



World Water Forum Bulletin

A Daily Report of the 5th World Water Forum

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5th WORLD WATER FORUM
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5TH WORLD WATER FORUM HIGHLIGHTS: MONDAY, 16 MARCH 2009

The 5th World Water Forum opened on Monday, 16 March 2009 in Istanbul, Turkey and will continue until 22 March. Participants convened in a morning plenary to hear opening statements and watch presentations of the Turkish Republic Prime Minister's Water Prize and the King Hassan II Great World Water Prize. In the afternoon, the thematic sessions were opened and the World Water Development Report was launched. Participants also attended special focus sessions.



L-R: Albert II, Prince of Monaco; Abdullah Gül, President of the Republic of Turkey; and Emomali Rakhmon, President of Tajikistan

The World Water Forum seeks to enable multi-stakeholder participation and dialogue to influence water policy making at a global level, in pursuit of sustainable development. Over 100 thematic sessions are scheduled, and more than 28,000 participants are expected to attend, representing governments, UN agencies, intergovernmental and non-governmental organizations (NGOs), academia, the media and other civil society groups.

The Forum's main theme, "bridging divides for water," will be addressed through six sub-themes: global change and risk management; advancing human development and

the Millennium Development Goals (MDGs); managing and protecting water resources; governance and management; finance; and education, knowledge and capacity development.

A Water Fair and Water Expo will also take place during the Forum, offering a platform for participants to present their achievements and highlight the cultural aspects of water. A Learning Centre will further exchanges of knowledge and experience, while events that enable participation of the major groups convened under Agenda 21, particularly children, youth and women, will also be held.

OPENING THE FORUM

OPENING STATEMENTS: Oktay Tabasaran, Secretary General of the 5th World Water Forum, welcomed participants, emphasizing that its main objective is to urgently address the issue of efficient water use. He said the Forum will also be a venue for discussing economic development, local water management, risk management, human development and the MDG objectives.

Loïc Fauchon, President of the World Water Council (WWC), stressed that while ensuring access to water is a "difficult and long road to be traveled," it must be addressed. He called for rigorous and harmonious water sharing, and noted the importance of political will in this regard. Fauchon



Oktay Tabasaran, Secretary General of the 5th World Water Forum



Delegates during the opening ceremony. L-R: Abbas El Fassi, Prime Minister of Morocco; Prince of Orange Willem-Alexander of the Netherlands; Celal Talabani, President of Iraq; Albert II, Prince of Monaco; and Abdullah Gül, President of the Republic of Turkey.

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Lóïc Fauchon, President of the World Water Council

emphasized the need for effective water management, protection of the poorest people and the need to consider the principle of virtual water.

Noting that the ideals of Istanbul are peace and tolerance, Kadir Topbaş, Mayor of Istanbul, welcomed participants to the city. He noted that cities are major consumers of water resources and that local

authorities have an obligation to protect natural resources and plan for the water security of future generations.

Veysel Eroğlu, Minister of Environment and Forestry of Turkey, emphasized that water issues affect peace and that stability can only be achieved through fair division of water resources. He said water is critical for development and noted the need to address drought in Africa and elsewhere. Eroğlu underscored the importance of large infrastructure for water security in Turkey, and stressed that the Forum's objective is not to commercialize water but to provide "good quality water for all."

José Luis Luege Tamargo, Director General of the Mexico National Water Commission, on behalf of President Felipe Calderón of Mexico, described the water management, climate change and infrastructure projects initiated at the 4th World Water Forum in Mexico City.

UN Undersecretary-General Sha Zukang, on behalf of UN Secretary-General Ban Ki-moon, highlighted that the World Water Forum facilitates dialogue between the policy community and civil society. He recommended four strategic action areas for the Forum, namely: emphasizing linkages between water and climate change; learning from disaster risk reduction to increase adaptive capacity; improving human and institutional capacity, backed by financial resources; and recognizing the importance of cooperative transboundary water management.

Abbas El Fassi, Prime Minister of Morocco, noted that the Forum follows the 2008 High-Level Conference on World Food Security, precedes the 2009 UN negotiations on a post-2012 climate regime, and is taking place during an international financial crisis.

Naruhito, Crown Prince of Japan, stressed the need for collaboration to resolve pressing water issues and strengthen initiatives for achieving the MDGs. He emphasized, *inter alia*: the link between water and climate change; the importance of



Abbas El Fassi, Prime Minister of Morocco

water financing initiatives and of ministerial-level dialogues and regional summits to foster collaboration; and the need for monitoring and capacity building through UN-Water.

Abdullah Gül, President of the Republic of Turkey, emphasized that water is not only a technical issue but a matter that requires political attention and priority at the highest level. He said the international community must recognize the limited nature of water and highlighted that changes in policies are necessary to address water scarcity. He said the 5th World Water Forum will take previous efforts one step further and called on the international community to bridge divides for water.

Children representatives from 21 countries then appeared on stage to symbolize cultural cooperation. The Tekfen Philharmonic Orchestra, comprised of musicians from 23 countries in the Caspian and Eastern Mediterranean regions, brought the plenary to a close.

TURKISH REPUBLIC PRIME MINISTER'S

WATER PRIZE: Irfan Aker, World Water Council Board of Governors, on behalf of Turkey's Prime Minister, presented the Turkish Prime Minister's Water Prize, which honors media representatives for coverage of national and international water issues. The international prize was awarded to Alison Bartle, Aqua-Media International. National prizes were awarded to Özgür Coban (Anatolian Agency), Özgür Yildirim (Channel 24), and Gurhan Savgi (Zaman Daily Newspaper), and for the programme Yeşil Ekren on NTV (accepted by Erman Yerdelen).

KING HASSAN II GREAT WORLD WATER PRIZE:

Prime Minister El Fassi introduced the third King Hassan II Great World Water Prize for cooperation and solidarity in the fields of management and development in water resources.



UN Undersecretary-General Sha Zukang



Abdullah Gül, President of the Republic of Turkey



Children hold up messages to participants of the opening ceremony.

Abdelkébir Zahoud, Morocco's Secretary of State in charge of water and environment, presented the prize to Abdulatif Yousef Al-Hamad, Director General of the Arab Fund for Economic and Social Development. Al-Hamad commended Morocco's leadership in water management and enumerated water projects funded by his organization.

OPENING OF THEMATIC SESSIONS

Henk van Schaik, Co-operative Programme on Water and Climate, on the theme "global change and risk management," highlighted the links between water, climate change, disasters and migrations. Pasquale Steduto, UN-Water Chair / Food and Agricultural Organization (FAO), on "human development and the MDGs," urged strengthening national capacity to enable on-the-ground action. Karin Krchnak, The Nature Conservancy, on "managing and protecting water resources," emphasized the importance of integrated water resource management to meet human and environmental needs.

Andre Dzikus, United Nations Human Settlements Programme (UN-HABITAT), on "governance and management," highlighted that the water and sanitation crisis is a governance and management crisis, and not one of resources. Abel Mejia, World Bank, on "finance," discussed: barriers to sustainable financing; pricing of water services; and access to water and sanitation for the poor. András Szöllösi-Nagy, United Nations Educational, Scientific and Cultural Organization (UNESCO), on "education, knowledge and capacity building," noted that the draft 5th Forum Ministerial Declaration had weaker language than was called for during preparatory thematic meetings.

Kusum Athukorala, Associated Development Research Consultants, stressed that the Forum's six themes must be translated into the ministerial process, and Sahana Singh, Asian Water, emphasized that politicians should advocate for "tough change." Monica Scatasta, Organisation for Economic Co-operation and Development, said the thematic process must develop common understandings of critical topics,



L-R: **Henk van Schaik**, Co-operative Programme on Water and Climate; **Pasquale Steduto**, UN Water Chair / FAO; **Karin Krchnak**, The Nature Conservancy; **Piers Cross**, Water Research Commission; **Mark Smith**, IUCN Water Programme; **Letitia Obeng**, Global Water Partnership; **Bert Diphoom**, UN-HABITAT; and **Doğan Altınbilek**, 5th World Water Forum.

including cost recovery and water pricing. Ibrahim Gürer, Gazi University, reminded participants to use the thematic sessions to enhance mutual understanding.

LAUNCH OF WORLD WATER DEVELOPMENT REPORT

UNESCO Director-General Koichiro Matsuura launched the Third World Water Development Report (WWDR-3),



UNESCO Director-General
Koichiro Matsuura

outlining actions to address future water challenges. He highlighted the Report's key messages, including *inter alia*: the need to involve water specialists in decision making; the significant impact that decisions to address climate change in the energy sector have for water use; the importance of monitoring and assessment for sound water

management; and the need to strengthen capacity in developing countries.

Ali Backoğlu, Deputy Governor of Istanbul, encouraged enhancing collaboration among countries, sectors and stakeholders. Emomali Rahmon, President of Tajikistan, said the Report will help policy makers to apply the most advanced approaches and technologies to water management.

Alexander Müller, FAO, Hasan Zuhuri Sarikaya, Undersecretary of the Ministry of Environment and Forestry, Turkey, and Pasquale Steduto, UN-Water Chair / FAO, welcomed the launch of the report as a useful tool for the sustainable management of water resources. András Szöllösi-Nagy, UNESCO, emphasized that external factors impact water resources and that increased water storage capacity is essential for responding to climate change.

Olçay Ünver, World Water Assessment Programme, and William Cosgrove, WWDR-3, underscored the Report's paradigm shift from a water-specific focus to one that addresses the external drivers of water resource use, and the Report's linkages between water use and broader development objectives.

Kenneth Konga, Ministry of Energy and Water Development, Zambia, presented the Zambian case study from WWDR-3. Narcio-Rodrigues da Silveira, Vice President, Brazil, proposed the immediate constitution of a "World Water Parliament."



