and Brine Mining	Chia-Hung Hou Professor, Graduate Institute of Environmental Engineering, National Taiwan University
15:05-15:25	Tea break	
15:25-15:30	Introduction by Moderator	Tin-Lai Lee Vice President, Taiwan Water Corporation
15:30-16:00	Global Water Scarcity - Is Desalination the Answer?	Simon Breese Vice President, Global Technical Director, Water Treatment, AECOM
16:00-16:30	Environmental Aspects of Desalination – IDE’s Considerations and Solutions	Chen Rosenfeld Business Development Manager, IDE Technologies
16:30-17:00	Panel Discussion	
17:00	Farewell	

Water and the Culture (1)

Sustainable Development of All People Flood Risk Management

● Time: October 14th 09:00~12:00 (Taipei time) ● Venue: R101A

Moderators



Kuang-Chih Chang

Deputy Chief Engineer, Water Resources Agency, MOEA, Taiwan

Chang has dedicated himself to WRA for 28 years, has become Deputy Chief Engineer since 2019. With master's degree in Civil Engineering from National Taiwan University, he specializes in water policy, river management, promotion of spring water and reclaimed water.



Chi-Ming Peng

Founder & CEO

- Ph.D., Atmospheric Science, National Central University (1999)
- National Central University, Adjunct Assistant Professor (2010-)
- Executive Yuan, Legal Consultant(2012-)
- Organization for Data-driven Application, Chairman (2013-)
- YAHOO TV, Host (2016-)
- Open Government Partnership, Chairman (2016-)
- Climate Without Borders, Sponsor (2017-)
- CTBC Business school, Distinguished Professor (2018)
- Taiwan Association of Disaster Prevention Industry, Chairman (2019-)
- Taiwan Climate Partnership, Secretary General(2021-)

Speakers



Yi-Sheng Lin

Chief of Water Hazard Mitigation Center, Water Resources Agency, MOEA, Taiwan

1. Chief of Planning Section, the 10th River Management Office,WRA
2. Chief of Construction Section, the 10th River Management Office,WRA
3. Senior Engineer,WRA
4. Chief of Water Hazard Mitigation Center,WRA



Wu-Lung Hsu

LASS Founder

The open hardware project that attracted the world's attention and developed an innovative Maker economic model. Former product line director of chip design company, system architect, familiar Embedded system design, communication system and software design. Serve as several community managers and business consultants.



Shao-wei Huang

Secretary General, Taiwan Association of Disaster Prevention Industry

Secretary-General Huang specializes in geological science. With prior experience in academic research, pedagogy, and government service, she is now dedicated to promoting collaboration between different aspects of the disaster prevention industry. Her work includes the promotion of disaster technologies and products, disaster prevention education, and cross-disciplinary cooperation. She believes that participation from the private sector is the key to building self-sufficient disaster capacity, and that damage can only be minimized when firms and citizens have an awareness of disaster risks and prevention.



Jason Leou

Senior Specialist, Buddhist Compassion Relief Tzu Chi Foundation

- 2006, Joined Tzu Chi Foundation as volunteer
- 2009, Joined Tzu Chi Foundation as employee
- Recipient of the 2016 National Model Worker Awards
- 2010-2019, Participated disaster relief missions in China, Pakistan, N. Korea, Myanmar, LAOS, etc.
- 2010-present, Developing Tzu Chi disaster response and relief system

Water and the Culture (1)

Sustainable Development of All People Flood Risk Management

● Time: October 14th 09:00~12:00 (Taipei time) ● Venue: R101A

Time	Topic	Moderator/Speaker
09:00-09:10	Registration	
09:10-09:20	Introduction by Moderator	<p>Kuang-Chih Chang Deputy Chief Engineer, Water Resources Agency, MOEA</p> <p>Chi-Ming Peng Chief Executive Officer of WeatherRisk Explore Inc.</p>
09:20-09:50	Experience and Current Status of Community Engagement for Flood Risk Management in Taiwan	<p>Yi-Sheng Lin Chief, Water Hazard Mitigation Center, Water Resources Agency, MOEA, R.O.C.</p>
09:50-10:20	The practice of digital sustainable public-private cooperation-Taking the cooperation between LASS and the Water Resources Department as an example	<p>Wu-Lung Hsu Founder, LASS</p>
10:20-10:40	Tea break	
10:40-11:10	The Disaster Between Us	<p>Shao-wei Huang Secretary General, Taiwan Association of Disaster Prevention Industry</p>
11:10-11:40	The innovation of disaster response and relief system	<p>Jason Leou Senior Specialist, Buddhist Compassion Relief Tzu Chi Foundation</p>
11:40-12:00	Panel Discussion	
12:00	Farewell	

