



10<sup>th</sup>  
World  
Water  
Forum  
Since 1969



# 10<sup>TH</sup> WORLD WATER FORUM

## WATER FOR SHARED PROSPERITY

18-25 May 2024 | Bali, Indonesia

**SYNTHESIS REPORT**



10<sup>th</sup>  
World  
Water  
Forum  
Bali 2024



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# SYNTHESIS REPORT

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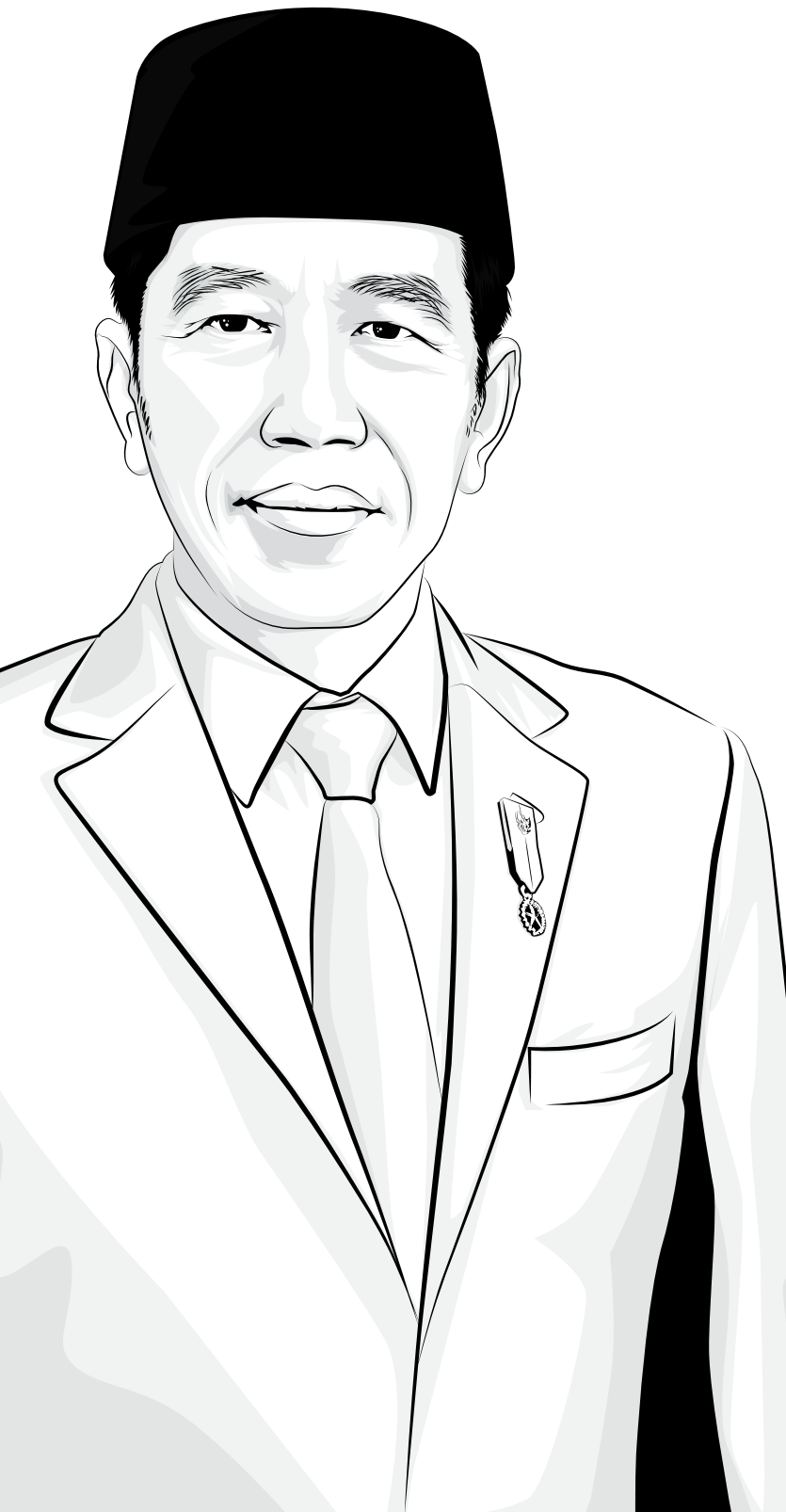
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# GREETINGS



## JOKO WIDODO

*President of the Republic of Indonesia*

Water resource sustainability has become a pressing issue worldwide. The demand for water has risen sharply with population and industrial growth, while ensuring its quality and sustainable availability has become increasingly challenging due to environmental degradation and climate change.

Indonesia was honored to host the 10<sup>th</sup> World Water Forum in Bali in 2024, in collaboration with the World Water Council. This forum brought together participants from various sectors—politics, multilateral institutions, academia, civil society, and the private sector—to seek solutions and innovations in the water sector.

We hold a significant responsibility to conserve water resources for future generations. Through the 10<sup>th</sup> World Water Forum, we revitalized tangible action and reinforced our joint commitment to developing sustainable water resource management. It is my hope the spirit of unity fostered by the forum will lead to enduring collaboration, ensuring access to clean water and sanitation for all.

## LOÏC FAUCHON

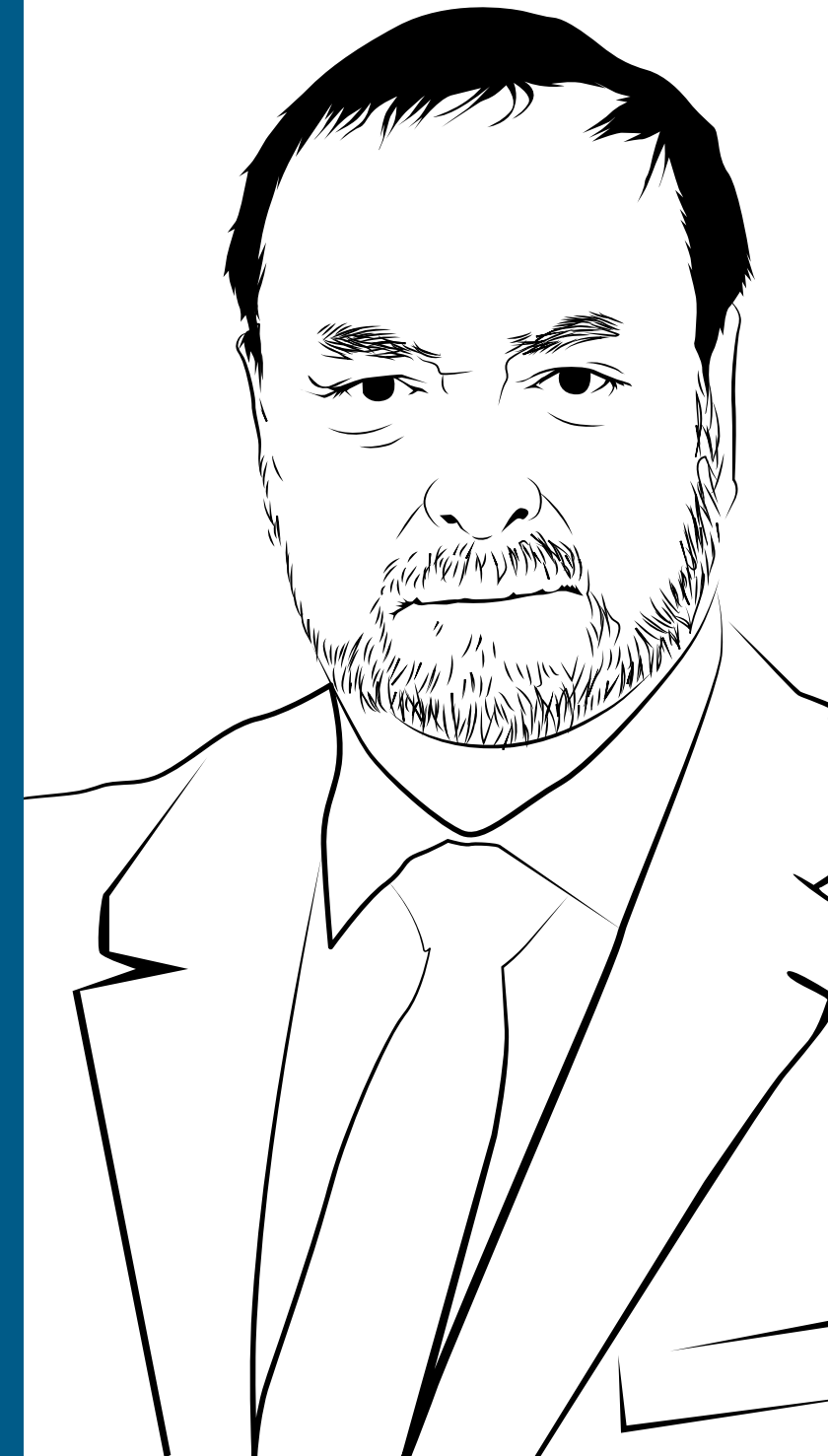
*President of the World Water Council*

“Water for Shared Prosperity” the theme of the 10<sup>th</sup> World Water Forum – captures the vital truth that true prosperity, peace, and harmony are only possible through sharing. But to share, we must first protect, safeguard, and honor our water resources.

This forum has been a milestone achievement, driven by Indonesia’s remarkable efforts to bring global attention to water as the essence of life and a cornerstone of our planet’s well-being. Through the common vision of Indonesia and the World Water Council, the world gathered in Bali has reaffirmed that water is not merely a resource but the foundation of sustainable development. The forum united nations, experts, and stakeholders from diverse backgrounds who have been fostering dialogue and inspiring cooperative action.

Our message is clear: “Spare to Share.” By conserving water today, we can ensure its abundance, quality, and accessibility for all tomorrow. Across every culture and belief system, one truth remains constant: “Water is Life.” To save water is to secure a future of shared prosperity.

The World Water Forum has set a new standard for international collaboration, urging us to change the course of water history. The tireless work of the World Water Council and Indonesia has not only highlighted the critical importance of water but has also underscored the urgency of global cooperation. Now, as we look ahead, it is our collective duty to transform this vision into reality, ensuring that water remains a source of unity, peace and prosperity for humanity, and shared well-being for all.





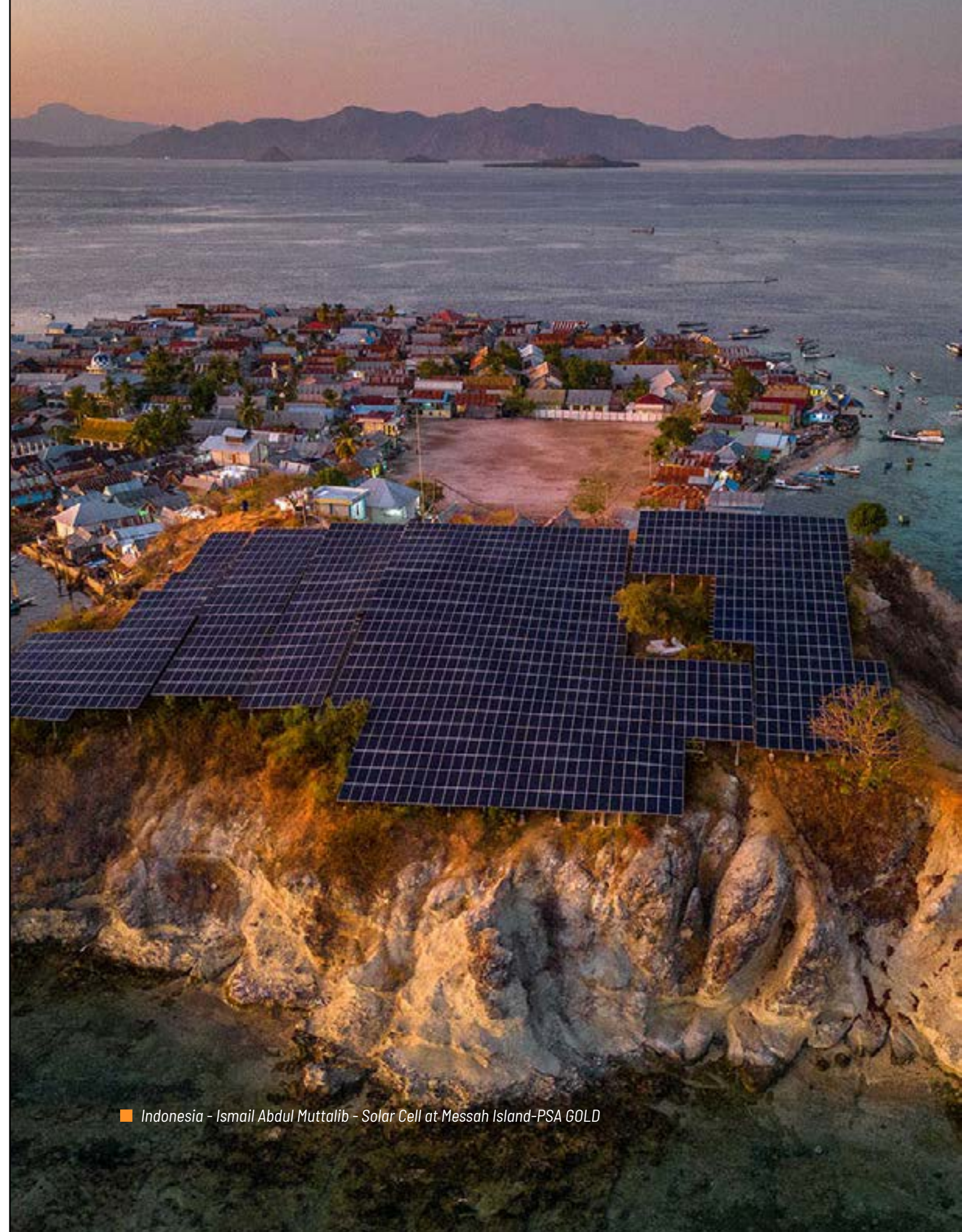
## LUHUT BINSAR PANDJAITAN

*Coordinating Minister of Maritime and Investment Affairs, Republic of Indonesia*

Water is essential to life. In recent years, the water table has been significantly impacted by factors such as rapid population growth, industrial and urban development, overconsumption, climate change, global warming, and the shrinking of Arctic and Antarctic glaciers. Consequently, over 650 million people across nearly 40 countries now face water scarcity.

The 10th World Water Forum, co-hosted by the Government of Indonesia and the World Water Council, provided a unique platform for water communities and key decision-makers to collaborate and make long-term progress on global water challenges.

On behalf of the National Organizing Committee of Indonesia, I would like to extend heartfelt appreciation to all stakeholders who participated in the 10th World Water Forum for their commitment and collaboration in addressing water issues. Together, let us continue our mission to elevate water as a top priority on the global agenda to ensure sustainable access for all.



Indonesia - Ismail Abdul Muttalib - Solar Cell at Messah Island-PSA GOLD

01

# INTRODUCTION

# 10<sup>th</sup> World Water Forum Highlights

The 10<sup>th</sup> World Water Forum, held in Bali, Indonesia from May 18-25, 2024, provided a unique platform for the water community and key decision-makers to collaborate and advance long-term solutions to global water challenges. The forum brought together stakeholders participating in the Political, Thematic, and Regional Processes to present results from each working group and to plan for the forum week and beyond. This forum updated exchanges on political, thematic, and regional issues and facilitated in-depth discussions with process working groups on final deliverables for forum planning, including follow-up actions beyond the forum.

## The 10<sup>th</sup> World Water Forum in numbers:

-  **20,000+** Registered participants from around the world
-  **75,000+** Visitors from **160** countries
-  **5** heads of state, **2** deputy prime ministers, **3** special envoys, and **135** minister-level delegates, including **51** ministers and **28** representatives of international organizations
-  **216** parliamentary representatives from **44** countries
-  **300+** local and regional government and basin representatives
-  **260+** sessions and over 100 activities in the Expo and Fair Booths
-  **254** Expo and Fair Booths, including **19** Country Pavilions
-  Over **7,000** youth participants
-  **800** journalists from **120+** media outlets, producing **15,000** news during the month
-  **113** water and sanitation projects compiled into a compendium valued at **USD 9.4 billion**

A wide-angle photograph of a massive construction project in a mountainous valley. In the foreground, a river flows through a concrete dam structure. Several large orange tower cranes are positioned around the site, with one particularly tall crane on the right. The background shows steep, rocky mountains under a clear blue sky. The overall scene is one of intense industrial activity in a natural setting.

02

A MULTI-LEVEL  
POLITICAL APPROACH  
TO GLOBAL WATER  
CHALLENGES

China-Xiaoping Chen-Bridge construction-FIAP HM.

## A MULTI-LEVEL POLITICAL APPROACH TO GLOBAL WATER CHALLENGES

### Leaders' Meeting as The Highest Commitment to Water

The 10th World Water Forum brought the highest commitment to solving water-related issues by organizing the first ever High-level Meeting. President Joko Widodo co-chaired with President of the World Water Council, Loic Fauchon the 10th World Water Forum High-level Meeting at the Bali International Convention Center (BICC) in Nusa Dua, Bali on May 20, 2024. Five head of state and heads of government and two deputy ministers attended the meeting to affirm commitments and agreed on concrete actions for inclusive and sustainable water management:

1. President of the Republic of Indonesia, H.E. Joko Widodo
2. Prime Minister of Tajikistan, H.E. Qohir Rasulzoda
3. President of Sri Lanka, H.E. Ranil Wickremesinghe
4. President of Fiji, H.E. Ratu Wiliame Maivalili Katonivere
5. Prime Minister of Morocco, H.E. Aziz Akhannouch
6. Deputy Prime Minister of Malaysia, H.E. Haji Fadillah Bin Haji Yusof
7. Deputy Prime Minister of Papua New Guinea, H.E. John Rosso

Also in attendance were President of the United Nations (UN) General Assembly Dennis Francis; former President of Hungary and Hungary's Special Envoy Janos Ader; French Special Envoy Barbara Pompili; Dutch Special Envoy Meike van Ginneken; and Speaker of the House of Representatives of Indonesia Puan Maharani.

In his remarks, President Joko Widodo encouraged global collaboration in managing water resources. He described water as "the next oil," highlighting it as critical factor in economic sustainability and global ecology.



Leaders' Meeting led by H.E. Joko Widodo



*Water is described as 'the next oil'. It has become an important factor in maintaining economic sustainability and global ecology.*

*H.E. Joko Widodo,  
President of the Republic of Indonesia*



The President of the World Water Council emphasized the importance of water and energy in rural areas, the financing of water, and a horizontal approach through the “five-finger alliance” of water, energy, health, education, and food. Leaders acknowledged that water is the source of life and a basic human right integral to dignity and prosperity. Governments are highly responsible for respecting, protecting, and fulfilling individuals’ water rights, including those of future generations. Moreover, water must be accessible to all, not only in the urban areas but also in rural communities, where half of humanity lives.

Water is under threat. Competition, overconsumption, and pollution are draining and contaminating the world’s lifeblood. Climate change is pushing water temperatures to new extremes, causing glaciers to melt, seas to rise, and river flows to diminish. The consequences are droughts, crop failures, malnutrition, disease, and disasters. Therefore, governments must engage in collaborative efforts and adopt effective water management practices to tackle water security challenges.

Leaders highlighted that water is critical to achieving the Sustainable Development Goals (SDGs). The world is not on track to meet SDG 6 by 2030 or other water-related development goals. This shortfall calls for enhanced cooperation among governments and active involvement from various stakeholders at all levels. Through collective action and shared responsibility, a water action agenda can be implemented to address these challenges.

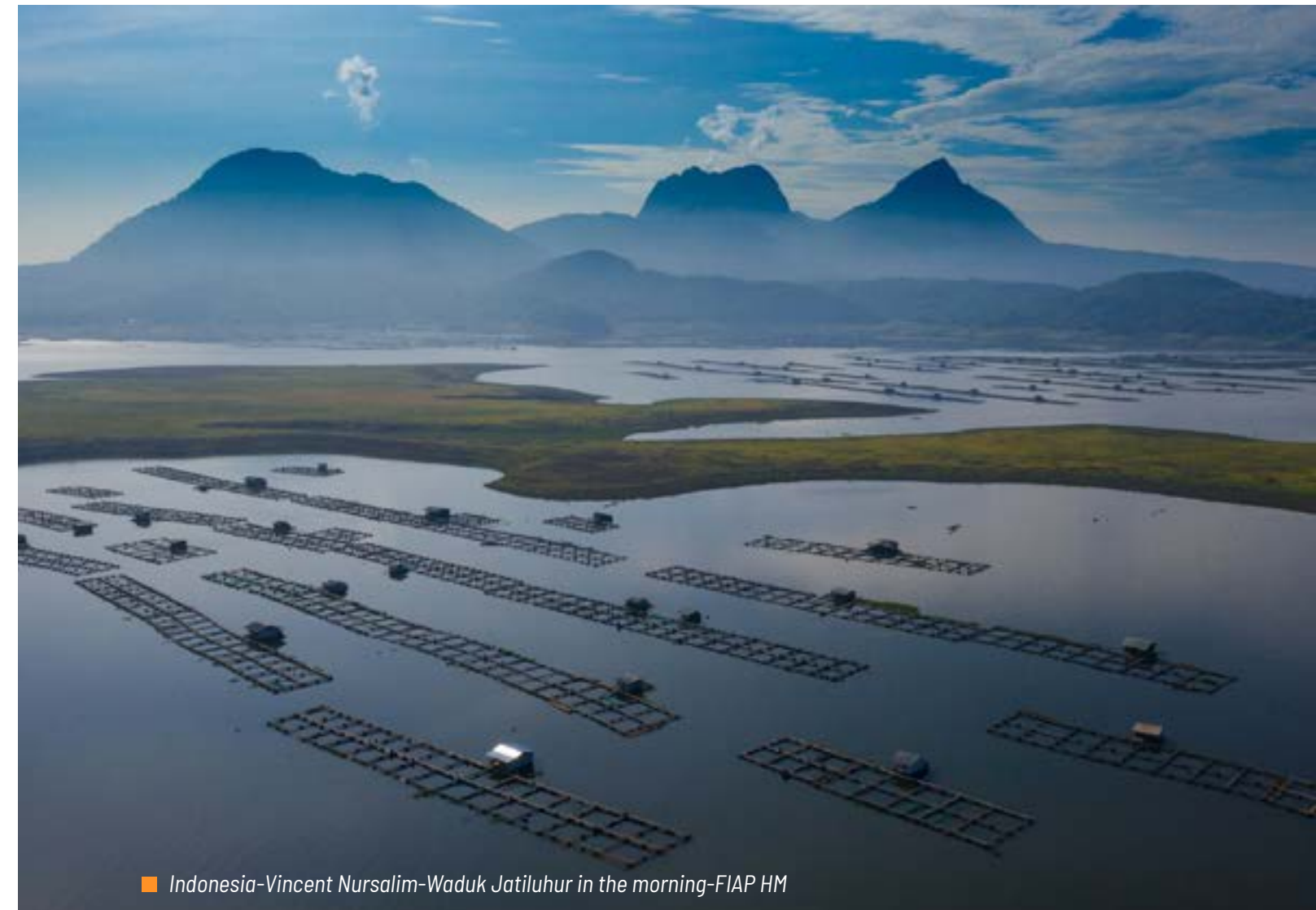
We are now in the era of water action. Just over a year ago, at the 2023 UN Water Conference, the world made over 800 commitments to address water challenges. Through the 10th World Water Forum, leaders reviewed actions and outcomes, continuing to advocate for further progress. Moving forward, world leaders will work collaboratively to address shared water-related challenges and fulfill the Water Action Agenda.

Five primary goals were discussed and agreed upon during the High-level Meeting of the 10th World Water Forum:

1. Water as a fundamental right: Political commitment must be continuously reinforced in global forums.
2. Water resilience: Resilient water management practices must be established to address challenges such as climate change.
3. Water management funding: This forum encourages global cooperation in funding to solve water challenges and close the funding gap.
4. Water for accelerating the SDGs: Enhanced water cooperation is necessary to support economic growth, development, and political stability.

5. Synergy of the water agenda with global efforts: The World Water Forum will align with the Global Water Agenda and other water-related initiatives.

In addition, President Fauchon called for action on seven main commitments: to promote water security policies worldwide at all levels of responsibility; to advocate for behavioral change toward water conservation; to scale up nature-based solutions; to strengthen the right to water in national legislation; to establish a “Finance for Water” coalition; to prioritize water in climate funds allocations; and to encourage true hydro-diplomacy through governance based on multilateral cooperation.



Indonesia-Vincent Nursalim-Waduk Jatiluhur in the morning-FIAP HM



## MINISTERIAL MEETING REPORTS

Indonesia's and the World Water Council's  
Leadership in Global Water Management

Bridging Divides, One Drop at a Time: Indonesia's and the World Water Council's Water Diplomacy

### A Ministerial Declaration Leading to Concrete Action

#### MAIN ISSUES AND HIGHLIGHTS

The ever-present disparity in global water resources presents a significant challenge. While some regions endure chronic scarcity, others face devastating inundations. This precarious situation is compounded by the unpredictability of climate change, escalating international tensions, growing populations, and uncontrolled urban sprawl. Recognizing this global crisis, Indonesia and the World Water Council took a leading role at the 10th World Water Forum, fostering inter-stakeholder cooperation and advocating for innovative solutions.

During the Ministerial Meeting of the 10th World Water Forum, held on May 20-21, 2024, Indonesia and the World Water Council successfully adopted the Ministerial Declaration on May

21, 2024. This pivotal document, developed in consultation with all UNESCO member states and various international organizations, including youth and expert representatives, serves as the official outcome of the forum. The declaration underscores access to safe and clean water and sanitation as fundamental human rights—a crucial message requiring strong global commitment. Indonesian representatives, including the Minister of Home Affairs, the Minister of Environment and Forestry, and the Minister of Public Works and Housing, who served as co-chairs of the Ministerial Meeting, as well as the World Water Council representative, Benedito Braga, highlighted the need for strong political will to elevate these issues to a global priority.



Co-chair for the 1<sup>st</sup> session of the Ministerial Meeting

Tito Karnavian  
Minister of Home Affairs,  
Indonesia



Co-chair for the 2<sup>nd</sup> session of the Ministerial Meeting

Siti Nurbaya Bakar  
Minister of Environment and  
Forestry, Indonesia



Co-chair for the 3<sup>rd</sup> session of the Ministerial Meeting

Basuki Hadimuljono  
Minister of Public Works and  
Housing, Indonesia



World Water Council Co-Chair of the Ministerial Meeting

Benedito Braga  
Honorary President,  
World Water Council

## BUILDING THE FUTURE: COLLABORATION AND ACTION



#### 1<sup>st</sup> Preparatory Meetings:

- Zero Draft Ministerial Declaration consultation
- Attended by 80 countries and 14 international

#### 2<sup>nd</sup> Preparatory Meetings:

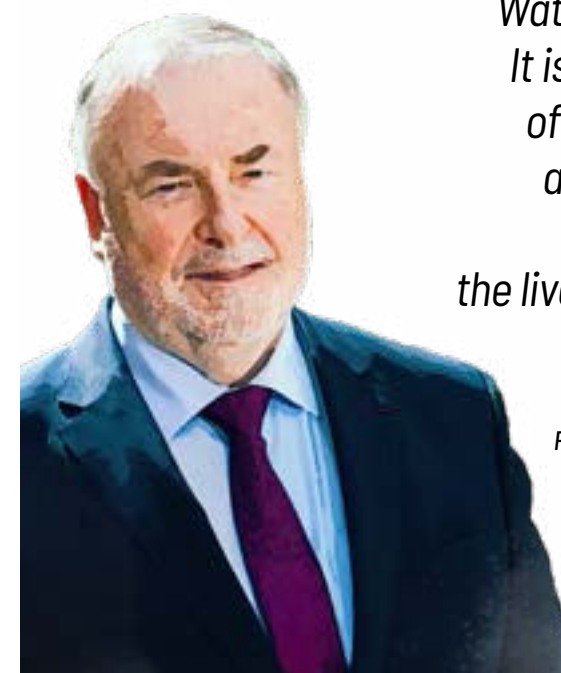
- First Draft of Ministerial Declaration consultation
- Attended by 56 countries and 8 international organizations

#### Ministerial Meetings

- Adoption of Ministerial Declaration document
- Attended by 110 countries and 12 international organizations



*Water is politics. It is at the heart of governance, and decisions that shape the lives of billions.*



Loïc Fauchon,  
President of the World  
Water Council

#### Ministerial Meetings Process

During the preparatory stages for the Ministerial Declaration, the Indonesian government and the World Water Council, in collaboration with UNESCO, invited all UNESCO member states and thirty international and non-governmental organizations to participate in an information session and two preparatory meetings at UNESCO Headquarters in Paris. These meetings served as a pivotal reference point, guiding water stakeholders as they charted a course toward adopting the declaration and advancing the global water agenda. The declaration addressed the importance of respecting the fundamental rights to adequate water and sanitation, strengthening global partnerships, integrating water resources management with the UN SDGs, and enhancing political commitment to promote sustainable water and sanitation agendas for all.



Indonesia-PIMPIN NAGAWAN-Water For Life-FIAP GOLD

## Opening Remarks

The 10th World Water Forum convened against the backdrop of a deepening global water crisis, underscoring the critical need for resolute and collaborative leadership. Acknowledging the inherently political nature of water resources, the forum sought to catalyze comprehensive and mutually beneficial cooperation. In his opening remarks at the Ministerial Meetings, Indonesian Co-chair Tito Karnavian articulated three key

priorities: ensuring solidarity and inclusivity across countries and stakeholders; fostering synergy with relevant water processes; and encouraging governments to translate discussions into tangible actions to address the water crisis effectively.

World Water Council's President, Loïc Fauchon, for his part, called for a global dialogue to "save water for shared prosperity" in the face of climate and

demographic crises. He stressed the need for policies on water sobriety, water security and wastewater treatment, while calling on leaders to raise political awareness as "WATER IS POLITICS" and "NOW DIPLOMATICS" and step up international cooperation.

He proposed to create together a movement and a shelter, the "Save and Share Water Shelter."

Substantial preparatory work undertaken by the Indonesian government and the World Water Council informed the forum's deliberations. The concept of "Water for Shared Prosperity" was introduced, emphasizing the need for a multi-faceted approach that considers demographic, organizational, and other factors to enhance water availability. Ministers were identified as key actors in fostering political will.

The imperative of innovation and robust governance for water security was highlighted.

## The Ministerial Meeting on "Water for Shared Prosperity"

The Ministerial Meeting convened at a critical juncture in global water management. Representatives from 110 nations and key international organizations gathered to address the mounting challenges posed by water scarcity and climate change. The first day established a foundation for collaborative action, focusing on the importance of integrated water resource management and the vital link between water and human well-being. The Indonesian Co-chair concluded with a statement that all stakeholders and governments must share a common commitment to achieving water resilience in the face of future climate change, emphasizing three points:

1. Intergovernmental collaboration toward mainstreaming integrated water resources management

Balancing increased water production with reduced consumption emerged as a central challenge to water security. The promotion of innovative solutions, such as desalination and water reuse exemplified by practices in Singapore and Indonesia, was emphasized, including the integration of renewable energy.

Recognizing the interconnectedness of water, health, food, and ecosystems, the forum underscored the importance of achieving a harmonious balance between human needs and environmental preservation. A call was made for measured human-nature interactions and respect for ecosystems. The overarching message was clear: water is a defining issue of this century, necessitating strong political will from all nations. The forum marked a significant step in knowledge sharing and exchange of experiences on water management.

2. The profound connection between access to drinking water and its quality—clean, safe, and sufficient for health
3. Empowering inclusive and meaningful participation of all stakeholders in supporting the water agenda, including those affected by water challenges, through innovation and collaboration

Building on this momentum, the second day expanded participation and culminated in the adoption of the Ministerial Declaration on Water for Shared Prosperity. This comprehensive document outlined a shared vision for water security, emphasizing the human right to water and sanitation, the need for robust international cooperation, and the strategic importance of integrated water resource management. The declaration also acknowledged the potential of water as a driver of economic growth and sustainable development.

Indonesia proposed a paradigm shift, viewing water not as a problem but as a catalyst for global cooperation. This approach fosters the achievement of the SDGs by promoting political commitment and driving concrete innovation. The Ministerial Declaration outlines four key areas in which Indonesia proposed collaborative action:

1. World Lake Day Initiative: Promote the urgent need for global lake conservation efforts
2. Integrated Water Resources Management on Small Islands States: Recognize the importance of climate change mitigation and adaptation for small island states
3. Center of Excellence for Water and Climate Resilience: Establish a regional hub for knowledge, initiatives, and activities in the Asia-Pacific region to address pressing water and sanitation issues
4. Compendium of Concrete Deliverables: Showcase practical water management and sanitation projects through multi-stakeholder collaboration

## Ministerial Meetings Result and Conclusions

The Ministerial Meeting concluded with a resolute commitment to transform the declaration's principles into tangible actions. This marked a pivotal moment in global water governance, signaling a unified determination to address pressing water challenges.

Co-chaired by Indonesia and the World Water Council, the Ministerial Declaration established a comprehensive framework for water security. It enshrined the human right to safe water and sanitation, emphasizing the necessity of inclusive cooperation among nations. The declaration also prioritized strengthening Integrated Water Resources Management (IWRM) policies and practices, recognizing water's indispensable role in driving economic growth and sustainable development. The Republic of Congo's perspective highlighted the significance of water in the blue economy, emphasizing the potential to uplift vulnerable communities through investments in marine and aquatic resources.

Under the leadership of Indonesia and the World Water Council, the declaration produced

concrete outcomes, with 113 water and sanitation projects valued at USD 9.4 billion identified for implementation both domestically and internationally. This unprecedented level of commitment was underscored by the participation of UNESCO member states and numerous organizations in showcasing innovative water-related projects. Together, these initiatives represent a substantial step towards advancing global water and sanitation infrastructure.

The upcoming World Water Forum in Saudi Arabia will serve as a critical juncture to evaluate progress in implementing the declaration's provisions and to chart a course for future actions. It will provide a platform to assess the impact of the 113 projects and to identify emerging challenges and opportunities in the global water landscape.

By fostering collaboration, promoting innovation, and mobilizing resources, the Ministerial Declaration has laid a solid foundation for a water-secure future.

### MINISTERIAL DECLARATION ON "WATER FOR SHARED PROSPERITY" THE 10<sup>th</sup> WORLD WATER FORUM

BALI, INDONESIA, 20-21 MAY 2024

We, the Ministers and Heads of Delegations assembled in Bali, Indonesia, on 20-21 May 2024, on the occasion of the Ministerial Meeting of the 10<sup>th</sup> World Water Forum "Water for Shared Prosperity",

PP1 Acknowledging the outcomes of relevant United Nations processes representing major milestones for addressing global sustainable development and water-related challenges, such as the Rio Declaration; the outcome of the United Nations Conference on Sustainable Development, "The Future We Want"; the 2030 Agenda for Sustainable Development and its Goals (SDGs); the United Nations Framework Convention on Climate Change<sup>1</sup> and the Paris Agreement<sup>2</sup>; the Sendai Framework for Disaster Risk Reduction 2015–2030; and the United Nations Convention on Biological Diversity and its Kunming–Montreal Global Biodiversity Framework.

PP2 Recalling the United Nations General Assembly Resolutions 64/292, 71/222, 77/334, 78/130, and 78/206 adopted in New York, and the United Nations Environment Assembly Resolutions EA.5/4 and EA.6/13; as well as recognizing the 2023 United Nations Conference on the Midterm Comprehensive Review of the Implementation of the Objectives of the International Decade for Action "Water for Sustainable Development" 2018-2028, the UN World Water Development Report 2024, the upcoming 2026 United Nations Water Conference to Accelerate the Implementation of Sustainable Development Goal 6 and the upcoming 2028 United Nations Conference on the Final Comprehensive Review of the Implementation of the Objectives of the International Decade for Action, "Water for Sustainable Development", 2018–2028.

PP3 Reaffirms that the human rights to safe drinking water and sanitation, as components of the right to an adequate standard of living, are essential for the full enjoyment of the right to life and all human rights.

