



## UN 2023 Water Conference Side Event

### Pathway Forward: Water-resilient, Sustainable, and Inclusive in Asia and the Pacific

22 March 2023, 13:15-14:30, Trusteeship UN HQ Inside

#### Partner organizations

- Ministry of Land, Infrastructure, Transport, and Tourism (MLIT), Japan
- The Secretariat of the Headquarters for Water Cycle Policy of the Cabinet Secretariat
- Asia-Pacific Water Forum (APWF) c/o Japan Water Forum
- Tajikistan Government
- Indonesian Government (Ministry of Public Works and Housing and Agency for Meteorology Climatology and Geophysics (BMKG))
- National Mission for Clean Ganga, Ministry of Jal Shakti, India
- Economic and Social Commission for Asia and the Pacific (UNESCAP)
- UNESCO Regional Office in Beijing / UNESCO HQ
- UN-HABITAT
- Asian Development Bank
- Executive Committee of the International Fund for Saving the Aral Sea (EC-IFAS)
- Global Water Partnership (GWP) Southeast Asia / GWPO
- International Water Management Institute (IWMI)
- Singapore PUB
- Water Policy Group

#### ● **Background on the event**

Representatives from Asia and the Pacific present how to put water at the core of a quality-oriented society through policy, investment, and partnership decisions to strengthen climate resilience and socio-economic security. Government representatives from Japan, Indonesia, India, and Tajikistan presented their voluntary commitments and actions in addressing water security challenges for Climate, Resilience, and Environment in their countries. A panel of leading experts and practitioners discussed what works, what lessons to learn, and how to replicate and scale successes in addressing the opportunities and challenges.

#### ● **Key Issues discussed**

The panel discussion addressed three key issues in the water sector: governance for financing,

governance for cooperation, and inspiration and elevation of political will. The first issue involves incentivizing and mobilizing financial capital from non-public sources and ensuring investment aligns with the delivery of outcomes. The second issue focuses on the effectiveness of goal-orientated cooperation and engagement in enhancing progress. The third issue concerns promoting cross-sectoral partnerships to address climate change and water-related disasters and mainstream policies and measures to achieve SDG6.

## ● **Key recommendations for action**

- Many current water resources management and water-related disaster mitigation infrastructures were designed without considering climate change, making it necessary to re-evaluate their capacity to anticipate and mitigate the impact of climate change and associated extreme events.
- Prioritize building resilient infrastructure, improving data and information management, and creating more cohesive institutional structures to address the challenges posed by climate change and water-related issues.
- Creating a safe space with manageable risks and implementing governance reforms that enable more efficient business practices is essential to attract private sector investment.
- Sharing success stories and best practices among countries in the Asia Pacific region is crucial for making progress on SDG6. A governance framework that fosters cooperation and structured learning can help identify effective strategies and provide a platform for sharing knowledge. We must also focus on integrated water resource management, considering the complex relationship between water, energy, and food, leveraging digital technologies to promote policy coherence and inclusivity, and creating synergies with climate goals, agriculture, and energy.
- Prioritize integrating water-related issues by establishing a multi-stakeholder platform to facilitate collaboration among various actors at different levels. These platforms can convene dialogues, engage other sectors, and implement interventions on the ground. Engage in multilateral processes to access relevant data, information, and policy support to address water issues at the national level.
- Effective governance is crucial for closing gaps and achieving water-related goals, and technology and infrastructure can help address some of the challenges. However, financing and inclusive partnerships that account for all stakeholders' interests remain challenging. We should also explore demand-side options to reduce water consumption and create a market for sustainable water use that benefits all communities.
- Community-based approaches, multisectoral processes, and inclusive partnerships can help tackle interrelated water issues. We must break down sectoral barriers, promote collaboration between existing networks, and conduct research supporting transformative changes.
- Look for solutions that provide core benefits in water resource management, allowing for concurrent climate adaptation and mitigation. It is particularly relevant in urban contexts, where water-sensitive urban design principles can help manage floods and regulate temperatures while providing habitats for fauna, improving water quality, reducing pollution, and enhancing urban recreation spaces.

