

APWS Bulletin

Summary of the 2nd Asia-Pacific Water Summit (2nd APWS) - Water Security and Waterrelated Disaster Challenges: Leadership and Commitment

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SECOND ASIA-PACIFIC WATER SUMMIT

The 2nd Asia-Pacific Water Summit took place in Chiang Mai, Thailand, on 19-20 May 2013, on the theme of "Water Security and Water-related Disaster Challenges: Leadership and Commitment." The meeting was organized by the Royal Thai Government in collaboration with the Asia-Pacific Water Forum (APWF) and supporting regional and international organizations.

The Summit consisted of: a high-level plenary and focus area discussions on 19 May and a ministerial-level Leaders' Forum on 20 May. It was preceded by an exhibition and poster session from 14-20 May focusing on research, policy, and innovation in the areas of water security and waterrelated disasters, and technical workshops from 16-18 May. Around 300 delegates from government agencies, international organizations, academia, non-government organizations and the private sector attended the Summit. Ten heads of state and government attended the Leaders' Forum, from Bangladesh, Brunei, Fiji, Georgia, Republic of Korea, Lao Peoples Democratic Republic, Niue, Tajikistan, Thailand and Vanuatu, as well as ministers and high-level delegates from many countries.

During the Summit, participants discussed issues of water resources management in relation to food security, human well being, and disaster risk reduction, with many countries delivering policy statements and sharing their experiences and national actions towards water security.

The Summit produced an outcome document, the Chiang Mai Declaration, which was developed through the Ministry of Foreign Affairs (MOFA), Thailand, working in cooperation with the Asia-Pacific Water Forum and its lead agencies. MOFA coordinated drafting of the text, including through informal bilateral discussions prior to the Summit, and the text was adopted during the closing plenary. The Chiang Mai Declaration acknowledges and reiterates the importance of water for human security, environment, and economy by outlining specific recommendations such as, inter alia: prioritizing water and sanitation and integrated water resource management (IWRM) in national agendas; including disaster risk reduction and water issues in the post-2015 agenda; enhancing regional and international cooperation; and improving efficiencies in the agricultural sector. The Chiang Mai Declaration invites the APWF to mobilize initiatives to support the recommendations and consider establishing an Asian Water Information System.

A Brief History of the Asia-Pacific Water Summits

The Fourth World Water Forum, held in Mexico in March 2006, recognized the challenges of water resources management in the Asia-Pacific region, including the need to



A warm welcome from Thai representatives in traditional Northern

ensure better access to water and sanitation, protect and restore river basin freshwater resources, and reduce the vulnerability of human populations to water-related disasters.

Participants in the regional preparatory process, coordinated by the Japan Water Forum, initially proposed the creation of an Asia-Pacific Water Forum (APWF) as a response to these challenges. Many agencies in the region supported the idea, including the Asian Development Bank (ADB), the UN Economic Commission for Asia and the Pacific, the Global Water Partnership, the Mekong River Commission, the UN Development Programme, and the UN Environment Programme, among others.

In the ministerial statement of the Fourth World Water Forum, the region's water ministers called for the establishment of the APWF to encourage greater collaboration among countries and better integration of water resources management into socio-economic development. The APWF was launched

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on 27 September 2006 at the ADB headquarters in Manila, the Philippines, as an independent, not-for-profit, non-partisan network for solving water problems in the Asia-Pacific region.

First Asia-Pacific Water Summit (APWS): The APWF organized its first Summit, on the theme of "Water Security: Leadership and Commitment," in 2007 in Beppu, Japan, involving over 370 participants. Thirty-six countries and regions were represented, including 10 heads of state or government, and 31 ministers from the Asia-Pacific region.

The 1st APWS issued a "Message from Beppu" that reaffirmed the existing international water and sanitation targets in the Millennium Development Goals (MDGs) and looked to achieve universal water access by 2025. The message called for: improved water governance; action on floods, drought and other water-related disasters; and support of small island developing states in addressing the impacts of climate change on lives and livelihoods. The Summit also issued a chair's summary and a policy brief outlining certain thematic priorities: water financing and capacity development; water-related disaster management; and water for development and ecosystems, recognizing the importance of IWRM in achieving many water-related aims. It additionally established concrete goals for the 2008 G8 Summit held in Toyako, Japan, on supporting developing countries to achieve their water and sanitation targets, and to adapt to the impacts of climate change.

Second Asia-Pacific Water Summit: The 2nd APWS was initially planned to be held in 2011 in Bangkok, Thailand, but was postponed due to severe flooding. Following the floods, there was increased support for organizing the 2nd APWS on the theme of water security and water-related disaster challenges.

REPORT OF THE MEETING

SUNDAY OPENING PLENARY

Preecha Rengsomboonsuk, Minister of Natural Resources and the Environment, Thailand, welcomed participants to the 2nd APWS. He noted the focus area sessions would be "the nexus" to link the technical workshops that took place from 16-18 May to the Leaders' Forum on 20 May 2013.

Plodprasop Suraswadi, Deputy Prime Minister and Chairman of the Water and Flood Management Commission, Thailand, underscored the opportunity provided by this Summit to review progress of implementation since the 1st APWS in Beppu, Japan. He encouraged participants to find ways and means to make the Asia-Pacific a water-secure region, and to promote dialogue and cooperation as well as a series of implementation actions by a wide range of actors including academia, the business community, and regional and international organizations.