PP4 Mindful that water is essential for vital human needs and is needed in all aspects of life and of the importance of ensuring availability of safe drinking water and sanitation for all.

PP5 Recognizing the importance of tackling water-related challenges, including through an integrated approach that addresses climate change, biodiversity loss and pollution, and the need to conserve, protect and sustainably manage the ecosystems.

PP6 Aware that the impacts of climate change and increased demands on water safety and accessibility, including due to population growth, requires better management and cooperation, sustainable finance as well as generation of and access to water-related knowledge and understanding.

PP7 Concerned that the world is off-track to ensure by 2030 the achievement of SDG 6, which poses significant risks to human well-being and the three dimensions of sustainable development, namely environmental, economic and social.

<sup>1</sup> United Nations, Treaty Series, vol. 1771, No. 30822.

<sup>2</sup> Adopted under the UNFCCC in FCCC/CP/2015/10/Add.1, decision 1/CP.21.

PP8 *Emphasizing* the importance of inclusive coordination and collaboration among governments and water-related stakeholders at all levels, in accordance with applicable international law, including international instruments countries are Parties to.

PP9 *Deeply concerned* about the lack of access to adequate water and sanitation services in emergencies, including in times of natural and man-made disaster and in situations of armed conflicts and emphasize the importance of access to basic drinking water and sanitation services in affected countries.

PP10 *Welcoming* efforts and initiatives to promote adaptive and socially inclusive and meaningful participation of all relevant stakeholders, including women, children, older persons, persons with disabilities, indigenous peoples and local communities, and youth, and those affected by water challenges.

PP11 *Noting* that innovative and sustainable financing is one of the main challenges in ensuring the availability and sustainable management of water and sanitation for all.

PP12 *Reaffirming* that the works of World Water Forum, since its first convening in Marrakesh in 1997, have contributed to the international dialogue and actions on water and emphasizing the role of the World Water Forum to contribute to relevant global water-related agendas, including in the United Nations frameworks.

PP13 *Realizing* the importance of political leadership in fostering international cooperation to advance water and sanitation agenda.

We present an urgent call and declare our political will to translate our commitments into policies, plans and actions by:

1. Conserving, protecting and sustainably using water resources, including sustainable groundwater, as crucial elements in human activities and ecosystems, including through the development of efficient and integrated water resources management.
2. Incorporating water issues into action plans, particularly related to increasing the financing of adaptation to climate change, prevention of the pollution of air, land, water, loss of biodiversity and the decline of services provided by the ecosystems.
3. Implementing measures and actions to reduce pressure on water availability, including by strengthening access to clean water and sanitation for all, among others through the sustainable management of water demand and supply, building resilient water management system, conservation and diversifying water sources through the utilization of non-conventional water resources, such as treated wastewater reuse, desalination and rainwater harvesting, while respecting various ecosystems in different national context.
4. Encouraging the establishment or strengthening of national integrated water resources management (IWRM) policies, plans, and actions in a systemic manner that, among others, include facilitating access to safe and affordable drinking water and sanitation for all.
5. Proposing the World Lake Day in the United Nations process to highlight the role of natural and artificial lakes as significant water resources that contribute to the availability and accessibility of water.
6. Strengthening the capability of all relevant stakeholders to access safe water, sanitation and hygiene services for health, education and development.

7. Strengthening efforts to address challenges related to the interlinkage between water, energy, food security, nutrition, poverty and hunger eradication, and migration, while recognizing that water is indispensable for human development, health and well-being and taking into account the carrying capacity of the limited freshwater for economic and social development.

8. Developing and strengthening disaster prevention and risk reduction, including through pre-disaster investment in early-warning system and forecasting, risk and vulnerability assessment, disaster response, as well as post-disaster mitigation and rehabilitation to address the adverse impacts of water-related disasters, such as drought and flood, and support sustainable resilience.

9. Encouraging transboundary cooperation in accordance with applicable international law, including international instruments countries are Parties to.

10. Empowering various stakeholders, including women, children, older persons, persons with disabilities, indigenous peoples and local communities, and youth, as agents for change and innovation in the search for smart solutions for water and sanitation challenges, including traditional, local and indigenous knowledge.

11. Advocating innovative and sustainable financing from all sources, including through public and private partnership, for water and sanitation infrastructure projects as well as mitigation of the negative impacts of climate change and water-related disasters, in rural and remote areas and vulnerable areas and territories, as well as in archipelagic and small islands states.

12. Fostering education, research and innovation, upscaling cooperation on capacity-building and technology transfer on mutually agreed terms in the water sector, including through North-South, South-South and triangular cooperation.

13. Exploring the establishment of a center of excellence on water in the Asia-Pacific region as a regional hub of water-related knowledge, initiatives and activities, especially research activities, to enhance knowledge generation, promote exchange of information and data, and strengthen research and innovation through capacity building, while taking into account existing mechanisms.

14. Leveraging networks and partnerships formed during the 10<sup>th</sup> World Water Forum, to promote the long-term implementation of this Declaration.

15. Welcoming the initiative of the Government of the Republic of Indonesia and the World Water Council to mobilize and compile voluntary commitments<sup>3</sup> to undertake actions across countries, sectors and stakeholders, aimed at accelerated implementation and improved impact towards achieving Goal 6 of the SDGs and its targets and to contribute to the UN Water Action Agenda.

16. Looking forward to the convening of the 11<sup>th</sup> World Water Forum "Action for a Better Tomorrow" in Riyadh, the Kingdom of Saudi Arabia.

Expressing our appreciation to the people and Government of the Republic of Indonesia, the Provincial Government of Bali and the World Water Council for the hosting of the 10<sup>th</sup> World Water Forum and its participants.

<sup>3</sup> The compilation of commitments can be accessed at [www.worldwaterforum.org/compendium](http://www.worldwaterforum.org/compendium).

## Recommendation and Proposals for Follow-Up

In furtherance of the UN-Water Agenda for achieving SDG 6 on water, clean water and sanitation, the ongoing commitments outlined in the Ministerial Declaration are reflected in the subsequent follow-up actions agenda:

### 1. World Lake Day Initiative:

- Propose August 27 as World Lake Day to be adopted as a UN Resolution
- Preserve lakes through pollution control measures
- Implement periodic vegetative rehabilitation and technical engineering control to prevent lake shallowing
- Promote pilot projects for environmentally friendly fisheries and agriculture
- Expand collaboration opportunities between government agencies and communities from planning to implementation

### 2. Integrated Water Resources Management in Small Islands:

- Promote and implement IWRM in Small Island States (SIS), Sub-National Island Jurisdictions (SNIJ), and small islands within archipelagic and delta states
- Indonesia proposed several follow-up actions for IWRM on small islands, including:
  - o Establish a cooperative framework between the Indonesian and Dutch governments and international organizations, including the Integrated Water Resources Association (IWRA), the Pacific Island Forum (PIF), and the Resilient and Sustainable Islands Initiative (RESI)
  - o Promote and implement IWRM across Small Island States (SIS), Sub-National Island Jurisdictions (SNIJ), and small islands within

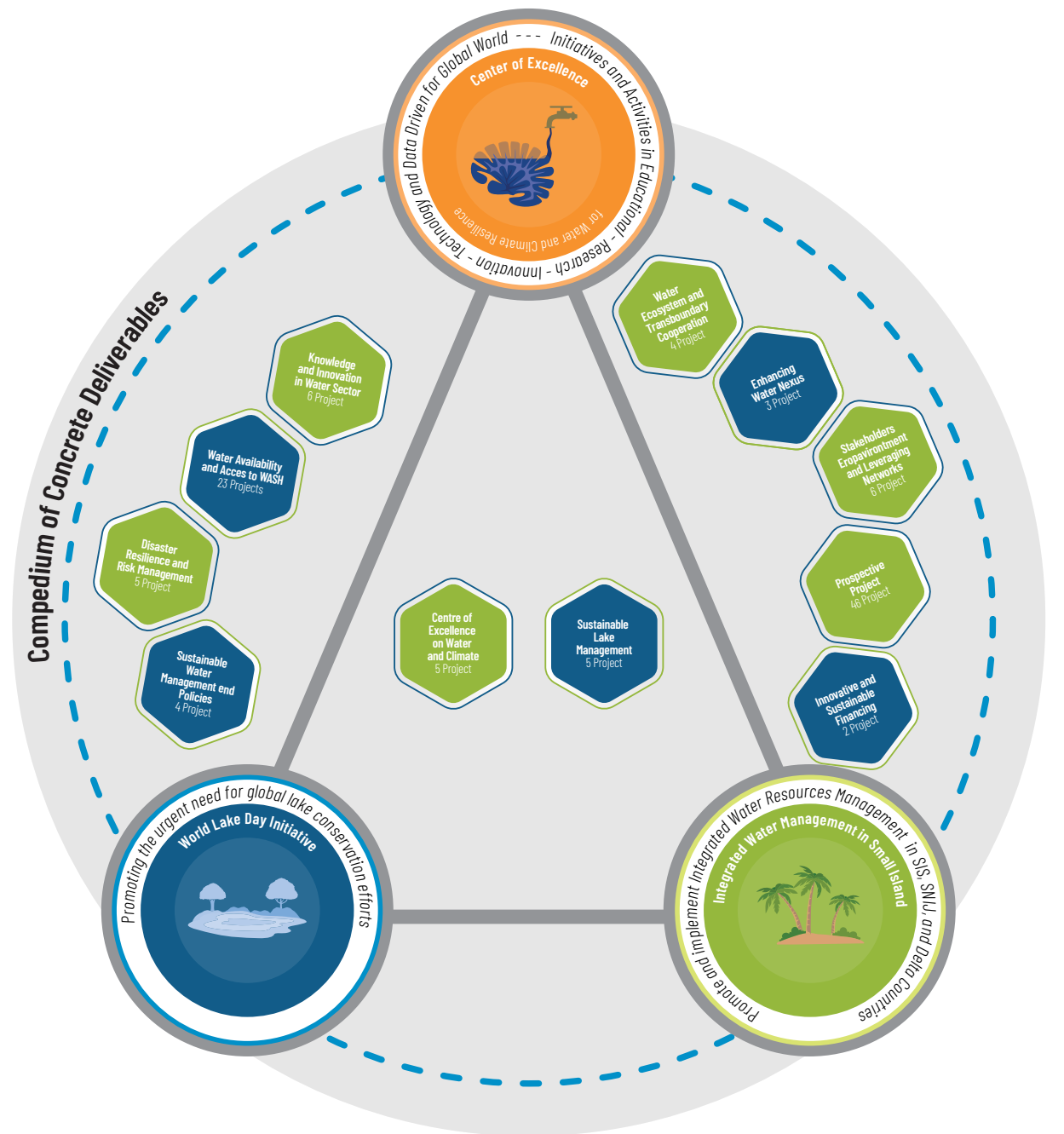
archipelagic and delta states, advancing progress toward SDG 6 on clean water and sanitation access for all. o Advocate for water rights inclusion in the constitution, laws, and regulations of each nation, accelerating global water and sanitation access equity..

### 3. Center of Excellence for Water and Climate Resilience

- Form a dedicated interdisciplinary task force at an international level, involving the Indonesian government, Japan, the Netherlands, international organizations, and other countries and water organizations.
- Develop a water hub through learning modules focused on water and climate challenges, including:
  - o Training on water balance analysis for river basin planning
  - o Interpretation of hydrology data
  - o Developing a hydrological network to support water resources management
  - o Implementation of Flood Early Warning System (FEWS)

## MINISTERIAL DECLARATION

### INITIATIVE FOR FUTURE WATER SCHEME



## Parliamentary Dialogues for Innovative and Sustainable Water Management



■ Parliamentarian Group Photo at the Closing of the Parliamentarian Meeting

Building on prior efforts to enhance parliamentary discussions on water, the House of Representatives of the Republic of Indonesia, the Inter-Parliamentary Union (IPU), and the World Water Council hosted the Parliamentary Meeting at the 10th World Water Forum from May 19-21, 2024. The meeting was attended by 216 participants, including two speakers, four vice speakers, and 135 members of parliament representing 44 countries. Additionally, seven

embassy representatives and six observers from international organizations were present.

The purpose of this agenda was to sustain global parliamentary momentum on water issues, promote cooperation between governments and parliaments, and develop integrated actions to achieve water-related SDGs. The program included discussion sessions on water governance and a site visit to key water management locations in Bali.



“  
There is a significant disparity between military spending and investment in the water sector. Prioritizing access to clean water and sanitation is vital as these are basic human

Puan Maharani,  
Speaker of the House of Representatives of Indonesia

In his opening remarks, Fadli Zon, a member of the House of Representatives of the Republic of Indonesia and an IPU Executive Committee representative, emphasized the urgency of translating commitments into action to address the global water crisis. He highlighted the IPU's commitment to mobilizing parliamentary action on water for shared prosperity. Loïc Fauchon, President of the World Water Council, stressed the crucial role of parliamentarians in tackling water challenges and promoting innovative solutions, underscoring the importance of innovation in water management, such as wastewater reuse and the use of digital and advanced technologies. He also proposed the launch of a Parliamentarian Water Help Desk to help parliamentarians around the world to

benefit permanently from information and guidelines on laws and regulations, on budgets and on possible parliamentary action in favor of water.

The program also featured a stamp-signing ceremony, symbolizing participants' commitment to addressing the water crisis. Following the ceremony, Mustika Wijaya, Founder and Executive Director of the Solar Chapter, spoke as a representative of youth voices. She spoke passionately about combating the water crisis through sustainable energy solutions. Wijaya outlined three critical points: supporting youth water entrepreneurs, ensuring the sustainability of water projects, and promoting transparency in water distribution.



## Access to Water and Sanitation: A Deal-Breaker for Achieving Sustainable Development

This panel session, moderated by Guy Fradin, Special Advisor to the World Water Council President, underscored the vital role of sanitation alongside access to fresh water. Panelists from various regions elaborated on the current state of water and sanitation access, sharing best practices and lessons learned.

Parliamentarians were highlighted as crucial players in addressing water and sanitation issues. Issa Mardo Djibir from Chad emphasized that water is a fundamental human right and outlined the multifaceted role of parliamentarians in conflict resolution, awareness-raising, budgeting, and engagement with technical and financial partners. The Water and Sanitation Caucus in Chad's Parliament serves as a notable example of parliamentary action. Federico Properzi from UN-Water highlighted alarming statistics: 2.2 billion people lack safely managed water, and 3.5 billion lack safely managed sanitation. He stressed the nexus between water and energy and called for political engagement and policy coherence

to tackle these challenges. Sareen Malik from ANEW highlighted the importance of legislation in improving access to water and sanitation, managing financial flows, and ensuring the stability of financial systems.

Several case studies illustrated effective parliamentary actions. Alexandr Duoinykh from Russia discussed the 2006 Water Code, which prioritizes water use for drinking and household purposes. Hussein Mohamed Dahir from Somalia shared efforts to improve infrastructure and implement community-based projects, emphasizing sustainability and inclusiveness. Kanimozhi NVN Somu from India highlighted initiatives like the Jal Jeevan Mission and Jal Shakti Abhiyan, which focus on rainwater harvesting and water conservation. These examples underscore the diverse approaches taken by parliamentarians worldwide to address water and sanitation challenges, demonstrating their pivotal role in fostering sustainable development.



■ Indonesia-MUJIONO .-DSC\_0485-FIAP HM



■ Vietnam-CHAU TRAN MY-Nang luong sach-PSA HM

## Innovative Practices for Inclusive and Equitable Access to Water

This session, moderated by Dionysia-Theodora Avgerinopoulou, a member of the Hellenic Parliament of Greece and the IPU Executive Committee, began with an emphasis on involving local communities in water management, especially marginalized groups. Each speaker brought unique perspectives and solutions to the discussion.

Recommendations from the session included the importance of inclusivity, data transparency, good governance, and leveraging technology and innovation. Parliamentarians were urged to prioritize community needs, adopt a bottom-up approach, and educate communities on responsible water usage. The session concluded with a call for global efforts and legislative actions to ensure equitable access to water for all communities.

## Water at the Heart of Climate Action

This session focused on the critical intersection between water security and climate resilience, highlighting the need for comprehensive and collaborative approaches. Key speakers emphasized that while water issues can be managed independently, they become increasingly complex when compounded by climate change. Ravindra Airlangga of Indonesia underscored the urgency of coordinated parliamentary actions to address these challenges, calling for effective legislation and budgetary decisions. Abdourahman Houmed-Gaba Maki of the FAO stressed the importance of innovative solutions like desalination and water productivity improvements, while Juan Bordera Romá highlighted the need to maintain and upgrade existing water infrastructure to handle rising demands and challenges.

In subsequent discussions, various parliamentarians and experts reinforced the necessity of a unified global response. Abderrazak Boussehaba of Algeria called for shared responsibility and frameworks to protect transboundary water systems, advocating for reductions in greenhouse gas emissions and drawing on historical water management practices. Andrei Denisov from Russia highlighted the impacts of extreme weather events and the need for region-specific adaptation strategies. Meanwhile, Ashok Kumal Mittal of India showcased India's extensive water management initiatives and international collaborations. Contributions from Morocco, Laos, Brazil, Iraq, and other countries underscored the diverse and urgent water and climate challenges faced by different regions. The session concluded with a call for integrated solutions, emphasizing the importance of combining scientific knowledge, political will, and public engagement to effectively address water and climate crises. The collective message was clear: urgent, coordinated, and innovative actions are essential to ensure water security and climate resilience for future generations.



## Water Diplomacy, Cooperation, and Science for Peace

The final session underscored the critical role of diplomatic engagement and scientific innovation in addressing global water challenges. A diverse array of parliamentarians highlighted the urgent need for international collaboration to manage water resources effectively and prevent conflicts. Representatives from Seychelles, Türkiye, Iraq, China, India, Bangladesh, Indonesia, Morocco, and other nations emphasized various aspects of water diplomacy, including the importance of data sharing, joint management initiatives, and climate adaptation strategies.

Participants, including Waven William from Seychelles and Mevlut Karakaya from Türkiye, emphasized the importance of addressing ecocide and geoengineering, as well as fostering

cooperation on transboundary water issues to prevent conflicts and promote sustainable management. Speakers such as Kanimozhi NVN Somu from India and AKM Enamul Hoque Shameem from Bangladesh underscored the significance of joint monitoring mechanisms, inclusive decision-making, and climate change adaptation in water diplomacy. They called for proactive measures, such as legislative support and community engagement, to address water scarcity and ensure equitable resource distribution. The session also featured calls for increased parliamentary involvement and international collaboration to tackle water-related challenges effectively and promote global peace and stability.

## Closing and Shared Commitments on the Global Water Agenda

In his closing statement, Eric Tardieu, Vice President of the World Water Forum, underscored the importance of establishing water caucuses within national parliaments to foster greater emphasis on water-related issues and achieve policy coherence.

Reflecting on the discussions, the forum highlighted the commitment of parliaments worldwide to address water and sanitation-related challenges through political will and action. Several key points were emphasized by Putu Supadma Rudana, a member of the House Representative of Indonesia and Rapporteur for the meeting:

1. Prioritize water as a recurring item on parliamentary agendas and foster dialogue at regional and international levels
2. Incorporate traditional knowledge into tailored actions to recognize the essential perspectives of local communities and populations in ensuring water justice and security
3. Promote sustainable water management for societal and ecosystem resilience, supporting climate change adaptation in alignment with global climate goals
4. Enhance diplomacy in managing water resources, sharing knowledge and implementing best practices to address the transnational nature of water-related challenges

## Field Visit to Mangrove Benoa

The meeting concluded with an invitation from the Indonesian Parliament for all delegations to visit the Mangrove Benoa. This visit provided insight into the maritime conservation zone of Benoa Bay in Bali, covering approximately 1,400 hectares. As a guardian

of the coastline, Benoa Bay provides habitat for diverse marine life and plays a critical role in ecosystem preservation. The visit highlighted the importance of environmental conservation and sustainable practices.



Myanmar-ZAW ZAW WAI--D1B7749-PSA HM



Inter-Parliamentary Union  
For democracy, for everyone

### Parliamentary Meeting on the occasion of the 10th World Water Forum

19–21 May 2024, Bali (Indonesia)



*Mobilizing parliamentary action on water for shared prosperity*

**NUSA DUA COMMUNIQUÉ**

Parliamentarians from 43 countries gathered at the Parliamentary Meeting on the occasion of the 10th World Water Forum in Bali, Indonesia, reaffirmed the importance of mobilizing parliamentary action on water for global security and prosperity.

The Parliamentary Meeting, which was co-organized by the Indonesian House of Representatives and the Inter-Parliamentary Union (IPU), formed a critical part of the political process at the Forum. With the world on the verge of a water crisis, the debates, divided into four plenary sessions, focused on the following key issues: (1) access to water and sanitation: a deal-breaker for achieving sustainable development; (2) innovative practices for inclusive and equitable access to water; (3) water at the heart of climate action; and (4) water diplomacy, cooperation and science for peace. The sessions enabled participants to benefit from the expertise of renowned representatives of international organizations, civil society organizations and parliamentarians from various countries.

The following is a summary of the key points and recommendations discussed at the event.

**Access to water and sanitation: A deal-breaker for achieving sustainable development**

Water affects every human being and ecosystem, and water and sanitation are fundamental human rights. However, water scarcity affects more than 40% of the global population and 4.2 billion people lack sanitation. Women and girls are especially affected, as well as vulnerable and marginalized groups facing barriers and discrimination in access to water. The Sustainable Development Goals (SDGs) will not be achieved without progress on SDG 6 on clean water and sanitation whose implementation is currently off-track. Water and sanitation are essential to health and well-being, but also to poverty reduction, sustainable livelihoods, improved education – especially for girls and women – peace, human rights, as well as natural resources and ecosystems. The achievement of SDG 6 can lay a strong foundation for sustainable development and the achievement of all the SDGs. The main challenges in accelerating progress on SDG 6, include underlying inequalities and gaps within and among countries; financing and low levels of investment; the fragmentation of water management across multiple sectors; and political will.

Parliamentarians discussed concrete strategies for parliaments to promote a comprehensive approach to water and sanitation in the context of the SDGs. To that end, the following key actions were identified:

- Ensure water is a standing item on parliamentary agendas and is included into existing parliamentary committees or other structures.
- Use the SDG framework to foster comprehensive, long-term policies on access to water for all using water as a resilience multiplier.
- Protect the human rights to water and sanitation, and promote a human-rights based approach to water management
- Include water and sanitation into laws and policies aimed at addressing gender and social inequalities.
- Promote parliamentary dialogue and cooperation at the regional and international levels.
- Establish an ad hoc committee dedicated to the assessment and implementation of identified key actions, recommended approaches and strategies adopted during parliamentary meetings at world water forums.

### **Innovative practices for inclusive and equitable access to water**

The session promoted a dialogue between parliamentarians and water stakeholders to ensure a better understanding of the needs and perspectives of local communities and populations facing disparities in access to water. Participants discussed how innovation and new technologies could help make progress on both access and quality, mindful that technology was not neutral, and noting the importance of investing in water solutions tailored to local contexts. Data systems on access to water, including disaggregated data, and data sharing needed to be strengthened. Furthermore, it was recognized that access did not suffice, water needed to be clean and safe.

The following key actions were identified:

- Use parliamentary oversight and public engagement mechanisms to identify existing barriers to access to water and sanitation, and ensure that new technologies and innovation in the water sector benefit the most vulnerable and marginalized.
- To enable increased access to safe and clean water and its sustainable use, ensure that innovative policy and technological practice is accompanied by increased water literacy of communities.
- Review existing and new legislation from an access to water perspective to ensure it does not create barriers or discriminate against any group or population, and to ensure water justice and security.
- Take steps for greater inclusiveness in decision-making processes to make sure water solutions – including technology-based solutions – are adapted to local needs and take into account traditional knowledge.

### **Water at the heart of climate action**

The session discussed the linkages between water and climate change, as climate change was exacerbating water scarcity, and affecting water access and water safety. The session provided insights into parliamentary efforts to promote water efficiency, reduce water pollution and preserve water ecosystems. Concern was expressed that over two billion people were already living in countries where water supply was inadequate, which also affected the production of food and energy. The importance of the water sector in addressing climate change was also discussed. Sustainable water management was viewed as a key opportunity to build the resilience of societies and ecosystems, and support climate change adaptation in line with internationally-agreed climate goals.

The following key actions were identified:

- Implement the Paris Agreement and other climate commitments, ensuring that water is included in national climate strategies and legislation.
- Promote adaptive measures, such as more resilient water supply and sanitation systems that can withstand growing climate change impacts.
- Work with civil society and research institutions to better understand how climate-related water issues are affecting food and energy production, and support legislation that considers the impacts of water scarcity across sectors.
- Support investment and explore innovative financing for sustainable water resource management, particularly in the agricultural sector, that builds the resilience of communities and societies most exposed to climate change.

### **Water diplomacy, cooperation and science for peace**

Acknowledging that water-related challenges transcend national borders, and require collective action and cooperation at regional and global levels, the session highlighted the responsibility and pivotal role of parliamentarians in water governance and in fostering international cooperation to make the water pie bigger. It emphasized the critical need for enhanced diplomacy in managing water resources, necessitating open dialogue, cooperation and sharing of scientific knowledge and good practices to address water scarcity, access to water and quality issues included.

Drawing on the [report](#) of the first IPU Science for Peace Schools on water, held in December 2022, and the outcomes of the IPU Science for Peace Parliamentary Meeting on *Water security and insecurity: Rebuilding peaceful coexistence with science*, held in September 2023, the session highlighted that parliamentary water diplomacy, with the guidance of science, could turn elements of conflict into reasons for coexistence.

The following recommendations emerged during the discussion:

- Leverage evidence-based decision-making to strengthen policies and legislation on water and sanitation through cooperation with relevant researchers and experts, and by prioritizing formal and informal dialogue between the legislative and inter-disciplinary scientific communities.
- Facilitate the creation of and access to comprehensive and transparent data in relation to water and climate change.
- Engage local communities in ensuring the success and sustainability of water management and sanitation initiatives.
- Promote strengthening of international cooperation on transboundary rivers.
- Establish a global parliamentary expert community on water to facilitate knowledge exchange and collaboration among legislators to effectively address water-related issues.

The Parliamentary Meeting reiterated the call on the parliamentary community to prioritize action on water to realize the commitments set out in the 2030 Agenda for Sustainable Development, and the vision of a fair and prosperous world for today's and future generations. The IPU will continue providing a platform to exchange parliamentary experiences and practices on the issue of water. The conclusions of the meeting will be brought to the attention of the IPU Governing Council at the 146th IPU Assembly.

## Fostering Local and Regional Authorities Initiatives



Opening Session of the Local and Regional Authorities Day  
Bali Nusa Dua Convention Center on May 22, 2024

As frontline implementers of transformative measures, local and regional government delegations gathered at the 10th World Water Forum's Local and Regional Authorities Day on May 22, 2024 to underscore the urgency and complexity of their tasks and emphasize the crucial role of local and regional authorities in advancing the global transformative agenda. The meeting was attended by a diverse group of 300 participants, including 160 local and regional elected officials from around the world, representing the Asia-Pacific, Europe, Latin America, Africa, and the Middle East.

The opening day of the Local and Regional Authorities sessions at the 10th World Water Forum was marked by the adoption of a joint declaration, which guided discussions throughout the day. The declaration facilitated a political dialogue among representatives of local and regional authorities and other political stakeholders present at the forum, aligning the political agenda with the solutions and challenges faced by local authorities.

### Opening Session

The growing global population and the projected scarcity of water resources underscore the urgent need for comprehensive water management strategies. Agus Harimurti Yudhoyono, Minister for Agrarian Affairs and Spatial Planning of Indonesia, emphasized this point during his speech in the opening session of the Local Regional Authorities Day, calling for unified global action.

Building on the need for a coordinated response, the President of the World Water Council, Loïc Fauchon, and the Special Envoy of the President of the French Republic to the One Water Summit, Barbara Pompili, highlighted the critical role of local authorities in water management. They emphasized the necessity of empowering local authorities with

the resources and capacity needed to effectively manage water resources. Minister Muhammad Tito Karnavian of Indonesia expanded on the global dimension of water management, stressing the importance of international cooperation and the integration of local actions into broader strategies.

The complexity of water challenges was further emphasized by President Ugur Ibrahim Altay of United Cities and Local Governments (UCLG), who called for a holistic approach. He highlighted the importance of integrated water management, recognizing water as a human right, and emphasized the role of local authorities as key actors in achieving water security.



*Global management of water is a huge orchestra. Water is transnational and crosses boundaries between countries, no single country can manage water individually. United efforts must be organized.*

Muhammad Tito Karnavian,  
Minister of Home Affairs of Indonesia



## Empowering Water as a Global Common Good: Ensuring Equitable Access and Human Rights Through Local and Regional Governance

As water's significance has evolved, it is no longer just a commodity but a fundamental human right and a cornerstone of global peace and security. However, challenges persist in ensuring universal access to clean water and sanitation, a situation further exacerbated by climate change and population growth.

Local and regional authorities have been steadfast in addressing these challenges. Through innovative policies and collaborative partnerships, they have worked tirelessly to safeguard water resources and promote equity and social justice. Their efforts extend beyond mere provision to encompass broader issues such as conservation and biodiversity. Embracing the concept of water as a global common good creates an opportunity to reframe governance models and approaches, moving beyond narrow sectoral perspectives. It demands a paradigm shift from a predominantly technical stance to a political one, emphasizing collective responsibility and action to ensure equitable access for all and counteract the commodification of water.



*We play a crucial role in achieving universal access to water as leading actors at the local level responsible for the planning, implementation, and management of water and sanitation services and need to be recognized as such.*

André Viola,  
UCLG spokesperson on water and sanitation

During the session, Muntinlupa City Councilor Atty. Raul R. Corro emphasized the importance of integrated and harmonized policies across government agencies and stakeholders, drawing lessons from the Muntinlupa experience. André Viola supported this view, advocating for decentralized cooperation. The launch of a binational, cross-border platform between the province of Loja, Ecuador, and regional governments of Piura, Peru, enables water stakeholders to collaborate on managing climate change, particularly addressing floods and droughts in cross-border watersheds. Furthermore, government efforts alone are insufficient without the support of the local people. Nobuhiko Miwa, Director General of Shiga Prefecture, Japan, conveyed lessons learned from Lake Biwa, the largest freshwater lake in Japan. Once severely polluted, the lake's recovery was driven by citizen action and government cooperation. To address challenges effectively, a multi-level governance approach that builds on these lessons and inspires broader global cooperation is essential.



## Governance and Financing Strategies Key for Success

Through the Local and Regional Government Authorities Day at the 10th World Water Forum, discussions consistently reinforced primary commitments which were later outlined in the Joint Declaration. Emphasizing the importance of water as a global common good and human right, the declaration affirms inclusive governance and community involvement in decision-making processes. It advocates for strengthened multi-level governance and policy engagement across all government levels. Financially, there is a push for innovative mechanisms to mobilize funding for inclusive water infrastructure, particularly in marginalized communities and for youth. Local

and Regional Authorities Declaration underscores the urgency of enacting legislative frameworks for safe drinking water and sanitation, alongside fair resource allocation. It also highlights the crucial role of women in water governance and the need for diverse voices in shaping water policies.

Furthermore, discussions highlighted the role of water in conflicts and called for international solidarity and accountability in water-related issues. Promoting dialogue and cooperation through basin organizations and city-to-city diplomacy is also a key focus, alongside sustainable management plans and ecosystem protection initiatives.



China-Quanliang Cui-Fearless-FIAP HM

## Main Expectations and Regional Insights on Water Governance at the World Water Forum

During the World Water Forum, UCLG presented the outcomes of regional consultations conducted with all UCLG regional sections at the “Returns on Regional Consultations” session during the Local and Regional Authorities Day. The session featured insights from key regions: Europe by André Viola, the Mediterranean by Oriol Illa Garcia, South America by Sergio Arredondo, and Africa by Jean-Pierre Elong M'bassy, Secretary General of UCLG Africa and Mohamed Sefiani, Mayor of Chefchaouen.

Special focus was given to Asia, moderated by Bernadia Irawati Tjandradewi, Secretary General of UCLG-ASPAC, with detailed discussions by seven elected officials. The key message from ASPAC emphasized that water security can be achieved by promoting transboundary governance and management and by linking water security with economic benefits, livelihood accommodations, and integrating local planning documents into national strategies. This session underscored the importance of considering regional specificities and the perspectives of local and regional authorities in shaping global water policies and strategies.

## Multi-Stakeholder Political Dialogue on Water

The final segment, titled “Multi-Stakeholder Political Dialogue on Water: Forging Sustainable Solutions for Global Agendas,” was organized to facilitate a political dialogue among representatives of local and regional authorities and other political stakeholders present at the 10th World Water Forum. The objective was to align the political agenda with the solutions and challenges faced by local authorities in preparation for global agendas, including the One Water Summit. Facilitated by Emilia Saiz, Secretary General of UCLG, the session included participation from various stakeholders, including youth parliamentarians, basin organization representatives, government

officials, and parliamentary representatives. The dialogue aimed to multi-stakeholder dialogue to advance global water governance and strengthen the political dimensions of water issues.



**LOCAL & REGIONAL AUTHORITIES' DECLARATION  
ON "WATER FOR SHARED PROSPERITY"  
OUTCOME OF THE 10<sup>th</sup> WORLD WATER FORUM  
BALI, INDONESIA, 22 MAY 2024**

Water plays an increasingly important role in human society. As the world is evolving, threats to this natural resource are particularly worrying. The erratic evolution of the planet's climate is not the only cause. Demographic growth, urban overcrowding, tourist concentrations, rising living standards, waste of all kinds and excessive consumption are all weighing increasingly heavily on the security of water resources.

However, front of such aggression, water is a common good for all mankind. It is a fundamental right, insufficiently proclaimed, unequally respected and inequitably implemented. Water is one of the essential public services which, beyond the needs of daily life, is a primary element of human dignity.

Local, provincial and regional authorities play a decisive role in the organization of territories. And this role is growing, not only in cities and metropolises, but also in rural areas, sometimes desertified, sometimes being repopulated. They have a growing responsibility to provide access to water and sanitation, and to prevent water-related disasters such as floods and droughts. This is a responsibility they intend to assume, with the necessary legal, financial and technical resources at their disposal.

Humanity's survival depends on the harmonious sharing of water for humans and water for nature. Respect for biodiversity and the life of ecosystems call for a new commitment to protecting the water cycle. Only this careful protection will enable us to secure the quantity and quality of water resources. The progressive control of domestic, industrial and agricultural pollution promises is a determining factor in preserving a living planet.

We are committed to:

- Promote an effective right to water and sanitation in the texts and regulations governing their areas of responsibility. Local Authorities will also support the move towards a right to water enforceable to third parties (as it's the case for town planning). They will take concrete action to promote this right on a daily basis, to make access to water and sanitation available to all.
- Give priority to securing resources, in close coordination with the national and basin levels. And to ensure that the necessary infrastructure is ready to deliver drinking water and treat wastewater, while adopting strategies for sobriety and efficiency for all uses, such as optimizing irrigation systems or repairing leaks, in order to reduce the water footprint without interfering political interest.
- To implement Nature-based Solutions that protect local aquatic ecosystems, in particular rivers, lakes and wetlands, to preserve and restore sustainable biodiversity.
- Implement Flood control policies through law enforcement of local spatial planning regulations to hinder the increasing water runoff as the result of land development, such as the Zero Delta Q policy as applicable in Indonesia.



- Promote all forms of inter-municipal, national, and international cooperation, including decentralized cooperation, to exchange and share know-how, best practices and experiences in support of emerging city hydro-diplomacy in line with the expectations of local populations.
- Encourage the exploration and creation of innovative financing mechanisms, such as public-private partnerships, mixed financing and climate-led development funds, all designed to guarantee transparency, equity and long-term financial sustainability.
- Integrate capacity building to enable local authorities to efficiently maintain water treatment and distribution. And to provide ongoing financial support for staff training and access to qualified advice.
- Encourage community involvement and citizen participation, enabling local populations to contribute to decision-making and effective implementation of projects. And implement without delay awareness-raising lessons on water in nature, since preschool due to jurisdiction.

