



Asia Water Forum 2022

8–11 August | Online

P R O G R A M

WELCOME!

The Asian Development Bank welcomes you to the Asia Water Forum (AWF) 2022.

The theme will be **“Toward a Resilient and Water-Secure Asia and the Pacific”**.

Underpinned by the need for climate change resilience, sustainable water management, reliable water services, and water security, participants can expect high-level plenary sessions and parallel break-out sessions centered around four key focus areas: (i) water as a sustainable resource; (ii) universal water and sanitation services; (iii) productive water in agriculture and the economy; and (iv) climate change and water-related risks.

Topics will also cover the following crosscutting themes of: (i) embracing environmental sustainability and circular economy; (ii) improving governance and catalyzing finance; (iii) promoting inclusiveness and gender equality; (iv) building resilience and adaptive capacity; and (v) fostering innovation and technological advancement.

AWF 2022 will provide a platform and venue for sharing knowledge and experience on water information, innovation, and technology across the region. AWF 2022 aims to discuss ways to identify and adopt innovations that best address the requirements for a resilient and water-secure Asia and the Pacific, and to keep the profile of water high on the region’s development agenda. The increased knowledge and application of international best practices as well as continued technology development are expected to improve the effectiveness and sustainability of ADB-financed projects in developing member countries; thus improving climate change resilience, management of water, delivery of water and sanitation services, and the status of water security across the region.

Enjoy and have a productive Asia Water Forum!

Note: All events are listed in Manila time (GMT+8).



Asia Water Forum 2022

8–11 August 2022 • Online

Week at a glance

Pre-event Monday, 8 August			Day 1 Tuesday, 9 August			Day 2 Wednesday, 10 August			Day 3 Thursday, 11 August		
Parallel side event (9:00–10:30 a.m.)			(9:00–10:30 a.m.) Opening Ceremony and Keynote Panel Strengthening Water Security in Asia and the Pacific			Parallel technical sessions (9:00–10:30 a.m.)			Parallel technical sessions (9:00–10:30 a.m.)		
S1A: Pathways for Quality-Oriented Growth Through Resilient and Water-Secure Asia and the Pacific						1B: Financing, Private Sector Participation, and Stakeholder Engagement	2C: Data-Driven and Smart Utilities	4B: Governance and Planning for Climate Resilience	1E: Nature-Based Solutions and Integrated Perspectives	2E: Sector Capacity and Stakeholder Engagement	4D: Technologies for Climate Resilience
Morning break (10:30–11:00 a.m.)											
Parallel side events (11:00 a.m.–12:30 p.m.)			Parallel technical sessions (11:00 a.m.–12:30 p.m.)			Parallel technical sessions (11:00 a.m.–12:30 p.m.)			Parallel side events (11:00 a.m.–12:30 p.m.)		
S2A: Conducting Good Field Surveys and Capturing Willingness To Pay		S2B: Asset Management for Business Resilience	1A: Decision Support for Efficient Water Utilization	2A: Strengthening WASH Toward Universal Access	3A: Enhancing the Economic Value of Water	1C: Governance and Planning for Water Security	3C: Circular Economy and Water Reuse	4C: Green Infrastructure and Nature-Based Solutions	S5A: Youth Leadership in Water: Putting Words into Actions		S5B: Water Security Data as Tools for Decision-Making and Resilience
Lunch break (12:30–1:30 p.m.)											
Parallel side events (1:30–3:00 p.m.)			(1:30–2:30 p.m.) High-Level Panel 1: Financing and Investing in Resilience			(1:30–2:30 p.m.) High-Level Panel 2: The Digital Water Revolution in Asia and the Pacific			(1:30–2:30 p.m.) High-Level Panel 3: Leading the Transition to the Circular Economy in Asia and the Pacific		
S3A: Improving Water Utilities’ Sustainability Through Effective Partnerships and Future-Focused Utility Transformation	S3B: Establishing Young Water Professional Networks	S3C: (Closed Door Meeting) the Path Toward the Asian Water Development Outlook 2025									
Afternoon break (3:00–3:30 p.m.)											
Parallel side events (3:30–5:00 p.m.)			Parallel technical sessions (3:00–4:30 p.m.)			Parallel technical sessions (3:00–4:30 p.m.)			(3:00–4:00 p.m.) Closing panel: Young Leaders Shaping the Water Future of Asia and the Pacific (4:00–5:00 p.m.) Closing ceremony: Launch of the (i) Mainstreaming Water Resilience Guidance Note, and (ii) Asia and the Pacific Water Resilience Hub		
S4A: Using Technology to Reduce Leakage in Water Distribution Networks	S4B: Mainstreaming Climate Resiliency by Water Organizations: Best Practices and Lessons Learned	S4C: Keeping the Taps Flowing: O&M Contracting and Water Infrastructure Sustainability	4A: Understanding, Managing and Communicating Risks	2B: Innovative Tools for Awareness Raising and Decision-Making	3B: Water-Energy-Food Nexus	1D: Innovative Technologies for Optimization and Resilience (a Cross-Thematic Session with FA4)	3D: Opportunities for Financing and Private Sector Involvement	2D: Achieving Universal Sanitation			

LEGENDS:

PLENARY SESSION

PARALLEL TECHNICAL SESSION

PARALLEL SIDE EVENT

FOCUS AREAS: 1–4 • SUBTHEMES: A–E

FOCUS AREA 1

Water as sustainable source

FOCUS AREA 2

Universal water and sanitation services

FOCUS AREA 3

Productive water in agriculture and the economy

FOCUS AREA 4

Climate change and water-related risks

For more on ADB Water, follow us here:

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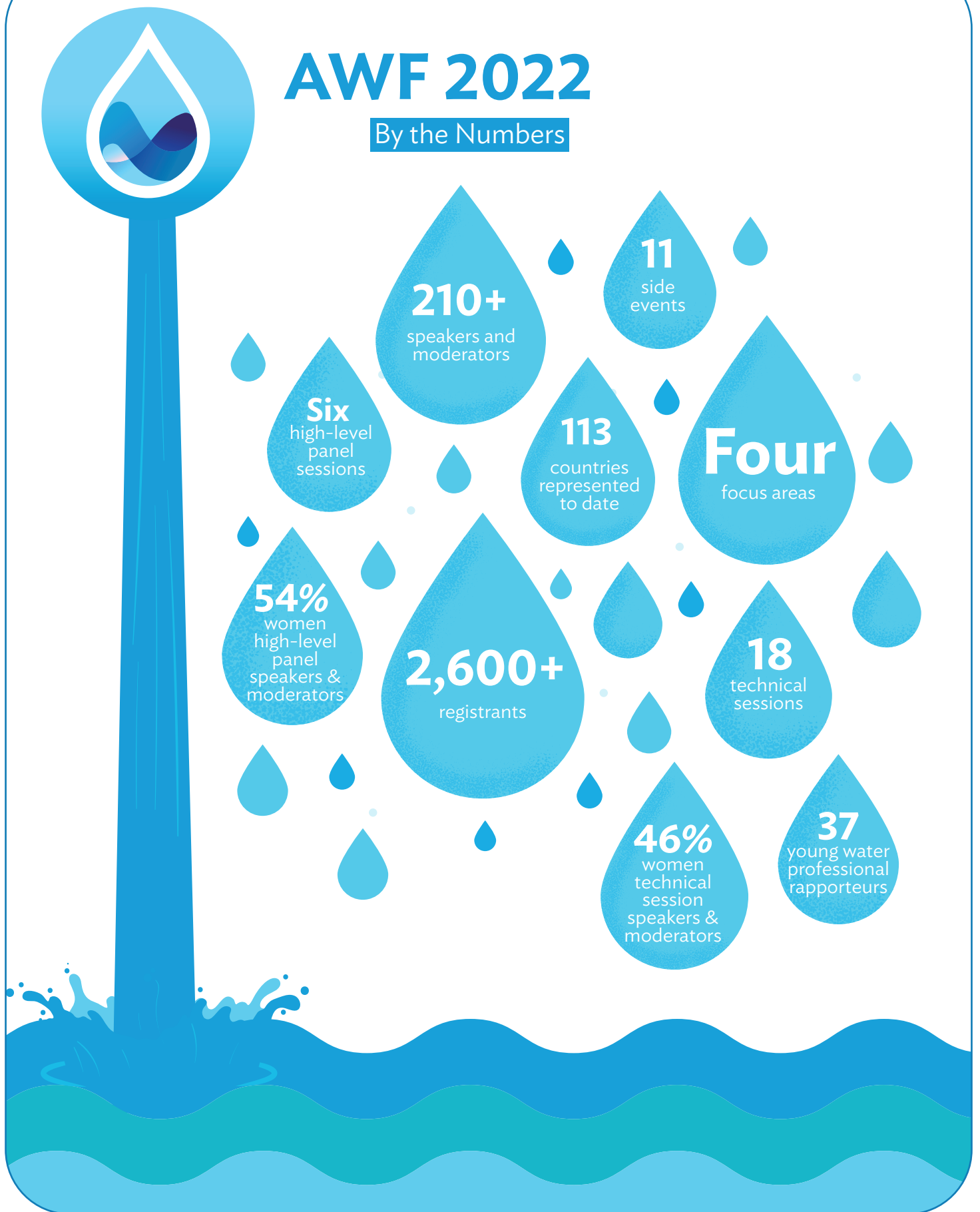
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AWF 2022

By the Numbers



PRE-EVENT, 8 August

SIDE EVENT

🕒 9:00–10:30 am

S1A: Pathways for Quality-Oriented Growth Through Resilient and Water-Secure Asia and the Pacific**Organizer:** Asia-Pacific Water Forum (APWF)

Drawing inspiration from the Kumamoto Declaration, this session will tackle the bottlenecks for orchestrating water governance and financing, opportunities for science-backed decision making, and nurturing local talent (particularly the youth) to implement locally-tailored projects.

Speakers/Panelists:

- Mark Pascoe, *Chair, APWF Governing Council*
- Mikio Ishiwatari, *Board Director, Japan Water Forum*
- Wendy Walker, *Chief of Social Development Thematic Group, Asian Development Bank (ADB)*
- Sanjay Srivastava, *Chief of Disaster Risk Reduction, United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)*
- Perry Rivera, *Advisor, Manila Water*
- Yumiko Asayama, *Manager, Japan Water Forum, APWF Secretariat*
- Saswati Belliappa, *Senior Safeguards Specialist, ADB*
- Taikan Oki, *Professor, Graduate School of Engineering, The University of Tokyo, Japan*
- Mandira Shrestha, *Program Coordinator for Climate Services Initiative, ICIMOD*
- Misako Kachi, *Senior Researcher, Earth Observation Research Center, JAXA*

Rapporteur: Md. Sabbir Ahmed, *Bangladesh Delta Plan 2100*

PRE-EVENT

PARALLEL SIDE EVENTS

🕒 11:00 a.m.–12:30 p.m.

S2A: Conducting Good Field Surveys and Capturing Willingness to Pay**Organizer:** Asian Development Bank

The session will present a gender sensitive modular questionnaire that contains core and expanded questions for surveys for water supply, sanitation, wastewater, and flood management projects. Speakers will explain the proper approach to accurately measure people's willingness to pay for goods and services that are not traded in the market, such as piped water and urban green space.

Speakers/Panelists:

- Srinivas Sampath, *Director, Southeast Asia Department, ADB*
- Aimee Hampel, *Economist, Economic Research and Regional Cooperation Department, ADB*
- Thuy Trang Dang, *Senior Urban Development Specialist, Southeast Asia Department, ADB*
- Jindra Samson, *Senior Economics Officer, Economic Research and Regional Cooperation Department, ADB*
- Dieldre Harder, *WASH Survey Specialist (Consultant), ADB*
- Asa Sajise, *Associate Professor, University of the Philippines Department of Economics*
- David Raitzer, *Economist, Economic Research and Regional Cooperation Department, ADB*
- Jeffrey Liang, *Principal Economist, Economic Research and Regional Cooperation Department, ADB*
- Amanda Mamon, *Senior Operations Assistant, Economic Research and Regional Cooperation Department, ADB*

Rapporteur: Lucia Gamarra, *Australia Water Partnership***S2B: Asset Management for Business Resilience****Organizer:** Isle Utilities Asia-Pacific

Integrating risk and assurance is critical to service delivery. This session will explore the role of asset information systems, underpinned by an understanding of functional requirements as mapped against key business requirements, in order to mitigate key business and operational risks.