In his keynote address, Emomalii Rahmon, President, Tajikistan, welcomed participants, highlighting the international foundation of support and interest to address water security based on the Rio+20 outcome and the 2013 International Year of Water Cooperation, linking water quality, availability and integrated management as central to achieving all other sustainable development goals (SDGs). Rahmon indicated the critical role of cooperation to address water security challenges and maintain peace, outlining a global water vision to implement goals and promote water security.

Participants then heard introductory remarks from a number of speakers.

Gabor Baranyai, Special Envoy of the President of Hungary, welcomed the broad agenda and nature of the draft Chiang Mai Declaration. Recalling his work as Co-Chair of the Open Working Group on SDGs, he stressed the need to address all aspects of water security. He remarked that the 2nd APWS will

strengthen the Asia-Pacific region's voice and message to the upcoming 2013 Budapest Water Summit in Hungary, where elements of water as an SDG will be discussed.

Tommy Koh, outgoing Chair of the APWF Governing Council, recalled the establishment of the APWF and its mandate to adopt solutions to water issues in the region. He highlighted the APWF's



Tommy Koh, outgoing Chair of the Asia-Pacific Water Forum Governing



L-R Emomalii Rahmon, President, Tajikistan and Plodprasop Suraswadi, Deputy Prime Minister, Thailand, arriving for the opening session.

achievements, including: the launch of the Ministers for Water Security Initiative in the region; the 2013 Asian Water Development Outlook which he said provided the first comprehensive view of water security issues; and a framework document to guide action on water and climate change adaptation, among other accomplishments.

Participants viewed an Asian Water Development Outlook 2013 video that addressed how countries can drive progress towards five water management aims: household access to water and sanitation; productive use of water in industry and agriculture; better water management services for livable cities; restoration of river basin ecosystems; and building resilient communities.

Chew Men Leong, Public Utilities Board (PUB), Ministry of the Environment and Water Resources, Singapore, recognized Koh's leadership and acknowledged the critical platform created by the APWF to build a water-secure future. He identified the need to increase the capacity of water professionals, pointing out the "knowledge hubs" launched in 2008 in collaboration with the ADB and the UN Educational, Scientific and Cultural Organization (UNESCO) to promote knowledge sharing and capacity building, and to champion solutions for water topics.

Hiroyuki Konuma, Regional Representative for Asia and the Pacific, the Food and Agriculture Organization of the UN (FAO), indicated that the high economic growth and poverty reduction achieved by the Asia-Pacific region in the previous decade has come at a high cost to the environment, and undermined the importance of sustainable use of water and other resources. He said commitment to reduce hunger and poverty will be hard to achieve unless the food-water-energy nexus is addressed together.

Kenzo Hiroki, Principal, International Centre for Water Hazard and Risk Management (ICHARM), flagged the increased frequency and severity of water-related disasters and their heightened global impact. He stressed the need to increase political will and urged greater use of science to support political processes in mitigating risk and increasing resilience.

Mark Smith, International Union for Conservation of Nature (IUCN), said that dialogue among all



Kenzo Hiroki, Principal, International Centre for Water Hazard and Risk Management (ICHARM), delivering his plenary address.

stakeholders "opens the space" for international diplomacy on water management issues. He highlighted IUCN's Mekong Water Dialogues and other initiatives to build consensus and understanding among countries and communities, especially with regard to the critical services that nature performs, such as water storage and flood regulation.

Shahbaz Khan, UNESCO, reflecting on the transition from the MDGs to a post-2015 development agenda, indicated that water is key to unlocking complex development challenges. He stressed the need to work together, link political systems, and share data, acknowledging the platform provided by the APWF.

Kulwant Singh, the UN Human Settlements Programme (UN-HABITAT), outlined key concerns for water security, including pressure on water resources from economic growth, expanding populations, climate variability and increased energy needs. He called for cooperation, improved urban planning and resource allocation, explaining that many countries will need to make substantial investments in effective solutions and capacity building to increase water security.

After the opening plenary session, participants met in four focus area sessions to discuss: economic, food and water security; urban water security; environmental water security; and water-related disaster challenges. Three additional focus area sessions met in the afternoon on: household water security; water risks and resilience; and IWRM process for a water-secure world.

FOCUS AREA SESSIONS

Economic, Food and Water Security: FAO and the UN Economic and Social Commission for Asia and the Pacific (ESCAP) organized this session. Hiroyuki Konuma, FAO, and Rae Kwon Chung, ESCAP, presented opening remarks encouraging participants to craft key messages for incorporation into the Chiang Mai Declaration.

Panelists underscored the urgency for action, highlighting: the role of regional cooperation to support national development; the need for payment for ecosystem services; examples from successful and efficient industries such as aquaculture; and the importance of enabling innovation and engaging water stakeholders including the poor, political leaders and the media. Panelists provided differing opinions on whether the emerging SDGs should include a separate goal for water, energy and food or address the nexus of all three.