We call on all Local and Regional Authorities and their institutional, economic and associative partners to join the Bali Water Initiative and contribute to the creation of a Global Network for local, equitable and sustainable water management.

Adopted at the 10<sup>th</sup> World Water Forum, Bali, Indonesia.



Basin Segment Day First High-level Discussion

## Integrated Water Management at Basin Level

Another political process at the 10th World Water Forum was the dedicated Basin Segment Day, a full-day program aimed at further solidifying the recognition of basin management as a political priority by establishing a high-level political segment dedicated to basins, alongside the “historic” Ministerial, Parliamentarian and Local Regional Authorities segments. This segment featured high-level speakers and participants.

The Basin Segment Day serves as the World Water Forum’s high-level political segment focused on basins and the promotion of an operational approach to IWRM at the basin level, with the goal of accelerating

the achievement of SDG 6, by and for the basins. It was organized by the International Network of Basin Organizations (INBO), in partnership with the Network of Asian River Basin Organizations (NARBO), under the auspices of the Government of Indonesia and the World Water Council.

This day dedicated to basin management was opened by the President of the World Water Council, the Minister of Equipment and Water of the Kingdom of Morocco, and the Minister for Public Works and Housing of the Republic of Indonesian, along with more than eight ministers and 60 speakers from 21 countries including representatives from 11 national & transboundary basins. The high-level sessions provided a pivotal platform to address critical issues facing the management of water resources at the basin level throughout the world, with an emphasis on governance, planning, and financing strategies.

## Aiming the Target of Basin Authorities

Throughout the day, stakeholders reaffirmed their commitment to collaborative action and resource mobilization, utilizing the expertise and financial resources of donors to strengthen initiatives in the water sector. The meeting highlighted the urgency for concerted efforts to address complex challenges in global water security for sustainable development and prosperity. Key areas included:

1. Enhancing governance, planning, and financing by fostering dialogue among ministers, heads of basin organizations (both national and transboundary), and international institutions to refine governance frameworks and explore sustainable financial mechanisms for IWRM at the basin level
2. Facilitating transboundary cooperation by promoting cooperation and diplomatic engagement among riparian states to address transboundary water challenges
3. Advancing water information systems
4. Integrating ecological security to safeguard ecosystems, enhance biodiversity, and promote nature-based solutions for long-term water security and resilience
5. Launching the Bali Basin Champion Agenda during the closing ceremony of the basin segment to provide concrete outcomes through commitments and promotion of exemplary actions that support basin management as a catalyst for achieving the SDGs



Indonesia-M. JEFFRY HANAFIAH-Clean Water for Biodiversity-FIAP HM



■ Indonesia-AGUS KURNIAWAN-The Harmony of Water and Tradition-FIAP HM

## High-Level Session on Transboundary Cooperation

The session on transboundary cooperation highlighted that half of the world's population lives in 310 transboundary river and lake basins, shared by 151 countries. Approximately 60% of these basins and most of the 610 transboundary aquifers lack cooperative arrangements, raising concerns about potential conflicts over water resources, which are intensified by climate change, population growth, and unsustainable practices. Overcoming these tensions requires significant effort in cooperation and resource allocation to strengthen transboundary basin organizations. Promoting collaborative management and diplomatic engagement is essential for equitable water distribution and conflict mitigation in these regions.

Florence Grace Adongo, President of the African Network of Basin Organizations (ANBO), noted that transboundary cooperation is the solution to addressing the major challenges of the water sector. As an outcome of the forum, ANBO will facilitate agreements between riparian countries of transboundary basins and implement coordinated policies. This is crucial to establish governance, strategic planning, networks, institutions, and funding. Promoting the planning, development, and financing of projects and infrastructure at the transboundary basin level, especially for developing countries, is essential. Transboundary basin organizations should manage both surface and groundwater resources. Coordinated efforts are needed to reduce water use amid demographic and climate change pressures. These should foster peace and trust, enabling shared benefits from concerted water management.

## High-Level Session on Governance, Planning and Financing

During the Governance, Planning, and Financing of Basin Management High-level Sessions, speakers mentioned that technical solutions exist to achieve the United Nations SDGs and the Global Biodiversity Framework, but their implementation is hindered by poor governance, inadequate strategic planning, and insufficient financial resources, especially at the basin level. Effective governance, which treats water as a fundamental human right and a common good, is essential for proper water management. The meeting emphasized the need to optimize policy frameworks, institutional structures, planning processes, and financial mechanisms to ensure equitable access and sustainable use of water resources.

The forum also wishes to implement policies that require cross-sector cooperation across science, politics, and other sectors, while promoting cross-border discussions. Financial limitations hinder policy development, necessitating an independent financial system or external funding. During the session, participants recommended permanent coordination and cooperation mechanisms between countries within a basin organization. Successful governance must consider the diverse needs, demands, and interests of society, the economy, and the environment. Li Guoying, Minister of Water Resources from China stated the aim is to provide concrete benefits to the population at the basin level.

The following countries and entities shared their experience during the Governance, Planning, and Financing High-level Sessions:

- China (Minister of Water Resources)
- Egypt (Minister of Water Resources and Irrigation)
- France (Director General of the French Biodiversity Agency)
- Brazil (National Secretary of Water Security), from transboundary basin organizations (Amazon Cooperation Treaty Organization, Lake Victoria Basin Commission) and
- International organizations (Organization for Economic Cooperation and Development)

## High-Level Session on Water Information Systems

Effective water management requires accurate measurement and understanding of resources, uses, and associated ecosystems, a focus specifically discussed during the Water Information Systems sessions. Strengthening the knowledge base and information flow is essential for sustainable development and climate change adaptation. Integrated information systems are key to managing water resources and incorporating data on land use, agricultural practices, biodiversity, and environmental health. Strategic planning at the basin level relies on successful data management and water information systems, supported by shared governance and sustainable financing. Enhancing water information systems and increasing data sharing are crucial for informed decision-making and resource allocation. The session discussed innovative technologies and methodologies to improve data collection, analysis, and dissemination in water management.

One proposed solution is enhanced data sharing and strengthened water information systems on resource quantity, quality, usage, and ecosystem health. Ville Tavio, Minister for Foreign Trade and Development of Finland emphasized the importance of data sharing at all levels—between local and national agencies, institutions and across borders—for developing knowledge-based policies. Investing in new technologies, such as earth observation and remote sensing, and enhancing digital skills can improve decision-making in basin management. Capacity building in data collection and management is crucial for implementing forecasting and early warning systems for floods and droughts, which are increasing due to climate change. Despite the availability of data sets and water information systems, greater cooperation and capacity building are needed to effectively utilize this knowledge.



## High-Level Session on Better Integration of Ecological Security In Basin-Level Approaches

The final session focused on better integration of ecological security in basin-level approaches. Biodiversity is in crisis, with many species threatened by demographic pressure, economic development, industrial and agricultural activities, habitat destruction, invasive species, climate change, and water cycle disruptions. The biodiversity and water crises are interconnected, as insufficient water quantity and quality damage natural habitats. The

session emphasized integrating ecological security into water basin management, adopting holistic approaches that balance ecological sustainability with socio-economic development. Participants highlighted the need for ambitious, nature-based solutions at the basin scale to achieve significant impact, enhance efficiency, and provide multiple co-benefits, including flood and drought prevention and control, extending beyond just preserving biodiversity.

Laurent Tchagba, Minister of Water and Forests from the Ivory Coast emphasized that ecological security and water security are interconnected and the foundation to provide fresh water and resilience to climate change. Accordingly, the session discussed promoting IWRM at the basin scale to

address interactions between human activities and ecosystems, with strong legal, institutional, and policy frameworks to reduce anthropogenic pressures. Planning and implementing national and transboundary projects for the conservation, protection, and restoration of aquatic ecosystems aims to deliver benefits comparable to or greater than traditional gray infrastructure. Organizing awareness-raising events to educate citizens about water use and aquatic ecosystem protection is also essential. These solutions target environmental pressures from climate change, urbanization, agricultural expansion, and illegal exploitation, which degrade soil and water quality. They also aim to enhance ecosystem services for climate regulation, water filtration, and protection against natural hazards.

## High-Level Closing and Adoption of the Bali Basin Action Agenda

In the closing session, participants adopted the Bali Basin Champion Agenda. The agenda reaffirms support for the Dakar Action Plan for River, Lake, and Aquifer Basins, which was launched in Senegal at the 9th World Water Forum. The session also included the signing of the MOU agreement between INBO and NARBO.

Basin Segment Day also launched a series of flagship actions that received strong support, including the Twin Basin Initiative, an international program for experience sharing and capacity building between peers working on IWRM at the basin level (both national and transboundary).

This program intends to:

- Promote peer-to-peer exchanges and twinning alliances between basin organizations with common interests
- Support joint capacity-building activities such as webinars, face-to-face exchanges, study visits
- Facilitate the dissemination of lessons learned on a global scale, both peer-to-peer and to the public

Cross-border collaboration was identified as essential for peaceful water sharing and for addressing issues like glacier melt and extreme weather events. Experts advocated for enhanced data sharing and information system integration to inform decision-making on water allocation and flood/drought risk reduction. Basin Segment Day also underscored the importance of ecological security in water management. Participants agreed on the need for a holistic approach that protects ecosystems and promotes biodiversity. Measures such as restoring natural environments, better rural practices and reforestation were highlighted as crucial. The session emphasized the importance of integrating ecological considerations throughout the water cycle, from source to sea.

Basin Segment Day provided the technical definition of the principles for actions and commitments needed to strengthen cooperation, planning, the legal and institutional framework needed by basin organizations, and the search for innovative financing. There were five priority commitments:

1. Confirm the basin organization's role and effectiveness in the service of water security, peace, and sustainable development
2. Value the positive impact and concrete results produced by basin organizations including economic and social development, shared facilities, and an ecological approach
3. Strengthen visibility and institutional frameworks, especially for transboundary basins
4. Promote innovative and autonomous financing mechanisms at basin level
5. Plan the implementation of integrated

## The Bali Coalition for Strengthening Training in the Water Sector

The Bali Coalition for Strengthening Training in the Water Sector aims to promote training as an essential tool to accelerate the implementation of the SDGs, particularly in terms of access to drinking water and sanitation. Initiated by INBO and the International Office for Water, the coalition collaborates with 25 representatives from international organizations and government agencies as partners. The partners of this coalition are committed to promote and implement the following recommendations and actions:

1. Strengthening skills and develop professional training in the water sector
2. Supporting professional training through sustainable financial mechanisms

3. Integrating professional training into human resources development strategies
4. Utilizing specialized training organizations equipped with the necessary skills and educational tools
5. Improving the sector's attractiveness, gender balance, and youth representation

Basin management was emphasized as a fundamental tool for achieving water-related SDGs, particularly SDG 6, which aims to ensure universal access to safe drinking water. Basin Segment Day will continue the collective commitment to leveraging outcomes to build capacity, nurture collaboration, and stimulate effective water governance at the basin level.



*I am convinced that the role of basin organizations will become more important in the implementation of Integrated Water Resources Management in the future*

*Nizar Baraka,  
Minister of Equipment and Water,  
Kingdom of Morocco*





# BALI BASIN CHAMPIONS AGENDA



## THE 9TH WORLD WATER FORUM'S DAKAR ACTION PLAN FOR BASINS LEGACY

The participants in the Basin Segment in Bali reaffirm their support to the Dakar Action Plan for River, Lake and Aquifer Basins launched in Senegal at the 9th World Water Forum (March 2022) during the first ever high-level political segment dedicated to basins in the history of the Forums.

The Dakar Action Plan still aims to accelerate the achievement of water-related SDGs "by the basins and for the basins". It reminds that the availability of water resources in sufficient quantity and quality for water uses (including access to drinking water) and the needs of the environment almost exclusively depend on the Integrated Water Resources Management (IWRM) of river, lake and aquifer basins. It promotes basin management as an essential tool to achieve sustainable development of territories, to adapt to climate change and preserve natural resources, biodiversity and its ecosystems.

It provides the technical definition of the principles for actions and commitments needed. It calls on the main stakeholders of basin management (basin organizations and committees, ministries, donors, UN agencies and water users' associations, etc.) to strengthen cooperation, planning, the legal and institutional

framework of basin organizations, and the search for innovative financing, with 5 priority commitments:

- Confirm the basin organizations role and effectiveness in the service of water security, peace and sustainable development;
- Value the positive impact and concrete results produced by basin organizations including economic and social development, shared facilities and an ecological approach;
- Strengthen visibility and institutional frameworks, especially for transboundary basins;
- Promote innovative and autonomous financing mechanisms at basin level;
- Plan the implementation of integrated management between uses at basin scale.

Its call for action in return received strong commitments during the basin segment of the World Water Forum in Dakar with, including the announcement of the European Commission and its partners (Member States, European Investment Bank, African Union and the African Ministers' Council on Water) of over 400 million euros in funding for transboundary basin management in Africa (for 60% of the African territory & 900 million people).



## THE AMBITIONS OF THE 10TH WORLD WATER FORUM FOR BASIN MANAGEMENT

The participants of the basin segment welcome the decision of the 10th World Water Forum (18-25th May, Bali, INDONESIA) to further consolidate the recognition of basin management as a political priority by making perennial the inclusion of a high level political segment dedicated to basins, alongside the "historic" Ministerial, Parliamentary and Local authorities segments.

They applaud the commitments made during this second edition of the basin segment, including:

### Twin Basin Initiative (TBI)

The launch by INBO of the Twin Basin Initiative (TBI), a global program of exchange of experiences between peers working on the management of water resources at basin level, with a contribution from:

- The European Commission, in the form of the global project "Peer-to-Peer project support for basin organizations" (capacity building and IWRM twinning programme between basin organizations);
- The French Development Agency, in the form of the DYNOSA Project (capacity building of African transboundary basin organizations);
- GEF - IW Learn as an associated partner;
- Inter-American Development Bank [TBC];
- Development Bank of Latin America and the Caribbean [TBC];
- World Bank and its Global Facility for Transboundary Waters Cooperation [TBC];
- Asian Development Bank [TBC].

The TBI aims to develop the Integrated Water Resources Management (IWRM) good practices by focusing on capacity building within Basin Organizations themselves, both at national and transboundary scales.

To this end, the World-twinning program intends to:

- Promote peer-to-peer exchanges and twinning alliances between basin organizations with common interests;
- Support to joint capacity building activities (as webinar, face-to-face exchanges, study visits);
- Dissemination of lessons learned at global scale (peer to peer and towards the public).





















### The Global Hydrometry Support Facility (WMO HydroHub)



### Archipelago Sea Programme for integrated basin management - Finland



<p><b>The handbook on transfer of solid waste and plastics</b></p>  <p>AFD ISWA OFB</p> 	<p><b>The special edition of the Water International Journal, dedicated to basins</b></p>  <p>International Water Resources Association OFB</p> 
<p><b>Bilateral and multilateral cooperation on transboundary basins - Côte d'Ivoire</b></p>  	<p><b>The development of the Transboundary Water Cooperation Coalition (TWCC)</b></p>  <p>Transboundary Water Cooperation Coalition</p> 
<p><b>Good Practices and Lessons Learned in Data-sharing in Transboundary Basins</b></p> <p>This publication contains a collection of good practices and lessons learned in data sharing in transboundary basins around the world, intended to help countries and basins to increase cooperation through enhanced information exchange.</p> 	<p><b>The Coalition of Bait to strengthen training for water professionals</b></p>  
<p><b>Water and Nature Action Plan: Implementation of the "No water security without ecological security / No ecological security without water security"</b></p>  	<p><b>Development of a planning and sustainable management tool for ecosystems and water resources to improve the living conditions of riverside communities in the Mano River Union area - Côte d'Ivoire</b></p>  
<p><b>The incubation of Water &amp; Climate projects</b></p>  	<p><b>Latin American and Caribbean Platform on basin recovery and restoration efforts</b></p> 


## BASIN MANAGEMENT RECOGNISED AS A POLITICAL PRIORITY

The participants of the basin segment recognize that the call to make **basin management a top priority of the United Nations Water Conference (March 2023)** was also heard. High level political leaders joined basin management practitioners, echoing the Dakar Action Plan key messages in their official statements.

### HIGH LEVEL POLITICAL LEADERS PRAISING IWRM AT BASIN LEVEL AT THE UNITED NATIONS WATER CONFERENCE


"Effective implementation of the integrated water resources and river basin management at the country level and in the transboundary nature need not only legal and institutional framework, but also stronger coordination mechanisms and participatory, responsible, and collaborative actions."

**Dr. Rabun Ouk,**  
*Minister of Rural Development, Kingdom of Cambodia*



"Costa Rica promotes Integrated Water Resources Management (IWRM), so that the water cycle - in basins, sub-basins or aquifers - is managed as a single system. To this end, the implementation of indicator 6.5.1 is vital."

**Ms. Maritza Chan Volverde,**  
*Ambassador and Permanent Representative, Costa Rica*



"To promote a city-basin approach to integrated water resources management and implement upstream-downstream solidarity mechanisms, the African Development Bank (AfDB) supports mechanisms whereby downstream users financially compensate upstream users for water conservation or pollution reduction, also known as payments for ecosystem services."

**Ms. Beth Dunford,**  
*Vice President for Agriculture, Social and Human Development, African Development Bank*



"Integrated Water Resources Management at the basin level is now, more than ever, an ingenious way to manage groundwater and surface water jointly and sustainably. I am convinced that the role of basin organizations will become more important in the implementation of IWRM in the future."

**Mr. Nizar Baraka,**  
*Minister of Equipment and Water, Kingdom of Morocco, World President of INBO*



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03

FOUR REGIONS, COMMON  
CHALLENGES: BUILDING  
SUSTAINABLE WATER  
FUTURES

■ *The Jatigede Dam-FIAP HM, Ismail Abdul Muttalib - Indonesia*

# CHAPTER 3: FOUR REGIONS, COMMON CHALLENGES: BUILDING SUSTAINABLE WATER FUTURES

## Developing a Solidarity-Based Financial Model to Address Water Issues in the Mediterranean

Regional Coordinator: Alain Meysonnier (Mediterranean Water Institute)

### Background

The Mediterranean region is increasingly affected by global challenges such as climate change, conflicts, and external pressures, leading to significant impacts, particularly water scarcity. These challenges have intensified disputes over water use, making it critical to adopt a holistic and integrated approach to water management. The SDGs and ecological transition policies demand urgent actions to address decarbonization, clean energy production, universal access to water and sanitation, poverty reduction, and sustainable resource use. The Mediterranean sessions at the 10th World Water Forum highlighted discussions aligned with the six sub-themes derived from the motto, "Water for Shared Prosperity." Given the interconnected nature of these challenges, the traditional silo-based approach is no longer sufficient. Instead, the Water-Energy-Food-Ecosystems (WEFE) Nexus approach is essential for developing sustainable and efficient solutions. This approach promotes a multi-sectoral vision that values all sectors equally, including ecosystems, and facilitates integrated planning and management.

The Mediterranean region's unique characteristics and historical background make it an ideal hub for implementing the WEFE Nexus approach. Efforts are needed to scale up pilot projects and overcome technological, regulatory, cultural, and financial obstacles. Integrating the WEFE Nexus into sectoral planning and policies can create an inclusive and participatory process, aligning with the broader societal expectations and necessities.

The 10th World Water Forum provided an opportunity to discuss the region's progress and challenges in water resource management, focusing on innovative and operational solutions to cope with extreme events like severe flooding and prolonged droughts. Six sessions and two High-Level Panels were organized by Mediterranean countries, and five of the 15 pavilions featured Mediterranean countries. The Mediterranean region aimed to bring recommendations from the Mediterranean Basin on adapting to climate change and managing disaster risks, emphasizing inter-administrative coordination, quality data, resource allocation, and participatory approaches to avoid conflicts and ensure sustainable water management.



Mediterranean Sessions RM1: WEFE Nexus (Water/Energy/Food/Environment)

## Objective

The primary objective of the Mediterranean sessions at the 10th World Water Forum was to address the intensifying effects of global change on water scarcity and related conflicts. The sessions aimed to promote integrated management by advancing traditional water resource management to adapt to new challenges through integrated planning and multi-sectoral coordination. The discussions advocated for the mandatory adoption of the WEFE Nexus approach to develop sustainable solutions for interconnected global challenges. Efforts focused on scaling up pilot projects, overcoming existing obstacles, and integrating the WEFE Nexus into sectoral planning and policies, fostering inclusive and participatory processes for an integrated societal vision. The sessions presented recommendations from the Mediterranean Basin on adapting to climate change, particularly focusing on droughts and rapid flooding, and included topics on disaster risk reduction and management. Emphasizing the need for precise regulations on unconventional water resources, adequate treatment of effluents, and control of the water use cycle, the discussions underscored the necessity for quality data on water resources and



*Protect natural resources, sobriety in uses, management efficiency and develop the water mix with non-conventional resources.*

**Alain Meysonnier,**  
President of the Mediterranean  
Water Institute (IME)



demands, incorporating climate change scenarios for adaptive planning. Participants highlighted innovative solutions such as digitization, AI, new technologies, and contributions from human and behavioral sciences in managing water resources. They also discussed mechanisms to resolve conflicts over water use, clarify responsibilities and duties, and develop cross-border hydro-diplomacy actions. The sessions ultimately aimed for a comprehensive and integrated approach to water management in the Mediterranean region.

The Mediterranean region highlighted six topics:

1. The water, energy, food, and environment approach
2. Water mix and a new vision of water demand by 2050
3. New sources of water financing, performance monitoring, and blended finance
4. Digitalization and new solutions dedicated to the rational use of water resources
5. Prevention and management of drought and flood
6. Regulation, right for water and water laws, and conflict prevention/resolution

## Outcomes



The session highlighted the urgent need for multifaceted approaches to address water management challenges in the Mediterranean region, emphasizing the critical role of modern tools for climate change impact forecasting and risk management. Speakers stressed the importance of adopting transformative approaches to development and management and the necessity of facilitating intersectoral and interstate cooperation to create resilient water governance structures.

Governance, cooperation, and hydro-diplomacy were central themes, with a focus on combining innovative technologies, local know-how, and traditional practices for sustainable water management. Developing cross-border hydro-diplomacy actions and applying solidarity across basins were identified as essential for resolving

conflicts among sectors and ensuring equitable water distribution.

The session also emphasized the significance of knowledge and innovation, particularly in the realm of digitalization and new solutions for efficient resource use. Prioritizing innovations and technological solutions for resource protection and efficiency, raising awareness among decision-makers about digitalization technologies, and utilizing remote sensing for water resource management were highlighted as key strategies.

The Marseille Statement of the Mediterranean Local Authorities called for the promotion of knowledge dissemination, the development of dynamic adaptation pathways, and support for local governance and solidarity-based financial models. The statement stressed the importance

of local authorities and stakeholders in integrated water management.

In conclusion, the session advocated for integrated and participatory management of all types of water resources and associated demands within a realistic hydrological pre-planning framework. The use of non-conventional water, which is costly and energy-intensive, was deemed unsuitable without considerable efforts to reduce water and energy consumption both prior to and in parallel with such usage, to minimize water losses, overall consumption, and greenhouse gas emissions. That said, marine or brackish water, wastewater, rainwater, or runoff are new water resources that need to be mobilized through desalination or recycling to move towards sustainable management of water resources. An international observatory platform for the exchange of experiences was discussed as timely idea. Wastewater and stormwater management, once considered only an

expense, is now becoming a significant resource in terms of water, energy, and fertilizers, which also plays a role in public health. Furthermore, the sessions made the following recommendations:

- Implement in each country modern tools (Early Warning Systems) for knowledge and prediction of the impacts of climate change on water management (floods and droughts) allowing adaptation and risk management
- Prioritize innovations, technological and regulatory solutions, adapted to produce more and consume less, protect resources, and improve the performance of services
- Develop cross-border water-diplomacy actions and apply the same method to solidarity between basins in the same country as well as to conflicts of use between sectors of activity in the same sub-basin

#### Key Messages from the Mediterranean Region

- **Integrated Management:** Ensure integrated and participatory management of all water resources and demands with a realistic hydrological pre-planning framework
- **Non-Conventional Water:** Prioritize efforts to reduce water and energy consumption before using costly, energy-intensive non-conventional water sources. Mobilize marine or brackish water, wastewater, and rainwater through desalination or recycling, and establish an international "Observatory" for experience exchange
- **Wastewater and Stormwater:** Recognize wastewater and stormwater as valuable resources for water, energy, and fertilizers, contributing to public health.
- **Climate Adaptation:** Implement modern tools (Early Warning Systems) for predicting and managing the impacts of climate change on water, including floods and droughts
- **Innovation and Regulation:** Prioritize innovations and regulatory solutions to produce more, consume less, protect resources, and improve service performance
- **Water Diplomacy:** Develop cross-border water-diplomacy actions and apply similar methods to intra-national basin solidarity and sectoral conflict resolution in sub-basins



Myanmar-Saw Aung Thein Htun-Fishing Family on Inle Lake-PSA HM



*The Mediterranean faces increasing water stress due to climate change, necessitating focused strategies and stakeholder engagement. Given the rapid changes in climate phenomena, a national Early Warning System (EWS) is crucial to effectively respond.*

Marc Garcia Manzana,  
President of MENBO



# Emphasizing Enhanced Resilience Climate Change as a Solution to Americas

**Regional Coordinators:** Benedito Braga (World Water Council) & Sergio I. Campos G (Inter-American Development Bank)



Americas Regional Process Synthesis Session

## Background

The Americas regional session at the World Water Forum focused on water challenges and solutions across North, Central, South America, and the Caribbean. A key theme was the importance of strong water infrastructure and financing. The session addressed the diverse challenges facing water and sanitation sectors in North America, including urban issues like aging infrastructure, cyber threats, and contaminants, as well as agricultural challenges posed by extreme weather events and climate variability affecting both rainfed and irrigated areas. Despite well-developed water and wastewater infrastructure in the United States, ongoing needs include upgrading facilities to meet higher discharge standards and expanding

capacity due to population growth. The importance of innovative financing schemes to bridge funding gaps in the water sector was also highlighted.

Furthermore, the session emphasized the critical role of water in achieving food security, social stability, and economic development, aligning with the Agenda 2030 goals. In South America, where international transboundary basins like the Amazon and La Plata Basin are significant, the session focused on current challenges to water security and strategic actions to strengthen it. International cooperation in water management was showcased as essential for fostering sustainable development and regional integration, promoting peace and stability across South American countries.

## Key Messages from the Americas Region

- Dialogue with Governments. About 48 focal points within the governments of Latin America and the Caribbean were confirmed, committed to the delivery of official data from the sector for the drafting and development of subregional reports carried out by the coordinators and academic partners of the process.
- Regional Workshops. Six regional workshops

focused on World Water Forum themes (Virtual, Brazil, Guyana, Argentina, Panama) were organized to encourage the participation of civil society organizations, youth groups, and various entities to provide their perspective on key issues of the sector in the Americas.

- Call for Proposals. A total of 486 proposals were received in an open call for all types of actors in the water and sanitation sector. Among these cases, 269 experiences passed the first stage of evaluation.

## Objective

The Inter-American Development Bank led the Americas Regional Process at the 10th World Water Forum, emphasizing their commitment to identifying, sharing, and promoting exemplary practices and experiences in water and sanitation. The initiative aims to provide inspiration and guidance for sustainable water management across the region.

In summary, the Americas Regional Process was a testament to the region's commitment and determination to address water challenges with innovation, collaboration, and long-term vision. Key takeaways included:

- Strengthening institutions and regulatory frameworks as well as coordination mechanisms at all levels
- Developing monitoring systems to support decision-making, evaluating the effectiveness of water management instruments and enhancing transparency
- Promoting dialogue and coordination mechanisms, and capacity building through existing regional platforms and instruments, particularly in transboundary basins.

- Fostering an intersectoral and multilevel perspective to diversify financing and promote greater flexibility in financial management.
- Conducting applied research and capacity building as key steps in the development and establishment of circular economy systems that allow greater efficiency in the use of water resources
- Investing in the development of institutional human capital capacities and promoting career advancement to integrate young people and support generational renewal



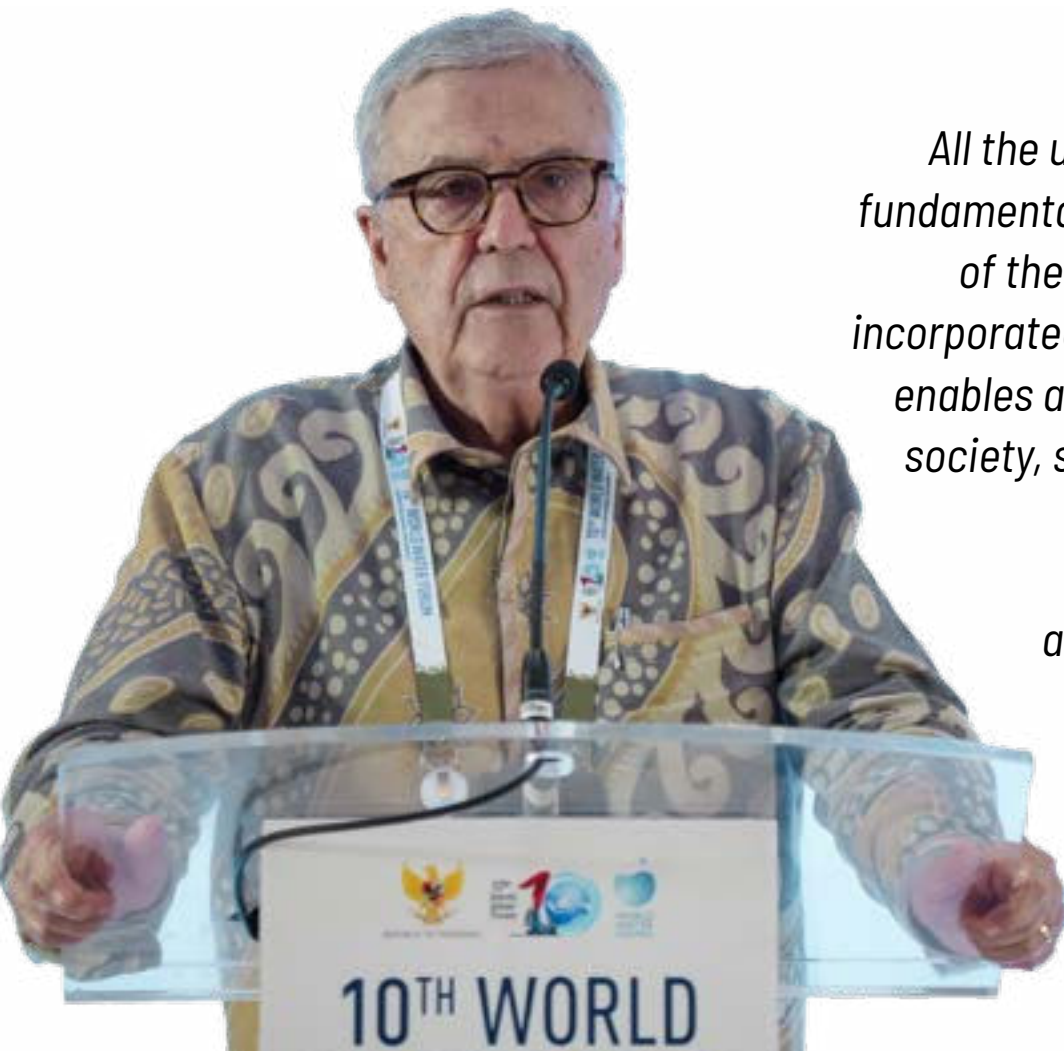
America Regional Process RA2: Using knowledge and innovation to finance the water sector

## Outcomes

The Americas regional session at the 10th World Water Forum underscored the breadth of water challenges across the continent. Subregional discussions distilled essential insights, policy suggestions, and actionable plans from four regional sessions and a synthesis session. These outcomes varied from targeted solutions for specific issues or regions to broader recommendations relevant across the Americas and globally. The discussions in the Americas emphasized the wide-ranging nature of water issues confronting the region.

In the North America subregion, highly developed water and sanitation sectors are bolstered by robust

legislative frameworks such as the Clean Water Act of 1972 and the Safe Drinking Water Act of 1974, each marking over 50 years of effective regulation. These acts mandate stringent standards and federal funding mechanisms, with the federal government typically financing 75-80% of water treatment and sanitation infrastructure costs through grants and revolving funds. This financial model has been pivotal in maintaining and upgrading infrastructure throughout the continent. Private funding in the United States remains limited due to the comprehensive federal support structure in place. Looking ahead, North America plans to continue enhancing its infrastructure under this proven financial model and hopes that



*All the uses of water that are fundamental to the development of the continent need to be incorporated into legislation that enables active participation of society, strong involvement of local and national governments, and collaboration with to foster innovation and knowledge.*

**Benedito Braga,**  
Honorary President of the  
World Water Council

other regions can draw lessons from its successful approach to financing water and sanitation projects.

The South America subregion possesses approximately 25% of the planet's water resources, including the largest river basin, expansive wetlands, significant aquifers, crucial lakes, and the driest desert. As regional processes unfolded leading up to the 10th World Water Forum in 2024, the continent grappled with pressing water issues, exemplified by floods in Brazil that highlight the real impacts of climate change. Challenges persist in water resource management due to institutional weaknesses, inadequate funding, limited hydrological knowledge, and insufficient monitoring systems. Although there is a notable but insufficient number of well-trained professionals and technicians, integrating youth into the water sector and fostering innovation and knowledge could pave the way for a promising future in water management across South America. The discussions also noted challenges due to weaknesses in monitoring, funding and knowledge.

In the Central America subregion, irrigation represents the highest water consumption, underscoring the need to prioritize expanding technical expertise and efficiency in irrigation practices to optimize water use effectively. Strengthening effective information and communication mechanisms is essential to promote co-responsible water management among diverse stakeholders in the region. Moreover, accelerating the transition towards a circular economy that integrates clean energy solutions is critical to addressing water scarcity challenges sustainably and advancing economic resilience. The session also emphasized the need for improved irrigation efficiency and collaboration on water management across Central America.

The Caribbean subregion, known for its diversity and vulnerability to climate change impacts, faces escalating challenges with water availability and security exacerbated by climate variability. Community-based interventions are crucial to

mitigate these effects. There is a growing sense of urgency among decision-makers regarding water resources management and governance, driven by the increasing frequency and intensity of disasters that pose credible threats to the region's economy. Establishing robust monitoring systems for informed decision-making, enhancing institutional regulatory frameworks, and coordinating mechanisms across all levels are imperative. Promoting dialogue and coordination for capacity building, innovation, and financing is essential to enhance flexibility in infrastructure and resilience against climate-related water risks in the Caribbean. Participants further highlighted the region's vulnerability to climate change and the need for improved monitoring and disaster preparedness.

Notably, the Latin America Water Council (LAWC) officially launched on May 20, 2024 at the Latin America Pavilion amidst recent devastating floods in Brazil that have impacted thousands, highlighting the urgent need for robust infrastructure and adaptive management strategies in the face of climate change. LAWC's primary goal is to ensure the protection and conservation of the region's precious water resources. By fostering unity and collaboration among stakeholders, LAWC aims to develop comprehensive strategies to address water challenges effectively. Inspired by the global leadership of the World Water Council, LAWC is dedicated to working alongside the World Water Council in advancing sustainable water management practices throughout Latin America. LAWC stands as a testament to the region's unwavering commitment to a sustainable future for the region, reinforcing our determination to enhance resilience and prosperity through proactive water stewardship and innovative solutions.

Overall, the Americas session highlighted the diverse water challenges and solutions across the region, with a strong emphasis on collaboration, knowledge sharing, and infrastructure investment to ensure sustainable water management.

