

The 4th Asia-Pacific Water Summit Kumamoto Japan 2022

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Water for Sustainable Development - Best Practices and the Next Generation -

Implementation Report

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This report is a tentative translation by the Secretariat of the Fourth Asia-Pacific Water Summit. The translation may be revised in the future.

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Greetings



Mr. Yoshiro Mori Chair of the Joint Executive Committee of the 4th Asia-Pacific Water Summit President of the Asia-Pacific Water Forum Former Prime Minister of Japan

The 4th Asia-Pacific Water Summit (APWS) was successfully concluded and issued several outcome documents, namely, the Kumamoto Declaration and Chair's Summary. In addition, at the Heads of State and Government Meeting—a flagship component of the APWS—Japanese Prime Minister Fumio Kishida announced the Kumamoto Initiative for Water, a robust commitment by the Japanese government.

For their considerable efforts and contributions to this conference, I would like to thank the organizations involved in the Asia-Pacific Water Forum, the people of the host city, Kumamoto City, the countries participating from the Asia-Pacific region and their embassies in Tokyo, the United Nations and other international organizations, the Japanese government and their ministries and agencies, the members of the Joint Executive Committee from Japan and overseas, and everyone who participated in, attended or watched the sessions and events.

The APWS was held in Japan for the first time in 15 years since the 1st Summit was held in Beppu in 2007. At the Opening Ceremony of the 4th APWS, we were honored by the online presence of Their Majesties the Emperor and Empress of Japan, and by the commemorative speech delivered by His Majesty the Emperor. In addition, representing the high school students who participated in the Youth Water Forum Kyushu, which is a newly launched platform by the Japan Water Forum for capacity development and awareness-raising, six students from three high schools in the Kyushu region were also given the opportunity to have an informal talk online with Their Majesties the Emperor and Empress.

In terms of the outcomes of the 4th APWS, I am pleased to report that Kumamoto City, Japan, was highly praised by the participating countries and organizations as a model that embodies the theme of the 4th APWS, "Water for Sustainable Development - Best Practices and the Next Generation -".

I ask for your continued cooperation and support in disseminating and sharing the series of outcomes from the 4th APWS, including the good practices and roadmaps that were shared at the conference and the significant involvement of youth participants, both within Japan and to the Asia-Pacific region and to the rest of the world.

Following the 4th APWS, in June, the Second High-level International Conference on the Water Action Decade was held in Dushanbe, co-organized by the Government of Tajikistan and the United Nations.

This conference was an important milestone meeting within the International Decade for Action, "Water for Sustainable Development", 2018-2028, which was adopted by the UN General Assembly in December 2016 to help achieve the various water-related SDGs.

The principal outcome document from this conference, the Final Declaration titled "From Dushanbe 2022 to New York 2023", stipulates the determination to accelerate efforts for achievement of all water-related goals including SDG 6 (clean water and sanitation), while also looking more broadly at issues related to the environment, the economy, science and technology, human resources and other relevant areas. The sound management of water, the participation of youth, and the 4th APWS are also referenced in the document.

It is my hope that the outcomes of the 4th APWS will serve as a beacon of hope, not only for the UN Water Conference scheduled to be held at the UN Headquarters in New York in March 2023, but also for the future post-COVID-19 pandemic and post-SDGs.



Mr. Kazufumi Onishi Vice Chair of the Joint Executive Committee of the 4th Asia-Pacific Water Summit Mayor of Kumamoto City

The 4th Asia-Pacific Water Summit was held at Kumamoto-Jo Hall over two days, April 23–24, and was attended in person and online by heads of state and government from 30 countries in the Asia-Pacific region, including Japan. The success of the Water Summit, which had been postponed due to the impact of COVID-19, is the direct result of the dedicated efforts of our co-organizer, the Asia-Pacific Water Forum, the Japanese Ministry of Land, Infrastructure, Transport and Tourism, and so many others. I would like to express my sincere gratitude to all those who cooperated in organizing the event.

At the Opening Ceremony of the Water Summit, we were honored by the online presence of Their Majesties the Emperor and Empress and by the commemorative speech delivered by His Majesty Emperor Naruhito titled "Hearts Minds and Water - Touching Water in People's Beliefs -."

In addition, based on the theme of "Water for Sustainable Development - Best Practices and the Next Generation -," the Heads of State and Government Meeting, the Parallel Sessions, and other programs made for an international conference of great significance. Participants shared about various water-related issues in the Asia-Pacific region and engaged in enthusiastic discussion, leading to new developments for the resolution of global water-related problems.

At the Heads of State and Government Meeting in particular, the Kumamoto Declaration was adopted, reaffirming the importance of water in recovering from the COVID-19 pandemic and aiming for transformation towards a quality-oriented society. Named after Kumamoto, the declaration was compiled in a concise and comprehensive manner from the three perspectives of governance, finance, and science and technology based on the various views and opinions of the participating countries. It is a new form of declaration through which the Summit encouraged discussion among participants and called for substantive action. The Kumamoto Declaration will be exhibited to the wider world at next year's UN Water Conference, and I am confident that it will provide a pathway of hope for the future of water not only in the Asia-Pacific region but throughout the world.

As the host city of the Water Summit and as an "SDGs Future City" pioneering efforts to achieve the SDGs, Kumamoto City will strengthen collaboration with various stakeholders and take the lead in resolving water-related issues—not only in Kumamoto City but also in Japan and abroad—in order to realize a sustainable society in which no one is left behind.

In closing, I would like to express my respect and gratitude once again to all the participants in the Water Summit and to thank everyone involved for their cooperation.

Greetings from the Governing Council of the Asia-Pacific Water Forum

Act Together: For Resilient, Inclusive and Sustainable Society



Ms. Changhua Wu Vice Chair of the Governing Council of the Asia-Pacific Water Forum

The Kumamoto Summit is a pivotal moment for Asia and the Pacific nations when leaders have renewed their commitments to quality growth supported by quality water infrastructure for a resilient, inclusive and sustainable society. Very importantly, decision-makers have committed to putting water security at the core of policy making at all levels and across all sectors. And collaboration and partnership are reconfirmed as key to advancing, governing, financing, and innovating water sustainability.

Three deliverables highlight the significant and inspiring outcomes of the Summit:

- 1. The Kumamoto Declaration reconfirms water's critical importance and renews leaders' commitments to continuously enhancing adaptivity in the context of intensifying climate change impacts, with focuses on improving governance, closing the financial gap and appealing to the science and technology community to better support science-based policy- and decision-making.
- 2. The Chair's Summary reflects the best practices, knowledge and expertise that support and enable solutions to drive through actions while removing barriers in governance, finance and science and technology, as well as bridging the gaps in basin-wide water management based on IWRM, policy coherence, institutional and professional capacity and capability to attract investment, standardization and accountability.
- 3. And, the Kumamoto Initiative for Water, announced by Prime Minister Fumio Kishida, demonstrates the Japanese government's continued dedication to forging stronger partnership in the region for collective actions in building quality infrastructure by using Japan's advanced technologies, centered around climate adaptation and mitigation in least developed economies in the region.

A new narrative of water has re-emerged and re-mainstreamed. Just as His Majesty the Emperor has articulated in his commemorative lecture – "Heart, Minds and Water: Touching Water in People's Beliefs", it has long been deeply rooted in Asian cultures that water is life; water shapes who we are and defines how we conduct our deeds and behave. This new narrative is guiding us all to review, rethink, and reset how we, collectively cross-generation and cross-national-boundary, bring back water harmony to our economy and society.

The success of the Summit shall be attributed to the leadership and steadfast support from Japanese government and Kumamoto City, and the participation and contribution from the political leaders in our region, all APWF members, and all the participants on-side and online. I am especially inspired by the enthusiasm and aspiring entrepreneurship of the younger generation.

The compass of the pathway forward is clearly set by the Summit. And for us all at the APWF, we are moving forward and deep diving to further strengthen the network's actions, partnerships and impactful solutions. Let's join more hands, big and small, and embed ourselves in transformative solutions.



Dr. Eduardo Araral Vice Chair of the Governing Council of the Asia-Pacific Water Forum Associate Professor, Lee Kuan Yew School of Public Policy, National University of Singapore

Mr. Lee Kuan Yew, the founding Father of Singapore and former Prime Minister, once declared that every policy in Singapore would have to bow down to the imperatives of water security. This is the essence of the Asia-Pacific Water Forum (APWF), to provide a platform for political leaders in the region to put water on top of the political agenda.

We only realize the value of water when faced with prolonged droughts like those in Australia, California and China. We know the value of water when we have too much of it, like recently in Pakistan, Bangkok, South Korea. We know the value of water when it becomes too polluted as is the case with most cities in developing countries. When ground water is already depleted and cities are sinking, we appreciate the value of water. With the gathering pace of urbanization in developing countries, water becomes a central problem. And as countries around the world grapple with a solution to the protracted energy crises, hydropower and nuclear power (which depends on water cooling), water will again play a prominent role. Unfortunately the incentives of political leaders are tied to short term electoral cycles while water problems require long term, and some-times difficult, solutions, for example building unpopular dams, imposing water tariffs for urban consumers and farmers, stopping unregulated water extraction, among others.

Thankfully, there are platforms such as the APWF and the Asia-Pacific Water Summit to remind political leaders of the value of water and need to for leadership. The Government of Japan and the City of Kumamoto have to be commended for pushing ahead with the Summit at the height of the Covid pandemic.

But as they say, talk is cheap and conferences are dime a dozen. The real test is when political leaders read this report, take to heart its recommendations and take concrete action.

Rest in peace, our dear leader Mark Pascoe



Saddened and heartbroken, we mourn the sudden passing and loss of Mr. Mark Pascoe, our beloved new and now late Chair of the Governing Council of Asia Pacific Water Forum (APWF). On behalf of our entire members of APWF, please accept our deepest sympathies to Mark's family. We deeply share your loss and grief.

Immediately after taking over as Chair of the APWF Governing Council in April 2022, he demonstrated his leadership at the 4th Asia-Pacific Water Summit (APWS) by supporting APWF President Yoshiro Mori, who chaired the 4th APWS. He also served as moderator of the Heads of Government Meeting (HSG) and the high-level statement sessions of the 4th APWS. He also presented the recommendations and pathways for improving water governance in Asia and the Pacific. He generously gave his time and feedback to young water leaders in Asia and the Pacific.

Mark is a friendly and genial person, someone with integrity, persistence, open-mindedness, flexibility, adaptability, and resilience. He was always willing to respond to our every request and gave us feedback.

His influence and contribution have fallen on our shoulders to carry on in advancing water resilience, inclusiveness, and sustainability in our region, including his concern for the younger generation. Mark can be rest assured that we will carry on with his legacy.

He will be sorely missed as a leading figure in the global water community. Mark will be remembered dearly in our community and remembered by people he has mentored, guided, helped, and supported.

We are honored to have had the opportunity to have known and worked with Mark for the 4th APWS.

With our deepest sympathy

APWF Governing Council and APWF Secretariat, on behalf of all APWF

Outline

The 4th Asia-Pacific Water Summit Logo



4th Asia-Pacific Water Summit Kumamoto Japan 2022

The Concept of 4th APWS Logo

On this Earth, there is a dynamic water cycle that flows from the atmosphere through the ground, rivers, etc., to the oceans, and hence, the solutions we implement for water issues would likely affect other regions, environments and economies. In addressing water issues, it is important that people from various regions and stakeholders work together while considering the sound water cycle.

This logo represents the outlook of the entire Asia-Pacific region towards solving our water issues, recognizing water through the larger perspective of the water cycle.

The outer ring expresses a broad view of water circulation,

rotating in a counterclockwise direction from the right side, in which water vapor, condenses into water droplets, falls as rain on the ground, and transforms into rivers, lakes, groundwater and the like to moisten the earth.

The 4th Asia-Pacific Water Summit in Number

- Heads of state and government participants: 18 persons from 18 countries *
- Ministerial level participants: 33 persons from 22 countries *
- Total number of participants: 5,488 people including 1,460 online participants
- High level statement: 22 countries and 25 organizations
- Sessions: 9 parallel sessions, 4 integration sessions, 2 special sessions
- Official side events: 6 symposiums, local and online exhibitions (51 exhibitors)
- Related event: 14 events
- Coverage: More than 1,300 newspaper/online articles (28th March 27th April, 2022)

* Either face-to-face or online, or through video messages

Outcome of the 4th Asia-Pacific Water Summit

Kumamoto Declaration

Water challenges amid the COVID-19 pandemic and its recovery

The COVID-19 pandemic is having serious socio-economic impacts on countries around the world and is hindering progress on the 2030 Agenda for Sustainable Development. The pandemic has disrupted disaster risk reduction and water service delivery. On the other hand, lack of access to safe and affordable water and sanitation, along with recurrence of floods and droughts, has hindered prompt global responses to the pandemic. The extent of damage has varied by region and context, with island nations, inland areas, and vulnerable groups suffering particularly severe impacts.

We, the Leaders of the Participating Countries in the 4th Asia-Pacific Water Summit (APWS), building on the Joint Statements of the previous Summits, reaffirm the criticality and importance of water as we deal with hazards marked by widespread damage due to the pandemic. We recognize that the water sector plays a vital role in recovering from the pandemic. At the same time, climate change will continue to generate and further aggravate the cascading multi-hazards of tropical cyclones, storm surges, flood and drought disasters, soil and water pollution, rising sea levels, and melting glaciers. But, by restoring a sound water cycle, we can reduce disaster risk, achieve multiple Sustainable Development Goals (SDGs), and strengthen transboundary cooper-ation.

Transformation towards a quality-oriented society

We have reached a collective understanding that recovery from the pandemic requires transformation into quality-oriented societies that are resilient, sustainable, and inclusive. This can be achieved by strengthening action for water sustainability. This transformation should proceed through multi-stakeholder partnership with open, transparent, participatory, and collaborative processes.

Resilience involves efforts to reduce water-related disaster risk on a cross-sectoral, whole-of-river basin and aquifer basis. We will also continue improving water security and access to water and sanitation, which is a primary public health measure against infectious diseases.

Sustainability involves placing water at the center of the political agenda. We will promote climate change mitigation measures while utilizing low-emission energy sources in conjunction with adaptation measures and strategies for disaster risk reduction and infrastructure development. Also, we will promote green infrastructure that can provide mitigation and adaptation benefits for achieving carbon-neutral societies in harmony with nature and biodiversity conservation.

Inclusiveness involves maintaining the current trend of improvement towards achieving SDGs in the Asia-Pacific region. Without waiting until 2030, we will work towards achieving access to safe and affordable drinking water and sanitation facilities for all, including women, youth and elderly persons, ending open def-ecation, reducing the risk of disaster, and attaining other water-related SDGs. We will rectify inequalities in access to water and sanitation services and protection from disaster risk. Also, we encourage every party con-cerned in both public and private sectors to be involved and closely cooperate in activities to address water-related issues towards a quality-oriented society.

Water problems are inextricably linked to food security and energy security. We will consider the various aspects of water value, and deploy sustainable solutions by managing water resources more effectively starting from glaciers, adopting a source to sea approach, and better integrating water resource management with dis-aster risk reduction, environmental improvement, and greater water use efficiency.

For acceleration of efforts

To realize a quality-oriented society, we are determined to strengthen the development of quality infrastructure for the water sector, integrating both hard and soft components, including knowledge, information and data

management. In order to break free from the conventional approach and accelerate efforts, we will:

- 1. **Improve governance.** We encourage water-related institutions and civil society organizations to collab-orate across sectors and generations, while enhancing capabilities and performance in the water sector. For growth to proceed cooperatively in each river basin, we will share water-related lessons learnt in solving problems and sharing prosperity, subject to international agreements and national laws.
- 2. **Close the financial gap.** Recognizing the contribution to growth from investing in water, building on the Yangon Declaration adopted at the 3rd APWS in 2017,¹ we acknowledge the importance of mobilizing investment in each river basin not only by national governments but also by international and regional organizations, financial institutions, donor communities, subnational authorities, non-governmental organizations, private sector, and local communities.
- 3. **Appeal to the science and technology community.** We call upon the science and technology community to provide context-specific innovations for resolving water problems, respecting the natural environment, geographical features, and historical backgrounds of the local community. Additionally, we emphasize the importance of promoting education and capacity building for a new generation of water professionals to ensure, maintain, and improve a sound water cycle.

Outcomes of the 4th Asia-Pacific Water Summit

We acknowledge and support the Japanese Initiative, which was announced at the 4th APWS by the Government of Japan as one of the outputs to tackle water-related challenges. Together with the other participants at the 4th APWS, in coordination with the Bonn Water Dialogues, the World Water Forum, the Dushanbe Water Process, and other major preparatory processes, all discussions at this Summit in the context of this Declaration and the abovementioned perspectives will be communicated and shared at global water-related discussion processes, including the United Nations Conference for the Midterm Review of the Water Action Decade, to be held in March 2023, as well as the 2nd Dushanbe Water Action Decade Conference, the High-level Political Forum for Sustainable Development, the Global Platform for Disaster Risk Reduction, the 27th Conference of the Parties to the United Nations Framework Convention on Climate Change, the 15th Conference of the Parties to the United Nations Convention on Biological Diversity, the G7 and the G20. We will appeal for this Decla-ration to be taken into consideration and built upon.

We collectively express our sincere appreciation to the City of Kumamoto and the Asia-Pacific Water Forum for hosting this Summit and for its successful conclusion.

Question from the Summit to participants

In all water-related sectors, the barriers, breakthroughs, opportunities, and ways forward for reform and im-provement in the three areas of governance, finance, and science and technology need to be identified and thoroughly discussed. In particular, it is imperative to explore what role science and technology should play in the cross-sectoral decision-making of leaders. We invite leaders, experts, scientists, and all other partici-pants gathered at the 4th APWS to discuss this question in view of the spirit of the above Declaration, formulate particularly substantive answers, and make this an outcome of the Summit.

¹ The Yangon Declaration committed to doubling investment in the Asia-Pacific region.



Kumamoto Initiative for Water (outline)

Japan will address water-related social issues faced by the Asia-Pacific region based on a "New Form of Capitalism", specifically by fostering public-private partnerships and promoting digitization and innovation, regarding the solution of social issues as a growth driver for sustainable development and the formation of a resilient society and economy. For example, we will work for the development of "Quality Infrastructure" by making effective use of Japan's advanced technologies to contribute to the rebuilding of the international economic order and the co-creation of value for the future of the Earth.

Based on this basic policy, Japan will press forward with both climate change adaptation and mitigation measures as well as measures to improve people's basic living environment, thereby proactively making contributions to the solution of social issues regarding water and to the sustainable economic growth of the Asia-Pacific region and the entire world.

1. Promoting both climate change adaptation and mitigation measures

In the Asia-Pacific region, which accounts for half of the world's population and more than one-third of the world's GDP, the impact of climate change has already become apparent, with the number of flood events impacting a population of 1,000 or more having nearly tripled over the past 30 years, along with an increase in the magnitude of the damage.¹

In response to the issue of climate change, Japan will make use of its advanced technologies to develop "Quality Infrastructure", including dams, sewerage systems and agricultural facilities, for river basin sustainability and resilience against water-related disaster risks² to reduce flood damage for climate change adaptation, while also reducing the emissions of greenhouse gases for climate change mitigation.

To this end, Japan will foster the effective use of its hybrid technology to implement both climate change adaptation and mitigation measures for dams, sewerage systems, agricultural and rural development, specifically to enable the advanced operation of the facilities as "Quality Infrastructure" and the formulation of plans to develop such infrastructure.

While promoting the development of "Quality Infrastructure" in the Asia-Pacific region, Japan will conduct feasibility studies to propose the introduction of such infrastructure through public-private partnerships, thereby contributing to the solution of local social issues and the sustainable development of the region.

(1) Promoting the development of "Quality Infrastructure"

(Development of "Quality Dams")

Japan will develop and provide the hybrid technology that will enable the implementation of both climate change adaptation and mitigation measures for dams. Specifically, for climate change adaptation, precipitation observation and forecast technology will make it possible for water to be released from a dam to urgently lower its water level before it rains again during the flood season to mitigate the risk of flood damage. Also, based on the use of this same technology, the water level will be kept high during the non-flood period to improve the agricultural water supply function of the dam. Moreover, keeping the water level of the dam high after flooding

¹ Source: EM-DAT: The OFDA/CRED International Disaster Database

² Refer to the measures to reduce damage caused by flooding across a basin area based on cooperation between all related parties (national and local governments, companies, local citizens and others)

and during the non-flood period will help enhance the hydroelectric power generation function of the dam for climate change mitigation.

Also, by using Japan's technology to raise the height of a dam or enhance the water drainage facilities of a dam while it is in use, countries will contribute to fostering the variability of the water level of dams to transform them into "Quality Dams".

Japan will share information about these measures through international cooperation frameworks, such as the International Flood Initiative³ and the Typhoon Committee,⁴ in which Japan is proactively participating.

(Development of "Quality Sewerage Systems")

To reduce the risk of inundation for climate adaptation, Japan will also develop and provide hybrid technology to install sewerage pipes without the need for road excavation, thus avoiding causing traffic congestion in urban areas. It will also develop and provide hybrid technology to make effective use of sewage sludge for biomass power generation to produce more renewable energy for climate change mitigation.

Japan will increase the number of member countries of the Asia Wastewater Management Partnership (AWaP)⁵ from the present six to share know-how, experience and solutions to meet challenges, including the aforementioned measures, across Southeast Asia.

(Promoting "Quality Agricultural Infrastructure Improvement and Rural Development")

Furthermore, Japan will develop and provide hybrid technology to construct/ rehabilitate irrigation and drainage facilities and make effective use of the rainfall storage function provided by paddy fields to reduce flooding damage in rural areas as climate change adaptation, while fostering small hydroelectric power generation installed to irrigation and drainage facilities and introducing agricultural water management systems with ICT technology to realize climate change mitigation.

Japan will share knowledge and experience about these measures through the International Network for Water and Ecosystem in Paddy Fields (INWEPF)⁶.

(2) Contribution to fill gaps of observation data

Japan will provide the data collected by the country's meteorological satellite "Himawari" and Advanced Land Observing Satellite-2 (ALOS-2) "Daichi-2" as well as by the core satellite of the Japan-US Global Precipitation Measurement (GPM) mission to fill gaps of ground observation data, which are not available in many areas in the Asia-Pacific region, so that sufficient precipitation observation and forecast data are available in such areas for

³ Framework through which UNESCO, the World Meteorological Organization, the United Nations University, the UN International Strategy for Disaster Reduction and other international organizations cooperate to foster flood management across the world

⁴ In order to reduce the damage caused by typhoons in the Asia-Pacific region, the Economic and Social Commission for Asia and the Far East (ESCAP) and the World Meteorological Organization (WMO) established this intergovernmental organization in 1968, in which a total of 14 countries and regions participate

⁵ Framework for six countries (Indonesia, Cambodia, the Philippines, Vietnam, Myanmar and Japan) to discuss measures to accelerate the development of sewage treatment facilities, which was established at the initiative of Japan at the 3rd Asia-Pacific Water Summit held in 2017

⁶ International network for paddy farming and water environment founded under the leadership of Japan following the ministerial meeting on water, food and agriculture held as a part of the 3rd World Water Forum (Kyoto, 2003), in which 17 countries (mainly in Asia) and related international organizations, such as the FAO, participated

the advanced operation of "Quality Infrastructure" and the formulation of plans to develop such infrastructure.

Japan will implement these measures leveraging international frameworks, e.g. Group on Earth Observations (GEO) for the continual enhancement of the earth observation network in the Asia-Pacific region. The GEO is a multilateral cooperation framework developed at the initiative of Japan in which 113 countries participate, including 22 in the Asia-Pacific region.

(3) Contribution to the enhancement of governance (systems, human resources and capacity)

By making use of AI/IoT, Japan will develop the precipitation forecast and flood analysis technologies that are necessary for the advanced operation of "Quality Infrastructure" and for the formulation of plans to develop such infrastructure. Japan will then support the enhancement of the operational capabilities of the meteorological and hydrological bureaus of each country so that each country can visualize changes in local water-related disaster risks by utilizing the technologies developed by Japan and can make decisions on the appropriateness of the investments to be made for the implementation of the related measures. Also, through international cooperation frameworks, Japan will contribute to the selection of appropriate sites for community building while encouraging companies to make ESG investments and conduct activities in line with their BCPs.

In addition, in order to promote science-based climate change adaptation measures including the development of "Quality Infrastructure" in consideration of climate change risks, Japan will make use of the Asia-Pacific Climate Change Adaptation Information Platform (AP-PLAT)⁷ for the enhancement of the latest scientific knowledge and information, support tools and related capabilities.

Moreover, Japan will implement training programs for countermeasures against water-related disasters by using the earth observation data and climate change forecast data provided by the Data Integration and Analysis System (DIAS)⁸ and will conduct joint research for climate change forecasting in cooperation with universities and research institutes in each country, thereby contributing to human resource development and the establishment of related systems.

(4) Use of economic measures to promote climate change countermeasures

In order to promote the advanced operation of "Quality Infrastructure" and the formulation of plans to develop such infrastructure for the reduction of greenhouse gas emissions, Japan will expand the Joint Crediting Mechanism (JCM)⁹ from the current 17 and will lead introducing advanced decarbonizing technologies.

In addition, Japan will expand its emissions reduction project for the systematic use of technologies as well as for the packaging of multiple technologies, with a view to helping developing countries shift to a decarbonized society and develop "Quality Infrastructure".

⁷ Information platform for climate change adaptation built by Japan to support decision-making in consideration of climate change risks and to foster highly effective climate change adaptation measures in the Asia-Pacific region

⁸ Platform to accumulate, comprehensively analyze and provide voluminous data in the domain of the global environment, including earth observation data and climate change forecast data

⁹ A scheme that Japan is implementing to quantitatively evaluate contributions to greenhouse gas emissions reductions and removals which are achieved through the diffusion of leading decarbonizing technologies, products, etc. and use such contributions to achieve Japan's NDC.

2. Promoting measures to improve people's basic living environment

Water is one of the most basic and important elements for human life and is closely related to food and energy. Accordingly, Goal 6 of the SDGs addresses water issues.¹⁰

In order to help individuals to improve their quality of life and be freed from poverty and social inequality, Japan will foster the development of infrastructure to improve water supply, sanitation, hygiene and basic living environments, thereby providing more people with access to safe water for the reduction of infant mortality and contributing to the maintenance of good hygienic environments and the improvement of the environment of public bodies.

In making these efforts, Japan will foster digitization and innovation for the operation of the infrastructure developed by each country with an eye to having water supply and sanitation facilities that are equipped with advanced technologies serve as "Quality Infrastructure" and a growth engine for the future.

Moreover, in expanding the use of "Quality Infrastructure" in the Asia-Pacific region, Japan will conduct feasibility studies to propose the introduction of such infrastructure through public-private partnerships for the solution of local social issues and sustainable economic growth.

(Promoting the development of "Quality Water Supply Facilities")

In order to help water utilities increase their operational efficiency and enhance their management foundation to achieve growth and make management improvements, Japan will make use of the know-how developed by its own local governments to support water utilities in gaining more trust from local citizens. Japan will also provide its technologies and give financial support for the expansion and updating of the water supply facilities of these utilities.

Moreover, Japan will encourage in-field participation by companies in the private sector to help water utilities expand their revenue basis by establishing a billing and tariff collection system based on the use of IoT technologies, improve their water leakage detection capability, reduce non-revenue water to improve their profitability, and introduce advanced technologies for the desalination of seawater and recycling of used water as non-drinking water.

Also, Japan will contribute to the reduction of greenhouse gas emissions as well as stable water supply through energy saving by introduction of inverters for raw water intake pumps and the introduction of high efficiency water pumps.

(Promoting the development of "Quality Sanitation Facilities")

For the development of healthy and sound communities and the improvement of the environment of public water bodies, Japan will build a business model for the improvement of the water environment by drawing on the expertise gained through its own experience in overcoming pollution issues and utilizing its water treatment technologies under the Model Project for Improvement of Water Environment in Asia¹¹.

¹⁰ SDG 6 states, "Ensure availability and sustainable management of water and sanitation for all", based on the recognition of the important role played by water in increasing the prosperity of more people, reducing social inequality and addressing climate change

¹¹ Project to build a business model for the improvement of the water environment through feasibility studies and on-site demonstration tests conducted by companies and others on water treatment technologies in the Asia-Pacific region

Also, Japan will make use of its technologies and give financial support for the development of sewerage systems and on-site treatment facilities in a localized manner in each area. It will also promote local capacity building for the formulation of wastewater management master plans and the sustainable management and maintenance of the facilities.

3. Financial contribution for the future of the Asia-Pacific region

Japan will proactively make contributions for the creation of a "Quality-oriented Society" in the water-riskchallenged Asia-Pacific region in cooperation with each country and with international organizations with regard to scientific technologies, governance such as systems, human resources and capacity, and capital. In such a society, which is sustainable and resilient against water-related risks, people can enjoy a high quality of life with no one being left behind.

As part of the measures, Japan will provide financial assistance worth approximately 500 billion yen over the next five years for the development of "Quality Infrastructure" through the use of its digital technologies and innovation, in addition to continuing its conventional effort to ensure access to safe water and sanitation for more people. Japan will thereby accelerate the water-related measures in the Asia-Pacific region and across the world toward the achievement of the SDGs by 2030 and carbon neutrality by 2050.



4th APWS Chair's Summary

Preamble

This Chair's Summary shows the pathway toward quality growth and is part of the Kumamoto Declaration process. In the Asia-Pacific Region, quality growth is by definition resilient, sustainable, and inclusive. This Summary compiles the outcomes of two rich days of presentations and exchanges of views to answer questions raised in the Declaration, which was adopted by the Heads of State and Government at the 4th Asia-Pacific Water Summit. It includes the key messages of four integration sessions, which built on the outcomes of nine thematic sessions and two special sessions. Despite the difficult times of the Covid-19 pandemic, in these sessions, Heads of State and Government and other leaders, such as policymakers, heads of government agencies, prac-titioners, scholars, representatives of civil society organizations, as well as the private sector, discussed a wide range of water-related issues, found challenges and opportunities from the perspective of governance, finance, as well as science and technology, and proposed concrete actions alongside a wide range of perspectives shared by the participants in the sessions.

Over the decades, the Asia-Pacific Region has considerably improved in terms of water security but is currently facing difficulties responding to the COVID-19 pandemic and multiple kinds of hazard. The Region also needs to address water-related risks exacerbated by climate change. I hope the Heads of State and Government of Asia and the Pacific, alongside the other leaders, will accelerate their concerted action, engage youth and the generations to come, from the drawing board all the way to imple-mentation and evaluation, and lead the recovery from the COVID-19 pandemic.

Outcomes of the Summit Sessions Synthesized by the Overall Integration Session

The following outcomes of the Summit sessions are the answer to the inquiry by Heads of State and Government at the 4th Asia Pacific Water Summit (APWS):

1. Towards a Sustainable Society

As the primal contribution to building an overall sustainable society, the water sector should achieve all waterrelated SDG targets such as SDG 6.1-6.6 and 11.5. We are, however, alarmingly off-track from the path towards the achievement of SDGs, and were so even before COVID-19. The water sector should transform itself in the three key areas of governance, finance, as well as science and technology if we hope to achieve SDGs.

Governance. Mainstream integrity and transparency practices across water organizations as a foundation to transform all water subsectors. Invest in human resources, inter alia, to achieve this result. Creating transsectoral, stakeholder-inclusive and fully transparent governance is key. The concept of valuing water should be embedded in the minds and actions of all stakeholders to promote behavioral change and facilitate holistic collaboration by all. Specific recommendations include: use the digital trans-formation to improve and visualize water management efficiency; integrate water management principles at national to provincial and district levels; improve the decentralization of decision-making processes; and apply mentoring and peer-to-peer approaches to build the capacities and skills of small and emerging cities.

Basin-wide water management based on IWRM should be the norm rather than the exception. Increase policy

coherence and develop legal and other frameworks at all levels, taking into account a source-to-sea and IWRM approach to restore and keep a sound water cycle. Not only freshwater, but also solid water including glaciers, aquifers, oceans, and islands should be within the scope of the framework. Further recommendations include: strengthen regional legal frameworks and institutions; hold in-clusive regional dialogues; and upgrade existing arrangements to enhance transboundary cooperation. Governance and finance systems need to be tailored towards the diverse climate, geographic, and socio-economic conditions of the Region (Asia+) and should be developed based on research and dialogue. The issues of Small Island Development States (SIDS) should be given special focus to address these challenges.

Finance. Given the off-track status of SDGs, drastically increase total investment in the water sector. Direct and indirect benefit of water investment should be numerically articulated to convince finance institutions and taxpayers and attract investors by developing and standardizing the analytic method for this purpose. Specific recommendations include: encourage cost sharing and pooled resources, support water security actions from multiple funding sources, and ensure that investment and management of water-related infrastructure and technologies are designed to be multi-purpose.

Science and Technology. We cannot improve what we cannot measure. The collection, archiving, and sharing of water data and information, including those of water risks, should be promoted through establishing appropriate frameworks and organizations, as well as prioritized investment. Transboundary information sharing is particularly important. Building global observatories should be supported by the Region.

Water can broadly contribute to global socio-economic advancement by helping building peace and regional stability. For this purpose, enhance the leaders' awareness that cooperation on water, particularly on water emergencies, such as disasters, can be an agent for peace and promote effective actions; promote the use of "Principles to Foster Peace before, during, and after Water-related Disasters" which was launched at the APWS; use traditional technologies such as cylindrical water distributers and a locally nurtured culture of peacefully sharing water in society.

2. Towards a Resilient Society

COVID-19 reminded us how our society and systems were unprepared for sudden disturbance and changes. Water can and should play a critical role to build a post-COVID-19 society that is more resilient and adaptive to sudden and slow onset disturbances such as pandemics, disasters, and climate change. Decision-making by leaders should be quick and evidence based.

Science and Technology. Here, science and technology plays a critical role. For this: Position science and technology as "a game changer" towards a fully resilient post-corona society through three actions: Promote water cycle consilience by acceler-ating the Open Science policy, particularly focusing on observation, modeling and data integration; Foster "Facilitators", that is, catalytic beings who can lead the way toward resolving problems by providing professional advice on-site using a broad range of scientific and indigenous knowledge; and Work together beyond disciplines and sectors among different levels while taking an end-to-end approach.

Slow-onset changes should be given special attention. Yearly and seasonal hydrological patterns and those of water demand are changing quickly due to climate change and other socioeconomic changes. Those changes should be addressed by adaptive policies, as well as resilient and green infrastructure. Demand management of water should be given higher attention.

3. Towards an Inclusive Society

An inclusive society is a must not only for the achievement of SDGs but also as an engine for socio-economic growth, by fully tapping diverse capabilities and talents of human beings. The water sector should be an enabler. For this purpose: make gender equality and social inclusion a core goal for any institution; to aim all budgets to be at least responsive to gender and vulnerability; carry out gender and inclusivity analysis at all levels as a core component of research; empower youth to provide solutions and demonstrate their expertise in areas of technology, innovation, and data; encourage, initiate, and support Meaningful Youth Engagement (MYE); to strengthen Youth-Government Partnerships at all levels; promote direct investment in actions for, of, and by youth, including startups.

4. Towards the UN 2023 Water Conference and Beyond

Water, Climate Change, and disaster risk reduction (DRR) were discussed in most thematic sessions and all integration sessions of the 4th APWS. As such, connection and linkage of these three elements were the core focus of the Summit. The resulting recommendations and proposals of action on these three issues reflect the Region's rich experience and relevant practices. The Kumamoto Water Initiative announced by the Government of Japan at the Summit focuses on these three issues in an integrated manner. As such, we recommend that Water, Climate Change and DRR are discussed as a key topic for global processes, partic-ularly the UN 2023 Water Conference. It is expected that the Kumamoto Water Initiative will make progress by enlarging the circle of commitments in the Region and beyond.

As related recommendations were and will be shared at major processes, such as the Bonn Conference, the 9th World Water Forum, the Dushanbe Water Process, as well as the Lisbon Ocean Conference, messages and recommendations of the APWS including those in this document should be closely connected with those of the other processes.

Commitments and actions of the APWS do not end today but will start again from tomorrow. The organizers expect that all participants in the Summit will keep their steady progress and decisive steps towards the solution of every water challenge and build a quality society in the Asia-Pacific Region and the world.

Yoshiro Mori Chair of the Joint Executive Committee of the 4th Asia-Pacific Water Summit President, Asia-Pacific Water Forum Former Prime Minister of Japan



4th Asia-Pacific Water Summit (APWS) - Chairs Summary

The Chairs summary shows the pathway toward quality growth and is part of the Kumamoto Declaration process. It responded to the questions from the HSG in Asia and the Pacific about the ways forward compiling the key messages of 9 parallel and 4 integration sessions.

1. Towards a Sustainable Society The water sector should achieve all water-related SDG targets such as SDG 6.1-6.6 and 11.5.

Governance: Basin-wide water management based on IWRM, and increase policy coherence and develop legal and other frameworks at all levels to restore and keep a sound water cycle, tailoring diverse climate, geographic, and socio-economic conditions of the Region, etc.

Finance: Direct and indirect benefit of water investment should be numerically articulated to convince finance institutions and taxpayers and attract investors by developing and standardizing the analytic method to drastically increase total investment in the water sector. etc.

Science & Technologies: We cannot improve what we cannot measure. Transboundary information sharing is particularly important. etc.

2. Towards a Resilient Society: Water can and should play a critical role to build a post-COVID-19 society that is more resilient and adaptive to sudden and slow onset disturbances such as pandemics, disasters, and climate change.

Science & Technologies: promote a healthy water cycle by accelerating an Open Science policy, particularly focusing on observation, modeling, and data integration; and work together, beyond disciplines and sectors among different levels, while adopting an end-to-end approach. Etc.

3. Towards an Inclusive Society: An inclusive society is a must not only for the achievement of SDGs but also as an engine for socioeconomic growth, by fully tapping diverse capabilities and talents of human beings.

- Make gender equality and social inclusion a core goal for any institution
- empower youth to provide solutions and demonstrate their expertise in areas of technology, innovation, and data; encourage, initiate, and support Meaningful Youth Engagement (MYE); to strengthen Youth-Government Partnerships at all levels. etc.

4. Towards the UN 2023 Water Conference and Beyond:

Water, Climate Change and DRR are discussed as a key topic for global processes, particularly the UN 2023 Water Conference.
It is expected that the Kumamoto Water Initiative will make progress by enlarging the circle of commitments in the Region and beyond. etc.



Day1 23 April 2022 (Sat)



Day2 24 April 2022 (Sun)

Opening Ceremony

Opening Remarks



Mr. Yoshiro Mori Chair of the Joint Executive Committee of the 4th Asia-Pacific Water Summit President of the Asia-Pacific Water Forum Former Prime Minister of Japan

Good morning. In the presence of Their Majesties the Emperor and Empress, Their Excellencies Prime Minister Hun Sen of the Kingdom of Cambodia, Prime Minister Lotay Tshering of the Kingdom of Bhutan, Prime Minister Kausea Natano of Tuvalu, Prime Minister Phankham Viphavanh of the Lao People's Democratic Republic, Prime Minister Pham Minh Chinh of the Socialist Republic of Viet Nam, Deputy Prime Minister Sardor Umurzakov of the Republic of Uzbekistan, and representing the host country, Prime Minister Fumio Kishida, it is truly a great honor and pleasure to be here today to organize the Opening Ceremony of the 4th Asia-Pacific Water Summit.

I would like to express my heartfelt gratitude to everyone in Japan and abroad—including those in the Asia-Pacific countries, from international organizations and to those in Kyushu and Kumamoto in Japan—your tremendous efforts and cooperation make this summit a success.

In the preparation period for this fourth summit, we were faced with the unprecedented crisis of the COVID-19 pandemic. In fact, I would also like to reiterate my sincere appreciation and respect to all those working in the areas of health, sanitation and hygiene, and medical care who are fighting infectious diseases, as well as to all those working for water and sanitation infrastructure and services that support these people in the field, and to everyone who is engaged in the recovery from the COVID-19 pandemic.

The Working Group II of the UN Intergovernmental Panel on Climate Change released its contribution to the Sixth Assessment Report in February this year, confirming for the first time that "human-induced climate change has caused widespread adverse impacts to nature and people". It highlighted extreme weather events, such as floods and droughts, as well as water scarcity and food insecurity, degraded ecosystems and energy issues among the crises of concern that are facing humanity. These are precisely problems of water security, which the Asia-Pacific Water Summits have been addressing these past 15 years.

In 2007, we organized the world's first summit for the resolution of water-related issues of the Asia-Pacific region, in Beppu City, Oita Prefecture in Japan. I remember I had said in my opening address at the time that our strategy must be to focus on how to adapt to the impacts of climate change. And now, those words have become a reality.

Water is the cornerstone of national and regional prosperity. And human wisdom is necessary to respond to and share the blessings and threats to that water. In the context of environmental, economic, and social connections, resolving water-related issues is essential to achieving human security.

In closing, I hope that the 4th Asia-Pacific Water Summit will be a valuable opportunity for leaders from every field of endeavor and for all those who have participated in this Summit, either face-to-face or online, to actively discuss and share decisive and continued actions that will lead to enhancing the quality of all our societies. Thank you very much.

Remarks

His Majesty the Emperor of Japan

Prior to my address, I would like to express my sincere condolences to all the victims of the 2016 Kumamoto Earthquake and the heavy rains in recent years such as those of 2020. I would hereby extend my deepest sympathies to families in bereavement and also to those who survived the catastrophies. I hope that recovery from the disasters will proceed smoothly and steadily.

Excellencies, Ladies and gentlemen,

I am delighted to join online with all of you from the Asia-Pacific Region along with the rest of the world in the 4th Asia-Pacific Water Summit held in Kumamoto City.

The host city of Kumamoto is blessed with water. Abundant groundwater is distributed to all of its 740,000 citizens from this single source of water supply, which is actually an exceptional case in the world. The municipality, private sectors and citizens are jointly engaged in activities to foster groundwater and conserve the aquatic environment so that this rich resource is securely passed on to the next generation. The city has been on the way to recovery after having been severely affected by the Kumamoto Earthquake. It is thus meaningful that the Summit is being held with the theme of "Water for Sustainable Development - Best Practices and the Next Generation" in this sustainable and resilient city.

Water is at the origin of all living things. While water benefits us in so many ways, it also threatens us in the form of water-related disasters, such as flooding. Water is a cross-cutting issue that is closely connected to poverty, education, gender and other issues of the Sustainable Development Goals or SDGs. We were in fact reminded how water and sanitation is fundamental in maintaining our health when the COVID-19 pandemic threatened us all. It is also a significant challenge to secure water and sanitation in areas affected by disasters or conflicts.

It is hoped that the leaders of countries participating in the Summit will share their visions and thoughts. International organizations, national agencies, NGOs, experts, and many others are expected to bring together their wisdom through discussions and try to find solutions for various water challenges and turn them into concrete action. I understand that many young people have also been invited to the Summit. It is very meaningful that the youth, who will take up the challenges of the future, should join in discussions and action on water throughout the region, and I look forward to their contributions.

The United Nations will hold a conference dedicated to water next year for the first time in 46 years. I sincerely hope that this 4th Asia-Pacific Water Summit will bear fruitful results and become a momentous step towards meeting water challenges in the Asia-Pacific Region and around the world, and thereby will bring about peace and happiness for all human beings.

Thank you very much.

Greetings [Tentative Translation]



Mr. Fumio Kishida Prime Minister of Japan

With the presence of your Majesties, the Emperor and Empress online, and the participation of Your Excellencies and Distinguished guests, on behalf of the government of the host country, I would like to wish you all a warm welcome to the Asia-Pacific Water Summit in Kumamoto, a region blessed with plentiful water attractions.

While Kumamoto is blessed with abundant groundwater from Mt. Aso, we have also experienced many disasters related to heavy rain, including the flooding in July 2020 which resulted in \$3 billion in damages and a total of 69 dead and missing people. Kumamoto was also hit by major earthquakes in April 2016.

The entire region and the country as a whole are collaborating on recovery and reconstruction and also working to strengthen "National Resilience" and "Disaster Prevention".

Tomorrow, I will visit Hitoyoshi in Kumamoto, the area affected by the flooding in July 2020, to observe the conditions of the post-disaster recovery and reconstruction.

I am delighted to be able to hold this summit here in Kumamoto and welcome participants from overseas in spite of the ongoing global COVID-19 pandemic.