A second panel opened with remarks from Jung-moo Lee, Korea Water Forum, and Zhou Xuewen, Ministry of Water Resources, China, encouraging participants to see risks as opportunities. Panelists urged that solutions: be inclusive; adopt an ecosystem approach; provide fair and just sharing of resources, products and benefits of water resources; include sharing tools to manage climate variability; and reversing land degradation through waste management.

During a ministers' round table that took place during the focus area session, Manu'alesagalala Enokati Posala, Minister of Works, Transport and Infrastructure, Samoa, and Ali Akbar Salehi, Minister of Foreign Affairs, Iran, highlighted the importance of strong leadership in implementing water resource management plans to mitigate damage from natural disasters.

The session concluded with key recommendations to, *inter alia*: adopt knowledge-based green growth and policy instruments; review socio-economic objectives through a water lens; promote governance, dialogue and transboundary cooperation for political stability; acknowledge the role of mountain communities; and ensure that green growth is inclusive.

Urban Water Security: UN-HABITAT and the PUB, Singapore, organized this session to present case studies, best practices and promising solutions for urban water security. On urban water supply, presenters discussed delivery of affordable water for all, the use of technology and future challenges, with examples from the Philippines and Tokyo, Japan. Panelists discussed challenges for Asian cities in the areas of sanitation and the use of urban used water, and considered drainage issues in urban flood preparation.

Environmental Water Security: IUCN organized this session, which comprised of two panels on: "setting the scene" regarding issues around environmental water security; and "from solutions to action," providing examples of innovative approaches. On setting the scene, panelists discussed progress towards a possible water goal in the post-2015 development agenda, including consideration of safe drinking water, wastewater treatment, and water governance targets. Government representatives provided examples of national actions, such as limits on logging and hydropower development. Panelists called on participants to protect mountain ecosystems, highlighting over-use of water that is needed to maintain natural ecosystems. IUCN highlighted its publication, "Water Wealth: Investing in Basin Management in Asia and the Pacific," containing case studies that illustrate examples of approaches being applied by basin managers to secure water for all.

On solutions, panelists drew attention to: water footprinting; using treated wastewater in agriculture; recouping resources including minerals and plastics from wastewater; and managing trade-offs and sharing benefits and costs between parties, so as to avoid or settle water disputes. They highlighted existing intergovernmental frameworks for regional cooperation, including the Mekong River Commission, the Greater Mekong Subregion economic corridors, and the Association of Southeast Asian Nations. On post-2015 goals, they raised the possibility of separate goals around water, food and energy.

Water-related Disaster Challenges: The Royal Government of Thailand organized this session. Delivering the keynote address, Siripong Hungspruek, Royal Project Foundation, Thailand, stressed the need to treat flood management as an integral part of IWRM. Suphot Tovichakchaikul, Ministry of Natural Resources and Environment, Thailand, described the advantage of having "a single command and authority" for disaster response. Chaiwat Prechawit, International Commission on Irrigation and Drainage, encouraged using risk maps noting that most of the damage, during the Bangkok floods of 2011, occurred in industrial estates in high-risk areas. Michael Waters, Deep Running Waters consultancy, called for more research to be undertaken at the catchment scale to improve the understanding of the relationship between land cover and flood risk. Kelly Hayden, ESCAP, highlighted the importance of public interventions to enhance the resilience and recovery of global supply chains following disruptions to manufacturing operations. The session resulted in six key messages on: strengthening forecasting and warning systems; enhancing the ability of individuals to respond to warnings;



Focus Area Session 7 on Water-related Disaster Challenges: Robert Speed, WWF, and Toshihiro Sonoda, Japan Institute of Country-ology and Engineering

improving governance; accounting for climate change in water management; providing support to help flood victims be selfreliant; and taking action to prevent and reduce risks of waterrelated disasters.

In the afternoon, participants met in three further focus area sessions to discuss: household water security; water risks and

resilience; and the IWRM process for a water-secure world.

Household Water
Security: ESCAP,
UN-HABITAT and the Japan
Water Forum organized this
session. Panelists reported
on technical workshops
preceding the Leaders
Forum, highlighting: the role
of innovative management
and business practices in
improving access to water
supply and sanitation; calls



for improved monitoring systems and financing modalities through multi-stakeholder collaboration; and the potential for a wastewater revolution in the Asia-Pacific region. On the post-2015 development agenda, panelists discussed: harmonizing potential regional goals with the emerging SDGs; and creating goals that are practical, achievable and reasonable with specific indicators. The panelists urged scaling up investment using outcome-based approaches; giving sanitation intervention equal importance as disaster management; and creating new paradigms of impact investment that will incentivize collaboration.

In a high-level panel on policies, panelists shared national experiences: Deputy Prime Minister Kausea Natano, Tuvalu on providing government-funded water tanks to households; Ryuji Uematsu, Ministry of Land, Infrastructure, Transport and Tourism, Japan, on implementing regulations; and Tagsem Khan, Dhaka Water Supply and Sewerage Authority, Bangladesh, on outsourcing services and public-private partnerships.