András Szöllösi-Nagy, UNESCO

Yong-Joo Cho, Korea Institute of Construction Technology, outlined Korea's water management efforts in the context of climate change. Giorgio Sfara, Development Cooperation, Italy, highlighted the G8 Evian Plan and its enhanced implementation strategy in partnership with African countries.

SPECIAL FOCUS SESSIONS

RUNNING DRY! HOW TO TURN DROUGHTS INTO OPPORTUNITIES FOR BETTER MANAGEMENT:

Session moderator Marta Moren, Spain's General Director of Water, opened the panel by stressing the need for effective drought management at the national and global levels. Milagros Couchoud, Mediterranean Water Institute, noted that Spain has many water management experiences to share. Hachmi Kennon, WWC, highlighted the successful implementation of a drought management plan during the recent four-year drought in Spain. Juan Antonio Arrese Luco, Ministry of Public Works, Chile, noted that climate change and its impact on water availability have moved to the top of the political agenda. Jean-Paul Rivaud, Ministry of Ecology, Energy, Sustainable Development, Town and Country Planning, France, called for sustained public awareness campaigns to enhance water efficiency. Donald Wilhite, National Drought Mitigation Center, US, noted that the world should: move away from crisis management in favor of risk management; engage stakeholders in developing drought mitigation plans; and establish priorities for a comprehensive drought policy.

In the ensuing discussion, participants noted that drought is a natural cyclical process and called for a greater focus on adaptation strategies. Other contributors stressed the need for bottom-up approaches to reduce water-related conflicts and flexible drought management plans.

During roundtable discussions, Carlos Motta Nunes, Brazil, presented drought management activities from Brazil's northeastern region. Noting that the region receives sufficient rainfall, but within a short period each year, he emphasized that adequate water infrastructure and local government involvement are prerequisites for equitable water access. Javier Ferrer, Spain, described Júcar River Basin activities, highlighting benefits of moving from an emergency response to a risk reduction framework. Erkan Eminoğlu, Turkey, reported on the country's national drought strategy, developed using a consultative approach.

The closing discussions highlighted: linking water management to other environmental sectors; promoting drought-resistant crops and animal species; the legal basis for inter-basin water transfers; the availability of finances for upgrading water systems; farmers' education on best practices; and children's participation in water management planning.



L-R: Milagros Couchoud, Mediterranean Water Institute; Marta Moren, General Director of Water, Spain; and Hachmi Kennon, World Water Council

HEALTH, DIGNITY AND ECONOMIC PROGRESS: THE WAY FORWARD FOR GENDER EQUITY:

Co-chair Kenza Kaouakib-Robinson, UN Department of Economic and Social Affairs (UN-DESA), opened the session, calling for gender-disaggregated data in the water and sanitation sectors based on the recommendations of an expert group meeting convened by UN-DESA and the UN-Water Decade Programme on Capacity Development (UNW-DPC).



Co-chair Kenza Kaouakib-Robinson, UN-DESA

Session co-chair Uschi Eid, UN Secretary-General's Advisory Board on Water and Sanitation,

called for an end to the "speechlessness" surrounding sanitation, and urged development partners to insist that adequate toilets be preconditions for releasing funding for health and education projects.

Bertrand Charrier, Chirac Foundation, emphasized that water and sanitation are not the same issue and that both have unique gender-related dimensions. Two women who attended the Women and Water Preparatory Conference - Hilal Gonca Coşkun, Istanbul Technical University, and Siegmien Staphorst, Women for Water



Session co-chair Uschi Eid, UN Secretary-General's Advisory Board on Water and Sanitation

Partnership - discussed the meeting's outcomes, including a request to heads of states and ministers to implement gender-responsive budgeting in water and sanitation.

Elmira Joldosheva, Central Asian Alliance for Water, presented experiences in water and sanitation in Kyrgyzstan, Uzbekistan and Tajikistan, noting their success in training women as regional sanitation facilitators.

In a high-level debate, Nimet Çubukçu, Minister for Women and Family Affairs, Turkey, stressed the need for women's involvement in decision-making processes, emphasized the importance of awareness raising and capacity building, and noted the specific role of women in agriculture and irrigation.

Santha Sheela Nair, Minister of Rural Development, India, highlighted the taboos surrounding discussion of menstruation and defecation. She emphasized that sanitary facilities must be context-appropriate and account for issues such as safety, water availability and the needs of children, babies and adults.

Asfaw Dingamo, Minister of Water Resources, Ethiopia, provided examples demonstrating how gender issues have been incorporated into the national agenda over the last 20 years, including the recent Water Supply, Sanitation and Hygiene Movement. Participants discussed: gender in relation to disaster management; gender disaggregated water-use data; and social barriers to using the Ecosan dry toilet.

Sascha Gabizon, Women in Europe for a Common Future, and Charlotte van der Schaaf, UNW-DPC, moderated a discussion on recommendations for global and national targets and indicators for gender and sanitation. Panelists and participants discussed the creation and use of gender indicators, data collection, funding for water and sanitation, and capacity building for women's participation.

A BRIEF HISTORY OF GLOBAL WATER ISSUES

Freshwater is a finite resource that is imperative for sustainable development, economic growth, political and social stability, health, and poverty eradication. While water issues have long been on the international agenda, the debate on how to meet the growing global demand for freshwater has intensified in recent years: over 800 million people currently lack access to safe drinking water, while about 2.5 billion lack access to adequate sanitation.

In response to these challenges, the World Water Forum was initiated as a platform to include water issues on the international agenda. This Forum is convened every three years by the World Water Council (WWC) and a host country. The WWC, an international policy think-tank established in 1996, addresses global concerns over the pressures on the Earth's freshwater resources. The Forum is an open, all-inclusive, multi-stakeholder process that aims to: raise the importance of water on the political agenda; support deeper discussions to help solve the international water issues of the 21st century; formulate concrete proposals; and generate political commitment. The World Water Forum takes place in the context of other international, regional and national water dialogues.

1ST WORLD WATER FORUM: The 1st World Water Forum, held in Marrakesh, Morocco, in March 1997, mandated the WWC to develop a long-term Vision on Water, Life and the Environment for the 21st Century. This Forum also cautioned against treating water as a marketable good and established priorities, namely: water and sanitation; shared water management; ecosystem conservation; gender equality; and efficient use of water.

2ND WORLD WATER FORUM: The 2nd World Water Forum took place in The Hague, the Netherlands, in March 2000. The Ministerial Declaration identified key challenges for the future, including: meeting basic water needs; securing food supply; protecting ecosystems; sharing water resources; managing risks; and valuing and governing water wisely. In the Declaration, ministers agreed to regularly review progress in meeting these challenges and to provide support to the UN system for periodic reassessment of the state of freshwater resources.

UN MILLENNIUM SUMMIT: At the UN Millennium Summit held at UN headquarters in New York, in September 2000, world leaders adopted the Millennium Declaration, which inspired eight Millennium Development Goals (MDGs) with 18 targets, including the target to halve the proportion of people without access to safe drinking water by 2015.

INTERNATIONAL CONFERENCE ON FRESHWATER: The International Conference on Freshwater convened in Bonn, Germany, in December 2001, in preparation for the World Summit on Sustainable Development (WSSD). The Conference addressed: equitable access to and sustainable supply of water for the poor; strategies for sustainable and equitable management of water resources; integration of gender perspectives; and mobilization of financial resources for water infrastructure.

WSSD: During the WSSD, held in Johannesburg, South Africa, in August-September 2002, world leaders expanded the MDG target on safe drinking water by also agreeing to halve the number of people lacking adequate sanitation by 2015. Other water-related targets in the Johannesburg Plan of Implementation included the commitment to develop



L-R: Nelson Mandela, Nobel Laureate and former President of the Republic of South Africa being welcomed at WSSD by Kofi Annan, former UN Secretary General, and Thabo Mbeki, former President of the Republic of South Africa

integrated water resource management (IWRM) and water efficiency plans by 2005. Governments, lending agencies and international organizations also launched several voluntary partnerships and initiatives in the area of water and sanitation.

3RD WORLD WATER FORUM: During the 3rd World Water Forum, held in Kyoto, Osaka and Shiga, Japan, in March 2003, ministers adopted a Declaration underscoring the role of water as a driving force for sustainable development. They also launched the Portfolio of Water Actions, which is an inventory of more than 3,000 local actions with respect to this vital resource. The "Financing Water for All" report of a high-level panel chaired by Michel Camdessus, former Managing Director of the International Monetary Fund, was presented, leading to the establishment of the intersessional Task Force on Financing Water for All.

29TH G8 SUMMIT: At their annual Summit, held in Evian, France, in June 2003, leaders of the Group of Eight (G8) countries adopted the Action Plan on Water to help meet the MDG and WSSD goals of halving the number of people without access to clean water and sanitation by 2015. In this Action Plan, G8 leaders committed themselves to: promoting good governance; making use of all financial resources; building infrastructure by empowering local authorities and communities; strengthening monitoring, assessment and research; and reinforcing engagement of international organizations.

12TH and 13TH SESSIONS OF THE UN COMMISSION ON SUSTAINABLE DEVELOPMENT (CSD-12 AND CSD-13): At its 12th and 13th sessions held in New York, in April 2004 and April 2005, respectively, the CSD focused on policies and options to expedite the implementation of international commitments in the areas of water, sanitation and human settlements. The section on water in the CSD-13 outcome document calls for, *inter alia*: accelerating progress toward the MDGs and the WSSD 2015 water access targets by increasing resources and using a full range of policy instruments such as regulation, market-based tools, cost recovery, targeted subsidies for the poor, and economic incentives for small-scale producers; improving water demand and resource management, especially in agriculture; and accelerating the provision of technical and financial assistance to countries that need help to meet the 2005 target on IWRM.

2005-2015 INTERNATIONAL DECADE FOR ACTION "WATER FOR LIFE": Organized by the UN, the International Decade focuses on the implementation of



The dais during the opening ceremony of the 4th World Water Forum in Mexico City.

water-related programmes and projects and on strengthening cooperation on water issues at all levels. Priorities include: access to sanitation; disaster prevention; pollution; transboundary water issues; water, sanitation and gender; capacity building; financing; and IWRM. Africa is identified as a region for priority action for the Decade.