About 130 years ago, Kitasato Shibasaburo, a Kumamoto native who studied medical science, discovered the plague bacillus, a global threat. His devotion to fighting infectious diseases is a shining light for humanity. On this occasion, our efforts to combat the COVID-19 pandemic have reaffirmed how crucial it is for global nations to collaborate in solidarity to overcome the common threats to humanity and collectively develop. I consider it very meaningful that we are gathered here for this Summit to discuss water-related issues, which are essential for the survival of the human race, and working to build a quality-oriented society together.

The COVID-19 pandemic has reminded us all how critical things we took for granted like clean and safe treated water for handwashing are.

The effects of climate change are manifesting themselves as social issues in the Asia-Pacific region and worldwide. Changes in water-related issues are especially striking, including severe water-related disasters that are more common than before.

In addition, water is also closely related to various other issues such as poverty, food, the environment, energy, peace, and security.

Who has the responsibility for all these social issues related to water?

The answer is "us" - the leaders.

There is an old saying that "those who govern water govern the country".

And now, governing water means significant contribution to solving global challenges.

In Japan, following the first Asia-Pacific Water Summit in 2007, the Headquarters for Water Cycle Policy, headed by the Prime Minister, was established to strongly promote water cycle policies.

This Summit presents an opportunity, and all of us gathered here are responsible for carrying out a united effort to lead actions for resolving water issues to promote resilient and sustainable development.

Also, I would like to express my deepest respect for the leadership of former Prime Minister Mori Yoshiro, the chairman who has led this Summit since the first time it was held.

Personally, I have also been actively involved in solving global water problems, including participation in the 2^{nd} World Water Forum in the Hague, the Netherlands, in the year 2000 in my role as the Parliamentary Vice-Minister of Construction at that time.

Through my participation in this Summit as Prime Minister of the host country, I feel compelled to further accelerate our actions to resolve water issues in the Asia Pacific region.

I am confident that the discussion and outcomes of this Summit will not only contribute to the Asia-Pacific region, but also help consolidate and underpin future global discussions on water issues, disaster prevention, and climate change.

I believe now is the right time to take a major step toward solving the world's water problems by unifying the wisdom and determination of the Asia-Pacific region, starting here, in Kumamoto.

In conclusion, I would like to express my heartfelt gratitude to the organizers and all those who have contributed to the hosting of this event.

Thank you very much for your attention.

Greetings



Mr. António Guterres Secretary-General of the United Nations

Your Majesty Emperor Naruhito, Prime Minister Fumio Kishida, Distinguished Delegates,

I thank Japan for hosting the fourth Asia-Pacific Water Summit and former Prime Minister Mr. Yoshiro Mori for championing this important initiative.

I am deeply grateful to His Majesty Naruhito for his lifelong leadership and advocacy on global water issues – including as honorary president of the United Nations' Advisory Board on Water and Sanitation and Patron of the Global Water Partnership.

Water is essential to every aspect of sustainable development.

Yet we are facing a growing water crisis and Sustainable Development Goal 6 is badly off track.

The triple planetary crisis of climate change, biodiversity loss and pollution is worsening, putting severe pressures on this precious resource.

Half of the world's population experiences severe water scarcity for at least some part of the year.

Droughts and heatwaves are becoming more intense and more frequent.

Sea-level rise is driving salt-water intrusion into coastal aquifers.

The loss of snowmelt water and glaciers further reduce water supplies.

Across Asia-Pacific – the region with the lowest per capita water availability in the world – the situation is especially troubling.

High population growth, unsustainable consumption and poor management all threaten the region's clean water sources.

The ramifications run wide and deep.

Water scarcity reverses economic and social gains, undermines human rights, and threatens peace and security.

The water crisis demands a holistic, systemic, and multilateral response.

I see three priorities:

First, more financing.

We must dramatically increase financing – public, private, and blended – for adaptation and mitigation of climate impacts, improved preparedness, and more sustainable water management, and fully address the dramatic needs of developing countries.

Second, better cooperation.

We must transform our silo-based approach to water management to better tackle water stress, combat climate change and enhance resilience.

We need all actors and sectors to work together to improve how we balance water needs of nations, communities, and households.

Third, accelerated action.

We are approaching the halfway point of the International Decade for Action on Water for Sustainable Development.

Next March, the United Nations Water Conference – the first UN conference on water since the 1970s – provides a unique opportunity to promote policy dialogue, exchange best practices and forge partnerships.

Your Summit is an important milestone as we together strive towards a more sustainable world.

I wish you every success.

Thank you.

Greetings from the Host City



Mr. Kazufumi Onishi Mayor of Kumamoto City

On this occasion of the 4th Asia-Pacific Water Summit, I would like to extend my greetings on behalf of the host city.

It is a great honor to be able to host today's Opening Ceremony of the 4th Asia-Pacific Water Summit on such a grand scale with the online presence of Their Majesties the Emperor and Empress, with the in-person attendance of His Excellency Mr. Samdech Hun Sen, Prime Minister of the Kingdom of Cambodia, the Honourable Mr. Kausea Natano, Prime Minister of Tuvalu, His Excellency Dr. Phankham Viphavanh, Prime Minister of the Lao People's Democratic Republic, His Excellency Mr. Sardor Umurzakov, Deputy Prime-Minister of the Republic of Uzbekistan, and Mr. Fumio Kishida, Prime Minister of the host country Japan and with the online attendance of His Excellency Dr. Lotay Tshering, Prime Minister of the Kingdom of Bhutan, and His Excellency Mr. Pham Minh Chinh, Prime Minister of the Socialist Republic of Viet nam.

I would like to express my sincere gratitude to everyone who has worked so hard in organizing this Water Summit, and, on behalf of the host city, I extend a warm welcome to you all.

Kumamoto City is proud of its wonderful history and culture, not least of which is the splendid Kumamoto Castle standing tall in the center of the city. The city is also blessed with a natural environment featuring crystal-clear groundwater, abundant greenery, and plentiful agricultural and fisheries products.

The crystal-clear groundwater, which is the source of the city's water supply, is described as "mineral water on tap." It is a precious resource that enriches our lives and is the pride of Kumamoto.

This bountiful water environment is sustained by the flow of water into the ground facilitated by the exceedingly water-permeable geology of our local caldera - one of the largest in the world - formed by four large pyroclastic eruptions of Mt. Aso as well as our infrastructure from 400-years of paddy agriculture.

In order to protect this precious water resource for future generations, Kumamoto City declared itself a "Groundwater Preservation City" in 1976. Since then, it has been working on groundwater conservation and river basin flood control beyond our municipal area through collaboration between residents, businesses, and government and in cooperation with other local governments whose representatives are present here today.

These activities have been widely recognized around the world, including when we received the "Water for Life" UN-Water Best Practices Award in 2013.

To host this Water Summit, which is positioned as one of the milestones of the UN-International Decade for Action on Water leading up to its midterm review, is a great honor, and we will do everything we can to make this Water Summit a safe and secure conference.

As the organizer of this Summit, I am confident that the sharing of information on water-related issues and initiatives as well as the robust discussion among participants here will provide a pathway of hope for the future of water not only in the Asia-Pacific region but throughout the world.

Hosting this Water Summit has another significant meaning for us.

As you know, the Kumamoto Earthquake struck here on April 14, 2016, causing extensive damage throughout the prefecture and bringing about a drastic change to our beloved, beautiful homeland.

Since that day, the people of Kumamoto City and the people of Kumamoto Prefecture have worked hard together for recovery and reconstruction, and, with the kind support of people in Japan and overseas, steady progress has been made in reconstruction. I am delighted that this day has come, and I would like to express my sincere gratitude to everyone who has supported us.

Along with a display of the strong recovery that we have made from that disaster, we would like to take this opportunity of the Water Summit to convey our message of gratitude for the support we have received from everyone in Japan and overseas.

In closing, I would like to reiterate my sincere wishes for the success of the Water Summit and that great strides can be made toward resolving the world's water problems. I would also like to extend my best wishes for the ongoing development of the countries represented here today, and I wish everyone success in your endeavors.

Report from the Asia-Pacific Water Forum



Mr. Mark Pascoe Chair of the Governing Council of the Asia-Pacific Water Forum

Your highness…

Your Excellency, Prime Minister…

Welcome by Governing Council

On behalf of the Chair of the Governing Council of Asia Pacific Water Forum, Mr Ravi Narayanan it gives me great please to welcome you all to the 4th Asia Pacific Water Summit in Kumamoto, Japan. Mr Narayanan is unfortunately not able to be here and that is a great shame as he has led the APWF so expertly and with such inclusive style for the last xx years. Can I also include the Vice Chairs of the Governing Council, Ms Chunghua Wu and Professor Eduardo Araral in this welcome.

The Asia Pacific Water Forum

The APWF was set up in 2006 at the suggestion of Asian Water Ministers attending the World Water Forum in Mexico to help build partnerships and share knowledge about water issues and their solutions based on the growing experience in different countries of the Asia Pacific region based on political commitment at the highest level. At that time the water leaders of the world were focussed on the Millennium Development Goals; since 2015 we have been focussed on the Global Goals we refer to as the SDG's. In a sense the formation of APWF anticipated SDG 17 (cooperation, collaboration and partnerships). We do of course have a strong focus on SDG 6 though we understand that the water goals cannot be achieved without working on many of the 17 goals.

These partnerships bridge international development banks like ADB, elements of the United Nations family like UNESCAP, apex bodies like GWP, academic and capacity building organisations like International WaterCentre and peak national bodies like the Japan Water Agency.

It was set up thanks to the initiative of the Japan Water Forum (which volunteered to be the secretariat) strongly supported by the Asian Development Bank and UNESCAP. It was also decided to keep the organisation lean so it did not operate in a bureaucratic manner but rather on the basis of consensus and partnership. The Public Utilities Board in Singapore volunteered to host meetings of the Governing Council and it has done so since 2006.

APWF from the beginning has been about bringing together high-level policy and decision makers together.

One of the early initiatives is the partnership with the ADB to develop the Asia Water Development Outlook which is now a highly respected benchmarking tool for National Water Security that is being used by

governments and others for investment prioritisation that is now in its 4th edition.

The Summits

So far there have been three summits (the one in Kumamoto being the fourth) starting in Beppu, Japan, then Chiang Mai in Thailand and then Yangon in Myanmar. From the beginning it was decided that this was more than a water minister's meeting but should be held at the level of heads of government.

The themes of these events have been consistent with the Forums focus areas over time and always with the mission of the APWF being to seek political commitment at the highest level in the region to the cause of water security and to promote the active exchange of information, knowledge and skills across institutions and people in Asia and the Pacific in the pursuance of water security as an indispensable part of the development process.

The APWF has established a well-coordinated network of its member organizations that is founded upon their willingness to meet the needs of decision-makers, policy-makers, and practitioners and identify solutions toward water security for sustainable development.

Global Partnerships

APWF has become a key regional water network for other global events such as the Stockholm International Water Week and the World Water Forum. APWF has acted as the co-ordinator of Asia Pacific regional inputs to deliberation at the World Water Forums in Turkey, Franc, Korea and a few weeks ago in Senegal. We will be participated again this year in the Asia Focus sessions in Stockholm Water Week under a partnership agreement with the Stockholm International Water Institute.

Also APWF is now one of the key members of Asia-Pacific Regional Consultation of the Mid-term review of the UN Water Decade (2018-28). We aim to deliver the outputs of the APWF activities, particularly of the outputs of the 4th APWS, towards the Mid-term review for accelerating the actions that will be developed in New York in early 2023.

Acknowledgements

On behalf of the Asia Pacific Water Forum, its lead organisations and it many members in from across the region I thank you for joining us here at this 4th Asia Pacific Water Summit. I particularly want to thank the Japan Water Forum for it stewardship of the development of this event and also I must thank the small team who have put in an enormous effort to develop this event under the cloud of Covid-19.

We still have an enormous task ahead of us to achieve water security for our region and I do think of our current time being that of the "Asian century" where we need to have managing water, sanitation, environment and responding to climate change for our people at the very top of political agendas.

Thank you





ICHARM, ICIMOD, IUCN Asia, IWMI, Japan Sanitation Consortium, NARBO/Japan Water Agency, Korea Water Forum, Secretariat of Pacific Community, Singapore PUB, World Toilet Organization, AIT, WaterEd Australia, Water Stewardship Asia-Pacific, Water Integrity Network, EBRD Representative Office Japan, etc Secretariat: Japan Water Forum
Youth Declaration of Summit Opening



Students from Kumamoto Kita High School, Kumamoto Prefecture

Today, we face unprecedented challenges because of COVID-19. Our school lives and relationships with family and friends have completely changed.

And yet, with a courageous spirit, we continue to look ahead, ready to take on all the challenges and difficulties we face currently and will face in the future.

We know that water is an everyday and truly precious source of life.

However, water can also be fearsome when it rages out of control.

We want to speak from our hearts to the grown-up versions of ourselves and to all the people we will meet in the future about the importance of protecting(=learning) about water.

Leaders of the Asia-Pacific region here today, please guide us. Now, we announce the start of the 4th Asia-Pacific Water Summit.

Commemorative Speech Hearts, Minds and Water - Touching Water in People's Beliefs -

His Majesty the Emperor of Japan

Prior to my lecture, I would like to express my sincere condolences to all the victims of disasters that have occurred in Kumamoto, Kyushu, Japan, as well as in other countries around the world. Please accept my sympathy for all who are affected by disasters.

Your Excellency Mr. Yoshiro Mori, Chair of the Asia Pacific Water Summit, Your Excellencies Participating Heads of State and Government, Excellencies, Ladies and gentlemen,

1. Prologue - People and Water in Kumamoto -

I am pleased to give the memorial speech at this Asia Pacific Water Summit in Kumamoto City, where water and people have had a profound relationship. This area was, unfortunately, hit by recurrent floods in recent years. However, Kumamoto Prefecture has been known as a place of lush greenery and scenic beauty.

Kumamoto Prefecture is topographically characterized by the volcanic calderas of Mt. Aso and Mt. Kinpoh. Shirakawa, meaning the White River, is the subject of a poem composed by the poetess Higaki in the Gosen Waka Anthologies.

"I collect water from the White River

that reminds me of elapsed years

as my dark hair has turned into the color

that merges with the name of the river"

In the same way, the Midori River, the Kikuchi River, the Chikugo River, and the Kuma River bring precious water to the fields. Also the abundant groundwater that permeates the earth supports people's lives and is also a source of richness and vitality for the city. In particular, the area around Kumamoto city stands on pyroclastic fall deposits, so rainfall readily permeates through the layers of the deposits, which helps to form a large aquifer of quality water. This groundwater is the single source of domestic water supply for all of the 740,000 citizens, a rare occurrence amongst the large cities of the world. This is possible because many citizens volunteer to conserve this good water environment. Kumamoto City, therefore, deserves to be called a "Pristine Water City".

Plentiful water in Japan, including Kumamoto Prefecture, has fostered fertile lands, which has nurtured a unique culture and society through long standing interaction between people and water. Through the history of the relationships between people and water, the culture and the society have been formed, not only in Japan, but everywhere in the Asia Pacific and the world. If you look around the world at various cultures and civilizations, you may find that water not only upholds the lives of people but affects the relationships between people and

nature, and even their conception of nature and the world. There are cases in Japan and the world in which people's appreciation and fear of water led them to see water as a means to purify their minds and hearts and even a subject of their worship, leading to a worship of water. Today, I would like to talk on this topic of the relation between our hearts and minds and water, by examining folk religion related to water.

2. Mountain Worship and Water

Mountain worship is a form of folk religion widely found in Japan. Famous examples in Japan are the worship of Mt. Fuji, Mt. Hakusan, Mt. Ohmine, and Mt. Daisen. Shrines that deify those mountain gods have spread out all over the country. Worship of mountains is found not only in Japan but throughout the world. They develop in places where close ties exist between characteristic mountains and ethnic groups. In Asia, Mt. Kailas in China is a sacred mountain for Buddhism and Hinduism. Many people visit the mountain for pilgrimage. Mt. Machapuchare which I visited in Nepal and Mt. Chomo Lhari in Bhutan are also worshiped as sacred mountains (Fig.1).



Mt. Aso in Kumamoto Prefecture is widely known as a representative of active volcanoes of Japan. It has been a subject of worship. The famous crater of Nakadake (Fig.2) contains water at its bottom and the god Take-iwatatsuno-mikoto is enshrined as a subject of worship. A legend says the god cut open the ring mountain of Aso to discharge water dammed up in the Aso caldera, thus producing fertile paddy fields. His son, the god Hayamikatama-no-mikoto, is enshrined as a water-distributing god at the Aso Shrine at the foot of the mountain (Fig.3). As seen in this case, it is said that there is a religious fusion which has existed since ancient times of the worship of a volcano god in Mt. Aso and the worship of an agricultural god and a water god through the opening up of the Aso Valley.





This picture shows water springs abundant in Kumamoto City (Fig.4). There are a number of prominent water sources such as Lake Ezu and Mt. Kinpoh Springs in Kumamoto City. There are also some scenic places such as the Shirakawa Water Source in Kumamoto Prefecture where abundant pure water springs forth. Not only the worship of Mt. Aso, but also many of these prominent water sources are the subjects of worship, and small shrines are located beside the water sources (Fig.5).





Let us turn our eyes to the relationship between water and Mt. Hakusan, a prominent sacred mountain of Japan, which straddles Ishikawa, Gifu, and Fukui Prefectures (Fig.6). The altitude of Mt. Hakusan exceeds 2,700 meters, and it is the source of major rivers such as the Tedori River, Kuzuryu River, and Nagara River. Presumably because of this, since ancient times, Hakusan has been referred to as "God the Parent that sustains life", and also worshipped as a god of agriculture and water. It is said that Hakusan was established as a sacred mountain in 717 A.D. of Nara period by a Buddhist monk named Taicho. Its 1,300-year anniversary was celebrated in 2017. As you can see, there is much mountain worship in Japan that is associated with legends and worship that is connected with water.

In addition the water-related folk religion is connected not only to mountains but also to people's livelihoods such as forests and forestry. These pictures show the Shikobuchi Shrine in the Ado River Basin in Shiga Prefecture (Fig.7). In this watershed forestry used to prosper. Logged timber was built into rafts that had to flow through many dangerous spots along the river to reach the market places. It is said that thus a network of "Shikobuchi Shrines" was formed to pray for the safety of raft navigation. As we have seen, people's various desires, appreciation, and thoughts for water have led to the folk worship of water.





3. Water beliefs connecting the Asia Pacific Region

(1) –Journey of the Nagas–

Now, let us take a look at the connections in the Asia-Pacific Region through water-related beliefs. I will first of all take up divine snakes, and then dragons as a clue to exploring the connection.

Please have a look at this figure (Fig.8). These are earthen wares of the Jomon Period. They are adorned with patterns of snakes, which suggest that the snake was a subject of worship during this period. In fact, there are examples of snake worship in many parts of the world besides Japan, including Asia, Europe, the Americas, and Africa (Fig.9), where the snakes were considered as gods or messengers of gods. There are numerous mythologies and legends of snakes, which are in many cases associated with hydrological and meteorological events, such as heavy rain, drought, praying for rain, rainbows, and clouds. There are various explanations. One reason is that meandering rivers resemble snakes, for example, the shapes of rainbows and lightning are similar to those of snakes, and that snakes stay or live in water. In any case, it seems certain that simple forms of water worship developed through deifying snakes at local levels before major trans-national religions such as Buddhism and Hinduism prevailed. One example from Japan is the story of Yamata-no-orochi, or a huge snake with eight heads and tails, which appears in the book of Japanese history "Kojiki" and "Nihon Shoki".





After the rise of civilization in each region of the Asia Pacific, the propagation of major religions and the spread of related legends and icons took place in tandem. In particular the propagation of Buddhism influenced people's hearts and minds in the region (Fig.10), while concepts such as those of snake gods and associated icons started to move across the continent along with it. This photo shows Nagas, or the snake gods of Hinduism (Fig.11), and it is said to be modelled on the poisonous cobra. As Hinduism places importance on purification with water from the Ganges River, water gods are hence given importance. There are numerous statues of Nagas, half-human and half-snake, on the reliefs of many Hindu temples in India.





I visited Angkor Wat in Cambodia in 2012 (Fig.12). There were many reliefs and sculptures of Nagas in the temple (Fig.13). Above all there was a stone relief depicting the Hindi genesis story of the "Churning of the Ocean of Milk" in the first corridor of the temple (Fig.14). The relief depicts a scene where in search of immortal portion, as shown in the photo at the bottom, the gods of virtue and those of evil are pulling the Naga coiled around a mountain in the center, from both the head on the left and the tail on the right. Another story, of the birth of Cambodia, reveals that a Naga drank up the water that had immersed the entire ground, thereby creating the country, which suggests the strong relationship between Nagas and water. Statues of Nagas are also found in Indonesia (Fig.15).









Now, I would like to take a look at the examples of Japan. Please see this picture (Fig.16). This is a statue of the god Ugajin of Honzanji Temple in Osaka, Japan. Many Ugajin statues with a human head resting on a coiled snake body are also seen in Japan. This picture shows a statue of the Goddess Benzaiten on Chikubushima Island in Lake Biwa, the largest lake in Japan (Fig.17), and on its head lies a statute of Ugajin.



Speaking of Benzaiten shrines, famous ones are those on Itsukushima in Hiroshima Prefecture, one of three most scenic spots in Japan. Another is the one on Enoshima in Kanagawa Prefecture that is known for yachting sports. Both of them are enshrined on islands, places related to water (Fig.18). Furthermore, being also an island in the Shinobazu Pond in the Ueno quarter of Tokyo, an island was created to resemble Chikubujima Island in Lake Biwa, on which a shrine that enshrines Benzaiten was built. I also heard that there is an island enshrining Benzaiten in Kumamoto Prefecture. Also, at the summit of Mt. Misen in Omine Mountain Range in Nara Prefecture, a well-known site for mountain worship, there is a rear shrine of Tenkawa Benzaiten (Fig.19). Mt. Ohmine is the source of the Yoshino River which has provided water to the Kii Plain since ancient times and later even to the Yamato Plain thanks to its abundant water flow, from which we can infer the close relationship between water and the worship of Benzaiten. In Japan, Benzaiten is listed as one of the Seven Gods of Fortune, and is familiarly known to people as "Benten-sama". Benzaiten had her origin in the Water Goddess Saraswati in India. The concept of a water goddess seemingly migrated along with the propagation of Buddhism. The name "Saraswati" means "the one holding water", which suggests that the snake and the god of water are closely related (Fig.17). As I have explained, water beliefs related to Naga, or snakes, travelled across the continent and the ocean and left a gigantic spiritual vestiges on the region.



By the way, the palace which I moved to last September was the former residence of the Tokugawa Shogunate. Interestingly, when I was studying the history of the residence, in the 18th century of the Edo period, I was surprised to find that there was a Benzaiten enshrined on a small island in a moat on the palace premises, and I felt that ties to water are continuing.

4. Water beliefs connecting the Asia Pacific Region

(2) -Journey of Dragons-

Let us now look at the case of dragons. The dragon is an imaginary creature of legend and folklore. It is said that the concept of the dragon took shape thousands of years ago in China even before the beginning of Buddhism and other religions. These photos show such examples (Fig.20). Both in the Chinese First Dragon in the Yangshao Culture in 6,000 B.C. or earlier and in the Jade Dragon in the Hongshan Culture in 3,000 B.C. or earlier, the shapes of dragons were already appeared. The dragon in China is also a symbol of authority, and is said to govern water, and thus has been the subject of prayer for rainfall since ancient times. As there were no snakes such as the Indian cobras in China, it is assumed that this ancient concept of dragons was carried to East Asia and South-East Asia, combined with the teaching of Buddhism relating to the snakes (Fig.21).





The Japanese dragons are thought to be a result of the propagation of this conceptual formation in ancient China. They are often enshrined as water gods. There is a cave in which a dragon is said to live in Murou, Nara Prefecture. A ritual praying for rain was performed in the cave in the 9th Century A.D. according to a historical document titled "Nihon Kiryaku" (Fig.22). Also, as Sanetomo Minamoto, the third Shogun of the Kamakura Shogunate, wrote:

"People's sorrow will unbearably increase

When rain falls in excess.

May I plead to you, Great Eight Dragons,

To make the downpours cease."

Dragons became the subject of prayer, especially during extreme weather such as floods and droughts, giving rise to folktales in many parts of Japan about water dragons (Fig.23). Among dragons, there are nine-headed ones called "Kuzuryu". It is said that Mt. Hakusan and Mt. Togakushi in Nagano Prefecture, which I introduced earlier, are closely related to the worship of Kuzuryu. This picture shows Mt. Togakushi (Fig.24). A theory says that the unique jagged shape of the peak was thought to resemble a multi-headed dragon, and was worshipped as the "God Kuzuryu", which led to the origin of the Togakushi belief. Looking at this picture, this theory seems to some extent to be convincing.







By the way, a hybrid and imaginary creature of a snake and a turtle from China called "Ga-meh" appears in the Myoken Festival in Yatsushiro City, Kumamoto Prefecture (Fig.25). "Ga-meh" was said to be the 6th child of a dragon in ancient China. Considering that the festival is held for good harvests, the close ties between water and dragons - as well as between Japan and Asia - are felt even in a cultural event like a festival.



In this way, you can see the process whereby a people's appreciation and fear of water developed into myths and idols in the concrete form of snakes and dragons. Furthermore, they amalgamated with the newly introduced teachings, and migrated across the Asia-Pacific Region, while gradually changing in shape and concept.

So far, we have seen cases where simple forms of worship related to water arose from a people's daily relations with water and then developed into deeper beliefs, which migrated across the region along with the propagation of religions. Thoughts on water, appreciation and fear of water, taking on the images of snakes and dragons, travelled from the continent over the sea and became a part of the cultures that connected various countries across the Asia-Pacific region. The deep relationship between people and water over the ages and distance seem to have formed a stable foundation for sympathy and solidarity for all people in this region.

5. Towards the achievement of the international common goals of water

Fifteen years ago in the first Asia Pacific Water Summit in Beppu, Oita Prefecture, I presented my experiences in Nepal where I encountered women and girls queuing up for the water from a shared water pipe. This triggered my interest in water issues (Fig.26). While for some there is water, safe and easily available by turning on a tap, for others, there is water only available after treading hilly paths and waiting for hours. From this photo scene, are projected the challenges for the achievement of the Sustainable Development Goals (SDGs) with "no one left behind", such as gender equality, health and education in the relationship between water and people.



The 2030 Agenda for Sustainable Development of the United Nations agreed in 2015, has set common goals and targets among the international community including the Asia-Pacific Region to meet these challenges. Now that more than one third of the implementation period has already passed, the concerned UN agencies have sounded wake-up calls for the delays in achievements. In order for all people in the world to have access to safe drinking water and adequate sanitation and hygiene, it is necessary to double the current pace of improving facilities and expanding services. Furthermore, in order for all people in the world to have access to hygiene services such as drinking water in each home and to have individual toilets by 2030, it is said that the current rates of progress should be quadrupled.

On the other hand, water-related disasters such as floods and droughts are occurring at an alarming pace. It is in fact feared that these phenomena may be aggravated due to climate change. Although recovery and reconstruction from the floods are in progress in Kumamoto Prefecture, the efforts need continuously to be further promoted. Measures in the future are also considered to be urgently required. Various issues caused by lack or excess of water bring distress and instability to people and society. The challenges of the relationship between people and water is an urgent issue that we must work on in solidarity.

I sincerely hope that all people will be able to benefit from the abundant water and attain good and sustainable lives, which will eventually lead to peace and prosperity for the Region of the Asia Pacific and the whole world. I would like to express my deep respect to those who are engaged in building regional cooperation and stability through water around this region and the whole world.

As I have explained through many stories today, while supporting people's lives, water brings peace and happiness to people's minds and hearts, and even leads to sympathy and solidarity in and across the regions. It is my wish that everyone attending this meeting will discuss the relationship between people and water from various perspectives, come up with concrete directions for water-related challenges and their solutions, and renew your resolve towards the achievement of the water-related goals and targets common in the international community. I, too, would like to deepen my understanding and consideration towards solving the water challenges.

Thank you.

Heads of State and Government Meeting

Speech by Mr. Fumio Kishida, Prime Minister, Japan



Mr. Fumio Kishida Prime Minister of Japan

I feel so honored to be given this opportunity to share my commitment to global sustainable development and the creation of a resilient society and economy with you at this Water Summit held here in Kumamoto with the participation of leaders from throughout the Asia-Pacific region.

Water is a blessed resource that underpins our society. In the form of natural disasters, however, it can pose a threat to human life and prosperity. Water issues are thus deeply related to a range of challenges in society such as climate change, natural disasters, sanitation, and poverty.

In recent years, the frequency of water-related disasters has been increasing across the world. In Japan, the frequency of torrential rains has increased by about 40 percent compared with 30 years ago, and in the Asia-Pacific region, the number of water-related disasters impacting large populations has nearly tripled over the past 30 years.

Furthermore, the COVID-19 pandemic has forced us to recognize once more the importance of maintaining a hygienic environment related to water. Also, using water to improve local sanitary environments is essential for the eradication of poverty.

I am aiming for the realization of a "New Form of Capitalism", solving social issues the international community faces such as climate change and poverty through public-private partnerships and the promotion of digitization and innovation, while supporting sustainable economic development.

This also applies to the solution of social issues related to water. I am committed to leading the implementation of measures to develop quality infrastructure by making use of Japan's advanced technologies with the New Form of Capitalism concept as a base, thereby simultaneously contributing to both the resolution of social issues and sustainable economic development in the Asia-Pacific region.

In Japan, in order to deal with climate change, we are promoting digitization and technological development for the maximum use of infrastructure, including dams.

For instance, we are pushing ahead with the development of technologies to optimize the AI-based forecasting of the inflow of water into dams and the operation of dams, while enhancing mutual data linkage among 1,500 dams in Japan for the maximization of their flood-control effects. In addition, we are working to make optimal use of related infrastructure such as severage systems and agricultural facilities and to make effective use of land,

as well as more proactive use of the water storage function provided by rice paddy fields and reservoirs, in order to improve river basin sustainability and resilience to water-related disaster risks.

To this end, it is essential to increase the precision of precipitation and flood forecasts. Accordingly, we are pressing forward with research and development utilizing our meteorological satellite "Himawari", which is equipped with a cutting-edge observation sensor, and our supercomputer "Fugaku", which boasts computing speed ranked No. 1 in the world for four consecutive terms.

As I mentioned in my opening speech for the Summit, heavy rains hit Kumamoto and caused tremendous damage in 2020. This disaster was due to the unpredicted formation of a linear rainband. With a strong commitment to preventing the reoccurrence of similar damages, we have been promoting research and development through industry-academia-government cooperation, and we can now predict the formation of similar linear rainbands using the world's most advanced technology in our Fugaku super computer.

Moreover, by disclosing big data about weather events and the water levels of rivers to the private sector and by proactively adopting digital technologies they develop, we are working to minimize human losses caused by disasters through measures such as sending out evacuation alerts and related information via smartphones in real time.

In addition, we will make flexible use of water by utilizing our weather forecast technology for the promotion of hydroelectric power generation, thereby also contributing to the realization of carbon neutrality.

Through these measures implemented by both the public and private sectors capitalizing on Japan's advanced technologies, we aim to solve social issues, which will simultaneously help drive sustainable economic growth.

Today, I have the honor to declare the "Kumamoto Initiative for Water".

Japan has accumulated an abundance of water-related knowledge and technology. We will share this expertise with other countries in the Asia-Pacific region from the perspectives of governance—namely of systems, human resources, and capacity—and of finance, as well as science and technology.

The Kumamoto Initiative for Water will be implemented using two approaches to contribute to the creation of quality-oriented society in the Asia-Pacific region.

The first approach is to "implement climate change adaptation and mitigation measures".

Japan's hybrid technology can be applied at more than 30,000 existing dams in the Asia-Pacific region, rapidly increasing their flood control and water supply functions for climate change adaptation while simultaneously enhancing their hydroelectric power generation capacity for climate change mitigation, all without causing any additional environmental impacts.

Furthermore, through the provision of Japan's cutting-edge technologies, we will contribute to improvement of agricultural irrigation and drainage facilities, more effective use of the rainwater storage function of paddy fields, promotion of small hydroelectric power generation, and improvement of sewerage systems for the reduction of inundation damage and creation of biomass energy in Asian monsoon areas. We will thereby promote the

establishment of "quality infrastructure" that facilitates both climate change adaptation and mitigation.

In the Asia-Pacific region, we have yet to build the capacity to collect and accumulate observational data and make forecasts for water management planning. To meet these challenges, Japan will collaborate with European countries, the United States, Australia, and India to conduct activities to enhance the earth observation network, thereby making it possible for areas where not enough ground observation data is available to make use of the observation data provided by a number of satellites for weather forecasts such as precipitation estimates.

In addition, we will support the assessment of water-related disaster risks and the visualization of the infrastructure development and operation effects while simultaneously encouraging companies to make ESG investments and disclose more of their climate change risk-related information. Furthermore, we will increase the number of partner countries for the Joint Crediting Mechanism (JCM).

In addition, it is also important to make "investments in human resources" handling water management to ensure the practical use of scientific technology in society. To this end, we will provide support by using the Data Integration and Analysis System (DIAS) built by Japan and conducting joint research in cooperation with organizations in each country, thereby contributing to human resource development.

Climate change is progressing day by day and continually posing a greater risk to all of us. It is therefore essential to implement measures against it before we face disasters as the actualization of a serious risks. The financial costs for implementing such measures will also skyrocket if we wait until such risks have already materialized. We need to act promptly so that later on we will not regret postponing countermeasures.

Now, as the second approach taken for the "Kumamoto Initiative for Water", I would like to talk about measures to improve people's basic living environment.

Japan will contribute to the provision of wider access to safe water and maintenance of hygienic environments, and we will also facilitate the improvement of water environments in various areas for the public water body.

By making use of Japan's technologies and providing financial support, we will assist in the expansion and renovation of water supply facilities in the region while also encouraging private companies to participate in this field, thereby helping water utilities to expand their revenue base by establishing a billing and tariff collection system based on the use of IoT technologies. This will help improve their water leakage detection capabilities and reduce non-revenue water, improving their profitability for the enhancement of their overall capacity.

We will also increase the number of member countries of the "Asia Wastewater Management Partnership (AWaP)" from the current six in order to share our knowledge and experience across Southeast Asia for the further promotion of sewage management. At the same time, we will contribute to the improvement of water environments and biomass power generation by making use of Japan's sewerage facility development technologies.

For water supply, sanitation, and other facilities to serve as "quality infrastructure" and an engine for economic growth, Japan will support not only the structural development but also the digitization of infrastructure operation and the introduction of advanced technologies.

Based on the Kumamoto Initiative for Water, Japan will provide financial assistance worth approximately 500 billion yen over the next five years.

The details of this initiative will be incorporated in the "Kumamoto Declaration" to be finalized today, and Japan is committed to implementing the measures as described in this document.

To ensure the Asia-Pacific region can achieve the SDGs and to create a quality-oriented society where people can enjoy a high quality of life with a high level of resilience against water risks, Japan will spearhead these efforts in a sincere manner.

Now, taking the opportunity presented by this meeting held with the participation of leaders from across the Asia-Pacific region, I would like to comment on the situation in Ukraine, which is another very important challenge that the international community should address together.

The international community is now facing a crucial moment. In order to end Russia's outrageous aggression and to maintain peace and order in the world, we need to make a concerted effort and speak with a unified voice to make it clear that we will not tolerate any attempts to alter the status quo by force.

To this end, I would ask for cooperation from the leaders who gathered to take part in this Summit before concluding my speech.

Thank you very much for your kind attention.

Statement (on-site)



Samdech Akka Moha Sena Padei Techo HUN SEN Prime Minister of the Kingdom of Cambodia

- Excellency Kishida Fumio, Prime Minister of Japan, Chair of the Summit;

- Excellencies, Ladies and Gentlemen!

First of all, I would like to congratulate the Government of Japan in collaboration with **the Asia-Pacific Water** Forum to host the 4th Asia-Pacific Water Summit under the theme "Water for Sustainable Development-Best Practices and the Next Generation". I am very delighted to join this important event!

On the 6th Anniversary of major earthquakes that caused many deaths and destruction especially a severe damage to the Kumamoto Castle, which is the heart of the Japanese people, I also would like to extend my deep condolences to the affected peoples and families in this province.

Over the past two years, COVID-19 has posed unprecedented impacts on global socio-economic development. Yet, this crisis has also made us understand better of the need for conservation and protection of the ecosystems and natural resources, particularly water resource, to promote and support sustainable and resilient livelihood and socio-economic development.

Certainly, water is an essential resource for development and quality living, but this resource is becoming scarcer and scarcer day by day in many parts of the world. This is due to human activities that are adversely affecting water source and its quality, climate change, floods and droughts, population growth and rapid development – all of these have been impacting water resource and the ecosystem supporting it.

Therefore, our approach towards water resource management today will determine the quality of life for us and our children in the future. In this sense, <u>water resource has become a key agenda that requires us to work</u> together to manage this resource sustainably for now and in the future through:

- 1. Continuing to promote the development and integration of infrastructure networks to support water resource management at country, regional and global levels.
- 2. Continuing to promote the development of responsible socio-economic activities and to support green development, especially for agriculture which requires great amount of water.
- 3. Promoting and enhancing our digital cooperation to leverage the progress of digital technology development for the use and management of water resource in efficient and effective manners.
- 4. Continuing to support programs, initiatives and activities that support the promotion of social sustainability in the use and management of water resource to ensure that all people around the world have access to water as needed.

Excellencies, Ladies and Gentlemen!

Effective and efficient use of water resource is critical to sustainable socio-economic development. In fact, in the UN 2030 Agenda for the sustainable development, water is defined in Goal 6 on "Ensure Availability and Sustainable Management of Water and Sanitation for All". For Cambodia, water is considered as "White Gold"— a driving force for sustainable and inclusive socio-economic progress and development. The Royal Government of Cambodia always recognizes its strategic importance and place high priority on water resource aimed to promote better management of water resource in order to ensure water security in the country. Cambodia will continue its commitment to collaborating with all stakeholders, under both regional and international mechanisms, to strengthen and promote more effective governance and management of water resources and transboundary river basins, towards achieving "Water for Sustainable Development" objective.

In this regard, I firmly believe that our high-level political will, joint efforts, and collective actions, will indeed ensure a successful achievement of the above objective. Cambodia looks forward to fruitful outcomes of the **4th Asia-Pacific Water Summit** – along with the **Kumamoto Declaration**, which will become an important roadmap for strengthening our joint efforts to ensure sustainable and inclusive use, development, and management of water resource for all generations of humankind.

To conclude, I wish **Excellencies, Ladies and Gentlemen**, present here today, good health, happiness, and success in all endeavours. I also wish other related meeting success as planned.

Thank You!



Honourable Kausea Natano Prime Minister of Tuvalu

Excellencies, Heads of State, Excellencies, Prime Ministers, Distinguished Delegates Ladies and Gentlemen

Introduction

In 2007 at Oita City, I attended the 1st APWS as the Minister responsible for Water related matters here in Japan. The theme then was Water Security and Leadership and Commitment. Today, we are here once again to discuss water related issues that confront Asia and Pacific, under the theme "Water for Sustainable Development – Best Practices and the Next Generation". Excellencies, I salute Japan for their standing commitment to Countries in the Asia Pacific Region, show casing the importance of water to the future of the people of the World.

On behalf of the people and the Government of Tuvalu, I would like to take this opportunity to extend my sincere gratitude to the government of Japan for their hospitality to me and my delegation on our arrival.

I want to also congratulate former Prime Minister Mori for his dedication and consistency in believing that water is a very important matter and the World need to consider it really serious in terms of development for generations to come. Former Prime Minister Mori was the 1st Chairperson of the APWS and has been looking after this matter for all this time, so big thank you to PM Mori.

The 4th Asia-Pacific Water Summit's Theme

Excellencies, Tuvalu welcome the theme of this Summit, "Water for Sustainable Development - Best Practices and the Next Generation". The people and Government of Tuvalu consider water for development as an important matter. Our participation reflects the close alignment to Government's priorities around water related problems whether it is linked to infrastructure, housing, regional development, economic growth, or climate change. We regard this sector as critical in achieving our national objectives.

Water Sources in Tuvalu

Drinking water supply is primarily achieved through harvesting and storing of rainwater. This harvested rainwater is, by far, Tuvalu's most important and widely used potable water resource. It is perhaps the only water resource that is essentially free and delivered by nature directly to the consumer.

Groundwater is also used for non-potable uses throughout Tuvalu, and is, therefore, an important factor in reducing the pressure on drinking water supplies. Excessive nutrient inputs are causing eutrophication and associated macro-algal blooms in some of our lagoons. This is leading to nearshore habitat loss, decrease in fish numbers, and causing challenges for fishermen. Inadequate sanitation including poorly functioning septic

systems, are thought to be the main contributors to the excessive nutrient loads to the lagoon.

Water-related Challenges in Tuvalu

Like many other Pacific Island Countries, Tuvalu faces pressures of growing population, limited water resources and storage capacity, and poor sanitation infrastructure. Limited institutional capacity, thinly spread human resources, and irregular funding sources further challenge our ability to effectively respond to water and sanitation issues.

Compounding these challenges are the impacts of climate variability and climate change. For my country Tuvalu and I believe for the Pacific as well, Climate Change is the single biggest security existential threat to our survival and this requires urgent actions and ambitions to address these threats.

Our vulnerability was dramatically illustrated in 1999 and 2011 when the country entered a prolonged period of drought, for which a state of emergency was declared and drinking water supplies in some of our communities were pushed to the point of exhaustion. We had an outbreak of the water-borne disease in 2011 concurrent with and apparently precipitated by La Nina–associated drought conditions. As we speak today, most areas of Tuvalu are in the wake of drought warning.

Toward the recovery from the COVID-19 pandemic

Tuvalu is currently COVID-19 free. However, we are facing delays in major infrastructure projects due to the impact of the COVID-19 pandemic on border closures, leading to delays in the transportation of construction materials, and limited access to technical expertise in various fields to name a few.

We recognize the benefit to share knowledge and learn best practices of water-related issues that are commonly affecting the Asia-Pacific Region amid the Covid-19 pandemic. As such, we have to be more resilient and prompter in our response, which I wish to share under the following thematic areas, which were proposed for further deliberations.

Finance

We have plans such as the Te Kete (Tuvalu National Strategy for Sustainable Development 2021-2030) and the Tuvalu Infrastructure Strategy and Investment Plan (TISIP) 2020-2025 that include some direction on investment needs in water and sanitation through infrastructure development. Despite all these plans, we still have competing priorities that hinder the fulfillment of our aspirations.

Governance

Several useful water governance mechanisms are already in place in Tuvalu. We are applying an integrated approach to dealing with water-related impacts of climate change, through collaborative efforts between the Public Works Department and the Climate Change Department. Tuvalu's exposures to these impacts have been reflected in recent climate change-related documents. Therefore, we should never lose sight on the implementation of the Paris Agreement.

Science & Technology

Tuvalu's limited fresh water and financial resources mean that appropriate technologies must be a key component of efforts to secure our water and climate resilience.

To safeguard against water shortages, Tuvalu has already pursued alternative sources such as desalination. However, these are expensive to operate and maintain, limited in the volumes they produce, and cannot be relied upon alone to protect Tuvalu from the impacts of drought. A more cost-effective approach to achieving water security is to properly manage and conserve our scarce water resources and to power these, using renewable energy sources.

Tuvalu can significantly increase its resilience to the impacts of drought by investing in Disaster Risk Reduction approaches, rather than relying on immediate disaster response. Undertaking risk assessments and putting in place effective Early Warning Systems and Responses can ensure people of Tuvalu are well prepared for extended dry times. However, these systems and responses do not come cheap nowadays. The mere fact that we are being serviced by a monopoly shipping service gave us limited avenue but to go along with very high freight costs.

Concluding remarks

Excellencies, I hope that out of this Summit we will be able to come up with a meaningful Declaration document, strong message, and identified actions to contribute and address the 2030 Agenda for Sustainable Development and to foster the engagement of the private sector and development partners in addressing and contributing to the attainment of the SDGs, Paris Agreement, and the Sendai Framework.

Let me reiterate, to ensure that these efforts and best practices are taken over by the next generations, we all need to paddle together to urgently address the current COVID-19 crisis, and accelerate efforts to achieve water-related SDGs while building a resilient Asia-Pacific region to cope with evolving threats.

I thank you.

Fakafetai lasi.