Water Risks and Resilience: ICHARM organized this session. Kenzo Hiroki, ICHARM, described the APWS as being at the crossroads of global processes such as discussions on the post-2015 development agenda, and on disaster risk reduction under the Hyogo framework. He invited the panelists to reflect on lessons learned from addressing water-related disasters and the outputs and targets needed in the post-2015 scenario. Panelists underlined the need to cooperate regionally and sub-regionally, agreeing that disasters are best mitigated by actions at the local level. Panelists also agreed on the need to have an international goal on disaster risk reduction and noted the challenge of arriving at a simple target. Some panelists encouraged thinking not just about disasters but also associated challenges like sanitation. Others affirmed the willingness of the scientific community to help develop targets with sound scientific bases.

IWRM Process for a Water-Secure World: UNESCO organized this session. Soontak Lee, Yeungnam University, Republic of Korea, and Li Yuanyuan, General Institute of Water Resources and Hydropower Planning (GIWP) of the Ministry of Water Resources, China, presented drivers and challenges for water resources planning in the post-2015 development agenda. Panelists looked beyond international water and sanitation targets, to discuss: IWRM as a planning

approach; the role of the environment in providing water security for people; transboundary data and information sharing; and management of over-use of water in river basins through water allocation schemes. They discussed managing river basins for multiple uses, and the issue of capacity building with local stakeholders to improve bottom-up planning, especially given staff turnover in local government authorities. Panelists highlighted the need for inclusiveness, governance and "hardware" for data collection as the three minimum conditions for successful river basin management, and the role of satellite technology in supporting disaster risk management and response, citing the 2005 Pakistan earthquake as an example.

At the close of the session, the ADB, GIWP, UNESCO and the World Wildlife Fund (WWF) launched three joint publications on river basin planning, flood risk management, and basin water allocation planning. Robert Speed, WWF, said the aim of the publications was to incorporate principles of sustainability in water management, based on lessons from China's experience that could be applicable to other countries.

LEADERS' ARRIVAL, VISIT TO EXHIBITIONS AND

GROUP PHOTO SESSION

On Monday morning, Heads of State and Government, Ministers and senior officials visited the exhibition on water projects and posed for a group photo, hosted by Prime Minister of Thailand, Yingluck Shinawatra, before proceeding to the conference room for plenary discussions.



MONDAY OPENING

PLENARY

Plodprasop Suraswadi,

Deputy Prime Minister and Chairman of the Water and Flood Management Commission of Thailand, welcomed the Heads of State and Government, and all delegates, recalling the technical workshops, exhibition and focus area sessions leading up to this event. He looked forward to the adoption of the Chiang Mai Declaration, which he said would be the key to successful planning for better water resource management and avoiding water scarcity, drought, floods and other water-related catastrophes.

Suraswadi then presented a written summary of the seven focus area sessions that took place the previous day.

Focus Area 1 on Economic, Food and Water Security concluded that to eradicate hunger and poverty by 2025 while ensuring economic, food and water security, it is necessary to adopt knowledge-based green growth that is inclusive and equitable.

Focus Area 2 on Urban Water Security recognized the goal of universal access to water and sanitation by 2025 as a basic human right and fundamental aspect to human security, highlighting, *inter alia*: the need for a paradigm shift from "waste water" to "used water;" Water Demand Management; capacity building of local authorities; knowledge sharing; and community engagement.

Focus Area 3 on Environmental Water Security supported cooperative efforts and investments in natural infrastructure to enhance the environmental contribution to water security for household, urban, economic, food, and risks and resilience needs

Focus Area 4 on Household Water Security asserted that to reach universal access to water and sustainable sanitation by 2025, it is necessary to scale up, *inter alia*: regional commitments and leadership; public-private partnerships; data collection modalities; and outcome-based approaches.

Focus Area 5 on Water Risks and Resilience encouraged the Asia-Pacific region to lead the global community in addressing water-related disasters by establishing a clear-cut target on water and disaster for the post-2015 development agenda, supporting the proposal by the UN Special Thematic Session on Water and Disasters to establish regular discussion processes.

Focus Area 6 on IWRM Process for a Water Secure World determined that the post-2015 development agenda should address global water challenges and establish measurable targets on IWRM beyond the MDG water and sanitation targets, advocating for an inclusive approach.

Focus Area 7 on Water-related Disaster Challenges agreed to take immediate action to: support adaptation of water management to account for climate change; develop database, forecasting and warning systems; reduce risks of floods, drought and other disasters; formulate Incident Action Plans to provide support for victims; improve governance; encourage participation; and enhance people's ability to understand the danger and respond to warnings.

Yingluck Shinawatra, Prime Minister, Thailand, delivered the opening remarks and keynote address on "Disaster and Response: Thailand's Action and Commitment to Water and Flood Management for the Future." Calling water a human right that we need to protect and promote, she remarked that the 21st century "would be the Asia-Pacific region's century" only if water security is addressed. She noted that no country can handle challenges regarding water-related disasters on its own, and called for building momentum for closer cooperation, expressing willingness to play a role in this regard. She remarked that cooperation in water management would help to create wide-ranging benefits that would lead to greater human security.

Hassanal Bolkiah, Sultan and Prime Minister of Brunei, applauded Thailand's royal initiatives as excellent examples of water resource management. He indicated the need for cooperation, in the form of regional and international initiatives, to build resilience and handle challenges such as severe weather patterns from climate change and increased



Epeli Nailatikau, President of Fiii

human population. Bolkiah asserted that the proper management of water is a shared responsibility for everyone, introducing the steps taken in Brunei to create awareness and reduce water wastage, and inviting further exchange with other countries to share experiences.