4TH WORLD WATER FORUM: The 4th World Water Forum was held in Mexico City, Mexico, in March 2006. In their Declaration, ministers emphasized the need to include water and sanitation as priorities in national processes, particularly national sustainable development and poverty reduction strategies. They reaffirmed commitments to achieve the internationally agreed goals on IWRM and access to safe drinking water and basic sanitation, and underscored the supporting role that parliamentarians and local authorities can play in this regard. The Declaration also recognized the importance of domestic and international capacity-building policies and cooperation to mitigate water-related disasters.

DEVELOPMENTS SINCE THE 4TH WORLD WATER FORUM

5TH WORLD WATER FORUM PREPARATORY PROCESS: A number of preparatory meetings took place ahead of the 5th World Water Forum, including meetings to advance the Forum's thematic, political and regional processes. The Turkish Women's Water Alliance met twice to define their role in the Forum.

Thematic process meetings: Several multi-stakeholder meetings were held to establish the themes, topics and sessions that will guide discussions at the Forum.

Political process meetings: Four Preparatory Committee meetings were held to negotiate the draft Ministerial Declaration and the Istanbul Water Strategy Guide, which will be attached to the final Declaration. Parliamentarians met to prepare their agenda for the Forum at the Parliaments for Water meeting in Strasbourg, France, in November 2008. Local authorities met several times, including at the United Cities and Local Government World Council meeting in Istanbul, Turkey, in November 2008, to draft the Istanbul Water Consensus.

Regional process meetings: The Forum's four regions (Africa, the Americas, Asia-Pacific and Europe) and three sub-regions (In and Around Turkey, the Mediterranean, and the Middle East and North Africa and Arab countries) held meetings to prepare for the Forum and identify contributions for the draft Ministerial Declaration.

2008 INTERNATIONAL YEAR OF SANITATION: Organized by the UN, the goal of the International Year of Sanitation was to raise awareness and accelerate progress towards the MDG target on sanitation. The Action Plan for the Year included activities to raise awareness, release and

update publications, monitor access and commitments, advance implementation, strengthen capacities, and evaluate costs and benefits.

16TH SESSION OF THE CSD: Held in New York in June 2008, CSD-16 included a review of the implementation of CSD-13 decisions on water and sanitation. Delegates observed that: according to current trends, Africa will realize its MDG targets on water and sanitation no sooner than 2076; the implementation of the CSD-13 decision on IWRM has been slow; and indicators to monitor changes, especially among the poor, are lacking. Delegates urged: investment for upgrading and maintaining infrastructure, building capacity, and promoting good governance; consideration of transboundary water management; and consideration of the vital importance of financial assistance, particularly for Africa.

34TH G8 SUMMIT: At their annual Summit held in Toyako, Japan, in July 2008, leaders of the G8 countries agreed to reinvigorate their efforts to implement the Evian Water Action Plan, which they will review prior to the 2009 G8 Summit. They further agreed to promote IWRM and "Good Water Governance," with a focus on sub-Saharan Africa and Asia-Pacific, including by: strengthening transboundary basin organizations; sharing water-related expertise and technology with developing countries; and supporting capacity building for water-related initiatives, data collection and use, and adaptation to climate change.

"PEACE WITH WATER": Held in the European Parliament in Brussels, Belgium, in February 2009, and led by former Soviet leader Mikhail Gorbachev, the World Political Forum, the European Parliamentary Groups and the European Research Institute on Water Policy, this meeting called for the inclusion of water issues in a successor agreement to the Kyoto Protocol on climate change. Participants proposed a Memorandum for a World Water Protocol, focusing on conflict prevention, the promotion of the right to water for all, and safeguarding the global water heritage for future generations.

1ST G77 MINISTERIAL FORUM ON WATER: In their Muscat Declaration on Water, G77 ministers attending this meeting in Muscat, Oman, in February 2009, *inter alia*: stressed the need to improve South-South exchanges of scientific and technological know-how; called on the UN system to play an important role in supporting relevant research; highlighted the potential of biotechnologies to reduce poverty; and emphasized the need to better understand these technologies. They agreed to meet annually, as necessary.

1ST JOINT FORUM MEETING OF THE NETWORK OF WOMEN MINISTERS AND LEADERS FOR THE ENVIRONMENT (NWMLE): Held in Nairobi, Kenya, in February 2009, this joint meeting between NWMLE and the UN Environment Programme (UNEP) discussed issues also under consideration at the 25th Session of the UNEP Governing Council/ Global Ministerial Environment Forum. On water, participants recommended that: women be recognized as central to the provision, management and safeguarding of both water and environmental resources; policies and strategies on water and environmental management respect gender differences; and particular attention be given to collecting gender and gender-disaggregated data and developing gender indicators to track implementation of multilateral and national policies.



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5TH WORLD WATER FORUM HIGHLIGHTS: TUESDAY, 17 MARCH 2009

On Tuesday, participants convened in plenary to hear a keynote address by the Crown Prince of Japan. They attended the Americas and European regional presentations, high level panels, and sessions related to the themes “global change and risk management” and “governance and management.” Numerous events on finance also took place, while side events convened at lunch and in the evening.



Naruhito, Crown Prince of Japan, during his keynote address

KEYNOTE ADDRESS

The Crown Prince of Japan addressed the high-level panel on disaster and climate, welcoming the Action Plan, which sets out means for implementing the Hyogo Framework for Action. He said the Action Plan captures the need to establish targets to articulate actions for reducing loss of life and livelihoods and providing adequate drinking water and sanitation during disasters. Addressing the history of flood management in Japan, he noted that civilizations have always had to prioritize between disaster management, sanitation and water supply. He concluded by emphasizing the need to learn from past experiences and to bring creative minds together to chart long-term visions for the management of individual river basins.



Loïc Fauchon, WWC President

HIGH-LEVEL PANELS

WATER AND DISASTERS: Opening the session, World Water Council (WWC) President Loïc Fauchon listed the urgent imperatives called for by the Hyogo Framework for

Action, which are to: galvanize and mobilize before disaster strikes; prioritize systems to forecast; inform, alert and evacuate; incorporate disaster risk reduction and climate change adaptation in development planning; improve disaster response; and provide safe water and toilets quickly when disaster or conflict strikes.

Han Seung-soo, Prime Minister, Republic of Korea, highlighted the need to increase global resilience by: sharing hydrological data; minimizing the damage caused by sea level rise; facilitating studies on infrastructure construction; creating appropriate legal and



L-R: UN Under-Secretary-General Sha Zukang; Prince of Orange Willem-Alexander of the Netherlands; Naruhito, Crown Prince of Japan; Han Seung-soo, Prime Minister, Republic of Korea; and Hong Soja, his wife



Han Seung-soo, Prime Minister, Republic of Korea

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policy frameworks; and establishing processes to identify the progress and shortfalls in the Framework for Action. UN Under-Secretary-General Sha Zukang noted the work of various UN agencies to assist developing countries create and implement national disaster plans.

During the first panel discussion, Sayid Yakub, Tajikistan, said dams and reservoirs are the most efficient way to mitigate the impact of drought and inundation. Robert Van Antwerp, US, emphasized the importance of shifting from a reactive to a proactive and preventive disaster management strategy. Sadik Yamaç, Turkey, outlined Turkey's disaster management and preventive action strategies. Shaikh Wahid uz-Zaman, Bangladesh, noted the need for additional resources in disaster management to secure the future of vulnerable groups.

During discussions, panelists raised issues regarding: education and knowledge development; priority setting for the international community; forecasting and early warning systems; stricter zoning laws; capacity-building, financial and technical assistance for developing countries; prompt international assistance during disaster events; technology transfers; and cooperation between Afghanistan and Tajikistan over their common lake basin.

Margareta Wahlström, UN Assistant Secretary-General for Humanitarian Affairs and Deputy Emergency Relief Coordinator, noted that UN-ISDR has received 90 country reports on disaster risk thus far and that major areas of progress include political support and capacity building in disaster preparedness and response, while the major weakness is addressing the root causes of disasters, such as land use and poverty.

During a second panel, panelists addressed, *inter alia*: the role of the World Bank in mitigation and adaptation; the importance of ground observations; the complementarity of emergency response and prevention; government response to disasters; and organizational preparedness.

FINANCE: In the High Level Panel on Finance, Chair Mehmet Şimşek, Minister of State, Turkey, explained that while there is increased stress on funding due to the economic crisis, there are ways to address and secure finances for water and sanitation for those who need them most, including through the private sector and international financial institutions.

In the first session, Prince of Orange Willem-Alexander of the Netherlands emphasized the need to recommit to the MDGs, most notably on water and sanitation, and called for: political will; increased or leveraged funds; local currency-based debt markets; and targeted official development assistance (ODA).



L-R: UN Under-Secretary-General Sha Zukang; and Prince of Orange Willem-Alexander of the Netherlands

Noting that 1 billion people lack access to water and 2.4 billion to sanitation, UN Under-Secretary-General Sha Zukang said it is a moral imperative to provide these services, and that these issues must be mainstreamed into discussions on financing for development. Angel Gurría, OECD, stressed the need to act quickly to encourage governments to incorporate water projects into fiscal stimulus packages.

Simon Brooks, European National Bank, highlighted difficulties in achieving decentralized management without fragmentation and the importance of developing blended financing strategies. Arjun Thapan, Asian Development Bank, stated that sustaining water and sanitation supply gains in Asia requires a focus on governance and efficiency.

Participants discussed: the need to account for social and environmental policies; whether multilateral financial institutions have different standards for developed and developing countries; and whether private companies will invest in infrastructure for developing countries.