H.E. Dr. Phankham Viphavanh Prime Minister of the Lao People's Democratic Republic

- Your Excellency Kishida Fumio, Prime Minister of Japan,

- Excellencies Prime Ministers/Deputy-Prime Ministers of the Asia-Pacific Countries,
- Distinguished Guests, Ladies and Gentlemen,

At the outset, I would like to extend my sincere congratulations to His Excellency Prime Minister Kishida as well as the Government of Japan for the excellent hosting of the 4th Asia-Pacific Water Summit in the city of Kumamoto, Japan. I also wish to commend the Government of Japan, particularly the Kumamoto Prefecture Authority in its recovery and reconstruction success in the aftermath of the devastating earthquake in 2016 giving us a good opportunity to witness and learn best practices from this success.

Excellencies, Distinguished Guests,

Water and water resources are vital elements for human life and the existence of our planet, particularly to food security, sound environment and biodiversity sustainability. Nevertheless, water has been unequally distributed around the world. Growing population, increasing demand for water and water resources for socio economic development, and climate change not only remain challenging and primary causes of more frequent and severe natural disasters but also pose direct impact on water and water resources' sustainability. Therefore, it calls upon all nations to collectively explore ways and means to manage water and water resources in an efficient and sustainable manner. Against this backdrop, the international community, particularly the United Nations has included the sustainable use and water management as one of the 17 Sustainable Development Goals (SDG6), which is incumbent upon us all to implement the goal effectively.

Excellencies, Distinguished Guests,

The Lao PDR is one of the countries that is abundant in water and water resources. There are more than 60 river basins across the country contributing more than 40% of the total water volume that flows into the Mekong River. This has become a key potential for the country's socio-economic development. Therefore, the Lao Government has adopted appropriate strategy and management plan in order to manage and utilize these water resources in a most beneficial and sustainable manner.

Furthermore, the Lao Government has attached a great deal of importance to Water Diplomacy by expanding

its cooperation on water related issues with countries in the region and beyond. Particularly, the Government has mainstreamed the international measures and standards on water management into its national plans and strategies such as integrating the SDG6 into the National Socio-Economic Development Plan. Through the implementation of the above mentioned undertaking, the Lao PDR has gained key results and targets.

Excellencies, Distinguished Guests,

To realize the theme of this summit "Water for Sustainable Development - Best Practices and the Next Generation", I would like to share some of my views on our future cooperation as follows:

- 1. Managing integrated, green and sustainable-led water and water resources through multidimensional and multisectoral approach, such as: by increasing green forest coverage, environmental protection, climate change mitigation, poverty reduction, gender equality, clean water supply and sanitation;
- 2. Promoting research and development cooperation on science and technology in water and water resources development and management among countries in the region and development partners, with an aim to effectively utilize water resources for common benefits of all countries;
- 3. Further enhancing effective participatory mechanisms of development partners and private sector by integrating subregional, regional and international cooperation mechanisms, particularly: Convention on Climate Change, Environment Cooperation among countries in the Asia-Pacific, ASEAN, ACMECS (Ayeyawady-Chao Phraya-Mekong Economic Cooperation Strategy) initiatives, Mekong Cooperation Mechanisms with development partners, among others; and
- 4. Building capacity and resilience for countries in the Asia Pacific region in order to respond to unforeseen challenges relating to water utilization and water resources namely natural disasters (floods and droughts).

Excellencies, Distinguished Guests,

In conclusion, I wish to express my sincere appreciation to the Government and the people of Japan, as well as the international community and development partners for extending their cooperation and support to the Lao PDR in implementing our common endeavours over the past years. I strongly believe that our cooperation in sustainable development and water management, as well as on addressing the impact of COVID-19 pandemic will be further enhanced and yielded concrete results based on shared benefits of the region and the world at large.

The Lao PDR is pleased to support and adopt the Kumamoto Declaration of this Water Summit.

Thank you



H.E. Mr. Sardor Umurzakov Deputy Prime-Minister of the Republic of Uzbekistan

Prime Minister Kishida! President Mori! Dear participants!

First of all, I would like to express my gratitude to the Government of Japan, especially H.E. Prime-Minister Fumio Kishida for the warm hospitality and the opportunity to speak in front of such a distinguished audience.

The topic of today's event (*«Water for sustainable development – best practices and the next generation»*) – is more relevant than ever.

We know that current challenges and problems related to food security, health, energy, climate and education are closely linked to the water issues.

For Uzbekistan, solving the problem of diminishing water resources is a key factor to ensure economic development and the vital needs of our people.

For centuries, the waters of Central Asia's two rivers, the Amu Darya and Syr Darya, have been the source of life and well-being of the people of Uzbekistan and the entire region.

However, starting from the 1960 the Aral Sea's water level was systematically and drastically reduced, because of the diversion of water from the Amu Darya and Syr Darya rivers for purposes of agricultural irrigation, especially for cotton cultivation.

As the Soviet government converted large acreages of lands into irrigated farmlands, the amount of water from Amu Darya and Syr Darya rivers that reached the Aral Sea dropped and led to ecological disasters on a global scale, such as the drying up of the sea.

The world's fourth largest lake has lost 90% of its water surface and 97% of its water volume in the last 60 years.

This disaster has already spread far beyond the region and become global. The traces of toxic dust contained salt, fertilizers and pesticides from the Aral seabed have been discovered in different parts of the world, including Norway and even Antarctic.

Currently, according to the UN report, our country is among the 25 states most vulnerable to water scarcity, and the situation will worsen in the future.

Dear friends!

Uzbekistan is making significant efforts to mitigate the consequences of the Aral Sea disaster and the development of the Aral Sea region.

Recently, on the 75th UN General Assembly, based on the initiative of the President of Uzbekistan Shavkat Mirziyoyev, a special resolution was adopted on the declaration of the Aral Sea region as a zone of environmental innovations and technologies.

In 2018, the United Nations Multi-Partner Human Security Trust Fund for the Aral Sea region was established in Uzbekistan.

In recent years, the Fund has raised \$240 million for projects to decrease the consequences of the Aral Sea disaster.

Over the past four years, nearly two (1.7) million hectares of the Aral seabed have been planted with trees in the region, contributing to a favourable ecosystem conditions and climate mitigation in the area.

Today, tens of thousands of people in the Aral Sea region are covered by specialized medical care and have access to clean drinking water.

At the same time, the scale of the problem requires us to jointly collaborate in the implementation of projects aimed at improving the water management, environmental and socio-economic situation in the Aral Sea region.

In September of this year, a high-level International Conference on promoting environmental innovations in the Aral Sea region will be organized in Uzbekistan.

I would like to take this opportunity to invite all the participants of today's Summit to this event.

Dear colleagues!

Uzbekistan is taking concrete steps to consistently implement the United Nations Sustainable Development Goals by 2030, including ensure accessibility and sustainable management of water resources and sanitation for all.

In order to achieve this goal, our Government has been carried out concrete reforms on the efficient use of land and water resources, improvement of their management systems, modernization and development of water facilities.

The Strategy of water resources management and irrigation sector development covering 2021-2023 as well as the Concept of water sector development until 2030 were approved.

As a result of the taken measures, currently Uzbekistan ranks 16th in the world for the adoption of water-saving

technologies and the first among Central Asian countries.

The «Smart Water» system is being adopted at water management facilities of the country, with implementation of advanced IT solutions.

By the end 2030, we are planning to introduce water-saving and high-tech irrigation systems on almost 50% of irrigated land. Cutting-edge digital technology will be installed at more than 6 thousand entities in Uzbekistan.

Dear friends!

Although, we can witness certain success, the country itself cannot solve water issues on its own.

More than 50% of the total flow of Amu Darya and Syr Darya, the largest rivers in the region, is formed by melt glacial water. At the same time, long-term observations show that the glaciers of Central Asia have been shrinking intensively in the last 40 years due to climate change and have already been reduced by more than a quarter.

In order to introduce effective solutions to this issue and lay the foundation for sustainable development of the entire Central Asian region, Uzbekistan is building relations on water management issues in a multilateral format – within the framework of the International Fund for Saving the Aral Sea, as well as bilateral format – within the framework of the joint Working Groups with each of Central Asian countries.

Dear participants of the Summit!

We can talk a lot about the topic of today's event, however, it is more important to show actions.

In this regard, let me briefly enumerate several initiatives, which, in our opinion, will help to find solutions to the problems we are discussing today.

First, I would like to encourage member states, international organizations and donors to participate in joint projects, aimed at implementing environmental innovations and technologies in the Aral Sea region.

Given the successful experience with Japan International Cooperation Agency in the field of water resources, we invite for active cooperation in implementation of variety of solutions to introduce water saving technologies in agriculture.

Second, taking into account the unique experience of Kumamoto city, we are interested in learning that achievement as well as implementing its new innovative solutions for groundwater usage in Uzbekistan.

Third, we propose to establish a Platform for young generation within the framework of the Asia-Pacific Water Summit to increase their awareness and literacy in environmental protection issues, especially water resources.

Last but not least, we suggest to establish a joint mechanism for the exchange of experience, information and strategies, in particular in the field of water reduction and introduction of fine-grained irrigation of agricultural land.

Dear friends!

It is time for all countries to move beyond words and start to jointly act and consolidate to ensure water security and address common environmental issues.

I am confident that today's Summit will be an effective platform for the implementation of new, targeted ideas in this area.

I would like to confirm Uzbekistan's commitment to cooperate in the field of efficient water usage and engage in advancement of joint projects as well as concrete initiatives.

I wish all the participants of the Summit fruitful cooperation.

Thank you for your attention!

Statement (online)



H.E. Lyonchhen Dr. Lotay Tshering Hon'ble Prime Minister of Bhutan

Your Excellency Fumio Kishida, Prime Minister of Japan, Distinguished delegates, Ladies and Gentlemen.

I have the pleasure of conveying the warm greetings of my King, the Queen and people of Bhutan.

Although I could not make it in person, I am glad that I am attending this important event virtually, thanks to technology.

As we all know, water is the driving force of our life and that of our planet. I remember writing to Prime Minister Kishida that how we deliver in this sector will have far reaching impact on our recovery from the pandemic, since it is at the core of all other sustainable development goals.

So, thank you prime minister Kishida, particularly the Kumamoto City for the timely summit. I am excited to closely follow the discourse and all the great ideas that the experts share here.

Excellencies,

Let me also take some time to update highlights of Bhutan's water story with you all today.

Our streams and rivers are fed by snow and glacial lakes. We take pride in having one of the highest per capita availability of water in the world. This is part of our rich natural heritage and exotic ecosystem.

Like most of the cultures, we also attach huge importance and spiritual significance to the water, lakes and rivers around us.

For example, we prohibit people from climbing mountains higher than 6,000 metres, as it is considered sacred and must not be disturbed. Some of the streams and lakes are regarded as blessed and have healing properties. Such Bhutanese customs and beliefs, in a way, helped us protect water sources and preserve it for generations.

Among other things, our main source of revenue is hydropower. The variation in our altitude as a mountainous country ensures swift flow of rivers, making it conducive for power production. But even with all the advantages, we have our share of water problems.

I must also inform you that Bhutan is caught up in a little sad situation.

On one hand, we are not able to solve the issue of taking drinking and irrigation water to the homes of the people despite generous per-capita water availability. Water projects were just seen as one component of developmental activities and not approached in a wholesome manner. Without a dedicated institution, our approaches to water management have been in bits and pieces.

On the other hand, climate change is inducing water scarcity at the sources. Our glacial lakes are receding, and catchment areas are drying up. At the same time, the constant risk of Glacial Lake Outburst Floods threatens whatever water infrastructure we have.

However, in all our efforts so far, I would like to share with all esteemed members here one unique story that puts water in the heart of national solidarity and unity in such an unprecedented time.

It originated from the Golden Throne. At a time when pandemic peaked world over, causing immense disruption to education, employment and other livelihoods, His Majesty The King called upon the young people of Bhutan to step up and embrace activities that are timeless and of national importance.

It was at that time that His Majesty redirected our attention to the abundant water resources we have and urged our youth to engage in building robust water infrastructure for the people and the nation. My King said it would not just be for the food security but contribute to national self-reliance and global accomplishment.

His Majesty said conflicts and wars in future can originate over access to water… and that we must solve this problem once and for all in Bhutan.

With this, thousands of youth came forward to work on water projects during the peak of the pandemic, at times requiring to work in self-containment. These group of youth are called De-suups and the project is referred to as the De-suung National Service Water Project.

Through this Royal initiative, communities across the country were connected with water for drinking and irrigation in just about two years. In solving the water issues, His Majesty gave the youth of Bhutan a new purpose and renewed spirit.

This is significant for Bhutan. Our young people are ensuring that water, the very source of life, is secured with their own hands. At a time when human tendencies are to take things for granted, our De-suups will take ownership and value what matters to their future as well as the future of the country.

But this is just the beginning. While the project is ongoing and we have to build further on the foundation that has been laid. Works are underway to institutionalise a wholesome water management system through a professional governing body.

That way, we be able to explore required resources, keep pace with emerging water technologies and introduce dynamic water policies and coordination.

We are excited about what lies ahead of us, and it is a joy to be sharing our experience at such forums. In doing

so, we are motivated with newer ideas and opportunities other countries will bring along.

Given the cross-cutting nature of water and climate, it is only through common action that we can arrive at ideal solutions.

Excellencies

In discussing water, we are talking about the element that circulates in our shared eco-system. Together, we must reduce net water loss and wastage. We have to harness not just every drop but every molecule of water. For instance, breaking up H2O into hydrogen and oxygen have huge potential of sustainable energy generation, opening up a whole new sector of economy.

Countries will have to support each other with rapid technological progress and ensure efficient water management system. Otherwise, we cannot establish water as a core component of economic progression and human advancement.

In this context, I am most delighted to welcome the announcement of the Japanese initiative to strengthen national capacities in the Asia-Pacific region. This will address our current limitations in areas of water governance.

Excellencies,

In conclusion, I am happy to note that the outcome of the two-day Summit will contribute to the Midterm Review of the UN Decade of Action for Water, which is coming up next year, thus globalising the initiative.

As every country charts the national pathway to accelerate our recovery efforts, today's summit makes us rethink and re-priorities. The way ahead is exciting. Let us all be guided by our understanding and spirit of collaboration that will be reflected in the Kumamoto Declaration.

Let us work together in a way that we are able to harness advantages at every point in the water cycle. In addition to meeting the conventional needs and utilities, we must prepare ourselves to embrace fast emerging technologies around water. Only then will we be able to derive the true meaning of its reference as "white gold" that enriches every life on earth.

I wish the summit every success! Thank you and Tashi Delek!



H.E. Mr. Pham Minh Chinh Prime Minister of the Socialist Republic of Viet Nam

Your Majesty Emperor Naruhito, Your Excellency Prime Minister Kishida Fumio Excellencies Heads of States and Governments, Ladies and gentlemen,

At the outset, on behalf of the Government of Viet Nam (General Sec of the Party and President of VN), and in my own name, I would like to extend my best regards and wishes of good health to the leaders and delegates. I wish to thank and applaud Prime Minister Kishida Fumio for hosting and inviting me to the especially significant Conference today.

Ladies and gentlemen,

Our world and region is experiencing the compounding impact, with unprecedented intensity and scale, of global challenges, leaving behind immense and manifold consequences for the generations of today and tomorrow. Examples include the COVID-19 pandemic, natural disasters, climate change and the extreme weather phenomena along with it, such as storms, floods, droughts, sea level rise, and water and soil pollution, and the over-exploitation of natural resources, including water. Ensuring water security is closely related to food security, energy security, human security and other non-traditional security issues.

To address and mitigate such negative impacts, while promoting green, sustainable, inclusive and transnational economic growth, especially during the post-pandemic recovery process, the efforts of each country is key and decisive, but international cooperation is important and game-changing. These global challenges require a global approach and solution, promoting international solidarity, and upholding multilateralism.

Against this backdrop, the Asia-Pacific should prioritize the following groups of solutions:

First, promote regional and international cooperation in an open, transparent, substantive and mutually-beneficial manner, seriously and effectively deliver international commitments on the water resource, especially the 2030 SDGs, the Paris Agreement, the commitments made at the COP26, and the Sendai Framework for Disaster Risk Reduction. In addition, in the coming time, I suggest that we need to attach importance to promoting exchange and sharing at regional and global discussions related to water.

Second, I suggest that Japan and developed countries pay attention to, share with and support developing countries with regards to experience, financing, governance, technologies, human resource development,

primary research and planning of water use, for the effective management, sustainable exploration, and equitable distribution of the water resource. We should prioritize the sustainable management and protection of ecosystems using nature-based solutions, in harmony with nature, and preserving biodiversity.

Third, promote cooperation and support the work of sub-regional, regional and inter-regional cooperation organizations and mechanisms for cross-border river basin management, such as the Mekong River Commission, and other river basin cooperation arrangements. To make good use of opportunities under the Fourth Industrial Revolution, regional cooperation should also focus on promoting digital transformation, encouraging the participation of the business community and the people, advancing private-public partnership in managing water resources, and strengthening smart water governance.

Ladies and gentlemen,

As it is located at the downstream of major rivers, Viet Nam's water resource always carries risks of unsustainability that may compromise water security. The water resources face depletion due to over-exploitation in many places. This is compounded by the impact of climate change, sea level rise and the development of hydropower. Therefore, Viet Nam lists water among its strategic resources, requiring proper, safe, hygienic and effective management extraction and use to promote green, circular and sustainable development, and ensure harmony and balance between economy and socio-cultural development, environment protection and climate change adaptation, without sacrificing social security, living environment, and water security to pursue economic growth.

Recently, Viet Nam has been actively engaging with and contributing to the common effort at all levels of international cooperation, including other countries sharing the same water source with us such as Laos, Cambodia and other international partners, in order to manage, develop, protect and make sustainable and effective use of the water resource from rivers.

Let me take this opportunity to extend heartfelt gratitude to international partners, including Japan, for your invaluable assistance. We hope to continue receiving further and more effective cooperation from other countries, international organizations, the business community, especially in strategic cooperation projects for the development of water infrastructures, without causing drastic changes to the natural river courses, especially the Mekong river.

We trust that given our international solidarity and cooperation, our singular understanding and sharing of interests, responsibility and determination to act together, we will certainly deliver in our purpose, to promote quality water development and secure water security, especially the fair, just, coherent and mutually beneficial use of transnational water resource in the region and the world, contributing to fostering cooperation, development and prosperity in the region and the world.

Bearing this in mind, we support and very much applaud the Kumamoto Declaration by the Government of Japan at the present Summit.

Once again, I wish you, Your Majesty the Emperor, Your Excellency Prime Minister Kishida Fumio, Excellencies Heads of State and Government and all delegates, good health.

Thank you for your kind attention. May the Summit be a success.

Thank you very much.
Statement (video message)



H.E. Emomali Rahmon President of the Republic of Tajikistan

Distinguished Chairman, Ladies and gentlemen,

At the outset, I would like to express my sincere gratitude to the Government of Japan for organizing this meeting.

It is gratifying that the theme of today's meeting is "Water for Sustainable Development – Best Practices and the Next Generation".

In 2007, at the first Asia-Pacific Water Summit in the beautiful city of Beppu, I stated that "... global development processes are such that the cost of water can outweigh the cost of oil, gas, coal and other resources necessary for the sustainable development of each country and region".

After almost fifteen years of development, the analysis proves the viability of those projections.

The realities of this period have made the world community to pay greater attention to water-related issues and to include various mechanisms of their solution in the Sustainable Development Goals Agenda.

Tajikistan has also made significant efforts over the past two decades to promote the world water agenda and made a worthy contribution to this process.

At the initiative of Tajikistan, the United Nations General Assembly adopted eight resolutions and our country has hosted several high-level international conferences on important water issues.

Also, at the initiative of our country, the UN General Assembly in 2016 adopted its Resolution on the International Decade for Action "Water for Sustainable Development, 2018-2028".

The core objective of this resolution is to give impetus and accelerate water actions with a view to achieving the Sustainable Development Goals.

Distinguished guests,

The sustainable development goal stands for ensuring decent life for future generations. However, the analysis shows that with current pace and efforts, it is hard to anticipate that we can achieve the Sustainable Development Goals, especially in water sector.

Unfortunately, the current threats and challenges, including the issue of climate change have seriously restrained this process.

Such situation requires special attention as its impact on water resources, especially glaciers is very clear and worrying.

Tajikistan has lost more than 1000 glaciers in the past few decades as the consequences of climate change, and suffers from severe floods and droughts every year.

It is clear that water resources play important role in adaptation and resilience to the impacts of climate change.

In this context, Tajikistan as a proactive member of Water and Climate Leaders' Coalition seeks to promote water and climate issues on the world agenda.

As part of this process, we have proposed to declare 2025 the Year of Glacier Preservation and establish a special International Fund for Protection of Glacier in order to accelerate the efforts of the international community in this regard.

Another paramount point that should be highlighted is to be ready to commit and undertake specific targeted measures in this dimension.

In this regard, Tajikistan as the initiator of the New Decade of Action "Water for Sustainable Development" launched the "Dushanbe Water Process" and in 2018 hosted the First High-Level Conference within the Decade. We plan to host the next Conference of this kind on June 6-9 this year.

The Second Dushanbe Conference will serve as the main loop to link the chain of various global events, including today's Summit and will play a crucial role in preparatory work for UN 2023 Water Conference for the Midterm Comprehensive review of implementation of the Decade for Action.

It is noteworthy that the 2023 New York Conference that will be co-chaired by Tajikistan and the Kingdom of Netherlands, will take part after almost 50 years following the First United Nations Water Conference held back in 1977.

Accordingly, the world community has substantive expectations from this world gathering on water and our countries have been doing their utmost to ensure the conference will come to fruition indeed.

It is my firm belief that all stakeholders, particularly the UN member states will support us in fulfilling this important responsibility.

I would like to avail myself of this opportunity to cordially invite all participants of this Summit to the Dushanbe Conference to decently contribute to the process of preparation for the UN Water Conference.

Distinguished participants,

In conclusion, I would like to reiterate that we will continue to proactively pursue our championship and political determination in this process together with our partner countries.

I thank you for your attention!



H.E. Joko Widodo President of The Republic of Indonesia

Thank you, Prime Minister Fumio Kishida, for organizing this important meeting.

Clean water is a luxury for most people. Water crisis is a global challenge.

785 million of global population, 300 million in Asia have no access to clean water.

1,2 billion of Asian population remains without access to proper clean sanitation.

Globally, more than 800 infants die each day because of water contamination and sanitation.

Climate change, population growth, and urbanization further complicate future challenges.

Many things that we must do together.

Sustainability is the key to the future.

Achievement of the **Sustainable Development Goals** must be accelerated to address **water crisis, climate change**, and ensure **green development.**

We must dare to take concrete steps.

First, utilizing innovation and technology-based solutions.

Research, technological development, and education are crucial for sustainable water policy and management in utilization, conservation, and supervision.

Indonesia encourages development of technology-based sustainable water infrastructure, including Wastewater treatment installation using environmentally-friendly microbubble technology to increase water quality, and using sustainable materials to build dams and water installations.

To boost sustainable infrastructure development, Indonesia welcomes investment in various sectors.

Second, empowering the people.

Active participation by the people enables government policies to improve the lives of the poorest by **improving** access and **prosperity.**

Third, increasing collaboration and international partnership.

Technology transfer and collaboration across sector and generational must not stay as a mere commitment.

We must promote an integrated policy.

Last month, Indonesia pushed for the adoption of a resolution on sustainable lake management at the UN Environmental Assembly.

This resolution integrates the policy of lake management, as one of the sources of water for human to the development plan at national, regional and global level.

Fourth, addressing the global challenges of water needs climate change and disaster management solutions.

Indonesia is committed to implementing the Paris Agreement on Climate Change… and Sendai Framework for Disaster Risk Reduction.

The Indonesian government is also committed in developing environmentally-friendly infrastructure for **water** security, food security, and energy security infrastructure to anticipate climate change.

Excellencies,

I welcome the Kumamoto Declaration, initiated by Prime Minister Kishida, to accelerate joint concrete actions in water sector.

I hope that this declaration can provide significant impact in creating a greener, more resilient, and more sustainable future.

Thank you.



H.E. Mr. Rodrigo Roa Duterte President of the Philippines

Your Excellency, Prime Minister Fumio KISHIDA; Mr. Yoshio Mori, President of the Asia-Pacific Water Forum; Distinguished participants; Ladies and Gentlemen:

Thank you for giving me the opportunity to share our perspective on the value of water, and lack of it; as well as the future of water, and not having it.

Water is universal, strategic and transformative. It has the ability to connect people and communities as well as define relationship and determines the development trajectories.

Truly, it is a resource so vital for humans and ecosystems not only to survive but to thrive. Given these qualities, access to water and water services is rightly considered a basic human right.

My country is a lesson in caution and an example of the necessity for urgent action.

Despite the abundance of water in my country, there remains an enormous challenge to ensure our people's universal access to safe, affordable and accessible water.

This requires an urgent sense of community action in the region, an integrated and coherent policy and the resolve to create opportunities for investment and collaboration for technological solutions. We also need to create a robust regime for regional sustainable water management.

Let us use the best available science in water resource generation and climate resilient infrastructure. Let us also secure sustainable forest protection and watershed management. Let us likewise foster collaboration between our regional experts for technology development and transfer.

We also need to promote transboundary benefits and interest for our common people's developments towards 2050 and beyond.

After all, we have the unique but complementary national circumstances and development aspirations.

And finally, we need to forge a strong alliance between our strategic partners to address entrenched corporate compulsions to ensure environmental compliance and just economic regulatory regimes.

At the end of the day, inclusiveness is imbued with national interest. This means equity and fairness in water sector development. Solutions therefore must come from government and non-government stakeholders alike.

Excellencies, now is the time for bolder vision and urgent action. We need to decide wisely for ourselves and for the future generations.

In closing, allow me to thank and commend the Japanese Government for the continued initiative in successfully organizing the 4th Asia-Pacific Water Summit.



H.E. Hon. Lionel Rouwen Aingimea, M.P. President of the Republic of Nauru

Your Excellencies Distinguished guests Ladies and Gentlemen

Ekamawir Omo.

I am honored to be invited today to make a virtual statement at this 4th Asia Pacific Water Summit. I take this opportunity to thank the Government of Japan for convening this important gathering to address the acute challenges our region faces on water issues in the context of climate change.

For Nauru, access to reliable, safe, affordable, secure, and sustainable water supply is a priority and a means to meeting socio-economic development needs. This is clearly articulated in Nauru's National Sustainable Development Strategy 2019-2030.

However, we are beset by a number of challenges inherent to small island developing states which has been further exacerbated by climate change and the onset of the pandemic.

My government recognizes that there is a need to align our national quality of current supplies with internationally recommended standards. Most of Nauru's ground water has been contaminated due to mining, ineffective sewerage systems, burial sites and dumping of commercial and household wastes. Frequent, unpredictable, and prolonged droughts coupled with lack of proper rainwater storage facilities compound water scarcity issues.

We have made inroads to addressing our water issues. A solar powered reverse osmosis plant has improved the supply of water, through delivery of potable water. Water storage facilities for houses have improved with most communities being made aware of the importance of using clean water and either treat or boil water for home use.

Government is cognizant that despite the efforts expended, there is still a need to increase capacity for water storage in the absence of natural reservoirs, a need to improve delivery of water from storage facilities to household water tank storages especially during sustainable drought periods when demand escalates and improve standards of the water produced by reverse osmosis. Additionally, there is a need to upgrade infrastructure, increase efficiency, secure the benefits of renewable energy, and develop and implement sustainable water management policies.

The current circumstances of the pandemic have further encumbered national efforts to provide safe, accessible, and sustainable water supply. While the effects of the pandemic has varied by region and context, island nations, inland areas, and vulnerable groups are suffering particularly severe impacts.

Nauru aligns itself with the Kumamoto Declaration that will be issued as an outcome of this Summit, recognizing that the water sector plays a vital and significant role in recovering from the pandemic. Subsequently, climate change will continue to and further aggravate the cascading multi-hazards of tropical cyclones, flood and drought disasters, soil and water pollution, rising sea levels, and melting glaciers. But, by restoring a sound water cycle, we can reduce disaster risks, achieve multiple Sustainable Development Goals (SDGs), and strengthen transboundary cooperation.

1) **Improve governance.** Nauru joins members in encouraging the many water-related institutions and civil society organizations to collaborate across sectors and generations while enhancing capabilities and performance in the water sector.

The Government of Nauru recognizes the co-relation between water and climate change and has established the Water Resource Management Division (WRM) under the Department of Climate Change and National Resilience. The Water Division is mandated to ensure that government meets its goal of providing reliable, safe, affordable, secure, and sustainable water supplies to meet socio-economic development needs and appropriate sanitation systems for healthy communities and environments. However, there is a need to develop and implement water management policies which incorporates existing legislation and policies to address past and emerging issues which will impact detrimentally on Nauru's water supplies.

2) **Close the financial gap.** Recognizing the contribution to growth from investing in water, building on the Yangon Declaration, Nauru acknowledges the importance of mobilizing investment in the water sector not only by national governments but also by international and regional organizations, international and regional financial institutions, international donor communities, subnational authorities, non-governmental organizations, private sector, and local communities.

For Nauru and similar small island developing states, mobilizing investment and finance in the water sector can form part of the solution to addressing water issues. A priority undertaking for Nauru is a sewage and water waste treatment facility, required to protect public health. The ability to properly dispose of liquid, chemical and hazardous waste is limited by the excessive cost of waste treatment. Waste disposal not only threatens natural environment and biodiversity, it also decreases air and water quality.

3) **Appeal to the science and technology community.** Nauru joins members in calling upon the science and technology community to provide context-specific innovations for resolving water problems, respecting the natural environment, geographical features, and historical backgrounds of the local community. Additionally, we emphasize the importance of promoting capacity building for a new generation of water professionals to ensure, maintain, and improve a sound water cycle.

Your Excellencies, climate change and COVID-19 continue to seriously impede our development plans. I am nonetheless confident that our collective and combined efforts in addressing the region's water issue will spur action in meeting our national priority goals and without waiting until 2030, achieve access to safe and affordable drinking water and sanitation facilities for all.

In conclusion, I take this opportunity to wish you all a successful and fruitful meeting.

Tubwa kor. Thank you.



H.E. Mr. Gotabaya Rajapaksa President of the Democratic Socialist Republic of Sri Lanka

Chairperson Excellencies Delegates.

Sri Lanka is an island nation with a rich heritage of water management that spans millennia.

Our ancestors transformed our landscape through vast hydrological projects, sustaining a sophisticated agriculture and earning Sri Lanka a reputation as the granary of the East.

My government's commitment to the water-related Sustainable Development Goals is guided by this rich heritage, and it is a key part of our national policy which emphasises sustainability.

Protecting the sustainability and resilience of our water systems is a priority for us.

Our discouraging the overuse of chemical fertilizers, pesticides, and weedicides in favour of a more organic and sustainable agriculture was based, in part, on this requirement.

So too is our national programme to clean over 100 rivers and reduce riverbank erosion, prevent sand mining, illegal construction, and discharge of effluents and plastic waste into our waterways.

Significantly improving water related infrastructure, including clean water supply and sanitation for all by 2025 remains a national target.

We are continually improving capacity and quality of existing water supply schemes and initiating new ones to cater to areas with poor coverage.

Even during the COVID19 pandemic, my Government was able to increase the number of new water connections to the public by more than 50% compared to what had been achieved annually in previous years.

Several projects intended towards improving water cycle management were also undertaken.

These achievements reflect the emphasis we give to inclusivity and to fostering participatory growth to all Sri Lankans, which is at the heart of my government's development efforts.

Despite considerable resource constraints, made far worse through the pandemic and our ongoing financial crisis, Sri Lanka's commitment towards such development as well as towards sustaining a progressive agenda on the environment remains unchanged.

Sri Lanka welcomes investments, technology transfers, and financing for our sustainability efforts, as well as broader development assistance and cooperation for debt restructuring to support our economic recovery during this critical time.

All of us alive today are custodians of this planet on behalf of future generations.

Managing water for sustainable development is a duty incumbent on all of us on behalf of our future generations.

Let us work untiringly towards this on behalf of our people and our planet.

Thank you.



H.E. Mr. Sadyr Japarov President of the Kyrgyz Republic

Dear Mr. Chairman, Dear Ladies and Gentlemen

I am very pleased to welcome all participants of the Summit.

I would like to express my sincere gratitude to distinguished Prime minister of Japan Mr. Fumio Kishida for invitation to an important and global event.

The Kyrgyz Republic fully supports the goals of the Summit and expects that the event will contribute to the solution of current challenges in the field of water resources in the interests of sustainable development.

I want to confirm that the Kyrgyz Republic is fully committed to the obligations of the United Nations Sustainable Development Goals. It should be noted that the coronavirus pandemic had most negative impact on the timely implementation of the Goals in my country.

Today, when the pandemic has already been brought under control and humanity is gradually returning to normal life, I call the world community to intensify collective efforts to achieve the delayed Goals by 2030.

Dear Ladies and Gentleman,

The Kyrgyz Republic is a country of celestial mountains, where the water sources of Central Asia are formed. Climate change has become a very serious challenge for our unique nature, especially for century old glaciers.

In recent years, the diseases of melting glaciers and dry winters in Kyrgyzstan and Central Asia are already bearing all the negative consequences of the reduction of water resources.

There is a shortage of water for the needs of the population and agricultural purposes and the risks to the life and health of citizens, food security and socio-economic development have increased. In turn, we are taking all necessary steps to mitigate these negative impact. In Kyrgyzstan, with the support of Japan and other international partners, the Taza Suu (Clean Water) program is successfully implemented, aimed at expanding the access of the rural population to drinking water. In agriculture, advanced irrigation technologies are being introduced, existing were modernized and new water infrastructure facilities was put into operation. At the initiative of the Kyrgyz Republic, in 2021 the Resolution of the United Nations General Assembly «International Year of Sustainable Mountain Development» and Resolution of the General Conference of UNESCO «Expansion of monitoring and research of mountain glaciers» were adopted, which aimed at solving the problems of sustainable development of mountain regions and protecting their ecosystems, improving the socio-economic conditions for the life on millions of people.

In order to implement this initiatives, in Kyrgyzstan, the year 2022 has been declared as the Year of Protection of Mountain Ecosystems and Climate Resilience, a Road Map of activities at the national level has been adopted.

One of such an activity is the nationwide campaign «Green Heritage» within the framework of which it is planned to plant six million seedling throughout the country as a measure to curb climate change and conserve water resources.

Dear participants,

In the conclusion of my message I want to note that the Kyrgyz Republic will continue its comprehensive activities aimed at achieving the Sustainable Development Goals.

We are also open and ready for active international cooperation, since only through joint efforts we can ensure the implementation of Sustainable Development Goals.

I wish all of a susses to the Summit.

Thank you.



H.E. Mr. Serdar BERDIMUHAMEDOV President of Turkmenistan

Excellencies Ladies and Gentlemen

Please allow me to express my gratitude to His Excellency the Prime Minister of Japan, Mr. Fumio Kishida, the Government of Japan and the Asia Pacific Water Forum for the invitation to take part in this Summit and the conditions provided for its successful organization.

Distinguished participants

Today, Asia Pacific region acts as one of the most powerful poles of global development and progress. Accordingly, great responsibility falls on the states of the Asia-Pacific region in their approaches to the issue of conserving and using the planet's water resources. This approach is an integral element of ensuring general international stability and security based on multilateral consideration of interests, reasonable balance and mitigating the damage when national and regional socio-economic projects and programs are implemented.

We are convinced that the main requirement for joint activities in this area should remain an unconditional commitment to the principle of equal and fair access to water resources, and recognizing it as a fundamental human right. According to our understanding, ensuring the right to have access to water and responsibility for this should become an obligation for all states. This is especially important in the current circumstances, when the coronavirus pandemic has seriously undermined the global economy, global food security, and had a negative impact on the implementation of sustainable development goals.

Our country closely and consistently cooperates on water issues with the global community, primarily with the United Nations on the basis of program documents that were adopted at the «Rio + 20» UN Conference on Sustainable Development in 2012, the 7th World Water Forum in Daegu in 2015 in the Republic of Korea, Dushanbe Highlevel International Conference in 2018 and other important forums. The initiatives of Turkmenistan proposed at those forums are extremely specific, relevant to the real needs of people, goals of regional development and cooperation.

The proposals are the followings:

To develop UN Special Program for the Aral Sea Basin and dealing the Aral Sea problem as a separate area of the Organization's activities;

Initiatives to develop and adopt the Central Asian Water Strategy;

New Program of Action to assist the countries of the Aral Sea Basin;

Implement Regional Action Plan for Environment protection as a unified ecological program of the countries in the Central Asia and many other measures.

The UN General Assembly Resolution «Cooperation between the United Nations and the International Fund for Saving the Aral Sea», drafted and adopted by Turkmenistan with co-sponsoring 19 countries is an important tool for the implementation of international plans in the water sector for Central Asia.

Our position is principled and consistent: Turkmenistan has stated and continues to state that water and energy problems have to be resolved:

- First, it should be based on universally recognized norms of international law;
- Second, it should take into account the interests of each country;
- Third, they should be dealt with the active participation of international organizations, primarily with the United Nations.

I think that, in general these principles may have a universal character and be applicable in the approaches of the international community to water issues.

I would also like to underline Turkmenistan's efforts at the national level. In particular, I am talking about the Code of Turkmenistan «On Water» adopted in 2014, which is the basis of a comprehensive program for the development and application of scientifically proven, more effective rules for the rational use of water resources, their conservation and restoration, protection from pollution and depletion.

Creating unique artificial lake «Altyn Asyr» in the Karakum desert is one of the largest national projects. Construction of this man-made reservoir which has the most complicated hydrotechnical engineering system will allow us to successfully address pressing environmental, economic and social issues and work effectively to ensure long-term environmental well-being both in Turkmenistan and entire Central Asian region.

When we implement such important endeavors, we believe that effective international cooperation on water issues should be firmly based on appropriate work at the national level. These are complementary and inseparable processes. Here, we count on closer and more effective cooperation with Asia Pacific countries, as well as broader exchange and application of experience.

Distinguished participants

Turkmenistan fully supports the goals and objectives introduced to the agenda of this Summit.

We expect that the outcome Declaration will be one of the platforms for further targeted and substantive international cooperation. It will also determine long-term benchmarks taking into account current realities, develop innovative models and management strategies to coordinate national water use programs with regional and global development plans.

I wish all participants of Summit fruitful work.

Thank you for your attention.



H.E. Sheikh Hasina Prime Minister of the People's Republic of Bangladesh

Bismillahir Rahmanir Rahim

Excellencies, Ladies and gentlemen. Assalamu Alaikum and good morning to you all.

I thank Prime Minister Fumio Kishida for inviting me to join the Fourth Asia-Pacific Water Summit being held in the Japanese city of Kumamoto.

Water is vital for life. It is fundamental for sustainable development and for promoting a culture of peace. We need to ensure sound water management to 'build back better' from the ongoing Covid-19 pandemic.

In 2016, I was a member of the UN High-level Panel on Water that adopted a 'Call to Action'. The mid-term review of the Water Action Decade next year will provide us a platform in implementing the action agenda. The Kumamoto Declaration will be a useful contribution to that process.

In Bangladesh, our government has taken an inclusive, whole-of-society approach to water management. More than 85% of our people have access to safe drinking water and improved sanitation facilities. We have almost ended open defecation. Our fight against water-borne diseases is a continuous effort. From next month, we shall administer 2.3 million cholera vaccines in the capital city.

Bangladesh is considered a "role model" in water related disaster management. Our investments in flood embankments, cyclone shelters, coastal polders, green belts, floating agriculture, river dredging, urban storm water drainage systems have increased our resilience. We have benefited from developing early warning systems and community-based interventions. Our floodplain management aims at managing the seasonal variations in water availability.

We have drawn up a cross-sectoral Bangladesh Delta Plan 2100 to work towards a resilient and prosperous delta. Our government is hosting an International Financing Conference next month for mobilizing resources for implementing projects under the Plan.

We look forward to using the sediment loads flowing into the Bay of Bengal for reclaiming and elevating lands in our coastal areas. Bangladesh also stands ready to harness the untapped potentials of Blue Economy.

We are aware of the immense impacts of climate change on water. We see growing saline intrusion in our coastal areas. We also see a sharp decline in ground water level in some parts of the country. Our government is giving emphasis on nature-based solutions, including on rainwater harvesting. Our scientists have been working on developing salinity and water-resistant, and drought-tolerant crops, and already invented a number of varieties. We are taking an eco-system based approach to protecting our wetlands. We recognize our rivers to be living entities.

In the Asia-Pacific region, we must combine our forces to share good practices, knowledge and technologies to help address our common challenges. A basin-wise approach is needed to manage the waters of trans-boundary rivers. We attach importance to regional or sub-regional cooperation, including for hydro-power generation and transmission.

We are indebted to our future generations to deliver on our international commitments on water, including the water related SDGs. Our youths must be empowered so that they can become responsible actors for water inclusiveness, efficiency and sustainability.

I thank you all.



H.E. Mr. Prayut Chan-o-cha Prime Minister of the Kingdom of Thailand

Your Excellency Kishida Fumio, Prime Minister of Japan, Excellencies, Distinguished Guests,

I am very honoured to participate in the 4th Asia-pacific Water Summit, and take this opportunity to commend Japan's efforts and highly constructive role on this essential issue, which is vital to the development and progress of our region. I regret not being there in person today, in particular to admire and learn from the resilience of Kumamoto City and her people after the 2016 earthquake, and to experience first- hand, Kumamoto's cultural vibrancy, especially during the spring season, including the city's renowned ground water resources.

As a country fundamentally committed to the agenda of water and sustainable development, Thailand has placed strong emphasis on effective and integrated water resources management for sustainability and balanced development, taking into account the importance of safeguarding water accessibility for all citizens and in particular, not leaving future generations with the burden of deficient water resources. As such, Thailand enacted legislation in the form of the Water Resources Act B.E. 2561 (2018), and a 20 – year Master Plan on Water Resource Management to serve as a guiding framework for water resources solutions and development, which covers the issues of mitigation, climate change adaptation, and disaster risk reduction as identified in the Sendai Framework.

As well, Thailand is fully supporting all efforts for achieving the Sustainable Development Goals within 2030, which has included priority budget allocation for efficient and effective infrastructure upgrades.

Indeed, the COVID – 19 pandemic has highlighted the weighty challenges of water resources management for Thailand. Water for consumption is increasing among the urban population, as well as in the manufacturing and agricultural sectors. As a result, the Royal Thai Government continues to allocate water resources to efficiently meet such needs, but with overarching importance given to ensuring balance in terms of demand and supply, and ensuring clean water access for consumption and sanitation. At the same time, water-related mitigation and adaptation measures, as well as an integrated green infrastructure have been undertaken by Thailand to increase climate change resilience and also minimise possible losses from disaster situations.

To further promote technology and innovation in our water management efforts, the Royal Thai Government has continuously campaigned for water conservation by using the 3R's, which are: Reduce, Reuse and Recycle. To complement this, we have supported the use of local wisdom for area - based water resources management, and the comprehensive implementation of early warning systems to minimise damages caused by water - related disasters.

For Thailand, collaborative partnerships between government, private, and civil society sectors are another key driving for integrated water resources management. In this regard, Thailand has established the River Basin Committee to serve as a muchly needed linking mechanism between policy, planning, and area - based implementation, for maximum efficiency in total water management. The River Basin Committee, which includes specialists from the agricultural, industrial, and commercial sectors, makes recommendations and suggests solutions to water - related issues, and collaborates with local authorities across the country on integrated water resources management.

Your Imperial Majesty, Excellencies, Distinguished Guests,

As the host of this year's Asia Pacific Economic Cooperation or APEC Leaders Meeting, Thailand is promoting the Bio - Circular - Green Economy Model or BCG Model as a socio economic recovery guideline in the aftermath of the COVID – 19 pandemic. In this aspect, sustainable water management is underscored as a crucial element for economic development based on balance and sustainability, as well as for climate and environmental resilience.

To conclude, allow me to commend Japanese initiative and exemplary commitment to water and sustainable development for the development of quality, resilient, and inclusive societies. With this, I firmly believe that the outcomes of the 4th Asia-Pacific Water Summit in Kumamoto will be an important driving force for the Midterm Review of the Water Action Decade 2018 – 2028, as well as for the achievement of the Sustainable Development Goals. In this connection, I wish to reaffirm, once again, Thailand' s commitment to this important agenda, and to enhancing cooperation with our regional partners for the sustainability of our precious natural resources and the well-being of our peoples.

Thank you.