Speakers/Panelists:

- Farshad Ibrahim, *Head of Asset Management, Isle Utilities*
- Paul Harris, *Head of Business Consulting, Isle Utilities*
- Geoffrey Wilson, *Senior Water Resources Specialist, Sustainable Development and Climate Change Department, ADB*
- Ir. Fuad bin Bakri, *Head of Asset Management, Ranhill*
- Aretha Samuel, *CTO, Nobel Systems*
- Tanmay Thakur, *Asset Management Specialist, Nobel Systems*

Rapporteur: Mae Liza Velasquez, *PrimeWater Infrastructure Corporation*

S3A: Improving water utilities' sustainability through effective partnerships and future-focused utility transformation

Organizers: Asian Development Bank and World Bank

Utilities are looking for ways to improve management and implement operational and organizational changes that lead to better and more sustainable service. The session will showcase examples of international and regional programs and initiatives aiming at connecting utilities with peers globally to facilitate knowledge exchange and know-how.

Speakers/Panelists:

- Jose Luis Martin Bordes, *International Consultant, ADB*
- Ma. Fiorella Fabella, *Senior Water Supply Specialist, World Bank*
- Abegil Pagatpatan, *Municipal Planning and Development Officer, Local Government of Pura, Tarlac, Philippines*
- Julie Marechal Perkins, *Officer-in-Charge of Global Water Operators Partnerships Alliance (GWOPA)/ UN-Habitat*
- Rodora Gamboa, *Executive Director, Maynilad Water Academy*
- Alan Thornton, *Senior Principal Engineer, Hunter H2O*
- Allison Woodruff, *Principal Water Security Specialist, ADB*

Rapporteur: Ishita Aryan, *PwC India*

S3B: Establishing Young Water Professional Networks

Organizer: International Water Association

This event aims to accelerate the discussions around youth engagement in the water sector by creating a community of YWPs to share knowledge and experiences, learn important skills and have a space to brainstorm solutions. This session is part of the “Youth on the Road to UN 2023 Water Conference” activities.

Speakers/Panelists:

- Isabela Espindola, *Management Engagement Officer, International Water Association*
- Emily Ryan, *Chair, International Water Association - Young Water Professionals*
- Afolayan Juwon Samuel, *World Youth Parliament for Water*
- Claudia Neuschulz, *Water Youth Network*
- Cholpon Aitakhunova, *Central Asia Youth for Water*
- Xuan Zihan, *UN International Federation of Youth*
- Maria Mercedes Kuri, *UN International Federation of Youth*
- Michelle Meaclem, *World Federation of Engineering Organizations Global Young Engineers*

Rapporteur: Yasha Mannan, *Caritas*

S3C: The Path Toward the Asian Water Development Outlook 2025

Organizer: Asian Development Bank

This closed-door meeting is a brainstorming session for ADB and partner organizations to plan the upcoming Asian Water Development Outlook 2025.

PRE-EVENT

PARALLEL SIDE EVENTS

🕒 3:30–5:00 p.m.

S4A: Using Technology to Reduce Leakage in Water Distribution Networks

Organizers: PUB Singapore and Singapore Water Association

Water leakage in the water supply network is one of the main challenges faced by many water utilities. This session will showcase some of the latest smart water technologies that are now available to enable us to better detect potential leaks and for preventive maintenance and replacement.

Speakers/Panelists:

- Tse Yau Shing, Council Member, Singapore Water Association
- Gary Wyeth, Senior Consultant, Isle Utilities Asia-Pacific
- Ashley Ng, Director, Client Solutions, Emerging Markets, Decision Intelligence Solutions, Xylem Water Solutions Singapore Pte., Ltd.
- Mark Nicol, Senior Director of Sales & Operations – International, Mueller Water Product
- Rajat Mishra and Liang Jie Wong, Co-Founders, Terezo Analytics
- Elise Wong, Regional Director of Business Development, Xylem Water Solutions Singapore Pte., Ltd.

Rapporteur: Shansang Wang, Arup

S4B: Mainstreaming Climate Resiliency by Water Organizations: Best Practices and Lessons Learned

Organizer: Royal HaskoningDHV

This panel discussion will feature thought leaders of various water entities in the region to share their successes, challenges, and lessons learned in promoting and building climate resilience within their organization and among their constituencies, whether through top-down or bottom-up approaches.

Speakers/Panelists:

- Henry Manguerra, Royal HaskoningDHV
- Anoulak Kittikhoun, Chief Executive Officer, Mekong River Commission Secretariat
- Abdul Malik Sadat Idris, Director for Water Resources BAPPENAS / National Development Planning Agency
- Christine Emboltorio, Strategic Asset Planning Department Head, Manila Water
- Terry A. Suehr, Director, City of Alexandria, Virginia, USA
- Allison Woodruff, Principal Water Security Specialist, ADB
- Santi Baran, Chief Strategy Officer, Mekong River Commission Secretariat
- Thim Ly, Chief Basin Planner, Mekong River Commission Secretariat

Rapporteur: Kristine Hayo, NKE and Institute for Global Environmental Strategies

S4C: Keeping the Taps Flowing: O&M Contracting and Water Infrastructure Sustainability

Organizer: Asian Development Bank

This session will introduce the ongoing work on standard ADB O&M procurement templates, discuss sustainability issues including financial sustainability faced by the water in ADB's developing member countries, and share examples of ADB projects which have integrated O&M contracts into the project design, and key design considerations.