# Addressing African Water Scarcity Issues with Local Solutions

**Regional Coordinator:**  
Rashid Mbaziira (African Ministers' Council on Water)



## Background

In preparation for the 10th World Water Forum, the Africa Regional Process reflected on the journey since the launch of the Africa Water Vision 2025 at the 2nd World Water Forum in 2000. This visionary initiative aimed to achieve equitable and sustainable water resource management across Africa, fostering poverty alleviation, socio-economic development, regional cooperation, and environmental sustainability. The vision established a framework with clear milestones and targets categorized under four themes: improving governance of water resources, enhancing water management practices,

meeting urgent water needs, and strengthening financial support for a sustainable water future.

The African Water and Sanitation Sector Monitoring (WASSMO) System played a crucial role in tracking progress toward these targets, alongside other continental and global commitments. It served as a key source of information for preparing key messages from the Africa Regional Preparatory Process for the 10th World Water Forum. This process involved assessing achievements, learning from challenges encountered, addressing emerging issues, and

identifying unfinished tasks as Africa prepares to transition into the post-2025 era.

The Regional Process highlighted persistent challenges, including inequitable access to water and sanitation, which hinder economic productivity and labor efficiency. Africa's underdeveloped water infrastructure exacerbates vulnerabilities to climate change, health crises, and food system shocks, while also compromising resilience against water-related disasters. Ineffective water governance systems and management structures

further constrain Africa from harnessing the full socio-economic potential of its water resources.

The African session at the 10th World Water Forum aimed to tackle water challenges and achieve sustainable water security for the continent. Participants discussed aligning water visions with African Union goals and utilizing innovative financing methods like carbon markets and blended finance. A key message was the importance of cross-border collaboration, with data sharing and collective management of water sources identified as essential.

## Objective

The African Regional Process at the 10th World Water Forum aimed to align the post-2025 Africa Water Vision with the African Union's Agenda 2063, integrating principles that prioritize the value of water as the cornerstone of its action framework. This alignment sought to secure financing and instill confidence among investors, fostering a robust water and sanitation economy that benefits both business and society across Africa. A key focus was on investing in institutional and human capacity development, particularly in integrated information systems. These systems are essential

for making science-based decisions that enhance climate resilience in the water and sanitation sector, ensuring sustainable development and adaptation to future challenges in the region.

Overall, the African Regional Process at the 10th World Water Forum aimed to catalyze actionable strategies and commitments that align with the Africa Water Vision's objectives, striving towards sustainable development, resilience, and equitable access to water and sanitation across the continent.



## Outcomes

The discussions at the World Water Forum will influence the upcoming Africa Water Vision meeting in October 2025. The outcomes will serve as a foundation for future water management policies and actions across Africa.

Water sources in Africa are largely situated across national borders, underscoring the critical importance of interstate cooperation. Africa

emphasizes the principle of collaboration and participation from partners in every sector to sustain resources, reduce unnecessary competition, and jointly address existing issues. Funding and data availability are key issues being discussed across the continent. While water provision aims to meet the needs of all sectors, there is a lack of discussion on how to optimize financing to achieve these

objectives. Although financing has been directed toward all member countries, there is a need to assess how these countries can enhance their water profiles. Technology and its applications are highly valued, but the focus should be on inclusive solutions that involve everyone, including vulnerable communities. Emphasizing needs-

based solutions and compliance will lead to better sanitation services, which in turn will support the implementation of new technologies. The session reiterated the involvement of multiple sectors is essential to effectively address unresolved issues and achieve sustainable water management.

### Key Messages from the Africa Region

- Ensuring water security for current and future generations in Africa
- Consolidating climate change and water-related disaster risk management and early warning capabilities and accessing innovative financing including climate finance to safeguard lives, assets, and infrastructure
- Investing in research and adopting emerging technology for generating, applying, and networking knowledge and information to strengthen good water governance, science-based water resources management, and climate-resilient WASH services delivery
- Adopting innovative financing models and partnerships to leverage investment including combined public finance, development finance, and private sector finance
- Strengthening institutions and structures that anchor peaceful coexistence and security among States in shared water systems in accordance with the applicable principles of international water law
- Promoting a human rights-based approach to the provision of water, sanitation, and hygiene services, and improving environmental integrity through wastewater and water quality management
- Recognising the combined social and economic



*Africa emphasizes the principle of cooperation and participation from partners in every sector to sustain resources, reduce unnecessary competition, and collaborate in decision-making to address existing issues.*

*Rashid Mbaziira, Executive-Secretary of AMCOW*





## Bridging Water Gaps: Collaborative Approaches in the Asia-Pacific

**Asia and the Pacific Regional Co-Coordinator:** Changhua Wu (Asia-Pacific Water Forum, APWF), Lance Gore (Asian Development Bank, ADB), Yongdeok Cho (Asia Water Council, AWC)

**Northeast Asia:** Lead-Japan Water Forum, Co-lead-Changjiang Water Resources Commission

**Southeast Asia:** Lead-GWP Southeast Asia, Co-lead-NOC, MPWH-coordinated with BAPPENAS

**South Asia:** Lead-Women for Water Partnership, Co-lead-SaciWATERs & Smart Water Solutions (Nepal)

**Central Asia:** Lead-Chair EC IFAS, Co-lead-GWP Central Asia

**Pacific Islands & Oceania:** Lead- Secretariat Pacific Community (PICs), Co-lead-Australian Water Partnership (AWP)

### Background

Asia-Pacific Regional Process RP2: Incorporating Sociocultural Dimensions in Water Resources Management: Policies, Practices, and Challenges

The Asia-Pacific region has a large population with uneven access to clean water and sanitation. Urban areas struggle to keep up with water demands due to rapid growth, while rural areas lack basic infrastructure. Small Island Developing States (SIDS) face the most significant challenges, with limited access to water and sanitation and high vulnerability to climate change.

Unequal access to water resources and weak governance have made it difficult to address these challenges. Effective solutions require a sustainable and integrated approach that considers the region's unique characteristics and the diverse needs of its communities.

To improve water management, the region needs to leverage science and innovation to develop better infrastructure. Collaboration among stakeholders, including governments, research institutions, and private sectors, is crucial. Additionally, solutions should reduce inequality, promote gender and social inclusion, and utilize innovative financing mechanisms.

The Asia-Pacific region prioritizes developing sustainable and inclusive water management practices. This can be achieved through collaborative efforts at all levels, from local interventions to regional knowledge sharing. These actions are necessary to achieve regional prosperity and meet the SDGs.

### Objective

The Asia-Pacific Regional Process of the 10th World Water Forum envisioned comprehensive water management plans rooted in sustainability, resilience, and inclusivity. These plans will be developed through collaboration among governments, research agencies, civil society organizations, and private sector stakeholders. Locally tailored solutions, shared pathways, enabling conditions, tools and methodologies, and showcases of best practices are central components of these plans.

The Asia-Pacific Regional Process played a significant role by providing a platform for various regions to share their specific water challenges and priorities. This ensures a comprehensive understanding of global water issues faced across different contexts. The process also fostered the exchange of best practices and localized knowledge between sub-regions, enriching discussions and leading to more effective solutions.

Furthermore, the Asia-Pacific Regional Process focused on practical solutions. It delved deeper into local case studies compared to the Thematic Process, which tackled broader themes. This knowledge informed policy recommendations and laid the groundwork for concrete action plans at the local level.

The Asia-Pacific Regional Process aimed to strengthen regional stakeholders and ensure local contexts are incorporated when crafting global water solutions. It achieved this through several methods, including identifying sub-regional water priorities, facilitating dialogue and cooperation among stakeholders, and encouraging cross-sub-regional learning.

In summary, the Asia-Pacific Regional Process objectives were formulated as follows:

- Specify regional priorities and related tangible local action plans to share and implement solutions to the priorities identified in the regions
- Facilitate regional dialogues and cooperation on local/regional water-related challenges by identifying local and regional water priorities and developing solutions to those challenges
- Catalyze the exchange of experiences, ideas, lessons, and potential solutions among different regions on common water issues through a set of inter-regional dialogues
- Strengthen regional stakeholders of water, able to raise the political profile of water in the respective region

#### Water Overview of the Asia-Pacific Region

- Over 500 million people are without access to basic water supplies, over 1.14 billion people are without access to sanitation
- 80% of wastewater generated by cities is discharged untreated
- There is a rising demand for water for food and energy production, outdated infrastructure
- Climate change impacts are primarily felt through water with A&P the most disaster-affected region globally with frequency and magnitude of natural hazards and impacts are likely to increase
- There is fragmented governance, depleting environmental quality and resources, and a lack of an enabling environment for private financing and operational sustainability
- There is a slow pace of technology adoption, innovations, digitalization, and earth

## Outcomes

The 10th World Water Forum's Asia-Pacific regional sessions highlighted the diverse water challenges faced across the continent and yielded a wealth of valuable insights. Subregional chapters captured key messages, policy recommendations, and specific action plans from the 11 topic sessions and five synthesis sessions. These outcomes ranged from highly specific solutions for certain topics or regions to broader recommendations applicable across the entire Asia-Pacific or even globally. The World Water Forum's Asia-Pacific session highlighted the diverse water challenges faced across the continent.

The Northeast Asia subregion recognized the importance of science and data sharing for managing river basins in the face of climate change. Additionally, they emphasized the need to incorporate local knowledge, traditions, and customs into water resource management (WRM) strategies. They highlighted that youth engagement and knowledge sharing between generations are crucial for addressing water challenges, citing examples such as filtration systems in Mongolia and traditional irrigation practices in China.

To tackle water scarcity, the Southeast Asia subregion emphasized efficient management and strategic allocation of water resources, including implementing reliable systems to track water usage. These measures are particularly important for supporting agriculture and ensuring long-term water sustainability, especially considering the competing needs of different sectors.

In South Asia, inadequate water, sanitation, and hygiene (WASH) services disproportionately affect marginalized groups, especially women, girls, people with disabilities, and those facing socio-economic challenges. The subregion's sessions emphasized the importance of ensuring equitable access to WASH



for all, which is achieved through promoting gender equality, disability inclusion, and social inclusion (GEDSI). South Asia's vulnerability to climate change demands significantly increased investment in WASH services, particularly for women and youth. This investment should focus on building capacity and advocating for disaster risk resilience. Additionally, strengthening gender-responsive policies, inclusive institutions, and community engagement is crucial through both short-term and long-term initiatives leading up to 2030.

The Central Asia subregion views water availability as essential for improving their social and economic well-being. Achieving this requires strong cooperation between countries that share water resources (transboundary cooperation) and taking urgent action. To achieve this, the session proposed incorporating water security and climate resilience

goals into national climate change adaptation plans. Additionally, participants emphasized the importance of accountability and transparency to attract funding and ensure positive outcomes. Central Asian countries, along with their development partners, are committed to building capacity for water project development and mobilizing financial resources from both domestic and international sources.

The Pacific Islands and Oceania subregion emphasized the unique challenges faced by SIDS on the frontlines of climate change. The session called for increased support for these island communities, focusing on developing, implementing, sharing, and scaling up locally driven solutions. Strengthening knowledge-sharing partnerships and improving access to funding mechanisms such as climate financing are seen as crucial ways to achieve this. Collaboration between public and private sectors,

legislative commitment, and local ownership are also important. Education and sustainable practices are key for these island nations.

The discussions also highlighted the importance of social inclusion and gender equality in water management. Speakers pointed out the challenges of inadequate sanitation services, particularly for women in developing countries. They emphasized the need for community involvement and government investment that considers both technical and social aspects of water management. By working together and embracing new technologies, Asian nations can build a more secure water future for all.



*This forum produces new knowledge and gives rise to new initiatives, and this is good for the sustainability of water resource management in Asia in the future.*

*Changhua Wu,  
Chair of APWF Governing Council*





04

HARMONIZING  
THEMATIC DYNAMICS  
FOR A SUSTAINABLE  
FUTURE

# CHAPTER 4: HARMONIZING THEMATIC DYNAMICS FOR A SUSTAINABLE FUTURE

## Background and Objective

The Thematic Process provided the substantive underpinning of the 10th World Water Forum. The process was structured around a main theme, “Water for Shared Prosperity,” and featured six sub-themes, each containing five topics. The goal was to exchange best practices and experiences on those priorities. The forum utilized the Thematic Process to develop cooperative and collaborative approaches and partnerships for addressing specific technical and political challenges. The outcomes of this process are expected to encourage policymakers to apply better solutions and to persuade stakeholders to commit to actions. Participants in the Thematic Process developed and facilitated sessions aimed at showcasing concrete initiatives leading to tangible solutions for imminent water challenges.

The sub-themes derived from the “Water for Shared Prosperity” initiative were designed to address the multifaceted challenges of water management comprehensively. These sub-themes are:

1. **Water Security and Prosperity:** Water security and related prosperity are among the most critical issues the world has been facing for decades.

Water insecurity is becoming a threat in a world that is rapidly changing due to the impacts of population growth, unsustainable development, rising inequality, climate change, and the resulting intensification of competition over water resources.

2. **Water for Humans and Nature:** Water is an indispensable resource for all life on Earth, supporting both humans’ existence and the natural world. Humans depend on healthy, functioning ecosystems, which provide us with a plethora of goods, services, and well-being. The degradation or destruction of freshwater ecosystems inevitably leads to acute problems affecting not only aquatic biodiversity but also our livelihoods and health.

3. **Disaster Risk Reduction and Management:** Climate change has increased the frequency and severity of extreme weather events, such as floods, droughts, heat waves, and storms, which are linked to the hydrological cycle. Disaster risk reduction and management was a crucial topic discussed at the 10th World Water Forum. Moreover, Indonesia, the host country of this event, is frequently struck by water-related disasters, particularly floods and cyclones, which gives high priority to this issue.



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4. **Governance, Cooperation, and Hydro-diplomacy:** Good water cooperation amongst global actors, as well as sound governance within the water community and beyond, including governments, international organizations, think tanks, civil societies, and other stakeholders, is vital to addressing the escalating competition over water resources, improving mutual understanding and identifying acceptable trade-offs between all water users, including other sectors. Hydro-diplomacy and international negotiations, often based on legal instruments, serve as valuable tools for promoting peace mediation and conflict prevention.
5. **Sustainable Water Finance:** The lack of funding for water is another crucial issue to address, as millions of people worldwide still suffer from insufficient access to clean water and sanitation, unreliable or unavailable water supply, and increased exposure to water-borne diseases and water-related disasters induced by climate change. Rapid urbanization creates additional challenges for water supply and sanitation in densely populated areas, while, rural and natural areas are often neglected.
6. **Knowledge and Innovation:** Scientific progress and technological innovation are rapidly advancing

in the water sector, with new tools, instruments, and methodologies becoming available. This wealth of knowledge, including traditional and indigenous know-how, needs to be shared, taught, widely disseminated, and scaled up to effectively address the escalating water challenges the world community is facing.

The Thematic Process was closely interconnected with other processes. The forum recognized that the sub-themes—as common challenges and enabling factors—also needed to be discussed in geographical contexts within the Regional Process. The Thematic Process was also associated with the Political Process, acknowledging that each main topic addressed in every commitment, policy, discussion, and recommendation of the political sessions notably revolved around the sub-themes. To ensure that all processes were aligned with a coherent mission to facilitate action, all process commissions engaged in regular communication and exchanged regarding progress.

## Objectives

The main aim of the Thematic Process was to foster in-depth discussions and share good practice related to the relevant sub-themes and topics, considering global challenges and enabling conditions. This included elaborating

on the technical content and its implementation, transitioning from debate to action, and seeking concrete responses and practical, customized solutions.



## Expected Outcomes and Results

The anticipated outcomes included the implementation of measures at various political levels, such as policy measures, solutions, action plans, and commitments. Additionally, the session aimed to mobilize public and private stakeholders from both within and outside the water community and to develop tangible methodologies—both technical and policy-based—with practical strategies to execute plans and implement solutions. The deliverables were sub-theme summaries, topic summaries, and session summaries, all prepared by coordinators of these three levels. This integrated approach ensured that the session's objectives, expected outcomes, and deliverables were interlinked, providing a comprehensive framework for addressing water management challenges.

The outcomes of the Thematic Process were multifaceted, contributing significantly to global water-related solutions. Numerous initiatives were launched during the forum, reflecting the commitment of stakeholders to take actionable steps in addressing water challenges. Beyond these tangible initiatives, the process also fostered a rich dialogue among participants, promoting the exchange of good practices and knowledge. It provided a platform for diverse voices, including those that are often unheard, such as Indigenous communities and local stakeholders, allowing them to share their experiences and perspectives. This inclusive environment not only facilitated meaningful discussions but also encouraged innovative approaches to solving water-related issues across various sectors and regions.

## Thematic Process Session List

Sub-theme	Topic	Session Code	Title
SUB-THEME 1. WATER SECURITY AND PROSPERITY	Sound water supply and demand management	T1A1	How to implement IWRM for sustainable development in the context of a changing climate
		T1A2	Nature-based solutions/ ecosystem protection and restoration to improve water supply
		T1A3	Enabling consumptive water use reduction and water savings: rRole of good governance, technological solutions and sustainable financing
		T1A4	Can utilities be incentivized to supply less and reduce demand while remaining viable?
	Circular economy in the water sector and non-conventional water resources	T1B1	The governance and building blocks for circular water and resource management for food security and resilient cities
		T1B2	Implementing circular water and resource management for food security and resilient cities
	Water for food and agriculture	T1C1	Solutions for managing water for agriculture within river basins
		T1C3	Revitalization of existing irrigated areas to be water-wise and climate-smart
		T1C4	Effective governance approaches for agricultural water management
	Water for eEnergy	T1D1	Boosting renewable energy generation from water and wastewater
		T1D2	Strengthening regional commitment to hydropower and water and sanitation-related renewable energies
		T1D3	Regulatory frameworks that can boost renewable energy implementations while safeguarding the environment
	Water insecurity and development	T1E1	Creating water justice through fair allocation and water rights for sustainable development
		T1E2	Dealing with water pollution by scientific planning and full involvement
		T1E3	A workable framework to address social and economic vulnerability under water-related disasters

Sub-theme	Topic	Session Code	Title
SUB-THEME 2. WATER FOR HUMANS AND NATURE	Water quality improvement	T2A1	Road Map for wWater Quality mMonitoring and aAssessment: From ecological status assessment to planetary blue health under Cclimate Cchange
		T2A2	Accelerating wWater Qquality ilmprovement: avoid, rReduce, rRecycle and rReuse to solve the water pollution enigma
		T2A3	The bBlue mMirror pParadox: hHow dirty waters support the One-Health approach in pPublic and eEnvironmental hHealth mMonitoring
	Conservation and restoration of freshwater ecosystems and biodiversity	T2B1	Financing conservation and restoration of freshwater ecosystems
		T2B2	River life: wWater and ecosystem connectivity and ecological flows
		T2B3	Evidence for and valuation of water-related nNature-based sSolutions
	Safe drinking water for all	T2C1	Policies and approaches to implement the human right to safe water for the most vulnerable
		T2C2	Realizing SDG 6 (access to water targets) in fragile and humanitarian contexts
		T2C3	People and communities: market-based solutions to safe drinking water access
	Water Sanitation and Hygiene (WASH) for all	T2D1	Enabling environment for the development of sanitation services and hygiene
		T2D2	Access to sanitation and hygiene for all at the household level, in schools, and in healthcare facilities with specific attention to the poor and the vulnerable people
		T2D3	Towards a circular economy transition through safe collection, treatment and resource recovery of wastewater and fecal sludge
	Integrated Water Resources Management (included IRBM, ICZM, S2S, WEFE Nexus, etc.) and cross-cutting, cross-sectoral approaches	T2E1	Water resources management across borders, basins, and scales from sSource to sSea
		T2E2	Conjunctive and integrated management of surface and groundwater resources: quality and sustainable use
	1 <sup>st</sup> cross-cutting session on sub-theme 2	T2CC1	One Health: linking water for humans and nature through water quality at a basin scale: new approaches and new technologies

Sub-theme	Topic	Session Code	Title
SUB-THEME 3. DISASTER RISK REDUCTION AND MANAGEMENT	Integrated flood prevention and management	T3A1	Community-based pParticipation: cCombining innovative technologies and approaches with local wisdom
		T3A2	Climate resilient flood risk management approaches: towards a greater resilience in the face of climate change
		T3A3	From local to national flood risk management: strengthening collaboration and communication between different governance levels
	Drought prevention and management	T3B1	Best practices and drought management planning including drought impact mitigation
		T3B2	Technologies, financing, stakeholders, and regional cooperation for drought prevention and management
	Ecosystem-based DRR in the water sector	T3C1	Grassroots to tTreetops, mountains to coasts: iInvesting in eEco-DRR for sSustainable fFuture
	Climate-smart, sustainable, and improved resilience of water infrastructures	T3D1	Extreme climate and its impact on water infrastructure
		T3D2	Improving the resilience of water infrastructure to climate change
		T3D3	Too much, too little, too polluted: - wWater sSecurity for rResilient, lLivable cCities
	Early warning systems for all and eEmergency response mechanisms, (included preparedness plans and disaster scenario analysis)	T3E1	Early Warnings for All (EW4All): lLearning from transversal cases
		T3E2	Accelerating innovation in Early Warning Systems (EWS): a call to action across all pillars
		T3E3	Improving emergency response in water-related disasters
	1 <sup>st</sup> cCross-cutting session on sub-theme 3	T3CC1	Adapting to extreme hydrological events induced by climate change for sustainable development
	2 <sup>nd</sup> cCross-cutting session on sub-theme 3	T3CC2	Science-based policy to make DRR actionable from local to global

Sub-theme	Topic	Session Code	Title
SUB-THEME 4. GOVERNANCE, COOPERATION AND HYDRO-DIPLOMACY	International collaboration at all levels, incl. transboundary and cross-border cooperation	T4A1	Integrating and implementing cooperation at all levels for water for shared prosperity
		T4A2	Transboundary and cross-sectoral dialogue for peace and water resilience
		T4A3	Innovative finance for transboundary and cross-border cooperation
	Decentralized cooperation (e.g. at RBCs, regional & local level)	T4B1	Decentralized water management: making it work across levels of government
		T4B2	Decentralized cooperation towards the achievement of the SDG 6
		T4B3	Thinking outside the box: making decentralized cooperation work for water
	Enhanced cross-sectoral dialogue and cooperation	T4C1	Together apart: linking ocean and freshwater policies for a thriving blue economy
		T4C2	What goes around comes around: applying a circular lens to water policies
		T4C3	Handbook for the local implementation of the OECD principles on water governance
	Active stakeholder involvement and public participation	T4D1	Turning crises into opportunities: how cCivil sSociety eEngagement helps solve water issues
		T4D2	Every word counts: the role of marginalized people in water policy making
		T4D3	Local culture and knowledge for better water management
	Transparent and accountable institutions and legal frameworks, integrity and equity (including gender, youth, and minorities)	T4E1	Transparent and accountable public participation for water management: where do we stand in national and international law?
		T4E2	Legal, institutional and policy pathways for strengthening water governance in the face of contemporary challenges.
		T4E3	Protecting the rights of women, children and marginalized groups
	Cross-cutting session on sub-theme 4	T4CC1	Hearing the uUnheard: wWater jJustice for hHumans and nNature

Sub-theme	Topic	Session Code	Title
SUB-THEME 5. SUSTAINABLE WATER FINANCE	Revisiting of international water financing architecture (incl. new economic approaches) with emphasis on transparency, accountability, fairness & equity	T5A1	New eEconomic aApproach
		T5A2	Reform of global financial water architecture
	Innovative and sustainable funding, financing and delivery mechanisms	T5B1	Bridge building through transboundary water finance
		T5B2	Financing: bBeyond banks. Engaging more actorsa wider range of investors in water finance
		T5B3	Delivery: Achieving a 'net zero' equivalent for water and the role of partnerships
	Improved funding for basic access to safe water and sani-tation for all at all scales	T5C1	Multi-stakeholder coordination in financing safe water and sani-tation services
	Special schemes and incen-tives promoting green finance	T5D1	Making the green investment case for innovation to achieve water resilience and improved governance
		T5D2	Innovative and smart ways to green finance for water services and conservation
	Enhanced funding to cope with water crises, water disas-ters and for climate resilience	T5E1	Recovery funding to cope with water crises, water disasters and for climate resilience
		T5E2	Multi-stakeholder approach for reducing disaster risks and em-bracing climate change adaptation
	1st cCross-cutting session on sub-theme 5	T5CC1	Evidence-based financing for crises, recovery, and resilience
	2nd cCross-cutting session on sub-theme 5	T5CC2	Equitable finance: accountability frameworks for just water part-nershipsEquitable and accountable legal and institutional frame-works + Just water partnerships

Sub-theme	Topic	Session Code	Title
SUB-THEME 6. KNOWLEDGE AND INNOVATION	Smart Water Management and Technological Innovation	T6A1	Challenges and opportunities for applying Smart Water Management: from concept to global practice
		T6A2	Innovations in Smart Water Management worldwide
		T6A3	Methods and tools for measuring and improving Smart Water Management Capabilities (Water4All)
	Accelerating transformative, innovative and integrative approaches: commitments from the UN Water Conference, 10th World Water Forum, and beyond.	T6B1	Framing legacy and innovative approaches to understanding and implementing organizational change
		T6B2	New interventions and integrative approaches for solving complex challenges
		T6B3	Transformative change for the future Water-Smart Society: linking science, policy and action
	Respect and valuation of indigenous, traditional, and community-based knowledge systems and integration of their practices into existing water management policies	T6C1	Successful water and ecosystem management through Indigenous and Local Knowledge (ILK)
		T6C2	Rights, Resilience, and Representation: ILK on Water Management amidst Climate Crisis
		T6C3	Ensuring Gender Equality and Social Inclusion to achieve climate-resilient WASH for all
	Upscaling of water information systems	T6D1	Innovating in data production
		T6D2	Boosting data sharing and governance
		T6D3	Transforming and upscaling data into information for science and digital based decision
	Enhanced access to education & training on water (incl. hydrology-hydrometeorology-hydrogeology) & new concepts	T6E1	Increasing financing to vocational and communities training in the water sector
		T6E2	Strengthening the capacities of institutions, professionals and stakeholders of water resources management and utilization
		T6E3	Increasing smart access to water-related educational materials
	1st Cross-cutting session on sub-theme 6	T6CC1	Ethical Water Futures: Culture as Crucial Force for Water Sustainable Development

Sub-theme	Topic	Session Code	Title
<b>CROSS CUTTING SESSIONS</b>			
Sub-themes 1 & 3		CC1	How to educate and meaningfully involve people in the tough decisions on climate mitigation and adaptation?
Sub-themes 1, 2 & 3		CC2	Climate resilient infrastructure: blending green and grey, traditional and non-traditional approaches to meet water security needs in a climate changed world.
Sub-themes 2, 1, 3 & 5		CC3	Climate-Water-Energy-Food-Ecology system of systems Water-food-energy-ecosystems Nexus: The Business case for integrated water resource management and successful financial and governance models
Sub-themes 5 & 2		CC4	Securing the Stream: Transformative and Participatory Financing for Water and Sanitation
Sub-themes 2, 1 & 3		CC5	Making Progress toward Climate Resilience: elevating the urgency of drought resilience for the water sector
Sub-themes 2 & 6		CC6	The case for water investments that deliver improved local human, societal and nature-based outcomes
Sub-themes 3 & 5		CC7	Enhance pre-disaster investment in water-related disaster risk reduction (DRR) for resilience
Sub-themes 3, 4 & 5		CC8	Towards better capacity development and collaboration on data, information, knowledge, and
Sub-themes 6, 1, 2, 3 & 4		CC9	innovation
Sub-themes 4, 1 & 2		CC10	Groundwater governance
Sub-themes 3, 4 & 5		CC11	Water related disaster risk reduction under climate change towards transforming to a resilient, sustainable, and inclusive society
Sub-themes 2, 4 & 5		CC12	Mainstreaming Nature-based Solutions in the Water Sector: practical solutions for common challenges
Sub-themes 5, 1, 2 & 3		CC13	Mobilizing 'wise' investments to address water crises, water disasters and to improve climate resilience
Sub-themes 5 & 4		CC14	Finance delivery models that serve the unserved
Sub-themes 4 & 6		CC15	The role of science for building capacity and dialogue across transboundary basins



## Sub-theme 1: Water Security and Prosperity

**Coordinators: Neil Dhot (AquaFed) & Thomas Van Waeyenberge (AquaFed)**

Water security and its connection to prosperity are among the most critical issues our world has faced for decades. Water insecurity is an escalating threat in a rapidly changing world shaped by population growth, unsustainable development, rising inequality, and climate change, which intensify competition for water resources

Population growth, unsustainable development, growing inequalities and climate change are factors that intensify inequitable access to water. To address this problem, the “Water Security and Prosperity” sub-theme highlighted several critical strategies for addressing global challenges and achieving sustainable development. Participants identified water security and sustainable management as fundamental priorities. They

emphasized the importance of integrating technological innovations to policy and governance frameworks. Participants also stressed the importance of interdisciplinary and international collaboration for effective knowledge sharing and solutions. They highlighted youth involvement and gender inclusion as vital for fostering innovative and inclusive approaches. Continuous innovation, education, and public awareness were identified as crucial for tackling water and energy challenges. The discussions highlighted the need for robust policies and strategic investments to support sustainable development. Looking ahead, the participants recommended focusing on hybrid solutions, community engagement, and inclusive, cooperative efforts to ensure water and energy security amid climate change.

## Sound Water Supply and Demand Management

**Topic coordinators: Henriette Faergemann & Dagmar Behrendt Kaljarikova (European Union – European Commission)**

The importance of policy and governance was highlighted, as effective governance, technology, and financing were identified as key components for driving sustainable water use. This involves recognizing the economic, social, and cultural values of water. The integration of water management with broader climate adaptation strategies was also highlighted. This ensures

that water management efforts are aligned with climate goals and are sustainable. The sessions facilitated the exchange of knowledge and innovative solutions, showcasing case studies and best practices which included the use of technology and governance models to improve water management.

## Circular Economy in the Water Sector and Non-Conventional Water Resources

**Topic coordinators: Patricia Mejias-Moreno (FAO) & Sasha Koo-Oshima (Sustainability Frameworks)**

Efficient water resource management is crucial for balancing water demands, addressing environmental impacts, and adapting to climate change. Effective governance and legislation, such as the EU’s Circular Economy Action Plan and water-use regulations, are essential for sustainable water management. Climate change adaptation measures, such as promoting reclaimed water and limiting irrigation expansion, are essential for river basins such as the Guadalquivir River. Agricultural practices and food security involve integrating economic, social, and technological solutions to address climate impacts. Private water operators

play a significant role in investing in infrastructure and promoting sustainable practices. A circular economy approach in Latin America was presented as essential for addressing asymmetrical water distribution, frequent droughts, and promoting energy-generating wastewater treatment plants. The discussions highlighted the need for a coalition of stakeholders to address water reuse and preservation challenges. Participants also recommended projects based on renewable energy for non-conventional water resources. Community building is essential for connecting stakeholders and inspiring action.



## Water For Food and Agriculture

*Topic coordinator: Christopher Neale (Daugherty Water for Food Global Institute)*

Water scarcity and food insecurity are pressing global challenges, with a projected 25–40% decrease in runoff expected in the future. The Bureau for Humanitarian Assistance (BHA) of USAID conducts activities to restore, mitigate, and protect water resources in order to meet the integrated needs of targeted populations. For example, young generations within local communities play a crucial role in watershed work in Zimbabwe, helping inhabitants fulfill their access to water resources. Traditional wisdom and innovative technologies are combined to enhance food security and water sustainability.

However, an urgent call to action is needed to boost crop production and ensure inclusive participation, especially for women, in agricultural decision-making processes. The path forward requires policy support and a blend of tradition and innovation. The initiatives presented during discussions included developing a global method to map and calculate irrigation potential, promoting advanced water management using robots, AI, and IoT, and enhancing irrigation network infrastructure through specialized hydraulic projects. Discussions noted more integrated, data-driven approaches to water management would be highly beneficial to multiple sectors, as well as enhancing collaboration among farmers, policymakers, and researchers to ensure sustainable water use.

## Water for Energy

*Topic coordinator: Lei Xie (International Hydropower Association)*

This topic emphasized the importance of raising public awareness about water-based power technologies, including advanced forms like



pumped storage and hydrogen hydro systems. Participants highlighted traditional methods such as wastewater and sludge for bioenergy, which can be converted into energy. The discussions also emphasized the need for continuous improvement and innovation to make hydropower resilient to climate impacts and ensure its continued contribution to a better quality of life. Additionally, participants suggested that governments should create favorable conditions for hydropower development, acknowledging its multifaceted contributions to energy generation, public services like flood prevention, and drought management.

## Water Insecurity and Development

*Topic coordinator: Jinjun You, GWP China(IWHR)*

Water is crucial for sustainable development, as it is essential for human consumption and economic activities. Advanced technologies, such as hydropower, support water management and conservation, including efficient pumping and storage systems. The discussions pointed out that hybrid solutions that combine renewable energy with hydropower offer a promising approach. Open dialogue and cooperation are essential for better decision-making and resource management. The

participants also emphasized public awareness of hydropower's role in mitigating climate change and managing water resources. They recommended that governments should create and enforce policies supporting sustainable water and energy practices, including incentives for renewable energy projects and environmentally sound water management practices.



## Sub-theme 2: Water for Humans and Nature

**Sub-theme 2: Coordinator:  
Andrea Erickson-Quiroz  
(The Nature Conservancy)**

The “Water for Humans and Nature” sub-theme emphasized the importance of addressing water-related challenges through collaborative and innovative approaches. Key themes included the interconnection between water, nature, and human well-being, the need for holistic water management, and the urgent need for innovative solutions. There was a unanimous call for collective action, advocating for water and nature conservation through partnerships and investment in impactful solutions. Participants emphasized public health and environmental protection by assessing water quality parameters, promoting sustainable water practices, and implementing wastewater surveillance. The discussion underscored the significance of collaboration, innovation, and financing mechanisms in achieving sustainable water management practices. This shared vision for a sustainable future was underpinned by a commitment to evidence-based decision-making and inclusivity.

## Water Quality Improvement

**Topic coordinators: Bilge Alpaslan Kocamemi (Turkish Water Institute, SUEN) & Bernd. Manfred Gawlik (European Commission Joint Research Centre, EC-JRC)**

This topic emphasized the multifaceted nature of addressing water management challenges. The collective focus on tangible action, co-creation, governance, citizen science, knowledge products, sustainability, innovation, regulation, collaboration, financing, and holistic approaches illuminated the complex array of elements that play a role in ensuring water quality and availability. The advocacy for synchronized action, well-informed decision-making, and the implementation of established solutions demonstrated a shared dedication to achieving mutual prosperity for both communities and the environment.

The discussion acknowledged the potential benefits of utilizing artificial intelligence (AI) to enhance water quality monitoring, highlighting its capacity to enhance both efficiency and accuracy. Nevertheless, there was a notable absence of substantial discourse concerning the role of AI in water quality monitoring during the sessions, prompting a need for further investigation into the reasons behind this lack of attention. Water pollution challenges require strong public-private partnerships and collaboration. The private sector’s involvement is crucial, and amplifying its integration is essential. Establishing trust, recognizing the diverse nature of the private sector, and overcoming barriers to information sharing are vital for effective collaboration.

## Conservation and Restoration of Freshwater Ecosystems and Biodiversity

**Topic coordinator: Andrea Ferret-Lambert (French Office for Biodiversity)**

The alarming decline of freshwater fish species and vertebrate populations underscores the urgent need for action to protect and restore ecosystems, which are crucial for water reliability and quality. Healthy ecosystems play a vital role in maintaining water cycles, renewing groundwater, and supporting natural water retention processes. Ecosystems also help to mitigate extreme temperatures and sustain local water retention, highlighting the critical link between water, ecosystems, and human welfare.

Nature-based solutions (NbS) offer cost-effective and sustainable approaches to ecosystem restoration. These solutions require collaboration among governments, foundations, local authorities, NGOs, and citizens, and involving local communities ensures equitable resource distribution. The forum showcased successful examples of NbS, demonstrating their proven impacts and fostering collaboration and learning among diverse stakeholders.