Water and the Culture (2)

Enhancing the Positive Benefits of Enterprise Water by ESG

● Time: October 14th 09:00~12:20 (Taipei time) ● Venue: R101B

Moderators



Yi-Fung Wang

Deputy Director General, Water Resources Agency, MOEA, Taiwan

Deputy Director Yi-Fung Wang received his Ph.D. degree in Civil Engineering at National Taiwan University. He was awarded by the Water Resources Agency as Outstanding Personnel in 2001 and by the Ministry of Economic Affairs as Model Civil Servant in 2010. Dr. Wang's dedication in Water Resources Agency are respectable including development of science and technology in water resources, water conservation, water-saving policy, inundation warning system, and emergency response to drought.



George Ren

CEO, ESG International Group

Previous positions:

- Vice President of the Business Group of WPG Holdings (WPIg Group)
- General Manager of Japan-based Jingxuan Enterprise (Shares) Company
- Industry Lecturer of China Productivity Center
- Taipei · Keelung · Yilan · Hualien · Kinmen · Matsu Local Counseling Committee of Workforce Development Agency of the Ministry of Labor

Speakers



Dr Gurdev Singh

Senior Deputy Director, Technology Department, Singapore PUB

Dr Gurdev Singh is the Senior Deputy Director in the Technology Department in PUB, Singapore's National Water Agency. He oversees the R&D efforts in PUB - from scanning of new technologies and trends, to initiating and translating technology projects with the aim of deployment of these technologies in PUB's operations.



Walter Den

Professor and Director, Institute for Water Resources Science and Technology, Texas A&M University-San Antonio

Dr. Den has actively engaged his research with the need of industry. In recent years the focus has been on water resource protection in central Texas. Earlier, his efforts in water conservation for the industrial sector have translated to his consulting roles for the high-tech industry internationally (U.S., Taiwan, Singapore). Since his appointment at Texas A&M University-San Antonio, he has served as the PI for several federal (NSF, USDA) and foundation grants to build programs to meet the workforce needs of the water industry. Previously, he was a professor and dean for Tunghai University (Taiwan) until 2018. He is currently serving on the executive committee for the Environmental Chemistry Division, a subdivision of the American Chemical Society (ACS). He is also a member of the American Water Works Association (AWWA).



Brenda Hu

Director-General, Dept. of Planning, Financial Supervisory Commission

DG Hu is responsible for the overall policy planning of the FSC, including the Fintech Development Roadmap, Green Finance Action Plan, Financial Inclusion, etc. She also assists in the integration of policy implementation plan, risk management and other measures. Before that role, she served in the Securities and Futures Bureau and the Banking Bureau. Her deeds include promoting the 2013 Corporate Governance Roadmap, CSR reporting and futures trust funds. She holds two master's degrees in international development policy from Duke University and in public administration from the University of Southern California in the United States, and entered public office in 1986.



James Wang

President, Tatung Co.

James Wang has over 30 years of experience in business, finance, accounting, corporate governance and Sustainability. He received his Doctor of Business Administration (DBA), M.S. in Accounting from National Chengchi University, and B.S. in Accounting from National Cheng Kung University. James Wang is committed to enhancing the functions of Board, strengthening corporate governance and sustainability.



Hsu Jung Huang

General Manager, Utilities Department, China Steel Corp.

Prior to Superintendent of Energy Dispatching Plant of Dragon Steel Corporation and Director of Energy Dispatching Center of Formosa Ha Tinh Steel Corporation, Superintendent of Power Plant of China Steel Corporation, Assistant General Manager of Utilities Department of China Steel Corporation.

Water and the Culture (2)

Agenda

Enhancing the Positive Benefits of Enterprise Water by ESG

● Time: October 14th 09:00~12:20 (Taipei time) ● Venue: R101B

Time	Topic	Moderator/Speaker
09:00-09:10	Introduction by Moderator	Yi-Fung Wang Deputy Director General, Water Resources Agency, MOEA
09:10-09:40	PUB's Approach and Innovations to Ensure a Sustainable Water Supply	Dr Gurdev Singh Senior Deputy Director, Public Utilities Board, Singapore
09:40-10:10	Water Security in Texas: Ensuring Water Supply with a 50-Year Horizon	Walter Den Professor and Director, Institute for Water Resources Science and Technology, Texas A&M University-San Antonio
10:10-10:20	Tea break	
10:20-10:30	Introduction by Moderator	George Ren CEO, ESG International Group
10:30-11:00	Policies and Strategies Driving Corporate ESG Practices	Brenda Hu Director-General, Dept. of Planning, FSC
11:00-11:30	The Relevance Between ESG Report and Corporate Sustainability	James Wang President Tatung Co.
11:30-12:00	CSC's ESG Concept in Improving the Positive Benefits of Water Use	Hsu Jung Huang General Manager, Utilities Department, China Steel Corp.
12:00-12:20	Panel Discussion	
12:20	Farewell	