## ● **Water Action Agenda**

Japan [Kumamoto Initiative for Water - Promoting both climate change adaptation and mitigation measures and measures to improve people's basic living environment](#) –  
(#SDGAction50308)

## Indonesia

- Integrated Data Framework and Services: High-quality data will enable better decision-making and planning.
- Strengthening Early Warning Services
- The provision of early warning for vulnerable societies will enable improved adaptation actions.
- Last mile capacity building : Addressing the last mile ensures resilience.
- Sustainable Lake Management through Rehabilitation and Community Engagement
- Automated, Continuous, and Online Water Quality Monitoring (ONLIMO) for Effective Water Pollution Control,
- Restoration of Peatland Ecosystem: Peatland Hydrological Restoration
- Achieved safety-managed water and sanitation for households and beyond household

## India

[River Cities Alliance: Partnership for Developing International River Sensitive Cities: National Mission for Clean Ganga, Ministry of Jal Shakti, Government of India #SDG Actio 51469](#)

## Tajikistan

- [Dushanbe Water Process as a follow-up mechanism to the UN 2023 Water Conference #SDGAction51276](#)
- Leadership in promoting glaciers' preservation issues at the global level, including through the platform of Water and Climate Coalition Leaders (WCCL) and the activities within the International Year of Glaciers' Preservation, 2025,
- Hosting an International Conference dedicated to Glaciers' Preservation in Tajikistan in 2025.
- Completion of the Water Sector Reform in the Republic of Tajikistan by 2025.

## APWF:

[Enhance political leaders' awareness and their political will to address water challenges in Asia and the Pacific \(#SDGAction50021\)](#)

## Asian Development Bank

### (i) [Asia Pacific Water Resilience Initiative # SDGAction50325](#)

ADB will mobilize \$10 billion in climate change adaptation financing for the water sector in Asia and the Pacific by 2030. This is in line with ADB's overall ambition of mobilizing \$100 billion in climate finance using its own resources by 2030.

To do this, we are working with key partners including the Government of the Netherlands which has pledged \$20 million in grant financing to the ADB-administered Water Resilience Trust Fund under the Water Financing Partnership Facility, in addition to grant funding from other partners including the Government of Japan, Government of the Republic of Korea, and the Bill and Melinda Gates Foundation.

### (ii) [Accelerating Women's Inclusion in Water Initiative](#)

The Accelerating Women's Inclusion in Water Initiative aims to:

- (i) better measure and track gendered dimensions of women's water insecurity, and women's representation in water leadership and policymaking roles, including the need for enhanced data collection efforts and establishing baselines;
- (ii) share transformative practices, which have good potential for scale-up and replication, to enhance women's leadership and water resilience and security;
- (iii) Form a multi-stakeholder platform, the 'Inclusion Roundtable' to exchange ideas and views on how to accelerate women's inclusion in water.
- (iv) Promote investments in gender equity in the water sector.

**(iii) [Yellow River Ecological Corridor Program](#)**

The Asian Development Bank (ADB) is supporting the People's Republic of China (PRC) Government to strengthen the sustainable management of natural capital in the PRC's second largest river basin. The Yellow River Ecological Corridor (YREC) Program was established in 2020 adopting an innovative ecosystem management approach for water resources management by considering a river basin as an ecological corridor. The YREC program builds on three key principles: (i) protect the basin's fragile ecological environment, (ii) address the severe condition of the water resources (balancing use and preservation), and (iii) promote high-quality green development and sustainable livelihoods. The YREC includes a program of lending, non-lending and policy interventions across four main thematic areas, such as: (i) natural resources management and biodiversity conservation, (ii) climate-resilient smart agriculture, (iii) climate change mitigation and adaptation, and (iv) integrated urban-rural green development.

**UN-HABITAT:**

UN-Habitat has a \$100 million portfolio in the Asia-Pacific region, focusing on building climate resilience and sustainability in the water sector. This includes work such as the Adaptation Fund-funded project in Lao PDR, which builds resilience in small-scale water infrastructure in 189 villages or work ensuring climate-resilient water infrastructure along the economic corridors of the Greater Mekong region. UN-Habitat works with a community-based approach and builds capacity in entities from the regional and national to the local levels.

**UNESCO:**

[UNESCO Intergovernmental Hydrological Programme \(IHP\) Phase IX \(2022-2029\)](#)

**GWP Southeast Asia: [Integrated Water Security Open Program](#) (#SDGAction50408)**

The **Integrated Water Security Open Program (IWSOP)** is an online platform, aims to mobilize action and activity in support of achieving water security goals and the implementation of Sustainable Development Goals (SDGs) through the provision of a space for sharing of knowledge and expertise among different actors that engage in multi-stakeholder water resources management. It enables real-time sharing of information, alignment of efforts, periodic updates of contribution and the establishment of a strategic and integrated approach for action and investment in the water sector leading to socioeconomic and environmental benefits in the region through increased investment in appropriate infrastructure, empowerment of marginalized or vulnerable groups, and more sustainable use of resources.