Speakers/Panelists:

- Stephane Bessadi, Senior Procurement Specialist, ADB
- Tiago Ribeiro, Urban Development Specialist, ADB
- Srinivasan Janardanam, Principal Financial Management Specialist, ADB
- Luo Xuegeng, Overseas Manager, Beijing Enterprises Water Group
- Yujia Shen, Asia Research Editor, Global Water Intelligence
- Lu Shen, Director for Results Management and Aid Effectiveness Division, ADB

Rapporteur: Jeff MacAllister, Arup

DAY 1
Tuesday,
9 August

**OPENING CEREMONY
AND KEYNOTE PANEL**

Strengthening Water Security in Asia and the Pacific

🕒 9:00–10:30 a.m.

In this opening session, a high-level panel of government leaders, thought provocateurs and leaders of international development organizations will share their perspectives on the main opportunities and challenges for building water security in Asia and the Pacific, particularly in the context of post-pandemic recovery, climate change, rapid urbanization, and digitization.

Keynote Address:

Woochong Um, Managing Director General and Officer-in-Charge, Vice-President for Knowledge Management and Sustainable Development, ADB

Moderator:

Neeta Pokhrel, Chief of Water Sector Group, ADB

Panelists:

- *Hon. Jone Usamate, M.P., Minister of Infrastructure and Meteorological Services, Fiji*
- *Suzanne Gaboury, Director General for Private Sector Operations Department, ADB*
- *Debora Comini, Regional Director for East Asia and the Pacific Region, UNICEF*
- *Taqsem Khan, Managing Director and CEO, Dhaka Water Supply and Sewerage Authority*

Rapporteur: *Jihan Al-Shdifat, Isle Utilities*

DAY 1

PARALLEL TECHNICAL SESSIONS

🕒 11:00 a.m.–12:30 p.m.

1A: Decision Support for Efficient Water Utilization

Key question: What are the new methods for holistic planning and integrated perspectives to make critical decisions in water management?

Moderator: Qingfeng Zhang, Chief of Rural Development and Food Security (Agriculture) Thematic Group, ADB

Session Speakers:

“Analysis of the water resources utilization in the Yellow River Basin based on water resources ecological footprint model”

• Rui Lu, Chinese Academy of Environmental Planning

“Integrated Modelling for Urban Water Security”

• Mukta Sapkota, eWater Ltd.

ADB’s Yellow River Ecological Corridor (YREC) Program: An integrated approach”

• Thomas Panella, ADB

“Realising the multiple benefits of Water-Energy-Food-Ecosystems Nexus in Indus and Ganges basins: Experiences from NEXUS Gains initiative”

• Santosh Nepal, International Water Management Institute

“Urban Water Security Assessment in Korea Under Climate Change: A Case Study of Seoul City from a Resource Nexus Perspective”

• Halim Lee, UN University Institute of Matter Fluxes and Resources

Rapporteur: Yenny Silvia, PT Mantra Bali

2A: Strengthening WASH Toward Universal Access

Key question: To achieve the ambitious goal of universal access, how can WASH providers and practitioners enhance service design and delivery?

Moderator: Maria Tran, Senior Project Officer (Urban Development), Pacific Department, ADB

Session Speakers:

“Transforming WASH services for a more equitable, inclusive and resilient future”

• Alison Baker, Water for Women Fund, GHD

Eau et Vie: making home water supply possible and affordable for slum dwellers”

• Mary Antonette Flores, Eau et Vie

“Building a viable governance model for peri-urban water supply in Papua New Guinea”

• Tim Davis, WaterAid

“Nepal Urban Water Supply and Sanitation Project”

• Shiva Prasad Paudel and Alexandra Conroy, ADB

“Creating safe and resilient water supply systems for the Pacific communities: The case of Kiribati Public Utility Board’s (PUB) holistic approach to water safety planning”

• James Young, Public Utilities Board in Kiribati, Clara Laydon, Hunter H2O and Edkarl Galing, ADB

Rapporteur: Trang Tran, Allens

3A: Enhancing the Economic Value of Water

Key question: How can we improve the productivity and economic use of water in the face of dwindling resources?

Moderator: Suzanne Marsh, Water Resources Specialist, South Asia Department, ADB

Session Speakers:

“Virtual water trade in food commodities: Mapping and sustainable options for rice cultivation in India”

• Raka Saxena, ICAR National Institute of Agricultural Economics and Policy Research

“Characterizing water productivity of rice systems in Sri Lanka using remote sensing”

• Karthikeyan Matheswaran, International Water Management Institute

“Smart and Precision irrigation system for Kundalia Left Bank and Right Bank Lift Irrigation Scheme in Madhya Pradesh”

• Ashwani Kumar Upmanyu, Mohanpura-Kundalia Project Management Unit, Water Resources Department, Government of Madhya Pradesh

“Modernising irrigated agriculture to protect and restore aquatic biodiversity and ecosystem services”

• Lee Baumgartner, Charles Sturt University

Rapporteur: Hong Ha, AMPERES

HIGH-LEVEL PANEL 1

Financing and Investing in Resilience

🕒 1:30–2:30 p.m.

Water sector challenges are mounting in the face of climate change, and growing demand for water driven by economic development and population growth. The widening gap between water investment requirements and government financing capabilities compels the public and private sectors to work together in new ways. This session will explore the potential crowd in private sector financing into the sector by making investments more bankable, including innovative financing mechanisms to expand water access. The session will also consider how emerging environmental and climate risks in the region are influencing investor decisions, and how utilities can better tap into climate finance and other concessional resources to finance investments to build their resilience and long-term water security.

Moderator: Christine Engstrom, *Director, Private Sector Financial Institutions Division, ADB*

Panelists:

- Winfried F. Wicklein, *Deputy Director General for Southeast Asia Department, ADB*
- Jeff Goldberg, *Director, USAID Center for Water Security, Sanitation and Hygiene*
- Debra Tan, *Director and Head, CWR*
- Eva Abal, *Strategic Advisor, International RiverFoundation*

Rapporteur: Sena Moses Satria, *Eco Mantra Bali*

DAY 1

PARALLEL TECHNICAL SESSIONS

🕒 3:00–4:30 p.m.