In the second session, Katherine Sierra, World Bank, described the water sector as chronically underfunded, emphasized the need to avoid a "lost decade" in water and sanitation investment, and recommended linking water and energy efficiency initiatives.

Alexander Müller, FAO, focused on the need for investment in water for agriculture, stressing the role of agricultural activities in food production and poverty reduction. He listed benefits from irrigation, including: increased crop yields, stabilized output, and increased farm incomes. Kazushi Hashimoto, Japan International Cooperation Agency, discussed mobilizing local financial resources for water and sanitation, and described the importance of using ODA to leverage private funds.

Patrick Cairo, Suez Environnement, identified four key aspects of water provision affected by the financial crisis, namely: capital improvements; cash flows; revenue streams; and low-income assistance programmes and social support agencies. He stated that the private sector has an important role to play in management, infrastructure development and capacity building.

Questions from participants addressed, *inter alia*: the role of technology in addressing water scarcity and in improving agricultural production and water storage; water demands of energy sources, including renewable sources such as biofuels; and demand management.

LAUNCH OF OECD REPORT

Presenting the OECD report, "Managing Water for All: An OECD Perspective on Pricing and Financing – Key Messages for Policy Makers," Angel Gurría, OECD Secretary-General, called for a political focus on freshwater in addition to the areas of finance, fuel and food, and for using tariffs, taxes and aid transfers (3Ts) for sustainable cost recovery.

Hasan Sarikaya, Undersecretary, Ministry of Environment and Forestry, Turkey, stated that access to irrigation technology and infrastructure must accompany training and education to improve efficient water use in agriculture.

Loïc Fauchon, WWC President, stressed the links between demand and supply policies, and between pricing and financing of water. He proposed that future discussions focus on developing specific approaches for financing energy for water access.



L-R: Loïc Fauchon, WWC President; Arjun Thapan, Director General, Asian Development Bank; Lorents Lorentsen, Director of the OECD Environment Directorate; Angel Gurría, Secretary-General, OECD; Gérard Payen, Chair, Finance Group of UNSGAB; and Hasan Sarikaya, Undersecretary, Ministry of Environment and Forestry, Turkey



Loïc Fauchon, WWC President

Gérard Payen, UN Secretary-General's Advisory Board on Water and Sanitation (UNSGAB), emphasized building the capacity of water utilities, ensuring predictability of public funding, and developing sustainable cost recovery measures to leverage investments in the sector.

Arjun Thapan, Asian Development Bank, said the Bank has achieved the Camdessus target

of doubling water investments in the region. He highlighted raising tariffs and scaling up environmental sanitation services in Asia's megacities as potential win-win strategies, and cited the privatization of Manila Water and a twinning programme for utilities in the region as success stories.

During the discussion, panelists and participants discussed, *inter alia*: risk management and other incentives for private-sector involvement; positive experiences in cost recovery in developing countries; and the need to improve benchmarking of cost recovery.



Gérard Payen, Chair, Finance Group of UNSGAB

EXPERT PANEL

TECHNICAL EXPERTS PANEL ON WATER AND THE FINANCIAL CRISIS:

Jamal Saghir, World Bank, introduced the session as one of twelve panels focusing on water financing during the Forum, and stressed that panel participants were speaking in their personal capacities. He called the intersection of the financial crisis with the existing climate change, energy, food and water crises, a "perfect storm."

Angel Gurría, OECD Secretary-General, said the financial crisis provides an opportunity to advance water sector reforms. Stressing that every dollar invested in water and sanitation saves 4-12 dollars in health and social costs, he stated that the



Angel Gurría, Secretary-General, OECD



L-R: Sergio Soto Priante, National Water Commission, Mexico; José Tomás Frade, European Investment Bank; Cafer Uzunkaya, Istanbul Sewage and Water Administration; Jamal Saghir, World Bank; Angel Gurría, Secretary-General, OECD; Usha Rao-Monari, International Finance Corporation; Patrick Cairo, Suez Environment, North America; and Jeremias Paul (the Philippines)

challenge confronting the sector is to use available research to "tell the good story." Usha Rao-Monari, International Finance Corporation, highlighted measures being taken by international financial institutions and partners to attract long-term finance and equity capital. José Frade, European Investment Bank, underscored the need to minimize risk and increase affordability of water services in developing countries.

On national and local initiatives, Sergio Soto Priante, National Water Commission, Mexico, discussed measures to attract private capital in Mexico's stimulus package, including "stapled credit" to boost private investments. Speaking on water reforms, Cafer Uzunkaya, Istanbul Sewage and Water Administration, underlined the need for efficient finance and water resources. Jeremias Paul, Department of Finance, the Philippines, suggested that to attract more funding from finance ministries, water projects should emphasize their ability to deliver health, education and poverty alleviation benefits.

Patrick Cairo, Suez Environnement, highlighted the financial crisis' impact on water utilities funded through municipal bonds in the US, including reduced "willingness to pay" by domestic and industrial consumers.

Participants discussed: the appropriate balance of the "3Ts;" the role of institutional mechanisms; balancing payments for water and water as a right; and reducing the risk of water investment in developing countries.

REGIONAL PRESENTATIONS

Americas: Benedito Braga, WWC Vice-President, opened the Americas session. Loïc Fauchon, WWC President, said the regions must propose to the WWC means to follow up on regional work.

During the opening session, Maria Concepción Donoso, UNESCO's International Hydrological Programme, introduced representatives from the sub-regions of the Americas to report on key sub-regional outcomes. State of Mexico Governor Enrique Peña Nieto said innovative approaches are needed to address the growing burden of recharging and transporting water. Gerald Sehlke, American Water Resources Association, said the US must develop a national water vision within its federal system.

Tomás Vaquero, Minister of Natural Resources and Environment, Honduras, Horace Chang, Minister of Water and Housing, Jamaica, and Patricia Aquino, Caribbean Environmental Health Institute, stressed that the Central American and Caribbean regions are vulnerable to climate change and require support from developed countries. Luis Zurita Tablada, Vice-Minister of Environment and Natural



L-R: State of Mexico Governor Enrique Peña Nieto; María Concepción Donoso, UNESCO's International Hydrological Programme; Jorge Rucks (Argentina); Tomás Vaquero, Minister of Natural Resources and Environment, Honduras; José Machado, Brazilian National Water Agency; Horace Chang, Minister of Water, Jamaica; Patricia Aquino, Caribbean Environmental Institute; José Luis Genta (Uruguay); and Gerald Sehlke, American Water Resources Association

Resources, Guatemala, said his sub-region is developing a Central American Action Plan to access and manage water resources.

José Luis Genta, Ministry of Housing, Land Planning and Environment, Uruguay, called for an international water pact and stressed that water must be a public good. José Machado, National Water Agency, Brazil, emphasized that all stakeholders must be involved in integrated water resource management to avoid conflict over water resources.

In a panel on sub-regional case studies, panelists noted increased stresses on transboundary water resources due to economic development, population growth and climate change. They highlighted pressing issues for transboundary water management, including the need for, *inter alia*: flexible legal frameworks that incorporate international cooperative bodies to avoid “diplomatic gridlock”; institutions to ensure that laws are mediated and implemented; water management to prevent conflict; and regional knowledge sharing. They also highlighted the importance of international groundwater agreements.

In a final panel, representatives from the Ibero-American Water Training Program, the Inter-American Development Bank and the Global Environment Facility highlighted financing and capacity-building initiatives in Central and Latin America, including partnerships with the Spanish government through the Spanish Water and Sanitation Fund. They addressed, *inter alia*, the need for: training, capacity building and technology transfer of low-cost, low-investment technologies; improving water operator efficiency; and financing wastewater treatment.

Jerome Priscoli, US Army Corps of Engineers, introduced the Americas Regional Document, describing the multi-stakeholder process from which it was created. He said it contains twelve recommendations, which include: promoting social inclusion and poverty eradication through universal access to water supply and sanitation, and through productive water use; and developing good regulation and economic incentives to ensure water sustainability.

While some participants lauded the participatory process by which the Americas document was created, others said the process was not sufficiently inclusive and that its recommendations were not new. Some stressed the need to prioritize amongst the recommendations, while others suggested the need for sustained financing, not only for short-term water supply. Discussions continued at the WWC Pavilion over lunch.

EUROPE: Tom Vereijken, European Water Partnership, introduced the European process in preparation for the 5th World Water Forum, which led to: a European water vision; the water stewardship and awareness programmes; and the realization of a European water-house to share technologies and best practices.

During keynote presentations, WWC President Loïc Fauchon stated that it is the role of political leaders to take up solutions proposed in the Forum, and emphasized the importance of regional cooperation. Marta Moren, Water Director, Spain, presented on water scarcity and drought in the EU within the context of the European Water Directive. Jacqueline McGlade, European Environmental Agency, noted that no part of Europe is immune to water scarcity and said supply-led management is unsustainable.

A first panel addressed “Europe’s achievements and challenges on water.” Renske Peters, Ministry for Transport, Public Works and Water Management, the Netherlands, stressed the need for a long-term and inclusive governance framework for sustainable water use. Anna Tsvietkova, Water and Sanitation Programme, Ukraine, spoke on the role of water partnerships in initiating water dialogue in her country, while José Pascual Gil, City of Castellón, Spain, highlighted innovations by the irrigation sector in the Valencia region. Diane d’Arras, Suez Environnement, highlighted technical innovations to enhance wastewater treatment and reuse. Jean François le Grand, Country Council of Manche in Normandy, France, emphasized the need for locally adaptive solutions. Doris Köhn, KPW Bank, Germany, noted that risk-management tradeoffs need to be made in improving water infrastructure, while Matthias Kollatz Ahnen, European Investment Bank, stressed that macroeconomic stability at the national level contributes to the “bankability” of water projects.

Sascha Gabizon, Women in Europe for a Common Future (WECF), introduced the session on European actions to achieve sustainable sanitation for all and highlighted key drivers for reform, including health issues, funding and incentives for sanitation. Helmut Blöch, European Commission, described key principles of EU policy on sanitation, wastewater treatment and drinking water standards, citing the protection of rivers as a key achievement. Blöch said groundwater pollution remains a problem.