Epeli Nailatikau President, Republic of Fiji, described Fiji's challenges in water supply and sanitation, due to urban migration and crowding; high electricity demand from the tourism and manufacturing sectors resulting in unsustainable imports of diesel fuel; agricultural pollution; and the impacts of drought and cyclones. He outlined government efforts to address these challenges through: using solar, wind and hydropower; regulation of wastewater discharges, including sewage; legislation to limit water use; environmental protection; development of a national water resources management and sanitation policy; integrated



land and water resources planning; rehabilitation of degraded catchment areas; and empowering local communities.

Mikheil Saakashvili, President, Georgia, underscored the need for longterm solutions in light of increasing vulnerability due to factors like climate change and appreciated

the Summit for providing a high-level forum to renew commitments. He noted the need to develop universal criteria on methods to assess the impact of water projects like big dams on local populations. He remarked that Thailand's cooperation with the private sector during the Bangkok floods of 2011 was worthy of study.

Sheikh Hasina Wajed, Prime Minister, Bangladesh, reflected on the critical state of water security, citing a recent ADB study showing that although the Asia-Pacific region has become an economic powerhouse, no country in the region is considered water-secure. She highlighted areas requiring urgent action, including: improving agricultural water productivity



Jung Hong-won, Prime Minister, Republic of

and efficiency; transferring waterrelated technologies; improving water management and governance and supporting grassroots cooperatives; establishing networks and partnerships to share experience and knowledge of transboundary rivers; and strengthening disaster risk preparedness and

management. Hasina concluded that water and human rights are linked, and that in the post-2015 agenda, universal coverage of water supply and sanitation on the basis of non-discrimination should be a key goal.

Jung Hong-won, Prime Minister, Republic of Korea, called for: water to be given top priority in the post-2015 development agenda and in the SDGs; preventive measures including better early warning systems; an international collaborative response

system on water-related disasters; and attention to vulnerable groups. He also called for greater efforts to tackle sanitation problems, lamenting that the MDG target is unlikely to be attained. He outlined national actions to forecast and manage floods, increase access to tap water in rural and fishing villages, and increase rainwater utilization and wastewater reuse. He highlighted preparations for the 7th World Water Forum to be held in Korea in 2015. He also highlighted the Association of Southeast Asian Nations (ASEAN) Regional Forum Disaster Relief Exercise, hosted by Korea and Thailand in May 2013, as an example of cooperation to increase countries' joint coping capability.

Thongsing Thammavong, Prime Minister, Lao People's Democratic Republic, remarked that water security, together with food and energy security, is ultimately connected to human security. He emphasized the need to strengthen mutual understanding and trust between riparian states on the essential nature of water for development. He highlighted cooperation on the Mekong region as being not just among riparian countries but also among other regions and development partners, noting the relevant legal and institutional frameworks.

Toke Tufukia Talagi, Prime Minister, Niue, appreciated the inclusion of youth contributions, noting support for the Chiang Mai Declaration. He recognized the impacts of climate change experienced in the Pacific region, and the increased frequency and intensity of disasters globally, urging government leaders to harness political will and encourage legislative frameworks to: protect water resources from biological and chemical pollution; ensure equitable distribution; implement waste management strategies; and leverage financial resources.

Moana Carcasses Kalosil, Prime Minister, Vanuatu, stressed the urgent need to avoid water scarcity, and emphasized raising awareness of water as a means of security. He highlighted disaster risk management and climate change as opportunities to further countries' efforts to meet water demand in an equitable manner, also taking into consideration environmental needs. He called for coherent and integrated national responses to overcome coordination challenges, saying that most water problems are not a result of water shortages, but of weak governance and lack of political will. He affirmed the internationally agreed goals in the Pacific Regional Action Plan on Sustainable Water Management and the Pacific Wastewater Framework for Action.

Vuk Jeremić, President of the 67th session of the UN General Assembly, expressed support for the Summit's key aims, in particular, to serve as a launch pad to spread knowledge on water security. He warned participants that the world is "not moving boldly enough," in light of the many

pressing challenges such as climate change, and highlighted the need to galvanize political will. He remarked that the Summit would help to set the tone for subsequent meetings, such as the High-Level International Conference on Water Cooperation to take place in Tajikistan in August 2013.

Yoshiro Mori, President, APWF, highlighted the role of the APWS in creating opportunities





for leaders to join together, raise awareness and initiate concrete actions, thanking Tommy Koh for his leadership and contribution to the Forum. Underscoring that 80% of the victims of water-related disaster live in the Asia-Pacific region, he called for improved water governance through multi-stakeholder engagement and regulatory frameworks. He announced the incoming Chair of the Governing Council, Ravi Narayanan from India, and new Vice-Chairs, Changhua Wu from China and Simon Tay from Singapore. He expressed hope to work together with young people to continue to protect and preserve a "blue planet" for children.