The economics of freshwater restoration session emphasized the need for substantial investments and effective control mechanisms. Discussions highlighted various restoration efforts, including improving agricultural practices and creating new ecosystems. Diverse case studies highlighted the importance of pooling different revenue streams, public investment, and mobilizing private finance for freshwater restoration.

The second session on water and ecosystem connectivity highlighted the importance of maintaining connected, diverse, and dynamic water systems. Global initiatives at various scales are making strides in ecosystem restoration and reconnection, emphasizing collaboration among science, policy, industry, and civil society. The conclusions from the discussions included the following:

- **Effective communication:** Adopt data presentation to different stakeholders to ensure the benefits of NbS are clearly understood.
- **Scientific validation:** Incorporate robust scientific research to validate and enhance the benefits of NBS.
- **Community integration:** Involve local communities in planning and implementation to ensure sustainability and acceptance.

Prioritizing the protection and restoration of ecosystems can ensure that water and nature are central to human progress and dignity.

## Safe Drinking Water for All

**Topic coordinator: Nidal Salim (Global Institute for Water, Environment and Health, GIWEH)**

The global urgency for equitable access to water and sanitation spans diverse contexts, from conflict zones to rural and developed regions, highlighting common challenges like geopolitical barriers, infrastructure deficiencies, and inequalities. Addressing these issues requires comprehensive policy reforms, community involvement, and adherence to human rights principles, with collaboration at all levels being essential for universal access, human dignity, and sustainable development. Bridging the gap between policy and practice in the WASH sector is crucial, emphasizing local empowerment, sustainable solutions, and market-based approaches such as the Nazava Water Filter. Case studies and initiatives underscored the need for collective action involving both the private sector and community-driven efforts to achieve lasting impact, particularly in marginalized areas. Participants noted that ensuring safe drinking water access, especially in lower-income regions, requires scalable interventions and context-specific strategies, making equitable water access a shared global responsibility reliant on robust regulatory frameworks and collaborative endeavors.



India-Subrata Bysack-FIGHTING FIRE FROM SKY-PSA HM

## Water Sanitation and Hygiene (Wash) for All

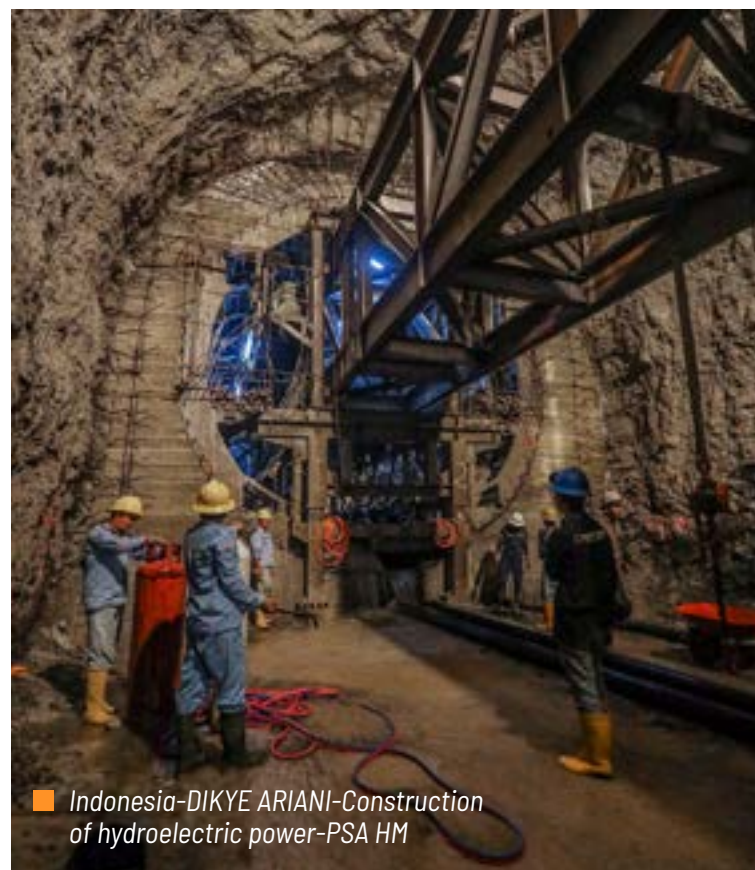
Topic coordinator: Christophe Le Jalle (Programme Solidarité Eau, pS-Eau)

This topic revolved around the importance of integrating sanitation with other services such as water management, health, and education. Speakers discussed the challenges of changing public behavior, particularly in hygiene practices, and emphasized the need for effective communication and advocacy to promote sanitation. They highlighted the necessity of involving stakeholders in decision-making processes and institutionalizing their participation to ensure sustainable solutions. The discussion also touched on the role of technology and the importance of multi-sectoral collaboration. Additionally, there was a focus on financing and leveraging green climate funds to support sanitation projects. The participants stressed the significance of public participation, effective stakeholder coordination, and the role of education in promoting sanitary behavior, with examples from various countries illustrating these points. The main points from the synthesis are as follows:

- Integration of services: Emphasize combining sanitation with water management, health, and education services
- Public behavior: Address changing public hygiene practices and the importance of teaching sanitary behavior from a young age
- Communication and advocacy: Highlight the need for effective communication strategies to promote sanitation
- Stakeholder involvement: Stress the importance of involving stakeholders in decision-making and institutionalizing their participation
- Multi-sectoral collaboration: Underscore the necessity for coordination between different sectors to achieve sustainable sanitation

solutions

- Technology and innovation: Utilize advanced technologies to address sanitation issues
- Financing: Emphasize the importance of securing funds, including leveraging green climate funds for sanitation projects
- Public participation: Highlight the role of public participation and stakeholder platforms in local governance
- Education: Emphasize the role of education in promoting sanitary behavior and the inclusion of health and hygiene in school curriculums
- Case studies from various countries: Illustrate the implementation and challenges of sanitation projects.



Indonesia-DIKYE ARIANI-Construction of hydroelectric power-PSA HM

## Integrated Water Resources Management and Cross-Cutting, Cross-Sectoral Approaches

Topic coordinator: Rabi H Mohtar (Texas A&M University)

The discourse on global water management emphasized the multifaceted challenges and imperative solutions required for sustainable water resource governance. The discussions highlighted critical areas, including the link between water resources management and water applications, community support, legal frameworks, and citizen action in water sustainability.

Integrated Water Resources Management (IWRM) and sustainable water governance require a holistic approach where actions focus on addressing pervasive issues such as pollution and biodiversity crises through regulatory frameworks, fostering international cooperation, and investing in youth perspectives. Eric Tardieu's insights underscored the importance of implementing frameworks such as the Water Framework Directive, while Nathalie Dörfliger stressed the urgency of promoting conjunctive water management to achieve sustainable development goals. Rabi Mohtar emphasized the need for structural reform and technological advancements, particularly in groundwater resource management and engaged farmers in water dialogues. Lifeng Li highlighted the central role of agriculture in water security, advocating for land-to-water perspectives and collaborative strategies among stakeholders. Main outcomes and commitments included:

- Linking water resources management with water applications was essential for effective and sustainable water governance. This includes leveraging technological advancements and integrating water applications in various sectors to ensure that water management practices are both efficient and resilient.

- Community support and citizen action were vital for achieving sustainable water management. Engaging communities in water dialogues, as emphasized by Rabi Mohtar, and supporting traditional water management practices, as highlighted by youth aspirations, are key to fostering local ownership and sustainability.
- Legal frameworks and robust regulations were critical for guiding sustainable water resource governance. Insights from the US-based speaker underscore the importance of national regulations and international cooperation in addressing global water challenges. The Water Framework Directive is a pivotal example of such a regulatory framework.
- Youth empowerment and investment in youth perspectives were necessary for long-term sustainability in water governance. Nathalie Dörfliger's emphasis on investing in youth and promoting integrated water management highlighted the importance of involving younger generations in the decision-making process.

In conclusion, addressing the complex challenges of global water management requires an interdisciplinary, cooperative, and forward-thinking approach. By linking water resources management with water applications, strengthening community support and legal frameworks, fostering citizen action, and youth empowerment, we can navigate the multifaceted landscape of water governance and ensure global water security for future generations.



### Sub-theme 3: Disaster Risk Reduction and Management

**Coordinators: Toshio Koike (ICHARM)  
Co-Coordination Group Member:  
Kenzo Hiroki (HELP Secretariat) &  
Indonesia Meteorology, Climatology,  
and Geophysics Agency**

The “Disaster Risk Reduction and Management” sub-theme aimed to identify key strategies to optimize financial, governance, and institutional frameworks for mitigating water-related disasters. Each session underscored the importance of pre-disaster investments and the use of science and technology.

Discussions highlighted the effectiveness of early warning systems, with a focus on understanding the root causes of vulnerability and risks. Participants emphasized the need for multi-hazard early warning systems, noting that climate-related disasters are approximately 15 times more deadly. They also stressed the importance of climate-smart water infrastructure and flood risk assessment, along with advocating for the

education of water professionals to better prepare for and manage water-related disasters.

Participants also addressed the complexity of systems and the necessity for adaptive monitoring. They highlighted the difficulty in making a business case for these initiatives, emphasizing the need to quantify benefits, especially co-benefits, to demonstrate their value. They noted the increasing frequency of droughts and the uniqueness of each event, urging for integrated, holistic, and proactive drought management strategies. Discussions emphasized the need for anticipation, planning, strong legal frameworks, and alignment with international standards. Challenges related to data availability

and the importance of community engagement were highlighted, recommending leveraging best practices for better planning, prevention, and adaptation.

In the long term, participants recommended adaptive strategies to connect current challenges for climate adaptation and flood-resilient sustainable development. A “whole-of-society” approach was stressed as essential to creating sustainable solutions, with community ownership highlighted through relevant, evidence-based information and local wisdom. Discussions explored science-based policy frameworks and cross-border collaboration for disaster risk reduction, addressing adaptation to extreme hydrological events induced by climate change and sharing best practices for sustainable development.

Panelists discussed increasing investment in disaster risk reduction and methods to convince local leaders using financial and scientific evidence. Optimizing financial and governance strategies was a focal point, emphasizing pre-disaster investment and the use of science and technology. The need for better capacity development and collaboration on data, information, and innovation was highlighted. The status of the Early Warnings for All initiative was discussed, showcasing national efforts and innovative technologies. Lastly, participants made a call for global action on water governance, climate change, and disaster risk reduction, promoting the integration of water knowledge.

The session concluded with actionable recommendations for increasing investment in disaster risk reduction. It highlighted methods for convincing local leaders about the importance of disaster risk reduction and emphasized the integration of scientific evidence into policy-making. The discussion underscored the crucial role of leadership and political will, along with the effectiveness of translating risks into financial values using scientific evidence and sharing global case studies to identify best practices.

## Integrated Flood Prevention and Management

*Topic coordinator: Annegien Tijssen (Deltares)*

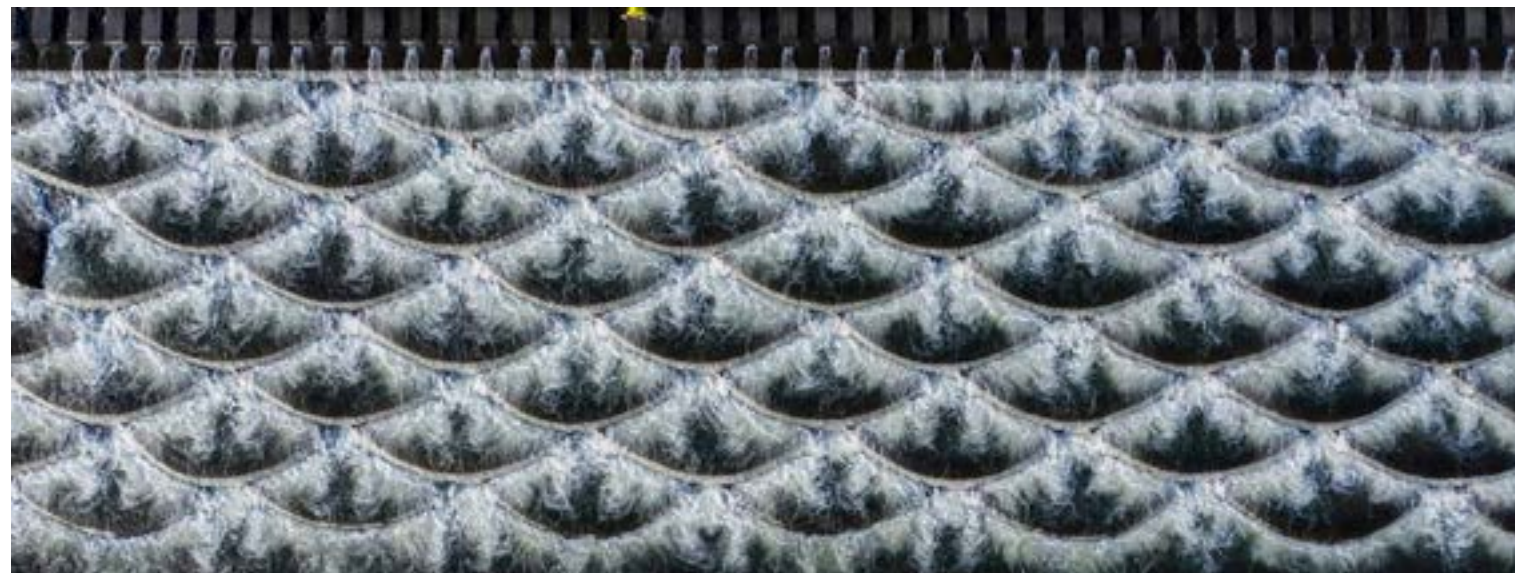
While water offers many opportunities for the shared prosperity of people and societies, excessive water can lead to floods. Globally, floods are one of the most disruptive natural hazards in terms of human fatalities, economic damage, and environmental impact. Therefore, preventing, managing, and reducing the impact of floods is essential for sustainable development and shared prosperity.

Integrated flood prevention and management requires a holistic approach, focusing on reducing both the likelihood of flooding and its impacts on people, communities, societies, ecosystems, and the economy. This calls for a risk-based approach to flood prevention and management. Significant progress has been made in the last decade towards promoting a risk-based approach in practice, in line with the goals of the United Nations Sendai Framework on Disaster Risk Reduction 2015-2030. While recognizing this progress, actions are not yet on track to reach the goals of the global agendas. This topic focused on the integration of actions to ensure further progress on this holistic approach. Main outcomes and commitments included:

- Whole-of-society approach is essential to create sustainable solutions and adaptation strategies, to ensure that no-one is left behind.
- Sustainable, climate-resilient flood prevention and management measures and strategies should be implemented with a local maintenance and community ownership strategy in mind.
- Community ownership can be created by providing relevant, evidence-based information and by building on local wisdom.
- Data strategies—such as open, accessible and disaggregated data—enable inclusive and climate resilient flood risk management. Different

governance levels require data with different accuracy and resolution (from global to local). A unified data ecosystem across governance levels that can accommodate the different scales of data is essential. Local knowledge should be used to enhance the quality of globally or nationally collected data (top-down versus bottom-up flow of data and information). Historical data can provide evidence-based insight into trends and can be used to predict impacts of climate change; thus it should be utilized.

To conclude, strengthening resilience to water-related disasters and advancing social sustainability requires integrated, climate adaptive, risk based, and inclusive solutions for current societal challenges. Participants noted the need to: develop integrated and whole-of-society approaches for climate adaptation and disaster risk management; increase climate and disaster risk awareness in communities and governments; and create community ownership by disseminating relevant, evidence-based information to communities and by building on local wisdom.



■ China-Kunping Chen-Floating dam-PSA HM

## Drought Prevention and Management

*Topic coordinator: Romorajausia (Indonesia Ministry of Public Works and Housing)*

Drought events significantly impact ecosystems, society, and economic sectors, leading to destabilization and civil unrest. Therefore, building resilience against future droughts is essential for sustainable development and stability.

Integrated Drought Management and Mitigation requires a holistic approach that focuses on collaboration among stakeholders, respects environmental limits, and adopts resilience-thinking and systems-thinking approaches. This approach involves overcoming challenges such as lack of data, institutional coordination, and financial resources. Significant progress can be made by addressing these challenges, particularly through gender mainstreaming, establishing a strong legal framework, and improving financial resource allocation. The main outcomes and commitments from the discussions are:

- A global society approach is essential to create sustainable solutions and adaptation strategies, ensuring that no one is left behind in drought management.
- Climate-resilient planning and management measures should be implemented with a focus on transforming drought into a manageable natural hazard, investing in land rehabilitation, and engaging younger generations in drought and land degradation issues.
- Data strategies and technology identification are crucial. Green water monitoring, for example, can improve understanding of drought impacts, while a unified data ecosystem can support inclusive and climate-resilient drought risk management. Utilizing local knowledge can enhance the quality of globally or nationally collected data, and historical data can provide evidence-based insight into trends and predict the impacts of climate change.
- Climate finance and financial perspectives should be leveraged effectively. While financial actors often allocate funds to climate change mitigation, it's crucial to ensure that resources are also directed toward the third pillar of drought management—preparedness and resilience.

Participants concluded that strengthening our resilience to drought events requires a holistic approach that incorporates resilience, systems thinking, and climate-resilient planning. This approach must address challenges such as data availability, institutional coordination, and financial resource allocation by engaging stakeholders, leveraging climate finance channels, and fostering collaboration through initiatives like the Drought Community of Learning and Practice. By doing so, we can advance drought management, enhance social sustainability, and ensure that our communities are better prepared to face future challenges.

## Ecosystem-Based Drr in the Water Sector

Topic coordinator: Geoff Wilson (Asian Development Bank)

The urgent need for integrated and adaptive strategies to tackle water resource challenges and improve climate resilience is critical for sustainable development. Overcoming technical, social, environmental, and institutional barriers is essential for the effective implementation of NbS.

IWRM and climate resilience call for a holistic approach where actions focus on investing in climate-resilient infrastructure, promoting sustainable agriculture, and implementing “slow water” strategies, such as improving soil infiltration and preserving wetlands. These actions are crucial for restoring natural hydrological cycles and supporting biodiversity. Despite progress, significant concerns remain, particularly regarding the declining mangrove cover and the limited integration of mangrove preservation in current strategies. The main outcomes and commitments from the discussions are:

- A whole-of-society approach is essential to create sustainable, scalable, and low-tech solutions that address water resource challenges and climate adaptation. Collaboration across sectors, involving governments, the private sector, and communities, is key to achieving this.
- Preservation and restoration of mangroves are vital for coastal protection against storm surges and erosion. Integrating mangrove conservation into broader strategies is crucial to enhancing climate resilience in coastal areas.
- Community engagement is necessary to ensure that initiatives are locally relevant and sustainable. This includes involving communities in the planning and implementation of NbS, fostering ownership and long-term commitment.

- Coordination across all levels, from grassroots actions to national and international policies, is essential for achieving long-term water security and climate adaptation. Efforts must be harmonized to ensure that strategies are effective and inclusive.

The discussions concluded that addressing water resource challenges and improving climate resilience requires a holistic approach that integrates nature-based solutions with community engagement and cross-sector collaboration. Overcoming barriers and ensuring coordinated efforts at all levels will be key to achieving sustainable water management and climate adaptation.



China-jianxing zhu-The polluted river-FIAP HM

## Climate-Smart, Sustainable and Improved Resilience of Water Infrastructures

Topic coordinator: Guoqing Wang (Nanjing Hydraulic Research Institute, NHRI)

The challenges of climate change on water resources management emphasize the need for enhanced monitoring and innovative approaches to build resilience against extreme weather events. China and Indonesia have implemented strategies to address these challenges by focusing on data history, instrument quality, and performance checks. In China, organizations like the China Hydraulic Engineering Society (CHES) and the Ministry of Water Resources (MWR) have developed comprehensive systems for flood and drought disaster prevention, combining engineering solutions, monitoring, and early warning mechanisms. Indonesia faces similar issues, with increasing rainfall, flooding, and drought revealing vulnerabilities in rural water services. Both

countries highlighted the importance of updating disaster prevention strategies, with China’s water governance model offering historic progress in tackling persistent water management challenges.

The discussions also highlighted the need for sustainable practices in water management, focusing on dam safety, flood risk management, and climate-resilient WASH (Water, Sanitation, and Hygiene) systems. Emphasis was placed on incorporating social and environmental factors in dam management, prioritizing vulnerable areas, and promoting knowledge sharing across regions. Tools like the water security index for the Marikina River Basin and the Climate Children’s Risk Index were introduced to guide climate-resilient interventions. The discussions reviewed Japan’s approach to water resource management, emphasizing the integration of climate science, data management, and a multi-pronged strategy that maximizes facilities, explores alternative water sources, and balances environmental protection with economic development.

The topic underscored the importance of proactive planning, collaboration across sectors, and innovation in addressing water management challenges driven by climate change and rapid urbanization. Cape Town’s response to severe drought demonstrated the value of demand management and diversifying water sources, while Jakarta’s flood management strategies focused on coastal defense and improved sanitation with national support. Participants highlighted scaling up water safety plans, improving data management, and integrating technology like smart metering as critical for resilient water systems. Examples from Australia, Portugal, and Brazil reinforced the need for long-term planning and sustainable practices to ensure water security amidst growing climate risks.

## Early Warning Systems for All and Emergency Response Mechanisms, (Incl. Preparedness Plans and Disaster Scenario Analysis)

Topic coordinator: Stefan Uhlenbrook (World Meteorological Organization, WMO)

The critical role of Early Warning Systems (EWS) in mitigating the impacts of climate change, particularly extreme weather events such as extreme floods, is fundamental for ensuring community safety and resilience. The success of Japan's advanced EWS highlights the importance of these systems but also underscores the challenges that need to be addressed, such as communication barriers, terminology confusion, and the necessity to tailor systems to local needs.

Integrated early warning and climate resilience calls for a holistic approach where actions focus on collaboration across sectors, continuous improvement of communication strategies, and the integration of local knowledge. Technological advancements, such as real-time data and flood prediction models, are vital, but equally important are emotional engagement and community involvement in building a resilient future. The United Nations' goal to protect global communities from hazardous weather by 2027 through integrated scientific and local warning systems is a key objective, with particular emphasis on vulnerable coastal areas and communities. Main outcomes and commitments from the discussions include the following:

- A whole-of-society approach is essential to enhance Early Warning Systems (EWS) by leveraging traditional knowledge, involving communities in drills, and facilitating the rapid dissemination of warnings. This approach ensures that EWS is locally relevant and effective.

- Technological innovations and transboundary cooperation are critical. Examples from river basins in Nepal and India demonstrate successful collaboration between upstream and downstream authorities, while innovations like satellite data and Earth observation are pivotal for effective disaster management.
- Resilience-building efforts must address the root causes of displacement, particularly in conflict-affected areas like Yemen and Nigeria, where water scarcity and flood risks are prominent. The introduction of the Composite Climate Resilience Index (CCRI-DRM) model underscores the importance of comprehensive risk assessments for better protection of vulnerable populations, especially children, in regions facing multiple shocks and stresses.
- Community engagement and emotional involvement are necessary to ensure that EWS is not only scientifically sound but also resonates with the local population, fostering a sense of ownership and proactive response.

The panelists concluded that strengthening Early Warning Systems to mitigate climate change impacts requires a holistic approach that integrates technological innovations, traditional knowledge, and community involvement. Addressing challenges such as communication barriers and ensuring transboundary cooperation will be key to enhancing resilience and protecting vulnerable populations from extreme weather events and related risks.





## Sub-theme 4: Governance, Cooperation and Hydro-diplomacy

**Coordinator: Oriana Romano (OECD), Co-Coordination Group member: Danielle Gaillard (SIWI)**

At the end of the forum week, the synthesis session on sub-theme 4 posed the question, “What makes cooperation and governance the most vital component for enabling the achievement of SDG 6, and how can we ensure it in practice?” To answer this challenging question the synthesis session offered two intergenerational panel debates: one on vertical and horizontal cooperation and another on governance. Participants discussed what good governance and cooperation look like at different levels, both now and for future generations. The focus was on vertical international collaboration, transboundary and cross-border cooperation, multi-level governance, decentralized cooperation, cross-sectoral dialogue and cooperation, stakeholder-inclusive decision-making and participation, transparency and accountability in institutions, inclusion of marginalized voices,

enabling the achievement of SDGs, and promoting the blue and circular economy.

To achieve the SDGs, governance and cooperation must play an essential role. By embracing a systems-based approach that spans borders, sectors, and communities, we can significantly enhance water management practices. Such collaboration promotes equitable access to clean water, bolsters climate resilience, and fosters sustainable development, peace, and shared prosperity for all.

The harmonization of legal, institutional, and policy frameworks across all levels of government—from global to local—creates a robust enabling environment crucial for achieving the 2030 Agenda. Such efforts enhance accountability and transparency while encouraging financial flows.

Local actors, particularly youth and women, are potent agents of change. Their inclusion in the decision-making processes ensures that policies are tailored to the realities of their communities and that no one is left behind.

Addressing the challenges of “too much”, “too little” and “too polluted” water requires robust public policies that target measurable objectives with appropriate timing and scale, clearly defined roles and responsibilities for relevant authorities, and regular monitoring and evaluation. Good water governance can greatly contribute to the design and implementation of such policies, with shared

responsibility across levels of government and a broad range of stakeholders, including traditionally “unheard voices” such as women, youth, Indigenous peoples, and marginalized communities. Cooperation across sectors, communities and countries is essential, as exemplified by transboundary river basin agreements where neighboring countries negotiate to mitigate conflicts and ensure fair access. By promoting transparent and accountable decision-making processes, fostering stakeholder engagement, and encouraging international cooperation, good water governance can help ensure sustainable management of water resources for current and future generations.

## International Collaboration at All Levels, Incl. Transboundary and Cross-Border Cooperation

**Topic coordinator: Mohamed C.B.C Diatta (Ministry of Water and Sanitation, Republic of Senegal)**

The topic sessions on water diplomacy emphasized the importance of international cooperation in managing shared water resources. For example, Vietnam and Cambodia are collaborating on hydrological monitoring to address fluctuating water levels during dry and rainy seasons, which can lead to disasters. The World Meteorological Organization (WMO) is developing a water monitoring system alongside diplomatic efforts to achieve sustainable management of the river. Egypt emphasizes bilateral cooperation with the Nile Basin Countries (NBC) to foster mutual trust and support sustainable development across Africa.

In the La Plata Basin, water resource management is coordinated through international treaties, including the integrated management of the Bermejo River Basin and climate adaptation projects in coastal cities and vulnerable ecosystems along the Uruguay River. The Guarani Aquifer Strategic Action Program also supports

sustainable water use.

Participants highlighted efforts to strengthen IWRM policies as part of the “100 Water and Climate Projects for Africa” initiative. The efforts involve engaging local communities, raising awareness, and fostering solidarity among those living along transboundary rivers.

In Labuan Bajo, Indonesia, innovative solutions address water challenges, such as the Bowosie Forest project, which provides clean water from multiple springs. The Youth Coalition for Climate Change (KOPI) has launched efforts to reduce water discharge, increase climate change resilience, and engage youth through art-based initiatives.

To address global water challenges, cooperation between NGOs, regions, and communities is crucial. Concrete action, ongoing dialogue, and sustained interaction between countries are needed to solve

complex water management issues and ensure long-term sustainability. Key enabling factors for multi-stakeholder dialogues include the inclusion and role of facilitators, using existing regional political and economic processes, fostering social learning across scales, and leveraging sustainable finance.

Turkey, for example, considers water as a source of cooperation among riparian countries, and continuous dialogue is necessary to reach transboundary dialogue. Key lessons learned include evaluating transboundary basins in light of peculiar circumstances and challenges, extending efforts to share responsibilities, and focusing on specific hydrological, economic, social, and cultural aspects.

The Peace and Security Agreement (PSA) and the Lake Chad basin commission (LCBC) focus on youth initiatives in the area, with key recommendations including transforming local vigilance, setting up a network of youth organizations, creating a Lake Chad basin youth council, and developing water conservation projects.

In conclusion, speakers stressed the importance of trust, cooperation, and collaboration in addressing water challenges. Financing mechanisms for transboundary and cross-border cooperation in water management are essential for addressing shared water challenges and promoting sustainable development.



India-Saurabh Bhattacharyya-Thirsty-PSA GOLD

## Decentralized Cooperation (e.g. at RBCs, Regional & Local Level)

Topic coordinator: Mohamed Nbou (UCLG Africa)

This topic focused on various aspects of water governance, drought challenges, and capacity-building initiatives, with key examples from Morocco, Brazil, and France. The session examined how different countries handle water management issues, emphasizing Morocco's struggle with drought, Brazil's conflicts over water allocation, and France's successful decentralized water management practices.

Barbara Pompili introduced a book which outlined 12 principles for effective water policies, along with over 50 examples from around the world demonstrating regulatory approaches. The discussion concluded with the importance of sharing experiences and publishing case studies to facilitate learning and adaptation. Decentralization was underscored as a powerful tool in addressing water challenges, empowering local communities, youth, and authorities to take more effective action.

The topic also covered Morocco's efforts to manage its water crisis, with support from the Water Governance Initiative (WGI) to improve decentralized water management. Multilevel governance was highlighted as essential for the implementation of water management strategies in cities. Brazil's experience in negotiating water allocation during times of scarcity was presented as a valuable case study.

Several speakers contributed key points on water policies, emphasizing that addressing water issues at the closest governance level fosters true partnerships across government, stakeholders, and local authorities. Participants discussed the challenges

faced by Morocco during droughts, such as limitations on water use and enforcement. Brazil's short-term procedures for resolving water conflicts and its focus on public consultations with stakeholders to manage water demands were also highlighted.

France's decentralized approach to water management was commended, as local authorities are empowered to handle technical issues related to sanitation and drinking water. The discussions also mentioned international projects supporting sanitation, drinking water, education, and management training as examples of effective collaboration with local agencies and subsidized support for local initiatives.

In conclusion, the session reinforced the idea that decentralization in water management is a promising solution, particularly when it involves local communities, youth, and authorities. Engaging youth in addressing water challenges is essential for sustainable outcomes, as their perspectives help ensure that water policies are inclusive, responsive to community needs, and more effective in addressing local issues.



India-Pranab Basak-Water and life-FPSI GOLD

## Enhanced Cross-Sectoral Dialogue and Cooperation

*Topic coordinator: Oriana Romano (OECD)*

This topic discussed the importance of interconnected policies, collaboration, and blue economy governance across various sectors. The discussions emphasized the need for integrated policies across freshwater, oceans, cities, and basins, focusing on ocean literacy and collaboration. Effective governance is crucial for establishing resilient, inclusive, sustainable, and circular blue economies. Waste sources, public waste management policies, and prevention approaches are also essential. Urban water management and water diplomacy were also discussed, as well as desalination for water-intensive industries. Inclusive governance from source to sea is crucial, balancing development priorities while protecting freshwater and marine ecosystems.

A study on the circular water economy in Latin America and the Caribbean revealed gaps in the sector's

current state and governance. It recommended regulatory frameworks, financing, business models, and capacity building. Spain has implemented circular economy principles in water management, particularly in agriculture, urban cleaning, and golf courses. Clear regulatory standards and transparency are crucial for building public trust in reused water. Circular approaches are essential for achieving water security, sustainability, and resilience.

The OECD Water Governance Handbook compiles 52 water governance practices to guide cities, regions, and basins in designing and implementing effective water governance systems. Challenges of sharing good practices include reluctance of public and private actors to share data, alignment of national frameworks with local and indigenous practices, and balancing short-term needs with long-term environmental and generational priorities. Discussions concluded that effective local water governance depends on clear national policies, basin-wide water management plans, and facilitators who bridge scientific and local/indigenous knowledge.

## Active Stakeholder Involvement and Public Participation

*Topic coordinator: Pierre Alain Roche (Water Governance Initiative, WGI)*

This topic covered water management, decentralization, involving marginalized communities in policy-making, and the importance of local culture and knowledge in shaping community needs. Decentralization is crucial for transforming water crises into actionable policies and promoting youth-centered innovation. Panelists also discussed the Blue Deal Declaration, regulations, and sustainable water management funding. The Mohawk community case was presented, illustrating community mistrust towards the government regarding river pollution. The Blue Book was introduced as a citizen monitoring system. Solutions to address marginalized people in water policy-making include involving all parties,

increasing education, and ensuring transparency. Local culture and knowledge are powerful tools for better water management, providing contextually relevant solutions rooted in community traditions and wisdom.

In conclusion, decentralization, youth engagement, and incorporating local cultural knowledge are critical for addressing global water management issues. Participants noted collaboration between communities, governments, and stakeholders, along with education and capacity-building initiatives, will drive sustainable solutions, empowering local actors and fostering global cooperation.

## Transparent and Accountable Institutions and Legal Frameworks, Integrity, and Equity (Including Gender, Youth, And Minorities)

*Topic coordinator: Remy Kinna (UNECE) & Barbara Schreiner (Water Integrity Network)*

This topic on water governance addressed key issues such as the Water Convention, Switzerland's commitment to inclusive water management, and regional plans like the Murray-Darling Basin Plan and the Lower Mekong Basin. The discussions highlighted the importance of public participation and stakeholder engagement, particularly in regions like Chad with arid conditions, and emphasized the need for youth engagement in water management, especially within Association of Southeast Asian Nations (ASEAN) communities.

Water governance and stakeholder engagement were central themes, with key speakers underscoring the importance of overcoming barriers to local community involvement, creating an enabling environment for public participation, and combining legal frameworks with bottom-up approaches. This topic also addressed the challenges posed by climate change, including its impact on water agreements, water allocation in transboundary basins, and barriers to groundwater governance in agriculture. Main outcomes and commitments included:

- Inclusive water management: The need for inclusive water management practices was emphasized, highlighting Switzerland's commitment to this approach and the role of legal frameworks like the Water Convention. Public participation and stakeholder engagement are critical for effective water resources management, especially in vulnerable regions like Chad.
- Youth and community engagement: Overcoming barriers to local community involvement and enhancing youth engagement in water management

are essential for sustainable governance. The discussions highlighted the importance of creating enabling environments for public participation, particularly in ASEAN, and integrating youth perspectives into water governance.

- Addressing climate change: Climate change poses significant challenges to water governance, impacting water availability, transboundary water agreements, and groundwater management in agriculture. The topic called for resilience through knowledge, legal and institutional mechanisms, and proportional allocation frameworks to address these challenges.
- Gender and customary rights: The impact of climate change on livelihoods, particularly for women and children was also explored. Solutions like village-level water supply groups involving women were proposed, and the importance of addressing issues like sextortion and disaster risk reduction through administrative actions and fair management practices was emphasized. Transparency and accountability in water allocation processes, as well as consideration of customary rights, were highlighted as critical elements in effective water management.

Panelists concluded that addressing the challenges of water governance in the face of climate change requires a holistic and inclusive approach. By strengthening stakeholder engagement, creating enabling environments for public participation, and ensuring legal and institutional frameworks are in place, we can enhance resilience, promote sustainable water management, and protect the most vulnerable communities.

## Sub-theme 5: Sustainable Water Finance

**Coordinators: Satoshi Ishii, Alex Money, Allison Woodruff (Asian Development Bank, ADB)**  
**& Coordination group member: Herry Trisaputra Zuna (Indonesia Ministry of Public Works and Housing)**

This sub-theme focused on mobilizing resources, promoting collaboration, and implementing innovative strategies to address water crises, climate resilience, and sustainable water management. It emphasized sustainable water management, innovative financing mechanisms, multi-stakeholder engagement, green finance, adaptation strategies, the establishment of a Global Water Fund, and collective action and accountability. The discussions advocated for transboundary financing, financing for peace, recognizing the water cycle as a common good, accountability, equity, inclusion, social and environmental justice, climate resilience, and green finance initiatives to secure sustainable funding and ensure universal access to safe water and sanitation services.

Sustainable water management is crucial for financial sustainability and economic resilience, addressing human needs and advancing water pricing reform. Cooperation frameworks and innovative communication strategies are essential for achieving a “net zero” for water. Green finance was highlighted as a powerful tool for environmental and social impact, though challenges persist. Adaptation strategies, efficient resource allocation, and regulatory frameworks are



essential for effective solutions. The Indonesian government expressed support for the Global Water Fund framework to accelerate water resilience through multilateral financing schemes.