Panelists presented and discussed four case studies on: the 2008 Swiss national awareness campaign; water treatment and sanitation innovations in the Paris metropolitan area and the Netherlands; and the promotion of ecosan toilets in rural areas of Moldova.

Summarizing the key challenges facing the future development of the sector, Peter Cook, European Water Association, identified mitigating climate change, coping with population movements and upgrading infrastructure.



L-R: Helmut Blöch, European Commission; Marga Kool, Water Board, Reest en Wieden, the Netherlands; Peter Cook, European Water Association; Sascha Gabizon, Women in Europe Network for a Common Future (WECF); and Jean Duchemin, Seine-Normandie Water Agency

Laszlo Kothay, State Secretary for Water, Hungary, chaired the final session on basin management and transboundary cooperation. In his keynote address, Jean François le Grand, International Network of Basin Organizations, highlighted that many basins, lakes and rivers are shared in Europe and noted that the European Water Directive provides a common framework for harmonization of practices.

Panelists made presentations on the International Commission for the Protection of the Danube River; the role of the United Nations Economic Commission for Europe Water Convention in Central Asia; the EU-China River Basin Management Programme on assisting China in the Yellow and Yangtze river basins; and the implementation of basin management for the Senegal river.

THEMATIC SESSIONS

THEME ON GOVERNANCE AND MANAGEMENT FROM RIGHT TO REALITY – GOOD GOVERNMENT PRACTICES FOR IMPLEMENTING THE HUMAN RIGHT TO WATER AND SANITATION:

Chair Uschi Eid, UNSGAB, noted that action on the human right to water has gained momentum in the last five years.

Santha Sheela Nair, Ministry of Rural Development, India, emphasized that people need to ensure the recognition of the human right to water, and a right to water for all life. Kerubo Ikioga, Centre On Housing Rights and Evictions, Kenya, emphasized that legal entitlement is a prerequisite to gaining benefits from the rights to water and sanitation. Lucinda O'Hanlon, Office of the High Commissioner of Human Rights, presented the UN Independent Expert on Water and Sanitation's mandate, stressing that she wants to advance the dialogue on the right to water and sanitation.



Santha Sheela Nair, Ministry of Rural Development, India

Celestine Kaseve, Nairobi Water Company, Kenya, said the Company is recognizing the right to water by ensuring affordable water pricing for informal settlers, who comprise 60% of Nairobi's population. Vibhu Nayar, Minister for Water, Tamil Nadu, India, emphasized the challenge of addressing discrimination at the individual and institutional levels in order to implement the right to water.

Ivan Lanegra, Ombudsman Office of Peru, described his Office's efforts to upgrade sewage services, especially in rural and non-urban areas, and to monitor whether the services meet those areas' needs. Francesca Bernardini, UN Economic Commission for Europe, discussed Europe's Protocol on Water and Health, a legally binding agreement that pairs environment and health with the objective of universal access to safe drinking water and sanitation.

Panelists discussed the need for the 5th World Water Forum's Ministerial Declaration to reflect the "world's mood" that water is a human right and the need for a legal framework and multi-sectoral approach to implement the right to water.

Cyprian Mazubane, South Africa, highlighted the strong language in South Africa's constitution on the protection of the right to water and said "water is life but sanitation is dignity." Simone Klawitter, German Organisation for Technical



The dais during the presentation by Kerubo Ikioga, Centre On Housing Rights and Evictions, Kenya

Cooperation, described the experience of providing water and sanitation in Zambia through the establishment of a pro-poor "basket funding" instrument.

Henry Smets, French Water Academy, proposed that each country should use an index to calculate water affordability. Sabin Intxaurrege, Basque Water Ministry, described the forthcoming "Water for Life and Sustainable Development Basque Initiative" to implement the right to water as a human right. Francois Muenger, France, noted that the "human rights approach" forces the identification of discrimination by highlighting the problem of access to water and sanitation for those who live in slums.

Adriana Marquisio, Union for the Public Water Company, Uruguay, urged creating a complementary declaration to the Ministerial Declaration that expresses the need for the right to water. Shaddad Al Attilli, Palestinian Water Authority, said the mention of a right to water in the Ministerial Declaration would help his Authority to provide water to users.

Participants discussed, *inter alia*: transboundary water rights; drawbacks and benefits of water privatization; and the need to recognize water as a human right at the national and international levels.

THEME ON GLOBAL CHANGE AND RISK MANAGEMENT

MANAGING WATER-RELATED RISKS IN A CHANGING CLIMATE: Kwon Do Youp, Vice Minister of Land, Transport and Maritime Affairs, Korea, opened the session by highlighting the increase in disasters caused by climate change and the need to minimize damages and increase resilience through: effective responses; construction of infrastructure; implementation of integrated flood management; and exchange of information.



Naruhito, Crown Prince of Japan, during the Children's World Water Forum



Participants during the session on *Managing Water Related Risks in a Changing Climate*

Avinash Tyagi, World Meteorological Organization (WMO), outlined the nature of climate change-related water risks and Toshio Okazumi, Ministry of Land, Infrastructure, Transport and Tourism, Japan, noted the ways in which Japan is implementing risk-based flood management.

Chris Zevenbergen, UNESCO-Institute for Water Education, stressed the need to bring about action by: changing risk perception, communication and human behavior; learning from best practices and failures; and building networks and relationships. He emphasized that extreme events may create the potential for disaster, but that disaster is created by human response to those extreme events. Zevenbergen underscored the need, *inter alia*, to focus on impacts rather than probabilities and on knowledge dissemination. He proposed the establishment of an international flood resilience center to demonstrate and share innovations in management and technology.

Panelists and participants then discussed: new water-related disasters; the economic costs of climate change; creation of an adaptive resilience center; the inclusion of urban meteorology in urban planning strategies; and cross-border river basin flooding.

Saeed Nairizi, Iran, described activities undertaken by the International Commission on Irrigation and Drainage related to drought, water scarcity and risk management. He said past work has addressed drought management strategies and indices and suggested that future work include implementation and redefinition of conventional definitions of agricultural water use.

Mary-Jeanne Adler, Romania, presented her country's efforts to address potential water-related climate change disasters. Highlighting the Danube basin disaster response mechanism, she emphasized the importance of forecasting and sharing experiences when dealing with potential disasters and stressed the need for a culture of quick response to disasters.

Soontak Lee, Korea, gave a presentation on the design of infrastructure for climate change resilience in Korea. He observed that the effects of climate change in his country have been abnormal, and highlighted the rehabilitation of dams as an example of designing hydrological structures based on projected climatic change.

Cees van de Guchte, the Netherlands, said his country is an example of successful risk management. On climate risk mitigation, he emphasized the roles of innovative and unconventional technologies, regular reassessment of risk and the concept of "building with nature."

Basanta Shrestha, Nepal, stressed the unique challenges faced by mountain communities, and highlighted the importance of reducing uncertainty, increasing adaptive capacity and enhancing the resilience of those communities.

Participants then discussed the responsibility of national governments and raised issues concerning the need to: address factors that lead to climate change; address climate change holistically; ensure efficacy of early warning systems; and improve financing of projects.

Zafar Adeel, United Nations University, concluded by noting the need to focus simultaneously on mitigation and adaptation, look at policy responses at the national level and invest in infrastructure. He also emphasized the critical need to downscale climate models.

SIDE EVENTS

PRINCE ALBERT II OF MONACO FOUNDATION: PROJECTS AND INITIATIVES WITHIN THE FIELDS OF INTEGRATED AND SUSTAINABLE WATER RESOURCE MANAGEMENT: A Partnership Initiative for integrated and sustainable water resource management in



Prince Albert II of Monaco

the Mediterranean region, led by the Prince Albert II of Monaco Foundation, was presented by the Prince. He stressed the need for projects that span international, national and regional levels.

Bernard Fautrier, Vice President and CEO of the Foundation, listed its priorities, which include biodiversity, climate and water, and outlined three focal areas for the Mediterranean region, namely: access to water; sustainable water and knowledge management; and experience sharing.

Partner organizations to the Initiative described their envisioned contributions and ideas. Several speakers noted the challenges of reconciling the mismatch between ecological systems and political borders for water management, and saw the project as an effort to make decentralized and locally-based management compatible with basin-level considerations. Lucien Chabason, Blue Plan, said that while the project addressed financial and technical concerns, it also recognized the importance of addressing governance at multiple levels. Jocelyn Fenard, UN Institute for Training and Research, emphasized the concrete and practical nature of the initiative, and discussed how the research might be translated into action. Dominique Heron, Veolia Environment, highlighted the added value of the project partners' cross-cutting expertise. In closing, practical experiences from Mexico and Togo were presented.



Local musicians performed at the Forum



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5TH WORLD WATER FORUM HIGHLIGHTS: WEDNESDAY, 18 MARCH 2009

The 5th World Water Forum continued on Wednesday, 18 March in Istanbul, Turkey. Participants attended regional presentations on Africa and the sub-region “In and Around Turkey.” Parliamentarians met throughout the day to prepare their output as part of the political process. Participants also attended thematic sessions and side events, while the Water Fair and Expo continued at the Forum’s two venues.



Süleyman Demirel, former President, Turkey, during his intervention in the afternoon

REGIONAL SESSIONS

IN AND AROUND TURKEY: Haydar Koçaker, Director General of Turkey’s State Hydraulic Works, said preparation for the sub-regional process included 22 preparatory sessions based on full stakeholder consultation.

Loïc Fauchon, WWC President, lauded the Turkish government for the high quality of the 5th World Water Forum, highlighting the many “firsts” at this Forum, including engagement in the political process of government actors across four levels: local authorities; parliamentarians; ministers; and heads of state. He said the Forum’s outputs will demonstrate the importance of water to the world.