Water and the Culture (3)

Water culture of Jianan Irrigation System:the past, the present and the future

● Time: October 14th 09:00~12:00 (Taipei time) ● Venue: R101C

Moderators



Chen-Yuan Chien

Deputy Chief Engineer, Water Resources Agency, MOEA, Taiwan

A deputy chief engineer of Water Resources Agency with more than 25 years of experience in water resources planning, water resources construction, dam safety evaluation and water resources management.



Chun-Hsi Wang

Assistant Professor, National Taipei University

Ph. D. of National Cheng Kung University, Tainan, Taiwan. He is the assistant professor of Graduate Institute of Folk Arts and Cultural Heritage, National Taipei University, Taiwan. His research interests are cultural heritage, cultural landscape, and the World Heritage. He is the member of cultural heritage council of several cities and counties in Taiwan. He is also the member of ISCCL (International Scientific Council of Cultural Landscape) and ICOMOS (International Council of Monument and Site). He also involved in several management plan projects of cultural landscapes in Taiwan.

Speakers



Meng Hsien Chuang

CEO, Watch Nature Ecological Consultant CO., LTD.

Director of environmental education and ecological conservation extension center of Aletheia University
Director of Tseng Wen District Community College



Chien Yu-Chen

Assistant professor, Department of Cultural Assets and Reinventio, Fo Guang University

1. Ph.D. in Architecture, The University of Tokyo, Japan, 2018.3
2. Visiting Researcher, Center for Conservation Science, Tokyo National Research Institute for Cultural Properties, Japan, 2018.4-2022.3
3. Postdoctoral researcher, the Institute of Taiwan History(ITH), Academia Sinica, Taiwan, 2020.6-2020.7
4. Adjunct Assistant Professor, Department of Landscape Architecture, Chinese Culture University, Taiwan, 2019.2-2020.7



Chuan-Hsing Wang

Principal, Tainan Municipal North District Liren Elementary School

Principal, Tainan Municipal North District Liren Elementary School
Principal, Tainan Municipal Guantian District Guantian Elementary School



Jow-Jiun Gong

Director and Associate Professor of Tainan University of the Arts, Curator

Gong Jow-Jiun was appointed associate professor and director of the doctoral program in art creation and theory at the Tainan University of the Arts. From 2009, he also organized the quarterly art magazine Art Critique in Taiwan (ACT), as chief editor and chairman and established it as a public journal. Gong is also acclaimed as Chinese translator of writings by Gaston Bachelard, Maurice Merlau-Ponty and Carl Gustav Jung into Chinese. Besides his research, Gong is engaging with curatorial activities. In 2017, he was the chief curator of Kau-Puê, Mutual Companionship in Near Future: 2017 Soulangh International Contemporary Art Festival in Tainan City, which won the first prize of Tai-Shin Annul Art Prize in 2018.



Chih-Bin Yang

National Association for the Promotion of Community University (NAPCU)

Yang was the principal of Beitou Community College, and now the Secretary-general of National Association for the Promotion of Community University. He has devoted himself to building the community-government relationship, who concerns about local issues for a long time.



Yu-Cheng Hung

Director of Kelio Art Company, Curator

Kelio Arts Company was established at the end of 2012. Located in Kaohsiung's TaKaoBooks. Hung-Yu Cheng plays the role of intermediary between artists, event planners, exhibitions, and designers, and specializes in finding possible exchanges in certain places or spaces with artists. The scope of Kelio's work includes linking creative industries and art with audiences through curating, fine goods, handmade items, and workshops.