Integrated urban strategies should address economic, environmental, climate, social, and demographic conditions, alongside cross-cutting

issues to achieve sustainable improvements. The lack of coordination and cooperation can impede the mobilization of commercial finance, which requires collaborative efforts. Investigating the capacity of local institutions, communities, and stakeholders to actively participate in planning, implementation, and maintenance of integrated urban strategies is essential.

The discussion emphasized the need for green finance to enhance water management by securing sustainable funding. Greater awareness and expertise in nature-based solutions, strategic resource allocation, robust policy frameworks, multi-stakeholder partnerships, and risk mitigation mechanisms are needed. Immediate and long-term investments are crucial, with governments playing a key role in removing barriers and promoting sustainable practices globally.

The sub-theme focused on the development of adaptive and innovative instruments for financing water and sanitation, including the announcement of a Global Water Fund. Cross-disciplinary coalitions were established to support collective action in water and sanitation finance, involving public sector agencies, private sector actors, development finance institutions, philanthropic organizations, civil society organizations, and communities.

The sub-theme also highlighted the importance of implementing water pricing reform, incorporating water into climate resilience strategies, and developing courses on water valuation. The session also highlighted the progress of the Blue Peace Finance Initiative in West Africa and the need to mobilize water finance for the missing middle. The session also identified “Water Positive” as an effective method for communicating financing water resilience to non-specialist audiences. Participants also discussed the importance of strengthening innovative financial approaches, securing water services as a portfolio for better livelihoods, and promoting strategic resource allocation. They also highlighted the need for accountability frameworks and inclusive processes in water finance for sustainable and just allocation of resources. The sub-theme discussions aimed to revisit the overall architecture for water and sanitation financing, reflecting the role of water in climate change adaptation.

## Revisiting of International Water Financing Architecture (Incl. New Economic Approaches) with Emphasis on Transparency, Accountability, Fairness & Equity

*Topic coordinator: Fauziah Zen (Economic Research Institute for ASEAN and East Asia, ERIA)*

The discussion emphasized public participation in decision-making processes and the national government's role in providing services to the poor and slum areas, noting ongoing projects targeting these issues.

Stakeholders discussed the perspectives of foreign companies, the role of academia in determining optimal household water costs, and the involvement of major shareholders like IIF in the government. Andre highlighted the need for specific criteria and viability gap funding to ensure project feasibility, while referencing successful projects like Umbulan to stress the importance of commitment. Lasana focused on accessing and engaging poor communities, suggesting CSR programs and market consultations to ensure affordable pricing and feasible PPP areas selected by local authorities.

The discussions addressed the affordability of water tariffs, proposing that 5% of disposable income is a reasonable benchmark. Participants also discussed securing investments for the water sector and the need for equitable access through targeted rural transfers and improved policy measures, such as



the DKI Jakarta groundwater tax. The discussion underscored the necessity of collaboration among government entities, the private sector, and foreign companies to address these challenges and ensure sustainable and inclusive water services.

This sub-theme identified three major challenges in providing clean water:

- Providing clean water infrastructure requires substantial investment; therefore it is crucial to consider the appetite of investors, lenders and also guarantors. Holistic economic models that capture the true value of water are needed.
- The availability of good quality of clean water will require commitment, support and consistency from policy makers and top management.
- Clean water also requires an aligned process

and risk management across three streams: upstream, midstream, and downstream. Synchronizing these streams is essential.

These three challenges affect provision of clean water at all levels—upstream, midstream and downstream

- Upstream: Climate risk affects the availability of raw water to provide clean water through pipe water supply systems. The prolonged dry season has made it difficult for many areas to provide raw water and clean water in quantity, quality and continuity. Investing in and lending for water infrastructure may also introduce additional risks.
- Midstream: The uncertainty of raw water sources upstream affects the health of investment in water projects, impacting the acceleration of clean water supply. In many countries,

investment in water infrastructure requires collaboration with the water sector.

- Downstream: Beyond the impact from up-stream and middle-stream, provision of clean water requires commitment from leaders. As a basic need, the provision of clean water requires both legal, financial and technical support from central and sub-national levels to make it publicly accessible (willingness and ability).

The following are some alternative solutions for clean water accessibility:

- Inline planning, process and monitoring in three streams
- Capacity development, enhancing fiscal, human capital and risk management capabilities
- Blended financing and holistic economic approach

## Innovative and Sustainable Funding, Financing, and Delivery Mechanisms

**Topic coordinator:** Satoshi Ishii, Alex Money, Allison Woodruff (Asian Development Bank, ADB)

The sustainable management of water resources, due to its inherently transboundary and multi-sectoral nature, demands the establishment of robust cooperation frameworks. Effective coordination across borders and sectors is essential to ensure water security, particularly in regions facing significant environmental and socio-economic challenges. Discussions during the session highlighted successful models of collaboration, drawing on case studies from Cambodia and Senegal. These examples illustrated how coordinated efforts can unlock financing for water initiatives, particularly through the alignment of national policies and cross-border agreements. The session also emphasized the importance of engaging a wider spectrum of market actors to mobilize private investment in water projects. With capital requirements typically ranging between USD \$10-100 million, the discussions centered on strategies to enhance deal flow and attract investment in projects that address critical water needs. Applied finance practitioners shared insights into structuring investments that balance financial returns with long-term sustainability goals.

In addition to these financing models, the session underscored the importance of innovative communication strategies to drive broader support for water initiatives. The concept of achieving “net zero” for water was introduced, focusing on how to appeal to both investors and the general public. The goal is to elevate water issues to a level of urgency and attention similar to that of carbon-intensive sectors, which have successfully attracted significant subsidies, investments, and policy support in their transition to more sustainable practices. The session concluded that to achieve this, it is crucial to foster a shared understanding

of water’s central role in global sustainability and to create messaging that resonates across diverse audiences—from financial institutions to local communities. Concrete outcomes were as follows:

- Present progress of Blue Peace Finance Initiative at One Water in New York (September 2024) to show how innovative financing in a transboundary context in West Africa can promote economic growth and water resilience.
- Smith School, Oxford University to publish a short working paper in H2 2024 titled ‘Mobilizing water finance for the missing middle’ summarizing proceedings from session on practitioner perspectives.
- Result of the competition run during the session identified ‘Water Positive’ as the winning choice of participants to communicate the idea of financing water resilience to non-specialist audiences. H2 Zero was also suggested.



■ Iran (Islamic Republic of)  
-Mahdi Zabolabbasi-Bathroom-FIAP HM



■ Malaysia-MOHD NAZRI SULAIMAN-  
Education to save our water source-FIAP HM

## Improved Funding for Basic Access to Safe Water and Sanitation for All at All Scales

**Topic coordinator:** Agus Rudyanto, Ministry of Public Works and Housing, Indonesia

Integrated urban strategies should be designed to create holistic and lasting improvements across various sectors, addressing economic, environmental, climate, social, and demographic challenges within urban areas. These strategies must also account for cross-cutting issues that influence multiple sectors simultaneously, ensuring that solutions are both comprehensive and sustainable. However, the successful mobilization of commercial finance, which is critical to the implementation of these strategies, is often hindered by a lack of coordination and cooperation among stakeholders. Collaborative efforts are essential to bridge this gap, as effective financial mobilization requires alignment between public and private sector initiatives, as well as among different levels of governance.

Furthermore, the active participation of local institutions, communities, and relevant stakeholders is crucial for the planning, implementation, and maintenance of integrated urban strategies. The capacity of these groups to engage meaningfully in the process must be carefully examined and

strengthened where necessary. Building this capacity involves not only improving technical skills and knowledge but also fostering an environment of inclusive governance where all voices are heard. By enhancing collaboration, building local capacity, and ensuring coordinated efforts, integrated urban strategies can achieve the broad, long-term impacts needed to address the complex and interconnected challenges facing modern urban areas. Concrete outcomes of the session included the following:

1. Examine the investment prospects and potential risks at both the local and regional levels
2. Assess the advantages of a blended finance strategy to draw in more funding and bolster market development for pioneering technologies aimed at delivering safe water and sanitation solutions on both local and regional scales
3. Establish a center of excellence at the regional level as a specialized forum for communication and exchanging information for possible common problems and choosing best practices solution effectively

## Special Schemes and Incentives Promoting Green Finance

**Topic coordinator: Sri Bagus Guritno**  
(National Development Planning Agency, Indonesia)

Financing the water sector through the capital market and banking (loans) with a green approach has been widely used in various countries around the world. The main areas within the water sector where financial innovation is most needed are clean water supply and wastewater treatment. However, implementing green financing instruments in the water sector is heavily influenced by political commitments, sectoral governance, business models and macro-fiscal situations. This has been widely studied and reviewed by various parties, including the global banking sector. This topic examined the application of innovative financing instruments in the water sector, emphasizing the use of green financing as an alternative method. The sessions of this topic discussed the obstacles in implementing green financing in the water sector and potential solutions.

The presentation discussed the development challenges and service difficulties in the Indonesian water sector, emphasizing the role of the Indonesia Infrastructure Guarantee Fund (IIGF) in providing sovereign guarantees to accelerate and strengthen water supply system projects. It emphasized the need for innovative financial instruments, such as green financing, to overcome obstacles like climate change risks, funding shortages, operator capacity issues, and political commitments. The government's efforts to support Public-Private Partnership (PPP) projects, particularly in water supply systems, include guaranteeing 52 projects, 85% of which are PPPs, amounting to USD 31.25 billion. Key solutions include aligning processes

across project streams, enhancing capacity building and risk management, and implementing blended financing models to improve efficiency and sustainability in water supply projects. The session also highlighted the importance of collaboration across sectors, robust policy frameworks, and strategic resource allocation to promote sustainable practices.

The session underscored key outcomes, including the need for green finance for sustainable water management, increased awareness in nature-based solutions, strategic resource allocation, robust policy frameworks, multi-stakeholder partnerships, and government involvement. Discussions also explored ways to make green projects more bankable by considering climate impacts and managing non-revenue water. Suggestions included holistic risk allocation and a new economic pricing model for water. Solutions included capacity building, collaboration

with the private sector, and creating incentives. To attract talent, the business model should reflect water's true value and digital technologies like AI should be used.

Another significant discussion focused on improving public investment and financial management in the water sector. Concrete solutions included capacity building throughout the project lifecycle, collaboration with the private sector to bring in expertise, and creating the right incentives and enabling conditions. Attracting talent to the sector requires improving the business model, ensuring that water tariffs reflect the true value of water, and leveraging digital technologies like AI. Addressing these root causes of inefficiency and implementing reforms in policy, institutions, and regulations are essential to enhance performance and make the sector more attractive to potential employees.

The synthesis session on special schemes and incentives promoting green financing featured a diverse lineup of speakers, including Yuki M.A. Wardhana, Fan Zhang, Erik Spiro-Larrea, and Sri Bagus Guritno, and was moderated by Novie Andriani. Each speaker shared valuable insights into innovative financing approaches, emphasizing the critical role of green financing in enhancing water management. They discussed challenges related to climate change, funding issues, and outdated infrastructure, proposing solutions such as process alignment, capacity building, and blended financing models. The importance of policy, institutional, and regulatory reforms was highlighted, along with successful examples of ecosystem-based and community-based financing schemes. The session concluded with a call for continued stakeholder collaboration to develop and implement innovative financing solutions that secure water resources for future generations, addressing both environmental and social impacts while ensuring financial viability.



India-DIPAYAN BOSE-Jute farming in flood water-FIAP HM



India-DIPAYAN BOSE-Flood victims-FIAP HM

## Enhanced Funding to Cope with Water Crises, Water Disasters and for Climate Resilience

**Topic coordinator: Mikio Ishiwatari (Japan Water Forum)**

The session on integrating cultural components in water management emphasized the critical need to incorporate cultural practices and knowledge systems into strategies for addressing water crises and preparing for water-related disasters. Recognizing and respecting these cultural elements is essential for creating effective and sustainable water management solutions.

Participants discussed tailored financing frameworks as a key component of disaster response. The session highlighted the importance of adapting financing frameworks and regulations to the specific contexts of each region or framework. Tailoring these mechanisms ensures

local circumstances are adequately addressed, leading to more effective response and recovery efforts in the wake of water-related disasters.

UNESCO's multi-stakeholder approach was another central theme, with discussions aligning with UNESCO's goals of engaging multiple stakeholders to advance science and ensure equitable access to water for all. The session emphasized the integration of scientific evidence into policymaking processes and the development of inclusive solutions in collaboration with local communities, which are core to UNESCO's mission in water management and disaster preparedness. The main outcomes and commitments of the session are as follows:

- **Cultural integration:** The session highlighted the necessity of incorporating cultural components into water management strategies. Respecting and integrating cultural practices and knowledge systems can lead to more effective and sustainable outcomes in water management and disaster preparedness.
- **Adaptable financing frameworks:** Disaster financing must be tailored to fit the specific needs and contexts of different regions. The session called for adaptable financing mechanisms that are capable of providing effective responses to water-related disasters, ensuring that recovery efforts are swift and contextually appropriate.
- **Stakeholder engagement:** Aligning with UNESCO's mission, the session underscored the importance of a multi-stakeholder approach in advancing scientific understanding and ensuring equitable access to water. Collaborative efforts that integrate scientific evidence into policymaking and involve local communities are crucial for

achieving sustainable water management and disaster preparedness.

Ishiwatari summarized the session by emphasizing the need for financing Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) through stakeholder cost-sharing, evidence-based project approval, and structured funding to enable quick recovery. Keynote speakers stressed the importance of global partnerships and knowledge exchanges in managing climate risks, with the Asian Development Bank (ADB) increasing its support for water security in Asia. The session highlighted that disaster recovery funding should include components for risk reduction, risk transfer, and the establishment of clear policies. Discussions on the topic of "Secure and increase funding to prevent and overcome water-crisis, water disasters and enhance climate resilience" called for inclusive water infrastructure that combines green and conventional methods. The cross-cutting session on "How to educate and meaningfully involve people in the tough decisions on climate mitigation and adaptation" stressed the importance of scientific understanding and decision support frameworks for DRR financing, while the discussions on "Mobilizing 'wise' investments to address water crises, water disasters and to improve climate resilience" focused on integrating Environmental, Social, and Governance (ESG) principles, particularly for vulnerable populations.

In conclusion, addressing the complexities of water management and disaster preparedness requires a holistic approach that integrates cultural practices, adaptable financing frameworks, and a multi-stakeholder strategy. These components, along with global partnerships and scientific evidence, are vital for building resilience and ensuring sustainable water governance in the face of climate change.



■ Vietnam-HUNG TRUONG  
BA-Kiem tra-PSA HM

## Sub-theme 6: Knowledge and Innovation

### Coordinator: Rahmah Elfithri (UNESCO)

The sub-theme on “Knowledge and Innovation” emphasized the importance of capacity development in water management, focusing on continuous learning from kindergarten to higher education and beyond with a lifelong learning perspective. Discussions highlighted the need for water-smart management and technological innovation to address water-related challenges and leverage climate-smart policies. Traditional and indigenous knowledge systems were recognized for their value in water management practices, particularly in the context of climate change. Easy-to-use water information systems were suggested, and water sector education and training were offered in various formats, languages, and with accommodations for people with disabilities. Participants suggested collaboration with local organizations, universities, and NGOs to broaden reach and make learning materials more accessible.

The discussions also highlighted the need for equity in water infrastructure development, sustainable management strategies, and data collection for

educational purposes. The sub-theme also stressed the need for reliable water resources management institutions, digitalization, and robust hydrological networks. Open data policies for water can be implemented through partnerships and universities. Furthermore, a startup is developing commercially valuable data sets to make water management data freely available.

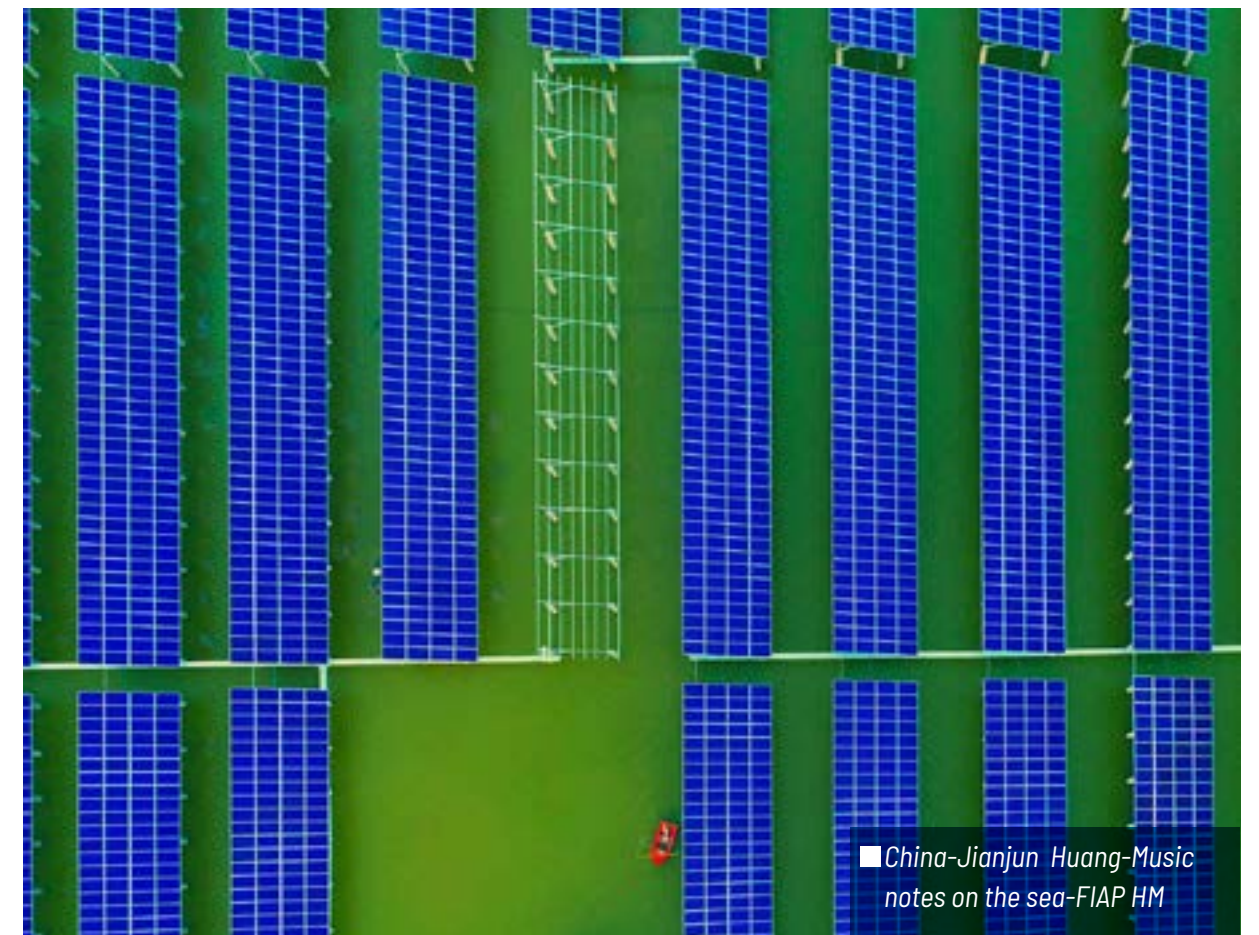
Participants discussed initiatives for smart water management, satellite technology, professional training, and international relations, including proposals for a community of practice for smart water management, a passport for satellite operating techniques, an exchange program for water innovations, and a training program for professionals. The session highlighted the need for knowledge and innovation in water resources, investment in sustainable water management, capacity development, and mobilization for youth, gender equality, and local and indigenous knowledge systems.

## Smart Water Management and Technological Innovation

Topic coordinator: Ignacio Deregibus (International Water Resources Association, IWRA)

Participants discussed the importance of smart water management in optimizing water consumption, utilizing data-driven information, and integrating both conventional and non-conventional methods. They highlighted the need for local adaptation, training the trainers, and bridging the gap between conventional systems and technology. They also pointed out the benefits of digital solutions for the entire water cycle, including hydrowallet, prepaid systems, and water credit. Panelists also identified the need for a center for water-industry business models, along with the challenges in the water credit system and the need for basic investment in infrastructure. The discussions also highlighted the importance

of water as a human right and the need for technological advancements to address water scarcity in developing countries. The discussion concluded that technology is not a threat but an opportunity to serve communities better. Citizen science was recognized as means to improve water quality in developing countries. Participants also highlighted the importance of bridging the gap between technology and accessibility for all communities, especially in developing countries. Community engagement and social shifts are vital for water management projects, and educating younger generations is essential for better access to these technologies.



■ China-Jianjun Huang-Music  
notes on the sea-FIAP HM

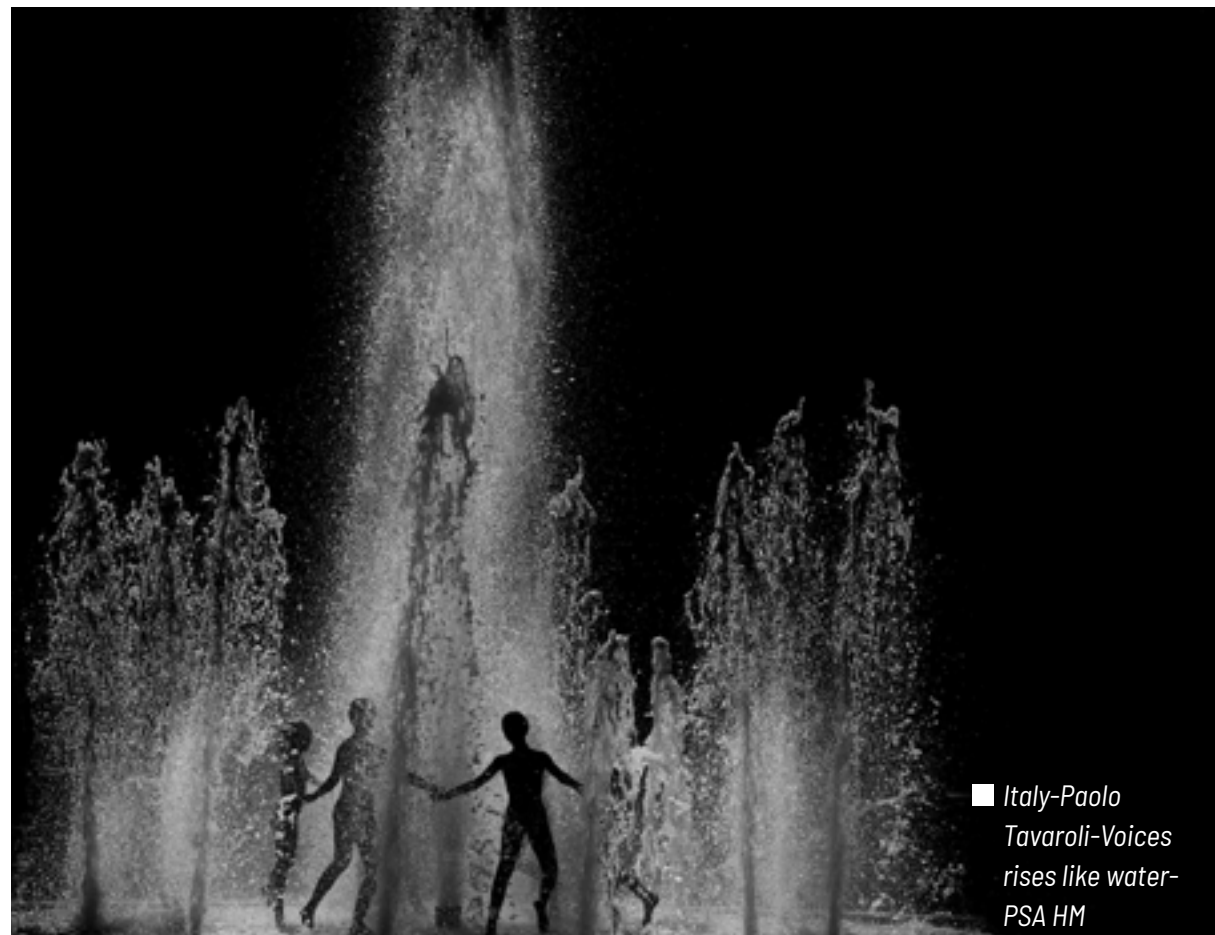
## Accelerating Transformative, Innovative and Integrative Approaches: Commitments From the Un Water Conference, 10<sup>th</sup> World Water Forum and Beyond

*Topic coordinator: Alex Money (Watermarq)*

Panelists highlighted the need for innovative engineering for disasters, climate change, and El Niño. In addition, government should develop community resilience and enhance capacity building. They noted that better infrastructure and inclusive problem-solving involves men, women, and Indigenous people. Optimism and energy are essential for progress, and forums should focus on accountability and pre-conference processes. Good practices and collaboration, including technologies such as AI and nature-based solutions,

are important for achieving the SDGs. Participants also noted the importance of engaging local communities, addressing missing stakeholders, and ensuring diversity and representation.

The discussion suggested that the next water agenda should involve participants from various sectors, including ministries, stakeholders, funding institutions, local communities, climate sectors, frontline workers, and Indigenous peoples across the world. Pre-processing is crucial to attract and engage participants and overcome willingness barriers.



■ *Italy-Paolo Tavaroli-Voces rises like water-PSA HM*

## Respect and Valuation of Indigenous, Traditional, and Community-Based Knowledge Systems and Integration of Their Practices into Existing Water Management Policies

*Topic coordinator: Daniel (WASH Network Indonesia)*

To increase focus on the connection between land rights and water management, especially for indigenous groups and local communities, it is crucial to integrate their unique perspectives and knowledge into policy frameworks. Indigenous communities have a deep understanding of their environment and protecting their land rights can empower them to manage water resources effectively. Recognizing the symbiotic relationship they have with their land and water, participants noted the need to advocate for legal frameworks that support Indigenous rights and promote environmental stewardship.

Fostering diversity and inclusivity in water management governance requires a determined effort to address the biases inherent in the prevailing economic system, which often privileges those with greater economic resources. This system

tends to marginalize women and disadvantaged communities, limiting their access to decision-making processes. Inclusive policies and platforms that prioritize equitable participation are needed to counteract this. Participants emphasized the need to ensure that marginalized voices are heard and valued, promote more inclusive water management by offering capacity-building programs, and ensure fair representation in governance structures.

Concrete actions and holistic integration of various perspectives in development are essential for equitable and sustainable water management. This involves recognizing the diverse roles and knowledge of all stakeholders, including marginalized communities and women. Effective programming should not only create policies, plans, and legislation but also address the underlying social norms that influence these roles. Investing in capacity building and creating platforms for dialogue between government officials, rights holders, the private sector, and academia is crucial. By fostering an inclusive approach that considers social, economic, environmental, and cultural dimensions, we can achieve more effective and sustainable water management outcomes.

In conclusion, managing multicultural discussions and decision-making processes in development work requires addressing challenges related to commitment, capacity development, and communication among stakeholders. It is essential to allow time for these processes to unfold, ensuring a standard approach that considers diverse perspectives. Leveraging existing networks and collaborations can streamline communication and avoid duplication of efforts. Overcoming resistance to more inclusive and longer-term approaches require patience, persistence, and clear communication about their benefits. By navigating these complexities with a focus on inclusive and sustainable development practices, we can foster more effective outcomes for all communities involved.

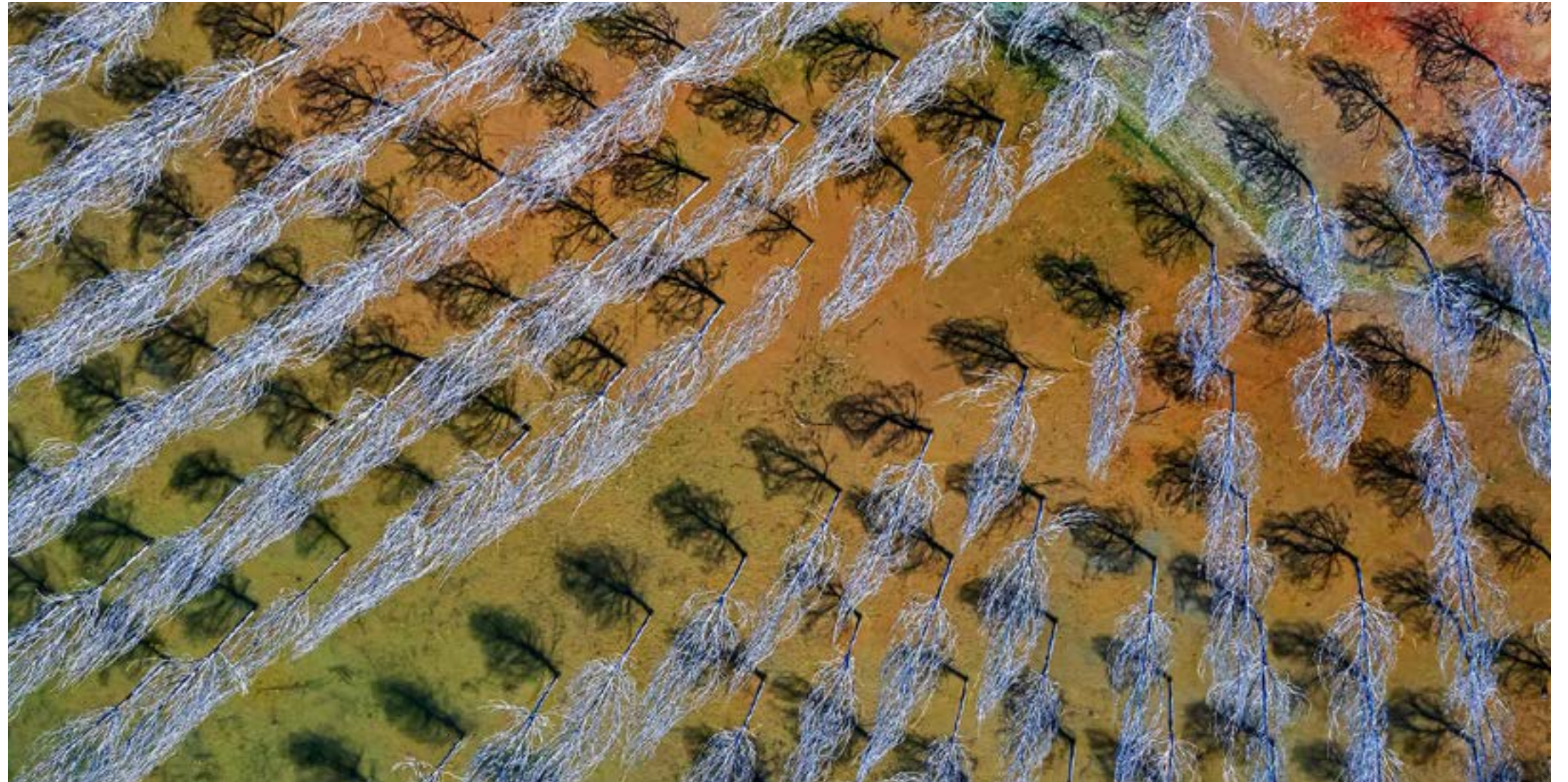
## Upscaling of Water Information Systems

*Topic coordinator:*

*Paul Haener (International Office for Water, OiEau)*

Efficient water resource management requires a data-driven approach, involving the generation, integration, processing, interpretation, and use of data for informed decision-making and public dissemination. Challenges in data availability and accessibility remain significant, but new data production processes like remote sensing, IoT, and crowdsourcing offer cost-effective alternatives, especially in data-scarce regions. Artificial intelligence can also be used to simulate datasets. Reinforcing data sharing through existing resources and promoting common language and procedures is essential. The availability of data is crucial for decision-making, operational processes, and public information. Strengthening strategies and collaboration among actors can optimize the use of new processes and technologies related to data management and information production.

This discussion led to innovations in data production, sharing, transformation, integrated water resource management, digitalization, and AI, which are crucial for improving water quality monitoring. New technologies like spatial altimetry and SWOT satellites provide critical hydrological data, while ground measurement techniques and remote sensing enhance water quality monitoring. Challenges in data sharing include security concerns and lack of interest, necessitating incentives for participation. Addressing technical and infrastructure issues, integrating different data sources, and fostering global collaboration are essential. Open data and open-source technologies support data sharing and collaboration. Challenges in data collection included frequent changes in authorities, underutilization of data, and infrastructure issues. Organizations like



Collecte Localisation Satellites and Hydroweb.next promote open access to hydrological data. The World Meteorological Organization (WMO) emphasizes the need for integrated data sources, including satellite, drone, IoT, and citizen science data, for early warning systems and climate resilience.

The importance of data sharing in water management was emphasized, with a focus on combining data from various sources, including public entities and citizen science. Addressing challenges in data utilization involves frequent changes in authorities, infrastructure limitations, and costs associated with data processing and

sharing. Integrated approaches, such as merging satellite data with in-situ measurements, are crucial for comprehensive water resource management. Incentives for data sharing include capacity building and providing equipment. A task force will synthesize new technologies and implement integrated data management practices in pilot basins. The White Paper on Best Practices in Water Data Management aims to standardize data management practices internationally and facilitate interoperability. Open data and mutualization were promoted, with digital tools integrated to provide a comprehensive overview of the water cycle. International cooperation

was recognized as essential for improving data infrastructure and management practices globally.

The session on “Upscaling Water Information Systems” discussed innovations, challenges, and opportunities in water data management. Presentations emphasized transforming raw data into actionable information, leveraging new technologies, and promoting robust data sharing practices. The session proposed a task force for integrating advanced data technologies and developed a white paper on best practices. Strong intermediary organizations, incentives, and open data were highlighted as crucial for effective water management.

## Enhanced Access to Education & Training on Water

*Topic coordinator: Julie Reynaud (International Network of Water Training Centers, INWTC)*

Investments in the water sector are significant but often fall short of expectations; billions of people still lack access to water and sanitation services, and water resources management is still poor in many regions, with dire consequences for human and environmental health. One of the main reasons for this collective failure is the lack of consideration and the low political and financial priority granted to education and training of the general public as well as professionals involved in water management. Education and training are critical tools to raise awareness of the public at large and build the capacities of decision-makers and staff of municipal water and sanitation services, local authorities, economic sectors and basin-level institutions.

The discussions emphasized the importance of capacity building, funding, and education in the water and sanitation sector, highlighting the need for increased funding for training and investment, as well as the need to integrate capacity development into projects and water strategies for sustainable water management. Climate change and its impact on water resources also presents significant challenges, including changing precipitation patterns, lack of capacity building in IWRM, and sanitation. Geographic diversity, accessibility issues, language barriers, and technological advancements were also identified as significant hurdles. Participants also discussed misconceptions about water and the attractiveness of jobs in the sector. A call for efforts was made to reduce the negative impact by society on water resources and improve education for youth. Stakeholders were encouraged to raise awareness about water education, as well as to enhance understanding and appreciation of water issues, ensuring future generations are better

equipped to manage and protect this vital resource.

Furthermore, the session emphasized the importance of professional training, sustainable financing mechanisms, and a holistic water-sanitation concept for long-term sustainability. It also emphasized the need for government support and public-private partnerships for training. Strengthening capacity requires collaboration, mobilization, and participation from institutions and stakeholders. Discussions also suggested customized training and a virtuous circle of continuous improvement. A global water network can facilitate knowledge sharing and capacity building. Participants also discussed the need for educational materials for teachers and students, mobile cloud solutions, and understanding past ecosystems. Valuing water and engaging youth with water topics are crucial for fostering a new generation of informed and proactive water stewards.



Indonesia-ISMAIL ABDUL MUTTALIB-The Jatigede Dam-FIAP HM

## Cross-Cutting Sessions

Complementing the substance of the six sub-themes, the cross-cutting sessions were organized to accommodate and integrate issues that require collaboration across multiple sub-themes. These discussions aimed to bridge gaps and foster synergy among different areas, recognizing that many challenges in water management and sanitation are interrelated. By addressing topics that span various sub-themes—such as climate

change, sustainable financing, capacity building, and technological innovation—participants could develop more comprehensive and cohesive strategies. This collaborative approach ensured that solutions were not developed in isolation but rather in a manner that considers the complex and interconnected nature of water and sanitation issues, ultimately leading to more effective and sustainable outcomes.