Veysel Eroğlu, Minister of Environment and Forestry, noted that “environmental fluctuations” necessitate implementation of adaptation and mitigation strategies, especially for droughts and flooding. He welcomed water management-related partnerships, stressing that Turkey has centuries of experience in managing water, with Istanbul being the “center of water management technologies.”



Haydar Koçaker, Director General of Turkey's State Hydraulic Works



L-R: Oktay Tabasaran, Secretary General, World Water Forum, and Veysel Eroğlu, Minister of Environment and Forestry, Turkey

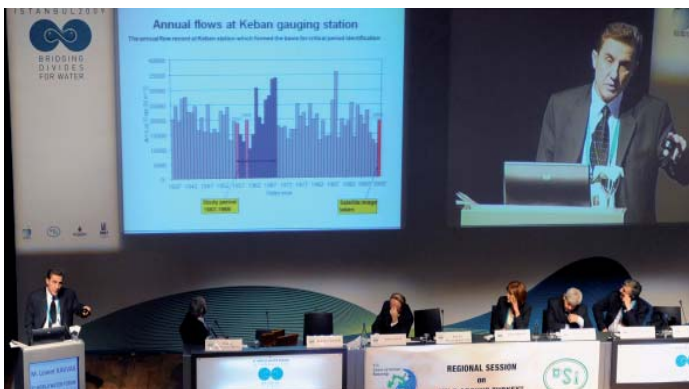
Süleyman Demirel, former President, Turkey, stressed that human beings have an obligation to protect the earth through better water management practices, emphasizing that “water is the centre of the universe.” Affirming that potable water is scarce, he noted that population growth could exacerbate the plight of millions of people without access to safe drinking water and proper sanitation. He highlighted the importance of dams for economic growth and social advancement.

Veysel Eroğlu then led a ministerial panel on climate change impacts in the region. He stressed the importance of legislation, early warning systems, adaptive strategies and cooperation. Raed Abu Saud, Minister of Water and Irrigation, Jordan, stressed the importance of cooperative mechanisms and legal



Veysel Eroğlu, Minister of Environment and Forestry, Turkey

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Levent Kavvas, University of California, Davis, during his intervention

regimes for transboundary waters. Baratli Koshmatov, Deputy Minister of Agriculture, Water Resources and Processing Industry, Kyrgyzstan, described measures undertaken in his country to facilitate adaptation to climate change.

Abdelkbir Zahoud, Moroccan Secretary of State, Water and Environment, emphasized the importance of science and technology for bridging partnerships between countries. Said Yokubzod, Minister of Water Resources Management, Tajikistan, highlighted the need to consider the MDGs and the goals of the International Decade for Water in the regional process, and urged naming 2012 the International Year for Water Diplomacy.

Hüseyin Gökçekuş, Deputy Rector of Near East University, Turkey, said the World Bank's Global Water Partnership highlights multiple challenges in the Mediterranean, including drought in northern Cyprus. Eroğlu highlighted a project to deliver water from southern Turkey to the region via a suspended pipeline.

A technical session, moderated by Doğan Altınbilek, Middle East Technical University, heard a number of presentations regarding the water situation in Istanbul. Ünal Öziş, Ege University, described hydraulic works in Turkey, which he said include dams, cisterns and canals, some of which have been in use for more than 500 years. Hasan Sarıkaya, Istanbul Technical University, presented on "regional climate change scenarios for Turkey and its surrounding areas," underscoring the need for the region to embrace mitigation and adaptation strategies. He highlighted the rise in temperature in the summer and the drop in precipitation in the winter, and projected that Turkey will experience water scarcity in the future.

Levent Kavvas, University of California, Davis, described a hydro-climatic model of the Tigris-Euphrates watershed for the study of water balances, noting that increased temperatures



Local dancers entertained delegates throughout the day



One of the winners showing her award during the Turkey Day Technical Session Awards and Reception

within the basin and the surrounding area has led to the melting of snow and subsequent rise in water levels in the basin. He said these will necessitate the construction of large water-storage facilities.

Aynur Gerzile, Istanbul Water and Sewerage Administration (ISKI), presented "From Past to Present, the Golden Horn," which described the Golden Horn Environment Protection Project. She said severe pollution due to industrialization and population growth necessitated the US\$653 million project, which entailed restitution, rehabilitation and beautification of the land surrounding the Golden Horn, with the waste collected from the water being recycled and reused in other city projects.

Ömer Özdemir, State Hydraulic Works, Turkey, presented the Metropolitan Drinking Water Initiative, which provides fresh drinking water to Istanbul residents, while Raif Mermutlu, ISKI, spoke on the Istanbul drinking water supply project. Mermutlu noted that with the current population growth rate, provision of drinking water will soon present a major challenge to the city.

AFRICA: Bai-Mass Taal, Executive Secretary, Africa Ministers' Council on Water (AMCOW), said the meeting would serve as a launching pad for the Africa Regional Paper and aimed to mobilize broad regional and international support to consolidate existing commitments to bridge water and sanitation divides in Africa. Asfow Dingamo, Minister of Water Resources, Ethiopia, noted that the World Water Forum offers an opportunity to announce Africa's successes, "not just doom and gloom."



Bai-Mass Taal, Executive Secretary, AMCOW

Prince of Orange Willem-Alexander of the Netherlands, chair of UN Secretary General's

Advisory Board on Water and Sanitation (UNSGAB), noted that there is a growing consensus on key water issues, and urged Africa and its partners to move quickly to deliver on their commitments. He underscored that donors have a moral imperative to enhance the effectiveness of their Official Development Assistance (ODA), and offered UNSGAB's support in leveraging such funds.

Oktay Tabasaran, 5th World Water Forum Secretary General, said the Forum has placed water firmly on the international agenda and provides decision makers with a place to debate, create links and advance water-related issues. Sfara Giorgio, Chairman of the G8 Expert Group for Water and Sanitation,



Erastus Mwencha, Deputy Chairperson, AU Commission

announced the G8-Africa Alliance on Water, launched during Italy's Presidency, saying it would build on the lessons learned from the Evian and Toyako G8 Summits.

Observing that "we are looking closely and listening carefully," Loïc Fauchon, WWC President, encouraged reinventing Africa's water institutions based on African experiences and priorities, which should include finding an African "expression" of the right to water. Delivering the keynote address, Erastus Mwencha, Deputy Chairperson, African Union (AU) Commission, welcomed the inclusion of the outcomes of the Sharm el Sheikh AU Summit in 2008, in which African Heads of State endorsed 25 commitments to tackle water security and sanitation goals. Concluding that Africa speaks with one voice and "without the distinction of some being donor babies or orphans," he urged all stakeholders to act immediately to bridge the continent's daunting water and sanitation divides.

Michel Jarraud, Secretary-General, World Meteorological Organization (WMO), highlighted the WMO's work to strengthen African institutional capacity, which includes developing a hydrological framework to make water management systems more affordable and sustainable.

Mandla Gantsho, Vice President, African Development Bank (AfDB), presented the Africa Regional Paper: "Bridging Divides in Africa's Water Security: An Agenda to Implement Existing Political Commitments." He underscored that the report is the culmination of a comprehensive consultative process and complements the Africa Water Vision 2025. Gantsho welcomed the increase in water funding in recent years, but stressed the scale of the problem, which includes: expanding the percentage of irrigated arable land; delivering improved sanitation to 60% of Africa's population; and tackling capacity gaps.



South African dancers performed during the Africa Regional Day

Presenting on "Financing a Sustainable Expansion of Africa's Water Infrastructure," Andrian Rakotobe, AfDB, said US\$50 billion annually will be needed to meet targets in three key areas: access to drinking water and safe sanitation; water for agriculture; and hydroelectric power multipurpose storage.

Reginald Tekateka, African Networks for Basins Development, noted that systems that can adapt to climate change require investments in knowledge and learning, diversity, proper institutional arrangements and adequate infrastructure.

In the closing session, South Africa announced that it would host the 7th session of AMCOW and the 2nd Africa Water Week in November 2009. They also expressed interest in hosting the 6th World Water Forum in three years.

POLITICAL PROCESS

PARLIAMENTARIANS

OPENING SESSION: Köksal Toptan, Turkish Grand National Assembly, welcomed parliamentarians from around the world, noting the gravity of the global water crisis and the important role of effective legislation in water governance. Pierre Victoria, WWC, on behalf of Loïc Fauchon, WWC President, addressed the 200 parliamentarians, emphasizing the need to translate the principles agreed upon in the 5th World Water Forum's parliamentary output into concrete action.

Celestion Leroy Gaombalet, Central African Republic, noted that "sharing water" is "sharing opportunities," and that new solutions and approaches are critical to meeting freshwater demand in Africa. Cho Jin Hyeong, Republic of Korea, argued that drought and desertification cause decreasing vegetation and food availability in Asia, while restoration and prevention lessen stress from cyclical drought and floods.



Narcio Rodriguez (Brazil)

Narcio Rodriguez, Brazil, called for the creation of a permanent global water parliament, under the aegis of the WWC and UNESCO-International Hydrological Programme (IHP), to coordinate efforts of parliamentarians addressing water issues around the world. He emphasized, *inter alia*, that Latin America faces: inequitable access to water; inadequate legislation on groundwater resources; and ineffective regulation on water services, pricing and payment for ecosystem services.



Köksal Toptan, Turkish Grand National Assembly



Participants during the Parliamentarians session

Alan Meale, UK and Council of Europe, highlighted the impacts of climate change on water availability, aquatic ecosystems and the occurrence of water disasters. Adnan Mohammad Badran, Jordan, emphasized that access to water is a basic human right, which should be implemented by parliamentarians in national laws.

Moderator Victor Ruffy, Switzerland, opened discussions on four topics being considered by parliamentarians: global change; transboundary waters; decentralization; and the right to water and sanitation. In a keynote address, William Cosgrove, World Water Assessment Programme (WWAP), discussed water issues identified in the 3rd UN World Water Development Report (WWDR-3).