Hon. Dalton Tagelagi Premier of Niue

His Excellency Mr Fumio Kishida, Prime Minister of Japan Yoshiro Mori, President of the Asia-Pacific Water Forum Kazufumi Onishi, Mayor of Kumamoto City Respective Heads of States and Head of Governments for Asia and Pacific Region Leaders of the sub-regional Coordinators for Asia and Pacific Region Excellencies Officials Ladies and gentlemen

Fakalofa Lahi Atu from Niue, I send warmest greetings to you all and wish you all success for this 4th Asia Pacific Water Summit in Kumamoto Japan.

There are no surface water bodies in Niue. The water resource consists mainly of a groundwater lens with rainwater catchment providing a small supplementary supply for the island residents.

The Niue drinking water supply is currently free of charge for all its residents.

This freshwater lens of approximately 200 sq. Km, located 34 – 55 m below ground level.

The water for the Niue groundwater lens is deemed safe and of very high quality and is thus pumped directly to consumers without any form of treatment.

Niue's water resources are vulnerable to any land surface activities and the close link between land and catchments activities and coastal zone impacts.

Approximately 80% of water pumped from the underground lens was used for domestic purposes and the rest is used for agriculture and commercial/industrial usage.

Last week the Government and people of Niue, in collaboration with Tofia Niue through the Ocean Wide (NOW) public private partnership announced bold new marine legislation passed in November 2021 that will ensure sustainable use across its entire EEZ and sovereign while also contributing to the global environment and climate action and key sustainable development goals.

The Niue Nukutuluea Multiple-Use Marine Park safeguards 100 per cent of its Exclusive Economic Zone (EEZ and Territorial seas), building on legislation passed in 2020 to fully protect 40 percent as a no-take Large Scale

Marine Protected Area (Niue Mona Mahu).

These efforts are a culmination of collective efforts over the last 6 years, including scientific assessment, community consultation, and cost benefit analysis, and inspired by a baseline of over 1000 years of traditional knowledge, practice and respect for our ocean.

Niue needs to strengthen our finances and human resource capacity in order to sustainably managed our capital infrastructure investments in 2030 and beyond.

To the President of the 4th Asia Pacific Water Summit, from the people of Niue we fully support the 4th APWS's theme "Water for Sustainable Development - Best Practices and the Next Generation" and the Kumamoto Declaration.

We have a moral responsibility to leave behind for our children and generations to come, the rich endowment of natural capital that has underpinned all the generations before them. We cannot leave behind a debt that our children are unable to bear.

Fakaue Lahi.



H.E. Jiba B. Kabua Acting President of the Republic of the Marshall Islands

Excellencies, Ladies and Gentlemen, Greetings from the Republic of the Marshall Islands.

I am honored to be involved in the discussion concerning Water as an item of necessity for life and development. I wish to commend the leadership of Japan and in particular the leaders of Kumamoto City, as this is the City that is the prime example of an intervention of conservation of natural water resources and being as well, a model for disaster response and recovery.

Since the first World Summit organized by the United Nations, especially during the period in which Japan took the lead in organizing discussion on water for the Asia Pacific Region, my country has been following this important lead by Japan, and the mention of Kumamoto City and hosting the 4th Asia-Pacific Water Summit, is synonymous with Japan's leadership and contribution to the science and technology of water for development.

However, I wish to share with you my Country's own experience by the so-called best practices in water management and development. In the main island, that is Majuro, where the seat of Government is located, the Government of the Republic of the Marshall Islands and JICA of Japan have cooperated with a water system that collects water on Airport Runway and store the collected water in reservoirs, while also collecting and pumping water from a natural lens 30 miles away. This method of water management has existed for about 40 years. We have no other natural source of water like a river or a lake, but we do have the Pacific Ocean. Indeed, this is water and water everywhere, but not a drop to drink.

This is a reality on the ground and I believe this is the focus that my country should have. In other words, an appropriate water technology is in order, besides constructing reservoirs. I am of the opinion that a simple, portable, and affordable technology is the way to address the needs of the family living in the remotest atolls of the Marshall Islands. Kommool tata! address this 4th Asia-Pacific Water Summit hosted in Kumamoto City, which is an important example of conserving groundwater as well as disaster recovery.

Water security is a challenge throughout the wider Asia Pacific and also in Pacific Islands region. To consider for a moment the wider Asia-Pacific, in different ways, we have shared challenges to ensure fragile natural resources while also achieving growth and development.

In the Marshall Islands, a key source of water security is currently run-off from our airport - our groundwater supplies are very fragile, and even small changes can produce severe drought. Rising seas can and have

inundated our thin freshwater lens, and we lack rivers and lakes.

We hope that this year's summit can help turn the 2017 Yangon Declaration into practical action throughout the Asia Pacific, and also in the unique island-driven context.

The Republic of the Marshall Islands is pleased to be now working closely with Japan to address our water security in Majuro atoll, including with provision to expand rainwater reservoir and storage capacity, as well as to address climate-driven impacts. Our population centers lack consistent access to basic water resources. This effort is linked to a further initiative with the UN Development Program, our regional resources, and the Marshall Islands government to address water security with a particular focus in interventions in our outer islands communities. These remote locations are often at great risk during droughts. These are strong examples of direct progress and successful partnership towards the UN Sustainable Development Goals.

This Summit has an important role in considering the role of our youngest and generations. The political will needed to better implement the Yangon Declaration of the 2017 3rd water summit can play a powerful role in accelerating regional efforts to meet the UN SDGs. There is much we can learn within the wider region, including from larger nations which also have islands and fragile coastal communities.

As Pacific Small Island Developing States, however, we also have unique challenges. Our populations are often small, but our geographic area is vast, and often remote. Our fragile water resources and island environments produces difficult risks and decisions. For atoll nations, we live for our water security on rainwater that can be collected, as well as a thin freshwater lens. As sea levels rise, our thin water lens is at growing risk of saltwater intrusion. And where growing seasonal drought patterns and risks are rising, we are increasingly challenged to meet drought disasters with adequate response. We cannot do it alone. And we must continue with our partners to deliver not just studies or regional workshops but also with visible results in local communities.

Unlike many of our larger nation partners in the wider region, however, our small scale of economy and remote location raise transaction costs, and produce serious hurdles needed to attract infrastructure finance and investment at scale. As nations with high incidence rates of non-communicable diseases, including diabetes, our water security also impacts our healthy, traditional food sources. Further, water security must also mean water quality, and consistent access to safe and healthy water, on land and in our coastal areas, remains a major challenge. Our water security policy is a guidepost, but policies alone won't move us towards the Sustainable Development Goals. We are truly in a race against time.

As small island nations, however, we also have the unique opportunity as partners who may be able to serve as innovation hubs, and can adjust strategies quickly while also meeting goals at national scale.

In closing, I know that important connections and thematic sessions this week at the 4th Asia Pacific Summit will have an important impact in addressing vital needs in the Pacific Islands as well as the wider Asia Pacific.

Kommol tata.

High Level Statement

List of Speakers

April 23

In person



Brunei Darussalam Yang Berhormat Dato Seri Setia Ir. Awang Haji Suhaimi Bin Haji Gafar Minister of Development



India H.E. Mr.Gajendra Singh Shekhawat Hon'ble Minister for Jal Shakti



Indonesia H.E. Dr. Ir. M. Basuki Hadimuljono, M.Sc. Minister of Public Works and Housing



Lao People's Democratic Republic H.E. Mr. Phouvong Luangxaysana Deputy Minister of Natural Resources and Environment



Niue

Hon. Crossley Tatui Minister for Infrastructure and Finance



Online



Kyrgyzstan Mr. Nurlan Sheripov Kurmanbekovich Deputy Minister of Agriculture of the Kyrgyz Republic



International Water Management Institute (IWMI) **Dr. Mark Smith** Director General



Singapore Dr. Amy Khor

Senior Minister of State, Ministry of Sustainability and the Environment



Organisation for Economic Co- operation and Development (OECD) Mr. Jeffrey Lloyd Schlagenhauf Deputy Secretary-General



United Nations Office for Disaster Risk Reduction (UNDRR)

Ms. Paola Albrito Chief of Branch Intergovernmental processes, Interagency cooperation and Partnerships



United Nations Industrial Development Organization (UNIDO) Mr. Hiroshi Kuniyoshi Deputy to the Director General

Video



Azerbaijan His Exccellency Mr. Muktar Babayev Minister of Ecology and Natural Resources of Azerbaijan



Nepal Ms. Pampha Bhusal Hon. Minister for Energy, Water Resources and Irrigation

April 24

In person



Phillipines Hon. Robert E. A. Borje Vice Chairperson of the Climate Change Commission



Micronesia (Federated States of) H.E. Mr. John Fritz Ambassador Extraordinary and Plenipotentiary



Ambassador Extraordinary and Plenipotentiary



Tonga H.E. Dr. Tevita Suka Mangisi Ambassador Extraordinary and Plenipotentiary



United Nations Development Programme (UNDP) Mr. Tetsuo Kondo

Direcor, Representation office in Tokyo



United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)

Dr. Akio Takemoto *Head of Programme and Administration*





United Nations Centre for Regional

Development (UNCRD)

Mr. Kazushige Endo

Director

United Nations Human Settlements Programme (UN-Habitat)

Mr. Atushi Koresawa Director, Regional Office for Asia and the Pacific



H.E. Mrs. Faalavaau Perina Jacqueline Sila-Tualaulelei Ambassador Extraordinary and

Samoa

Mongolia

Mr. Bat-Erdene Bat- Ulzii Minister of Environment and Tourism

Online



Armenia Ms. Gayane Gabrielyan Deputy Minister of Environment



Palau

Mr. Steven Victor Minister of Agriculture, Fisheries and the Environment



International Centre for Integrated Mountain Development (ICIMOD) Dr. Pema Gyamtsho



World Bank Group Ms. Jennifer Sara Global Director, Water Global Practice

Vice president of GIWP/President of IWRA General Institute of Water Resources and Hydropower Planning and Design (GIWP), Ministry of Water Resources, P. R. China International Water Resources Association

China

(IWRA)

Fiji

Mr Yuanyuan Li

Hon. Mr. Jone Usamate Minister for Infrastructure and

Mineral Resources

Meterological Services, Lands and



Director General





Republic of Korea Ms. Jeoung-ae Han Minister of Environment



Solomon Islands Hon. Mr. Bradley Smoky Tovosia Minister for Mines, Energy & Rural Electrification



Israel Mr. Yoram Morad Special Envoy for International Water Affairs, Israel Ministry of Foreign Affairs



Convention on Biological Diversity(CBD) Ms. Elizabeth Maruma Mrema Executive Secretary



International Fund for Agricultural **Development (IFAD)** Ms. Jyotsna Puri Associate Vice-President - Strategy and Knowledge Department (SKD)



Asian Development Bank (ADB) Mr. Woochong Um Managing Director General and Acting Vice President for Knowledge Management



Food and Agriculture Organization of the United Nations (FAO)

Mr. Qu Dongyu Director-General



Japan International Cooperation Agency (JICA) Dr. Akihiko Tanaka

President



Office of the High Commissioner for Human Rights (OHCHR)

Ms. Michelle Bachelet United Nations High Commissioner for Human Rights



United Nations Educational, Scientific and Cultural Organization (UNESCO)

Ms. Audrey Azoulay *Director General*



UN-Water Mr. Gilbert F. Houngbo Chair of UN-Water and President of IFAD, International Fund for Agricultural Development



The Office of the United Nations High Commissioner for Refugees (UNHCR)

Mr. Raouf Mazou Assistant High Commissioner for Operations





United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)

Ms. Armida Salsiah Alisjahbana Under-Secretary-General of the United Nations and Executive Secretary

United Nations Environment Programme (UNEP)

Ms. Inger Andersen *Executive Director*



United Nations Framework Convention on Climate Change (UNFCCC) Ms. Patricia Espinosa Executive Secretary



United Nations Children's Fund (UNICEF) Ms. Kelly Ann Naylor Associate Director of Water, Sanitation and Hygiene (WASH)



World Health Organization (WHO) Dr. Tedros Adhanom Ghebreyesus Director-General



World Water Council (WWC) Mr. Loïc Fauchon President

Parallel Sessions

Parallel Session 1 Water and Disaster/Climate Change

Session title

End-to-End Efforts for Shifting onto a Sustainable and Resilient Path under Climate Change by All

Key message from the session

The IPCC has projected more frequent heavy rainfall, thus resulting in more frequent flooding, due to climate change in most areas of the Asia-Pacific region, which is characterized by a monsoon climate and geographical diversity ranging from mountainous areas to deltas and islands. Especially in low-lying coastal areas, flood disasters will become more devastating, accompanied by sea level rises. Agricultural and ecological droughts are also projected to increase in East Asia and East Central Asia. Water-related disasters intensified by climate change will directly affect artificial and natural environments. The impacts will extend to the water-food-energy nexus and consequently affect many aspects of people's quality of life (QOL), including poverty, health, education, and labor. In addition, once a society is adversely affected at many levels, more problems are likely to arise in areas such as gender, equality, and peace.

All things considered, adaptation to climate change first requires quantifying acute and chronic physical risks by combining climate prediction model outputs with hydrologic and hydraulic simulations. Adaptation measures should then be selected and implemented based on comprehensive risk assessments considering physical risks and regional needs and characteristics in terms of the environment, economy, society, culture, and history. In conclusion, end-to-end approaches must be promoted, in which coordinated, cooperative action is taken in a gender-equitable, socially-inclusive manner in all three areas of science and technology, governance, and finance.

Session overview

To prepare for the Theme-1 session on "Water and Disaster/Climate Change", twelve national and international organizations have been working together as the lead and co-lead organizations since November, 2021. **Lead organizations:** ICHARM, HELP, ADB

Co-lead organizations: MEXT, MoE, UN-HABITAT, SPC, IUCN, IWMI, ICIMOD, EC-IFAS, GWP

To respond to the questions from the three integration groups, science and technology, governance, and finance, the Lead and Co-lead orgnizations planed three on-line pre-sessions in February and March, 2022, and reviewed local, national, and international experiences and identified directions and actions to be taken. Based on the discussions, the Theme-1 session in Kumamoto was designed and prepared in cooperation among the Lead and Co-lead organizations and the participants in the pre-sessions.

In Kumamoto, the Theme-1 session invited totally four keynote speakers, one for introducing his country's initiatives, and the other three for representing science and technology, governance and finance, respectively. The session also invited four panelists for introducing the IPCC 6th Assessment Report, the international coordination framework, the multi-stakeholder inclusion perspective, and the national knowledge sharing activities, respectively.

Based on the compilation of the efforts during the half an year, Theme-1 developed a strategy "End-to-end efforts" for shifting to a sustainable and resilient path under climate change.

Session agenda

Theme-1 Pre-session on Science and Techonology

Date and Time: 6:00-7:30UTC, Tuesday 15, February

Opening:

Prof. Toshio Koike, ICHARM

Local and National Reports:

- 1) Mr. Rajendra Sharma, National Disaster Risk Reduction & Management Authority, Nepal
- 2) Dr. Youichi Ishikawa, Japan Agency for Marine-Earth Science and Technology, Japan
- 3) Ms. Janaki Meegastenna, Department of Irrigation, Sri Lanka
- 4) Dr. Liu Jiahong, Institute of Water Resources & Hydropower Research, China

International Reports:

- 1) Dr. Amarnath Giriraj, IWMI
- 2) Dr. Mandira Shrestha, ICIMOD
- 3) Dr. Valentin Aich, GWP
- 4) Dr. Riko Oki, JAXA

Panel Discussion

Theme-1 Pre-session on Governance, on-line

Date and Time: 7:00-8:30UTC, Friday 18, February

Opening:

Prof. Kenzo Hiroki, HELP

Local and National Reports:

- 1) Mr. M. Mokhlesur Rahman, Center for Natural Resource Studies, Bangladesh
- 2) Mr. Tavanh Kittiphone, Ministry of Natural Resources and Environment, Lao PDR
- 3) Mr. Doan Doan Tuan, Water Partnership, Vietnam
- 4) Mr. Vadim Sokolov, Agency of IFAS, Uzbekistan

International Reports:

- 1) Mr. Vishwa Ranjan, IUCN Asia
- 2) Mr. Avi Sarkar, UN-HABITAT
- 3) Mr. Fany Wedahuditama, GWP Southeast Asia
- 4) Dr. Mamoru Miyamoto, IFI
- 5) Mr. Nestor Alfonzo Santamaria, OECD

Panel Discussion

Theme-1 Pre-session on Finance, on-line

Date and Time: 6:00-7:30UTC, Wednesday 30, March

Opening:

Prof. Toshio Koike, ICHARM

Local and National Reports:

- 1) Mr. Vibhu Goel, Kolkata Environmental Improvement Investment Program, India
- 2) Ms. Hitomi Miura, SEKISUI CHEMICAL CO., LTD. Japan
- 3) Ms. Ayako Torii, KPMG AZSA Sustainability Co Ltd. Japan

International Reports:

- 1) Mr. Geoffrey Wilson, ADB
- 2) Mr. Christian Walder, ADB

3) Mr. Takashi Hongo, Mitsui & Co. Global Strategic Studies Institute

Panel Discussion:

Theme-1 Session in Kumamoto, in-person and on-line

Date and Time: 15:40-17:10 JST, Saturday, 23 April

Moderator:

Prof. Toshio Koike, , ICHARM, PWRI

Opening:

Mr. Takahiro Hayashi, Deputy Director-General, Research and Development Bureau, Ministry of Education, Culture, Sports, Science and Technology, Government of Japan

Key Notes:

- 1) H.E. Mr. Daler Juma, Minister of Energy and Water Resources of the Republic of Tajikistan
- 2) Dr. Hiroshi Yamakawa, President, Japan Aerospace Exploration Agency (JAXA)
- 3) Mr. Henk Ovink, Special Envoy for International Water Affairs , Kingdom of The Netherlands
- 4) Ms. Neeta Pokhrel, Chief of Water Sector Group, Asian Development Bank

Panel Discussion:

- 1) Prof. Rajib Shaw, Working Group II of the Intergovernmental Panel on Climate Change (IPCC) for the Sixth Assessment Report, Keio University, Japan
- 2) Dr. Johannes Cullmann, Director, World Meteorological Organization (WMO) on-line
- 3) Dr. Yumiko Yasuda, Senior Network and Transboundary Water Cooperation Specialist, Global Water Partnership (GWP)
- 4) Mr. Robert Borje, Vice-Chair, Climate Change Commission, the Philippines

Closing:

Ms. Keiko Segawa, Deputy Director-General, Global Environment Bureau, Ministry of the Environment, Government of Japan

Key discussion points (including each presenter/panelist's discussion points)

Theme-1 Pre-session on Science and Techonology

This pre-session shared the reports from the national countries including Nepal, Japan, Sri Lanka, and China and the international organizations including IWMI, ICIMOD, GWP, and JAXA. The panel discussion followed to talk about the key questions: how the science and technology community develops a system to integrate knowledge and foster human resources, and how stakeholders work together to provide end-to-end solutions.

Theme-1 Pre-session on Governance

This pre-session shared the reports from the national countries including Bangladesh, Lao PDR, Vietnam, and Uzbekistan, and the international orgnizations including IUCN Asia, UN-HABITAT, GWP Southeast Asia, ICHARM, and OECD.

Theme-1 Pre-session on Finance

In this pre-session, presentations were given by experts from ADB and relevant private sectors working on the enhancement of water-related disaster resilience and climate change adaptation.

Theme-1 Session in Kumamoto

The main session started with an opening speech by Mr. HAYASHI Takahiro, the deputy director-general of the Research and Development Bureau, the Ministry of Education, Culture, Sports, Science and Technology. He

encouraged transformation into a "quality-oriented society", the theme set by the Water Summit, by strengthening collaboration with related parties in the Asia-Pacific region.

Next, four speakers made presentations as keynote speeches. H.E. Mr. Daler Juma, the minister of energy and water resources of the Republic of Tajikistan, expressed the nation's strong will to take urgent action in a clear manner to solve water issues and continue acting at the forefront. Dr. YAMAKAWA Hiroshi, the president of the Japan Aerospace Exploration Agency (JAXA), stated that JAXA will contribute to solving water-related issues by strengthening its satellite observation network with the latest space technology. Mr. Henk Ovink, Netherlands' water ambassador, spoke about the three principal pillars of the 2023 United Nations Water Conference, stressing that it should be inclusive, action-oriented, and cross-sectoral. Ms. Neeta Pokhrel of the Asian Development Bank emphasized that it is important for governments and leaders to mobilize field practitioners leading projects in order to formulate the best possible policies and put them into practice.

A panel discussion followed with four panelists. Prof. Rajiv Shaw of Keio University, who is also a member of Working Group II of the Intergovernmental Panel on Climate Change (IPCC) for the Sixth Assessment Report, mentioned the importance of governance, science and technology, and financing, pointing out that risks are complicated and have become even more complex while addressing differences between the findings reported in AR6 IPCC and the previous report. Dr. Johannes Cullmann of the World Meteorological Organization (WMO) argued that a global water information system should be urgently put in place, for the system will effectively support assessments, formulation of adaptation measures, and a scientific understanding of climate change. Dr. YASUDA Yumiko of the Global Water Partnership (GWP) emphasized the importance of partnerships among various organizations representing different groups of people, such as women, indigenous peoples, and persons with disabilities. She also explained that support can be provided in various ways, including guidance, materials, capacity building, and project support. Hon. Robert Eric Borje, the vice-chairperson and executive director of the Climate Change Commission, Philippines, stated that nations and organizations need to form a partnership to ensure holistic, sustainable water management.

Finally, Ms. SEGAWA Keiko, the vice-minister for Global Environmental Affairs, the Ministry of the Environment, gave a closing speech, reminding the participants that all stakeholders should try their best to fulfill their responsibilities from both global and regional perspectives.

Answers to the questions from the three Integrated Sessions

1) Science and Technologies

Ground and satellite observation and monitoring must be strengthened to enhance the ability to predict climate changes, extreme events, and other relevant phenomena. In addition, interdisciplinary and transdisciplinary collaboration must be promoted to translate physical risk information into risk information related to social benefits and to provide integrated information that incorporates local and indigenous knowledge. It is critical to create and share information that is understandable and reliable while ensuring transparency and accountability. To this end, the science and technology community and society must promote co-design, co-production and co-delivery. At the same time, to support this effort, they need to team up with the information and communication technology sector to develop a system to integrate the knowledge of the water cycle.

2) Governance

Cross-sectoral coordination is indispensable in municipal, prefectural, and national governments, as well as multi-layered coordination among a broad range of activities from national to community levels. In order to

achieve this goal, it is essential to build a platform involving all stakeholders at each level. This platform aims to select and implement adaptation measures based on the comprehensive assessment of climate change impacts, monitor the process and evaluate the results. After all this, the outcomes of the evaluation must be considered in making evidence-based decisions on the next step. To set this cycle in motion, what is called "Facilitators" is necessary. Facilitators are on-site catalytic agents who promote dialogue and provide expert advice for solving problems. Communities need to train them with support from the science and technology community. In addition, continuous capacity development opportunities must be provided at all levels by mobilizing face-to-face, online, and other possible modes.

3) Finance

More investment must be promoted to materialize the activities mentioned above. Studying investment gaps in communities, nations, or regions must be supported by providing professional advice to them and encouraging cooperation in them after monitoring and analyzing the current disaster risk reduction efforts in the Asia-Pacific region. Our immediate attention should be directed at implementing measures combining multiple technologies for different purposes such as early warning, forecasting, spatial planning, and water-related disaster risk reduction. Such measures should be urgently implemented by scheduling what investment tool should be employed at which timing while calling for cooperation from both public and private sectors. In the business sector, physical risks attributed to climate change have been recognized by the Task Force on Climate-related Financial Disclosures (TCFD) and stated in the International Financial Reporting Standards (IFRS). This is highly encouraging to further promote climate change adaptation, and in addition to the disclosure, adaptation measures should be integrated into business continuity plans. More efforts should be made to share information based on scientific evidence between the science and technology community and other sectors of society.



Participants in Theme 1: Water and Disaster/Climate Change

Panel discussion

Parallel Session 2 Water Supply

Session title

Achieve universal and equitable access to safe and affordable drinking water for all

Key message from the session

Providing affordable water supply to all, including poor communities and residents of informal settlements, by fostering different models of investments, building sustainable utilities, encouraging improved governance and promoting sustainable tariff models.

Session overview

This session focused on urban water supply. Target 6.1 of SDGs set a global target to achieve universal and equitable access to safe and affordable drinking water by 2030. To achieve the goal, it is important not simply to expand access, but to ensure that water supplies are resilient, inclusive and sustainable. This session discussed three key themes: science and technology, governance and finance.

Session agenda

Apr. 23rd (Sat) 15:40 - 17:10 (90 min) (Japan Time) Room A2 / Online

1) Introduction	Ms. Changhua Wu	Vice Chair, Asia-Pacific Water Forum
	[in the room]	Governing Council
2) Opening Remarks	Mr. ONODERA Seiichi	Senior Vice President, JICA
	[in the room]	
3) Presentation 1	Mr. Fuimaono Dominic Schwalger	Managing Director, Samoa Water
	[online]	Authority, Samoa
4) Presentation 2	Mr. KORESAWA Atsushi	Regional Representative, UN-Habitat
	[in the room]	Regional Office for Asia and the Pacific
5) Presentation 3	Ms. Simi Kamal	Chairperson, Hisaar Foundation, Pakistan
	[online]	
6) Panel discussion	Moderator:	
	Ms. Changhua Wu [in the room]	
	Panelist:	
	Mr. Fuimaono Dominic Schwalger [online]	
	Mr. KORESAWA Atsushi [in the room]	
	Ms. Simi Kamal [online]	
7) Summary	Mr. Binayak Das	Programme Coordinator – South Asia,
	[online]	Water Integrity Network (WIN)
8) Closing remarks	Mr. ONODERA Seiichi	Senior Vice President, JICA
	[in the room]	

Key discussion points (including each presenter/panelist's discussion points)

- Many questions were raised by the panelists, the moderator, and the audiences, and active discussion and interaction took place. Good lessons were also obtained through the dialogue.
- In the case of Samoa (JICA), the cooperation is from an island country with challenges such due to climate change and water crisis. Since there are not many water resources in island countries, these were very interesting examples of how they overcame these challenges, how they reached the stage of generating

revenue in the utility by supplying water and convinced their customers, and how they reduced non-revenue water. These are cases that need to be replicated. Furthermore, the planned digitization in Samoa would be a very interesting step to understand the role of digitalization for water utilities.

- The UN-HABITAT presentation and the presentation from Hisar Foundation, Karachi had an overlapping focus on communities and informal settlement, and highlighted major challenges that remain.
- There were very serious numbers shared by UNHABITAT on Asia Pacific regions progress towards the SDGs, showing that we are significantly lagging behind. This is an important issue and we need to pick up urgently how do we address this.
- Examples of good practices of water supply to communities in Laos, Myanmar, and Nepal were presented by UNHABITAT. They display the possibility of ensuring water services to communities that do not have a formalized structure and process for ensruing water services.
- The examples from Samoa, Laos, Myanmar, and Nepal show that water services can be ensured in small to medium size population and are probably manageable. On the other hand, the example of Karachi, a mega-city, presents the biggest challenges that we face in terms of water supply to a diverse and very highly populated cities. It is important to undertand how water supply are handled and the major challnges in mega-cities like Karachi. The SDG indicators which shows poor progress towards the goals is because the numbers and indicators that are lagging behind can be considered coming from these megacities.
- Various problems still remain, but we need to look forward. We should focus on three areas of urban water management, one is styrengthing governance including integrity management with the utilities; the second is to incorporate more informal settlements into water management, and the third is to improve the management of water utilities by improving the level of water services, gaining the trust of customers, politicians, and policy makers, securing an appropriate level of water tariff revenue, and mobilizing funds for investment.
- Governance and finance in water sector are issues that perhaps we need to focus more on. How to protect the investments made, how to use them for the right purposes and ensure that they are not wasted are critical issues.

Answers to the questions from the three Integrated Sessions

1) Science and Technologies

- A) Visualizing the status of water supply services and management, and promoting consensus building on water tariffs
- B) Using DX and appropriate technologies to improve management efficiency and ensure integrity and transparency of data
- C) Developing technologies that will provide breakthroughs, policy formation based on scientific evidence, and measurements and observations
- D) Developing institutional capacity

2) Governance

- A) Mainstreaming water integrity and transparency practices
- B) Communicating sufficiently with stakeholders
- C) Identifying marginalised groups, gaining the trust of women and other marginalized groups, understanding the challenges, and using innovattive approaches to reach informal settlements
- D) Ensuring community participation, including informal settlements
- E) Considering that different types of urban areas may have different needs and capacities available that require different approaches
- F) Water management should be envisaged as a cross-cutting issues, transcending sectors of intervention, space

needs to be made for all stakeholders contribution in decision making

G) Public institutions should have the responsibility of water management to ensure adequate distribution and access to water for all.

3) Finance

- A) Regardless of the source of funds, sound management of utilities is a prerequisite for effective conversion of funds into benefits for all.
- B) There is a need to safeguard current investments and that they are used for the purpose intended. Undertaking strong financial integrity and fiduciary measures will improve utility creditworthiness.

Showcase actions

- Country implemented:
- The Overview (please write shortly):
- Referable URL:

Samoa: Capacity of Samoa Water Authority (SWA) was improved by implementing integrated cooperation with water utilities in Okinawa Prefecture, through infrastructure development and capacity development to reduce high non-revenue water ratio and improve water supply quality as well as its inadequate water pressure. It evidenced that improving water services can help users' understanding on tariff payments, although the water tariff increased for most consumers due to a shift from fixed to metered tariff.

Laos, Myanmar and Nepal: The case studies showed that how community based actions following a people's process can enable access of safe water supply to people who are poor and people who are living in informal settlements.

Karachi: The example of Karachi as a mega city highlighted the key challenges in providing water services to a population of 16 million. There are no clear demarcations in terms of governance and there is a political tug of war between the city and provincial governments. This hampers improving services for the water utility.

Despite the challenges, there have been initiatives to ensure water to informal settlements like the Orangi where communities built, and managed water systems. The project current is facing a crisis as there has been loss of leaders to violence by the water mafia.

Another key message from the presentation highlighted the role and leadership of women played is critical to ensuring smooth water services.



Parallel Session 3 Water and the Environment from Source to Sea

Session title

Water and the Environment from Source to Sea

- Multi-level Governance for Sustainable Natural and Social Environment -

Key message from the session

The hydrological water cycle from source to sea is essential for natural environment, and also for human societies. As a nature-based solution, green infrastructure is an advanced technology to balance traditional and modern engineering. Local materials and indigenous species can boost social resiliency and stimulate local business. As a community-based approach, intergenerational engagement is a positive procedure to encourage sustainability. Especially young people working for forests, rivers, lakes, and the ocean can foster thankful mind and transfer it to the next generations. Integrated management of such virtuous cycles of water, economy, and sympathy throughout river basins from source to sea will incubate quality-oriented societies.

Session overview

Water and the environment security is deeply linked to natural sustainability and human well-being. In the Asia-Pacific region, however, our water-related circumstances are confronted with the threat from climate change, ecosystem degradation, unpredictable diseases, man-made pollutions, inequitable governance, and other negative impacts from human activities. Therefore, it is crucial to restore water and environmental systems and promote its adequate management. We are at a critical stage to preserve our habitats for the future.

For sustainability of life, business and culture of the next generations, the most essential aspect is understanding of the water and environment linkages and application of nature-based strategies in human-regulated water management. We, especially living in the Asia-Pacific region, have a responsibility to conserve natural and social "Water and the Environment" in a holistic manner from source to sea, through a multi-level governance for all stakeholders.

The session was a stage from which to exchange lessons learned with each other, find reasonable and feasible approaches, and engage ourselves to long-lasting actions. The discussion focused on combination of economic development and environmental conservation building back better from the COVID-19 pandemic, collaboration between the public and private sectors, cooperation among local, domestic, and international stakeholders, the system of water environment administration including continuous and comprehensive biological survey, and green infrastructure improvement.

Session agenda

Date: April 23, 2022 (Sat) Time: 15:40 - 17:10 (JST)

Venue: Kumamoto Jo Hall, Kumamoto City, Japan and online

Lead Organizer:

- Public Works Research Institute, Japan (PWRI)
- Ministry of Land, Infrastructure, Transport and Tourism, Japan (MLIT)
- Global Water Partnership (GWP)

Co-lead Organizer:

- Executive Committee of the International Fund for saving the Aral Sea (EC-IFAS)
- · International Union for Conservation of Nature (IUCN)
- UN Educational, Scientific and Cultural Organization (UNESCO)
- · Japan River Front Research Institute (RFC)

Moderator

Dr. Hirotada Matsuki, Director, Water-related Hazard Research Group, PWRI

Opening Remarks

Mr. Howard Bamsey, Chair of Global Water Partnership

Key Note Speech <Video>

H.E. Mr. Peter Thomson, UN Secretary-General's Special Envoy for the Ocean <video>

Presenters

- H.E. Mr. Serikkali Brekeshev, Minister of Ecology, Geology and Natural Resources, the Republic of KAZAKHSTAN <video>
- Mr. Taizo Mikazuki, Governor of Shiga Prefecture Government, JAPAN
- · Ms. Ying Li, Southeast University / Yangtze Water Partnership MSP Project Group, CHINA <online>
- Ms. Elvira Apriana, University of Gadjah Mada, INDONESIA <online>
- Dr. So Nam, Chief Environment Management Officer, Environmental Management Division, Mekong River Commission Secretariat <online>
- Ms. Keiko Muraoka, Principal Researcher, Water Environment Research Group, Public Works Research Institute, JAPAN

Conclusion and Closing Remarks

Ms. Ayuko Kato, Parliamentary Vice-Minister of Land, Infrastructure, Transport and Tourism, Japan

Key discussion points (including each presenter/panelist's discussion points)

Mr. Howard Bamsey (GWP) opened the session and confirmed the questions of science and technology, governance, and finance.

Mr. Peter Thomson (UN) stressed the importance of hysrological cycle and pointed out plastic pollution of the ocean.

Minister Brekeshev (Kazakhstan) informed the restoration of the Small Aral ecosystem is one of the most challenging projects in the world. Mitigation of climate change impacts and human activities require the collaborative actions of neighboring nations within closed watersheds. Authorization of the cross-border cooperation and participation of international development partners are indispensable. Kazakhstan appreciates the contribution of the Executive Committee of the International Fund for saving the Aral Sea (EC-IFAS) for reservoir restoration, further plans, and perspectives.

Shiga Prefectural Governor Mikazuki (Japan) explaimed that Japanese local governance has the core function of substantially and continually promoting environmental policies. The natural conservation actions, launched by local housewives, gradually developed and finally the Shiga prefecture governor established the Mother Lake Goals of Biwa. Under a clear vision, the prefectural government empowers a cross-divisional implementation mechanism encompassing pollution control, rivers, water supply, sewage, agriculture, and education. The prefecture engages municipalities, financial institutions, and NGOs to involve all residents in practical lake restoration programs. (Japan)
Ms. Ying Li (China) showed multi-stakeholder partnership in managing the problem of plastic pollution within the Yangtze River Chief System as a holistic, collabolative, participatory, result-oriented, and adaptive network. The system has a policy to strengthen the capacity in regards to plastic pollution monitoing and control, and provide experience in the management of other large rivers around the world. The sourc to sea approach is also working for upstream-downstream communication in environmental management.

Ms. Elvira Apriana (Indonesia) introduced a community-based approach related to water resiliency engages local communities and involves stakeholders by promoting gender equity and social inclusiveness. The Rinjani-Lombok Biosphere Reserve has education programs aiming to engage young people with real water-related problems and forestry preservation by challenging them to look at different aspects of water management, giving them room to contribute ideas and solutions, and letting them learn from experienced professionals in the field.

Dr. So Nam (Mekong River Commission Secretariat) detailed the national governances of Cambodia, Laos, Thailand, and Vietnam place emphasis on the biological diversity of wetlands under the IWRM-based Mekong Basin Development Strategy 2021–2030. Considering regional identity, the strategy is implemented through conservation of biodiversity, long-term food and water security, and as adaptation to climate change. The strategic planning cycle includes a mechanism for engaging communities and other actors and establishing cooperative partnerships and networks.

Ms. Keiko Muraoka (Japan) reported technically innovated tools are necessary to continue basic monitoring and make ongoing biological surveys more reasonable and reliable. In field surveys, the PWRI researcher's team is developing an environmental DNA technology that will reduce survey costs. It will involve a cross-sectoral monitoring network that will provide a comprehensive aqua-biological dataset. The technology will enhance the "National Census of River Environment" and should spread to the rest of the Asia-Pacific region for time-series monitoring and inter-basin comparison around the world. She stressed importance of basic and continuous biodata collection.

Ms. Ayuko Kato, Parliamentary Vice-Minister of Land, Infrastructure, Transport and Tourism (Japan) wrapped up the session by emphasizing virtuous cycles of water, economy, and sympathy, and closed the session.

Answers to the questions from the three Integrated Sessions

1) Science and Technologies

Scientific knowledge on natural and social environment should be integrated into a transdisciplinary intelligence and translated into the society. The reliable information assists biodiversity protection and nature-based technology.

Integrated information is a fundamental tool in building a public consensus, which enables political decision making. However, pollution networks and biological big data are sometimes hard to use due to their uncertainty and ambiguity. To tackle these issues, the science and technology sector is expected to play an increasing important role of verification. Only scientific professionals can guarantee the reliability of evidence and provide quantified data that underlie political decision and accelerate business judgement.

2) Governance

While multilevel governance of freshwater and salt water is important. Political leaders have a mandate to set a clear environmental vision. Sharing it, local leadership, national legislation, and international collaboration work

together to activate environmental conservation and restoration.

Without mutual collaboration, no governance can manage environmental issues, such as environmental conservation, pollution control, action continuity through generations, and private fund solicitation. Multilevel governance and mutual collaboration are crucial for biodiversity, social sustainability, and human welfare.

3) Finance

Public budgets should harmonize social, economic, and environmental priorities. Private funds should find profitable projects considering environmental reproductivity, community empowerment, and customer's participation.

Profit-based financing for the environment is a driving force to promote natural sustainability and human wellbeing. Its mechanism should be established by all stakeholders' effort to make the ecology understandable and the economy stable.

Showcase actions

Kazakhstan

Restoring the ecosystem of the northern part of the Aral Sea http://ec-ifas.waterunites-ca.org/aral_basin/institutions/ifas/index.html

Japan

Lake Biwa comprehensive conservation initiatives in Shiga, Japan (p10) https://www.4apws-kumamoto2022.jp/common/pdf/Collections_of_4thAPWS_Showcases_and_Roadmaps.pdf

China

Innovative policy for water conservation in Yangtze river basin: river chief system (p71) https://www.4apws-kumamoto2022.jp/common/pdf/Collections_of_4thAPWS_Showcases_and_Roadmaps.pdf

Indonesia

UNESCO Water Resilience Challenge 2021 – Rinjani-Lombok Man and Biosphere Program https://www.unesco.org/en/articles/unesco-water-resilience-challenge-2021-sustainable-environment-2030-andbeyond

Mekong River Commission

Mekong Strategy for Basin-wide Environmental Management for Environmental Assets of Regional Importance 2021-2025 https://www.mrcmekong.org/assets/Publications/BDS-2021-2030-and-MRC-SP-2021-2025.pdf

Japan

National census on river nature environment of over 30 years to contribute to climate change adaptation (p12) https://www.4apws-kumamoto2022.jp/common/pdf/Collections_of_4thAPWS_Showcases_and_Roadmaps.pdf

Japan

Nature-oriented river works (p15) https://www.4apws-kumamoto2022.jp/common/pdf/Collections_of_4thAPWS_Showcases_and_Roadmaps.pdf



Shiga prefectural governor with Kumamoto drinking water



Ms. Apriana, Dr. So Nam, and Ms. Li on the screen Dr. Matsuki, Mr. Bamsey, Ms. Kato, Mr. Mikazuki, and Ms. Muraoka on the floor

Parallel Session 4 Water and Poverty/Gender

Session title

Water, Gender and Poverty

Key message from the session

Water governance must embrace gender equality and social inclusion if it is to truly contribute to poverty reduction as the world closes in on 2030, the world's deadline for meeting the ambitious Sustainable Development Goals. Consistently integrating gender and poverty issues into scientific research in the water sector, including water-related disasters, can bring us closer to achieving more equitable and inclusive policy making, governance, and funding.

Session overview

A comprehensive understanding of the links between poverty and gender and water is key to achieving sustainable water governance. This session will present cutting-edge examples from the Asia-Pacific region on water-related disaster risk reduction, gender equality, and sanitation that contribute to improving the livelihoods of socioeconomically vulnerable populations, and discuss practical policy formulations and interventions for sustainable development. Specifically, case studies will be presented by researchers from the University of Peradeniya (Sri Lanka), the University of Technology Sydney, and the University of Tokyo, as well as Global Water Partnership and the International Water Management Institute who are working on poverty and gender issues in the water sector. Based on these case studies, panelists from Asian countries will then discuss priority policies to promote poverty reduction and gender equality and make recommendations on the way forward. Other topics to be discussed include science-based climate adaptation measures that balance poverty and long-term water-related disaster risk reduction, and four areas of action to advance on gender equality (Institutional leadership and commitment; Gender inclusion and analysis that drives change; Meaningful and inclusive participation in decision-making and partnerships; and Equal access to and control of resources).

Session agenda

Session convenors:

Dr. Liza Debevec, Global Water Partnership Dr. Akiyuki Kawasaki, Institute of Futre Initiatives, The University of Tokyo

Agenda:

Keynote address: Kusum Athukorala, Chair of GWP South Asia

Presentations:

1. The impact of floods on poverty: Through field investigation in Sri Lanka.

Dr. Gouri De Silva, Senior Lecturer, University of Peradeniya, Sri Lanka

2. Science-based policy making for reducing poverty and disaster risk: A modeling approach.

Ms. Risa Nakamura, University of Tokyo, Japan

3. Promoting Women Social Entrepreneurship through Water ATMs in low income communities for safe water access

Dr Veena Khanduri, GWP India Country Water Partnership;

Poonam Sewak, V.P. Program & Partnership, Safe Water Network India

4. Basin Women Forum as a platform to represent the voice of women in the IWRM Process at the Syrdarya River Basin

Shohida Tulieva, Focal Point on "Gender and Social Equality" and Senior Project Officer "Basin management", HELVETAS Swiss Intercooperation, Tajikistan.

5. Promoting inclusive index insurance: challenges and ways forward

Sanjiv Da Silva, International Water Management Institute, Sri Lanka;

Mr. Mohamed Aheeyar, Researcher, International Water Management Institute

6. Expanding our monitoring toolkit for gender equality in WASH: tools and insights from experiences in Nepal and Cambodia

Jess MacArthur, University of Technology Sydney, Australia

Panel discussion:

- 1. Dr. Rahmah Elfithri, Deputy Regional Coordinator, GWP Southeast Asia (GWP-SEA)
- 2. Mrs Guljamal NURMUHAMMEDOVA, Regional Coordinator of GWP Central Asia and Caucasus, (GWP CACENA)
- 3. Mr. Aung Myo Khaing, Director, Directorate of Water Resources and Improvement of River Systems (DWIR), Myanmar
- 4. Mr. Sardor Erjigitov, Founder, Zako Golden to Global, Uzbekistan

Key discussion points (including each presenter/panelist's discussion points)

The keynote speaker, GWP South Asia Regional Chair Kusum Athukorala, challenged participants to step up their game in view of the fast-approaching 2030 deadline to reach the SDG goals on gender and equality in the water sector and beyond.

The respective presentations from Risa Nakamura and Gouri de Silva highlighted the importance of understanding how natural disasters impact the livelihoods of the most poor and vulnerable populations, and stressed the need to ensure that scientific results not only influence the policy making but that this is done in a way that is pro-poor.

Poonam Sewak and Veena Khanduri presented a joint project between Safe water network India and GWP India Country Water Partnership that aimed to promote women entrepreneurs through water ATMs in low-income communities for safe water access.

Shohida Tulieva spoke about an initiative to increase women's participation in decision-making processes in the IWRM processes in the transboundary Syrdarya Basin in Central Asia.

Sanjiv de Silva of IWMI presented research on why social inclusion matters when it comes to climate insurance, and highlighted both its benefits and the challenges of the inclusive approach to climate insurance.

Finally, the presentation by Jess McArthur addressed the importance of adopting gender transformative approaches in WASH implementation projects and related challenges.

In the panel discussion, moderated by GWP's Senior Gender and Social Inclusion Specialist Liza Debevec, four panelists addressed several important issues at the interface of gender and poverty in the water sector.