2B: Innovative Tools for Awareness Raising and Decision Making

Key question: What lessons from the COVID-19 pandemic and other external shocks can we use to improve water supply and sanitation services?

Moderator: Elma Morsheda, *Urban Development Specialist, South Asia Department, ADB*

Session Speakers:

“Wastewater Surveillance: Lessons Learned for Proactive Responses to Outbreaks”

• John Sheets, *CDM Smith*

“Wastewater Epidemiology For ALL”

• Arthur Kokolekos, *LuminUltra Technologies*

“Adaptive partnering during the pandemic – lessons and successes”

• Katie Trevor, *Australia Water Association*

“Contactless location based billing and collection system using state of the art cloud technology”

• Dona Tajora, *GeoNobel Inc.*

“Project preparation for resilient urban water and sanitation services in secondary cities of Asia the Pacific”

• Ramon Abracosa, *ADB*

Rapporteur: Josephine Adu-Gyamfi, *Community Water and Sanitation Agency*

3B: Water-Energy-Food Nexus

Key question: How might we design and deliver projects using a nexus and systemic approach?

Moderator: Geoffrey Wilson, *Senior Water Resources Specialist, Sustainable Development and Climate Change Department, ADB*

Session Speakers:

“Water-Food Nexus through the Lens of Virtual Water Flows: The Case of India”

• Suparana Katyaina, *Tata Institute of Social Sciences Hyderabad*

“Nexus City: Water reclamation with integrated resource recovery as a key Water-Energy-Food Nexus potential for cities to transition to a circular economy”

• Daphne Gondhalekar, *Technical University of Germany*

“Food production and water management in atolls and low-lying Pacific Islands”

• Federico Davila and Jeremy Kohlitz, *Institute for Sustainable Futures, University of Technology Sydney*

“Water-by-Wind project to tackle salinity intrusion problem at lower Mekong Delta basin in Southern Viet Nam”

• Duong Ngoc Tu, *The Consortium Smart Universal Logistics - Groupe Huit*

“Technology for whom? Solar Irrigation Pumps, Women and Smallholders in Eastern Tarai, Nepal”

• Gitta Shrestha, *International Water Management Institute*

Rapporteur: Tyyaba Suhail, *Mehran University of Engineering and Technology Jamshoro*

4A: Understanding, Managing and Communicating Risks

Key question: What are the new methods for managing risks that yield practical value to climate action?

Moderator: Asif S. Cheema, *Director, East Asia Department, ADB*

Session Speakers:

“Development of water risk assessment tool based on a latest global hydrological model”

• Naota Hanasaki, *National Institute for Environmental Studies*

“Water and climate risk preparedness tools for anticipatory actions and response planning in South Asia”

• Faisal Mueen Qamer, *International Centre for Integrated Mountain Development*

“Understanding the links between drought indices and drought impacts to improve drought resilience in Thailand”

• Michael Eastman, *UK Centre for Ecology & Hydrology*

“Resilient community – adaptive life and livelihood”

• Bikash Pati, *WaterAid India*

“Climate resilient urban sanitation: Landscape study and setting a knowledge and learning agenda”

• Juliet Willetts and Avni Kumar, *Institute for Sustainable Futures, University of Technology Sydney*

Rapporteur: Tsenguun Tumurkhuyag, *Millennium Challenge Account, Mongolia*

1B: Financing, Private Sector Participation and Stakeholder Engagement

Key question: How can we build better partnerships to mobilize, finance and sustain efforts for water security and resilience?

Moderator: Le Lan, *Environmental Economist, Environment, Natural Resources, and Agriculture Division, ADB*

Session Speakers:

“Partnerships for Building Water Resilience”

• Martin Shouler, *Arup*

“Water Infrastructure in Central Asia: building capacities and policies to promote sustainable financing and private participation”

• Iskandar Abdullaev, *CAREC Institute*

“Promoting inclusion in transboundary water cooperation: Lessons from the Transboundary Rivers of South Asia (TROSA) program”

• Jyotiraj Patra, *Oxfam*

“Moving cities towards Urban Water Security”

• Jigisha Jaiswal, *CEPT University Center for Water and Sanitation*

“Arteries.blue – A digital story of the Mekong River”

• Chris Fischer; and Muhil Nesi, *Water Science Policy*

Rapporteur: Raunak Shrestha, *Global Water Partnership*

2C: Data-Driven and Smart Utilities

Key question: What does it mean for water and sanitation service providers to be “smart” - and what are the practical ways to achieve this?

Moderator: Gia Heeyoung Hong, *Principal Urban Development Specialist, Central and West Asia Department, ADB*

Session Speakers:

“Improving the rural WASH system resilience through the integration of climate change elements and internet of thing (IoT) solutions in Timor-Leste”

• Angelo Ximenes, *WaterAid*

“Innovation-in-Action: Tackling Water Losses Cost-Effectively with Utilities from Bangalore, Philippines and Rural Cambodia”

• Annamarie Martin, *Imagine H2O Asia* and Gokul Krishna Govindu, *SmartTerra*

“Growing a failure database with data collection apps for machine learning and failure risk prediction”

• Kevin Nirsimloo, *Altereo*

“Real Time Feed-Forward Wastewater Quality Monitoring in Viet Nam”

• Rodney Chapin, *Ardurra International PTE LTD*

“Wastewater treatment and potable reuse optimisation with an advanced data modelling”

• Ryo Takeuchi, *Yokogawa Electric Corp.*

Rapporteur: Shreya Gyawali, *Australia Water Partnership*

4B: Governance and Planning for Climate Resilience

Key question: How might we enhance our institutional, governance and planning systems to promote climate resilience?