The platform focuses on action mapping related to water security. Each registered action will be linked to relevant water security category (which are derived from the global indicator related to water security, such as Asian Water Development Outlook and SDGs). This will enable to facilitate learning exchange between actions. Open program aims to also provide

assistance to develop annual multistakeholder contribution report on water security achievement and ultimately to facilitate the alignment and consolidation of water security program in the country.

**IWMI:** [Transformative Futures for Water Security](#)

**Ref: Program**

<p><b>Session Introduction</b> Ms. Yumiko Asayama, APWF Secretariat c/o Chief Manager of Japan Water Forum</p>
<p><b>Opening remarks</b> Mr. Kazufumi Ohnishi, Mayor of Kumamoto City c/o host city of the 4<sup>th</sup> Asia-Pacific Water Summit</p> <p><b>Welcoming Remarks</b> Mr. Sulton Rahimzoda, the Special Envoy of the President of the Republic of Tajikistan to the Water and Climate Coalition Leaders, Chairman of the Executive Committee of the International Fund for Saving the Aral Sea</p>
<p><b>Showcase presentations from several national governments in Asia and the Pacific &amp; ADB</b></p> <ul style="list-style-type: none"><li>• Asian Development Bank: Mr. Woonchong Um, Managing Director General</li><li>• Japanese Government: Mr. Toshikazu TOKIOKA, Director for International Coordination of River Engineering, Water and Disaster Management Bureau, Ministry of Land, Infrastructure, Transport and Tourism of Japan</li><li>• Indonesia Government: Prof. Ir. Dwikorita Karnawati, Head of Indonesian Agency for Meteorology Climatology and Geophysics</li><li>• India Government: Mr. G. Asok Kumar, Director General, National Mission for Clean Ganga, Ministry of Jal Shakti</li></ul> <p><b>Moderator: Ms. Changhua Wu, Vice Chair of the APWF Governing Council</b></p>
<p><b>Panel discussion: What works for improvement, replication, and scale-up</b></p> <p><b>Panelists:</b></p> <ul style="list-style-type: none"><li>• Asian Development Bank: Dr. Thomas Panella, Director - Environment, Natural Resources, and Agriculture Division - East Asia Department</li><li>• ESCAP: Ms. Katinka Weinberger, Chief, Environment and Development Policy</li><li>• UN-HABITAT: Dr. Graham Alabaster, Chief Geneva Office, Office of The Executive Director, UN-Habitat</li><li>• UNESCO: Dr. Sarantuyaa Zandaryaa, Programme Specialist, Division of Water Sciences, Intergovernmental Hydrological Programme (IHP), UNESCO HQ</li><li>• IWMI: Dr. Mark Smith, Director-General</li><li>• Global Water Partnership: Dr. Yumiko Yasuda, Senior Network Officer for Asia</li><li>• Water Policy Group: Anthony Slatyer, Consultant on Water Policy and Governance</li><li>• Singapore: Dr. Winston Tseon Loong CHOW, Associate Professor, Singapore Management University</li></ul> <p><b>Moderator: Changhua Wu, Vice Chair of the APWF Governing Council</b></p>

**Wrap-up and Closing remarks**

Changhua Wu, Vice Chair of the APWF Governing Council

◆ **Speakers' talk summary:**

**Mr. Kazufumi Ohnishi, Mayor of Kumamoto City c/o host city of the 4<sup>th</sup> Asia-Pacific Water Summit**, delivered his opening remarks. He sincerely appreciated the thoughtful efforts to organize the session on the future of water safety in the Asia Pacific region. Recognizing the critical role of water as a vital resource, he underscored the potential threat it poses to human safety, especially in light of the growing environmental issues related to water shortages, pollution, and disasters stemming from global warming. He acknowledged the need for international cooperation to achieve the UN Sustainable Development Goals, emphasizing the significance of the 4th Asia-Pacific Water Summit held in Kumamoto City and the resulting Kumamoto Declaration. Moreover, he stressed the importance of fostering partnerships and collaboration to develop sustainable solutions and actively engaging the younger generation in solving water issues. With optimism and hope, he expressed his confidence in advancing efforts to address water issues through this session.