Noeleen Heyzer, Under-Secretary-General, ESCAP, urged delegates to work towards a vision of an inclusive and resilient future, noting that access to water is "a silent crisis" that is destroying livelihoods and claiming lives. She stressed the need to, *inter alia*: address persistent inequalities and increased competition for water through better policies, increased investment, and greater participation by stakeholders; manage wastewater and water rehabilitation to make water efficiency practices sustainable; regulate and enforce "polluters pay" approaches; create integrated river basin management plans; and tap the positive role of the private sector in developing critical infrastructure.

Takehiko Nakao, President, ADB, identified four focus areas to promote water security, based on the Asia Water Outlook 2013 study produced jointly with APWF: cities should be innovative and inclusive to promote wastewater management; agriculture should strive for "more crop per drop"; research and knowledge sharing initiatives on water-saving techniques should increase; rivers and aquatic ecosystems should integrate upstream and downstream communities to reduce flooding and protect biodiversity; and infrastructure such as early warning systems should be built to enhance resilience to water-related disasters.

LEADERS' FORUM

On Monday afternoon, the Leaders' Forum convened and heads of delegations delivered their country statements.

Mohammad Javad Mohammadi, Department of the Environment, Islamic Republic of Iran, pointed to population increase, mismanagement of water consumption, over-use of pesticides and fertilizers, improper disposal of wastewater, land disputes, and border conflicts as factors contributing to intensification of a water crisis. He called for preservation of

ecosystems, and outlined national actions to improve reuse of wastewater, protect water resources, maintain watersheds and underground aquifers, raise public awareness and elicit public participation on water pollution issues. He proposed defining the principles of trade in water, and setting "a real price" on water in the international economy. He called for greater participation and cooperation in managing international river basins, investment in water and sanitation that will value ecosystem elements, the optimal use of water in agriculture, and regular budget allocation by governments for dispute settlement, among other suggestions.

Sai Mauk Kham, Vice-President, Myanmar, highlighted water insufficiency, exacerbated by increasing global populations, climate change and natural disasters, as a high priority, referencing that it has led to disputes over ownership of water resources. He described national short-term measures to address household access and quality of water, calling for continuation of coordinated multi-faceted efforts. Kham said that to overcome water-related crises, it is necessary to collaborate and strike a balance between political stability, economic growth and social harmony, urging developed countries to assist under-developed and developing countries with technical and financial support to build resilience.

Lyonpo Kinzang Dorji, Special Envoy of the Prime Minister, Bhutan, remarked that Bhutan had recently passed its Water Act, consistent with IWRM, and said the act would strengthen existing customary rights focusing on conservation and management. He drew attention to Bhutan's high vulnerability to the impacts of climate change, particularly due to accelerated glacial melting, and noted the potential economic consequences.

Lim Kean Hor, Minister of Water Resources, Cambodia, said water and economic development has been dominated by the hydrological conditions of the Mekong since ancient times. He noted challenges are intensifying in the hydropower and irrigation sectors, saying that economic development will adversely affect the sustainability of water resources. He looked forward to the next Mekong River Commission summit in 2014 in Viet Nam, expressing commitment to Cambodia's regional and global responsibilities.

Nguyen Thien Nhan, Deputy Prime Minister, Viet Nam, revealed that over 60% of water in Viet Nam is sourced outside of national territories while existing supplies are threatened by pollution, salinization, and natural disaster. He outlined programmes and strategies employed to comprehensively



Heads of Delegation and Heads of Government pose for a family photo before the opening of the plenary session.

in Viet Nam. He called on Asia-Pacific countries to consider becoming signatories to the UN Economic Commission for Europe Convention on the Protection and Use of Transboundary Watercourses and International Lakes (UNECE Water Convention). He supported an SDG on water in the post-2015 development agenda.

Harish Rawat, Minister of Water Resources, India, asserted that water was a multi-sectoral issue and there are many paths to achieving water security. He noted that India had undergone a paradigm shift in disaster management from a relief-centric approach to one of preparedness. He underscored the need to build disaster mitigation into development actions to achieve sustainable development and called for greater knowledge and technology transfer to address water security.

Kirabuke Teiaua, Minister of Public Works, Kiribati, emphasized the island nation's limited financial and technical resources to address pressures from urban drift, climate change and related impacts of coastal erosion and increased temperatures. He acknowledged the support of partners and expressed commitment to regional action in the Pacific, and the MDGs. He highlighted that Kiribati had closed a valuable fishing ground, which is now the UNESCO Phoenix Island Protected Area, as its gift to humanity.

Manu'alesagalala Enokati Posala, Minister of Works, Transport and Infrastructure, Samoa, described the unique challenges for small island developing states, which require unique solutions, highlighting recent actions such as upgrading pipes to avoid leakage and improving water quality with filtration systems. He shared plans to investigate the use of solar energy to pump water; and to better understand water availability through data collection on a micro-level, expressing gratitude for donor support for water-related projects. He declared the Samoan commitment to safeguard the island and region from water-related disasters and looked forward to continued collaboration.

Vivian Balakrishnan, Minister of Environment and Water Resources, Singapore, asked the audience to think about why there were more mobile phones than drinking water taps, to understand the challenges in ensuring access to clean water. Suggesting that the answer lay in "getting right" the politics, governance, and economics, he noted the experience of Singapore in: integrating functions like drainage, reservoir, and sanitation under a single agency to improve governance; adapting and using technologies like reverse osmosis on a system wide basis; and pricing water to create incentives for maintenance and private sector investment.