TOPIC SESSIONS: Mustafa Östürk, Turkish Grand National Assembly, introduced a session on global change. He argued that developed countries should not see climate change adaptation and mitigation mechanisms as tools for profit, and emphasized the need for collective action.

During the ensuing discussion, a parliamentarian from Iraq called for a trilateral agreement on the Tigris and Euphrates rivers to enhance regional cooperation, while one from Hungary emphasized linking politics and science promising to use Hungary's upcoming EU Presidency to advance a more effective framework for sustainable water use in Europe. A parliamentarian from Bolivia lamented lack of access to technologies to harness the potential of water from glaciers. Some parliamentarians stressed the importance of avoiding water pollution and the effect of conflict on water quality, and others said that in Central Africa, conflicts and environmental problems are greater threats than natural scarcity.

Ursula Eid, Germany, introduced the session on transboundary waters. She urged ratification of the UN Watercourses Convention and using ODA to strengthen river basin organizations in developing countries. Osman Coşkunoglu, Turkish Grand National Assembly, recommended, *inter alia*, passing national laws to facilitate transboundary "benefit sharing" and developing a treaty on transboundary waters with an acceptable balance between upstream and downstream riparian states.

During discussions, a Turkish parliamentarian highlighted the difference between transboundary and international watercourses, and recommended the negotiation of separate

agreements on these distinct resources; other parliamentarians noted the importance of work by the International Law Commission on transboundary groundwaters.

Salwa el Magoli, Egypt, introduced the session on decentralization. Some parliamentarians emphasized the role of effective legislation in avoiding corruption and other potential problems associated with decentralization. Others suggested that decentralization should take place along catchment boundaries. Others supported the establishment of a "world water parliament," and proposed a database of good practices and law. Parliamentarians then discussed the benefits of dams as well as the potentially damaging impacts on neighbouring countries of damming transboundary waters.

Ali Riza Alaboyun, Turkish Grand National Assembly, introduced the session on the right to water and sanitation and stressed that parliamentarians should endeavor to ensure affordable water and sanitation to citizens without discrimination. David Ebong, Uganda, argued that effective water governance is the basis for a human right to water, and should include: public resource monitoring; access to courts to enforce rights; compliance; and partnerships.

In discussions, some parliamentarians emphasized that water is a universal human right and that provision of water is the responsibility of the public sector. Others noted the challenges in constitutionalizing water as a human right and the difficulties faced by developing countries in providing water and sanitation services.

The session ended with a video from Richard Durban, Senator, US, on legislation in the US Senate that could contribute ODA to efforts to provide clean water for 100 million people in developing countries.

THEMATIC SESSIONS

GLOBAL CHANGE AND RISK MANAGEMENT

CAN ADAPTATION TO CLIMATE CHANGE BE ADEQUATELY FINANCED?:

Juergen Welschhof, KfW Development Bank, opened the session on "Bridging the Financial Gap for Adaptation," stressing that the development of projects that use funding effectively are as important as new sources and mechanisms for financing. As a lead author, William Cosgrove, World Water Assessment Programme (WWAP), offered an overview of the WWDR-3 report, commenting that governments must prioritize water investment if donor communities are to support the sector.



William Cosgrove, WWAP

In the first panel, chaired by Christoph Gleitsmann, European Investment Bank, three country experiences of national-level adaptation planning were presented. Mohamed Ben Sakka, Ministry of Agriculture and Hydrological Resources, Tunisia, described his country's action plan for adaptation, noting its focus on long-term strategies instead of short-term crisis management. Eberhard Goll, German Organization for Technical Cooperation, highlighted the importance of a multi-level approach to adaptation, involving local-, regional- and national-level plans. Pavel Puncocar, Ministry of Agriculture, Czech Republic, called for well-designed, viable projects for attracting government and public



Mustafa Östürk, Turkish Grand National Assembly

support. Niels Vlaanderen, Ministry of Transport, Public Works and Water Management, the Netherlands, stressed the need to: secure long-term, predictable funding; develop monitoring strategies; and enlarge the scope of adaptation. Questions arose on, *inter alia*: the impacts of the financial crisis on financing from governments; the establishment of budget plans for adaptation; and decentralized decision making and local participation.

During the second panel on priorities and adaptation options, Vahid Alavian, World Bank, observed that while water managers routinely deal with uncertainty, there is a need to upgrade and diversify the range of tools and management practices available to them. In their joint presentation, Nanki Kaur and Roger Calow, Overseas Development Institute, questioned the distinction between adaptation and development, noting the similarities in responses, entailing, *inter alia*: climate-proofing development; strengthening disaster response; infrastructural investments; and integrated water resource management mainstreaming. Discussing a comparative study, they noted that the key issue for sub-Saharan Africa is accelerating access to available water resources, while China, with a much higher adaptive capacity, is focused on balancing competing demands. Nadia Abdul, Alexandria Water Utility, Egypt, highlighted water efficiency, infrastructure and scaling up of desalination programmes as key adaptation measures in the Nile Delta. Joppe Cramwinckel, World Business Council for Sustainable Development, underscored the need to diversify available analytical tools to enhance sound decision making.



Nadia Abdul, Alexandria Water Utility, Egypt

In the third panel, Chair Ron Hoffer, World Bank, described traditional cost-benefit assessments and technical approaches as inadequate for addressing climate change adaptation, and stressed the consideration of social concerns for equity and burden sharing. Marloes Bakker, Co-operative Programme on Water and Climate, the Netherlands, noted that the confusion between adaptation and development has hindered project design and funding, and stressed that funding for adaptation must be sufficient, predictable, equitable and effective.

Jan Schrijen, Dutch Association of Regional Water Authorities, the Netherlands, described the “Dutch model” for flood management financing, in which the central government manages large-scale investments in infrastructure, regional authorities oversee maintenance and smaller-scale infrastructure, and local stakeholders pay regional water taxes to support water management activities. Schrijen and Vasile Pintilie, Water Authority, Romania, discussed the viability of using the Dutch model in Romania and the European Union’s support of decentralized water management.

Tefera Woudeneh, African Water Facility, AfDB, offered strategies for securing resources for adaptation in Africa, including further mobilizing local resources, encouraging cleaner energy development, and calling for compensation from outside the region. Rafael Lazaroms, Association of Dutch Water Boards, the Netherlands, discussed design principles for targeted water taxes, noting that these provide reliable sources of income for water management activities and leverage for loans from banks. He emphasized the importance of communicating with local taxpayers during this process.

In the final panel, participants considered key policy messages. Some debated whether setting a ballpark price for adaptation based on weak data sends the right signal to decision makers. Others noted that while there is a need to improve existing models, there is sufficient “low-hanging fruit” in terms of agreed interventions that can be scaled up as a first step. Several speakers pointed to the importance of strong and accountable institutions for ensuring equitable access to water and sanitation. In his concluding remarks, Geert Aagaard, Ministry of Foreign Affairs, Denmark, said the outcomes of the session echo the five key principles to be considered at the UN climate change negotiations in Copenhagen in 2009, namely the need for: alignment with development goals; resilience building to cope with climate change; a strong governance framework; robust data and information exchange; and adequate financing.

GOVERNANCE AND MANAGEMENT

WATER RIGHT IN EMERGENCY: BE PRINCIPLED

OR GET PRACTICAL: Jean Lapègue, Action Contre la Faim (ACF), France, said the session aims to present the legal framework for the right to water and sanitation, how this right applies in emergencies, and how it can be put into practice.

Cyril Laucci, International Committee of the Red Cross, outlined the international legal frameworks related to water rights, distinguishing between international humanitarian law and human rights law. He said the former, based on the Geneva Conventions and protocols, applies mainly to situations of international and civil armed conflict, while the latter is invoked in times of peace, including in cases of natural disasters. He emphasized that international law, particularly through the right to life, protects water and water facilities during conflicts.



Clarissa Brocklehurst, UNICEF

Clarissa Brocklehurst, UN Children’s Fund (UNICEF), and Julie Aubriot, ACF, described a UNICEF-led Water, Sanitation and Health (WASH) project on the right to water and sanitation

in emergencies. Aubriot noted that few organizations are working on both human rights and water and sanitation, and stressed the importance of developing a common language across these groups.

Antoine Delepière, Terre des Hommes, discussed on-the-ground implementation of a human rights-based approach, highlighting challenges for community engagement in times of emergency. Jakaranda Neptune, UN Stabilization Mission in Haiti, said the International Covenant on Economic, Social and Cultural Rights (ICESCR) is a useful entry point to discussing the human right to water, and outlined how a right to water campaign was launched in Haiti, although the country is not party to the ICESCR.



Julie Aubriot, ACF

Lara El-Jazairi, Centre On Housing Rights and Evictions, highlighted a Damage Assessment report by the Coastal Municipalities Water Utility in Gaza, which found that the recent war with Israel resulted in damages of US\$6 million



Local dancers posed for a photograph during the afternoon

to water and sanitation infrastructure. She listed violations of international humanitarian law by Israel as an occupying power and during the war.

Fuad Bateh, Legal Consultant to the Palestinian Water Authority, emphasized that the human right to water and sanitation must be realized in the context of full realization of other human rights, and called for recognition of the rights of Palestinians under international water law. He stressed that the focus in Israel and Palestine should be on equitable and reasonable water access, rather than minimum water needs.

Discussions addressed, *inter alia*: definitions of emergencies, especially in the context of recurrent or prolonged emergencies; concerns over setting the minimum water need at 50L per person daily, given the much higher need when the right to food is accounted for; linking emergency responses with longer-term development activities; reasons for resistance to the recognition of the right to water; state sovereignty and the ability of the international community to secure water rights for people in countries with conflict; and the need to recognize the right to water in the Ministerial Declaration of the World Water Forum.