**Mr. Sulton Rahimzoda, the Special Envoy of the President of the Republic of Tajikistan to the Water and Climate Coalition Leaders, Chairman of the EC-IFAS**, highlights the vulnerability of Central Asia to climate change and its negative impact on the region's water-related natural disasters. The melting of glaciers and ice sheets due to climate change poses a threat of glacial lake outburst floods and water shortages in the mid to long term. In response, on the initiative of the Republic of Tajikistan, on December 14, 2022 the UN General Assembly adopted a resolution declaring 2025 the International Year of Glaciers Preservation. The EC-IFAS and the governments of Central Asia are implementing projects to minimize negative impacts and reduce the risks of water-related disasters, such as the Climate Adaptation Mitigation Program for the Aral Sea and the Central Asia Hydrometeorological Modernization Project. The region's countries adopted Aral Sea Basin Program (ASBP-4) in 2021, which includes projects dedicated to climate resilience and sustainable water resource management. He stressed the need to continue collective action and strengthen infrastructure, capacity, and cooperation to overcome current and future challenges and threats.

**Mr. Woonchong Um, Managing Director General, ADB**, shared ADB's commitment. The ADB has a long-term strategy called the ADB Strategy 2030, which aims to build a prosperous, inclusive, resilient, and sustainable future for Asia and the Pacific region. The ADB has also set out a directional guide for its water sector operations, which aims to address water security challenges and achieve the ADB Strategy 2030 objectives. The ADB aims to mobilize at least \$200 million of grant financing for its water sector operations between 2021 and 2030. It also seeks to ensure that at least 90% of its annual committed financing for water sector operations promotes effective gender mainstreaming up to 2030. The ADB is actively building capacity and sharing knowledge in the water sector through Asia and the Pacific Water Resilience Hub. The ADB hosted its first multi-stakeholder roundtable on accelerating inclusion in water in August 2022, with like-minded stakeholders committed to advancing the inclusion agenda in

the water sector.

**Mr. Toshikazu Tokioka, Director for International Coordination of River Engineering, Water and Disaster Management Bureau, MLIT Japan**, presented follow-up actions for Kumamoto Initiative for Water. Japan announced the Kumamoto Initiative for Water at last year's 4th Asia-Pacific Water Summit and has since been proactively contributing to solving water-related social issues in the Asia-Pacific region. It includes developing quality infrastructure, promoting public-private partnerships, and fostering digitalization and innovation as tools for sustainable development and forming a resilient society and economy. An intergovernmental cooperation structure supports the initiative. Practical actions include satellite observation for real-time precipitation monitoring, predicting future rainfall with ground observation data and computer simulation, flood risk mapping using satellite and ground observation data, and the wise use of existing dams for both flood control and hydropower capacity. Other aspects of the initiative involve developing quality sewage water systems and improving agriculture and rural development infrastructure. Japan has committed to providing approximately 500 billion yen (equivalent to 3.8 billion USD) in financial assistance over the next five years.

**Prof. Ir. Dwikorita Karnawati, Head of Indonesian Agency for Meteorology Climatology and Geophysics**, presented Water Data Governance sharing Indonesia's water action agenda. Firstly, she referred to the World Meteorological Organization's State of the Climate report that climate change is at a tipping point due to rising greenhouse gas concentrations and accumulated heat. The impact on global water resources and food security is evident, with more frequent and severe extreme events like floods and droughts. Indonesia supports the formation of the International Science Policy Platform for Water. It suggests integrating entire water cycle data into global data and information governance to achieve sustainable water resource management and water for shared prosperity. Current water resources management and water-related disaster mitigation infrastructures were designed before the issue of climate change, making it necessary to re-evaluate their capacity to anticipate and mitigate the impact of climate change and associated extreme events. Robust observation data is critical for reliable analysis, prediction, and projection to support the design of water infrastructures.

**Mr. G. Asok Kumar, Director General, National Mission for Clean Ganga, Ministry of Jal Shakti, Government of India**, mentioned his visit to the 4th Asia-Pacific Water Summit, Kumamoto, 2022 where the Kumamoto Declaration was announced. He reiterated the support of the Indian government for three principles of the declaration.