Guljamal Nurmuhammedova, Regional Coordinator of GWP Caucasus and Central Asia (GWP CACENA) reminded

the participants that Central Asia and Caucasus are two sub-regions that had fully equitable and inclusive access to water until the collapse of the Soviet Union. From the 1990s, Caucasus countries adopted European values, but Central Asia turned back to a male dominated mentality in terms of governance. She stressed the need to ensure equal access for women to all resources: water is only. In her opinion, the promotion of gender equality in water management requires ensuring equity in education and career development for women. She concluded that efforts need to be stronger in those countries where gender equality is traditionally not considered a priority.

Sardor Erjigitov, founder of Zako Golden to Global, a non-governmental educational institution in Uzbekistan, acknowledged the water-related issues of his country during his studies in the water field. He experienced low quality education, outdated contents, lack of qualified teaching staff, and lack of financial support. Erjigitov talked about how low-level salaries in the water sector make young water professionals with potential move abroad or to other sectors. The goal of his NGO is to help students have a deep understanding of water issues in Uzbekistan and the rest of the world.

Overall, the session stressed the importance of political will to advance gender equality and reduce poverty; the need for gender analysis and integration of gender into biophysical research; and the use of scientific findings to ensure policies are gender responsive and socially inclusive.

Rahmah Elfithri, Deputy Regional Coordinator of GWP Southeast Asia (GWP SEA), emphasized the need to include women in the overall planning and policy framework to ensure better addressing of water-related issues. She stressed the key role of community level involvement to improve water management and cited the contribution of gender mainstreaming workshops in Southeast Asia.

Aung Myo Khaing, from the Directorate of Water Resources and Improvement of River Systems (DWIR) in Myanmar, is involved in water-related disaster risk-reduction, including flood and cyclone risk reduction. He spoke about how disaster risk-reduction requires the involvement of multiple departments including the Environment Conservation Department, Department of Forest, Department of Water Utilization, and the Department of Mining. He made several recommendations for mitigating water-related disasters such as conducting technical research, public awareness programs, maintaining drainage systems, advancing weather forecast facility, and including law enforcement in decision-making.

Finally, the summary statements from this session to the Plenery (three Integrated Sessions) was delivered by Akiyuki Kawasaki, Institute of Futre Initiatives at University of Tokyo, in terms of Science and Technologies, Governance, and Finance, as conlusions.

Answers to the questions from the three Integrated Sessions

1) Science and Technologies

Research shows that gender and inclusion analysis can drive change. Therefore, we must commit to carrying out gender and inclusion analysis at all levels as a core component of research to ensure true integration of gender. Furthermore, we need to ensure all research teams are gender balanced and diverse.

We need to deepen our understanding of the impact of water-related disasters on the livelihoods of socioeconomically to ensure we design effective policies for disaster risk reduction and climate adaption. More detailed household survey and data collection about vulnerable populations is needed for understanding the interlinkages between disaster, poverty and gender related issues.

To ensure this, it is essential to approach research from an interdisciplinary and transdisciplinary wat, blending local knowledge, social, physical, and natural sciences. Technical assistance from scientific researchers, who can use modelling, simulation, and scenario analysis techniques, among others, is essential in promoting evidence-based policy making.

2) Governance

Gender equality and social inclusion that leads to improvement of lives and poverty reduction should be made a core business goal for any institution, including the government. This requires institutional leadership and commitment beyond statements of intent.

Policies for water related disaster risk reduction should be written with the objective of alleviating poverty and addressing gender equality. This means that the socio-economic impact through water-related disaster risk reduction should be considered not only through the direct benefit of reducing the disaster loss and damage but also through the indirect benefit of socio-economic development.

3) Finance

Gender equality and social inclusion interventions that aim to reduce poverty and improved livelihoods require designated funding. All budgets should aim to be at least gender responsive, if not gender transformative.

Financial support for fostering facilitators and development of data platform is essential to promote synthesis analysis for evidence-based policy making through close collaboration between science and policy.

Showcase actions

Country implemented:

Bangladesh, India, Indonesia, Myanmar, Sri Lanka, Tajikistan, and Uzbekistan





Parallel Session 5 Water & Sanitation/Wastewater Management

Session title

Toward the realization of appropriate wastewater management to contribute to sustainable development [Session No. 5 Water & Sanitation / Wastewater Management]

Key message from the session

Water is absolutely essential to human beings, especially to maintain public health. Wastewater management is one of the potential initiatives to increase the attractiveness of urban areas by ensuring public sanitation and improving the water environment. In order to push forward the strengthening of management, it is necessary to have not only a well-organized governance, but also investments through public-private partnerships and the application of science and technology innovations in different areas of the Asia-Pacific region.

Session overview

This session was held in order to discuss the urgent and essential matter of accelerating and improving wastewater management in the Asia-Pacific region. It was hosted on April 23, 2022 by the Japan Sanitation Consortium and UN-Habitat, in cooperation with the Ministry of Land, Infrastructure, Transport and Tourism of Japan and the Ministry of the Environment of Japan.

The session started with opening remarks from the representatives of two ministries of Japan: Mr. Norihiro Nakayama, State Minister of Land, Infrastructure, Transport and Tourism, and Mr. Yasushi Hosaka, Parliamentary Vice-Minister of the Environment.

State Minister Nakayama emphasized that the central and local governments should commit to strong governance for wastewater management, and Parliamentary Vice-Minister Hosaka mentioned the need to develop appropriate wastewater treatment facilities and strengthen partnerships among countries.

In the first half of the session, Mr. Seiichi Onodera from JICA gave a keynote speech on sustainable sanitation improvement, titled "Development of wastewater treatment facilities that contribute to sustainable development, operation and maintenance and cooperation with stakeholders". Then, Dr. Avi Sarkar from UN-Habitat delivered an address on the achievement of SDGs, titled "Access to adequate and equitable sanitation and hygiene facilities and improvement of water quality".

In the latter half, Dr. Taku Fujiwara, Professor at the Department of Environmental Engineering of Kyoto University, and moderator of the session, chaired the discussion with the panelists who presented different experiences and challenges faced to accelerate the progress of SDG 6.3 and promote measures against climate change.

In conclusion, Dr. Fujiwara summarized the session through a proposal including the key messages mentioned above for the three Integrated Sessions, respectively on governance, finance, and science and technology.

Note: Number of attendees: 27 in person; 96 online.

Session agenda

1) Opening Remarks

Mr. Norihito Nakayama; State Minister of Land, Infrastructure, Transport and Tourism (MLIT); Japan Mr. Yasushi Hosaka; Parliamentary Vice-Minister of the Environment (MOE); Japan

2) Keynote Speech

Development of wastewater treatment facilities that contribute to sustainable development, operation and maintenance and cooperation with stakeholders

Mr. Seiichi Onodera; Senior Vice President; Japan International Cooperation Agency (JICA)

3) Thematic Speech

Access to adequate and equitable sanitation and hygiene facilities and improvement of water quality Dr. Avi Sarkar; Regional Advisor; South-East Asia: UBS; UN-Habitat

4) Panel Discussion

Sewerage in Japan and AWaP activities

Mr. Ryuji Uematsu; Director General; Sewerage and Wastewater Management Dept.; Water and Disaster Management Bureau; Ministry of Land, Infrastructure, Transport and Tourism (MLIT)

Brief Introduction of Water Environment Partnership in Asia (WEPA)

Dr. Pham Ngoc Bao; Deputy Director; Adaptation and Water; Institute for Global Environmental Strategies (IGES) **Financing sanitation**

Ms. Allison Woodruff; Principal Water Security Specialist; Asian Development Bank (ADB)

City-Wide Inclusive Sanitation

Mr. Numeri Zaman; Joint Secretary (Policy Support Branch); Local Gov. Division; Ministry of Local Government; Rural Development & Co-operatives; Bangladesh

Nepal WASH sector status overview

Ms. Meena Shrestha; Joint Secretary; Ministry of Water Supply (MoWS); Nepal

Policy and future challenges in the field of Sewerage in Vietnam

Dr. Mai Thi Lien Huong; Director General; Administration of Technical Infrastructure; Ministry of Construction (MOC); Vietnam

Overall Facilitator: Dr. Pierre Flamand; Manager – International Affairs; Japan Sanitation Consortium (JSC)

Key discussion points (including each presenter's/panelist's discussion points)

Based on the legal system and framework made by the central government, the relevant stakeholders – such as the central government and local governments, the private sector and citizens – share responsibility for the development of sewage works. In addition, it is very important to strengthen partnership among countries to share knowledge, experiences, technologies, and solutions.

Answers to the questions from the three Integrated Sessions

1) Science and Technologies

It is recommended to consider various regional characteristics – such as population, climate change, biodiversity, culture and health (including infectious diseases) – to select the most appropriate technologies. It is also particularly important to promote the beneficial use of wastewater sludge, treated effluent, and risk information.

2) Governance

It is critical to establish a legal system and technical standards in order to clarify the responsibilities of central and local governments, private companies, and residents. In addition, it is very important to strengthen partnership among countries to share knowledge, experiences, technologies, and solutions.

3) Finance

It should be considered that the public sector (both central and local governments) ascertains whether its investments in wastewater management provide a prompt and necessary boost to accelerate the implementation of SDGs and climate change measures as well as to attract private sector investments.



Opening Remarks by State Minister Nakayama

Panel Discussion



Opening Remarks by Parliamentary Vice-Minister Hosaka



Session Venue

Parallel Session 6 Youth Leadership & Innovation by Youth

Session title

Meaningful Youth Engagement for Water security and resilience in Asia and the Pacific

- Creating intergenerational partnerships for sustainable outcomes

Key message from the session

Youth play a significant role in promoting an inclusive, sustainable and resilient society in Asia and the Pacific and moving beyond the tokenistic inclusion of youth should be seen as a major priority. Youth should be seen as valuable partners in promoting water security in the region. This would entail adopting positive attitudes toward working with young people as equal partners; creating safe and conducive spaces for young people to engage in decision-making processes and lead initiatives; and involving them every step of the way.

Session overview

Youth are acknowledged as important actors in the achievement of development ambitions, including the Sustainable Development Goals. In the water sector, youth-led initiatives include peer- and community-focused education and behavior change on water issues, clean-ups and other water management practices, innovation, research and policy advocacy, among others. Rather than working for youth, meaningful youth engagement emphasizes recognizing youth as "experts of their own issues" with valuable contributions to development. Youth and adults should work collaboratively in shared value partnerships so that there is a sharing of expertise and knowledge between both parties; creation of value for both partners; having common objectives, joint ownership and shared decision-making; and building a partnership on foundations of trust, respect and reciprocity.

In this session, we will gain an insight into the meaningful intergenerational partnership pathways at all levels and discuss how they can be strengthened for water security and resilience in the Asia Pacific region.

Session agenda				
Item	Time	Description		
Opening Remarks	5 mins	Minh Nguyen, Programme Coordinator, ADB Youth for Asia Dr. Tsugihiro Watanabe, Secretary General, Youth Water Forum Kyushu, Professor of Kumamoto University, Kyoto University		
Feedback from Dakar	5 mins	Karishma Asoodani, World Water Forum Youth Focal Point for Asia and co-chair of session		
Case Studies Presentations	20 mins	 Tharika Fernando – Founder of Today for Tomorrow, Youth for Water and Climate (YWC) awarded project: Supplying life to the village of Sinhanagawilluwa (Virutal) Maria Tsuzuki, Student, Linden Hall School - 3R Project (Live) Gina Kandiati - Lead Youth Project Coordinator, Asian Development Bank's Youth for Asia (Regional) - Virtual 		

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Panel Discussion	30 mins	 Moderator: Rianna Gonzales, Water Resources Specialist, Youth GWP (virtual) Panel Speakers: Rafid A. Shidqi, Atoll Youth Climate Project (virtual) Mr. Toshiyuki Miyazaki, Director General, Kyushu Regional Agricultural Administration Office, Ministry of Agriculture, Forestry and Fisheries) (live) Kei Namba, Water Industry Professional (live)
Reactions and Questions	25 mins	StatementJapan High school students Ms. Sara Katayama and Mr. YutaUmesaki, Kumamotokita High School, Kumamoto, Japan introducedby KeiReactionsHon.Crossley Tatui, The Honourable Minister for Finance andInfrastructure, NIUE GovernmentHisaka Kimura, Head, Private Sector Infrastructure Finance, East Asiaat Asian Development Bank (virtual)Professor Satoko Seino, Associate Professor, National UniversityCorporation Kyushu University, Urban and EnvironmentalEngineering
Summary and Closing Remarks	5 mins	Karishma Asoodani and Kei Namba

Key discussion points (including each presenter/panelist's discussion points)

Mr. Toshiyuki Miyazaki

Main points: He focused on the inclusion of youth in the agricultural sector and highlighted the need to share knowledge in particular on rice paddy management. He stated that there are opportunities for youth in this space but it is not taken up or youth ar not interested.

Kei Namba

Main points: There has to be a balance between the roles of senior experts and young professionals as there has to be a level of trust and partnership when working together. Gave an example of being part of the SIWI Young Scientific Committee for Stockholm Water Week. She also highlighted that youth should be part of the entire project management cycle from design, implementation, resource mobilization and monitoring.

Rafid A. Shidqi

Main points: He highlighted the connection between the coastal zones and fresh water systems and the importance of this for the pacific islands. He spoke on the traditional passive contribution and collaboration of youth that is inherently cultural. He highlighted that young people should hold their governaments accountable for the decisions that are made and urges governments to create opportuites for young people to be more meaningfully involved in water decision processes. He also highlighted the innovative skills of some high school students in his region that have developed a solar powered deveice that works to desalinize water for use.

Answers to the questions from the three Integrated Sessions

1) Science and Technologies

It's highlighted that young people have the potential in championing and providing innovative solutions to water security and resilience as well as maximizing the use of technology to provide data to better inform policies. It is also seen that there is a lack of inadequate/inclusive reliable data and statistics that show the impact that water insecurity and climate change, such as access to education and decent employment, have on youth and more so marginalized youth.

- Youth must be empowered to provide solutions and demonstrate their expertise in specific areas, especially in technology, innovation, and data. This can be done through research opportunities and technical and financial support for youth led projects and research
- Invest in research and collection of disaggregated data to make sure that policymaking and programmatic interventions are informed and address the intersectionalities and marginalisation to protect young people's right to access education, decent employment that enables social, economic and political inclusion irrespective of sex, disability, race, origin, religion and economic status.

2) Governance

Governance

Meaningful Youth Engagement (MYE) should be encouraged, initiated and supported further, in the ongoing constitution of the political, social, economic, technical and administrative processes of water governance.

Stakeholders should distil the practical learning and experiences from development projects to take a pro-active, inclusive and determined next steps to ensure the right and conducive enabling-environment (personal and institutionally) for MYE.

The potential areas for strengthening Youth-Government partnerships at all levels in water governance are i) facilitating and enabling youth and community stakeholders to participate in community awareness programs, advocacy activities; and capacity building ii) enabling formalised meaningful representation in relevant bodies of water governance; and iii) further developing and budgeting water intergenerational programs and youth economic empowerment in water programs.

3) Finance

To promote direct investment in the priority issues that affect young people, including youth initiatives and enterprises, youth organizations, and in productive sectors and activities that benefit them most

It is recognized that cross-cutting interventions through multi-stakeholder models require additional resources to support the necessary additional dialogue, planning and coordination. Successful examples on the ground have demonstrated the resourcefulness, speed and cost effectiveness of working with youth. Institutionalizing an approach across levels to address water security and resilience is necessary to deliver on the water for all vision.

The private sector should also foster youth entrepreneurships and increase financial investment in youthled and small businesses and enterprises and work closely with the Government to encourage an active labour market. Use public-private partnership as a tool for decent growth in the economy.

Showcase actions

Tharika Fernando – Founder of Today for Tomorrow, Youth for Water and Climate (YWC) awarded project: Supplying life to the village of Sinhanagawilluwa (Virutal)

- Country implemented: Sri Lanka
- The Overview (please write shortly):

Project - Supplying life to the village of Sinhanagawilluwa. The project consists of getting 20 families connected to the village's ongoing rural water supply scheme, further construction of a rainwater harvesting tank for them to irrigate throughout the year, and further construction of a latrine system for the school. The non-structural means establishing a youth water organization in the village to practice sustainable practices of safeguarding water and knowledge sharing sessions from experts about sustainable usage of water and upgrading their lifestyles. This project is supported through the Youth for Water and Climate Platform coordinated by the International Secretariat for Water and the Global Water Partnership

Referable URL: <u>Bindu Drops</u>

Maria Tsuzuki, Student, Linden Hall School - 3R SDG Project (Live)

- Country implemented: Japan
- The Overview (please write shortly):

This project showcases how to achievie sustainable economy in more circular way by reducing waste, recycling and reusing materials. She and her team through their school SDG Project has creted a mechanism to use old clothing to create their school P.E. uniforms in collaboration with private sector and school. It is aimed that the project will expand to other schools

• Referable URL:

Gina Kandiati - Lead Youth Project Coordinator, Asian Development Bank's Youth for Asia (Regional) - Virtual

- · Country implemented: Nepal and Pan Asia
- *The Overview* (please write shortly):

The case study explains the concept of Meaningful Youth Engagement, the integration of MYE into ADB's operations and the implementation of MYE across Asia and the Pacific to encourage intergenerational partnerships for water security and resilience in Asia and the Pacific. Also highlights a specific project on the Bagmati River, Nepal, A youth-led peer to peer learning program aims to enable youth and children to learn about Sustainable Development Goals and 3R practices to take action from the ground level for a healthy and clean Bagmati River Basin

• Referable URL:







Parallel Session 7 Water and Food

Session title

Water and Food

Key message from the session

It is crucial to develop advanced science and technology easily utilized in the Asia Pacific region, to introduce the economic/collateral mechanisms for the policy making with the acknowledgment of the regional difference of the water cycle and to invest to the agricultural sector for promoting and enhancing sustainable water management in agriculture.

Session overview

This Thematic Session will promote proper methods and technologies for increasing productive or efficient and inclusive water use in agriculture (irrigation) in East, Southeast, South and Central Asia, with regard to SDGs Target 6.4, through introducing activities, their outcomes and resulting learning in these regions. The Session will also clarify the effective connectivity with other SDGs Targets such as Target 7.2, shifting to renewable energy with utilizing small-scale hydropower and solar system, Target 13.1, strengthening resilience and adaptive capacity to climate-related hazards and natural disasters as well as Target 2.4, with proper agricultural water management.

Session agenda

1 Opening Speech

H.E. Mr. Rokuta Shimono (Parliamentary Vice-Minister for Agriculture, Forestry and Fisheries, MAFF)

- 2 Opening Speech
- H.E. Mr. Guyzgeldi Bayjanov (Chairman, The State Committee for Water Management of Turkmenistan)
- 3 Presentations
- 3-1 "Water Use Efficiency of agricultural sector considering heterogeneity in countries characteristics" Dr. Kyohei Matsushita (Professor, Faculty of Economics, Shiga University)
- 3-2 "A Socio-Technical Approach to Water User Associations"
 - Dr. Sanjiv de Silva (Senior Regional Researcher, IWMI)
- 3-3 "Between development and uptake: stories from Asia and Africa"Dr. Maher Salman (Senior Land And Water Officer, FAO)

3-4 "ADB – Water and Food Operations in South Asia"
 Ms. Mio Oka (Director, Environment, Natural Resources & Agriculture Division, South Asia Department, ADB)

- 3-5 "Research trend of water use efficiency in paddy field"
 Dr. Keigo Noda (Associate Professor, Faculty of Applied Biological Sciences, Gifu University)
- 4 Q & A
- 5 Wrap-up

Key discussion points (including each presenter/panelist's discussion points)

1 As the efficiency of production technology suggests, improvement of water use efficiency defined by SDGs might be achieved via an increase of agricultural production rather than water use saving.

Because substitutability among inputs varies by region, strategies to improve agricultural efficiency are different by region, reflecting heterogeneity in countries' characteristics. (by Dr. Kyohei Matsushita)

- 2 Long-term sustainability of water user associations requires not only the development of irrigation facilities, but also broader investments such as improved agronomic practices and possibly diversification, better links to value chains, and structural investments in the region e.g. roads, transport, credit facilities, ICT. (by Dr. Sanjiv de Silva)
- 3 For successful innovation and uptake with advanced water management technologies, it must be codeveloped with farmers. The pace of development and the pace of uptake at field level must be balanced through enhanced knowledge management and sufficient training. A combination of different types of innovations, including social, process and technology innovations, will benefit all members of the communities, while minimizing the risk of failure of innovation or failure of uptake. (by Dr. Maher Salman)
- With the growing need for climate action in South Asia, the ADB has increased its climate change financing offerings to developing member countries to \$100 billion from 2019-2030.
 As a scheme to realize this, ADB also established the "CLIMATE CATALYST FINANCING FACILITY" in cooperation with the Gates Foundation. (by Ms. Mio Oka)
- 5 Most studies of Water Use Efficiency in paddy fields are based on field experiments, but should be evaluated in whole scale of the irrigation scheme or watershed.

In order to achieve both Water Use Efficiency improvement and Ecosystem Services enhancement, scientific evidence and/or innovative technology are necessary. (by Dr. Keigo Noda)

Answers to the questions from the three Integrated Sessions

1) Science and Technologies

In order to achieve both improvement of agricultural productivity and pursuit of sustainability, this session will propose that developing advanced technology and science that can be easily utilized in the Asia Pacific region in the field of water management is important and we also insist that it is important to realize the innovation utilizing those advanced technology and science.

2) Governance

In this session, instead of pursuing a simple reduction in water utilization in the agricultural sector, we will focus on the characteristics of the water cycle in each Asia Pacific region and the trend of increase / decrease in the amount of available water resources affected by the climate change. Based on this, considering an effective approach including the policy making and the introduction of economic/collateral mechanisms to comprehensively evaluate the positive and negative impacts of water on agricultural production and rural areas should be needed to implement appropriate water management for water use efficiency.

3) Finance

This session recognizes the importance of improving water use efficiency/productivity in the agricultural sector not only for improving agricultural productivity, but also for responding to cross-sectional issues such as climate change and for co-prosperity with other issues. Therefore, we will propose that investment in tangible as well as non-tangible measures that contribute to the improvement of water management methods in the agricultural

sector should be more actively taken.

In addition to this, in recent years, the mechanism of public-private partnership (PPP) in various sectors has been very widespread, so it is effective to incorporate not only in economic support from the government or international organizations, but also in the utilization of this mechanism.



Opening Speech (Mr. Rokuta Shimono)



Presentation (Dr. Maher Salman (FAO))

Parallel Session 8 Water, Culture and Peace

Session title

Water, Culture, and Peace

Key message from thesession

We should aim for countries to work together and improve collaboration across broders. It is important to raise awareness among leaders. While water can be a source of conflict, water can also bring peace. Transboundary water cooperation is a key to ensure peace and multistakeholder regional dialogues can be initiator for dialogue between countries. To ensure sustainable finance, we should ensure financial commitment from government and partner to really commit and ensure good practices from history, i.e. practices for water and security and across the border cooperation. Ancestral knowledge should be harmonized with technology in order to learn from disasters in the past. When we learn from history, we can better adapt to climate change.

Session overview

Peace in international water courses is intricately bound to water issues. As water is fundamental source for lives and livelihood of people and a key element for the environment, excess, shortage, and pollution of water has been of major concern for leaders, politicians, diplomats, stakeholders and citizens. Such concern and awareness are heightened in particular when water is in extreme status.

Water hazards such as floods, droughts and water pollution in international water courses can lead to tensions among countries. At the same time, water-related hazards can become an opportunity to foster peace among riparian countries by their sharing of critical information and by their extending support to affected countries. Countries and stakeholders can hope for lasting solutions and better relations by jointly overcoming water crisis. Countries, people, and all relevant stakeholders should be prepared and take necessary actions to build peace before, during and after water crisis.

In the process of fostering peace and cooperation through water, it is critical to respect cultural and historical relationship between people and water in the riparian countries since water has been closely associated with human being since ancient civilization periods. It has interacted with the people in critical fields for their existence such as health, food, energy, disasters, and environment. Therefore, relations between the people and water are not only practical and physical but emotional, philosophical, and even spiritual, so it affects the people's way of thinking and beliefs.

At this session, we would learn from the history of interaction between people sharing water as well as the relationship between people and water. The lessons gleamed from the exercise will give us a clue to create better paths towards holistic and sustainable development and peace of regions with no one left behind.

Session agenda

Moderator: Prof. Kenzo Hiroki, Professor of GRIPS/HELP Coordinator

Opening speakers: High level represetatives of the lead organizations

- Dr. Han Seung-soo, Chair of High Eevel Experts and Leasers Panel on Water and Disasters (HELP)
- Prof. Howard Bamsey, Chair, Global Water Partnership

• Dr. Shahbaz Khan, Director of the UNESCO Cluster Office in Beijing, UNESCO

Keynote speakers:

- H.E. Prof. Danilo Türk, Former President of the Republic of Slovenia, Chair of the Global High-Level Panel on Water and Peace and Lead Political Advisor of the Geneva Water Hub (video message)
- H.E. Mr. Nazarov Azimzhon, First Deputy Minister of Water Resources of the Republic of Uzbekistan
- Ms. Olga Algayerova, Executive Secretary, UNECE

Presentors for virtual "world tour to water heritages" by youth:

- The Youth Team on Water and Heritages Panelists:
- Dr. Jerome Deli Priscolli, USA
- Dr. Arie Setiadi Moerwanto, Advisor for Minister of Public Works and Housing, Indonesia
- Dr. Yumiko Yasuda, Senior network & Transboundary Water Cooperation Specialist
- Mr. Koos Wieriks, Chair of IGRAC

Key discussion points (including each presenter/panelist's discussion points)

Dr. Han, Chair of HELP

- HELP has been actively involved to raise awareness on water and disaster in concrete matter. For example, HELP has published a guiding principles to build resilience post-Corona world has been launched an the 5th UN Special Thematic Session on Water and Disaster in New York City in June 2021.
- History shows that there are more cases when disasters trigger collaborations between countries rather than causing conflicts. This meeting also marks the launching of The Principles to Foster Peace Before, During, and After Water-related Disasters in the session by turning crisis into peace.

Dr. Howard Bamsey, Chair of Global Water Partnership

- Dr. Bamsey shares how the whole human experience with water is related to culture and peace. The notion of sustainability development is related to everything. Water is essential for sustainable development and if we have sustainable development, we will have the water that we need.
- In some cultures, water and sources of water are venerated or even worshipped as it is the foundation of life. However, there are also cultures which don't respect water and the role it plays in life. This difference will be the basis of the discussion in the session.
- Dr. Bamsey agrees with Dr. Han that the sharing of water can be a way to build peace, but it can also be a source of tension and even conflict. It is really important that in fostering peace through water, we respect the cultural and historical relationship between people and water in the country concerned. The relationship is not only practical but also can be philosophical, emotional, and spiritual. Understanding that data can help create better path to create holistic, sustainable development, and peace.
- Sharing water resources across national boundaries is particularly difficult to mention of the balance between territorial sovereignty and central sharing of common resources. It's not unusual occurrence as transboundary fresh natural resources exist. Cooperation in managing transboundary water resource is essential for water security and peace.
- Not many countries share agreement or create indicator/data sharing regarding transboundary water resources. This underpins the need for agreement or strengthening cooperation regarding transboundary water resources.

Dr. Shahbaz Khan, Director of the UNESCO Cluster Office in Beijing, UNESCO

• Dr. Khan shares about water, culture and peace link with IPCC Report: Climate Change Risks for Peace and

Sustainable Development. UNESCO is also working on Intergovernmental Hydrological Programme.

- The UN2023 Water Conference: Water Action Decade is a very important concept in UNESCO, and they have hosted some activities including UN Water Groundwater Summit leading to the conference.
- Dr. Khan introduced the River Culture Concept: learn from the river to live with the river.
- Dr. Khan also includes a part about UNESCO heritage sites for peace and sustainable development. They wish to do active localization of SDGS by engaging communities and youth and protecting the world's natural heritage for future generations by fostering local economic development that is socially and culturally appropriate and environmentally sustainable.
- Japan is taking leadership role for ESD while Korea is taking leadership role in GCED. These concepts will help build capacity.
- UNESCO will also publish a book titled Global River Culture. Key message: nature-based solutions and sustainable innovations are very important.

H.E. Prof. Danilo Türk, Former President of the Republic of Slovenia, Chair of the Global High-Level Panel on Water and Peace and Lead Political Advisor of the Geneva Water Hub

- Water is a powerful force and a matter of survival. It has no substitute. It shapes history, defines boundaries, and cause civilizations to flourish and collapse. It is also shown in various forms of religions and culture.
- Prof. Turk emphasizes the importance of water, culture, and art. Peace is culture and it should be nurtured and protected. Water action and water cooperation are instruments of peace. Prof. Turk gave example of transboundary water cooperation as instrument of peace, with fighting over as conflict of water.
- Example given is Ukraine. Water infrastructure as object of armed attack is an issue. Peace effort in Ukraine should include vital management of water and transboundary water cooperation.
- Another example: Sahel region in Africa. Comprehensive peace effort with water management should be central to the issue. Comprehensive approach after management, preparedness of future disasters, and effective preparation of future disaster is essential for future peace in the region. Global warming also exacerbates the impact of water disaster such as flood and drought.
- Prof. Turk calls for stronger conceptual framework for international cooperation to better prepare for water disasters. He also introduces The Principles to Foster Peace Before, During, and After Water-related Disasters as the basis for much needed conceptual framework for effective international framework. He went on to explain about the content of the principles briefly. For example, he explains about the significance of building the much-needed awareness including among political leaders is fundamental to maximize use of resources and improve existing resources. Leaders should understand the need for preparedness for enjoyment of human rights. Prof. Turk calls for adaptation to negative effect of global warming by increasing preparedness. He calls for the importance of sharing of information. Only strong information base can allow effective mitigation of disaster.
- Prof. Turk discusses about the UN2023. The Principles to Foster Peace Before, During, and After Water-related Disasters can be an important part of the effort. He calls for finalizing the principles as conceptual framework.

H.E. Mr. Nazarov Azimzhon, First Deputy Minister of Water Resources of the Republic of Uzbekistan

- Mr. Azimzhon discusses about water sector development concept of Uzbekistan from the period of 2020-2030. He explains about the two major rivers that are shared between central Asian countries. Transboundary water management is a key issue that they are focusing on. Water is mostly used for agriculture in Uzbekistan.
- Some of the challenges they are currently facing are changing of the climate, population growth, urbanization, and economic development.
- Priorities of the Uzbekistan's Ministry of Water in the water sector development:

- Digitalization process. They try to improve forecasting and accounting of water resources, the system of forming and ensuring transparency of database.
- Modernization development of water facility. A lot of investments are directed to improve the current facilities. 70% of their budget goes for electricity consumption, so they wish to reduce the consumption of electricity through the modernization process.
- Ensuring the safety and reliable operation of water reservoirs and other water facilities.
- Improvement of water resource management system. "Smart Water" technology
- Further expansion of the implementation of water-saving irrigation technologies in the cultivation of agricultural crops. Plan to save 10 billion m3 of water annually.
- Improving land reclamation and ensuring sustainability of irrigated lands, increasing land fertility, increasing effective technologies to reduce the level and prevent soil salinization.
- Implementation of market economy principles in the water sector.
- Implementation of public-private partnership and outsourcing in water sector.
- Implementation of integrated water resources management principles.
- Development of interstate relations on the use of transboundary water resources that balance the interests of Central Asian countries.
- Capacity building for personnel in water sector.
- Minister Azimzhon highlighted the issue on improving relationship with neighboring countries and cooperating on transboundary water issue. The main goal is to share common water resources to make sure that water is purpose for peace in Central Asia and economic source for people living in the country.
- For Uzbekistan and Central Asia, water, culture, and peace are very important.

Ms. Olga Algayerova, Executive Secretary, UNECE

- Ms. Algayerova showed how rivers such as Mekong and Amazon connect people through navigation and trade, bring drinking water, sustain our economies, and agriculture, and production. Therefore, cooperation on this resource is key. However, not enough countries work in transboundary water cooperation.
- Ms. Algayerova shows how significant gap remains. There are not enough operational arrangements between countries. We urgently need to accelerate progress on transboundary water cooperation if we want to achieve SDG6. This requires knowledge gap on ground water, developing legal and institutional framework, enhancing capacity, mobilizing political willingness to cooperate, and addressing finance.
- The Convention on the Protection and Use of Transboundary Watercourses and International Lake (Water Convention) hosted by UNECE has improved transboundary water cooperation. It provides legal and intergovernmental platform in UN by promoting transboundary agreement, exchange on experience, developing common policy responses, and strengthening of capacity. It addresses key challenges such as adaptation of climate change, DRR, water allocation in transboundary context, financing, developing agreement, and such.

The Youth Team on Water and Heritages

- The rise and fall of civilization is related to disasters, particularly in water area. There is positive correlation between good DRR and more stable governance. Knowledge from history of disasters and experiences on heritages will allow countries and people to better prepare for disaster in the future.
- The Youth Team established Water Heritages Project, a creation of databases which aims to focus water and disasters. The team aims to provide a tool to analyze and compare water and culture for establishment of peace. They have completed 140 out of 574 water heritage sites. The water heritage sites are taken from UNESCO's world heritage sites.

- In the databases, they are looking whether the site is related with water through history or religion as well as the disasters/hazards that impacted the heritage.
- The team introduced 8 heritage sites:
- Pont Du Gard in France
- o Hiraizumi, Japan
- Mammoth Cave National Park, US
- ° Historic City of Ayutthaya, Thailand
- Singapore Botanic Garden, Singapore
- The Classical Garden of Suzhou, China
- Dutch Water Defence Lines, Netherlands
- The Subak System in Bali, Indonesia
- Their plans in the future:
 - \circ Completion of database sheets in the world
 - Development of database analysis system
 - ° Creation of systematic comparison of human relations with water and disaster
- Aiming to help better identify innovative model for human interaction with disaster.

Dr. Jerome Deli Priscolli, USA

- Dr. Priscolli introduces about three North American cases.
 - Columbia River
 - Negotiating creation and use of benefits versus fighting over allocation of flow (integration of hydro and flood storage benefits)
 - Recognizing of sharing the benefit and operated by technical agencies
 - International Joint Commission
 - Primarily a conflict management for United States and Canada
 - The organization develops its own independent culture
 - International Boundary Water Commission
 - Began as an effort to reduce conflict between United States and Mexico
 - Expected to provide neutrality and expertise
- Transboundary resources can be seen as common pool resources. We should focus on optimizing water use vs zero sum water allocation. Establishment should be conducted before conflict arises.

Dr. Arie Setiadi Moerwanto, Advisor for Minister of Public Works and Housing, Indonesia

- Dr. Arie made a presentation about historical temporal and spatial water management which is considered as Sundanese and Javanese local wisdom. For example, Subak is a democratic irrigation system in Bali.
- Dr. Arie shows an ancestral system which accurately divides time period depending on the position of the sun. It shows dry period, transition wet-dry, wet period, and transition dry-wet.
- It is probable that there is correlation between ancestral naming of sky and modern name of sky configurations. The method to measure the position of certain stars is also very simple by using bamboo filled with water (to check whether it is appropriate time to plant rice).
- However, there are new challenges now faced by farmers due to climate change. There is also different trend on monsoon, ENSO, and DME due to global climate.
- There is new satellite that Indonesia uses to monitor ocean condition etc. It lengthened lead time and provide higher accuracy on weather hint-casting and forecasting.
- Constructed irrigation schemes somehow disrupt their basic principles of living in harmony with natures

although the irrigation scheme might bring better crops result. New technology may significantly help farmers to hinder them from failing cultivations, yet it should be harmonized with local wisdom.

Dr. Yumiko Yasuda, Senior network & Transboundary Water Cooperation Specialist

- Dr. Yasuda shared photos about Kumamoto and how shrine was built so that people will not fight over water. It shows how water cooperation can bring peace. Historical relationship, culture similarities, religion and emotion often play a key role on how water is shared among the country.
- Dr. Yasuda shares that it is very important to keep in mind that in transboundary water cooperation, in addition to substance, we should focus on history and relationship with neighboring countries. For water diplomacy, it is important to recognize culture, religion, water attitudes, etc.
- In GWP, they are fostering multistakeholder regional dialogues. Regional dialogue is important particularly in transboundary water issue. To make a starting point at regional level is vital. It also involves training and exchanges. It can take a very long time although the result may take a long time to appear. For example, it influences the establishment of Drin basic cooperation.
- Dr. Yasuda emphasized that understanding each other and building trusts is important for transboundary water cooperation. She also congratulates the launching of HELP Principles to Foster Peace Before, During, and After Water-related Disasters.

Mr. Koos Wieriks, Chair of IGRAC

- Mr. Wieriks presents the role of water in society. Water is the basic driver for development and cities flourish due to water. Early civilizations built canals, drinking water distribution networks, and other technologies to manage and control water. Some examples of water systems are Dujiangyan in China and Subak system in Bali, Indonesia.
- The Ducth apply very down to earth and practical approach. They established waterboards, a simple democratic system to manage the water. The system still exists as a fourth layer of government with their own tax system. The money is dedicated for water treatment and safety.
- Netherlands applied the Delta program after flood in 1953. They felt safe, yet the 1993-1995 floods hit Netherlands again. They applied different approach called "what if" and created a new concept of living with water, room for the river. This is the 2nd Delta program.
- The 2nd Delta Plan is a prevention program, forward looking (100 years). They also established Special Delta Law and 5 year Delta Program. They also have investment called Delta fund which cannot be touched for other purpose than water as well Delta commissioner (connecting all ministries)
- Mr. Wieriks explain that they are better prepared now in Netherlands, but there is the lack of real risk awareness of the inhabitants. Netherlands predict that in 2120, there will be sea level rise that will impact their lives.
- Mr. Wieriks emphasize the importance of raising awareness. Education is an instrument such as through water museum as well. Mr. Wieriks want to invite collaboration with the Youth Team in the session to see how to combine the water museum and the heritages.

Prof. Kenzo Hiroki, Professor of GRIPS/HELP Coordinator

• Prof. Hiroki distributed the Principles to Foster Peace Before, During, and After Water-related Disasters. The session also commemorates the launching of the Principles.

Answers to the questions from the three Integrated Sessions

1) Science and Technologies

Strategic action can take form of collaboration for early warning disaster system across governments and partners. This will be made possible through knowledge and data sharing which can be a vehicle for cooperation. In particular, data sharing is very important with regards to transboundary water sharing. Cooperation over science and technology can be a vehicle for cooperation and peace among countries.

It is important to harmonize ancestral knowledge and technology. For example, The Youth Team also shows various examples of ancestral knowledge on water system such as Subak system, Hiraizumi, and Classical Garden of Suzhou. This ancestral knowledge can provide a way to better identify innovative model for human interaction with disaster. Dr. Arie from Indonesia also shows how technology can better prepare their farmers with regards to climate change in addition to ancestral knowledge on when to plant rice. Uzbekistan Minister also shared how they plan to improve forecasting and accounting of water resources through digitalization as well as establish "Smart Water" technology which aims to improve the water resource management system.

2) Governance

For our key strategic priority, we need to really ensure and promote the importance of cooperation across border on transboundary water cooperation. In order to promote regional and transboundary cooperation, we need to hold regional dialogues at different levels including multi-stakeholders in the discussion. For example, Dr. Yasuda from GWP shows evidences how hosting regional dialogues can help to push for transboundary water cooperation. In order to achieve transboundary cooperation in water, peace and culture aspect, we should enhance mechanism for more regional cooperation and understand different stakeholders' perspective. Uzbekistan minister also highlighted the issue on improving relationship with neighboring countries and cooperating on transboundary water issue to ensure peace in Central Asia. In that sense, water can be a purpose for peace and economic source for people living in the country.

It is also important to raise awareness among leaders and update the national policy according to climate prediction. Mr. Wieriks shows constant improvement of Netherland's policy on water through Delta program to tackle flood in the country. The launching of Principles to Foster Peace Before, During, and After Water-related Disasters is also a key to raise awareness of leaders that cooperation over water can bring peace, asr raised by Dr. Han and Dr. Bamsey. Data presented by Dr. Priscolli also shows various cases on transboundary water cooperation in North America which can serve as a model. Prof. Turk also gave example of transboundary water cooperation as instrument of peace with Ukraine and Sahel as study cases.

3) Finance

The key message of the session is the necessity of financial commitment from government and partner to really commit and ensure good practices from history, i.e. practices for water and security and across the border cooperation. Some examples raised in the session are Uzbekistan's investment for modernization development of water facility and Netherland's commitment of Delta program.

One of the challenges of of existing financing mechanism is to address cooperation over shared water. Trust funds often require government endorsement letters from all riparian countries before joint projects on transboundary waters can be started, but there is often a need to facilitate the cooperation before countries can come together to submit a joint project. Therefore, there might be a need for facilitation through GWP or UNECE as shared by Dr. Yasuda and Ms. Algayerova, respectively. Ms. Algayerova from UNECE also showed how the Convention on the

Protection and Use of Transboundary Watercourses and International Lake (Water Convention) provides legal and intergovernmental platform in UN by promoting transboundary agreement, exchange on experience, developing common policy responses, and strengthening of capacity.

Showcase actions

- · Country implemented: Indonesia, Netherlands, Uzbekistan, United States
- The Overview (please write shortly):

Indonesia showscases the attempt to harmonize ancestral knowledge and technology through Subak system and local wisdom for farming. Netherlands provides an example of living with water through Delta program. Uzbekistan shows efforts for transboundary water cooperation in Central Asia. United States show various transboundary water treaties made in North America.

· Referable URL:



From presentation of H.E. Mr. Nazarov Azimzhon, First Deputy Minister of Water Resources of the Republic of Uzbekistan

Conclusions

- Transboundary Resources can be seen as common pool resources
- Benefit Sharing realized through cooperation
- Focus best on resulting benefits (Type 1-4) not water volume/flows
- Discovering how to manage the nexus of sovereignty only and natural vs. common pool
- Focus on optimizing water use vs. zero sum water allocation
- Takes time 10 years ++ to reach some basic consensus
- Some forms of joint organization is necessary to ensure benefit sharing plans work
- Process tools and assisted negotiation tools are important
- Some Conditions:
 - -Willingness and incentives to cooperate
 - -Cooperation can generate incremental benefits
 - -Sharing process is fair and equitable -esp. local impact vs. long distance benefits
 - -Open and transparent rules of behavior -Foster norms of collaboration

 - -Creating trusted technical capacity
 - -Establish means for resolving disputes



Parallel Session 9 Sound Water Cycle including Groundwater

Session title

Maintaining or recovering a sound water cycle toward quality-oriented society

Key message from the session

In order to maintain or recover a sound water cycle including groundwater, it is important for various stakeholders to share the goal of "maintaining or recovering a sound water cycle" and to coordinate individual measures in each area related to the water cycle based on the knowledge obtained from science and technology.

Session overview

The available water resources are part of a continuous "water cycle", and maintaining "a sound water cycle" is extremely important for developing a "quality society" that is sustainable, inclusive and resilient.

It is important for various stakeholders to share the goal of "maintaining or recovering a sound water cycle" and to coordinate individual measures in each area related to the water cycle based on the knowledge obtained from science and technology, which is the basic goal of developing "quality infrastructure".

The session shares knowledge on governance, finance, science and technology to maintain or recover a sound water cycle including groundwater, and makes recommendations for concrete actions toward quality-oriented society that should be taken by countries in the Asia-Pacific region in the future.

Session agenda

1. Opening Remark

Prof. OGAWA Hisao, President of Kumamoto University

2. Session

Presentation

Dr. ISHIDA Kei, Associate Professor, Water Resource Research Laboratory, Center for Water Cycle, Marine Environment, and Disaster Management, Kumamoto University

Dr. Neno Kukurić, Co-coordinator the UN-Task Force World Water Day 2022, IGRAC

Dr. Hans Dencker Thulstrup, Senior Programme Specialist for Water and Environmental Sciences, UNESCO Regional Science Bureau for Asia and the Pacific

Ms. MITSUHASHI Sayuri, Secretary General, Secretariat of the Headquarters for Water Cycle Policy, Cabinet Secretariat, Japan

Mr. KATSUYA Kimio, Chief of Secretariat, Kumamoto Groundwater Foundation)

Ms. Megan McLeod, Program Director, Water Stewardship Asia Pacific

Q&A

Commentator Prof. TAKARA Kaoru, Secretary General of Asia Pacific Association of Hydrology and Water Resources

Moderator Prof. KAWAGOSHI Yasunori

3. Wrap-up

Commentator Prof. TAKARA Kaoru Moderator Prof. KAWAGOSHI Yasunori

4. Closing Remark

Mr. NAKAYAMA Norihiro, State Minister of Land, Infrastructure, Transport and Tourism

Key discussion points (including each presenter/panelist's discussion points)

- To realize resilient and sustainable water management under a changing climate, it is important to develop a reliable integrated water cycle model and to promote academia-industry-government collaboration.
- Keep fostering international cooperation: climate change and human impact on groundwater resources do not stop at administrative borders.
- As the pressure on groundwater increases, global information and knowledge sharing are crucial for tackling serious pollution and depletion problems worldwide.
- In order to maintain or recover a sound water cycle, effective water cycle management at basin levels in which all stakeholders work together with the same vision and according to their respective roles is essential.
- It is important to set up objective indicators and maintain relevant data in order to properly identify the current situation for evidence-based decision-making and planning.
- Small Hydroelectric Power contributes globally as a mitigation measure to mitigate climate change, and also contributes locally to the sustainable development in rural areas.