The Key Points Discussed and the Conclusions of the Cross-Cutting Sessions Are as Follows:

Session Code	Sub-themes	Title	Key Points	Conclusions
CC1	Sub-themes 1 & 3	How to educate and meaningfully involve people in the tough decisions on climate mitigation and adaptation?	<ul style="list-style-type: none"> <li>Importance of educating communities in climate change mitigation and adaptation.</li> <li>Indigenous communities face challenges due to remote locations and distrust.</li> <li>Traditional teachings and communication methods guide community engagement.</li> <li>Strengthening community capacity to mitigate climate impacts and address informational deficits.</li> <li>Active youth and community participation are crucial for inclusive planning.</li> <li>Addressing deep social problems requires social solutions and place-based approaches.</li> <li>Rethinking tools and approaches to work with disadvantaged groups.</li> <li>Early and positive engagement is crucial for environmental protection.</li> <li>Focused education on climate change, water scarcity, and water conservation.</li> <li>Language barriers pose challenges to capacity building.</li> </ul>	<p>Addressing Climate Change:</p> <ul style="list-style-type: none"> <li>Involving Communities and Traditional Teachings</li> <li>Indigenous communities face communication and involvement challenges due to remote locations.</li> <li>Traditional teachings are crucial for effective engagement.</li> <li>Strengthening community capacity is essential for mitigating climate impacts.</li> <li>Emphasizing disadvantaged groups for equitable adaptation efforts.</li> <li>Combining adaptation and mitigation strategies using traditional communication methods improves community health.</li> <li>Innovative, local context oriented approaches are needed for inclusive planning.</li> <li>Overcoming language barriers and raising awareness through initiatives like "letters to the sea" have proven to be effective.</li> <li>Collaboration on environmental projects, understanding diverse operational methods, and fostering relationships are key.</li> </ul>

Session Code	Sub-themes	Title	Key Points	Conclusions
CC2	Sub-themes 1, 2 & 3	Climate resilient infrastructure: blending green and grey, traditional and non-traditional approaches to meet water security needs in a climate changed world.	<ul style="list-style-type: none"> <li>Water Security Strategies</li> <li>Ensure access to water and sanitation.</li> <li>Reduce risks of water scarcity, excess, and pollution.</li> <li>Strengthen community and ecosystem resilience through governance, drought management, and flood control.</li> <li>Provide safe, inclusive, and efficient water access.</li> <li>Implement sustainable flood management projects.</li> <li>Integrate traditional knowledge and green infrastructure for environmental challenges.</li> <li>Prioritize equal representation and river protection.</li> <li>Develop a consultative framework for water sector transformation.</li> <li>Develop legal frameworks supporting nature-based solutions and ongoing dialogue on sustainable water management.</li> </ul>	<p>Blending Green and Grey Infrastructure: Direct and Indirect Costs</p> <ul style="list-style-type: none"> <li>Indirect cost of infrastructure due to environmental effects should be prioritized.</li> <li>Urgent need to define indicators and parameters for this indirect cost.</li> </ul> <p>Examples of Nature-Based Solutions</p> <ul style="list-style-type: none"> <li>Wetland application for storm water treatment in Peru and Waikato Tainui, NZ.</li> <li>Supporting indigenous rainwater harvesting and infiltration improvement.</li> <li>Restoring degraded areas to filtered gardens in France.</li> <li>Natural reservoirs application in Sao Paulo, Brazil.</li> </ul> <p>Challenges:</p> <ul style="list-style-type: none"> <li>Implementation of nature-based solutions in existing infrastructure.</li> <li>Increase capacity of mainstreaming solutions.</li> <li>Involving youth in framing resilience issues and sharing ideas.</li> <li>Social action involvement in resilience planning, financing, legal aspects, methodology, and strategy.</li> </ul>

Session Code	Sub-themes	Title	Key Points	Conclusions
CC3	Sub-themes 2, 1, 3 & 5	Climate-Water-Energy-Food-Ecology system of systems	<ul style="list-style-type: none"> <li>• Need for integration of environmental and socio-economic systems as per SDGs.</li> <li>• Vietnam's Irrigation Service Price program addresses climate change-induced water supply uncertainties and food shortages.</li> <li>• Gender-sensitive approaches to address water issues and improve community well-being.</li> <li>• The agricultural sector's impact on water quality, fisheries, and biodiversity.</li> <li>• African Network Basin Organization (ANBO) for improving water management across Africa.</li> <li>• Sedimentation in dams and strategies like dredgers.</li> <li>• Pakistan's WEFE nexus concept for managing water, energy, and food resources.</li> </ul>	<p>The discussion concluded that soil is crucial for water security and biomass is a vital component for sustainability issues. Farmers face significant challenges, necessitating future policies that consider market prices and commodity needs.</p> <p>UNESCO's institutional capacity roadmap emphasizes empowering marginalized sectors, including women. Nexus tools, involving academics, are beneficial.</p> <p>The IWRM operational approach integrates complementary tools. Sedimentation is a key soil conservation issue, affecting food security. Land use implications and nexus guidance support various applications. Nexus can enhance groundwater technology applications.</p>

Session Code	Sub-themes	Title	Key Points	Conclusions
CC4	Sub-themes 5 & 2	Securing the stream: transformative and participatory financing for water and sanitation	<ul style="list-style-type: none"> <li>• ADB's urban restructuring project in Bangladesh improved governance and infrastructure, enhancing water service delivery, waste collection, and tax efficiency.</li> <li>• India's PPP models for water treatment face challenges like inadequate capacity and high sewage treatment deficits.</li> <li>• Water Justice Fund supports women and girls in developing locally led solutions to water crises and climate challenges.</li> <li>• Tajikistan's efforts focus on financing improved rural water and sanitation services, addressing high water-related disease risks, and improving WASH services.</li> <li>• France's water agencies use water charges and the "Polluter Pays" principle to finance innovative water and sanitation projects.</li> </ul>	<p>Transformative and participatory of climate resilience issue by empowering women and youth as agents of change. The important lesson learns of PPP models in used water management in India is to manage the effective contract.</p>

Session Code	Sub-themes	Title	Key Points	Conclusions
CC5	Sub-themes 2, 1 & 3	<b>Making progress toward climate resilience: elevating the urgency of drought resilience for the water sector</b>	<ul style="list-style-type: none"> <li>• Need for a paradigm shift considering water sources and soil conditions.</li> <li>• Public mindset change and optimal use of integrated data needed.</li> <li>• Governments should focus on the negative impacts of droughts.</li> <li>• Large-scale investments required for effective solutions due to climate change.</li> <li>• Addressing interconnected issues of water, energy, and waste is essential.</li> <li>• Effective forecasting and integrated management solutions needed for drought susceptibility.</li> <li>• Africa is developing a continent-wide early warning system for drought.</li> </ul>	<p>Drought Management Importance and Solutions</p> <ul style="list-style-type: none"> <li>• Community and policymakers need to recognize the critical importance of drought.</li> <li>• Drought impacts 1-3% of GDP, necessitating significant investment.</li> <li>• Integrated, comprehensive, and high-quality data availability is crucial for early disaster prevention.</li> <li>• Technology, such as salinity technology, is needed for water and wastewater reuse.</li> <li>• Addressing drought involves restoring soil conditions through reforestation.</li> <li>• Involving the private sector and youth in practical solutions is essential.</li> <li>• Enhancing an early warning system for community preparation.</li> <li>• Synergistic handling across various ministries is necessary for holistic policies formulation.</li> </ul>

Session Code	Sub-themes	Title	Key Points	Conclusions
CC6	Sub-themes 2 & 6	<b>The case for water investments that deliver improved local human, societal and nature-based outcomes</b>	<ul style="list-style-type: none"> <li>• Water Management and Sustainable Development Goals</li> <li>• Importance of maintaining current water consumption patterns for SDGs achievement.</li> <li>• Importance of justice and equality in water management.</li> <li>• Need for collaboration between government and private sector in water issues.</li> <li>• Importance of blending finance and dual key investment mechanisms for risk minimization and sustainable investment.</li> <li>• Models like Indonesia's drinking water project and government PPP schemes for improving water access.</li> <li>• Need for collective discussion and relief efforts for water problems.</li> <li>• Underfunding of the global water sector.</li> <li>• Exploration of groundwater potential in southern Africa.</li> <li>• Importance of understanding local values and developing nature-based solutions.</li> </ul>	<p>The session promoted the importance of shifting perspective from technical based solution to Natural-based Solution (NBS) that promote sustainable development. There are many financial scheme opportunities to support the projects, including public, private, public-private, and international funding. However, to ensure the project bankable support from policy, legal framework, enhance capacity, data and information, and promote human welfare.</p>

Session Code	Sub-themes	Title	Key Points	Conclusions
CC7	Sub-themes 2 & 6	<b>Enhance pre-disaster investment in water-related disaster risk reduction (DRR) for resilience</b>	<p>Increasing Global Disaster Risks Session</p> <ul style="list-style-type: none"> <li>Discussed the rise in disaster risks due to climate change, despite rapid economic growth.</li> <li>Emphasized the need for pre-disaster investments in water-related disaster risk reduction (DRR).</li> </ul> <p>Major Agenda Items:</p> <ul style="list-style-type: none"> <li>Education, Technology, Infrastructure, and Regulation for disaster preparedness and response.</li> <li>Flood Risk Management Master Plan for effective flood management.</li> <li>Capacity Building for forecasting and warning systems.</li> <li>Digital Technology for better observation and management.</li> <li>Leadership and Policies for effective pre-disaster investments.</li> <li>Use of Scientific Evidence for financial understanding and action.</li> </ul>	<p>The session underscored the importance of pre-disaster investments in building resilient infrastructure and improving disaster risk reduction. By focusing on education, technology, and regulatory measures, and enhancing capacity for forecasting and digital observation, countries can better manage disaster risks. Strong leadership and clear policies are essential for prioritizing these investments and effectively communicating risks and solutions based on scientific evidence.</p>

Session Code	Sub-themes	Title	Key Points	Conclusions
CC8	Sub-themes 3, 4 & 5	<b>Enhance pre-disaster investment in water-related disaster risk reduction (DRR) for resilience</b>	<p>Financial Aspects and Governance Aspects of Water Management</p> <ul style="list-style-type: none"> <li>Expected increase in floods and droughts due to climate change.</li> <li>Severe economic and health impacts of water pollution and shortages.</li> <li>Growing adaptation finance gap due to higher costs and slow progress.</li> <li>Upstream investments in water management and resilience needed for disaster risk financing.</li> </ul> <p>Governance Aspect:</p> <ul style="list-style-type: none"> <li>Rising freshwater demand and climate change impact the economy.</li> <li>Water is a collective responsibility, and inaction affects justice and equity.</li> <li>Sustainable water management crucial for achieving SDGs and the Paris Agreement.</li> </ul> <p>Capacity Development:</p> <ul style="list-style-type: none"> <li>Bifurcation between research and education agendas.</li> <li>Overcoming challenges can lead to significant capacity building.</li> </ul> <p>Country Experiences:</p> <ul style="list-style-type: none"> <li>Japan, Peru, Burkina Faso, Indonesia.</li> </ul> <p>Key Ingredients for Success:</p> <ul style="list-style-type: none"> <li>Investing in water management to reduce future risks.</li> <li>Increasing capacity to use available financing.</li> <li>Involving indigenous communities and youth in water-related projects.</li> </ul>	<p>Reducing water-related risks is crucial for sustainable development, especially in regions vulnerable to water scarcity, pollution, and climate change. A multifaceted approach involving finance optimization, governance enhancement, capacity building, and institutional arrangements is needed to mitigate risks comprehensively. This integrated approach builds long-term adaptive capacities, promoting a secure and sustainable water future for vulnerable regions.</p>

Session Code	Sub-themes	Title	Key Points	Conclusions
CC9	Sub-themes 6, 1, 2, 3 & 4	<b>Towards better capacity development and collaboration on data, information, knowledge, and innovation</b>	<ul style="list-style-type: none"> <li>Water Management Challenges and Solutions</li> <li>Capacity Development and Collaboration: Importance of training and collaboration for data, information, and innovation.</li> <li>Data and Knowledge Sharing: Need for consistent, accurate, and holistic data.</li> <li>Best Practices and Lessons Learned: Use of satellite-based technologies and disaster risk reduction in development planning.</li> <li>Innovation and Technology: Use of advanced technologies like drones, machine learning, and AI.</li> <li>Education and Training: Importance of youth education programs in water resources management.</li> <li>Data Analysis and Decision-Making: Challenges in data analysis and need for representative data.</li> <li>Regional Cooperation and Governance: Importance of regional cooperation frameworks for water management.</li> </ul>	The session underscored the importance of pre-disaster investments in building resilient infrastructure and improving disaster risk reduction. By focusing on education, technology, and regulatory measures, and enhancing capacity for forecasting and digital observation, countries can better manage disaster risks. Strong leadership and clear policies are essential for prioritizing these investments and effectively communicating risks and solutions based on scientific evidence.

Session Code	Sub-themes	Title	Key Points	Conclusions
CC10	Sub-themes 4, 1 & 2	<b>Groundwater governance</b>	<ul style="list-style-type: none"> <li>Groundwater Management Importance and Approaches</li> <li>Crucial for sustainable development and addressing water scarcity.</li> <li>Requires a multidisciplinary approach incorporating diverse experiences and policies.</li> <li>Transboundary aquifers require coordinated efforts and common governance for sustainable use.</li> <li>Innovative programs like SMAB enhance sustainable management and efficiency in natural resource exploration.</li> <li>Complex water management issues necessitate a combined approach to supply and demand challenges.</li> <li>Knowledge and capacity building are essential for effective groundwater management.</li> <li>Youth involvement in groundwater management groups is crucial.</li> <li>Effective regulation, political instruments, and legal frameworks are necessary.</li> <li>International collaboration platforms like OSS facilitate knowledge exchange and governance practices.</li> </ul>	Groundwater is a crucial resource for many countries, but its quality and quantity are often unknown. Groundwater management often comes after severe problems, and it cannot be managed as an isolation system. It is connected to surface water and ecosystems, and sustainable management is needed. The next World Water Forum should promote the groundwater agenda and share data between countries to address these issues. More efforts are needed to ensure a unified approach to groundwater management.

Session Code	Sub-themes	Title	Key Points	Conclusions
CC11	Sub-themes 3, 4 & 5	<b>Water related disaster risk reduction under climate change towards transforming to a resilient, sustainable, and inclusive society</b>	<ul style="list-style-type: none"> <li>• Interaction on Water and Poverty, Food, and Disasters</li> <li>• Floods widen economic gaps and disrupt education, affecting the poor.</li> <li>• Flood control investments can reduce poverty and inequality.</li> <li>• Water-related disasters cause significant losses in agriculture, especially in developing countries.</li> <li>• Multi-purpose infrastructure can manage floods and droughts.</li> <li>• Integrated design and multifunctional infrastructure are essential for resilience.</li> <li>• The International Flood Initiative (IFI) has six objectives for disaster risk reduction.</li> <li>• Global leadership drive for water and sanitation requires holistic political engagement and continuous monitoring.</li> <li>• Water plays a critical role in building positive peace.</li> <li>• Rules and practices for water storage are crucial for DRR.</li> <li>• Youth prioritize biodiversity and prioritize scalability, speed, and resource access.</li> </ul>	<p>In conclusion, the session highlighted the urgent need for a holistic approach to address the significant impacts of climate change, particularly regarding flood and drought risks. It emphasized the interconnectedness of environmental, social, and educational factors, showcasing how floods can exacerbate economic disparities and hinder educational achievements. The importance of integrating flood management into educational systems and promoting community involvement was emphasized as crucial steps in enhancing local resilience. Additionally, comprehensive political engagement was underscored as indispensable for effectively tackling these complex challenges and fostering the development of more resilient societies.</p>

Session Code	Sub-themes	Title	Key Points	Conclusions
CC12	Sub-themes 3, 4 & 5	<b>Water related disaster risk reduction under climate change towards transforming to a resilient, sustainable, and inclusive society</b>	<ul style="list-style-type: none"> <li>• Interaction on Water, Poverty, Food, and Disaster Management</li> <li>• Floods widen economic gaps and disrupt education, affecting the poor.</li> <li>• Flood control investments can reduce poverty and inequality.</li> <li>• Water-related disasters cause significant agricultural losses, especially in developing countries.</li> <li>• Multi-purpose infrastructure manages floods and droughts.</li> <li>• The International Flood Initiative focuses on disaster risk reduction objectives.</li> <li>• Water plays a critical role in building positive peace.</li> <li>• Water storage infrastructure and information systems are essential in disaster risk reduction strategies.</li> <li>• Youth prioritize biodiversity and resource access.</li> </ul>	<p>The session promoted the importance of shifting perspective from technical based solution to Natural-based Solution (NBS) that foster sustainable development. There are many financial scheme opportunities to support the projects, including public, private, public-private, and international funding. However, to ensure a project's bankability, it requires support from policy, a legal framework, capacity enhancement, data and information, and human welfare promotion</p>
CC13	Sub-themes 5, 1, 2 & 3	<b>Mobilizing 'wise' investments to address water crises, water disasters and to improve climate resilience</b>	<p>Water Availability vs. Rainfall:</p> <ul style="list-style-type: none"> <li>• Improving Water Source Facilities</li> <li>• Hybrid disaster risk assessment technologies improve local resilience.</li> <li>• Reducing production damage costs minimizes economic disparities from disasters.</li> <li>• Climate change impacts water resources, requiring investment and collaboration.</li> <li>• ESG-Based Finance: Redefining water infrastructure investment using ESG criteria addresses governance, climate change, and community needs.</li> </ul>	<p>The session discussed water management strategies, highlighting the need for adaptive policies in response to climate change. It highlighted Japan's transition towards risk management-based policies, the HYDEPP-SATREPS project, and the socioeconomic impacts of floods. It also highlighted the importance of private sector initiatives, sustainable practices, and ESG-based finance in achieving resilient and equitable outcomes in the face of climate change.</p>

Session Code	Sub-themes	Title	Key Points	Conclusions
CC14	Sub-themes 5 & 4	<b>Finance delivery models that serve the unserved</b>	<ul style="list-style-type: none"> <li>WaterCredit Initiative and Innovative Financing for Urban Sanitation</li> <li>Uses microloans to improve water and sanitation access.</li> <li>Benefits low-income families by reducing open defecation and improving health and gender welfare.</li> <li>Emphasizes private sector involvement, technical support, and PPP for sanitation improvement in smaller municipalities.</li> <li>African Urban Sanitation Investment Initiative (AUSII Window) addresses sanitation challenges in Africa.</li> <li>AMCOW provides political leadership, policy direction, and advocacy for water and sanitation issues.</li> <li>Global Partnership for WASH maximizes existing funding, mobilizes resources, and fosters sustainable financing.</li> </ul>	<ul style="list-style-type: none"> <li>Emphasized innovative financing approaches, partnerships, and capacity building for underserved communities.</li> <li>Water.org's success in providing affordable loans for sanitation improvements highlighted.</li> <li>Small and medium-sized cities face financing challenges, best addressed through diverse revenue streams, public engagement, service clustering, and technical assistance.</li> <li>National initiatives like African Water Facility and AUSII Window support water projects with grants and technical help.</li> <li>Need for collaborative efforts to mobilize resources and accelerate progress in sustainable water and sanitation services.</li> </ul>

Session Code	Sub-themes	Title	Key Points	Conclusions
CC15	Sub-themes 4 & 6	<b>The role of science for building capacity and dialogue across transboundary basins</b>	<ul style="list-style-type: none"> <li>Water Sector Management Challenges:</li> <li>Accelerating Capacity Building: Essential for addressing water issues.</li> <li>Balancing Development vs. Environmental Protection: Requires politicians, practitioners, public, and professionals.</li> <li>Moeng River Management: Requires scientific dialogue, data sharing, water allocation, and consultation.</li> <li>Transboundary Cooperation: Language differences and varying institutional structures.</li> <li>Holistic Management: Slow progress in the water sector.</li> <li>Expert Involvement: Scientific principles beneficial for ecological restoration.</li> <li>Integration and National Interests: Reconciliation of specific national interests.</li> <li>Strategic Interests and Multidisciplinary Cooperation: Effective interboundary policies depend on strategic interests and cooperation.</li> </ul>	<p>The session:</p> <ul style="list-style-type: none"> <li>Emphasized the need for collaborative efforts and multidisciplinary approaches in addressing water issues.</li> <li>Stressed the role of science in capacity building and transboundary cooperation.</li> <li>Advocated for proactive engagement and holistic strategies.</li> <li>Advocated for vigilance and flexibility in water management.</li> <li>Advocated for integrating scientific knowledge, promoting international cooperation, and empowering youth.</li> <li>Prioritized equitable access to water resources, resilient societies, and collective action for a sustainable future.</li> </ul>

05

SOLUTIONS FROM  
HIGH-LEVEL PANEL

Photo: Garuda Wisnu Kencana statue, Bali - Indonesia

# CHAPTER 5: SOLUTIONS FROM HIGH-LEVEL PANEL

## Strategic Insights from High-Level Panels

The 10<sup>th</sup> World Water Forum's High-Level Panels (HLPs) served as a platform to discuss critical global water issues. These panels brought together a wide range of high-level participants from various water-related sectors to spark concrete actions. The HLPs reflect the forum's three main pillars: Thematic, Regional, and Political Processes. This comprehensive approach ensured that multifaceted water challenges were addressed.

Proposals for HLP sessions originated from preparatory work undertaken by the Thematic and Regional Process working groups, along with expert groups within and beyond the water community. The final selection, based on the proposals' relevance, urgency, and universal appeal, was made collaboratively by the working groups and the forum's co-hosts. A total of 20 HLPs were chosen to represent the

10th World Water Forum's key agenda, half of which were initiated by Indonesia, the host nation, showcasing its active role in shaping the forum's discussions on pressing water issues.



High-Level Panels 15: Bandung Spirit Water Summit

## Delving into the High-Level Panels' Discussion

Session Code	Name	Key Points	Key Points
HLP 1	Proposing the Establishment of the Global Water Fund	<ul style="list-style-type: none"> <li>• <b>Global Water Fund Proposal for Improved Access to Water and Sanitation</b></li> <li>• 2.2 billion people lack safe drinking water and 3.5 billion lack proper sanitation, affecting developing countries.</li> <li>• A Global Water Fund proposed to enhance financing for water infrastructure projects, promote private sector efficiency, and reduce reliance on public budgets.</li> <li>• Climate change, population growth, and economic development necessitate innovative fiscal policies and funding mechanisms.</li> <li>• Achieving Sustainable Development Goal 6 by 2030 requires increased efforts to improve public spending efficiency and water management reforms.</li> <li>• Innovative funding models like the Natural Capital Fund are crucial for supporting water-related projects and preserving natural capital.</li> <li>• Sustainable partnerships and development projects are essential for equitable access to clean water.</li> <li>• Collaboration among stakeholders is crucial for effective water management.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Water Security Challenges in Indonesia</b> Climate change, population growth, and economic development pose significant threats to water security. <ul style="list-style-type: none"> <li>• Innovative policies and increased investment in water resilience are crucial.</li> </ul> </li> <li>• <b>Fiscal Policy and Investment Mobilization</b> <ul style="list-style-type: none"> <li>• Indonesian Ministry of Finance mobilizes funds for water resiliency through Green Sukuk and PPPs.</li> </ul> </li> <li>• <b>Global Water Crisis and SDG 6 Shortfall</b> <ul style="list-style-type: none"> <li>• 2.2 billion people lack safe drinking water globally.</li> <li>• Addressing annual spending shortfall in water supply and sanitation requires enhanced investment and efficiency.</li> </ul> </li> <li>• <b>Strategic Recommendations</b> <ul style="list-style-type: none"> <li>• Improve public spending efficiency, catalyze long-term financing, and reform the water sector.</li> </ul> </li> <li>• <b>Global Water Financing Architecture Challenges</b> <ul style="list-style-type: none"> <li>• Funding gap for universal water access, inadequate environments, and weak governance.</li> </ul> </li> <li>• <b>WBG Responses and Roadmap</b> <ul style="list-style-type: none"> <li>• Proposals include capacity building, macro-fiscal assessments, and aligning water security with climate goals.</li> </ul> </li> </ul>

Session Code	Name	Key Points	Key Points
			<ul style="list-style-type: none"> <li>• <b>Collaborative Partnerships and Natural Capital Fund</b> <ul style="list-style-type: none"> <li>• Initiatives like “Building Adaptation and Resilience in the Hindu Kush Himalayas” play a crucial role.</li> </ul> </li> <li>• <b>MOYA’s Integrated Approach</b> <ul style="list-style-type: none"> <li>• Emphasizes an integrated approach to improving lives through water management.</li> </ul> </li> </ul>
HLP 2	Climate-Water-Energy-Food-Ecology System of Systems	<ul style="list-style-type: none"> <li>• <b>Community Engagement:</b> Building trust with the local community is essential for effective water quality control.</li> <li>• <b>Multi-disciplinary Teams:</b> Professionals are necessary but should also transfer knowledge to local implementers.</li> <li>• <b>Institutional Complexity:</b> Effective management of water river basin agencies is crucial for overcoming complexity.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Global Water Interlinkages:</b> Water’s connection to food, energy, health, and education must be raised at a global level.</li> <li>• <b>Regulations and Tools:</b> Essential to prepare proper regulations to tackle water problems.</li> <li>• <b>Policy Makers’ Understanding:</b> Government policy makers need to recognize the importance of water.</li> <li>• <b>Collaborative Efforts:</b> Collaboration among food and water systems professionals, investors, researchers, and community groups is vital despite existing trade-offs.</li> </ul>
HLP 3	Global water governance: What’s next?	<p><b>Water Governance and Action Agenda</b></p> <ul style="list-style-type: none"> <li>• Emphasizes partnerships and collaboration for effective water governance.</li> <li>• Calls for water leadership development, education, policy support, and technological innovation.</li> <li>• Addresses both “blue” (surface and groundwater) and “green” (soil moisture) water.</li> </ul>	<p><b>Addressing Global Water Challenges</b></p> <ul style="list-style-type: none"> <li>• Urgent action needed at all levels, guided by OECD Principles on Water Governance.</li> <li>• Good governance conditions, stable regulatory frameworks, effective stakeholder engagement, and transparency are crucial for SDG 6.</li> </ul>

Session Code	Name	Key Points	Key Points
		<ul style="list-style-type: none"> <li>• Calls for multi-level cooperation, including South-South collaboration.</li> <li>• Highlights the role of global conferences like the triple COP in advancing water governance.</li> <li>• Stresses the importance of private sector involvement for technical and financial innovation.</li> <li>• Advocates for public engagement and education to empower communities and improve water governance.</li> </ul>	<ul style="list-style-type: none"> <li>• Organisers of UN 2026 Water Conference committed to prioritizing global water governance and inclusive participation.</li> </ul>
HLP 4	Reimagining the Role of Finance in Collective Action	<ul style="list-style-type: none"> <li>• <b>Water Management Challenges and Solutions Collaboration and Innovation:</b> Requires coordinated and innovative efforts to achieve Sustainable Development Goals.</li> <li>• <b>Investment and Infrastructure:</b> Need for enhanced collaboration, co-financing, and innovative financial mechanisms.</li> <li>• <b>Water Valuation and Efficiency:</b> Proper water pricing separates economic growth from increased water use.</li> <li>• <b>Stakeholder Integration:</b> Incorporating diverse stakeholder perspectives and adhering to international standards improves water management outcomes</li> <li>• <b>Inclusive Dialogue:</b> Overcoming sector fragmentation and engaging stakeholders through bottom-up approaches.</li> </ul>	<p><b>Addressing Climate Change: A Pathway Forward</b></p> <ul style="list-style-type: none"> <li>• Climate change predictions suggest a potential temperature increase of up to 1.5°C by the end of the decade.</li> <li>• The Paris Agreement aims to keep this increase below 1.5°C by 2100, but recent trends indicate a rise of 1.4°C.</li> <li>• The need to bridge the gap in collective efforts, exacerbated by disparities among countries, is highlighted.</li> <li>• Initiatives like the Center of Excellence for Water and Climate Resilience aim to enhance water and climate resilience, increase access to global water data, build capacity across sectors, engage youth in research and innovation, and foster inclusive partnerships.</li> <li>• The initiative aims to minimize capacity gaps, inform evidence-based policies, and empower communities to build resilience against climate threats.</li> </ul>

Session Code	Name	Key Points	Key Points
		<ul style="list-style-type: none"> <li>• <b>Discussion Points:</b> Reforming voting share allocations could foster equality between the Global North and South. Ensuring water projects meet social requirements and standards can prevent failure or harm.</li> </ul>	
HLP 5	Navigating the Source-to-Sea Journey: Advancing Prosperity Across the Entire Water Cycle	<ul style="list-style-type: none"> <li>• <b>Source-to-Sea Management:</b> Highlighted the benefits of integrated water resources management.</li> <li>• <b>Data Sharing:</b> Important for disaster preparedness.</li> <li>• <b>Blue Economy:</b> Linking blue economy initiatives with water security.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Holistic Approach:</b> Source-to-Sea management protects natural habitats and builds synergy in water resources management.</li> <li>• <b>Transboundary Coordination:</b> Essential for achieving SDGs related to water.</li> </ul>
HLP 6	Hydro-diplomacy and peace	<ul style="list-style-type: none"> <li>• <b>Hydro-diplomacy:</b> Promotes peace and resilience through mutual benefits.</li> <li>• <b>Young Professionals' Role:</b> Emphasized their adaptability and critical thinking.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Unified Approach:</b> Hydro-diplomacy is crucial for peace and cooperation in water resource management.</li> <li>• <b>International Cooperation:</b> Essential for managing shared water resources effectively.</li> </ul>
HLP 7	The role of the private sector in meeting the goals of SDG 6	<ul style="list-style-type: none"> <li>• <b>Private Sector Involvement:</b> Crucial for building infrastructure and achieving water production goals.</li> <li>• <b>Water Stewardship:</b> A blend of private sector involvement and government regulation.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Engage Private Sector:</b> Treat private entities as partners in water stewardship.</li> <li>• <b>Regulatory Focus:</b> Governments should ensure clear and fair regulations for water management.</li> </ul>
HLP 8	Status of Early Warnings for All (EW4All) initiative	<ul style="list-style-type: none"> <li>• <b>EWS4All Applicability:</b> Discussed its implementation at the local level.</li> <li>• <b>Global Relations:</b> Importance of accelerating global and regional relations for water security.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Community Transformation:</b> EWS4All needs community readiness to respond to warnings effectively.</li> <li>• <b>Good Practices:</b> Emphasized learning from and convincing leaders about the importance of EWS4All.</li> </ul>

Session Code	Name	Key Points	Key Points
HLP 9	Towards a Global One-Health Approach in Public and Environmental Monitoring	<ul style="list-style-type: none"> <li>• <b>One Health Approach:</b> Integrates various communities to address health and ecosystem issues.</li> <li>• <b>Epidemiology Integration:</b> Supports global health and well-being through water quality improvement.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Collaborative Approach:</b> One-Health One-Water requires collaboration across sectors to address water challenges effectively.</li> </ul>
HLP 10	Worldwide Observatory for Non-Conventional Water Resources & Renewable Energy	<ul style="list-style-type: none"> <li>• <b>Non-Conventional Water Resources:</b> Focus on recycling and desalination.</li> <li>• <b>Global Desalination Efforts:</b> Emphasis on lowering the cost and environmental impact of desalination</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Experience Sharing:</b> Importance of sharing experiences in non-conventional water resources management.</li> <li>• <b>Commitment to Innovation:</b> Lowering the costs of desalination and increasing the use of treated water are essential for future water security.</li> </ul>
HLP 11	Nature for Water: the business case for nature to deliver value for water security	<ul style="list-style-type: none"> <li>• <b>Replicating Models:</b> Discussed replicating successful models from China.</li> <li>• <b>Nature-Based Solutions:</b> Highlighted the importance of nature-based infrastructure for water security.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Integrated Management:</b> Emphasized the link between water security and ecological security.</li> <li>• <b>Nature-Based Investments:</b> Highlighted as cost-effective means to advance water security goals.</li> </ul>
HLP 12	Integrated Water Resources Management (IWRM) on Small Island	<ul style="list-style-type: none"> <li>• <b>Challenges for Small Islands:</b> Discussed financial requirements and international funding needs.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Common Understanding:</b> Need for a common understanding of sustainable IWRM for small islands.</li> <li>• <b>Center of Excellence:</b> Proposed the creation of a center of excellence in IWRM for small islands.</li> </ul>
HLP 13	Urgent call to save our Lakes: Promoting Global Agenda and Collaborative Efforts for Sustainable Lake Management and Raising the World Lake Day	<ul style="list-style-type: none"> <li>• <b>Lake Protection:</b> Emphasized the importance of protecting lakes through collaboration.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Sustainable Management:</b> Collaboration among government, academics, private sector, society, and media is key to managing lakes sustainably.</li> </ul>

Session Code	Name	Key Points	Key Points
HLP 14	Blended Finance for Global Sustainable Water	<ul style="list-style-type: none"> <li>• <b>Entry into New Markets:</b> Discussed strategies for entering new markets in the water sector.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Nature-Based Solutions:</b> Essential for building resilience in water infrastructure.</li> <li>• <b>Blended Finance:</b> Highlighted as necessary for addressing funding gaps in the water sector.</li> </ul>
HLP 15	Bandung Spirit Water Summit - A New Political Corridor to Achieve SDGs Through Water	<ul style="list-style-type: none"> <li>• <b>International Cooperation:</b> Necessary for adaptation of climate change and disaster risk reduction.</li> <li>• <b>Youth and Women in Peace:</b> Emphasized the role of youth and women in water and peace initiatives.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Water as a Priority:</b> Elevate the human right to water and combat its weaponization.</li> <li>• <b>Youth Empowerment:</b> Utilize youth networks to address water challenges with transparency and accountability.</li> </ul>
HLP 16	Water for Shared Prosperity: Quiescent or Jump Through Hoops?	<ul style="list-style-type: none"> <li>• <b>Global Water Crisis:</b> Over 2.2 billion people lack safe drinking water, leading to 1.6 million deaths annually and posing threats to public health, agriculture, food security, economic growth, and gender equality.</li> <li>• <b>Disproportionate Effects on Women and the poor:</b> Water scarcity and droughts disproportionately impact women and girls, limiting education and work opportunities, while the poorest populations are most vulnerable and have limited adaptation capacity.</li> <li>• <b>Drivers of the crisis:</b> Climate change, population growth, and increased meat consumption are driving the crisis, with droughts increasing by 233% in developing countries over the last 50 years.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Global Water Crisis and Economic Growth</b></li> <li>• Importance of addressing global water crisis for economic prosperity.</li> <li>• World Bank and other organizations enhancing water security, resilience, and equitable access.</li> <li>• Urgent action needed to prioritize water in public budgets, implement reforms, and foster international collaboration.</li> <li>• Success of initiatives like the 10<sup>th</sup> World Water Forum demonstrates global scale efforts.</li> </ul>

Session Code	Name	Key Points	Key Points
		<ul style="list-style-type: none"> <li>• <b>Challenges:</b> Water scarcity is exacerbated by inadequate infrastructure, poor water management, and environmental degradation, especially in developing regions.</li> <li>• <b>Solutions and policy recommendation:</b> Address climate change water challenges by improving resilience, enhancing water resource management, scaling up equitable services, implementing investment and governance reforms, and expanding sustainable irrigation.</li> </ul>	
HLP 17	High-Level Panel of the Roundtable on Financing Water: How can financing support water justice?	<ul style="list-style-type: none"> <li>• <b>Water Justice:</b> Discussed financing mechanisms to ensure equitable access to water.</li> <li>• <b>Transparent Financing:</b> Emphasized the need for transparency in water financing.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Core Role of Financing:</b> Essential for delivering environmental and water justice.</li> <li>• <b>Blended Finance:</b> Highlighted as a solution for water investment challenges.</li> </ul>
HLP 18	Moving the Water Action Agenda forward together	<p><b>UN 2023 Water Conference: Water Action Agenda</b></p> <ul style="list-style-type: none"> <li>• Focused on transforming commitments into collective actions.</li> <li>• Emphasized on harnessing political momentum for effective global implementation.</li> <li>• Discussed themes like Water for Health, Development, Climate, Resilience, Cooperation, and Water Action Decade.</li> <li>• Provided platform to assess progress, identify gaps, and explore solutions.</li> </ul>	<ul style="list-style-type: none"> <li>• Highlights need and drivers of implementation following UN 2023 Water Conference outcomes.</li> <li>• Emphasizes alignment and mainstreaming, reiterating the need for an UN Special Envoy.</li> <li>• Acknowledges need to interact with outside sectors.</li> <li>• Highlights the importance of action at local and national level, addressing all parts of the puzzle.</li> <li>• Advocates for assertiveness and acceleration of water action, contributing to all SDGs.</li> <li>• Views 2026 as a year to be held accountable for making the world more water secure.</li> </ul>

Session Code	Name	Key Points	Key Points
		<ul style="list-style-type: none"> <li>• Highlighted need for systemic changes, intergenerational approaches, and inclusion of Indigenous and gender perspectives.</li> </ul>	
HLP 19	Paddies for the Planet and People	<ul style="list-style-type: none"> <li>• <b>Sustainable Rice Production:</b> Focused on reducing water use and boosting productivity.</li> <li>• <b>Climate Funds:</b> Emphasized the need for balanced climate funds for agriculture.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Collaborative Efforts:</b> Importance of joint action in agriculture and water management.</li> <li>• <b>Adopting Technologies:</b> Essential for sustainable rice production and water management.</li> </ul>
HLP 20	Water Information Systems	<ul style="list-style-type: none"> <li>• <b>Water Information Systems:</b> Highlighted the importance of accurate, real-time data for decision making.</li> <li>• <b>Data Sharing:</b> Emphasized the need for regulations and capacity building in data sharing.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Accurate Data:</b> Essential for effective water management and early warning systems.</li> <li>• <b>Collaboration:</b> Necessary at national and international levels for data sharing and cooperation</li> </ul>



*Indonesia is advocating for the establishment of a Global Water Fund or a global water financing platform. The government continues to pursue this global funding by discussing it with stakeholders from various countries and organizations.*

*Said by Sri Mulyani, Minister of Finance Republic of Indonesia during HLP 16*



THE BALI YOUTH  
PLAN AND TARGETS  
FOR WATER SECTOR

Photo: Memandikan Gajah, Sofyan Efendi - Indonesia

# CHAPTER 6: THE BALI YOUTH PLAN AND TARGETS FOR WATER SECTOR

## Youth Engagement Program in 10<sup>th</sup> World Water Forum

Youth engagement played a pivotal role throughout the journey leading up to and during the 10<sup>th</sup> World Water Forum, demonstrating a remarkable commitment and contribution from young people worldwide. At the onset of the forum, youth involvement was evident with their participation as moderators, rapporteurs, and speakers in thematic, regional, and political processes, side events, and parallel activities. An estimated 3,386 youths actively participated in these roles which drew a total of 8,166 individuals, including both youths and students.