Mr. G. Asok Kumar introduced the Namami Gange Mission, which is a flagship program launched by the Ministry of Jal Shakti, Government of India. The mission focuses on a holistic and integrated approach to the conservation, protection, and rejuvenation of River Ganga, which is spread across the northwestern part of India and home to about 43% of the country's population. The Namami Gange mission, announced in 2014 and launched in 2015, has a budgetary outlay of Rs 20,000 crores. At present, 424 projects have been sanctioned worth Rs 32,898 crores. The mission comprises five strategic areas of intervention, including Nirmal Ganga, Aviral Ganga, Jan Ganga, Gyan Ganga, and Arth Ganga, with six verticals of intervention, including zero budget natural farming, monetization of reuse of sludge and treated wastewater, promotion of livelihood generation opportunities, increased public participation, the revival of cultural heritage and tourism, and institutional building. The introduction of Hybrid Annuity based PPP Model (HAM) and One City One Operator Model has ushered a paradigm shift in the Indian wastewater sector and contributed to water security. In HAM, with 40% of CAPEX is being paid during construction and 60% with interest by a 15-year annuity

with separate payment for operation & maintenance (O&M) bringing a paradigm shift from payment for construction to Performance Linked Payments.

The mission aims to restore the riverine ecosystem, including pollution abatement, solid and liquid waste management, biodiversity, afforestation, wetland conservation, agribusiness, groundwater management, etc. Recently, the decade of 2021-2030 has been declared as the Decade of Ecosystem Restoration by the United Nations General Assembly, positioning the restoration of ecosystems as a major nature-based solution for achieving Sustainable Development Goals and other national priorities. Through the mission, India significantly restored polluted stretches of river, improved river water quality, and improved its biodiversity. Namami Gange has been recognized as one of the top 10 World Restoration Flagships to revive the natural world under the United Nations Decade on Ecosystem Restoration of the Conference on Biodiversity.

#### ◆ Panel discussion question

**Ms. Changhua Wu, vice-chair of the APWF Governing Council, moderated the panel discussion.** The organizations of panelists have played a crucial role in advancing water security, sustainability, and inclusiveness in the Asia Pacific region. We want to listen to your thoughts and discuss what comes next after the Kumamoto Declaration. Our region's leaders and stakeholders are committed to financing, governance, inclusiveness, innovation. We have seen successful showcases of actions on the ground, and now it's time to focus on scaling up our efforts. We would like to hear from each of you about your institutional priorities, what you are driving, and what you need to succeed in achieving our common goals.

#### **Dr. Thomas Panella, Director - Environment, Natural Resources, and Agriculture Division - East Asia Department, ADB** responded:

To attract private sector investment, we must create a safe space with manageable perceived risks, as investors will only put their money where they see a return. However, creating an enabling environment for this change is not straightforward, and we must ensure that the money is being used effectively. It's important to recognize that private sector finance is not just about money, but also governance reforms that the entities receiving the finance need to implement in order to do business more efficiently.

In the context of water supply, it's important to note that it provides both public and private benefits. Still, these benefits are often undervalued due to weak enabling environments and a lack of well-prepared projects. Private finance tends to be short-term, while demand for water infrastructure investments is long-term, and there can be a lack of information and analysis. Therefore, it's crucial to create a regulatory environment that is safe and coherent, with accountability mechanisms in place, and to ensure that there are adequate capital markets, tariff regulations, and standardized methodologies for assessing projects.

At the same time, the entities need to change their business practices, as demonstrated by the examples of the Climate Resilient Smart Water Infrastructure Project in the PRC and the self-sovereign lending project in Vietnam. Both projects required adopting climate resilient activities, demonstrating climate change adaptation planning, innovative technologies, and gender and safeguard requirements. The ADB supported these projects with grant resources and worked with the entities to become creditworthy, including conducting shadow credit ratings.

Overall, the public sector has a significant role in engendering these changes and creating a permanent and sustainable impact through partnerships with the private sector.



**Ms. Katinka Weinberger, Chief, Environment and Development Policy, ESCAP**

responded:

ESCAP recently launched its 2023 SDG6 profile, which reveals that we are falling behind on several SDGs, including SDG6. As a positive trend, the report also highlights that some political leaders and countries in the region are making above-average progress on SDG6, with many exciting innovations happening. To share these success stories and exchange best practices, governance for cooperation is crucial, because it allows us to take a structured approach to learn from what is working well within the region and provide a platform to learn from those best experiences.

In terms of partnerships, the Asia Pacific Water Forum, and the Asia Pacific Forum on Sustainable Development, coordinated by the ESCAP, are examples of successful platforms that bring together diverse stakeholders to promote cooperation and share the best practices on SDGs.