It is effective to incentivize credible water stewardship to attract and mobilise private investment in water.

Answers to the questions from the three Integrated Sessions

1) Science and Technologies

In order for the related parties to work together to promote water cycle policies, it is necessary to accurately understand the current situation and issues related to Water Cycle in the area centered on the target basin, qualitatively and quantitatively evaluate the results of the efforts, and use the evaluation to improve the efforts. The scientific knowledge should be "disclosed", "shared", and "understood" with all related stakeholders, and the above evaluations should be based on scientific evidence.

As for climate change, it is required not only to assess impacts and establish adaptation strategies, but also to implement mitigation strategies and thereby achieve carbon "Net-Zero". Therefore, it is expected to develop science and technology related to the development of renewable energy that effectively utilizes water, such as hydropower, while maintaining and recovering a sound water cycle, including groundwater.

2) Governance

In order to promote multi-sectoral cooperation on water, it is necessary to establish legal systems at the national and local levels and to promote the approach of basin management, in which relevant parties create plans and implement measures with appropriate division of roles on a basin basis.

It is effective to promote the establishment of a platform where governments, private companies, local residents, educational/research institutions and other relevant parties in each basin can share issues and goals related to the water cycle, formulate plans to achieve the goals, and promote efforts based on the plans in each country.

In order to increase the effectiveness of the implementation of the efforts, it is necessary to establish support systems and develop human resources in cooperation with governments and educational/research institutions. In addition, participations of local residents, businesses, and organizations are also important.

3) Finance

In order to systematically secure and allocate funds, a plan that clarifies the goals related to the water cycle, specific efforts to achieve the goals, and the schedule and division of roles on a basin should be prepared for each basin led by a River Basin Oganization (RBO) or river administrator in the case of river basins, or a local government or other public entity in the case of groundwater basins. Then, the budget necessary to implement the plan should be secured with accountability to taxpayers.

The funds must be used effectively and efficiently with the agreement and cooperation of relevant parties, based on an objective analysis of the status of the water cycle using science and technology. It is also desirable for governments to make efforts to secure public funding as the budget and to consider the establishment of a system that utilizes funds of the private sector beneficiary pays principle.

It is also desirable for governments to make efforts to secure public funding as the budget and to consider the establishment of a system that utilizes funds of the private sector beneficiary pays principle.

Showcase actions

- Country implemented: Australia, Indonesia, Japan, East and Southeast Asia
- The Overview (please write shortly): These countries can showcase academia-industry-government collaboration, international cooperation, global information and knowledge sharing, effective water cycle management at basin levels, objective indicators, Small Hydroelectric Power, and water stewardship.
- Referable URL: https://www.cas.go.jp/jp/seisaku/mizu_junkan/index.html, https://kumamotogwf.or.jp/english.html, https://www.un-igrac.org/, https://waterstewardship.org.au/, http://geftwap.org/, https://www.unesco.org/reports/wwdr/2022/en



Session



Participants

Collection of Showcase and Roadmap

4th APWS/APWF Secretariat published the collection of showcase and Roadmap in the 4th APWS. This document gathers case studies from Asia-Pacific countries. Countries and partner organizations of the 4th APWS introduced projects and hard and soft infrastructure to contribute to quality growth in Asia and the Pacific, which is replicable elsewhere in the region. Initiatives were described with graphics, tables, and figures. For each action, the country, a project title, and an overview of the project are provided, along with the major sources of financing. For each project, the contribution to quality growth is analyzed in terms of sustainability, resilience, and inclusiveness. Countries and partner organizations also share the points to be proud of projects in terms of governance (participation from multi-stakeholders, transparency, openness, inclusiveness, etc.), investment (life cycle cost, operation & maintenance cost, debt sustainability, investment without business delay, etc.), and science and technology.

The document also collects roadmaps from each organization. They include plans to promote quality growth. The concerned organizations are involved in the nine parallel thematic sessions and other national/international organizations. Each government and international organization voluntarily provided the case studies.

This document is the result of the collective effort of the participants in the 4th APWS. The organizations involved in the nine parallel thematic sessions were asked to collect the cases during the preparation process of the parallel thematic sessions. In addition to the cases that will be introduced in the parallel thematic sessions, cases that could not be introduced in the parallel thematic sessions are also included. Countries and international organizations submitted case studies between December 2021 and March 2022.

The document is posted on the website of the 4th APWS. https://www.waterforum.jp/pdf/other/4APWS_Showcases_Roadmaps.pdf

List of showcases

End-to-End Efforts for Shifting onto a Sustainable and Resilient Path under Climate Change by All

- Japan/MLIT: National census on river nature environment, of over 30 years to contribute to climate change adaptation
- · Indonesia: Driven action together for water security and climate resilience
- UN HABITAT: Enhancing the climate and disaster resilience of the most vulnerable rural and emerging urban human settlements (Lao PDR)
- UN HABITAT: Encouraging Climate Adaptation and Mitigation Investments through Private Sector Engagement in Decentralized Wastewater Treatment Systems (DEWATS) and Small-scale Water Supply Infrastructure (Lao PDR)
- · ADB: La Trinidad (Benguet) Flood Mitigation Project (Philippines)
- · GWP: Sponge city construction promotes high-quality urban development (PR China)
- GWP: Local Community organization for small reservoir safety management (Vietnam)
- IWMI: Based Flood Insurance (India, Bangladesh and Sri Lanka)

Sustainable Water Management in Agriculture for Asian Region

- · Japan/JICA: Capacity Enhancement for Sustainable Agriculture and Irrigation Development in Mizoram (India)
- · Japan/JICA: Participatory Irrigated Agriculture Development Project in Southern Areas along the Mekong (Lao

PDR)

- · Japan/JICA: Participatory Agriculture Development in Savannakhet Province (Lao PDR)
- · Japan/JICA: Promotion of Irrigated Agriculture in Terai Plain (Nepal)
- FAO: Sri Lanka-Zambia Rice
- ADB: Ningxia Integrated Ecosystem and Agriculture Development Project (PR China)
- · GWP: National Strategy on Water Management and Development of Irrigation 2021- 2023 (Uzbekistan)

Achieving universal and equitable access to safe and affordable drinking water for all

- Japan/JICA: Sustainable Management of Water Utility through Services Improvement with Okinawa Water Bureaus (Samoa)
- UN HABITAT: Access to safely managed Sanitation and Behavior Change (Nepal)
- · ADB: Karanataka Model for Sustainable Urban Water Service Delivery (India)
- ADB: Janiuay Community-Managed Water Supply System (Philippines)

Toward the realization of appropriate wastewater management to contribute to sustainable Development

- · Japan/ MLIT-MOE-JSC: Efforts for efficient wastewater treatment under a legal framework
- · GWP: Community Participation in Domestic Gray Water Treatment Using Con- structed Wetland (Indonesia)

Water and environment from source to sea: Multi-level governance for sustainable natural and social environment

- · Japan/MLIT: Lake Biwa Comprehensive Conservation Initiatives in Shiga, Japan
- · Japan/MLIT: Nature-oriented River Works
- UN HABITAT: Waste Wise Cities: Tackling Plastic waste in Environment (India)
- · ADB: Wuhan Urban Environmental Improvement Project (PR China)
- GWP: Innovative Policy for Water Conservation in Yangtze River Basin: River Chief System (PR China)
- · SIWI: Foundations for source-to-sea management: Vu Gia-Thu Bon case study (Vietnam)

Science and policy collaboration to advance on gender equality and reduce poverty related to water sector

 Australia: Water for Women Fund: Gender in WASH - Impact Assessment (Cambodia and Nepal) GWP: Promoting Women Social Entrepreneurship through Water ATMs in low income communities for safe water access (India)

Maintaining or recovering a sound water cycle to develop a quality society

- Japan/MLIT: Multi-layered and tri-purpose river administration of water-related dis- aster prevention, proper water utilization and environment conservation
- · Sri Lanka: Association between socioeconomic features and risk of flood damage: a local-scale case study

Integration Sessions

Integration Session 1 Science & Technology

Session title

Integration Session: Science and Technology

Session overview

To transform into quality-oriented societies, the Kumamoto Declaration states "We call upon the science and technology community to provide context-specific innovations for resolving water problems, while respecting the natural environment, geographical features, and historical backgrounds of the local community. Additionally, we emphasize the importance of promoting education and capacity building for a new generation of water professionals to ensure, maintain, and improve a sound water cycle".

The leaders of the participating countries in the 4th APWS asked the Summit participants to identify barriers, breakthroughs, opportunities, and ways forward for reform and improvement. In particular, they requested the science and technology community to explore what role science and technology should play in cross-sectoral decision-making by leaders.

This session responded to questions and requirements from the leaders based on the discussions made by the nine theme sessions and the special session, "Showcase".

Session agenda

Date and Time: 14:00-16:30JST, Sunday 24, April

1. Opening:

Dr. Shamila Nair-Bedouelle, Assistant Director-General for Natural Sciences, United Nations Educatioal, Scientific and Clultural Organization (UNESCO) on-line

2. Key Notes:

- 1) Mr. Garvey McIntosh, National Aeronautics and Space Administration (NASA) Asia Representative, U.S. Embassy, Tokyo, in place of H.E. Mr. Rahm Emanuel, Ambassador, U.S.A
- 2) Dr. Michio Kawamiya, Director, Japan Agency for Marine-Earth Science and Technology (JAMSTEC)
- 3) Dr. Johannes Cullmann, Director, World Meteorological Organization (WMO) on-line
- 4) Dr. Shahbaz Khan, Director, UNESCO Cluster Office in Beijing on-line
- 5) Mr. Tomoo Inoue, Director General, Water and Disaster Management Bureau, Ministry of Land, Infrastructure, Transport and Tourism (MLIT)

3. Panel Discussion:

Moderator: Dr. Toshio Koike, ICHARM

4. Closing:

Mr. Takahiro Hayashi, Deputy Director-General, Research and Development Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT), Government of Japan

Key discussion points of each presenter and panelist

The session started with the opening speech by Dr. Shamila Nair-Bedouelle, the assistant director-general for Natural Sciences of the United Nations Educational, Scientific and Cultural Organization (UNESCO), stating that connecting science and society and promoting open science, which offers people access to scientific knowledge, will speed up the solution of problems.

Subsequently, five presentations were delivered as keynote speeches. The first one was by Mr. Garvey McIntosh, the NASA Asia representative from the U.S. Embassy in Tokyo, in place of H.E. Mr. Rahm Emanuel, the U.S. ambassador to Japan. He began his speech by showing the video message from the ambassador, who addressed the challenges posed by climate change. Then, Mr. McIntosh emphasized the importance of cooperation in solving water problems. Dr. Michio Kawamiya, the director of the Japan Agency for Marine-Earth Science and Technology (JAMSTEC), followed and explained a climate change prediction model while expressing his hopes to contribute to decision-making processes with scientific knowledge. Dr. Johannes Cullmann, the director of the World Meteorological Organization (WMO), spoke about the significance of integrating science and technology and the Earth Observing System and providing services such as early flood or drought warning information in order to effectively respond to climate change. Mr. Shahbaz Khan, the director of the UNESCO Cluster Office in Beijing, pointed out that water security requires the abilities and knowledge of local individuals and organizations and stressed that indigenous knowledge is valuable and should be integrated with science and technology to help solve issues. The last presentation was made by Mr. Tomoo Inoue, the director-general of the Water and Disaster Management Bureau, the Ministry of Land, Infrastructure, Transport and Tourism (MLIT). He explained Japan's efforts from an administrative standpoint, including the revision of flood control plans to cope with climate change impacts and the introduction of more effective operations for existing dams. He also mentioned the importance of science and technology-based decision-making and human resource development.

After all discussions, the session concluded that it is important to develop water-cycle consilience by accelerating the open science policy with a special focus on observation, modeling, and data integration to foster "facilitators" and build cooperation among various fields and sectors by taking an end-to-end approach.

The session ended with closing remarks by Mr. Takahiro Hayashi, the deputy director-general of the Research and Development Bureau, the Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan.

Key messages

This session adopted the following three key messages as its conclusion:

- Promote water cycle consilience by accelerating the Open Science policy, particularly focusing on observation, modeling and data integration.
- Foster "Facilitators", that is, catalytic beings who can lead the way toward resolving problems by providing professional advice on site using a broad range of scientific and indigenous knowledge.
- · Work together beyond disciplines and sectors among different levels while taking an end-to-end approach.



Integration Session 2 Governance

Session title

Advancing water governance for optimal stakeholder collaboration across sectors and generations to achieve a water secure Asia-Pacific region by 2030.

Session overview

Water management including water-related disaster risk management and governance of water services is a challenge that requires the involvement of various stakeholders at multiple levels, from public, private and NGO sectors at all stages of decision-making, policy-planning, and collective action. Water-related policies are complex, as they are strongly associated with vital spheres such as health, environment, agriculture, energy, planning, regional development, and poverty eradication. Water governance emphasizes the need for cross-sectoral and multi-level coordination and for a holistic framework to ensure that water is managed holistically. Integrated Water Resources Management (IWRM), enshrined in the SDGs, is not only a means to monitor water governance at global, regional, country, and river basin scales but also a process which can provide the framework to advance water security.

The session explored the challenges faced in water governance referring to key water governance processes including Asian Water Development Outlook 2020 and SDGs; integrated perspectives from the nine parallel thematic sessions; and deepened discussions for improving water governance in accordance with the four IWRM dimensions - Enabling Environment, Institutions and Participation, Management Instruments, Financing - leading to the formulation of recommendations to advance water governance for optimal stakeholder collaboration across sectors and generations to achieve a water secure Asia-Pacific by 2030.

The session covered a wide range of topics to advance water governance: at the national and local level through the establishment of coherent laws, policies and plans that include climate change, environmental aspects and water related disasters are key to achieving policy coherence: regional water organisations can support riparian countries by enhancing technical knowledge, building communities and to exercise water diplomacy to reduce conflicts at the transboundary level; transparent data and information sharing by all relevant stakeholders can realise evidence based water management, policy and decision making; integrity and good governance ensure that funds are used efficiently and sustainably; and multi-disciplinary and multi-stakeholder approaches, dialogues and peer-to-peer exchanges at all levels are critical to advancing water governance in the Asia-Pacific and achieving IWRM.

Session agenda

The session was held on Sunday, 24 April, 14:00-15:30 (Japan Time, UTC 5:00-6:30), with Face-to-face and online (in a hybrid format).

Time	Activity
	Introduction by MC of the session: Ms. Sayuri Mitsuhashi, Director-General, Water Resources Dept.,
	MLIT, Japan.

10 minOpening Remark: Efforts in Japan for strengthening of water governanceSpeaker: Mr. Norihiro Nakayama, State Minister of Land Infrastructure, Transport and Tourism, Japan

20 min Keynote speech and setting the scene: Advancing water governance through Integrated Water

Resources Management as a cornerstone to achieving the water-related SDGs by 2030. Speaker: Mr. Howard Bamsey, Chair of GWP

45 min <u>Panel discussion:</u> Call-for-actions to accelerate the achievement of water governance across all sectors in reaching sustainable development.

Moderator: Dr. Yumiko Yasuda, Senior transboundary specialist, Global Water Partnership Panelist:

- Dr. Dinara Ziganshina, Director in Charge of Scientific-Information Center of the Interstate Commission for Water Coordination of Central Asia (SIC ICWC)
- Ms. Bibi Zarina Che Omar. Deputy Director General, Department of Irrigation and Drainage (DID) of Malaysia.
- Dr. Amgad Elmahdi, Water Sector Lead- Green Climate Fund (GCF)
- Mr. Fany Wedahuditama, Regional Coordinator, Global Water Partnership Southeast Asia
- Dr. Shinjiro Kanae, Professor of Tokyo Institute of Technology
- Prof Santosh Kumar, Head of Division, National Institute of Disaster Management, Ministry of Home Affairs, Government of India

10 min <u>Summary and Recommendations:</u> High level and concrete actions for advancing Water Governance in Asia-Pacific.

Presenter: Mr. Mark Pascoe, Chair of Governing Council of APWF

5 min <u>Closing Remark</u>, Mr. Seiichi Onodera, Senior Vice President, Japan International Cooperation Agency (JICA)

Key discussion points of each presenter and panelist

Introduction and Opening Remarks



Keynote Speech



Sayuri Mitsuhashi, Director-General, Water Resources Department, MLIT, introduced and moderated the session.

Norihiro Nakayama, State Minister of Land, Infrastructure, Transport and Tourism, Japan touched on Efforts in Japan for strengthening water governance, highlighting the importance of integrated river basin management with 61 local government authorities putting in place river basin water cycle plans.

Howard Bamsey, Chair of the Global Water Partnership (GWP), keynote address focused on the topic of advancing water governance through Integrated Water Resources Management (IWRM) as a cornerstone to achieving the water related SDGs by 2030 which now constitutes an urgent call to action for all relevant stakeholders at all levels as the water crisis is a governance crisis and thus addressing effective water governance should therefore be one of the highest priorities in Asia and the Pacific. The keynote address emphasised the need to:

reverse the lag for climate action in the region, to bring together marine and freshwater policy communities to accelerate conservation of marine and coastal areas; and that good governance can unlock finance, with good governance, being critical to achieving the water-related SDG targets. The keynote address further characterised the water crisis as stemming from poor management which can only be resolved through strong governance that takes a 'systems approach' and applies IWRM to improve governance. By having strong water governance doors can open with countries and companies that have strong climate resilience plans are finding it easier to get finance.
Panel Discussion



Yumiko Yasuda, Senior Network and Transboundary Water Cooperation Specialist, GWP, moderated the panel discussion.

Dinara Ziganshina, Acting Director, Scientific Information Center, Interstate Commission for Water Coordination in Central Asia, stated that regional agreements provide the best venue for political and legal commitments, and that river basin commissions can adopt routines that put such commitments into practice.

Bibi Zarina Che Omar, Deputy Director-General, Department of Irrigation and Drainage, Malaysia, explained that under Malaysia's federated system, water resources come under province-level (state) governments and management is guided by its 2012 national water resources policy, the 12th Malaysia Plan, and various statutory instruments, citing IWRM as key to achieving coherence between water sectors.

Amgad Elmahdi, Water Sector Lead, Green Climate Fund, announced a new water security guide that will communicate the GCF's approach to water sector transformation through greenhouse gas reduction, and climate adaptation through IWRM. The link between governance and finance was reiterated pointing out that integrity and good governance in climate change projects is a cornerstone to successful projects use of funds for designated purposes and enabling adaptation. In response, we are using our resources to drive a paradigm shift based on a four-pronged/pillars approach: Transformational planning and programming; Catalysing climate innovation; Mobilising finance at scale ; and Coalitions and knowledge to scale up success.

There is a building momentum to scale up global climate response. To translate this momentum into action will require significantly greater investments, investments in a different set of inclusive assets that address water security and provides sector-based or economy wide co-benefits to direct and indirect beneficiaries, e.g., job creation, health benefits, improved resilience. Therefore, there is a need for paradigm shift in the way the water asset is defined, developed, and financed. It is increasingly important to treat water as an new asset class, particularly as nations around the world (development countries) are set to experience an *anticipated 40% shortfall in water by 2030* due to climate change, economic recovery and growth, population growth and resource competition. Investment in water could be one of the ways of tackling this deficit through treating water as a new asset class. The creation of a new asset class through the development of a blended finance and an effective 'take-it-to-market' approach would ensure: De-risk water security investments; Scale-up blended finance into water security interventions; and Increase collaboration with financial partners.

Fany Wedahuditama, Regional Coordinator, GWP Southeast Asia, noted that institutions need to create engagement mechanisms. He highlighted GWP Southeast Asia's Integrated Water Security Open Program, which is mapping action on the ground to be able to present opportunities for connections among different actors.

Shinjiro Kanae, Professor, Tokyo Institute of Technology, stressed the importance of regular dialogue mechanism, transparent data and information sharing, and for evidence-based, science-based water management. The need for scientific evidence which aims for carbon neutrality was also emphasized.

Santosh Kumar, Head of Division, National Institute for Disaster Management, India, stressed the important role of local government authorities and called for addressing gender discrimination, including through action to bring more women into public policymaking.

Summary and Recommendations

Mark Pascoe, incoming APWF Governing Council Chair, presented a list of concrete actions arising from the discussions and highlighted the need for presenting case studies and best practices. He proposed using social

media to quickly share "what works" and what does not. With only 8 years left to achieve the SDGs, now is the time to take this path, with the need for governments to commit to policy decisions and water governance frameworks that support the acceleration of actions towards resilient, inclusive, and sustainable societies in the Asia and the Pacific, with an emphasis on a green recovery from COVID-19 and quality growth in addressing water-related issues.



Closing Remarks



In closing, Seiichi Onodera, JICA, thanked all participants and emphasized that no common framework exists for water governance, which should now be developed, allowing for the specific characteristics of each country in the Asia-Pacific.

Key messages

Overall, the session encouraged the many water-related institutions and civil society organizations to undertake efficient and acceleration action and to collaborate across sectors and generations, including youth, women and vulnerable groups and improve coherency of policy-regulatory, institutional arrangement and financial framework across sectors at basin, national and transboundary levels, by incorporating the Sendai Framework, good governance, IWRM and source-to-sea principles as a pathway towards achieving the water related SDGs and a water secure Asia-Pacific region by 2030. The session concluded that building on from the Yangon Declaration, transformation in water governance towards a resilient, sustainable and inclusive society in the Asia-Pacific is needed now, as a business-as-usual approach will not get us there.

The outcome of the session was the formulation of **eight high-level recommendations** and nineteen concrete actions for advancing water governance in Asia and the Pacific which drew from the nine parallel thematic sessions. The high-level recommendations apply at all governance levels (regional, transboundary, national, basin, aquifer); across all geographical scales from source-to-sea (mountains through to our coast and small islands), across all water sectors (environment, disaster, peace, WASH, water for economy and development); and inclusive of all people:

- 1. Increase policy coherence, develop, or accelerate the passing and full implementation of critical laws, regulations, policies, and standards across water-related sectors at the regional, transboundary, and national levels, taking into account source-to-sea and Integrated Water Resources Management (IWRM) approach, to restore a sound water cycle and achieve SDGs.
- 2. Strengthen regional legal frameworks, transboundary information sharing; hold inclusive regional dialogues; and upgrade existing transboundary water management arrangements between state authorities, where they are lacking, to enhance transboundary cooperation.
- 3. Establish coherent, inclusive (special attention to youth, women, vulnerable and marginalized groups) and gender-transformative institutional arrangements and coordination across all water sectors and jurisdictions; and ensure capacity development of all water actors.

- 4. Ensure that investment and management of water related infrastructure and technologies are designed to be multi-purpose based on the appropriate science and technologies, environmentally friendly and inclusive of all stakeholders (Quality Infrastructure led by Japan).
- 5. Address capacity and data gaps by consolidating data and promoting robust, transparent, inter-operable platforms and mechanisms for data capture, and information sharing, involving multi-stakeholders at all levels to participate in evidence-based planning, decision-making and monitoring process; and develop mechanism to map actors who are contributing to water security, including SDGs, APWS declaration and to enable action alignment on the ground. (Integrated Water Security Open Program to be piloted in Southeast Asia).
- 6. Develop and promote the use of instruments which are accessible to all stakeholders that can help to identify water risks which describe the hydro-meteorological and geographical features of regions in Asia-Pacific which are strongly impacted by climate change and use them for water management decision making to advance Asian water governance.
- 7. Encourage cost sharing and pooled resources to support Water Security actions at all levels through regional collaboration, intergenerational and inclusive for all.
- 8. Mainstream integrity and transparency practices across water organizations including water utilities to unlock access to funding through innovative financial frameworks that are supportive of multiple funding sources from different sectors and levels, being channeled towards the common good for efficient and effective implementation.

Integration Session 3 Finance

Session title

Integration Session on Finance

Maximizing Investment and Financing for Water Security in the Post COVID-19

Session overview

Water is essential for sustaining human life, human security, the environment, and the economy and is at the core of sustainable development. However, progress on internationally agreed goals and targets such as SDG6, SDG13, and the Sendai framework has been lagging even before the outbreak of the COVID-19.

Lack of funds is a key cause of the delay. According to the World Bank, it is estimated that achieving SDG 6.1 (universal and equitable access to safe and affordable drinking water) and SDG 6.2 (adequate and equitable access to sewage and sanitation facilities) will require US\$114 billion per year. There is also a significant investment gap in sustainable water resources management, which cannot even be estimated. Regarding disaster risk reduction (DRR), only about 4% of humanitarian assistance is used for the implementation of proactive DRR measures, while most of the budgets are used to react to events.

This session explored how we could maximize investment to address water security and disaster risk reduction in i) government sectors, ii) private sector. It also discussed how to efficiently combine i) and ii) by integrating the inputs from thematic sessions and good practices in water resource management and services delivery and disaster risk reduction and management in the Asia Pacific region.

Session agenda

Moderator: Akihiro Shimasaki, Director for International Coordination of River Engineering, Water and Disaster Management Bureau, Ministry of Land, Infrastructure, Transport, and Tourism (MLIT), Japan

1. Introduction by Moderator

2. Keynote speeches

- Ms. Neeta Pokhrel, ADB chief of the water sector group
- Prof. Kimio TAKEYA, Distinguished Technical Advisor on Disaster Risk Reduction, Japan International Cooperation Agency (JICA) / Visiting Professor, International Research Institute of Disaster Science, IRIDeS Tohoku University

3. High-Level Statement

· Hon. Roger G. Mercado, Acting Secretary of Department of Public Works and Highways, Philippines

4. Panel Discussions

- 4.1 Summary of inputs of thematic sessions: Moderator
- 4.2 Presentations by panelists: 5-7 min each
 - Ms. Patricia Lopez, Senior Water Specialist, World Bank
 - Dr. Xavier Leflaive, Principal Administrator, Resilience, Adaptation and Water team, Environment Directorate, OECD
 - Mr. Christopher A. Ilagan, Steering Committee member of Global Water Partnership/ Chair, GWP Philippines

4.3 Discussion and Q&A

5. Summary of the session and closing remark

 Prof. Kimio TAKEYA, Distinguished Technical Advisor on Disaster Risk Reduction, Japan International Cooperation Agency (JICA) / Visiting Professor, International Research Institute of Disaster Science, IRIDeS Tohoku University

Key discussion points of each presenter and panelist

Neeta Pokhrel, Chief, Water Sector Group, ADB, outlined approaches to mobilizing finance including: making effective and efficient use of available resources; mobilizing local resources through taxes and tariff reforms; and using innovative financing to blend public and private finance.

Takeya Kimio, DRR Advisor, JICA, urged addressing water related DRR as a development issue, stating predisaster prevention investment is essential as it can lead to less economic loss which simultaneously can reduce mortality inclusively align to SDGs. EW can reduce mortality but still remain as a humanitarian issue because it can not reduce economic loss and protect the fundamental condition of society.

Roger G. Mercado, Acting Secretary, Department of Public Works and Highways, the PHILIPPINES, provided an overview of disasters, saying the Government of the Philippines is working to mitigate them. He outlined infrastructure projects that have been initiated in this regard.

Akihiro Shimasaki, Director for International Coordination of River Engineering, Water and Disaster Management Bureau, MLIT, summarized the inputs to the session saying it integrates the nine thematic sessions.

Patricia Lopez, Senior Infrastructure Finance Specialist, World Bank, noted most developing countries' water sectors have been financed through concessionary finance, as accessing finance from the private sector is difficult due to low-cost recovery. She encouraged enabling environments conducive to accessing private sector financing.

Xavier Leflaive, Principal Administrator (Water), OECD, outlined four pillars for financing in the water sector: make the best use of available assets and financial resources; avoid building future liabilities; improve tools to plan and decide on investments and financing mechanisms; and harness additional sources of finance by setting up the appropriate enabling environment.

Christopher Ilagan, Steering Committee member of GWP/ Chair, GWP Philippines, said public finance has a role in achieving water security but is often insufficient, especially during this time of high public sector debt. Private sector financing should play a role to bridge this gap and tapping into this finance source should include (1) public-private partnerships in infrastructure, (2) riding the ESG wave and (3) shifting the water security narrative from a largely climate change adaptation play to one that incorporates the mitigation lens as well. Finally, IWRM remains a core approach in maximizing investment and finance for water security by ensuring an inclusive, coordinated and equitable development and management of scarce water resources.

During closing remarks, **Takeya Kimio** emphasized the role of political leadership for sufficient progress to be made.

Key messages

Recommendations for Maximizing Investment and Financing for Water Security in the Post COVID-19

The nine (9) thematic sessions identified the following challenges which may increase investment needs or hinder the promotion of investment in the water sector:

- (i) Increasing climate change impacts;
- (ii) Lack of comprehensive assessments considering physical risks and regional needs and characteristics in terms of the environment, economy, society, culture, and history;
- (iii) Weak positioning in policy;
- (iv) Lack of awareness of leaders, politicians, stakeholders, and citizens;
- (v) Capacity to effectively manage funds, and maintain the financial integrity in implementing bodies. etc.

Through the integration session, the recommendations for maximizing investment in the water sector from 9 thematic sessions are summarized as follows:

- (i) Promote more investment for water sectors, especially to urgently tackle climate change impacts
- (ii) Recognize that ex-ante water-related disaster risk reduction investment is a basis to achieve SDGs and national development in Asia Pacific Region, and each state needs to urgently plan and implement inclusive DRR investment to full fill the primary responsibility
- (iii) Implement measures combining multiple technologies for different purposes such as early warning and forecasting systems, spatial planning, and water-related disaster risk reduction
- (iv) Recognize risks or needs with scientific evidence, e.g. physical risks attributed to climate change have been recognized by Task Force on Climate-related Financial Disclosures (TCFD) and stated in the International Financial Reporting Standards (IFRS)
- (v) Utilize mechanisms for increasing public-private partnerships (PPP) in the water sector
- (vi) Focus on sound management of water utilities
- (vii) Build strong financial integrity and fiduciary measures
- (viii) Develop a medium- and long-term plan that integrates policy goals and finances
- (ix) Use funds effectively and efficiently with the agreement and cooperation of stakeholders, based on an objective analysis of the status of the water cycle, and using science and technology, e.g. "Winter Paddy Field Inundation Project" of Kumamoto Groundwater Foundation (KGF)
- (x) Develop data platforms to promote (synthesis analysis for) evidence-based policymaking to monitor progress on specific issues such as gender, environment, youth involvement, etc.

Proposed Actions

The integration session on finance proposed the following immediate actions to enable the above recommendations.

(1) Make the water sector, including water-related disasters, a priority issue for each country and substantially increase the allocation of funds

- The shift from ex-post response to ex-ante measures
- The best mix of structural and non-structural measures, considering the effects of blue-green infrastructure that utilizes natural functions in addition to structural measures.
- · Infrastructure that prevents water threats, stores, conserves, distributes, and returns water to nature
- Recommend other development sectors to take into account water sector goals and targets in their implementation of plans
- · Consideration of new financing mechanisms, such as the introduction of private financing

(2) Data collection and system development for medium- and long-term planning

- · Collection and accumulation of accurate data necessary for planning
- · Collection and accumulation of disaster data to enable to evaluate of the effects of measures
- · Evaluation of the status of achievement of SDGs and other goals in each field

(3) System development and human resources development for efficient use of funds

- Ensure integrity and develop human resources in public institutions, etc.
- Provide incentives for the participation of diverse actors by institutional reforms such as legal amendments and establishment of budgetary systems, if necessary
- Investment in education and capacity building of people to enable community-based disaster reduction activities.

(4) Secure funding for science and technology and knowledge information systems to promote innovation

(5) International academic organizations, United Nations/international organizations, international aid agencies, etc., support the activities in (1) to (4).



High-Level Statement by Hon. Roger G. Mercado, Acting Secretary of Department of Public Works and Highways, Philippines



Panel Discussions

Overall Integration Session

Session title

Overall Integration Session

-Building Post-Corona World Back Better through Water- Actions and Commitments from Kumamoto to the World-

Session overview

The Integration Session 4 were held to integrate messages and advice of the three previous integration sessions of (i) governance, (ii) finance, and (iii) science and technology in order to produce a clear-cut answer to the inquiry posed by Heads of State and Government in the Kumamoto Declaration. Special attention was given in the discussion and outcome to synchronize the outcome of Kumamoto Summit with previous and succeeding preparatory process such as Bonn Conference, the 9th World Water Forum, and 2022 Dushanbe Process to deliver common messages to the UN 2023 Midterm Review Conference. As the 4th Asia Pacific Water Summit (APWS) is one of the key preparatory processes towards the UN 2023 Midterm Review Conference, this process is to accelerate actions by all towards achieving internationally agreed targets on water through collaboration, partnership, enabling environment, youth and others.

The transformative role water should play towards full achievement of SDGs and building resilient, sustainable and inclusive post-corona society will be discussed. Concrete ways for improving governance, finance and applying science and technology in integrated manners at local, national and global levels as presented in all of the nine thematic sessions towards the end were the core subject of the discussion and outcome of the Session. The outcome of the Session was a part of Kumamoto Declaration as the holistic outcome of all nine thematic and three integration sessions.

Session agenda

1. Opening remarks by Co-Chairs:

- H.E. Dr. Han Seung-soo, Chair of HELP, Former Prime Minister of Korea
- H.E. Ms. Yoko Kamikawa, MP, House of Representatives, and Former Minister of Justice, Japan / Chair, Japan Parliamentary League for Water Policy Reform

2. Keynote speakers:

- H.E. Mr. Daler Juma, Minister of Energy and Water Resources of the Republic of Tajikistan
- H.E. Dr. Basuki Hadimuljono, Minister of Public Works and Housing, Republic of Indonesia (to be read by Dr. Ir. Arie Setiadi Moerwanto, MSc., Senior Engineering Expert, Technical Implementation Unit for Hydraulics and Water Geotechnics, DG of Water Resources)
- H.E. Dr. Christiane Rohleder, State Secretary at the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV), Germany (Video Message)
- H.E. Mr. Peter Thomson, UN Special Envoy for Ocean (Video Message)

3. High-level Panel Discussion: "The transformative role water should play towards full achievement of SDGs and building resilient, sustainable and inclusive post-corona society"

High-level Panelists:

- Professor Toshio Koike, Executive Director of ICHARM, representing Integration Session 1 (Science and Technology)
- Mr. Howard Bamsey, Chair of Global Water Partnership, representing Integration Session 2 (Governance)
- Ms. Neeta Pokhrel, Chief of Water Sector Group, Asian Development Bank, representing Integration Session 3 (Finance)
- Ms. Catarina de Albuquerque, CEO, Sanitation and Water for All
- Mr. Henk Ovink, Special Water Envoy, the Netherlands and Mr. Sulton Rahimzoda, Chairman, Executive Committee of the International Fund for saving the Aral Sea (EC IFAS)

Moderator:

• Prof. Kenzo Hiroki, HELP Coordinator / Professor, GRIPS

4. Closing

• Co-Chairs

Key discussion points of each presenter and panelist

Opening Remarks

H.E. Dr. Han Seung-soo, Chair of HELP, Former Prime Minister of Korea

- Dr. Han discussed about how water is life yet can be a threat to life. We have seen a lot of damaging impact due to water-related disasters. Covid-19 has also greatly affected countries all over the world and disrupted efforts to achieve the 2030 agenda.
- If we don't learn lessons from the current pandemic, the next pandemic can hit us harder. Thus, in-post corona society should be more resilient, sustainable, inclusive. We need to place water in the center of global agenda.
- Dr. Han discussed about the sessions preceding the Integration Session 4. He elaborated the need for integrating previous sessions in this session, address how to improve water sectors in the area of governance, finance, and science and technology, and connect the outcome of session and actions with other key processes to the follow up of Sendai Framework and the Paris Agreement.
- This summit is one of the key processes towards UN2023 conference. Dr. Han invited the representatives of three key areas of governance, finance, and science and technology to share the messages and commitment made in the sessions.

H.E. Ms. Yoko Kamikawa, MP, House of Representatives, and Former Minister of Justice, Japan / Chair, Japan Parliamentary League for Water Policy Reform

- Ms. Kamikawa shared about her view on the alarming pace of environmental degradation due to climate change. We need a paradigm shift. Quality growth as presented in the Kumamoto Declaration as a path should be followed. The water sector should be a vanguard in this new path. We should fundamentally change the way we think and act.
- Ms. Kamikawa encouraged to discuss and determine what our desirable future is and then establish a scenario of action in which we can achieve the future we want. Example: SDG.
- Ms. Kamikawa suggested improvement should consider the level of nation's development stage. Leap frogging should be encouraged. Green infrastructure is essential for water sector including forest and forest resource system.

- Ms. Kamikawa shared an indigenous technology in Japan, cylindrical water distribution system, which help different communities to live in harmony.
- The role of ice can also be emphasized. Glacier can work as health barometer for global water cycle through observation.
- Ms. Kamikawa also notes that regional elements of water governance is important, specifically monsoon and islands need to be considered. Comprehensive water risk management is the key. The Government of Japan just recently developed new concept of river basin disaster resilience and sustainability by all.
- Regarding finance, ways to increase total investment in water should also be addressed. Private financing and partnership are keys. Investment in preparedness including stockpiling will be effective.
- For science and technology, we need to invest in nurturing facilitators or experts who can turn scientific finding into practical action for social transformation.

Keynote Speech

H.E. Mr. Daler Juma, Minister of Energy and Water Resources of the Republic of Tajikistan

- Mr. Juma expressed that Tajikistan is one of the most vulnerable countries to climate change and tackling climate change is one of the highest priorities of their government, particularly related to managing and preserving freshwater resources which is critical for the future of their country and survival of other countries in Central Asia.
- The president of Tajikistan also emphasized on cooperation between countries to better manage water resources. The president also delivered a message which he has previously delivered in the first APWS, claiming that the cost of water can be the most expensive compared to oil etc.
- Scientific data also shows that water availability is decreasing yoy. Mr. Juma provides data about how water in Asia depletes significantly compared to in 1960s. Other regions also experience similar thing. Therefore, we need urgent action, such as through Tajikistan's initiative of Decade of Water for Sustainable Development. Therefore, the 2023's Water Conference which is hosted by Netherlands and Tajikistan are designed to be action oriented.
- The 4th APWS is important as it focuses on best practices and the next generation. Concrete ways for improving governance, finance, and science and technology were discussed in thematic sessions. The outcome of the summit will also be integrated into the discussion of the 2nd Dushanbe Water Decade Conference which will be hosted in Tajikistan in early June this year. The 2nd Dushanbe Conference will bridge the 4th APWS, the 9th World Water Forum, the Bonn Dialogue with the UN 2023 Water Conference.
- Tajikistan expresses their commitment to promoting water issues in global development agenda. As their energy is generated through hydro source and access to water is critical, Tajikistan will continue working with Netherlands, UN, and around the world to achieve their goals and matters adopted in the Summit.

H.E. Dr. Basuki Hadimuljono, Minister of Public Works and Housing, Republic of Indonesia (to be read by Dr. Ir. Arie Setiadi Moerwanto, MSc., Senior Engineering Expert, Technical Implementation Unit for Hydraulics and Water Geotechnics, Director General of Water Resources)

- Dr. Arie expressed three common water problems faced in Indonesia: too much, too little, and too dirty. This problem intertwines with climate change and socio-economic issues.
- Dr. Arie congratulated the international flood initiative and ICHARM for developing e-learning system for capacity development. The e-learning is very beneficial as it fosters facilitators who will lead formulation and implementation of policies, sustainability, and resilience of water-related disaster. This kind of scientific platform and e-training is very vital as it discusses today's water issues and prepare for future challenges.
- The Ministry of Public Works and Housing of Indonesia is currently improving their disaster mitigation system

and flood warning system. This includes application for technology of rainfall and water level prediction for preparation of adequate system and infrastructure to mitigate disaster.

- The Ministry of Public Works and Housing of Indonesia is working to optimize their dam operation and modify it to enable early water release to secure room for storing and absorbing big discharge. They also revitalize their lake and reservoir and preserve the catchment area.
- The Ministry also continues to construct and rehabilitation irrigation networks and selected swamp irrigation networks.
- The Ministry also prepared the first source to tap investment scheme. The approach will integrate the central government and local government in a public-private partnership package.
- Dr. Arie expressed his wish to work together and build back better in the world post-Covid 19. He also expresses appreciation to the Government of Japan's policy called river basin disaster resilience and sustainability by all. Indonesia will study more detail about the policy.
- Dr. Arie also expressed his support to Kumamoto Declaration and how it will have positive impact on water resources management including in Indonesia.

H.E. Dr. Christiane Rohleder, State Secretary at the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV), Germany

- Dr. Rohleder expressed how Japan and Germany share the same view of how water plays a transformative role in achieving all goals and requirements of 2023 agenda and other global agendas. Dr. Rohleder emphasized that we need to work together beyond the water sector. Close sectoral approach and actions continue to be relevant. SDG 6 Global Acceleration Framework launched by UN Water show the accelerators by government, financing, innovation, data and information, and capacity building. This goes hand in hand with discussions on improving governance, financing, and applying science and technology to accelerate implementation.
- Germany held Bonn Conference and the key messages and recommendation are cross-sectoral and modelled after SDG6 Global Acceleration Framework. To date, 63 countries have expressed their support for the messages.
- Germany was happy to create synergy with the preparatory processes leading to UN2023, including with Japan's 4th APWS. We should find joint solution to speed up process. Cross-sectoral transboundary water resource is deeply linked to peace and security. Sustainably managing our water resources is very important for mitigating climate change and adapting to it and key for DRR.
- Nature based solution is growing more important for resilience of the water resources and preservation for ecosystem. Dr. Rohleder calls for restoring and protecting natural ecosystem as foundation to the future.
- Dr. Rohleder shares that they particularly support Bonn Water Dialogue's recommendation to appoint UN Special Envoy on Water. The recommendation is all the more important as we need to give water voice and ensure the availability of the source.

H.E. Mr. Peter Thomson, UN Special Envoy for Ocean

- Mr. Thomson discussed about the significance of hydrological cycle, particularly in island setting. However, pollution poses great threat to ocean health and human health. Mr. Thomson emphasizes that the freshwater community and the saltwater community are connected through hydrological cycle and therefore there is a need to harmonize our efforts.
- Mr. Thomson recommended source to sea management as a holistic approach which recognize environmental, economic, and social linkages between land, freshwater, culture, and ecosystem. It brings together private, community organization, and other to building resilient society.
- Mr. Thomson commended the APWS for adoption of source to sea efforts. This integrated management

approach will be vital for achievement of SDG. Cross-sectoral between upstream and downstream with the assistance of science and technology and financial support is very important.

• Mr. Thomson recommended the Action Platform for Source to Sea Management as a great resource for learning and connecting others. Mr. Thomson encourages everyone to join the Action Platform.

High-Level Panel Discussion

Professor Toshio Koike, Executive Director of ICHARM, representing Integration Session 1

- Integration Session 1 discussed how science and technology can contribute to Kumamoto declaration. They concluded that we need to promote observation integration, model integration, data integration & analysis. To make maximum use of scientific knowledge, we need to build capacity especially for incorporating scientific knowledge at local site.
- This knowledge and capacity can support evidence-based decision making to support activities related to SDG. Then, we can promote cross-SDGs coordination as water is the key. Then, we can build water cycle consilience. This kind of activity can be supported by UNESCO's Open Science. Then, we can contribute to governance and finance which will result in quality-oriented society.
- In conclusion:
 - We need to promote water cycle consilience by accelerating Open Science policy.
 - We need to foster facilitators who can lead the way toward resolving problem by providing professional advice on site applying scientific and indigenous knowledge.
 - Work together beyond disciplines and sectors among difference level taking end-to-end approach.