Moderator: Niloofar Sadeghi, *Water Resources Specialist, Southeast Asia Department, ADB*

Session Speakers:

“From impacts to adaptation: pathways to climate resilient city-wide inclusive sanitation (CR-CWIS) in four cities in Indonesia”

• Cindy Priadi, *Universitas Indonesia*

“Hard and soft infrastructure for climate-resilient water services”

• Will Fargher, *Aither*

“Climate Change and Precipitation: the Challenge of Extreme Rainfall and Flooding”

• Mark Maimone, *CDM Smith*

“Delivering Smart Flood Management in Bangkok”

• Ismail Weiliang Osman, *Mott MacDonald Singapore*

“The contribution of drought communication and advice networks to agricultural drought adaptation in northern Thailand”

• Daniel Goodwin, *Cranfield University*

Rapporteur: Zeyu Yao, *Sun Yat-sen University*

DAY 2

PARALLEL TECHNICAL SESSIONS

🕒 11:00 a.m.–12:30 p.m.

1C: Governance and Planning for Water Security

Keynote question: How might we enhance our institutional, governance and planning systems to promote water security?

Moderator: Laxmi Sharma, Senior Urban Development Specialist, South Asia Department, ADB

Session Speakers:

“Moving toward urban water sustainability in India – The importance of a statutory, regulatory, and administrative enabling framework”

• Mriganka Saxena, *Habitat Tectonics Architecture & Urbanism*

“Recommendations for Restructuring the Labyrinth of Urban Institutions to Enable IUWM in Indian Cities: A Case of New Delhi”

• Niharika Gupta, *CEPT University*

“WaterGuide: Setting a Path to Improved Water Management and Use Under Scarcity”

• Huw Pohlner, *Aither*

“Design and application of environmental zoning method in the Yellow River basin”

• Yuli Wen, *Chinese Academy of Environmental Planning*

“Assessment of Water Security in River Basins of Thailand”

• Kaushal Chapagain, *Asian Institute of Technology*

Rapporteur: Manish Vadanere, *AccionLAND*

3C: Circular Economy and Water Reuse

Keynote question: How can we realize the opportunities and benefits of a circular economy through water recycling and wastewater reuse?

Moderator: Thomas Panella, Director, East Asia Department, ADB

Session Speakers:

“Circular Glasshouses: “Water and Food Security through High-Tech Horticulture”

• Jessie-Lyn Van Egmond, *Van der Hoeven Horticultural Projects B.V.*

“Reuse of treated wastewater and sludge from Faecal Sludge Treatment Plants (FSTPs) in Maharashtra, India: Existing and potential practices”

• Swapnika Vadali, *CEPT University Center for Water and Sanitation*

“Decentralised circular solution for wastewater”

• Sanna Melita, *LeAF*

“Purple Pipes – Painting the Way for Wastewater Reuse in Agriculture in India”

• Kavita Sachwani, *Anjali Parasnis, World Bank 2030 Water Resources Group and Astik Pandey, Aurangabad Municipal Corporation*

“Circular Economy- Asset Management and the Water Sector”

• Neslihan Sonmez, *Stantec*

Rapporteur: Mohammad Shahadat Hossain, *Global Water-Climate Policy Analysis*

4C: Green Infrastructure and Nature-Based Solutions

Keynote question: How might we better leverage nature-based solutions for climate resilience?

Moderator: Ramola Naik Singru, Principal Urban Development Specialist, Central and West Asia Department, ADB

Session Speakers:

“A Nature Based Approach: projects examples and why this approach will help us forward”

• Petra Dankers, *Royal HaskoningDHV*

“The Power of Nature – Designing Sponge Cities using readily available datasets”

• Thomas Sagris, *Arup*

“A Blue, Green and Grey Journey Through Asia Inspired by Nature”

• Paul Nettleton, *Ramboll*

“Institutional Setup for Implementation of Nature-based Solutions for Coastal Flood Mitigation”

• Jan-Willem Nell, *Royal HaskoningDHV*

“NBS, building the business case for investments”

• Jehanne Fabre, *Danone*

Rapporteur: Ranjit Kumar, *Tata Consulting Engineers*

HIGH-LEVEL PANEL 2

The Digital Water Revolution in Asia and the Pacific

🕒 1:30–2:30 p.m.

In many other sectors – telecommunications, transport, energy, and healthcare, to name a few – digital transformation has birthed a new era of service delivery: the smart age. “Smart” means translating information into efficiency and value-creation, and it is enabled by adopting fit-for-purpose digital technologies that gather, organize, analyze, and operationalize data. This session will consider the opportunities and constraints for digital transformation in the water sector, and how new technologies can help to address some of the most complex challenges facing the water sector in Asia and the Pacific.

Moderator: Thomas Abell, Chief of Digital Technology for Development, ADB

Panelists:

- Neeta Pokhrel, Chief of Water Sector, ADB
- Kala Vairavamoorthy, Executive Director, International Water Association
- Monica Bennett, Director for Thought Leadership, Global Infrastructure Hub
- Vinod Singh, Regional Director for Asia and India, Jacobs Singapore

Rapporteur: Janith Rupasinghe, Isle Utilities



DAY 2

PARALLEL TECHNICAL SESSIONS

🕒 3:00–4:30 p.m.

1D: Innovative Technologies for Optimization and Resilience (a Cross-Thematic Session with FA4)

Keynote question: Which technologies are changing the way we optimize water resources and promote resilience?

Moderator: Marie L'hostis, *Water Resources Specialist, South Asia Department, ADB*

Session Speakers:

“Water Resource Optimisation through Digital Tools”

• Vinod Singh, *Jacobs Singapore*

“River Basin Performance Optimization”

• Amit Mishra, *Vasaar Labs IT Solutions*

“Decision Support Framework on Riverine Plastic Waste Collection Technologies”

• Wouter De Hamer, *Royal HaskoningDHV*

“DISRUPTING ASIA-PACIFIC: The role of emerging technologies in a highly-vulnerable region's battle with climate change- needs, barriers to access, and successes”

• Jihan Al-Shdifat, *Isle Utilities*

“A Multi-Level Approach to Developing Climate Resilience Strategies – using data and digital technology”

• Daniel Martens, *Royal HaskoningDHV*

Rapporteur: Rosemary N'Cube, *African Women Sanitation Professionals Network - Zambia*

2D: Achieving Universal Sanitation

Keynote question: What are the hurdles to achieving universal sanitation, and how might we overcome them?