Babageldy Annabairamov, Minister of Nature Protection, Turkmenistan, stressed the urgency of saving the Aral Sea, suggesting a comprehensive international legal instrument could be developed based on the 2010 memorandum of understanding between the UN and the Committee of the International Fund for Saving the Aral Sea. He mentioned the possible establishment of an inter-regional center on climate change in the Central Asian states, and highlighted the importance of the UNECE Water Convention. He described national actions for water security, including measures to conserve surface water run-off, quoting a Turkmenistan proverb, "A drop of water, a grain of gold."

Asein Isaev, First Deputy Minister of Foreign Affairs, Kyrgyzstan, described the responsibilities of maintaining national water supplies, with over 90% flowing to downstream states. He urged countries to adopt multilateral long-term agreements to ensure mutual benefits for all countries sharing water resources.

Shavkat Khamraev, Deputy Minister for Agriculture and Water Management, Republic of Uzbekistan, listed challenges impacting water availability, such as climate-induced loss of glacial reserves and pressures from increased economic development. He voiced concern over the construction of hydropower plants with gigantic dams in transboundary river



The dais before the plenary session, where heads of government and heads of delegation posed for a group photo.



zones, calling for the use of alternative sources of energy, safer construction, and feasibility analyses of impacts to the environment.

Zhou Xuewen, Ministry of Water Resources, China, noted the increasing mismatch between water supply and demand in China. He presented China's many initiatives to address water security, in particular by building a water-saving society by promoting changes to water utilization, raising water use efficiency, and strictly controlling the pollutant load into rivers. On the supply side, he noted the accelerated construction of water distribution projects with an emphasis on rural facilities to promote livelihood benefits.

James Wise, Ambassador to Thailand, Australia, remarked that Australia was strongly committed to water research. He highlighted Australia's bilateral and multilateral efforts to improve water, food and energy security in national and transboundary contexts.

Lutfi Rauf, Ambassador to Thailand, Indonesia, discussed the imbalance in distribution of water resources, which he said required improved commitment and leadership. He shared IWRM strategies adopted in Indonesia to supply water and increase access to sanitation, particularly for low-income communities in urban areas. He highlighted the importance of capacity building, community participation and knowledge dissemination, in order to achieve the MDGs.

Umakant Jha, Minister of Energy and Irrigation, Nepal, welcomed the shift in water management from a sectoral to an integrated approach. He underscored the need for further research to understand the geospatial variation of rainfall to enable forecasting, so that disaster risks can be mitigated.

Leo Dion, Deputy Prime Minister, Papua New Guinea, described flood events caused by heavy rains and sea swells. He affirmed that sustainable use of water affects the fabric of local communities. He highlighted the need for legislation and consistent enforcement of regulations, and urged participants to embrace cooperation with stakeholders as "partners for human needs." He endorsed the Chiang Mai Declaration.

Kausea Natano, Deputy Prime Minister, Tuvalu, highlighted the country's adoption of innovative approaches to ecological sanitation. On behalf of the Pacific island states, he supported the Chiang Mai Declaration, and presented a joint complementary declaration. Entitled the Pacific Declaration, Natano highlighted that it underlined concerns over inadequate progress towards global goals for water and sanitation, and called for increased efforts, financial support and renewed leadership towards these goals. It highlighted the need to actively track investments and results, and to develop core capacity at the national level, with effective technical backstopping at the regional level.

Susil Premajayantha, Minister of Environment and Renewable Energy, Sri Lanka, conveyed that although there is a national abundance of water in the highlands, they are subject to pressures posed by seasonal variations, industry, climate change and natural disaster. He highlighted several schemes underway to increase access to sanitation and drinking water to meet the MDGs.

Sohail Mahmood, Ambassador of Pakistan to Thailand, reflected that the APWF could not have come at a more opportune time to promote collective actions and practical solutions. He drew a connection between water and human security, outlining national efforts to raise awareness and coordinate all sub-sectors to strengthen resilience. He called for national efforts to be supplemented and reinforced with international cooperation so that "water could remain a source of life and not a threat to life."

Manasseh Maelanga, Deputy Prime Minister and Minister of Home Affairs, Solomon Islands, called for tangible outcomes from the Summit with concrete commitments on, *inter alia*, technology transfer and capacity building. He highlighted climate change as a threat to water security and described efforts to integrate environmental concerns into development actions.

CLOSING CEREMONY

Preecha Rengsomboonsuk, Minister of Natural Resources and Environment, Thailand, introduced the final text of the Chiang Mai Declaration. He described the Declaration as providing a clear vision on the way forward to realize the common goal of achieving water security as an integral component of sustainable development. The Declaration was then adopted.