Mr. Howard Bamsey, Chair of Global Water Partnership, representing Integration Session 2 (Governance)

- Mr. Bamsey discussed about coherence as part the recommendation from integrated governance session. It means ensuring that the government's structure is coherent and integrated.
- Another key message from the recommendation is multi-stakeholder. It makes sure that everybody and every institution/organization that has a real stake on the outcome of decision making about water has a role in the decision making.
- The third key message is inclusion. It's not limited to process including the stakeholder, but the decision making has to take into account all the stakeholders particularly women and young people who have the greatest stake at the outcome of the decision making.
- Another key point which reflects the key concern of the experts is climate change.
- Climate change and the respond to it has real influence on what is happening within the water governance structure. The new paradigm is needed in the context of carbon neutrality. We can see that water is vital in all stages of energy transition.
- Climate change increases the urgency to build resilience as it changes water availability, frequency, and timing.
- Water disaster is increasing in frequency and amplitude. Mr. Bamsey calls for quick and urgent response.
- It is important to build governance structure and institution with capacity to evolve under the changes that we can see coming. Strong water governance enhances the prospect for finance. Findings show that countries and companies with strong resilience plan and build resilience for respond, they find it easier to get financed and the cost of capital is lower.
- Another way to think about IWRM is integrated multisector governance. The multisector characteristic is vital. We need transparency and clarity on different roles of stakeholder to enable different stakeholder to take ownership of their responsibility.

• Mr. Bamsey echoes Mr. Thomson's sentiment about the relation between freshwater and saltwater. Mr. Bamsey recognized that the source to sea concept is vital.

Ms. Neeta Pokhrel, Chief of Water Sector Group, Asian Development Bank, representing Integration Session 3 (Finance)

- Ms. Pokhrel discussed about the role of various actors and emphasized that the governance must lead and create the right governance and enabling environment to bring finance. We need to mobilize ISP for finance and make it available. Actors on the ground are those who need finance most. Making it available to local level is vital. We should include multiple stakeholders, especially the vulnerable. We should also have gender and youth involvement.
- Ms. Pokhrel discussed about how bringing data and science on the forefront to help government is a planning tool. We should also involve citizens in planning, sharing, responsibility and cost.
- Financing should be for low-carbon and resilience.
- Integration Session 3 recommends investment which is faster, more readily, and urgently to tackle climate change impact. It is also important to make it more available for local level actors.
- Implementing measures should combine technologies like early warning system, flood forecasting, and proactive water-related disaster prevention investment.
- Ms. Pokhrel emphasized utilizing and bringing new approach to increase public-private partnership in water sector. We should have enabling environment and review what has gone right/wrong. We should also focus on making the most of available resources and asset.
- Building strong financial integrity. Developing medium and long-term plans that integrate policy goals and finance. Ms. Pokhrel emphasize the importance of making the data available to local level. For example, in Japan, each mayor makes commitment to DRR.

Ms. Catarina de Albuquerque, CEO, Sanitation and Water for All

- Ms. Albuquerque discussed about possible positive outcomes that would have happened if everybody had access to sanitation. Sanitation and water for all goes beyond the immediate impact of better health. This can eliminate poverty and hunger, achieve equality, and tackle climate change.
- Ms. Albuquerque discussed about how education and opportunity which would be denied if we don't deliver the basic human rights of access towards water, sanitation and hygiene.
- Ms. Albuquerque calls for political will. Experience shows that generating greater political will improved governance and efficiency, leading to greater financial flow. Having a legal and regulatory framework and institutional set up with clear role and defined responsibility through policies and strategies with universal access, monitoring, and accountability is vital.
- Ms. Albuquerque calls for leadership with characteristics of cooperation, coherence, and courage.
- SWA for partnership is determined to try a better path forward. The sector ministerial meeting in Jakarta (April 2022) gathered over 80 ministers will be an opportunity to scale up efforts on sanitation and water.

Mr. Henk Ovink, Special Water Envoy, the Netherlands and Mr. Sulton Rahimzoda, Chairman, Executive Committee of the International Fund for saving the Aral Sea (EC IFAS)

- Mr. Ovink introduced about UN 2023 Water Conference. The UN2023 Water Conference aims to be the watershed moment to unite the world.
- Mr. Rahimzoda discussed about the processes leading towards the UN2023 Water Conference from 2016 to 2020. Tajikistan and Netherlands are co-hosts for the conference.
- Three principles for the UN2023 Water Conference:

- Inclusive
- Action-oriented
- Cross-sectoral
- The vision statement of UN2023 Water Conference is to think beyond the 2023. Mr. Rahimzoda calls for making effective use of the opportunities presented by the conference.
- The conference will:
 - Deliver summary of the conference proceedings
 - \circ Present a set of voluntary commitments in a Global Water Pact
 - Global Water Pact is a combined commitment. This will be a commitment to scale and replicate and use water as driving force for delivery of 2030 agenda.
 - \circ Provide roadmap towards 2028 (Decade) and 2030 (SDG)

Key messages

Governance

- Regional elements of water governance is important, specifically monsoon and islands need to be considered. Comprehensive water risk management is the key.
- Coherence, multi-stakeholder, and inclusion, response to climate change are the key messages.
- It is important to build governance structure and institution with capacity to evolve under the changes that we can see coming. Strong water governance enhances the prospect for finance. Findings show that countries and companies with strong resilience plan and build resilience for respond, they find it easier to get financed and the cost of capital is lower.
- Another way to think about IWRM is integrated multisector governance. The multisector characteristic is vital. We need transparency and clarity on different roles of stakeholder to enable different stakeholder to take ownership of their responsibility.
- We need greater political will. Experience shows that generating greater political will improved governance and efficiency, leading to greater financial flow. Having a legal and regulatory framework and institutional set up with clear role and defined responsibility through policies and strategies with universal access, monitoring, and accountability is vital.

Science and technology

- For science and technology, we need to invest in nurturing facilitators or experts who can turn scientific finding into practical action for social transformation.
- We need to promote observation integration, model integration, data integration & analysis. To make maximum use of scientific knowledge, we need to build capacity especially for incorporating scientific knowledge at local site.
- This knowledge and capacity can support evidence-based decision making to support activities related to SDG. Then, we can promote cross-SDGs coordination as water is the key. Then, we can build water cycle consilience. This kind of activity can be supported by UNESCO's Open Science. Then, we can contribute to governance and finance which will result in quality-oriented society.
- We need to promote water cycle consilience by accelerating Open Science policy.
- We need to foster facilitators who can lead the way toward resolving problem by providing professional advice on site applying scientific and indigenous knowledge.
- Work together beyond disciplines and sectors among difference level taking end-to-end approach.

Finance

- Regarding finance, ways to increase total investment in water should also be addressed. Private financing and partnership are keys. Investment in preparedness including stockpiling will be effective.
- Investment should be faster, more readily, and urgently to tackle climate change impact. Financing should be available at local level. The governance must lead and create the right governance and enabling environment to bring finance.
- In the planning part, we should bring data and science on the forefront to help government. We should also involve citizens in planning, sharing, responsibility and cost. We should include multiple stakeholders, especially the vulnerable. We should also have gender and youth involvement.
- We should have enabling environment and review what has gone right/wrong. We should also focus on making the most of available resources and asset.



From the presentation of Prof. Toshio Koike (Science & Technology)



From the presentation of Mr. Howard Bamsey (Governance)

Special Sessions

Showcase

Session title

Showcase

Session overview

Water is essential for human life and wellbeing. It provides a bridge between atmospheric, oceanic and terrestrial natural sciences and socio-economic benefit areas including agriculture, forestry, health, energy, economy and human settlement. Water-related issues are critical in Asia and the Pacific. Flood and drought prediction and warning systems are urgently needed. Water discovery and water resource development are essential for survival. Good water quality is indispensable for human health. Climate change is now a fundamental threat to this region. The Covid-19 pandemic broke out and has been threatening humanity beyond boundaries in space and time.

On-site stakeholders should develop integrated scenarios and execute concrete measures by sharing the understanding of water-related benefits and risks through cross-sectoral dialogue with the science and technology community; and making maximum use of global monitoring and prediction information as a public good in traditional and indigenous knowledge. It is also important to foster the human resources that can act as catalytic beings addition to capable of moderating meetings, leadind the way toward resolving problems, and providing professional advice on-site. Tripartite cooperation among science, policy and operation is essential at different spatial scales and in thematic and functional terms.

This special session shared four cases ranging from local to national levels as lessons learnt.

Session agenda

Date and Time: 17:30-19:00 JST, Saturday, 23 April

1. Introductory Video

2. Opening:

H.E. Mr. Tetsuo Saito, Minister of Land, Infrastructure, Transport and Tourism (MLIT)

3. Presentation:

- 1) Eng. K.D.N. Siriwardana, Director General of Irrigation, Irrigation Department of Sri Lanka on-line
- 2) H.E. Dr. Basuki Hadimuljono, Minister of Public Works and Housing, Indonesia
- 3) Dr. Anthony C. Sales, Director, Department of Science and Technology (DOST) Region XI, Philippines
- 4) Mr. Kazufumi Onishi, Mayer, Kumamoto, Japan

4. Panel Discussion

- 1) Dr. Han Seung-Soo, Former Prime Minister of the Republic of Korea and Chair of the High-level Experts and Leaders Panel on Water and Disasters (HELP) *video*
- 2) Ms. Yoko Kamikawa, Member of the House of Representatives, Former Minister of Justice, Japan
- 3) Ms. Maria Angelica Sotomayor, incoming Practice Manager, East Asia and Pacific Region, World Bank *on-line*
- 4) Dr. Joy Jacqueline Pereira, Vice-Chair of Working Group II of the Intergovernmental Panel on Climate Change (IPCC) for the Sixth Assessment Report, Professor of Universiti Kebangsaan Malaysia *on-line*

Moderator:

Dr. Toshio Koike, Executive Director, International Centre for Water Hazard and Risk Management (ICHARM)

5. Closing:

Mr. Tomoo Inoue, Director General, Water and Disaster Management Bureau, Ministry of Land, Infrastructure, Transport and Tourism (MLIT)

Key discussion points of each presenter and panelist

The introductory video overviewed the impacts of water-related disasters and COVID-19 and stated that this special session would share cases in line with the context of the Declaration, ranging from local to national levels, as lessons learned and discuss the next steps.

Mr. Tetsuo Saito, the minister of Land, Infrastructure, Transport and Tourism (MLIT), delivered an opening address, saying that Japan would contribute to solving water-related problems solving and achieving transformation into quality-oriented societies in the Asia-Pacific region.

The four showcases presented by the four countries commonly highlighted the importance of "multi-sectoral and multi-layer activities", "knowledge integration", "facilitator training", and "inclusiveness".

Eng. K.D.N. Siriwardana, the director general of Irrigation of the Irrigation Department of Sri Lanka, started his presentation by talking about their ancient irrigation system, which is more than 3000 years old and yet is still in service. He then explained their current activities, in which national and local experts cooperate with farmers to build a society resilient to climate change.

H.E. Dr. Basuki Hadimuljono, the minister for Public Works and Housing, Indonesia, spoke about cross-agencies activities to combat climate change, including an effective dam operation practice coupled with a rainfall and river level prediction system. He also described an e-learning program to train facilitators who will contribute to implementing policies to improve communities' resilience and sustainability.

Dr. Salles, the regional director of the Department of Science and Technology Region XI, the Philippines, mentioned two crucial components for the integration of "scientific knowledge integration" and "local community activities": "Online Synthesis System for Sustainability and Resilience (OSS-SR)" and "facilitators". Moreover, he introduced innovative, comprehensive activities by the HELP Davao Network, an organization working to help the community improve its flood resilience and sustainability by involving volunteers from various fields and sectors such as academia, media, government, industry, and civic organizations.

Mr. Kazufumi Onishi, the mayor of Kumamoto City, spoke about the current status of the city's vital water resource and water-related disasters. After explaining that its groundwater has been decreasing in volume and quality and that the city has been experiencing floods frequently, the mayor described their efforts to reduce flood risks, such as evacuation drills using a VR-based flood experience system and their plans to conserve water resources and improve water quality by involving neighboring municipalities and farmers.

During the panel discussion that followed, Dr. Han, the chair of the High-Level Panel on Water and Disaster (HELP), commented that the "cross-sectoral" and "multi-layered" approaches presented in the four cases should be pursued simultaneously.

Ms. Yoko Kamikawa, a member of the House of Representatives and a former minister of Justice of Japan, added that although the four case regions faced different challenges, they all shared a cross-sectoral, sustainable, and inclusive approach, and that they commonly had the need to maximize the use of scientific and technological knowledge, on-site experience, and community power. She also mentioned the importance of cross-sectoral collaboration, support for cutting-edge science and innovation, and the training of experts who can serve as facilitators to bridge the gap.

Ms. Sotomayor, the World Bank Africa practice manager of the Water Global Practice, commented on each case study from the perspective of the World Bank, which provides financial support for activities in all four regions.

Finally, Prof. Pereira of Universiti Kebangsaan Malaysia, the vice-chair of Working Group II of the IPCC Sixth Assessment Report, pointed out that the common denominator in each case study was the impact of climate change, which was confirmed by the IPCC, and explained future risks caused by climate change.

The representatives of the four regions expressed their appreciation for the panelists' comments and responded to the points raised. The session concluded with closing remarks by Mr. Inoue, the director general of the Water Management and Land Conservation Bureau, the Ministry of Land, Infrastructure, Transport and Tourism.

It is worth keeping in mind that all four presentations stressed the importance of a "multi-sectoral and multilayered approach", "knowledge integration", "facilitator training", and "inclusiveness". Parts of the presentations and discussions in the showcase event were reflected in the APWS4 Chair's Summary.

Key messages

It is worth keeping in mind that all four presentations stressed the importance of a "multi-sectoral and multilayered approach", "knowledge integration", "facilitator training", and "inclusiveness". Parts of the presentations and discussions in the showcase event were reflected in the APWS4 Chair's Summary.





Picture 1 Kumamoto City Showcase

Picture 2 The panelists and speakers of the session

Small Islands State Session

Session title

Special High-level Session for the Small Island States

Key message from the session

The session emphasizes the unique vulnerabilities faced by Small Island Developing States (SIDS) and the need for international cooperation through sharing of technology, capacity building, and disaster response. As SIDS are vulnerable to water-related disasters which is exacerbated by climate change, it is vital to improve climate and disaster resilience. Various suggestions to improve resilience for SIDS are raised in the session such as through better water technology, satellite and assessment to predict disaster, and capacity building. There is also a need for financing as water technology is very expensive.

Session overview

The special high-level session for SIDS is intended to bring forward SIDS-specific water issues, including how to address their vulnerability to disasters due to climate change. This session was co-organized by the Government of Australia, the Government Japan, ADB, UNDESA/UNCRD, and JAXA. Representatives of SIDS countries are invited to share their common problems, vulnerabilities, and existing efforts. In total, there are seven participants from SIDS countries including Prime Minister of Tuvalu and President of the Republic of the Marshall Islands (through video message). The result of the discussion is expected to feed into the outcome document of the Asia-Pacific Water Summit and will also contribute to the 7th Global Platform for Disaster Reduction in May 2022 in Bali, the Asia-Pacific Ministerial Conference on Disaster Risk Reduction in September 2022 in Brisbane, the Midterm Review of the Water Action Decade in 2023 and the 4th International Conference on Small Island Developing States (SIDS) in 2024.

Session agenda

Moderator: Prof. Kenzo Hiroki, HELP Coordinator / Professor, National Graduate Institute for Policy Studies

Opening (15 minutes)

- Opening remarks by H.E. Dr. Han Seung-soo, Chair of High-level Experts and Leaders Panel on Water and Disasters (HELP) / Former Prime Minister of Republic of Korea
- Welcome remarks by Mr. Masafumi Yokota, Deputy Minister for International Projects
- Welcome remarks by H.E. Ms. Jan Adams AO PSM, Ambassador of Australia

Keynote speeches by heads of states and government (7 min/each)

- Honourable Kausea NATANO, Prime Minister of Tuvalu
- H.E. Mr. David KABUA, President of the Republic of the Marshall Islands (video message)

Keynote Presentation (7 minutes)

- H. E. Mr. Ahmed Mujthaba, Minister of State for Environment of the Republic of Maldives
- The Hon. Mr. Crossley Tatui, Minister for Infrastructure and Finance of Niue
- Dr. YAMAKAWA Hiroshi, President, Japan Aerospace Exploration Agency (JAXA)

Remarks by other representatives of the countries and organizations (5 min/each)

- H.E. Mr. John Fritz, Ambassador Extraordinary and Plenipotentiary of Federated States of Micronesia
- H.E. Ms. Faalavaau Perina Jacqueline Sila-Tualaulelei, Ambassador Extraordinary and Plenipotentiary of Independent State of Samoa
- H.E. Dr. Tevita Suka Mangisi, Ambassador Extraordinary and Plenipotentiary of the Kingdom of Tonga (tbc)
- Ms. Alexandra Galperin, Senior Disaster Risk Management Specialist, Pacific Department at Asian Development Bank (ADB)
- Mr. Kazushige Endo, Director of United Nations Centre for Regional Development
- Dave Hebblethwaite, Water Security and Governance Coordinator of SPC

Closing (5 minutes)

- Final comments by Mr. Henk Ovink, Special Water Envoy, the Netherlands
- Closing remarks by the moderator

Key discussion points (including each presenter/panelist's discussion points)

Prof. Kenzo Hiroki

• Water challenges in SIDS include among others securing water sources, access to safe drinking water and sanitation, and coping with sea level rise/droughts.

H.E. Dr. Han Seung-soo, Chair of High-level Experts and Leaders Panel on Water and Disasters (HELP) / Former Prime Minister of Republic of Korea

• SIDS have high potentials with expansive area of biodiversity. SIDS however face challenges due to rapid climate changes. SIDS are very susceptible to water-related risks. Covid-19 also causes significant impact on SIDS. They are very affected such as in the form of their GDP.

Mr. Masafumi Yokota, Deputy Minister for International Projects, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan

• Japan is surrounded by all sea and composed by a lot of islands, and therefore it shares common issues with SIDS countries. MLIT is also focusing on water-related disasters. They are focusing on methodology observation by utilizing various technologies, such as JAXA.

H.E. Ms. Jan Adams AO PSM, Ambassador of Australia

- Ambassador Adams discusses about the regional or multinational processes that can support Pacific countries in managing challenges related to disaster risk reduction and climate change.
- Ambassador Adams notes about the vulnerability of Asia Pacific region to water disasters, such as flooding. Therefore, Australia works closely with the Pacific to improve climate and disaster resilience. Australia aims to make everyone's voices heard and since DRR is important, they aim to include marginalized group in decision making as well as increasing resilient infrastructure.
- Australia is also committed to investment in science and technology to ensure good early warning system. They have also increased commitment to climate finance for developing countries in the Indo-Pacific.
- Australia just launched partnership with SPC to strengthen flash-flood early warning.

Honourable Kausea NATANO, Prime Minister of Tuvalu

• PM Natano discusses about the climate change that threatens SIDS as it bring further the scarcity of fresh water, threatening sustainability. PM Natano brings forth the issues in Tuvalu such as damage to crops and

infrastructure due to water disaster. For example, the impact of cyclone in the past. Lower rainfall is also another issue due to ongoing impact of La Nina. Some of their islands are currently in the drought warning status.

- PM Natano calls for increased of water storage capacity and sustainable use of local water resources as high priority for Pacific islands nations. Water catchment needs to be improved as well as strengthened cooperation regarding water resource management. Building resilience is top priority for Tuvalu. He emphasizes that climate change is human rights and security issue. As the pressure for climate change increases, it can bring displacement.
- He brings commitment for resilient development by multi-stakeholders approach in the Pacific. He wishes to focus on preparedness and to seek capacity through cooperation between various stakeholders and adapt to make sustainable development possible. Sustainability is intended to be the objective. He stresses the need to come out of the pandemic as resilient and in cooperation with others.

H.E. Mr. David KABUA, President of the Republic of the Marshall Islands

- Sharing the best practices of Marshall Islands: the government of Marshall Islands and JICA has collaborated in a water collection system. The system has existed for 40 years. As they don't have source of fresh water, they wish to focus on water technology.
- They wish for simple, portable, and affordable water technology as a way to address families living in the rural area in Marshall Islands.

H. E. Mr. Ahmed Mujthaba, Minister of State for Environment of the Republic of Maldives

- Minister Mujtabha discusses about the situation in Maldives. The island communities in Maldies rely on groundwater and rainwater. However, the geography and scarcity of ground water pose serious limitation on water security related to catchment and storage. Climate change and high population density add up to the water-related issues faced by Maldives.
- The Government of Maldives is committed to provide portable water for all as a form of basic human rights. The government has embarked on infrastructure development that will provide sustainably managed safe water in islands irrespective of size and population number.
- Minister Mujtabha strengthens the importance of sharing international expertise in scientific research, exchanging assistances in capacity development, and advances in technology are necessary in order to enhance services in SIDS.

The Hon. Mr. Crossley Tatui, Minister for Infrastructure and Finance of Niue

- Minister Tatui emphasizes the need to increase resilience and the problems faced by Niue. Water mostly comes from underground. However, maintenance of water system is expensive, and the existing national water system and infrastructures are obsolete. Cyclones are devastating and unpredictable as the one which hit Niue earlier in 2022. Rainwater storage also has limited catchment capacity. Niue is remote, vulnerable, geographically isolated, and has small number of population as many of their people migrate overseas. As the people live physically scattered, it is expensive to build and maintain infrastructure.
- Water actions together is needed to ensure resilience. Niue wishes to attract people back to their nation building and therefore, water is important for them.

Dr. YAMAKAWA Hiroshi, President, Japan Aerospace Exploration Agency (JAXA)

• Dr. Yamakawa discusses about space technologies contributing in island states. The island states are vulnerable to crisis due to climate change. The 3rd international conference on SIDS in Samoa in September 2014

identified DRR as one of the major priorities. Observation from space allows monitoring of ocean and satellite data is an effective mean to understand the real time status of disasters. Comparisons of pre-disaster and post-disaster observations can also be applied to damage assessment. For example, Dr. Yamakawa shows how meteorological satellite could observe the large-scale eruption of a volcano in Tonga.

- Dr. Yamakawa also shows the image of cyclone Winston visualized by Global Satellite Mapping of Precipitation (GSMaP). GSMaP can be very useful as it can confirm the possibility of disaster occurences in advance. With the support of JICA, many local weather agencies utilize GSMaP. It can be used for local people and local community.
- JAXA also has a website called "Climate Rainfall Watch". It is hoped to help address forest fire and drought in Asia-Pacific. (https://sharaku.eorc.jaxa.jp/GSMaP_CLM/index.htm)
- Dr. Yamakawa stresses in the end that space technologies can offer:
 - \circ Disaster risk awareness
 - Real time monitoring
 - Damage assessment
- GSMaP are especially useful in the island states and provide information on preventing risks on water related disasters. JAXA will support the necessity of science and technology through provision of continuous satellite observation and strengthening space-based measurement technologies.

H.E. Mr. John Fritz, Ambassador Extraordinary and Plenipotentiary of Federated States of Micronesia

- Ambassador Fritz emphasizes the relations between water and quality of life and national development. Micronesia has history of protecting and trying to manage their water cycle with their water resources exist in the form of surface water and groundwater. The country's priority remains water conservation and access. The country has passed various acts and policies to ensure access to portable water. They are also working on national Water Master Plan.
- Micronesia is committed to provide good quality of life. The Ambassador stresses the need for international assistance to continue supporting Micronesia's commitment to meet the basic water needs for its dispersed population. They are committed to protecting their valuable water cycle and water resources by partnering with development partners.

H.E. Ms. Faalavaau Perina Jacqueline Sila-Tualaulelei, Ambassador Extraordinary and Plenipotentiary of Independent State of Samoa

- Ambassador Faalavau discusses about the increasing scarcity of freshwater resources. This is exacerbated by changing weather patterns, increased frequency of floods and droughts, and sea level rise due to climate change. Rising salinity also causes health problem in SIDS including Samoa. Other issues faced by SIDS include coastal erosion and overextraction to provide drinking water. Deforestation, pollution, and land degradation around catchment area further place pressures on water quality and supply.
- Ambassador Faalavau calls for integrated sustainable and economically viable solutions. Science and technology is critical in the form of data analysis, funding and technical support, and partnership.
- Some other possible solutions are wastewater treatment facilities or artificial wetlands. Appropriate technology is very important yet expensive and non-affordable. Samoa is still developing its wastewater treatment capacity. To reduce freshwater loss and protect water quality in catchment, they implement zoning, protection, and rehabilitation of land.
- It is important to continue investment in initiatives and policies to ensure water efficiency.

H.E. Dr. Tevita Suka Mangisi, Ambassador Extraordinary and Plenipotentiary of the Kingdom of Tonga

- Ambassador Mangisi discussed about the vulnerabilities of SIDS and situation that hit Tonga post volcanic eruption in January 2022. It further highlights the importance of proper water governance and need for resilient infrastructure.
- Tonga is currently in the immediate response phase, with 3 years recovery plan in effect at the estimated cost of USD240 million. Financing is crucial as well as sharing of technology, for example through himawari satellite as in JAXA presentation.
- Tonga follows the 2nd Tonga Strategic Development Framework 2015-2025 and wish to highlight the importance of water within their development plan. They wish to restore a sound and secure water cycle to reduce disaster risk.

Ms. Alexandra Galperin, Senior Disaster Risk Management Specialist, Pacific Department at Asian Development Bank (ADB)

- Introduction about comprehensive approach to Disaster Risk Assessments. The expected output for the risk assessment approach is for mapping, loss estimates, social impacts, and asset database.
- Ms. Galperin also shows the map of Tongatapu inundation hazards and CC impact as well as Tongatapu permanent asset loss due to sea level rise. Another slide shown is the different level of exposure to hazard.

Mr. Kazushige Endo, Director of United Nations Centre for Regional Development

- UNCRD launched a Smart City programme financed by MLIT which aims to provide technical assistance and build resilience through the programme. UNCRD will host a series of capacity building including smart city project. This will have direct synergy with other SDG. For the training, they can visit model city such as Okinawa.
- Okinawa is a good case as it is highly vulnerable to natural disaster and climate change impacts, also frequently hit by typhoon. They have long history of addressing water issues. Capacity building workshop will be opportunity to gain useful knowledge from Okinawa. Okinawa is integrating physical infrastructures and human system with digital technologies in order to deliver better service.

Dave Hebblethwaite, Water Security and Governance Coordinator of SPC

- Mr. Hebblethwaite stresses the need for strengthening dialogue that water is critical for climate change and resilience. SDG6 is very critical for climate change adaptation.
- A video is shown about resilient groundwater which further support resilient pacific community through the case of Yaro Village in Fiji. The community's drinking water is threatened, and they were hit by Cyclone Yasa which destroyed 26 houses including evacuation center. To conserve water, the village tanks were only used twice a week. That's how they manage the village water supply for about 6 month after the cyclone.
- After this disaster, there is groundwater project as part of disaster response by Fiji government. Now each household has access to tap outside of their house. Thus, health and general welfare improve.

Mr. Henk Ovink, Special Water Envoy, the Netherlands

- Mr. Ovink stresses that SIDS is the core of development of resilience and adaptation of climate change. As cohost to UN2023, Netherland aims to bring the agenda from the 4th APWS to Dushanbe conference to UN2023. This will be the moment where we put agenda on the table, and we should be committed to the agenda. Mr. Ovink reiterates the need for action and unite our actions and contributions of what we need to do. We should ensure capacity not only in technology but also at local level.
- Tajikistan and Netherlands stand ready to work with SIDS to bring forward the agenda in the UN2023.

Answers to the questions from the three Integrated Sessions

1) Science and Technologies

With regards to science and technologies, appropriate water technology for SIDS is very important yet it should be affordable. JAXA has shown some examples about how space technologies can contribute in island states. Observation from space allows monitoring of ocean and satellite data is an effective mean to understand the real time status of disasters. Comparisons of pre-disaster and post-disaster observations can also be applied to damage assessment. Observation through Global Satellite Mapping of Precipitation (GSMaP) can be very useful as it can confirm the possibility of disaster occurences in advance. With the support of JICA, many local weather agencies utilize GSMaP. It can be used for local people and local community.

The session agrees on investment in science and technologies. President of the Republic of the Marshall Islands also agrees on the necessity for simple, portable, and affordable water technology. This commitment to provide portable water for all is also raised by the government of Maldives through infrastructure development and sharing international expertise in scientific research.

2) Governance

The session stresses the need for international partnership and capacity building. Multi-stakeholder approach is necessary as brought forward by the Prime Minister of Tuvalu. Minister Mujthaba from Maldives raised about the key importance of exchanging assistances in capacity development.

Capacity development is shown through UNCRD's initiative of smart city program. This smart city program is in synergy with SDG and aims aims to provide technical assistance and build resilience through the programme. ADB also presented comprehensive approach to DRR in Aisa Pacific with mapping, loss estimates, social impacts, and asset database as the output of the approach.

3) Finance

For finance, the session showcase the need for resilient and affordable water technology and infrastructure. Ambaasador Faalavau from Samoa emphasizes the need to continue investment in initiatives and policies to ensure water efficiency. Australia also expresses their increased commitment to climate finance for developing countries in the Indo-Pacific as well as investment in science and technology to ensure good early warning system. It is important to ensure that water technology's establishment and maintenance is affordable for everybody, including those who live in rural area in SIDS.

Showcase actions

- Country implemented: Japan
- The Overview (please write shortly):

UNCRD showcases Okinawa as a model city for Smart City programme. While Okinawa is highly vulnerable to natural disaster and climate change impacts, they have long history of addressing water issues. Okinawa is integrating physical infrastructures and human system with digital technologies in order to deliver better service.

• Referable URL:





Slide from ADB

Closing Ceremony

APWF Governing Council Chair, RAVI Narayanan Farewell Statement



Mark Pascoe's thanks to Mr. Ravi Narayanan

It has been an honour and pleasure to be part of the Governing Council of the Asia Pacific Water Forum for 16 years, first as Vice chair from 2006 to 2013 and then as Chair for nine years since 2013 under the leadership and guidance of our President, Mr Yoshiro Mori. During this time I have learnt an enormous lot thanks to the experience, wisdom and generosity of the members of the Governing Council especially the Japan Water Forum supported by the Government and people of Japan. Two other organizations, the Asian Development Bank and UNESCAP have been instrumental in nurturing the growth of the APWF.

The APWF has grown from an idea into a formidable organization which has earned the recognition as the authentic water voice of the Asia Pacific region. None of this would have been possible without the energy an commitment of three individuals in the japan Water Forum, Yumiko Asayama, Taeko Yokota and Noriko Yamaguchi who have spared no effort to make the events such as the APWS a success.

Now we welcome the incoming Chair of the Governing Council, Mr. Mark Pascoe the Chief Executive of the International water Centre located in Griffith University in Australia who brings with him academic rigour, a wide network and a gentle manner all of which will take the APWF to greater heights.

I hope he will receive the support that I have had in sharing and learning and the contributions that we can all make in bringing water security to a thirsty world.

FAREWELL AND WISH YOU ALL WELL.

Mark Pascoe's thanks to Mr. Ravi Narayanan

A huge thanks to Ravi. I am humbled by Ravi's leadership and the Governing Council's acceptance and endorsement of me as the incoming Chair; indeed I have huge shoes to fill Ravi!. I could say lots of things about Ravithough can I just say that I, like many of you here, have a huge respect for the manner in which you have led the organisation. An organisation which I described earlier as a lean organisation which you have masterfully brought together as a powerful network of people and organisations to progress a joint agenda of water leadership in this Asia Pacific region.

What we have heard in the last two days indicates huge progress against the water challenges of the region which has been catalysed by the Asia Pacific Water Forum and its Summits. I am inspired by the last "Integration" session and I look forward to working with Changhua and Eduardo as Vice Chairs and the whole Governing Council in meeting the challenges you have proposed Ravi which includes championing the path forward that we discussed and of course a first step contributing to the UN Water Conference in New York next year. Thank you Ravi for your leadership!

Youth message



Representatives of students from Jonan High School, Fukuoka Prefecture, and youth from the Asia-Pacific region

This declaration is a Call to Action that reflects our concerns and embodies our aspiration for sustainable, resilient, and inclusive focused solutions on water as we move towards the mid-term review of the decade of Action on Water.

The theme for this Summit is "Water for Sustainable Development - Best Practices and the Next Generation" and within the theme itself, it speaks to the importance of young people and future generations. A sustainable future will not be possible without the meaningful inclusion of youth at the forefront of accelerated transformation and action in the region.

As the world moves toward the recovery from the global pandemic and simultaneously moves ahead to meet the targets of the 2030 Agenda, we call for Member States to adopt an intersectional, non- discriminatory, and participatory approach, that adopts meaningful youth engagement and fosters youth leadership, so we can collectively address the issues that affect water management in the region.

There have been many lessons learned throughout the pandemic, one of which is the vital role that water plays in the recovery process and that this region will continue to be affected by the impacts of climate change as experienced through water extremes, flood, droughts and sea level rise, which in turn affect health, food and the economic sectors. We also want to acknowledge the importance of the efforts that civil society and young people have played in the response to the COVID pandemic and help communities recover and build resilience.

The Asia Pacific region is home to 60% of the global youth population, making it the most youthful region and it is time to make the most of this valuable resource. Cross-cutting interventions through multi-stakeholder models require additional resources to support the necessary additional dialogue, planning and coordination. Successful examples on the ground, such as the Youth for Water and Climate programme, Young Professionals Programmes in water organizations and Youth for Asia, have demonstrated the resourcefulness, speed and cost effectiveness of working with youth. Institutionalizing an approach across levels to address water security and resilience is necessary to deliver on the water for all vision.

The pillars of this conference has been to promote inclusion , maintain sustainability in order to build resilience in the Region. To do this three areas of focus were identified: governance, science and technology and finances.

We the youth, ask the member states to consider the following:

On Governance:

The creation of formalized pathways for youth to be included in water governance processes at local, national and regional levels.

- Ensuring meaningful engagement of all youth in policy, decision-making and monitoring related to climate change, leaving no one behind. This can be achieved by investing in their capacity building and ensuring representation of their voices at the local and national level or by creating youth committees for climate change.
- Also, training for government and other actors on how to meaningfully work with young people; providing safe spaces and resources to support youth-led governance activities-

On Science and Technology:

- Youth must be empowered to provide solutions and demonstrate their expertise in specific areas, especially in technology, innovation, and data. This can be done through research opportunities and technical support for youth-led projects.
- Youth centered interventions and opportunities, such as paid internships, work placements, youth leadership and business training, early career development opportunities and youth oriented entrepreneurship skills development programmes, must also be encouraged so that they can mobilize their skills and knowledge.
- Also, encourage the cultivation of young water professionals. Provision of mentorship opportunities to young professionals esppecially those with strong interest in water.

On Finances:

- To promote direct investment in the priority issues that affect young people, including youth initiatives and enterprises, youth organizations, and in productive sectors and activities that benefit them most.
- Use public-private partnership as a tool for decent growth in the economy.
- Address barriers impeding young water entrepreneurs from accessing capital, financial knowledge and networks.

Youth play a significant role in promoting an inclusive, sustainable and resilient society in Asia and the Pacific. Youth should be seen as valuable partners in promoting water security in the region. This would entail adopting positive attitudes toward working with young people as equal partners; creating safe and conducive spaces for young people to engage in decision-making processes and lead initiatives; and involving them every step of the way.

Statement [Tentative Translation]



Mr. Tetsuo Saito Minister of Land, Infrastructure, Transport and Tourism of Japan Read by Mr. Norihiro Nakayama Deputy Minister of Land, Infrastructure and Transport

As Mr. Tetsuo Saito, the Minister of Land, Infrastructure, Transport and Tourism of Japan, urgently left Kumamoto last night for the crisis matters, I would like to deliver his statement on behalf of him.

The 4th Asia-Pacific Water Summit was held here in Kumamoto City at the Summit level with participation of Prime Ministers and Heads of State and Governments and Ministers of 29 countries in Asia-Pacific region, delegations of international organizations, from home and abroad including online participants. First of all, I would like to express my cordial gratitude on behalf of the Government of Japan in hosting this summit.

Due to the global spread of covid-19, we were forced to postpone this Summit, but I am extremely glad to have successfully welcomed the closing ceremony here today by inviting everyone to realize holding a hybrid meeting involving in-person/remote attendees with thoroughly taking appropriate infection prevention measures.

In addition, Kumamoto City has abundant groundwater and has been known for the "City of Water", and while receiving the "Blessings of Water." It is also familiar with "Severity and Fear of Water", being hit by many serious heavy rain disasters. I think it is very significant that we were able to hold this Summit on the theme of "Water" here.

In addition, the spread of covid-19 has severely impacted various fields of the Sustainable Development Goals (SDGs). Above all, "Water" is particularly related to a wide range of fields of the SDGs, and in order to achieve the goal by 2030, it is necessary to solve the water issues and each country should work together to accelerate the efforts. I am convinced that the discussions on achieving the SDGs at this Summit will strengthen cooperation with the Asia-Pacific region and will be a major step.

Well, at the opening ceremony of this Summit, I received a very valuable lecture from His Majesty the Emperor. Then, following "Kumamoto Declaration" at the Summit-level Meeting, with the main theme of "Water for Sustainable Development-Best Practice and Next Generation -", the Chair's Summary was released a while ago after active discussions in 9 parallel thematic sessions and 4 integration sessions. Based on it, I strongly hope that the "Actions" of each government and international organization will be steadily promoted.

Of course, at this Summit, Japan will steadily implement the "Kumamoto Initiative for Water" announced by Prime Minister Fumio Kishida for the sustainable development of the Asia-Pacific region. As the Minister of Land, Infrastructure, Transport and Tourism and Minister in charge of Water Cycle Policy of Japan, I will continue to actively contribute to the "promotion of initiatives in the climate change adaptation and mitigation measures" and the "promotion of initiatives forward improving the basic living environment" through such as Japan's advanced technologies and high-quality infrastructure development.

In addition, we will make efforts to reflect the results obtained through this Summit in discussions at various international conferences that will be held in the future, such as the United Nations Conference on the Medium

Comprehensive Review of "the Water Action Decade" to be held in March 2023, the SDG Summit, and the medium review of the Sendai Cooperation Framework for Disaster Risk Reduction.

At last, the closing ceremony of the 4th Asia-Pacific Water Summit is the last event. I would like to express my gratitude to all those who participated until the end of the Summit, and to pay tribute to all the stakeholders who have contributed to the operation of this summit, including the Executive Committee of the 4th Asia-Pacific Water Summit.

Finally, I will close my remarks wishing you good health and prosperity.

Thank you very much for your kind attention.

Closing Remarks



Mr. Kazufumi Onishi Mayor of Kumamoto City

On behalf of the organizers, I would like to say a few words at the closing of the 4th Asia-Pacific Water Summit.

For the past two days, the Water Summit has been held here at Kumamoto-Jo Hall. We were honored by the online presence of Their Majesties the Emperor and Empress, were joined in person by the heads of state and government from 11 overseas countries and regions, and welcomed many, many participants from Japan and overseas, including many online participants.

As an organizer, it is my greatest pleasure that the Water Summit has been held without incident.

The Water Summit was originally scheduled to be held in January 2019, but, with COVID-19 playing havoc the world over, it was subsequently postponed once before finally being held without a hitch in this new in-person and online format.

The successful conclusion of the Water Summit is entirely a result of more than three years of considerable preparation in cooperation with various relevant organizations, and I would like to express my sincere respect and gratitude to all those who were involved in organizing this event.

At the Water Summit, the leaders of each country, together with other participants, engaged in enthusiastic discussion on the theme: "Water for Sustainable Development -Best Practices and the Next Generation-."

It goes without saying that water problems are connected to a variety of complex issues, such as responding to disasters that are growing in intensity because of climate change, ensuring safe food and water, initiatives for public health, as well as social activities for the socially disadvantaged to ensure they are not left behind.

These two days, during which top leaders of each country shared their knowledge and worked to resolve such issues, were of tremendous significance.

In particular, the Kumamoto Declaration adopted yesterday presented a common understanding that, in view of the importance of water in recovering from the COVID-19 pandemic, we need to transform into a quality-oriented society that is resilient, sustainable, and inclusive by strengthening efforts for water sustainability.

The Kumamoto Declaration will play a large part in next year's UN Water Conference, and I am confident that it will provide a pathway of hope for the future of water not only in the Asia-Pacific region but throughout the world.

Following the conclusion of the Water Summit, Kumamoto City remains firmly committed to passing on to the next generation the bounties of nature and the rich groundwater nurtured by the tireless efforts of our ancestors. What's more, we will redouble our efforts to promote the creation of a sustainable society in which residents can live with peace of mind even in the face of increasingly severe floods, natural disasters, and other adversities.

I hope that you have enjoyed your stay in Kumamoto and that our preparations and hospitality have made your stay all the more memorable.

I am so pleased that this event overlapped with the ongoing Kumamoto Green Vision Expo National Urban Greening Fair, the largest flower and greenery festival in Japan, so that we could greet you with the water and greenery Kumamoto prides itself upon on full display. I dearly look forward to seeing all of you again.

In closing, I am sincerely grateful to everyone for all their efforts in organizing the 4th Asia-Pacific Water Summit and to all the participants from Japan and overseas.

Official Side Events

Symposium

Side Event 1: Suggestions from Elementary School Students in Kumamoto to the World! -Toward Zero Marine Litter -

Name of the Main Organizer

Umi-to-Nippon Project in Kumamoto

Name of Co-organizer

Kumamoto city education center

Time and Date

23 April, 2022, 13:10-14:40 (Japan Local Time)

Venue

Kumamoto-Jo Hall, Civic Hall and Online

Facilitator

SATOMI SHIBATA, Anchorperson, Kumamoto Asahi Broadcasting Co., Ltd.

Presenters

Hiyoshi Higashi Elementary School, Tamukaenishi Elementary School, Amakusa High School(Science club)

Number of local participants

150

Number of online participants

35

Related Side Event Overview

Kumamoto uses a bounty of groundwater and is supported by a rich ocean. However, the problem of marine debris is becoming a worldwide concern, and Kumamoto's oceans are no exception. Much of the marine debris is thought to be discarded by people living in towns and cities and washed into the ocean via rivers. Microplastics, in particular, are impossible to recover, and there are concerns about their impact on the ecosystem. The results of the elementary school students' studies on these issues will be shared with the world, and proposals will be made to reduce marine litter to zero.

Key Messages from the Event

Aiming for zero marine debris **(Declaration of zero marine debris)** "Pick up trash, don't throw away trash, choose one that can be used repeatedly".



Side Event 2: Kyushu in Asia and the Pacific Talks on Sustainable Life with Water by People Linked with the Water in this Area

Name of the Main Organizer

Kyushu Water Forum

Time and Date

23 April, 2022, 15:10-16:40 (Japan Local Time)

Room and Venue

Kumamoto-Jo Hall, Civic Hall and Online

Facilitator

Secretary-General, Kyushu Water Forum: Satoquo SEINO (Associate Professor, Graduate School of Engineering, Kyushu University)

Presenters

• Greetings

Chaireperson of Kyushu Water Forum Executive Committee: Masayoshi NUKI (Counselor, Kyushu Electric Power Company)

 Purpose of the Planning Secretary-General, Kyushu Water Forum: Satoquo SEINO

(Associate Professor, Graduate School of Engineering, Kyushu University)

- Good Practices of Canpanies and Citizens from Kyushu and the Nationwide Ryuuzou MAEHATAKE (Head, Mimigawa Hydro Power Development Office, Kyushu Electric Power Company), Yoshinori OONO (Executive Director, The Foundation for the Preservation of Green and Water Resources of Higo),: Hirotoshi HORINOUCHI (General Manager of Administration division, KIRISHIMA SHUZO Co., Ltd.),: Tetsuro UEYAMA (Group Manager, Business Development Department, Kyowakiden Industry Co., Ltd.), Kimikazu SAYAMA (Secretariat, Water and Greenery Association)
- Panel Discussion

Chair: Satoquo SEINO Panelist :

Sachiyo HOSHINO (Special Adviser to th Regional Representative UN-Habitat Regional Office for Asia and the Pacific), Mitsuyuki KAMOTO uperintendent, Regional Environment Office in Kyushu, Ministry of the Environment of Japan), Kimikazu SAYAMA (Secretariat, Water and Greenery Association)

Number of local participants

113

Number of online participants

52

Side Event Overview

Sustainable use of water and environmental conservation requires continuous efforts by a diverse group of people.

Kyushu is a region blessed with nature, and its people have lived a rich life in terms of history and culture.

Diverse people of many generations have been continuously working together to protect the health of water, overcome water-related disasters, and create social systems. In recent years, from the perspective of the SDGs, global initiatives from Kyushu have also become necessary.