Moderator: Srinivas Sampath, *Director, Southeast Asia Department, ADB*

Session Speakers:

“Leveraging Resources for Improved Household Sanitation through Output-Based Aid and Blended Finance: A Proof of Concept”

• Alma Porciuncula and Joanne Dulce, *USAID Safe Water Project*

“Connecting the rural unserved to safe water at home with local entrepreneurship”

• Riad Imam Mahmud, *Max Social Enterprise*

“Development Impact Bond for Urban Sanitation”

• Upasana Yadav, *CEPT University Center for Water and Sanitation*

“Use of the SaniPath Tool to identify Key Pathways of Exposure to Fecal contamination, with a case study from Dhaka, Bangladesh”

• Suraja Raj, *Emory University*

“Baguio Resilient City Tourism Project: Fecal Sludge Management in Baguio City, Philippines”

• Thuy Trang Dang, *ADB*

Rapporteur: Kumaresan Panneerselvam, *Indian Institute of Technology*

3D: Opportunities for Financing and Private Sector Involvement

Keynote question: How can we build a compelling business case for financing and investment for the productive use of water?

Moderator: Alexia Michels, *Senior Water Resources Specialist, South Asia Department, ADB*

Session Speakers:

“Sustainable and self-Finance Public Sector Pumping Irrigation Project: Barind Model”

• Asaduz Zaman, *ADB*

“Market-led high value crop enterprise development by water user groups in Xiengkhouang and Houaphan provinces in Laos”

• Kenneth Neils, *Lao PDR Department of Irrigation*

“Index insurance of soil moisture for winter crops: Experience of insurance in Kazakhstan via unified online platform”

• Aliya Tankibayeva, *DKU Natural Resources Institute*

“Preparing technology adoption for emerging farmers - the case of People's Republic of China”

• Xueliang Cai, *ADB*

“Decarbonizing irrigation through privatised solar irrigation service – case study from Bangladesh”

• Archisman Mitra, *International Water Management Institute*

Rapporteur: Maria Paschalia Judith Justiari, *University of Glasgow & PT Kompas Media Nusantara*

DAY 3: Thursday, 11 August

PARALLEL TECHNICAL SESSIONS

🕒 9:00–10:30 a.m.

1E: Nature-Based Solutions and Integrated Perspectives

Key question: How might we improve water security and resilience outcomes through nature-based solutions and integrated approaches?

Moderator: Jie Bai, *Urban Development Specialist, East Asia Department, ADB*

Session Speakers:

“Building with Nature: Indonesia paves the way for scaling up Nature-based Solutions in wider Asia”

• Datuk Keizrul Abdullah, *Wetlands International Malaysia*

“Mainstreaming the Sponge City approach through strategic planning in India”

• Manushi Ashok Jain, *Sponge Collaborative*

“You cannot clap with one hand: Tidal River Management and local communities”

• Willem Van Deursen, *Carthago Consultancy*

“Tools for the design and assessment of resilient mangrove coasts – and other Nature-based solutions”

• Jasper Dijkstra, *Deltares*

“Merging Blue-Green Infrastructure with Urban Design – a water master-planning approach in four quadrants”

• Nanco Dolman and Alwin Commandeur, *Royal HaskoningDHV*

Rapporteur: Saambhavi Nautiyal, *Indian Institute of Technology*

2E: Sector Capacity and Stakeholder Engagement

Key question: How can we better achieve sector outcomes by engaging multiple stakeholders and enhancing sector capacity?

Moderator: Wei Kim Swain, *Urban Development Specialist, Southeast Asia Department, ADB*

Session Speakers:

“Drivers, benefits and challenges of gender equality partnerships to strengthen WASH systems”

• Livia Cruz da Costa, *WaterAid*

“The Beacon Project: working in partnership with utilities and local government to achieve universal WASH services in Lahan, Nepal”

• Kabindra Pudasaini, *WaterAid*

“Implications of Drink from Tap Mission for Future Urban Water Projects: Lessons from Puri, Odisha”

• Abhisek Rout, *eGovernments Foundation*

“Improving desalination outcomes in the Pacific: an iterative design and training-based approach”

• Mat Francis, *Moerk Water Solutions Asia-Pacific*

“100MLD Namangan Wastewater Treatment – First water and wastewater Public-Private-Partnership project in Uzbekistan”

• Mukta Malhotra, *ADB*

Rapporteur: Anant Mitra, *Swiss Federal Institute of Aquatic Science and Technology*

4D: Technologies for Climate Resilience

Key question: How might we enhance our institutional, governance and planning systems to promote climate resilience?

Moderator: Natsuko Totsuka, *Principal Portfolio Management Specialist, Central and West Asia Department, ADB*

Session Speakers:

“Space-Based Technologies to Enhance Water Security Monitoring in Viet Nam”

• Nam Do Hoai, *ADB*

“Smart and Inclusive Flood Early Warning System in Baguio, The Philippines”

• Antonette Anaban, *Baguio City Government*

“Lessons learned from developing an operational and open-source flood monitoring tool over Southeast Asia”

• Arjen Haag, *Deltares*

“Real-time radar rainfall estimation and nowcasting system in urban areas”

• Munsung Keem, *Hydroinformatics Institute*

“FLASH Flood Forecasting system increases lead time in urban areas”

• Cornelis Dingemanse, *Royal HaskoningDHV*

Rapporteur: Praneeth Sarathchandra, *National Water Supply and Drainage Board*

DAY 3

PARALLEL TECHNICAL SESSIONS

🕒 11:00 a.m.–12:30 p.m.

S5A: Youth Leadership in Water: Putting Words Into Actions**Organizer:** International Water Association

Drawing from the key messages and calls to action generated throughout the AWF, the session will generate actionable insights to develop the leadership skills of the youth in order for them to take on leadership roles in the water sector.