Water and the Culture (3)

Agenda

Water culture of Jianan Irrigation System:the past, the present and the future

● Time: October 14th 09:00~12:00 (Taipei time) ● Venue: R101C

Time	Topic	Moderator/Speaker
09:00-09:10	Introduction by Moderator	Chen-Yuan Chien Deputy Chief Engineer, Water Resources Agency, MOEA
09:10-09:35	The secret of the pond in Jianan Plain	Meng-Hsien Chuang CEO, Watch Nature Ecological Consultant CO., LTD.
09:35-10:00	The sustainable way for the conservation of water(hydraulic engineering) heritage: The case of Chianan Irrigation System	Yu-Chen Chien Assistant professor, Department of Cultural Assets and Reinventio, Fo Guang University
10:00-10:25	Educational Inspirations from Jianan Irrigation System	Chuan-Hsing Wang Principal, Tainan Municipal North District Liren Elementary School
10:25-10:40	Tea break	
10:40-10:50	Introduction by Moderator	Chun-Hsi Wang Assistant Professor, National Taipei University
10:50-12:00	One thousand names of Zeng-wen river - Advocacy practice and art action on community bounded by river basin	Jow-Jiun Gong Director and Associate Professor ,Tainan University of the Arts Chih-Bin Yang National Association for the Promotion of Community University (NAPCU) Yu-Cheng Hung Director of Kelio Art Company
12:00	Farewell	

Water and the Economy (4)

Enhancing the Positive Benefits of Enterprise Water by ESG

● Time: October 14th 09:00~12:00 (Taipei time) ● Venue: R101D

Moderators



Dr. Ren-Yang Horng

Deputy Div. Director, Div. of Water Tech., MCL, ITRI

Over 3 decades, Dr. Horng has concentrated on water and wastewater treatment technology for research and industrial sector applications. The related technologies including organic removal, ammonium & nitrate removal, biomass reduction, and water reuse & reclamation, satisfy the requirement of saving energy, low sludge yield, small foot print, and low carbon dioxide emission.

Speakers



Han-Lin Lin

Technical manager, Industrial Technology Research Institute

Researcher, Industrial Technology Research Institute, Sep. 2016~present
Appointment researcher, China Steel Corporation, Nov. 2014~Sep. 2016



Nian-Ying Hu

General Manager, Rih-Ding Water Enterprise Co., Ltd.

General manager, Rih-Ding Water Enterprise Co., Ltd. (2013~present)
Engineering department manager, Ozone Environmental Technology Co., Ltd. (2004~2013)
North branch operation and administration department manager, RSEA Engineering Corporation (1986~2004)



Guan-You Lin

Manager/Div. of Water Technology Research, Material and Chemical Research Laboratories, Industrial Technology Research Institute (ITRI)

NTHU, Doctor of Philosophy in Chemistry (2004-2009)
Researcher, Water technology research, MCL, ITRI (2010-2019)
Manager, Water technology research, MCL, ITRI (2020~)



Hung-Yi Chuang

Director, ChiMei Corp.

1993~1995 Powertech Technology Inc.
1995~2022 ChiMei Corporation

Water and the Economy (4)

Enhancing the Positive Benefits of Enterprise Water by ESG

● Time: October 14th 09:00~12:00 (Taipei time) ● Venue: R101D

Time	Topic	Moderator/Speaker
09:00-09:05	Opening Remarks	Jer-Young Chen Deputy General Director, MCL, ITRI
09:05-09:10	Introduction by Moderator	Dr. Ren-Yang Horng Deputy Div. Director, Div. of Water Tech., MCL, ITRI
09:10-09:40	Start-up of The First Full-scale Methanogenesis and Anammox System For Treating Mainstream Municipal Wastewater in Taiwan	Han-Lin Lin Technical Manager, Div. of Water Tech., MCL, ITRI
09:40-10:10	Introduction of The Reclaimed Water BTO Project at Taoyuan North District Water Recycling Center	Nian-Ying Hu General Manager, Rih-Ding Water Enterprise Co., Ltd.
10:10-10:25	Tea break	
10:25-10:30	Introduction by Moderator	Dr. Ren-Yang Horng Deputy Div. Director, Div. of Water Tech., MCL, ITRI
10:30-11:00	Brine Management Strategies and Recovery Technologies	Guan-You Lin Manager, Div. of Water Tech., MCL, ITRI
11:00-11:30	EDR Water Resource Center for Industrial Wastewater Reclamation Systems	Hong-Yi Jhuang Director, Chi Mei industrial Co., Ltd.
11:30-12:00	Panel Discussion	
12:00	Farewell	

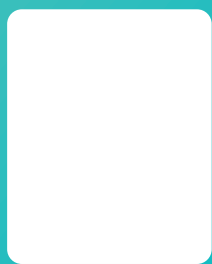
綠色永續下 創新水戰略

Innovative Strategies for Water Sustainability

International Forum 2022

Oct. 12 ▶ 14
TICC台北國際會議中心

Exhibition



Exhibitor Profiles

Environment and Development Foundation

• <https://www.edf.org.tw/>

Company Profile

The Environment and Development Foundation (EDF) was founded in 1997. The main services of EDF include promotion of energy saving, carbon reduction and green consumption, wastewater treatment and recycling technologies, waste treatment and resource regeneration technologies, as well as green building material development and promotion of green buildings, etc.