This time, from the perspective of Kyushu in the Asia-Pacific region, people connected by water will discuss and consciously formulate a sustainable life with water, connecting the region, Japan, and the world.

Key Messages from the Event

Kyushu Water Forum Declaration

Contributing to a Sustainable Asia-Pacific Region with the Wisdom of Water in Kyushu

People of the world, especially those in the Asia-Pacific region, are facing a serious situation with regard to water. Almost all of the issues in the Asia-Pacific region are found in the Kyushu region.

Kyushu is an island with an Asian monsoon climate. It is affected by various weather conditions of the oceans and continents. Here, people have lived in harmony with various types of natural environment since ancient times. As a result, they have overcome disasters such as typhoons, floods and droughts. By wisely using the water provided by the diverse natural environment, we have developed high-level industries such as agriculture, forestry, fisheries, manufacturing and consumer goods industry.

For its geographical location, Kyushu is open to the Asia-Pacific region. The mindset of the people of Kyushu is toward the Asia-Pacific region. Kyushu has an advantage over other regions of Japan in transmitting lessons learned from past disasters and wisdom of wisely using water to the Asia-Pacific region.

This spirit and aspiration of Kyushu will attract the most advanced industries in the world to Kyushu.

The people of Kyushu will continue to work tirelessly for "water of the future". It is our hope that the people of the Asia-Pacific region join our efforts and that Kyushu develops into a hub for the development of the Asia-Pacific region. On the occasion of the 2022 Asia Pacific Water Summit in Kumamoto, we took a fresh look at the relationship between Kyushu and water. We can help people in the Asia-Pacific region to solve their water issues because we will work on our water issues with sincere efforts here in Kyushu.

We, the people of Kyushu, hope to contribute to the sustainable development of the Asia-Pacific region through our efforts for water in Kyushu.

We hereby declare our determination to do so.

April 23, 2022 Side-Event Participants of the Kyushu Water Forum


Side Event 3: Space Technologies for addressing Water Issues

Name of the Main Organizer

Japan Aerospace Exploration Agency

Time and Date

23 April 2022, 17:10-18:40 (Japan Local Time)

Room and Venue

Kumamoto-Jo Hall, Civic Hall and Online

Facilitators

Koji Terada, Director General, Space Technology Directorate I , JAXA Dr. Riko Oki, Director of Earth Observation Research Center, JAXA

Presenters

- Mr. HAYASHI Takahiro, Deputy Director-General, Research and Development Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan
- Honorable Rahm EMANUEL, Ambassador of the United States of America to Japan
- Mr. John C. TAYLOR, Principal Officer at the U.S. Consulate in Fukuoka, Japan
- Dr. Hiroshi YAMAKAWA, President, JAXA
- Dr. Karen St. GERMAN, Director, Earth Science Division, NASA, U.S.
- Mr. Stephen MEKE, Acting Principal Scientific Officer, National Weather Forecasting Centre, and RSMC Nadi, Fiji Meteorological Service, Fiji
- Mr. Socrates F. PAAT, Jr., Assistant Weather Services Chief, Hydro-Meteorology Division, Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), Philippines
- Dr. Mohamed RASMY, Senior Researcher, International Centre for Water Hazard and Risk Management under the auspices of UNESCO
- Mr. Keitaro KIMURA, Director for Statistics Planning, Statistics Planning Division, Minister's Office, Ministry of Agriculture, Forestry and Fisheries, Japan
- Ms. Neeta POKHREL, Chief of Water Sector Group, Sustainable Development and Climate Change Department, Asian Development Bank (ADB)

Number of local participants

82

Number of online participants

11

Side Event Overview

Mr. HAYASHI Takahiro, Deputy Director-General of MEXT delivered Opening Remarks stating that stable and continuous acquisition and accumulation of satellite data will contribute to solutions for water-related issues such as disaster damage reduction and food security.

Ambassador Rahm EMANUEL, U.S. Ambassador to Japan, and Mr. John C. TAYLOR, Principal Officer at the U.S. Consulate in Fukuoka, were invited for the keynote speeches addressing the importance of cooperation among countries.

In Session 1: "Overview of space technologies", Dr. Hiroshi YAMAKAWA, President of JAXA, and Dr. Karen St. GERMAN, Director of Earth Science Division of NASA, introduced their satellite missions contributing to water-related issues.

In Session 2: "Panel Discussion: Addressing for Resolution of Water Issues by use of Earth Observation Data", moderated by Dr. Riko OKI, Director of Earth Observation Research Center of JAXA, 5 panelists were invited to explain their achievements, and discuss what we need to tackle the water-related issues.

Key Messages from the Event

In the Kumamoto Declaration, the provision of science and technology to solve water-related issues is strongly required to strengthen the development of quality infrastructure for the water sector. To respond to the request, JAXA will support strengthening the Earth Observation network and promote the significance and application of satellite observation to water-related issues, continuous satellite observation, and use of satellite data.



Side Event 4: Kumamoto Forum on What You Can Do For "River Basin Disaster Resilience and Sustainability by All" ~"Urban planning" and "Capacity building" for intensifying water disaster~

Name of the Main Organizer

Ministry of Land, Infrastructure, Transport and Tourism, Kyushu Regional Development Bureau, Kumamoto River and National Road Office

Time and Date 24 April, 2022, 10:30-12:00 (Japan Local Time)

Room and Venue

Kumamoto-Jo Hall, Civic Hall and Online

Facilitator

Toshio Koike ,the Director of Public Works Research Institute, International Centre for Water Hazard and Risk Management (ICHARM).

Presenters

Toshio Koike, the Director of Public Works Research Institute, International Centre for Water Hazard and Risk Management (ICHARM).

Kazunori Arita, TKU Kumamoto Telecasting press bureau's deputy manager. The managing editor and reporter, disaster prevention expert.

Masakatsu Ikeda, A person experienced 1953 flood (Shirakawa River).

Harumi Takenaga, A disaster prevention education coordinator.

Yosuke Tanaka, The chairperson of Midorikawa River basin meeting.

Hotaru Hayata, A mom weather forecaster, disaster prevention expert.

Number of local participants

103

Number of online participants

39

Side Event Overview

① Lecture: Climate change and the Transition to "River Basin Disaster Resilience and Sustainability by All" policy Introduce climate change, Flood Damages, "River Basin Disaster Resilience and Sustainability by All" policy, and the various roles of citizen's in the policy.

②Panel discussion: Experience around Flood and Joining to "River Basin Disaster Resilience and Sustainability by All" from tomorrow

Introduce flood experience, disaster prevention education, local exchange activity, on-site training, and disaster prevention news, etc in Kumamoto. And think about the citizen's approach for the future.

Key Messages from the Event

- In response to the increasing risk of water-related disasters, it is necessary to engage in "River Basin Disaster Resilience and Sustainability by All".
- In disaster prevention activities, it is important for citizens to learn from the experiences of disasters and develop a cycle of action by adding ideas considering a regional and generational context.
- Various meaningful experiences and initiatives in Kumamoto were introduced, such as passing on the tragic flood experience, combining a disaster prevention theme with games and environmental learning, raising awareness of the river as a local treasure, collaboration among active organizations and generations and partnership among media organizations that compete each other.
- We hope that these initiatives inspire the citizens to take part in "River Basin Disaster Resilience and Sustainability by All". We also expect that their efforts lead to the formation of a sustainable, high-quality society.



Side Event 5: "Kumamoto, Land of Water" Symposium ~Groundwater Preservation Efforts in the Kumamoto Area~

Name of the Main Organizer

Executive Committee of the "Kumamoto, Land of Water" Symposium

Time and Date

24 April, 2022, 12:30-14:00 (Japan Local Time)

Room and Venue

Kumamoto-Jo Hall, Civic Hall and Online

Facilitator

Jun Shimada, Professor Emeritus, Specially-Appointed Professor, Faculty of Advanced Science and Technology, Kumamoto University

Presenters

- · Tetsuya Yoshida, Kumamoto Prefectural Government Environmental Policy Promotion Division
- · Akira Hamano, City of Kumamoto Water conservation section
- · Keiichi Shinno, Kumamoto Groundwater Foundation
- · Yoshinori Oono, The Foundation for the Preservation of Green and Water Resources of Higo

Number of local participants

114

Number of online participants

71

Side Event Overview

In Kumamoto City and its surrounding municipalities, almost 100% of the domestic water is supplied from groundwater. We would like to explain why there exists so rich groundwater in Kumamoto Area and the unique hydrogeological structure. We would also like to introduce the efforts of the citizens, the private sector, and Kumamoto City and Prefectural government to conserve groundwater so that we can pass on to future generations the blessing of our precious groundwater.

Key Messages from the Event

Activities that raise awareness to the invisible groundwater flow system play a very important role. These activities allow residents living above groundwater aquifer to realize its importance and only then can they understand and cooperate to make the necessary efforts to achieve a sustainable use of groundwater.

In the Kumamoto area, there is a wide range of structures and dynamic activities promoting a sustainable use of groundwater. Those structures and activities by local governments and environmental organizations are going ahead of the national government, it is our belief that the model proposed in Kumamoto can be shared nationally and internationally.

We hope that this summit will be the opportunity to convey to Japan and overseas the efforts and challenges to

preserve a sustainable use of groundwater that Kumamoto has taken on.



Keynote speech

Panel discussion

Side Event 6: The role of forests in contributing to water infrastructure

Name of the Main Organizer

Forestry Agency

Name of Supporter

Japan Forest Conservation Association

Time and Date 24 April, 2022, 14:15-18:00 (Japan Local Time)

Room and Venue Kumamoto-Jo Hall, Civic Hall and Online

Facilitator

Takashi Gomi Professor, Graduate School of Agriculture, Tokyo University of Agriculture and Technology

Presenters

[Greetings from the Organizer] Zentaro Kosaka Director-General, Private Forest Department, Forestry Agency [Information] Kenji Hayashi Senior Planning Officer, Conservation Division, Forestry Agency [Keynote Speech] Makoto Tani Honorary Professor, Kyoto University [Case Study] Yoshinori Shinohara Associate Professor, Faculty of Agriculture, University of Miyazaki Shinichi Onodera Professor, Graduate School of Advanced Science and Technology, Hiroshima University Ryuichiro Maruyama General Manager of CSV Promotion Department, Coca-Cola Bottlers Japan Inc. Corporate Communication Supervisory Department, Management Reform Headquarters Nang Yu War Doctoral Student, Graduate School of Advanced Science and Engineering, Hiroshima University Forest Department, Ministry of Natural Resources and Environmental Conservation, Myanmar [Panel Discussion] Facilitator: Takashi Gomi Professor, Graduate School of Agriculture, Tokyo University of Agriculture and Technology Panelists: All speakers

[Closing Remarks] Yorimitsu Tsumoto Executive Director, Japan Forest Conservation Association

Number of local participants

96

Number of online participants

94

Side Event Overview

The following presentations were given by each speaker:

Policy for Fulfillment of the Water Resource Conservation Function of Forests by Forestry Agency (Mr. Hayashi) Forest and Water - From a viewpoint of the long-life characteristics of tree species (Honorary Prof. Tani) Management of Coniferous Plantations and Water Resources, Soil Erosion, and Landslide Disasters (Assoc. prof. Shinohara)

Evaluating Water Resource Conservation and Other Forest Functions: Estimating Water, Soil, and Nutrient Runoffs with the SWAT Model (Prof. Onodera)

Water resource conservation activities in the Coca-Cola system (Mr. Maruyama)

Estimation of Soil Erosion under Major Land Covers of Inle Watershed in Shan State, Myanmar (Ms. Nang Yu War) The role of forests in "development of a system for groundwater use during disasters, critical water shortages, and other emergencies" (Prof. Gomi)

Toward Further Realization of the Water Source Recharge Function of Forests (Panel Discussion: All speakers)

Key Messages from the Event

The latest domestic and international research and private sector initiatives related to the water resource conservation and disaster prevention functions of forests were introduced. The importance of further promotion of forest maintenance and conservation, research and development, as well as cooperation with foreign countries and private sectors, was confirmed and informed widely.







The panel Discussion by all speakers

Local Exhibition

	Exhibitor	Theme	
Infrastructure Systems & Technology Area			
1	Ministry of Land, Infrastructure, Transport and Tourism, Kyushu Regional Development Bureau	Water Cycle in Kyushu	
2	TAISEI CORPORATION	Approach about the water infrastructure business of TAISEI CORPORATION	
3	Ministry of Land, Infrastructure, Transport and Tourism/ Japan Water Agency	Sustainable Water Resources Management and Cooperation for Existing Dam Upgrading Project	
4	Jisedainotameni Ganbarokai & Yatsushiro River and National Highway Office	History and Environment of the Kuma River Basin and the Torrential Disaster of July 2020	
5	Smart Energy Kumamoto Corporation	The local power business of Smart Energy Kumamoto Corporation	
6	WATER WELL DRILLING COMPANY ASSOCIATION OF JAPAN KYUSHU-BRANCH	Back up water for disasters	
7	TEQUANAUTS Co., Ltd. (Tobishima Corporation Group Company)	Efforts to protect the water environment with aquatic plant removal vessels	
8	Azuma Solar Co., Ltd	From Kumamoto to the world We deliver safe water with solar heat.	
9	Ministry of Land, Infrastructure, Transport and Tourism, Kantou Regional Development Bureau, Arakawa-Karyu River Office	The advanced river management in Arakawa River Basin	
10	SIP "Strengthening of National Resilience Against Natural Disasters"	SIP National Resilience breaks up a safe and secure society	
Kumamoto's Natural Environment Area			
11	Kumamoto City Water and Sewerage Service Corporation	Compare the water of the world with the water of Kumamoto	
12	Aso UNESCO Global Geopark	Kumamoto's water nurtured by the catastrophic eruption of Aso	
13	Land Improvement District Council for the Shirakawa River's Middle Basin Network for Fostering Abundant Groundwater	Paddy fields in the middle reaches of the Shirakawa River nurture groundwater in the Kumamoto area	
14	Working Group for Water and Its Environment	Mashiki Winter Paddy Flooding & Suntory Holdings Mizu no Kuni Support Project	
15	Non-Profit Organization Kumamoto Mirai Network / Organic Farming Hyakusouen	What shoud we do NOW? In order to make our organic agriculture sustainable, which will help protect life and water.	
Efforts for the Future Area			
16	Non-Profit Organization Discovery Kumamoto	Sustainable Development Support Program— Introducing the groundwater in Kumamoto to the world.	
17	Center for Water Cycle, Marine Environment and Disaster Management, Kumamoto University	Introduction of studies on water circulation and works for the development of Kumamoto	
18	Youth Water Forum Kumamoto	Youth Water Forum Kumamoto: Introducing videos and activities by Japanese high school students	
19	Youth Water Forum Kyushu	Introducing videos and activities by Japanese high school students who applied to Youth Water Forum Kyushu	

Water Issues Seen Around the World and from Space Area			
20	Teco-Japan (Taipei Economic and Cultural Representative Office in Japan)	The Sustainability of Subsurface Water —Taiwan's Underground Weir "Erfeng Canal"	
21	Japan Aerospace Exploration Agency (JAXA)	Space Technologies for addressing Water Issues	
Culture, Research & Sustainability Area			
22	Yasaka Kappa Club(OITA Prefecture)	Take a Look at Oita's Water Protectors!	
23	Shiga Prefecture	Shiga's Efforts to Protect Lake Biwa's Water Environment	
24	Coca-Cola Bottlers Japan Inc.	Water Resources Conservation Activities and World Without Waste in the Coca-Cola System	
25	Mizkan Center for Water Culture	"Being grateful for water and raising awareness about its importance" Mizkan Center for Water Culture	

Online Exhibition

	Exhibitor	
1	Youth Water Forum Kyushu (Japan Water Forum)	
2	Kumamoto City	
3	HICOM WATER	
4	Hirata Corporation	
5	KAJIMA CORPORATION	
6	OBAYASHI CORPORATION	
7	SHIMIZU CORPORATION	
8	OYO Corporation	
9	Takenaka Civil Engineering & Construction Co., Ltd.	
10	JFE Enginnering corporation	
11	Fujita Corporation	
12	Japan Institute of Wastewater Engineering and Technology	
13	Kumagai Gumi Co.,Ltd.	
14	MAEDA CORPORATION	
15	SATO KOGYO Co., Ltd.	
16	Sumitomo Mitsui Construction Co., Ltd.	
17	TOA CORPORATION	
18	Tequanauts Inc. (Tobishima Corporation group company)	
19	TOKYU CONSTRUCTION CO., LTD.	
20	Tokyo Electron Limited.	
21	Awa Paper & Technological Company inc.	
22	Japan Global Center for Urban Sanitation	
23	Ministry of Land, Infrastructure, Transport and Tourism, Kantou Regional Development Bureau, Arakawa-Karyu River Office	
24	Ministry of Land, Infrastructure, Transport and Tourism, Kyushu Regional Development Bureau	
25	United Nations University Institute for the Advanced Study of Sustainability	
26	Pacific Community	

Related Events

1. Special Sponcership from CELMO CO., LTD: Kumamoto Spring Uekiichi

Name of the Main Organizer

Kumamoto Spring Uekiichi Executive Committee (Kumamoto Uekiichi Promotion Association/Kumamoto city)

Time and Date

1 February, 2022 - 11 March, 2022

Venue

Shirakawa riverbed, east side of JR Kumamoto Station

Number of local participants

82,000

Related Side Event Overview

The origin of the Kumamoto Spring Uekiichi is said to have been more than 440 years ago, during the Tenshou era, when Lord Chikamasa Jo, the lord of Kumamoto Castle, held a market to liven up the community and provide fun for children. This event has been passed down to the present day and has become a major early spring event with a history of over 440 years.

A wide variety of garden plants, bonsai trees, and flower seedlings of all sizes are sold at the festival. Succulents, which are popular among the younger generation, and air plants that can be grown without soil are also sold.

Key Messages from the Event

Citizen oneself is energized and regains green to wait and is connected for activation of the regional economy in its turn by holding the garden plant market where has been got close to to many citizens as a spring pastime that gives poetic charm of Kumamoto.





2. Symposium on creating liveliness by utilizing the waterfront in Kumamoto

Name of the Main Organizer

Ministry of Land, Infrastructure, Transport and Tourism Kyushu Regional Development Bureau

Time and Date

12 February, 2022, 13:30-15:30 (Japan Local Time)

Venue

Kumamoto-Jo Hall 3rd Floor A3 and A4 meeting rooms

Coordinator

Panel Discussion: Naoto Tanaka (Associate Professor, Kumamoto Innovative Development Organization, Kumamoto University)

Presenters

Keynote Speech/Panelist: Yuji Hoshino (Associate Professor, Center for Water Cycle, Marine Environment and Disaster Management, Kumamoto University)

Panelists (Panel Discussion): Ryosuke Minami (President, Shiromimachi Zeneikai), Jason Morgan (CEO, Shirakawa Banks), Kazunori Hoshiko (Mayor, Chuo-ku, Kumamoto City), Masafumi Uemura (Director, River Environment Division, River Department, Kyushu Regional Development Bureau, Ministry of Land, Infrastructure, Transport and Tourism)

Number of local participants

67

Number of online participants

67

Related Side Event Overview

This symposium focuses on the effective use of river space and regional revitalization, as represented by the "Green Section" of the Shirakawa River, which runs through the urban area of Kumamoto City. Keynote speeches are given on the past flood control in the Shirakawa River and the utilization of river space in recent years, and panel discussions are held on the utilization of river space by private sector vitality and the future prospects of city planning by inviting regional representatives of the private sector and city planning, experts, and government as panelists.

Key Messages from the Event

We are still experiencing serious flood damage, such as the torrential rains in July 2020, and we are now at a point where we need to change the direction of flood control throughout the entire watershed to cope with climate change caused by global warming. In the future, it will be necessary for all parties involved in the watershed to work together to implement flood control measures for the entire watershed, and the participation of residents will be important. To achieve this, we believe that getting familiar with the waterside during normal times will lead to thinking about and understanding the river.

We hope that the past efforts of the "Green Section" will help Kumamoto citizens become more interested in the

Shirakawa River (waterfront) and deepen their understanding of the importance of water.



3. Spring Kumamoto Castle Festival

Name of the Main Organizer

Kumamoto Castle Festival Steering Committee

Time and Date

12-13, 19-21, 26-27, March, 2022

Venue

Kumamoto Castle Ninomaru Square Special Stage

Number of local participants

18,116

Related Side Event Overview

In addition to stage events centering on traditional events that have been held continuously at Kumamoto Castle, such as kobudo performances and taiko drumming performances, "The Spirit of Samurai" and "Kyushu Gassai" will be performed by Busho-Tai from all over Japan.

Key Messages from the Event

Kumamoto Castle sends out a message of recovery from the earthquake disaster.



4. Postmaster recommended tour, Follow the roots of Kumamoto, a world-class groundwater city

Name of the Main Organizer

Mifuneueno Post Office

Time and Date

23 March - 24 May, 2022

Venue Kashima Town, Mifune Town

Facilitator Mifuneueno Postmaster

Presenters Kashima Postmaster, Rokka Postmaster

Number of online participants

29

Related Side Event Overview

Using "Spot Tour"(digital sightseeing tour app), we departed the Rokka springs in Kashima-town, I went to the Yoshimuta water source in Mifune-town while tracing the spots related to water upstream.

Key Messages from the Event

The abundant water of Kumamoto is created by Aso volcano and the symbiosis between nature and humans.



5. ADBI-Stanford University Country Policy Dialogue on Innovative Solutions for Achieving City-wide Inclusive Sanitation (CWIS)

Name of the Main Organizer

Asian Development Bank Institute

Name of Co-organizer

Stanford University

Time and Date

6 April 2022, 9:30-17:10 (Japan Local Time)

Venue Online

Facilitators Hiroshi Takami, Seungju Baek, Megumi Muto

Presenters

Naohiro Kitano, Sujatha Srinivasan, Patrick Lester Ty, Kazushi Hashimoto, Michael Bennon

Number of online participants

53 participants from Philippines, Indonesia, Bangladesh, Pakistan, Japan, US, UK, and several other countries

Related Side Event Overview

ADBI and Stanford University, in cooperation with the Bill & Melinda Gates Foundation (BMGF), the Asia Pacific Water Forum, and development partners (ADB, JICA, Worldbank, IsDB, and others), hosted a virtual policy dialogue on 6 April 2022 to share expert knowledge and discuss key issues pertaining to city-wide inclusive sanitation (CWIS).

The event was attended by government officials of Indonesia, Bangladesh, the Philippines, and Pakistan, along with key persons at bilateral and multilateral development partners (Ministry of Finance Japan, ADB, World Bank, JICA, IsDB, BMGF, UK Water Aid, etc.) and knowledge partners (World Toilet Organisation, CEPT University, Japan Sanitation Consortium, EAWAG, Japan Education Center of Environmental Sanitation). The main objective of the policy dialogue was to strengthen "buy-in and demand" for future investments in CWIS among governments.

The event opened with a presentation from Professor Naohiro Kitano (Waseda University) on Japan's development experience and official development assistance (ODA) to the People's Republic of China (PRC). This session focused on good practices in water and sanitation investments that could be adopted by other developing member countries. The presentation explained how sanitation investments, particularly those such as the Gaobeidian wastewater treatment project, can effectively reach the poor and foster other positive outcomes. Professor Kitano added that long-term foreign loans in the PRC had made way for institutional reforms and corporate governance structures. Moreover, they help fund the acquisition of advanced equipment and technologies and the training of technical experts. As a result, the PRC's wastewater treatment rate has increased

to over 95%, and now the PRC has the world's largest wastewater treatment capacity, with over 200 million cubic meters per day. Event participants discussed challenges, solutions, and best practices in international aid, policy reform, financing scheme implementation, and capacity building in their respective operations.

The second session was chaired by Dr Megumi Muto (JICA) and discussed accountability mechanisms, institutional arrangements, and impact evaluation for CWIS. The three speakers in this session were Kazushi Hashimoto (Japan Sanitation Consortium), Patrick Lester Ty (Metropolitan Waterworks and Sewerage System - MWSS), and Sujatha Srinivasan (Krea University). They discussed how accountability can be measured and who should be held accountable for sanitation services delivery. They noted that there are many key players in this area and that it is imperative to ensure an institution is accountable while simultaneously achieving key performance indicators (KPIs). As an example, Ty raised an example of how MWSS could expand a served population from 5.82 million people to 17.21 million people with an astonishing sanitation coverage from 1% to 82%. Ty added that privatization played a big role in the MWSS case but emphasized the importance of clear KPIs and business efficiency measures (BEMs) to ensure the quality and expansion of MWSS services to the people of Manila. The session stressed that upholding KPIs and BEMs are essential to close sanitation service delivery gaps.

The last session was a policy dialogue in which participants discussed bottlenecks for boosting sanitation investments and institutional strategies for accelerating sanitation investments. The policy dialogue followed an interactive format, with an expert TV moderator (Mitzi Borromeo, former CNN host) anchoring the discussion. ADBI Deputy Dean Seungju Baek opened the session and welcomed government participants. Professor Michael Bennon of Stanford University's presentation called for a new development institution to address the many barriers to increased sanitation investment where it is needed most. He referred to the new institution as the Global Sanitation Finance Institution (GSFI) as a placeholder. He explained that the GSFI is designed with two important conditions in mind: (1) It should be based on a clear appraisal of the challenges inherent in sanitation sector investments; and (2) It should aim to help public sponsors develop projects with commercial or non-concessional sponsors or service providers to align long-term incentives. Prof Bennon elaborated the purpose and need for this new institution, and described its key functions, stakeholders, objectives, organization, and governance.

Active discussions were enriched by follow-up responses from senior representatives of development partners such as the Asian Development Bank (ADB), Japan International Cooperation Agency (JICA), Ministry of Land, Infrastructure and Tourism (MLIT) of Japan, and Bill & Melinda Gates Foundation (BMGF). They showed interest in Prof Bennon's proposed GSFI and recommendations to the Kumamoto Asia Pacific Water Summit. These development partners noted that they would encourage collaboration with all stakeholders in-line with the Asia Pacific Water Forum's mission to build capacity and enhance cooperation while boosting investment at the regional level and beyond. Additionally, these development partners showed interest in in the establishment of the GSFI to help public sponsors develop projects with commercial or non-concessional sponsors to align long-term incentives.

Key Messages from the Event

The key messages from the policy dialogue include a proposal for a new development institution to address the many barriers to increased sanitation investment where it is needed most. The new institution is referred to as the Global Sanitation Finance Institution (GSFI) in the Policy Note, as a placeholder. The GSFI is designed with two important conditions:

- It should be based on a clear appraisal of the challenges inherent in investments in the sanitation sector; and
- It should aim to help public sponsors develop projects with commercial or non-concessional sponsors or service providers to align long-term incentives

The Policy Note includes the purpose and need for this new institution, and describes its key functions, stakeholders, objectives, organization, and governance. The Policy Note is intended to serve as a starting point for a broader discussion of institutional solutions to address remaining global sanitation needs.

Associated development partners mentioned that they would encourage collaboration with all stakeholders in-line with Asia Pacific Water Forum's mission to build capacity and enhance cooperation while boosting investment at the regional level and beyond. Additionally, the development partners showed interest in the establishment of the GSFI proposed by Stanford University Prof Michael Bennon to help public sponsors develop projects with commercial or non-concessional sponsors to align long-term incentives.





6. World Heritage Irrigation Structures Summit in Kumamoto

Name of the Main Organizer

World Heritage Irrigation Structures Summit in Kumamoto Executive Committee

Time and Date

11-12 April, 2022

Venue

KUMAMOTO-JO HALL Civic Hall and others

Facilitators

Keynote speech

Speaker : Prof. Yohei Sato(Professor Emeritus, University of Tokyo/Former Chairman of the ICID Japan National Committee)

Panel discussion

coordinator:

Mr. Yuji Oka (Representative Director of Moyai Works Co., Ltd.)

Dr. Takehide Hama (Associate Professor, Graduate School of Agriculture, Kyoto University)

Presenters

Panelists:

Dr. Naoto Tanaka (Associate Professor, Kumamoto Innovative Development Organization, Kumamoto University) Mr. Masaaki Watanabe (Director of Rural Development Bureau, Agriculture, Forestry and Fisheries Department, Kumamoto Prefecture)

Ms. Misuzu Shimoda (Farmer/Yamato Town Regional Revitalization Advisor)

Mr. Jason Morgan (Shirakawa Banks CEO)

High school students belonging to Youth Water Forum Kumamoto in Kumamoto Prefecture

Number of local participants

205 participants

Related Side Event Overview

Irrigation structures are an important regional resource that supports the productivity and multi-functionality of agriculture. They supply water essential for agricultural production to agricultural land, contribute to the region's water cycle, and form a good rural landscape.

It is an extremely important issue to re-evaluate the value of irrigation structures, which are treasures of the region, and conservation activities that have been carried out for many years, and to convey them to future generations in good condition. All over the world, efforts for the conservation and utilization of irrigation structures are being actively implemented, including active registration in the "World Heritage Irrigation Structures" that are promoted by ICID.

From this kind of circumstance, we will hold the "World Heritage Irrigation Structure Summit in Kumamoto" to improve the momentum for promoting the sustainable conservation and utilization of irrigation structures.

Key Messages from the Event

Declaration

- We would like to express our respect and gratitude for the fact that irrigation facilities in Japan have been built with the wisdom and extraordinary efforts of our predecessors, maintained and managed by the tireless activities of residents, mainly farmers, management organizations, and have been handed down from generation to generation until the present day.
- We recognize that irrigation facilities are important local resources that have supported local society, culture, and the affluent lives of residents, as they provide farmland with water that is indispensable for agricultural production and serve as a foundation for the multi-functionality of agriculture.
- As the ideal way of water use is being discussed worldwide, we will reevaluate the sustainable form of water use that balances advanced water use and groundwater recharge, which is achieved through Japan's irrigation technologies and facilities and the irrigated agriculture based on them, and disseminate its significance and value widely both domestically and internationally.
- As people involved with world-class irrigation facilities, while looking to the future together with those who will lead the next generation, and through an exchange, cooperation, and mutual study with relevant organizations, we will reaffirm the diversity and uniqueness of the facilities and actively promote initiatives for the sustainable conservation and utilization of irrigation facilities, including examinations from multiple perspectives.



Keynote speech

Panel discussion

7. Kumamoto Junior Chamber Youth Forum

Name of the Main Organizer

Kumamoto Junior Chamber

Name of Co-organizer

Tanaka Xun

Time and Date

23 April, 2022

Venue Castle Kumamoto JCI Secretariat (hybrid)

Facilitator

Tanaka Xun

Presenters

Tanaka Xun

Number of local participants 20

Number of online participants

Related Side Event Overview

International Youth Forum

Key Messages from the Event

Participating in the international conference this time allowed me to think about environmental issues anew. I think it is necessary to continue to provide this opportunity to members of the younger generation, as they do not often have the opportunity to learn about issues overseas.





8. Special Performance "Kumamoto Meisui Monogatari (Kumamoto's Famous Water Story)"

Name of the Main Organizer

Kumamoto Castle Museum Wakuwakuza

Time and Date

23-24, April, 2022

Venue Sakuranobaba Josaien Kumamoto Castle Museum Wakuwakuza

Number of local participants

April 23(SAT): 65 April 24(SUN): 92

Related Side Event Overview

We offer the short play which introduces some beautiful water spots in Kumamoto. We hope you all enjoy this exclusive live show in Wakuwakuza.

Key Messages from the Event

Through the skit, we want visitors to learn about Kumamoto's water attractions and actually visit them to deepen their understanding of "Kumamoto's water".



9. Shirakawa Night Market

Name of the Main Organizer

Shirakawa Midori no Kukan Park Promotion Council

Time and Date

23 April, 2022, 16:00-22:00 (Japan Local Time)

Venue

Shirakawa Midori no Kukan Park (1-5-6 Shinyashiki, Chuo Ward, Kumamoto City, Kumamoto Prefecture)

Number of local participants

480

Related Side Event Overview

The Shirakawa Night Market is a part of the Mizbering Project, the aim of which is to better utilize water-adjacent land. This night market brings together ordinary citizens, businesses, and local government and is held by the Shirakawa Midori no Kukan Park Promotion Council, which aims to invigorate the local area through use of Midori no Kukan Park.

Key Messages from the Event

Flags promoting the collaboration with the Water Summit were set up at the venue.



10. Publicness of Water ~Groundwater as a common and Chemical pollution~

Name of the Main Organizer

General incorporated foundation Zensuidokaikan Water information center

Time and Date

24 April, 2022, 9:30-11:30 (Japan Local Time)

Venue

Kumamoto Prefectural Citizens Exchange Center Parea

Facilitator Takafumi Tsujitani

Presenters Takenori Ueda

Number of local participants 26

Number of online participants

4

Related Side Event Overview

This event consists of two parts. In the first part, The Bureau of Waterworks and Sewerage Kumamoto City will give a report regarding the earthquake in Kumamoto prefecture in 2016, what they had worked on to recover and the point of the groundwater management they learned from the disaster. In the second part, Mr. Takenori, Ueda who is a chemical journalist will have a lecture about chemical pollution, mainly PFAS, which has spread to various part of Japan over many years and whose adverse effects have come to recognized last few years. We hold this event to let you know that our "water" is always next to danger.

Key Messages from the Event

Groundwater is vulnerable to external contamination such as chemical pollution, and once contaminated, it becomes very difficult to remove it. It is natural to take measures to prevent contamination, but if it is contaminated by any chance, it is important to investigate actively and find risks rather than covering it up. Like the COVID-19, we must not be a society in which people who get sick because of chemical pollution are abandoned. It is important to make it a society that actively saves.



11. School of Forest in Yoshimuta

Name of the Main Organizer

Specified non-profit corporation AikyoYoshimuta

Time and Date

1 May, 2022

Venue Yoshimuta water source, Yoshimuta national forest

Facilitator Katsunari Takamatsu

Presenter Hidekazu Watanabe

Number of local participants

60

Related Side Event Overview

We departed from the Yoshimuta water source at the foot of Aso volcano, proceeded through the Yoshimuta national forest, and headed for the forest of giant trees planted in the Edo period. In the forest, we held a workshop to learn about forest and water, and had lunch with local wild plants dishes.

Key Messages from the Event

The Yoshimuta water source is produced by the Yoshimuta national forest, which is an artificial forest. It was planted about 200 years ago to create an irrigation canal so that rice could be cultivated in Yoshimuta. It still brings many blessings such as rice and vegetables to Yoshimuta.



12. The Youth Participation for 4th Asia-Pacific Water Summit, and The next development of "Practice and Inheritance"

Name of the Main Organizer

Kyushu University Umitsunagi

Time and Date

15 May, 2022, 14:00-16:00 (Japan Local Time)

Venue

Kyushu University Nishijin Plaza

Facilitator

Satoko Seino

Presenters

Adviser JWF Representative Director Kotaro Takemura [Panelist] Kyushu University Graduate School of Engineering Collaborative Researcher Yuri Mito Nagasaki-Higashi hischool PlastiKUJIRA Sakiko Horikawa Linden Hall school Hi school Maria Tuduiki Kyushu University (Jonan hischool OB) Kazuhito Murohara Nogata hischool Kyoji Koyama Hita hischol Teacher Shuhei Higashi Sanyo hischool Teacher Takashi Inoue Nita primary school Teacher Hidefumi Hatashima For The Next Generation Group Yukari Matsuura mai PLA Shinta Mori mai PLA Kota Miyazaki Japan Water Agency Tokuyama Dam management office Hiroshi Noguchi

Number of local participants

20

Number of online participants 41

Related Side Event Overview

Lecture and panel discussion.

The theme of the 4th Asia-Pacific Water Summit was "Practice and Inheritance". We felt it was important to raise awareness throughout society that youth play an important role in water issues. Youth from high school and university students in Kyushu played a remarkable role in the youth activities, including video production, discussions, youth breakout sessions, and the Youth Water Forum Kyushu booth, where they communicated and interacted with each other. We held a preliminary debriefing session on this event.

We had a free discussion about what the high school students who participated in this event felt and what they wanted us to do and what we need to do in response.

Key Messages from the Event

We have a role to pass on the current water problems to the next generation. We had a free discussion, about what the high school students who participated this time felt, what we wanted, and what we had to do.



13. UNEP-ILEC International Webinar -Taking a Major Step toward Mainstreaming Lakes-

Name of the Main Organizer

International Lake Environment Committee Foundation

Time and Date

18 May, 2022, 15:00-17:00 (Japan Local Time)

Venue Online (ZOOM)

Facilitator

ILEC Secretariat / Adelina Santos-Borja, a member of the ILEC Scientific Committee

Presenters

The Governor of Shiga Prefecture / ILEC President Dr.Kazuhiko Takemoto / Mr. Patrick M'Mayi, Science Division, UNEP / Dr. Saparis Soedarjanto, Director of Planning and Supervision of Watershed Management, the Ministry of Environment and Forestry Republic of Indonesia / Ms. Inge Retnowati, Director of Inland Waters and Mangrove Rehabilitation, the Ministry of Environment and Forestry Republic of Indonesia / Dr. Kotaro Kawamata, Director, Water Environment Division, the Ministry of the Environment / Dr. Kenzo Hiroki, Professor at National Graduate Institute for Policy Studies (GRIPS) and the director of ILEC / Dr. Walter Rast, the chair of the ILEC Scientific committee / Dr. Masahisa Nakamura, the Vice President of ILEC

Number of online participants

135 participants from 20 countries

Related Side Event Overview

ILEC and the United Nations Environment Programme (UNEP), in partnership with relevant UN agencies, national governments, and civic and industrial sectors, have been calling for action toward "Mainstreaming Lakes and other Lentic Waters in the Global Water Agenda and SDGs".

Thanks to the efforts of all member countries and the concerned international organizations, including ILEC, the draft resolution prepared by the Indonesian Government entitled "Sustainable Lake Management" was unanimously adopted at the 5th Session of the United Nations Environment Assembly (UNEA5.2).

This International Webinar focused on sharing the overview of the resolution, seeking directions and challenges in mainstreaming lakes, and building the momentum toward accelerating the joint national, regional, and the global action, welcoming the representatives from Indonesia government, Japanese government and UNEP etc.

Key Messages from the Event

The need for a clear message that people, including those who are not familiar with lakes, and especially policy makers, can understand and accept the importance of lakes. (The role of lakes in mitigating the effects of climate change and natural disasters, which is one of their coordinating functions; the establishment of World Lake Day at the UN General Assembly as a symbolic initiative; and the dissemination of activities to mainstream lakes in

global water agenda using water-related conferences and forums.)

The importance and potential of the role of lake basin stakeholders, especially local residents. (As examples, the Basic Act on Water Cycle and other water-related laws in Japan, and efforts by Shiga Prefecture)



14. Symposium on Grasslands and Water of Aso "Is there a close connection between Water in Kumamoto and The Grasslands of Aso?"

Name of the Main Organizer

Aso Grassland Restoration Committee

Time and Date

21 May, 2022, 13:30-16:00 (Japan Local Time)

Venue

Kumamoto City Hall, Large Conference Room

Facilitator

Representative of Aso Grassland Restoration Committee, Yoshitaka Takahashi

Presenters

Distinguished Professor of Prefectural University of Kumamoto, Shimatani Yukihiro/Mayor of Aso-city, Sato Yoshioki/Representative of Bokuya Kumiai/Representative of Noyaki (Controlled burning) Volunteers/

Number of local participants

45

Number of online participants

39

Related Side Event Overview

 Raise awareness among residents in downstream areas about how they benefit from the groundwater recharge properties of Aso Grasslands, with the aim of getting them involved in conservation efforts.
 Showcase ongoing research into the graoundwater recharge properties of grasslands and the conservation activities of the Aso Grassland Restoration Committee.

• Panel discussion by water resource researchers, local governments and other organizations involved in grassland restoration, as well as organizations based in downstream areas which are beneficiaries of the Aso water system.

Key Messages from the Event

- Wealthy grasslands of Aso-Kuju National Park is popular as tourist spot. In addition to that, it has various functions like agricultural land, home to rare creatures, carbon fixation and groundwater recharge.
- On the other hand, the grasslands are declining because of a lack of supporters of operation and maintenance like NOYAKI(controlled burn) and reduction of cattle grazing.
- With focusing on groundwater recharge, from the view of the" Connection of grasslands of Aso and water in Kumamoto", it is necessary to do action for protection grasslands with people in downstream of Aso.



Message from Diet Members Elected from Kumamoto Prefecture

As Diet members elected from Kumamoto Prefecture, we are delighted that the 4th Asia-Pacific Water Summit will be held in Kumamoto on April 23-24, 2022, and welcome participants from the Asia-Pacific region.

Water sustains our daily lives at home. It supports economic activity in agriculture, forestry, fisheries, industry, and energy. And it shapes people's identities in terms of culture, traditions, and arts. Water is the source of life. However, in altered forms it also creates threats such as floods and droughts. Our relationship with water is a vital issue for the Asia-Pacific region. Water issues not only relate to the water and sanitation goal of the SDGs, but are also closely intertwined with poverty, public health, gender, land and marine resources, peace, cities, and climate change. Water issues are wide-ranging and profound. Solving them is no easy matter. All around the world, the complexity of water issues tends to paralyze governments, companies, and citizens.

The inaugural Asia-Pacific Water Summit was held in Oita, Kyushu 15 years ago, prompted by Japan's assertion that strong leadership is essential to resolving water issues. Solutions to such issues require consensus-building to overcome administrative barriers, share water among industries, and safeguard regions against floods and droughts. Firm leadership is needed to achieve this.

As Kumamoto prepares to host the 4th Asia - Pacific Water Summit, Diet members elected from Kumamoto Prefecture have joined in recognizing and affirming the need for leadership to resolve water issues. The 1s t Asia - Pacific Water Summit was held in Oita, Kyushu, the 2nd in Thailand, the 3rd in Myanmar, and the 4th returns to Kyushu in Kumamoto. Geographically, Kyus hu is a gateway to the Asia - Pacific. Historically, Kyushu has developed hand-in-hand with the people of the Asia-Pacific.

As Diet members elected from Kumamoto Prefecture, we declare this message to the Asia-Pacific and the entire world in the hope that Kyushu will become a hub for water information, technology, and culture for the people of the Asia-Pacific.

April 18, 2022 First Members' Office Building of the House of Representatives

Minoru Kihara, Member of the House of Representatives (Kumamoto 1st District)
Daisuke Nishino, Member of the House of Representatives (Kumamoto 2nd District)
Tetsushi Sakamoto, Member of the House of Representatives (Kumamoto 3rd District)
Yasushi Kaneko, Member of the House of Representatives (Kumamoto 4th District)
Yoshifumi Matsumura, Member of the House of Councillors
Seishi Baba, Member of the House of Councillors

Organizational Structure of the 4th APWS

Co-organizers

- Asia-Pacific Water Forum (APWF) (Secretariat: Japan Water Forum)
- Kumamoto City
- * Cooperation of the Government of Japan to conduct the necessary cooperation under the cabinet approval by ministers concerned to implement the 4th APWS

International Organizations, etc., who cooperate with the APWF activities (co-host)

- · Asian Development Bank (ADB)
- · United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)
- · United Nations Educational, Scientific and Cultural Organization (UNESCO)
- The Food and Agriculture Organization of the United Nations (FAO)
- United Nations Human Settlement Programme (UN-HABITAT)
- Executive Committee of the International Fund for Saving the Aral Sea (EC-IFAS)
- Global Water Partnership (GWP)
- GWP China
- GWP CACENA
- GWP South Asia
- GWP Southeast Asia
- High-level Experts and Leaders Panel on Water and Disasters (HELP)
- · International Centre for Water Hazard and Risk Management under the auspices of UNESCO (ICHARM)
- · International Centre for Integrated Mountain Development (ICIMOD)
- · International Union for Conservation of Nature (IUCN) Asia
- International Water Management Institute (IWMI)
- International WaterCentre (IWC)
- · Japan International Cooperation Agency (JICA)
- · Japan Sanitation Consortium (JSC)
- Japan Water Agency (JWA)
- Korea Water Forum (KWF)
- PUB, Singapore's National Water Agency (PUB)
- Secretariat of Pacific Community (SPC)
- World Toilet Organization
- Water Stewardship Asia Pacific
- · European Bank for Reconstruction and Development (EBRD) Representative Office Japan
- · Freshwater Action Partnership for South Asia
- · Global Water Institute, University of NSW, Australia
- WaterEd Australia
- Water Integrity Network (WIN)
- United Nations Centre for Regional Development (UNCRD)
- Asian Institute of Technology (AIT)

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In cooperation with Japan National Tourism Organization
Co-organizers of the 4th Asia-Pacific Water Summit