The Chiang Mai Declaration is the final outcome from the 2^{nd} APWS, which calls on Heads of State and Government and high-level representatives to:

- Accord high priority to water and sanitation in national agendas and to allocate appropriate resources to water and sanitation sectors;
- Encourage the inclusion of disaster risk reduction and, more broadly, water issues, in the United Nations development agenda beyond 2015;
- Promote efficient use of water resources while taking into account basic human needs, in particular, by improving irrigation systems;
- Enhance regional and international cooperation on scientific and technical knowledge;
- Accelerate the incorporation of integrated water resources planning and management in national socio-economic development planning processes;
- Minimize the impacts from water-related risks and disasters by increasing transfer of technology, capacity building and knowledge sharing;
- Reduce water pollution, combat desertification, improve water quality and protect sources of freshwater;
- Prioritize the use of information and communication technology for development of water-related disaster risk reduction and relief systems, and build resilient communities through capacity development, improved governance, and innovative sources of finance; and
- Strengthen networking and partnerships between governments and stakeholders on the efficient use of water resources.

The Declaration invites the APWF to support these recommendations by mobilizing initiatives, and to consider establishing an Asian Water Information System.



Rengsomboonsuk thanked everyone for their contributions and expressed special gratitude to those who had worked hard to organize the Summit. He declared the Summit closed at 5:33 pm.

UPCOMING MEETINGS

Expert Consultation on Water-related Sustainable Development Goals: The UN Office for Sustainable Development (UNOSD) is organizing the meeting to discuss and finalize a methodological framework for a study to define the scope of water-related SDGs, together with an assessment of means of implementation required to achieve the SDGs. The study is being undertaken by the UNOSD in collaboration with the UN University's Institute for Water, Environment and Health and the Stockholm Environment Institute. The study will inform work already initiated by the UN Task Team on the post-2015 development agenda and the Open Working Group on SDGs, and support UN-Water, which is developing specific targets for water-related SDGs. dates: 13-14 June 2013 location: Incheon, Republic of Korea contact: Shelley Choi email: choi9@un.org www: http://www.unosd.org/index.php?p age=view&type=12&nr=354&menu=240

High-Level International Conference on Water Cooperation: The Government of the Republic of Tajikistan will convene this event, recognizing that 2013 is the International Year of Water Cooperation, to promote dialogue and mutual understanding and strengthen the partnership and cooperation on water issues among all stakeholders at all levels. The conference will provide an opportunity to discuss and recommend measures to accelerate the efforts to achieve the MDGs, and contribute to development of the post-2015 development agenda and SDGs related to water. dates: 20-21 August 2013 location: Dushanbe, Tajikistan phone: +992 37 236 06 79 fax: +992 37 236 06 79 email: secretariat@hlicwc.org www: http://www.hlicwc.org/

World Water Week: Organized by the Stockholm International Water Institute, the theme for this year is water cooperation and building partnerships. dates: 1-6 September 2013 location: Stockholm, Sweden contacts: Stockholm International Water Institute (SIWI) phone: +46 8 459 66 00 fax: +46 8 661 91 25 email: worldwaterweek@congrex.com www: http://www.worldwaterweek.org/

First World Irrigation Forum and 64th International Executive Council Meeting (WIF1): Organized by the Turkish National Committee on Irrigation and Drainage, FAO, International Water Management Institute, GWP, ADB, International Food Policy Research Institute, UNESCO Institute for Water Education, Aviation Weather Center, International Crops Research Institute for the Semi-Arid Tropics, International Center for Agriculture research in the Dry Areas and the World Bank, the Forum will include policy makers, experts, research institutions, non-governmental organizations, private sector companies and farmers. dates: 29 September – 5 October 2013 location: Mardin, Turkey contacts: Serpil Koylu Dalgin, TUCID phone: + 90 312 425 46 14 fax: + 90 212 425 20 59 email: icid2013@dsi. gov.tr www: http://www.worldirrigationforum.org/en/#. UZndLIVXsy4

Budapest World Water Summit: With the participation of UN Member States, competent UN agencies and bodies as well as all concerned economic and social partners, the Summit aims to contribute to the elaboration of the water-related Sustainable Development Goals and provide concrete guidance

on the most pressing water issues – drinking water, sanitation, waste water treatment, integrated water management, international water cooperation, innovative water technologies – with a view to defining the priorities of global development policy post-2015. dates: to be announced October 2013 email: BudapestWaterSummit@mfa.gov.hu www: http://budapestwatersummit.hu/

7th World Water Forum 2015: The World Water Forum consists of at least three processes: the Political Process, the Thematic Process and the Regional Process, while gathering officials, legislators and local and regional authorities from more than 150 nations. Each topic is developed in cooperation with the private sector, governments, industry, international organizations, NGOs and academic groups into a common framework of goals and concrete targets. dates: 14-15

November 2015 location: Daegu Gyeongbuk, Korea tel: 82
2 504 4032 email: secretariat@worldwaterforum7.org www: http://worldwaterforum7.org/en/

GLOSSARY

ADB	Asian Development Bank
APWF	Asia-Pacific Water Forum
APWS	Asia-Pacific Water Summit
FAO	Food and Agriculture Organization of the United Nations
GIWP	General Institute of Water Resources and Hydropower Planning (China)
ICHARM	International Centre for Water Hazard and Risk Management
IUCN	International Union for Conservation of Nature
IWRM	Integrated Water Resources Management
MDGs	Millennium Development Goals
SDGs	Sustainable Development Goals
UNECE	United Nations Economic Commission for Europe
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNESCO	United Nations Educational, Scientific and Cultural Organization
UN-HABITAT	United Nations Human Settlements Programme