Product Description

The Industrial Development Bureau of the Ministry of Economic Affairs has entrusted the EDF to implement the "Project of Improving the Water Efficiency of Industrial Park" since 2013. The industrial water recovery rate has increased significantly from 46% in 2005 to 73% in 2021.



EVER-CLEAR ENVIRONMENTAL ENG.CORP.

• <https://www.ever-clear.com.tw/>

Company Profile

Ever-Clear, as a water treatment total solution provider established in 1999, provides our customers the service of water treatment evaluation/ design/construction/ commissioning. We specialize in advanced water treatment technology, and have more than 300 reference in the world.

Product Description

Advanced Water Treatment Technology

For new published and stricter effluent standards, Ever-Clear provides several advanced treatment technologies, such as Advanced Oxidation Technology (FBR-Fenton, FeRed-Fenton technology), Biological Technology (UASB, AFB, BioNET), Ion Recycle Technology (FBC) and Water Recycle Technology



BRIGHT VISION ENGINEERING INC.

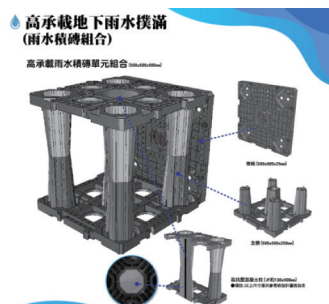
• www.brighvision.com.tw

Company Profile

Bright Vision Engineering Inc. is an agent of the JW Eco-Technology's Underground Water Bank Water Retaining Bricks, the best solution for water adaptation under climate change.

Product Description

Water Retaining Bricks incorporates a high compression concrete column design with high load-bearing characteristics. High compression resistance up to 1218 kPa /m2 enables it to retain and recycle rainwater effectively under roads.



Exhibitor Profiles

CTCI Group

• www.ctci.com

Company Profile

CTCI, a leading EPCC company, is the sole Taiwanese corporation on ENR's top-100 international contractors list. CTCI offers green engineering services and enjoys tremendous ESG performance. It remains a component of Dow Jones Sustainability Emerging Markets Index for 7 years.

Product Description

CTCI's businesses span across EfW, AQCS, renewable energy, transportation, power, refinery, petrochemical, and high-tech industries. CTCI provides reliable engineering services throughout the whole project lifecycle: from project development to the O&M services. It particularly provides total solution on wastewater treatment/reclamation.



RIH DING WATER ENTERPRISE CO., LTD.

• <https://www.rihding.com.tw/>

Company Profile

Radium, in cooperation with the Taoyuan City Government, via a 100% owned subsidiary company "Rih Ding Water Enterprise Co., Ltd." Is responsible for this project. The responsibilities include upgrading the Taoyuan sewer line throughout the city and increasing sewer line connectivity, improving the water quality of the service area and purification of river water.

Product Description

The company uses MBR water treatment technology in the second phase of sewage treatment plant.



HUI MIN ENVIRONMENTAL TECH CORPORATION

• <http://www.huimin.com.tw/>

Company Profile

Huimin Company was established on April 8, 1986. The purpose of its establishment is to engage in environmental protection and wastewater treatment related businesses. The scope covers domestic and foreign regions. Huimin Company was reorganized in 1989, recruited domestic first-class technical personnel in environmental engineering, water conservancy and electromechanical related technologies, and they actively promoted and implemented various tasks with a serious and responsible attitude. Through the integration of enterprises and technological innovation and responsibility attitude, the company continues to grow and thrive in the field of environmental protection. Therefore, under the premise of pursuing excellent quality and self-improvement of each operating plant, we also actively assist each owner to establish various certifications for operating plants, including ISO 9001, ISO 14001 and ISO 45001 systems.

Product Description

Seawater desalination uses RO membrane for seawater, which is filtered through membrane at high pressure to produce desalinated water. In order to meet drinking water quality standards, RO water will be chlorinated before delivery to ensure cleanliness. It will be fed into a 50,000-ton tank and then tap water. Pipe Network



Water Innovation, Low-Carbon and Environmental Sustainability Research Center (WInnER), National Taiwan University

• <https://www.ntu.edu.tw/>

Company Profile

NTU WInnER Center integrates innovative technologies that offer solutions achieving carbon (C) neutrality and sustainable development, including those for wastewater treatment, drinking water treatment, or quality inspection and testing method.