Central to facilitating this engagement was a program called the Bali Youth Plan, spearheaded by 27 organizations comprising the Global Youth Movement for Water. The Bali Youth Plan encompassed a diverse range of activities designed to empower and showcase youth initiatives. These collaborative impactful projects such as the National River Clean Up, Share Water Stories Challenges, Water Talk Instagram Live Podcast, Video Competitions collaborated with Asia Water Council, and the Young Water Sustainability Leaders program. Additionally, the NOC sponsored 73 young participants to attend the forum, fostering their active involvement in shaping discussions and outcomes.



Family Photo during Bali Youth Sessions



Photo: Water supply in mountain village, Huaifeng Li - China

## Bali Youth Target

Building on the collaborative efforts and represents over 1,000 young people and aims to ensure youth participation in all three World Water Forum processes and on-the-ground actions, the targets are organized in:

1. Improve and diversify job and academic opportunities for young water professionals: Expand internships, ensure fair work conditions, enhance professional development, promote research, and foster networking.
2. Transform the inclusion and consultation of young water professionals and activists in decision-making in norm, and not exception: Adopt the 30-30-30 youth target, institutionalize Youth for Water Action Decade, and ensure inclusion in official declarations.
3. Support to youth-led water leadership and entrepreneurship: Recognize local youth actions, and promote innovation and training for young entrepreneurs, especially women.
4. Action against the weaponization of water: Strengthen legal frameworks, support international alliances, collaborate with civil society, use scientific research, implement actionable measures, recognize water rights, and leverage partnerships.

## Final Youth Activities

During the 10<sup>th</sup> World Water Forum, a variety of youth activities were offered to empower and mobilize young participants. The Youth Committee provided Youth Space, located in the Country Pavillon at Bali Nusa Dua Convention Center (BNDCC) 1, as a central hub for these activities. The activities included capacity-building sessions and workshops led by the Bali Youth Plan Working Group, networking events, and on-site events tailored to the interests of youth delegates. Throughout the week, 21 sessions were organized on a variety of subjects such as gender and access to WASH, water governance, groundwater management, transboundary water management, and indigenous knowledge.

Other event held is the groundbreaking Youth Hackathon: Bali Raincraft x 10<sup>th</sup> World Water Forum, a combined the creativity of Minecraft to tackle water and climate issues through innovation and collaboration, focusing on the Bajra Sandhi Monument and Lapangan Puputan Renon Area. Additionally, through collaboration youth workshop titled "Water-Energy Nexus, Achieving SDG" was held at the Mangrove rehabilitation area at Telaga Waja, Tanjung Benoa. The program also featured the culminating event of the Young Water Sustainability Leaders 2024 competition. Also, the Youth Session concluded with a prestigious Youth Awarding Ceremony, attended by the Minister of Public Works and Housing as the National Organizing Committee.

The Collaborator of Youth Final Activities	
Universitas Gadjah Mada	World Water Council Youth Delegates
UNESCO Jakarta	World Water Council
Energy Academy Indonesia	UNESCO Ground Water Youth Network
The Water Agency	The Wavemakers United
Indonesian Youth Diplomacy	World Youth Parliament for Water
Indonesia Global Network Compact	Indonesia Global Network Compact
South Africa Youth Parliament for Water	Water Youth Network
AJIPEAS	European Youth Parliament for Water

## Bali Youth Plan leading the Youth Movement in 10<sup>th</sup> World Water Forum

The Bali Youth Session, a key part of the Bali Youth Representatives program, gathered significant global interest, with 2,101 applicants from 159 countries worldwide. Of these, 60 representatives were selected, hailing from diverse nations such as Nigeria, France, USA, South Africa, Indonesia, and more. The Bali Youth Session concluded on May 24<sup>th</sup>, 2024.

The Bali Youth Session culminated in the creation of a policy roadmap. This roadmap is a strategic plan that outlines the specific procedures or steps that need to be taken to achieve goals related to sustainable water management. The roadmap includes six subthemes, each corresponding to a specific area of focus within the broader topic of water sustainability, including water security, water for humans and nature, disaster risk reduction and management, governance and cooperation, sustainable water finance, and knowledge and innovation.

## Youth-Led Solutions: Exploring the Policy Roadmap for Water Issues

After the Forum, there will be a follow-up event for the Policy Road Map Youth developed during the Bali Youth Session. This event is expected to involve the participation of youth leaders and other stakeholders in translating the strategic plan into concrete actions to enhance sustainable water management.

In addition, through the collaboration with Wavemakers United, Indonesia launched the “Indonesian Wave”, a program designed to foster a youth-led ecosystem to tackle global water challenges and link youth networks to enhance water awareness, education, and innovation. This initiative forms part of the post-forum efforts to implement the policy roadmap developed by participants, outlining future actions in water management. The “Bali Youth Targets” project as part of the compendium of concrete deliverables and actions ministerial declaration 10<sup>th</sup> World Water Forum, another significant endeavor, will be further developed through youth participation in global water initiatives, ensuring they contribute actively to the global conversation on water management and sustainability.

The Policy Road Map, designed from the forum’s six main sub-themes, is intended as a long-term project guide, subject to ongoing evaluation to incorporate advancements in science and technology. The follow-up event will provide an opportunity to strengthen global commitments to water issues and drive practical steps towards achieving the outlined goals.

## Establishing Bali Youth Water Prize



■ Bali Youth Water Prize Announcement at the Closing Ceremony

Additionally, Indonesia launched Bali Youth Water Prize in the closing ceremony, a dedicated youth award organized by the Republic of Indonesia, aimed to sustain the momentum of youth engagement in future forums. Indonesian government plans to award the Bali Youth Water Prize at every World Water Forum henceforth. This signifies a long-term commitment to empower young water champions on a global stage. The Bali Youth Water Prize is a significant initiative that will inspire and empower young people to become active participants in solving global water challenges.

The award will target youth working on:

- Recognizing young researchers who are developing new solutions for water challenges.
- Highlighting young people leading projects that address water access, sanitation, or conservation.

- Applauding young leaders who are making significant contributions to the water sector through various means.

The Bali Youth Water Prize is a significant initiative that will inspire and empower young people to become active participants in solving global water challenges. By recognizing outstanding contributions, this award program has the potential to cultivate a generation of water heroes who will ensure a sustainable future.

The journey of youth engagement in the 10<sup>th</sup> World Water Forum was guided by the dedicated efforts of the Youth Core Committee. Comprising volunteers from varied backgrounds including committee members, experts, academics, and private sector employees, this committed group played a pivotal role from the forum’s inception.

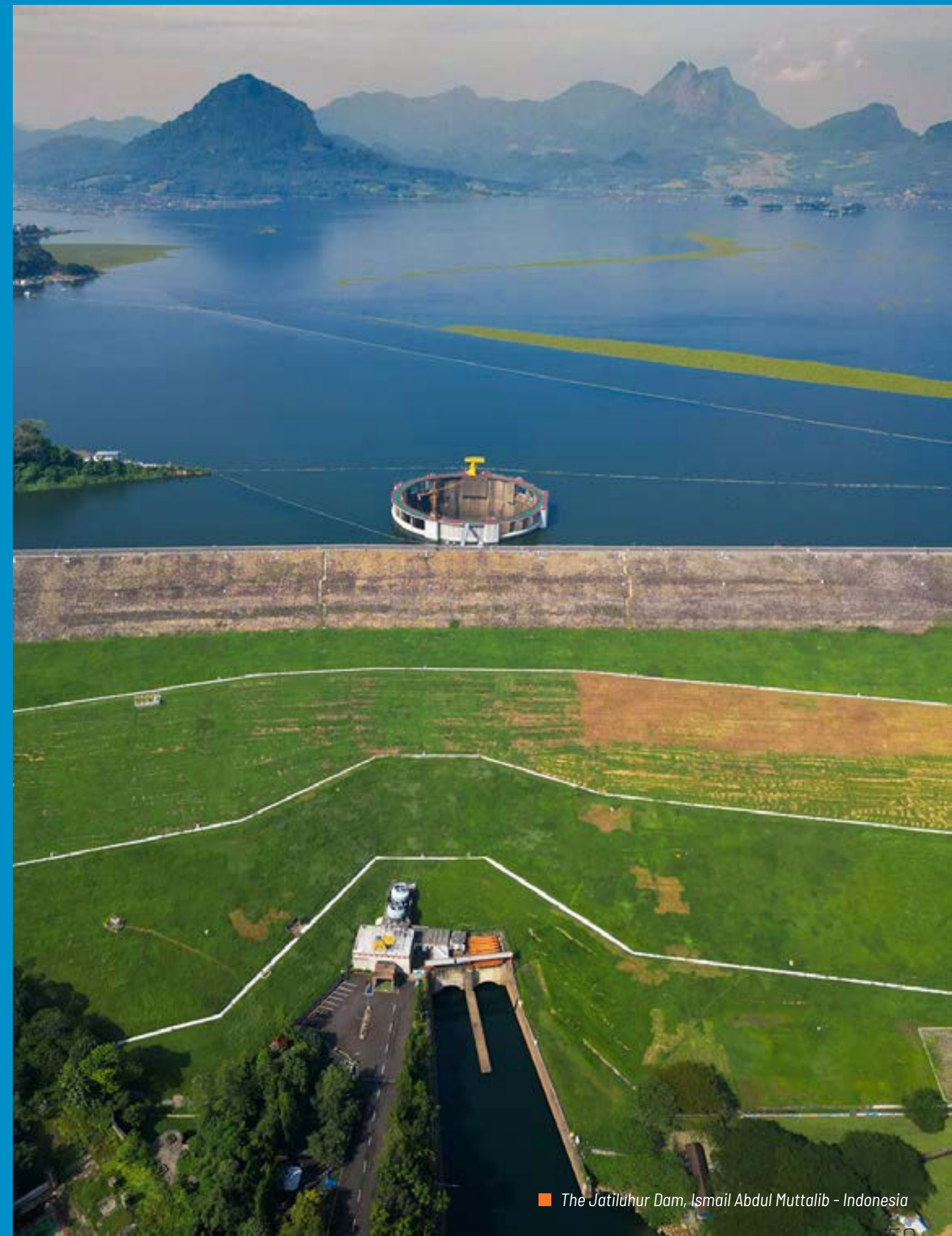
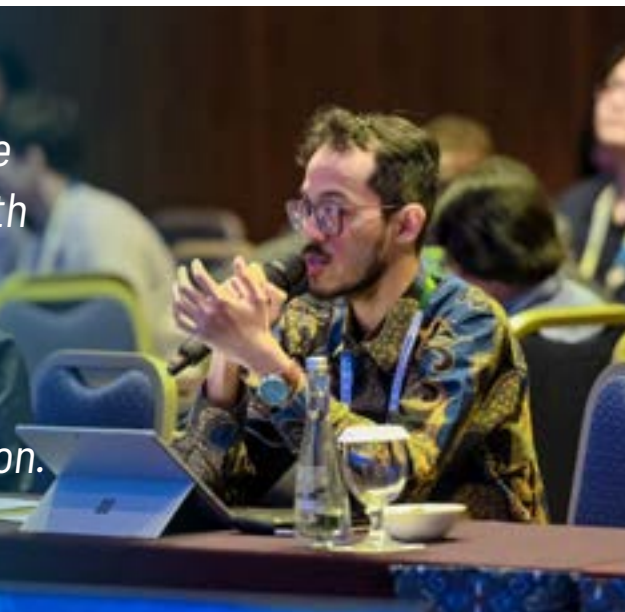


■ Youth Community of the 10<sup>th</sup> World Water Forum



*Our hope is to continue this framework for stronger, more inclusive, and persistent youth engagement in the global youth movement for water through collaboration and intergenerational participation.*

Neil Andhika, Indonesia Youth Representative of 10<sup>th</sup> World Water Forum



■ The Jatiluhur Dam, Ismail Abdul Muttalib - Indonesia



07

SHOWCASING  
INNOVATION AND  
COLLABORATION  
FROM THE FAIR AND  
EXPO OF THE 10<sup>TH</sup>  
WORLD WATER FORUM

# CHAPTER 7: SHOWCASING INNOVATION AND COLLABORATION FROM THE FAIR AND EXPO OF THE 10<sup>TH</sup> WORLD WATER FORUM

## The Opening Session of the Fair and Expo

On May 20, 2024, Puan Maharani, the Chair of the Indonesian House of Representatives, officially opened the 10<sup>th</sup> World Water Forum Fair and Expo. The fair and expo featured 278 booths, representing 17 countries. A total of 153 booths comprised expo pavilions from various countries, while 125 booths showcased products from Micro, Small, and Medium Enterprises (MSMEs).

The arrival of VIP guests at the Opening Ceremony of the 10<sup>th</sup> World Water Forum was marked by a traditional Balinese dance performance, the Sekar Jepun Dance. Following a brief speech by Puan Maharani, the opening ceremony culminated with Puan

Maharani, President of the World Water Council Loïc Fauchon, Minister of Tourism and Creative Economy Sandiaga Uno, Acting Governor of Bali S.M. Mahendra Jaya, and Communication Ambassador Cinta Laura pressing a ceremonial button to open the Fair and Expo officially. Puan Maharani expressed her belief that the event provided an excellent opportunity to promote initiatives and innovations from various countries and stakeholders regarding water issues, while also encouraging collaboration in water management. After the opening ceremony, Puan Maharani and Sandiaga Uno toured the Indonesia Pavilion.



# Country Pavilions: A Global Showcase of Innovation and Collaboration

Held at the Nusa Dua Hall of the BNDCC, the Expo of the 10<sup>th</sup> World Water Forum attracted 29,265 visitors. Encompassing a total exhibition area of 4,400 square meters, the Country Pavilion served as a dedicated space for countries to showcase their contributions and innovations in sustainable water management. This exhibition cluster featured 17 exhibitors from 15 different countries as follows:

1. Commonwealth of Australia
2. Republic of Korea
3. Kingdom of Morocco
4. Republic of Senegal
5. Republic of Italy
6. People's Democratic Republic of Algeria
7. Kingdom of the Netherlands
8. African Union
9. French Republic
10. Kingdom of Spain
11. Federative Republic of Brazil
12. People's Republic of China
13. Kingdom of Saudi Arabia

14. Japan
15. Republic of Indonesia

In addition to the country pavilions, the forum also featured a Youth Space, designed to provide space for the Youth to be actively involved in discussions and forum activities, along with the World Water Council booth.

This cluster encompasses a diverse range of activities, including:

- Seminars: In-depth sessions led by experts and thought leaders in the field of water management.
- Mini Talk Shows: Focused and engaging discussions on critical topics related to water sustainability.
- Cooperation Agreements/Memorandum of Understanding: Formal ceremonies for the signing of new partnerships and collaborative initiatives in the water sector.





## Showcasing Indonesian Water Solutions: A Deep Dive into the Indonesia Pavilion

The Organization Pavilion at the 10<sup>th</sup> World Water Forum was located in BNDCC 1 and 2, covering South Lobby, East Lobby, Uluwatu Lobby, Kintamani Lobby, Pecatu Hall, Pecatu Lobby, and outdoor areas, with a total exhibition area of 6,359 square meters. This pavilion features 107 exhibitors from various sectors, including commercial organizations, non-commercial organizations, companies, NGOs, and government agencies.

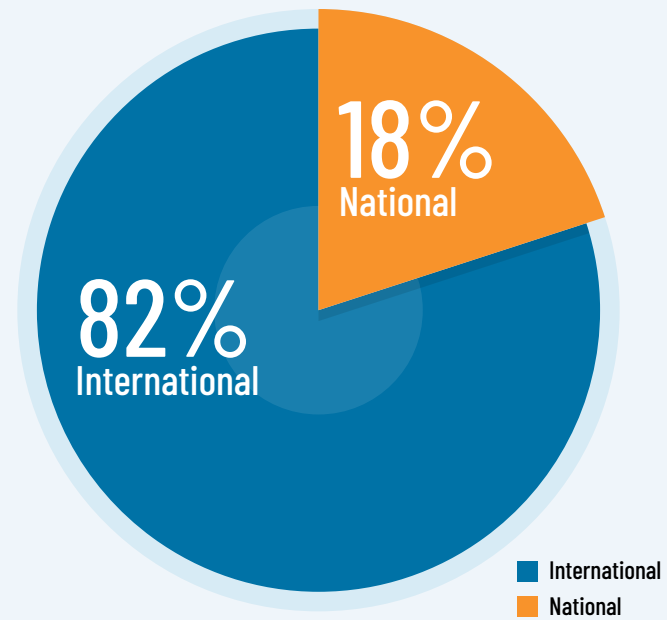


Participating organizations are as follows:

1. Sahara and Shael Observatory
2. PT. Ultratex Indonesia
3. PT. Wiratama Sistem Integrasi
4. PT. Mectron Engineering Indonesia
5. Equipment and System LLC
6. Medisun Pte. Ltd
7. PJTC Nile WATER
8. Asian Development Bank
9. Wahana Visi Indonesia
10. PT. Exact Global Teknologi
11. PT. Danareksa
12. USAID
13. Itron
14. Amphibious
15. PT. Citic Envirotech Indonesia
16. Urip Gumulya
17. Danone
18. Delameta Bilano
19. Agni Pradipa Indrajaya
20. PT. Nindya Karya
21. PT. Hutama Karya
22. PT. Pembangunan Perumahan
23. Water Indonesia
24. The Nature Conservancy
25. PJT 1 & 2
26. World Bank
27. UNESCO
28. WSV
29. Tajikistan
30. Asia Water Council
31. IRSA-CNR-WRI
32. Vega Instruments Indonesia
33. Padma Panji Pratama
34. Krakatau Tirta Industri
35. Holland for Water
36. Mekong River Commission
37. Wateroam Singapore
38. Sato Lixil
39. PT. Bima Sakti Alterra
40. Garuda Indonesia
41. KEMENPERIN
42. BPPSDMP SIMURP
43. Pertamina
44. Virama Karya, Indra Karya, Yodya Karya
45. Mind ID
46. Pemerintah Kota Kediri
47. Balai Wilayah Sungai Sulawesi IV Kendari
48. BWS Kalimantan III
49. Balai Wilayah Sungai Kalimantan IV Samarinda
50. BWS Sulawesi II Gorontalo
51. Dinas Cipta Karya dan Sumber Daya Air Provinsi Sulawesi Tengah
52. BWS Sumatera VII Bengkulu
53. Directorate General Cipta Karya
54. Ikatan Ahli Teknik Penyehatan dan Teknik Lingkungan Indonesia
55. Balai Wilayah Sungai Papua Barat
56. Balai Wilayah Sungai Sumatera I
57. Balai Wilayah Sungai Sumatera V
58. Balai Wilayah Sungai Sumatera IV Batam
59. BWS Kalimantan I
60. BWS Sulawesi I
61. Perumda Air Minum Tirta Moedal Kota Semarang
62. PT. Hantech Water Technology
63. BWS Nusa Tenggara II
64. BWS Kalimantan II Kalimantan Tengah
65. BWS Sumatera III Pekanbaru
66. BWS Kalimantan V Tanjung Selor
67. Dinas Sumber Daya Air Provinsi Jawa Barat
68. BBWS Mesuji Sekampung
69. Poltek PUPR
70. Balai Teknik Irigasi
71. Islamic Development Bank
72. Waskita Precast Beton
73. Waste for Change
74. PT. Taman Nandana Tavatimsa
75. Balai Hidrologi dan Lingkungan Keairan
76. Balai Teknik Pantai
77. Universitas Muhammadiyah Malang
78. PT. Bevananda Mustika
79. BBWS Cimanuk Cisanggarung / CS SIMP
80. BBWS Citarum
81. BBWS Citanduy
82. BWS Nusa Tenggara I
83. BWS Bali Penida
84. PT. Pasti Makmurkencana
85. BBWS Pompengan Jeneberang
86. BBWS Bengawan Solo
87. Pemprov SDA Jatim
88. BBWS Cidanau Ciujung Cidurian
89. BBWS Pemali Juana
90. BWS Sumatera II Medan
91. BBWS Serayu Opak
92. BBWS Sumatera VIII
93. BBWS Brantas
94. PT. PINDAD
95. INACOLD
96. PT. Linico Indonesia
97. Institut Teknologi Bandung
98. PT. Laminar Multi Kencana
99. PT Alkatec Mandiri Kencana
100. HATHI
101. PT. AFC Berjaya Indonesia
102. BPIW
103. BWS Maluku
104. BWS Maluku Utara
105. BWS Sulawesi III Palu
106. BWS Sumatera VI
107. BBWS Ciliwung Cisadane



## Organization Pavilion



The Organization Pavilion hosted a range of activities, including mini talk shows and Memorandum of Understanding (MOU) signings. These activities attracted a significant number of visitors from Forum's participants and delegations.



# A Platform for Collaborative Solutions at the Organizational Pavilion

Hosting the 10<sup>th</sup> World Water Forum marked a significant honor for Indonesia. Beyond participation, the Country Pavilion served as a platform to showcase international collaboration. While the Expo featured participants from foreign nations, Indonesia was also well-represented with its dedicated pavilion.

Situated within the Taman Jepun area of the BNDCC, the Indonesia Pavilion encompassed a total exhibition area of 338 square meters. This space served to chronicle Indonesia's historical journey in addressing water management challenges. Through a series of captivating exhibits, the pavilion effectively communicated Indonesia's commitment to developing innovative solutions for water-related issues. These solutions spanned

from traditional water conservation methods to the latest advancements in technology. Additionally, the pavilion highlighted Indonesia's ongoing efforts in water conservation, infrastructure development, and policy initiatives designed to overcome a range of water-related challenges.

"The Flow of Water" served as the central theme for the Indonesia Pavilion, drawing inspiration from the movement of natural water. This concept resonated perfectly with the core values of the 10<sup>th</sup> World Water Forum. By incorporating this theme into the pavilion's design through a modern interpretation of water flow, the intention was to encourage shared responsibility for water usage, ultimately aiming to ensure its continued preservation.

The Welcoming Area features a digital display showcasing Indonesian traditions that have long fostered responsible water management. The display also incorporates quotes from President Joko Widodo emphasizing the importance of efficient and integrated water management solutions. Additionally, it highlights the results of Indonesia's water processing culture, exemplified by the Subak irrigation system and similar practices. Finally, the display extends a warm welcome in various languages, reflecting the international participation at the 10<sup>th</sup> World Water Forum.



Following the Welcoming Area, the Hallway Area presents visitors with a series of interactive infographics. These infographics, incorporating videos and digital displays, address critical water management issues such as improving water quality and sanitation, ensuring clean water access for all, flood prevention and management, drought mitigation and climate resilience, sustainable water infrastructure development, and the implementation of comprehensive early warning systems and emergency response mechanisms.



The Main Exhibition Area offers an immersive experience showcasing Indonesia’s achievements in water resource management. This captivating display utilizes dramatic visuals to illustrate the nation’s strategies, including built facilities, innovative solutions, and information concerning governance, cooperation, and hydro-diplomacy. The exhibition also highlights the Nusantara Capital City (IKN), emphasizing its commitment to sustainability, particularly with regard to water management. Additionally, the area features an Interactive Touchscreen inviting visitor engagement with the theme of “Promoting Innovative and Sustainable Funding.” Furthermore, the display incorporates information on dams in Indonesia.

The Function Room Area provides a platform for engaging visitor participation. This area hosts a variety of activities featuring highly qualified speakers from relevant fields. These activities include workshops, presentations, discussions, and talk shows. A total of 43 sessions were presented by 36 institutions and organizations, including:

1. Coordinating Ministry for Maritime Affairs and Investment of the Republic of Indonesia
2. Ministry of Public Works and Public Housing of the Republic of Indonesia
3. Ministry of Tourism and Creative Economy of the Republic of Indonesia
4. Ministry of Environment and Forestry
5. Ministry of National Development Planning (PPN) / Bappenas of the Republic of Indonesia
6. Embassy of the Republic of Indonesia to Germany

7. Embassy of the Federal Republic of Germany to Indonesia
8. East Nusa Tenggara Province
9. Meteorology, Climatology and Geophysics Agency
10. Gajah Mada University
11. National Research and Innovation Agency
12. Defense University
13. Kreditanstalt für Wiederaufbau (KfW)
14. German Agency for International Cooperation (GIZ)
15. Van Oord
16. United Nations Development Programme
17. OR Archaeology, Language and Literature, French Partners Collaboration

The Exhibition Hall Area, supported by the Ministry of Tourism and Creative Economy of the Republic of Indonesia, offers visitors a unique and immersive experience. This area utilizes Virtual Reality (VR) technology to transport visitors to the beauty of Indonesia’s islands. Additionally, the space showcases games developed by Indonesian children. Featured content includes the Lokapala game, VR GO Virtual, and sales opportunities for Low Carbon/Climate Positive/Regenerative Tourism Tour Packages.



The Pledge/Manifesto Area fosters visitor participation in water resource conservation efforts. This interactive space invites visitors to contribute messages expressing their hopes and commitments. These messages can be submitted via tablets provided on-site or by scanning a QR code with personal communication devices (cellphones) that link to the interactive screens. A total of 1,257 visitors actively participated by providing data and messages. The enthusiasm for this initiative was evident, as visitors not only submitted messages but also enjoyed taking photos on the interactive screens.



The Indonesia Pavilion incorporates a dedicated space specifically for Micro, Small, and Medium Enterprises (MSMEs). This inclusion underscores the World Water Forum's commitment to generating positive impacts for these businesses. The Ministry of Tourism and Creative Economy of the Republic of Indonesia played a pivotal role in ensuring the 10<sup>th</sup> World Water Forum's success for MSMEs. Their efforts aimed to strengthen the role of MSMEs within the framework of quality and sustainable tourism recovery.



The MSME Area itself offers visitors the opportunity to discover and purchase a variety of unique, Indonesian-made MSME products. These products include hand fans, bracelets, bags, drinking bottles, ID card holders, and other trinkets suitable as souvenirs.



## Water Vaganza on the 10<sup>th</sup> World Water Forum Fair

The 10<sup>th</sup> World Water Forum Fair welcomed 20,742 visitors. “Water Vaganza,” as one the 10<sup>th</sup> World Water Forum’s Fair activities was held at two strategic venues, namely Tsunami Shelter Plaza, Kuta and Bali Collection, Nusa Dua. Held on 20 - 25 May 2024 at 10.00 - 20.30 WITA.



The recently revitalized Tsunami Shelter Plaza Kuta has emerged as a new destination of interest for both domestic and international tourists. Encompassing an area of 5,741 square meters, the plaza provides a well-suited venue for hosting the Water Vaganza event. This event offers a diverse range of activities, including MSME exhibitions, cultural festivals, informative talk shows, engaging workshops, and lively music concerts, all accessible to the public free of charge.



Bali Collection, a strategically located shopping and entertainment complex within the ITDC Nusa Dua area, has established itself as a popular destination for both local and international visitors. This popularity is attributed, in part, to its convenient proximity to the 10<sup>th</sup> World Water Forum’s main venue, situated just 6 minutes away. As a result, the Bali Collection was selected as the host location for the Water Vaganza, a dedicated event within the broader forum program.

### Indonesian SMEs Exhibition

The Water Vaganza incorporates the Indonesian SMEs Exhibition, designed to support Micro, Small, and Medium Enterprises (MSMEs) from across Indonesia in expanding their market reach and showcasing their high-quality products to an international audience. This exhibition featured the participation of 15 provinces/regions and 3 ministries/institutions at the Tsunami Shelter Plaza Kuta location, and 23 provinces/regions at the Bali Collection venue.



The Indonesian SMEs Exhibition at the Water Vaganza played a crucial role in supporting Micro, Small, and Medium Enterprises (MSMEs) across the nation. The Tsunami Shelter Plaza Kuta branch featured a total of 70 booths divided into five distinct clusters: arts & crafts, fashion, beauty products, culinary, and Kuta Traditional Village MSMEs. Each cluster showcased a diverse range of products representative of their specific regions.

The Water Vaganza, held within the Bali Collection area, was formally packaged under the title "SMEs & River Community Exhibition." Encompassing a spacious 2,069.96 square meters, the exhibition showcased a diverse range of products and programs through 51 booths featuring both Micro, Small, and Medium Enterprises (MSMEs) and the River Care Community.



Each exhibitor at the Bali Collection presented a selection of superior and distinctive products and programs specific to their respective regions. This vibrant display encompassed booth decorations, artistic creations, traditional clothing, and a tantalizing array of food and beverages.

In addition to exploring the exhibition booths, visitors to the Water Vaganza at the Bali Collection were invited to partake in interactive activities. These activities included communal singing during live music performances and the opportunity to gain hands-on experience playing rindik, a traditional Balinese gamelan instrument.



## Cultural Festival

Concurrent with the Indonesian SMEs Exhibition, visitors were treated to a captivating display of traditional dances and music representing diverse regions across Indonesia. This Cultural Festival showcased a vibrant tapestry of performances, including the Joged Bumbung Dance from Bali, the Paduppa Dance from Makassar, the Remo Branjang Kawat Dance from East Java, the Coastal Nandak Dance from DKI Jakarta, the Dugder Dance from Semarang, and many more. Visitors were enthralled by these presentations, which took place every afternoon and evening throughout the event.



## Water Talks

Instigated by the 10<sup>th</sup> World Water Forum's objective of becoming a cornerstone in achieving the Sustainable Development Goals (SDGs) target for global access to clean water and adequate sanitation, the Water Vaganza extended beyond product showcases. It also incorporated educational elements through a series of talk shows titled "Water Talks."

These discussions centered on the crucial themes of water resources and environmental preservation. The esteemed speaker roster comprised environmental activists, including Cinta Laura, the 10<sup>th</sup> World Water Forum's Communication Ambassador, and Sophie Kirana, Miss Indonesia for the Environment 2024. The Water Talks aimed to reach individuals beyond the forum's direct participants, fostering education and dialogue regarding clean water issues.



Each Water Talks session explored distinct topics:

1. Day One: "Thirsty for Change" featuring Cinta Laura as the resource person.
2. Day Two: "Rivers of Life" with speakers from World Clean Up Day and the Denpasar River Care Community.
3. Day Three: "Water Warriors" with guest speakers Melati Wijsen and Sea Soldiers.
4. Day Four: "Youth for the Future" featuring Jerhemy Owen and Rotary International as guest speakers.
5. Day Five: "Green Innovators" with Sophie Kirana and Wallace Conservation Licouping as speakers.
6. Concluding Day: "Blue Planet Solutions" featuring Mangrove Ranger and Humanity First as resource persons.

## Bali Creative Workshop

Complementing the light forum discussions on water, the Water Vaganza offered a platform for creative activities through a workshop series titled the Bali Creative Workshop. Visitors were invited to participate in workshops on crafting body care products from natural ingredients, creating trendy chunky bags, and even upcycling used paper into bookmarks.

Five Balinese workshop communities participated in this activity, including Kultara, Gracious Project, Volen Artspace, Kala Sunara, and Buana Alit Arts. The Bali Creative Workshop sessions attracted significant interest, with each session accommodating 10-15 participants. Workshop participants were able to take home their creations.



### Water Concert

Concurring with the conclusion of the Water Vaganza series of events, entertainment was provided for visitors in the form of a music concert. The Water Concert was held daily from 7:00 PM to 8:30 PM WITA, featuring performances by local Balinese musicians, including Assia Keva, a graduate of The Voice Kids Indonesia 2018.



On the final day, the presence of guest stars Andra & The Backbone served as the celebratory highlight, marking the culmination of the entire 10<sup>th</sup> World Water Forum Fair series.



## Impacts

### Increased Student Engagement

In conjunction with the 10<sup>th</sup> World Water Forum Fair and Expo, the Committee strategically invited 1,500 students from schools and universities across Bali and surrounding islands to participate in the world's largest water event. These students actively engaged as either discussion forum participants or exhibition and fair visitors.

One interviewed student remarked that the event effectively raised awareness among the younger generation regarding their role in maintaining water cleanliness and sustainability. Furthermore, students gained valuable experience engaging in discussions within exhibition halls with global water resource stakeholders and obtained insights into the latest water resource technologies.

### Empowering Local Economies

The 10<sup>th</sup> World Water Forum Fair and Expo served as a vibrant marketplace for Micro, Small, and Medium Enterprises (UMKM) from across Indonesia. This platform provided a unique opportunity for UMKM entrepreneurs to directly engage with a global audience of visitors, showcasing their diverse products crafted with local skills and traditions. This direct connection between producers and consumers fostered economic empowerment within local communities. Sales generated at the Fair and Expo directly translated into increased income and potential business expansion for participating UMKMs.





10<sup>th</sup>  
World  
Water  
Forum  
Bali 2024



# 10<sup>TH</sup> WORLD WATER FORUM

## WATER FOR SHARED PROSPERITY

18-25 May 2024 | Bali, Indonesia





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