In terms of going forward, these platforms, as well as the recent UN-Water regional water discussion group, have emphasized the need for the following:

- The need for a stronger focus on integrated water resource management, considering the complex relationship between water, energy, and food, and the importance of creating synergies with climate goals, agriculture, and energy
- Digital technologies, such as sensors, data analytics, and artificial intelligence, can also play a critical role in improving the efficiency and effectiveness of water and sanitation management. However, we also need new ways of using digital technologies to enhance governance for cooperation and integration, ensuring equitable, sustainable, and clean water for all. Having granular data available can enhance water security and access, improve transparency and accountability, and help with financing mechanisms.
- Finally, we need a stronger focus on policy coherence, synergies, and legal frameworks for effective governance, capacity building, and inclusive governance approaches that involve marginalized communities and civil society organizations. Training institutions working with such communities to provide participatory and equitable approaches is crucial to ensure that water and sanitation services are delivered equitably.

**Dr. Graham Alabaster, Chief Geneva Office, Office of The Executive Director, UN-HABITAT,** responded:

By 2050, it is projected that 70% of the world's population will live in urban agglomerations, many of which have yet to be built. This presents a significant opportunity for urban planning to be mainstreamed in order to build resilience and ensure access to basic services, such as water. It is crucial to strike a balance between physical infrastructure and the governance of that infrastructure to build resilience in crises, such as floods or outbreaks. Community-based approaches and engagement are particularly important for smaller urban centers where local authorities may be constrained. Diversification in funding, particularly towards non-public financing and public-private partnerships, is needed. Collaboration and inter-regional exchange of good practices should also be considered to learn from successful systems around the world. While there are cost-effective ways to gather data, there is a need for capacity building to interpret the data and make informed decisions effectively. Multisectoral partnerships and community engagement are key to addressing competing uses for water and promoting resilience. At the local level, municipal and civil administrations must mobilize the capacity that exists amongst communities to optimize community engagement and promote resilience.

Ms. Changhua Wu, the moderator, ask the following questions. We can see that numerous city networks, such as C40 and ECLEI, are operating globally, and the agenda they pursue has been established for over a decade or even a couple of decades. However, we still see gaps in terms of linkage and collaboration. At UN-Habitat, we work with all stakeholders, not just government agencies, and we believe that certain aspects of the landscape require more attention. Specifically, a few points need to be adequately addressed. What is missing regarding effective collaboration and establishing strategies to address these gaps?

Dr. Alabaster responded that the issue with most city-level networks is that they tend to focus on specific sectors. For instance, C40 mainly focuses on climate, while other networks are concerned with health or other areas. However, the reality is that all these issues are interconnected and require a collaborative effort to address them. Therefore, breaking down these sectoral barriers and promoting cross-fertilization between existing networks is crucial. By doing so, we can develop more efficient and practical approaches and design new systems to tackle multiple issues simultaneously.

**Dr. Sarantuyaa Zandaryaa, Programme Specialist, Division of Water Sciences, Intergovernmental Hydrological Programme (IHP), UNESCO HQ,** responded:

The region and its countries face various water-related challenges, including water-related disasters that previous speakers have highlighted. However, I would like to draw attention to two additional issues. Firstly, water pollution has a devastating impact on both freshwater and marine ecosystems in Asia, with some of the most polluted rivers in the world located in this region. Pollution is considered one of the triple environmental crises facing humanity today, alongside climate change and biodiversity loss. These interconnected challenges make it crucial to reduce water pollution in Asia, especially plastic and microplastic pollution. Rivers are the primary transport pathways for pollutants, including microplastics, to coastal waters and marine systems. Therefore, it is vital to adopt source-to-sea and transdisciplinary approaches to address pollution across the land, freshwater, coastal, and marine ecosystems. Such approaches offer opportunities for partnerships and collaborations among freshwater and marine science communities and practitioners.

Secondly, ensuring water supplies for human needs to support food production for the region's growing population while maintaining ecosystem integrity is a significant challenge. The Asia-Pacific region is home to more than half of the world's population of 8 billion, and the number of mega-cities in the region is expected to increase significantly in the coming decades. To ensure water security in human settlements, UNESCO is implementing a multi-year, multi-country project funded by the Korean government. The project focuses on two regions (Africa and Asia) and aims to support water security in ten Asian countries, including ongoing projects in Bhutan and India. The projects support water quality monitoring to ensure water security in Bhutan and the establishment of an integrated water database at the municipal level in India, which is critical for data-driven integrated urban water management. The Ninth phase of IHP of UNESCO, dedicated to the overall theme of "Science for a water-secure world in a changing environment", provides an opportunity for collaboration between countries within and across different regions.