Product Description

Waste Water Treatment Machine, Drinking Water Treatment Machine, Water Treatment Appliances, Quality Inspection & Testing



Exhibitor Profiles

Kmate Filtration Ltd.

• www.kmate.com.tw

Company Profile

Kmate is a leader of Taiwan water treatment equipment and filter media.

For over 30 years Kmate has devoted thier passion to developing a comprehensive line of water filter equipment in different applications , such as industrial water , municipal waste water , desalination , RO pretreatment , rain water recycle , surface water filtrationetc.

Product Description

1. anti-bacteria deep-bed filter :AFM Filter
2. self clean filter:Amiad Filter
3. rainwater recycle filter:Kmate Filter



Ginger Water Processing Technology Company

• <http://www.ginger.com.tw>

Company Profile

GWPT is a high technology driven company placing emphasis on Research and Development. In recent years, GWPT has developed a Seawater Desalination System through new innovative Fogging technology. This new innovative system has high freshwater conversion rate, and it is energy efficient and environmental friendly too.

Product Description

GWPT's Seawater Desalination through Fogging System uses solar power to heat up the fog. The heated fog goes through a condenser (cool by seawater) where freshwater is collected. The residual brine can be used for salt production. This environmental friendly system not only a high freshwater yield but also an option-al energy efficiency.



National Yang Ming Chiao Tung University - Environmental Technology & Smart System Research Center

• <http://etss.nctu.edu.tw/lab/>

Company Profile

NYCU-ETSS, which is based on the development of the water industry, devotes their efforts to researching and providing solutions for enterprises and programs the ETSS to explore the innovative techniques to the industry.

Product Description

1. Catalytic Oxidative Activated Carbon
2. Production technology for urban sludge-derived biochar
3. Application of metallic Nickel Foam electrode for ammonia electrooxidation
4. Membrane aerated biofilm reactor



Exhibitor Profiles

FineTek Co., Ltd

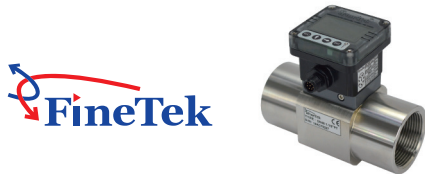
• <https://www.fine-tek.com/>

Company Profile

“Persistence of Quality” is FineTek’s business philosophy for sustainability and social responsibility. Hundreds of millions of NT dollars have been invested in the company’s water flow test laboratory (TAF certificate number 3086/3853) in Yilan to ensure consistent quality. FineTek’s self-developed electromagnetic flowmeter has the prestige of being the “only brand in Asia” to be certified by the International Organization for Legal Metrology (OIML).

Product Description

FineTek have array radar, ultrasonic, and electromagnetic induction technologies. FMCW radar level transmitter, ultrasonic flow meter, electromagnetic flow meter and paddle wheel flow meter and etc. Those solutions are excellent to apply for applications of smart city, especially for drinking water treatment, waste water treatment, sewage water monitoring and spring water monitoring and etc.



Industrial Technology Research Institute

• <https://www.itriwater.org/> • <https://www.iwaternet.org/>

Company Profile

ITRI has devoted four decades to cultivating and building strength in treatment technology. We provide the total solutions including feasibility study, treatability study, system design, installation of facilities, as well as the consultation for the management of water treatment system.

Product Description

1. Municipal/Industrial wastewater treatment (physical/chemical technology, anaerobic technology and aerobic technology)
2. Wastewater reclamation
3. Water treatment
4. AIoT water treatment



工業技術研究院

Industrial Technology Research Institute

Mintei Information Co. Ltd.

• <https://www.mintei.com.tw/>

Company Profile

Mintei Information Co., Ltd. (hereafter referred to as Mintei) was established in 2004. Mintei signed a technology transfer contract with “Japan Rikuchi Water Leakage Detection Corporation” to introduce Japanese professional techniques and equipment to Taiwan market.

Product Description

- | | |
|-----------------------|--------------------|
| ECHOLOGICS | FAST |
| 1. LeakFinder ST | 1. BIDI Logger |
| 2. EchoShore Mobile M | 2. ZM Ultra Mobile |



GSD Enviro Tech (Taiwan) Co., Ltd.

• www.gsd.net.tw

Company Profile

GSD has deeply involved in the water industry for many years and provides a full range of smart water services through the integration of sewage treatment IOT and AI systems.

Product Description

GSD provides sewage treatment equipment manufacturing and functional supporting products, as well as integration and development of smart water systems.