Speakers/Panelists:

- Andre Taylor, *Leadership Specialist, International WaterCentre*
- Isabela Espindola, *Membership Engagement Officer, International Water Association*
- Huijie Lu, *Professor and Vice-chair of the Department of Environmental Engineering, Zhejiang University*
- Niti Jadeja, *Post-doc Researcher, Ashoka Trust for Research in Ecology and Environment*
- Rianna Gonzales, *Water Resources Specialist - Youth Engagement, Global Water Partnership*
- Chelsea Hayward, *Senior Process Engineer, Jacobs*
- Luisa Lopez, *Research Assistant, Griffith University*
- Maria Tran, *Senior Project Officer (Urban Development), ADB*
- Misael Camposano, *Technical Operations Manager, Calasiao Water Company*
- Edward Bornilla, *Senior Project Officer, USAID Catholic Relief Services*
- Yang Villa, *AWF Lead Events Management Specialist (Consultant), ADB*

Rapporteur: Anique Azam, *NED University of Engineering and Technology*

S5B: Water Security Data as Tools for Decision Making and Resilience**Organizers:** Asian Development Bank and Australian Water Partnership

This session will launch the Asian Water Development Outlook (AWDO) database/website, increase its awareness, communicate why such tools are needed and ensure it gets maximum usage. Lessons will be drawn from the last AWDO in order to ensure that AWDO 2025 is more used by the end beneficiaries.

Speakers/Panelists:

- Teresa M. Kho, *Director General, East Asia Department, ADB*
- Mark Smith, *Director General, International Water Management Institute*
- Michael Wilson, *Chief Executive Officer, eWater*
- Changhua Wu, *Vice-Chair, Asia-Pacific Water Forum*
- Samantha J. Hung, *Chief of Gender Equality Thematic Group, ADB*
- Thomas Abell, *Chief of Digital Technology for Development, ADB*
- Christian Walder, *Water Supply and Sanitation Specialist, ADB*
- Mafalda Pinto, *Water and Sanitation Specialist (Young Professional), ADB*
- Lachlan Guthrie, *Senior Consultant, Aurecon*
- Yumiko Yasuda, *Senior Network and Transboundary Water Cooperation Specialist, Global Water Partnership*
- Brian McIntosh, *Assistant Professor, International WaterCentre*
- Piyatida Ruangrassamee, *Assistant Professor, Department of Water Resources Engineering, Faculty of Engineering, Chulalongkorn University*
- Charlotte MacAlister, *Senior Researcher - Water Security, UNU-INWEH*

Rapporteur: Sindhuja Janakiraman, *World Resources Institute*

HIGH-LEVEL PANEL 3

Leading the Transition to the Circular Economy in Asia and the Pacific

🕒 1:30–2:30 p.m.

Transitioning from a linear to circular economy is a systemic undertaking. The burden for creating the conditions for such a transition often rests primarily on governments. However, business and industry can also drive and design the circular economy through technological innovation, creation of new markets and services, and unlocking previously untapped value. When aligned with government support and regulatory mechanism, industrial transformation can speed up the transition to circularity. This panel will explore the mechanisms by which this can be achieved: What incentives do private firms need to shift from take-make-waste to circular operations? Which industries are taking the lead, and what support is required to sustain their efforts?

Moderator: Jingmin Huang, *Director, Pacific Department, ADB*

Panelists:

- Kenichi Yokoyama, *Director General, South Asia Department, ADB*
- Jack Sim, *Head, World Toilet Organization*
- Yumiko Noda, *Chairman and Representative Director of Veolia Japan K.K.*
- Newsha Ajami, *Chief Strategy and Development Officer for Research, Berkeley Lab Earth and Environmental Sciences Area*

Rapporteur: Lieke van der Sanden, *Water Policy Professional*



CLOSING PANEL

Young Leaders Shaping the Water Future of Asia and the Pacific

🕒 3:00–4:00 p.m.

Asia and the Pacific boasts of a vibrant youth demographic that embraces digital technologies, cultivates new ideas, and espouses a can-do attitude in the face of an uncertain future. In the water sector, emerging leaders are counted on to fulfill the promise of digital transformation, innovative financing, climate change adaptation, and circular economy. How can we better tap into the region's energetic youth and develop them into capable leaders? In this forward-thinking closing plenary, an all-women panel of young water leaders will synthesize the key messages, fresh ideas, and calls to action coming out of AWF 2022.

Moderator: Mio Oka, Director, South Asia Department, ADB

Panelists:

- Isabela Espindola, Membership Engagement Officer, International Water Association
- Niti Jadeja, Postdoc Researcher, Ashoka Trust for Research in Ecology and Environment
- Huijie Lu, Professor and Vice-Chair of the Department of Environmental Engineering, Zhejiang University
- Rianna Gonzales, Water Resources Specialist - Youth Engagement, Global Water Partnership

Rapporteur: Ifeyinwa Luciana Nwankwo, International Committee of the Red Cross





Asia and the Pacific Water Resilience Hub

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CLOSING CEREMONY

Launch of the (i) Mainstreaming Water Resilience Guidance Note, and (ii) Asia and the Pacific Water Resilience Hub

🕒 4:00–5:00 p.m.

Moderator: Neeta Pokhrel, Chief of Water Sector Group, ADB

Speakers/Panelists:

- **Han Seung-soo**, Former Prime Minister of Republic of Korea; Founding Chair, High-Level Experts and Leaders Panel on Water and Disasters; Chair, Asian Development Bank Water Advisory Group
- **Bruno Carrasco**, Director General concurrently Chief Compliance Officer, Sustainable Development and Climate Change Department, ADB
- **Sungsup Ra**, Chief Sector Officer, Sustainable Development and Climate Change Department, ADB
- **Michael Toh**, Director (Industry and Technology Collaboration), Public Utilities Board Singapore
- **Bart van den Hurk**, Scientific Director, Deltares
- **Roshan Raj Shrestha**, Deputy Director, WASH and Sanitation, Bill & Melinda Gates Foundation
- **Kadra J. Saeed**, Senior IT Specialist, ADB

With special video presentations from UNESCO, K-water, Imagine H2O, European Space Agency

Rapporteur: Tien Le, The Australia – Mekong Partnership for Environmental Resources and Energy Systems

About the Asian Development Bank

ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 67 members—48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.



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