Finally, it is essential to emphasize the needs of small island developing countries in this context.

**Dr. Mark Smith, Director-General of IWMI,** responded:

The International Water Management Institute (IWMI) is a research organization headquartered in Sri Lanka, with additional offices throughout Asia and Africa. We pride ourselves on being a "research for development" organization, meaning that we conduct

research with a focus on achieving impactful results through partnerships. At the core of our work is the challenge of conducting good research, fostering innovation, and scaling that innovation for the greatest impact. In recent years, there has been an increasing dialogue within the research community about whether we are focused on the right priorities in relation to water security and whether we are delivering against stakeholders' future priorities as challenges to water security continue to unfold.

Our research is driven by stakeholder priorities and is intended to support transformative changes in water security. To achieve this goal, we need youth champions, actors from government, business, science communities, and inclusive development sectors to align around these missions and bring their respective tools and expertise to the table. We believe that if we can foster convergence among these groups, including the research and innovation community, we can deliver results that address stakeholder priorities better.

Looking ahead, research must be positioned at the center of systems change, particularly about the significant challenges facing water and climate. To achieve this, we need to conduct research differently and better adapt our approach to supporting transformative changes. We need high-ambition missions to advance science-based actions for water security. We are committed to driving this change through our [Transformative Futures for Water Security](#) (TFWS) initiative and believe that continued support and recognition of the critical role of research will be essential to achieving success.

**Dr. Yumiko Yasuda, Senior Network Officer for Asia, Global Water Partnership Organization**, discussed the need for cooperation among various actors at different levels to address water and related problems. To date, many organizations have worked solely on the water sector, and we need to prioritize integration to address water-related issues. She suggests using a multi-stakeholder platform, such as the Global Water Partnership (GWP), which has been operational for the past 25 years and has partners from various sectors voluntarily engaged in the partnership. We can bring partners together, convene dialogues, and provide opportunities for sectoral engagement. She invites partners to use the GWP platform to implement interventions on the ground and engage with different sectors. The GWP also initiates an Integrated Water Security Open Program to provide a platform for partners to register their activities on the ground and make the data available to others. It will offer a one-stop shop to understand what each organization is doing and what is happening in the fields. She emphasized the importance of collaboration with other partners to make this program work.

**Anthony Slatyer, Consultant on Water Policy and Governance**, discussed what works for improving, replicating, and scaling up efforts. He shared the [results of a survey](#) by the Water Policy Group of the opinions of Ministers and other national water leaders of 92 countries. They say the highest risks their countries face are climate change, and related issues of droughts and floods, as well as increasing demand for water. Their greatest challenges are with infrastructure, inadequate data and information and the fragmentation of institutions within the government. They think multilateral processes can best help them by providing data and information on water relevant at the national level, as well as policy support. Mr Slatyer also explained Water Policy Group's new project, [Global Scaffolding for Water Policy](#). This is to develop fundamental principles around the most challenging policy issues, such as water pricing and allocation, to make it easier for ministers to make difficult political decisions.

**Singapore: Dr. Winston Tseon Loong CHOW, Associate Professor, Singapore Management University** responded:

I have two key takeaways from the IPCC climate assessments related to improving replication and scaling up of action. The first is that there are gaps in successful implementation for numerous water-related SDGs, including SDG6 and 11, which also impact climate adaptation, mitigation, and resilience. Effective governance in water resource management is critical to closing these gaps and achieving these goals. Fortunately, technology and infrastructure are available to address some of these challenges, and knowledge transfer is happening rapidly. However, financing these measures remains a challenge, and inclusive partnerships that account for the interests of all stakeholders are needed to move forward. It's essential not to overlook demand-side options to reduce water demand and build a market for sustainable water consumption that includes vulnerable communities.

The second point is to look for solutions that provide core benefits in water resource management that allow for both climate adaptation and mitigation concurrently. This is particularly relevant in urban contexts, where water-sensitive urban design principles can help manage floods and regulate temperatures while providing habitats for fauna, improving water quality, reducing pollution, and enhancing urban recreation spaces. The IPCC's synthesis report provides excellent guidance on achieving climate resilience and water resource management.