Smart WaterOps Service Platform

GSD Air Bearing Turbo Blower



基士德環科股份有限公司
GSD Enviro Tech (Taiwan) Co., Ltd.

Exhibitor Profiles

Prognosis Technology Inc

• <https://prognosistech.com/>

Company Profile

Prognosis is an expert that provide the complete solution of equipment fault predictive diagnosis. Prognosis HW and SW solution has own patent and brand.

Product Description

Portable PHM Box

Friendly interface that is closest to the user, auxiliary setting function of "measurement point, warning value" allows you to easily set up and use. The health guardian of the machinery and equipment improves the maximum efficiency of plant equipment management , Perform trend analysis, status warning and result management functions. It is the best weapon for predicting equipment maintenance.



AIWin Technology Co., Ltd.

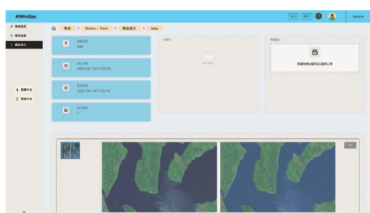
• <https://aiwin.com.tw/>

Company Profile

AIWin Technology is your trusted partner of AI SaaS solutions. Our innovative products enable industrial enterprise to conduct fast digital transformation. AIWin wishes to be a responsible supplier to fulfill the global long-term objective of ESG.

Product Description

Our major product-WinHub.AI platform came from our successful POC experiences. WinHub.AI has MLOps platform which is easy for AI life-cycle management and fast deployment. Customers can easily conduct any AI project on-demand without any programming. Three kinds of AI SaaS provided: AOI, smart water and NDT.



UTRUST Technology Co., Ltd.

• <https://www.utrust.com.tw>

Company Profile

UTRUST is an expert of system, software and digital solution provider. Over the years, UTRUST successfully assisted over a hundred enterprises and governmental agencies in business digitalization and transformation and supplied them solutions for industry innovation and upgrades.

Product Description

Vast Cloud-Based IoT Platform has powerful analytical computation which is capable of receiving massive data. Apart from transmitting the data of your device or sensor, this platform can effectively analyze collected derivative data and formulate business insights that drive decisions to reach the real value of IoT ecosystem.



PROCAL TECHNOLOGY CO., LTD.

• <https://www.procal-tech.com/procal/>

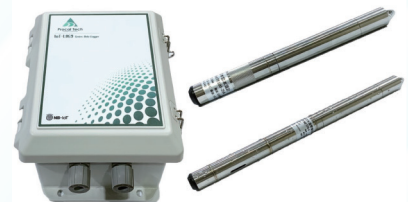
Company Profile

Procal Tech is specializes in outfield monitoring, such as river water level, stream discharge, ground water, slope disaster, etc. We cooperate with WRA, SWCB, and university research centers to conduct long-term national hydrology monitoring projects, and our self-developed products have got several 3rd party certifications, including CE, ATEX, TAF, NCC.

Product Description

Real-Time Groundwater Water Monitoring System

Real-time groundwater monitoring system is composed of sensors like TE100-25 or TE150-CTD, and wireless transmitter IoT-LOG9, which are all made by Procal. The system provides managers real-time data of water level, temperature, and conductivity, and helps to analyze the route of groundwater recharge, and saltwater intrusion.



Exhibitor Profiles

Public Works Department (PWD), Taipei City Government

• <https://pwd.gov.taipei/>

Company Profile

Responsible for major public construction work in Taipei City. PWD is composed of five offices, such as the New Construction Office, Hydraulic Engineering Office, Parks & Street Lights Office, Sewerage Systems Office, and Geotechnical Engineering Office.



Product Description

Innovative research · Future prospects

From 2019 to 2022, a total of 20 projects were subsidized, and 10 of them were in the field of water affairs, covering smart management, waste water treatment, flood monitoring and early warning, climate change adaptation, autonomous disaster prevention, etc.

The Automatic Control of Pumping Station

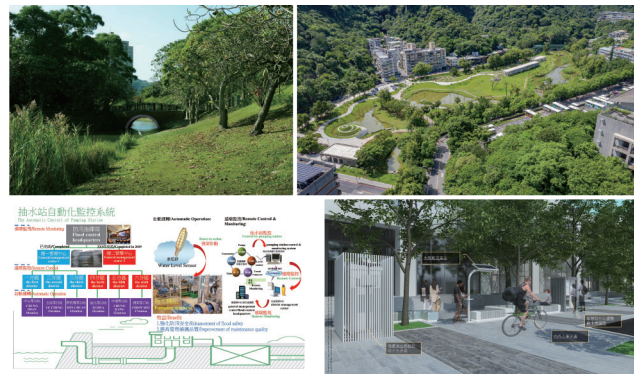
Hydraulic engineering office has reached the goal of facilities of water pumping stations controlled automatically. Include 1-Automatic Operation Function, 2-Remote Control Capability, 3-Remote Monitoring Capability, 4- Burglar Proof Security Capability, 5- Fire Alarm Capability.

Permeable and Water Retention Design for City Sidewalk

Area of new permeable pavement (PP) is 194,410 m² with annual addition rate of 25,000 m²/year; Maximum temperature reduction by PP was 3.7°C and Surface runoff reduction by PP was 40.1%.

Oasis in the Concrete Jungle

Re-examine and improve the space that has been over-disturbed by humans, and give the green land and waterfront a chance to breathe and restore a new field of coexistence of life.



Future Water: Intelligence, Sustainability and Reclamation

As water is the source of life, we establish an intelligent water reclamation network considering aesthetic value, and that open a new chapter of sustainable water.

Yongchunpi and Shungxi Wetland Park Construction Project

Yongchunpi Project with ecology and water conservation, the eco-friendly habitat, and a complete urban ecological corridor. Shungxi Project combined with sunset landscape, ecological habitat, education, entertainment, and natural scenery.

Taipei Water Department

• <https://english.water.gov.taipei/>

Company Profile

Taipei Water Department (TWD) was established in 1907. It has been established for more than 100 years. The service area covers Taipei City, and parts of New Taipei City.



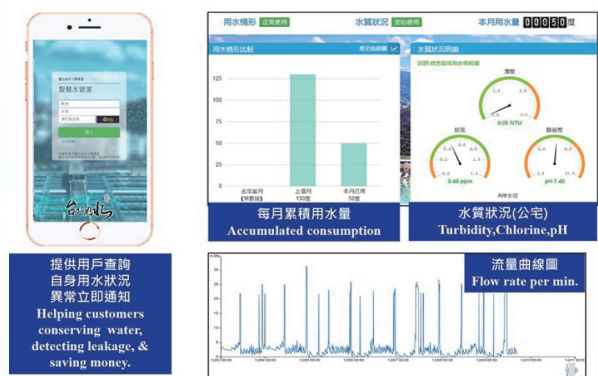
Product Description

District Smart Metering (DSM)

By 2021, leakage rates of 406 DMAs (District Metering Areas) have been reduced less than 10% in Taipei. To keep the health of all the DMA after pipeline replacements, a long-term management of leakage-growth-monitoring also been undertaken, including those DMA replacement jobs currently carrying on.

Smart water service

Taipei city is actively promoting smart water meters (SWMs). Applying SWMs with IoT technology and smart water management platform to assist customers with self-management of water usage, and provide abnormal water usage warning.



Exhibitor Profiles

Green Intelligent Technology

• <http://www.gren2015.com/>

Company Profile

Green Intelligent Technology Co. is mainly committed to applying artificial intelligence technology to the field of water environment management. We have backgrounds of rich practical experience in water treatment engineering, which is helpful for constructing AI model precisely.

Product Description

AI backwash diagnose model

It provides the uniformity and completion diagnosis of filtration backwash through the image recognition technology.

AI DO prediction model

It is applied in nature water management and aquaculture through input environmental parameters to predict DO.



Energy Management System Co., Ltd

• <https://www.ems.com.tw/en/>

Company Profile

More than 30 years dedicated to developing smart water meters and IoT datalogger in Taiwan, EMS company propose the cutting-edge smart metering solutions to water utilities, industrial and commercial projects supporting our customers around the world.

Product Description

The smart water meters, with edge computing to display flow data, leak alarms, and consumption logs, can connect to IoT datalogger to transmit data to the cloud systems where users can access these data anytime & anywhere.



Water Affairs Organization • Taiwan (WAOT)

• <https://waot.org/>

Company Profile

WAOT is close co-work partner with industry, government department, university, and research institute to promote water industry. WAOT not only provides an exchange platform for international and domestic water business but also introduces new technologies & facilities about water to members.

Product Description

SMART WaterOps Service Platform

Providing innovative techniques and equipment improved solution for water environment and water resource utilization, WAOT demonstrates SMART WaterOps Service Platform and offers water treatment AI modeling and analysis services. Without setting up algorithm teams and AI experts, users could easily upload the data about equipment and water quality, build-up their own AI models, and optimize the operational decision.



Conference Organization

• Advisor



• Organizer



• Co-organizer



• Implementer