SIDE EVENTS

A CONVERSATION WITH GRANTEES OF THE BILL & MELINDA GATES FOUNDATION: Louis Boorstin, Deputy Director of the Foundation's WASH programme, listed impact, sustainability and scalability as its central goals. He stressed the Foundation's interest in leadership and learning, and its emphasis on "bringing sustainable solutions to scale." Presentations were made by four grantees.

Glenn Austin, Safe Water Project, PATH, described a project on sustainable and scalable point-of-use water treatment and storage devices, explaining that commercial solutions to health challenges are generally inaccessible for the very poorest people, but that innovative systems might be designed that could lead to self-sustaining market-based systems for the poor.

Jae So, Water and Sanitation Programme, presented the "Global-Scaling-Up Sanitation Project," aimed at increasing access to basic sanitation and supporting the development of enabling environments for sanitation systems, particularly through a combination of community-led sanitation and sanitation marketing approaches.

Sam Parker, Water and Sanitation for the Urban Poor, outlined a project focused on supporting local service providers, leveraging private sector resources for water and sanitation, and linking community-based organizations with providers for large urban areas.

Ben Lamoree and Catarina Fonseca, International Water and Sanitation Centre, presented the WASHCost programme, aimed at improving life-cycle service planning in water and sanitation systems by focusing on long-term maintenance and sustainability in project design.

Participants addressed, *inter alia*: the challenges of reaching low-income communities; the effects of cultural differences in project implementation; how to establish evaluation criteria for projects that are responsive to learning; the challenges of demand generation for water treatment and sanitation services; and how the grantees navigated the political landscapes in which their projects were set.

AROUND THE FORUM

WORLD WATER EXPO AND FAIR: Opened by Veysel Eroğlu, Minister of Environment and Forestry, the World Water Expo and Fair continued to display stands from international water and environment companies. Eroğlu highlighted that "the interest of so many companies highlights the importance of 5th World Water Forum and Turkey."



Veysel Eroğlu, Minister of Environment and Forestry, during the opening of the World Water Expo and Fair



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5TH WORLD WATER FORUM HIGHLIGHTS: THURSDAY, 19 MARCH 2009

On Thursday, participants attended sessions for the Mediterranean and Arab Country regional groups. The political process continued with a dialogue between local authorities and parliamentarians in the morning; local authorities discussed the Istanbul Water Consensus in the afternoon. Thematic sessions on “Advancing Human Development and the MDGs” and “Finance” continued, while sessions on “Global Change and Risk Management” and “Governance and Management” came to an end.



Youth participants gather for a “wave” at the bridge linking the two conference venues

REGIONAL SESSIONS

MEDITERRANEAN COUNTRY GROUP: Hachmi Kennou, Mediterranean Water Institute, noted that comments raised during the session would inform the final draft of the Mediterranean regional document. In introductory remarks, Amb. Roza Ieremia (Greece) listed political priorities for the region, including: sustainable financing; climate change adaptation and mitigation; and synergies between integrated water resource management (IWRM) and integrated coastal zone management (ICZM). Abdelkebir Zahoud, Secretary of State, Morocco, noted the importance of knowledge and technology transfers.

Michael Scoullou, Global Water Partnership-Mediterranean (GWP-Med), summarized the draft Mediterranean message, stating that the region approaches the Forum with renewed political commitment.

During the first panel on water demand management and adaptation to climate change, and water governance and financing, Henri-Luc Thibault, Blue Plan, stressed the role of demand management and efficiency. Vangelis Constantianos, GWP-Med, pointed to education, stakeholder participation and gender awareness for addressing governance challenges.



Henri-Luc Thibault, Blue Plan

Fadi Comair, Ministry of Energy and Water, Lebanon, presented two water governance initiatives in Lebanon; Mohamed Ali Khouadja, National Water Supply Authority, Tunisia, described the Tunisian experience in mobilizing responses to climate change; Juan Valero de Palma Manglano, Euro-Mediterranean Irrigators Community, emphasized the importance of irrigation in the region; and Niraj Shah, European Investment Bank, noted the need for diverse financing strategies.

Participants discussed, *inter alia*: virtual water; water management in situations involving occupation, conflict and transboundary waters; the interaction between water, energy and food needs; and opportunities for north-south cooperation in the Mediterranean basin.

Opening a second panel on water and coastal development, World Water Council (WWC) President Loïc Fauchon said the role of modern technologies in the Mediterranean, although controversial, must be explored. Panel co-Chair Michel Vauzelle, Conference of Peripheral Maritime Regions Inter-Mediterranean Commission, cited tourism, urbanization and migration as stresses on coastal regions. Co-Chair Ivica Trumbic, UN Environment Programme, stressed that poor integration of marine and terrestrial regions leads to tensions between wealthy and poor populations. Panelists then highlighted, *inter alia*: tourism and agriculture as competing sectors for water in coastal areas; the importance of desalination and wastewater treatment in Mediterranean coastal zones; means to simultaneously implement IWRM and ICZM, even though they sometimes conflict; the implications of the EU Water Framework Directive in the EU’s coastal regions; and the potential for regional initiatives, such as the Euro-Mediterranean

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Partnership and the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, for building regional cooperation.

In a concluding panel, Teodoro Estrela, Deputy Water Director, Spain, highlighted public awareness, pricing policies and policy integration as critical components of water demand management. Trumbic noted the importance of regional efforts, such as the European Union's Horizon 2020 programme, in improving water management.

Jean-Claude Vial, Ministry of Ecology, Energy, Sustainable Development and Territorial Development, France, encouraged the translation of political commitments into action, and Elena Espinosa Mangana, Minister of Environment, and Rural and Marine Affairs, Spain, stressed the need for close cooperation among countries in the region to harmonize water demands and environmental protection.

ARAB COUNTRY GROUP: Mahmoud Abu Zeid, President of the Arab Water Council (AWC), emphasized that it is a challenge to deliver sufficient quantities of water for agriculture, industry and household use since water is scarce in the Arab region. He said these problems could be solved by: drawing upon the region's human resources, including the Arab Water Academy; collaborating across states; and continuing to share information internationally.

Loïc Fauchon, WWC President, highlighted four main obligations, namely to: implement the right to water; find more funding for water and sanitation, and use it efficiently; ensure that water managers are in place to ensure clean, continual water supply; and provide education about water resources.

Safwat Abdel-Dayem, Executive Director, AWC, described the Arab Countries' Regional Process, highlighting necessary measures to improve water management, including implementing the right to water and bridging the divides between people's knowledge through collaboration and information exchange.

Al Sadiq Almahdi, Former Prime Minister of Sudan, stressed the importance of dialogue to reach agreement on equitable sharing. He stated that unlike oil, water is a shared resource that can only be managed through good policies and respect of the rights of others. Abdulatif Rasheed, Minister of Water Resources, Iraq, noted that with most of its water sources originating from outside the country, Iraq is highly "water



Al Sadiq Almahdi, Former Prime Minister of Sudan



L-R: Mahmoud Abu Zeid, AWC President; Abdulatif Rasheed, Minister of Water Resources, Iraq; and Kaoru Ishikawa, Ambassador of Japan to Egypt

insecure." He highlighted renewed efforts to promote dialogue with Turkey and Syria, and urged Arab countries to ratify existing international treaties on transboundary watercourses.

Kevin Cleaver, International Fund for Agricultural Development, called on Arab countries to build on the region's historically rich and unique knowledge base. Observing that many modern agricultural systems are highly water-inefficient, he called for restructuring the existing incentive systems to promote more efficient technologies and crops. Reflecting on broad opposition to water privatization in the region, he proposed finding less controversial "vocabulary" to stimulate public discussion on the range of policy options available, "since someone has to pay for water delivery."

Kaoru Ishikawa, Japan's Ambassador to Egypt, underlined five messages on water and science, namely the need to: respect existing resources through efficient use; use techniques such as desalination; "give nature a helping hand" by using technology to clean polluted water sources; strengthen water user associations for equitable use; and adjust public perceptions of sanitation and water reuse.

In a closing panel discussion, panelists from academia, policy institutions, government and civil society debated key messages from Arab stakeholders to the 5th World Water Forum. Stressing that the way forward requires thinking out of the box, they discussed, *inter alia*: exploring innovations outside the water sector; recognizing the contribution of civil society; disseminating good practices; strengthening education and research collaboration; promoting IWRM approaches; and accelerating ratification of international treaties to address water-based conflicts.

POLITICAL PROCESS

DIALOGUE BETWEEN LOCAL AUTHORITIES AND

PARLIAMENTARIANS: Following separate meetings on Wednesday, parliamentarians and representatives from local water authorities convened for a joint dialogue to discuss decentralization and the right to water and sanitation. Opening the session, Mustafa Öztürk, Turkish Grand National Assembly, noted the historic importance of the meeting and the critical need for coordination between parliamentarians and local authorities.



Moderator Mohamed Saäd El Alami, Morocco



L-R: Kevin Cleaver, Assistant President, International Fund for Agricultural Development; Al Sadiq Almahdi, Former Prime Minister, Sudan; Mona El-Shazli, Egypt TV; Mahmoud Abu Zeld, AWC President; Abdulatif Rasheed, Minister of Water Resources, Iraq; and Kaoru Ishikawa, Ambassador of Japan to Egypt



Participants of the Local Authorities session posed for a photograph

authorities. He said cooperation is crucial to ensure the sustainability of water resources through appropriate laws and policies.

Mohammed Bin Abdallah Al-Guwaihes, Saudi Arabia, and Louis Le Pensec, Council of Municipalities and Regions (AFCCRE), discussed the roles of national- versus local-level governance and the private sector in the provision of water, wastewater treatment and sanitation, as well as the processes of decentralization in their countries. They also cited climate change, pollution and provision of good quality water as challenges faced jointly by parliamentarians and local authorities.



Mohammed Bin Abdallah Al-Guwaihes, Saudi Arabia

Summarizing the Forum's parliamentary sessions to date, Jean-François le Grand, Country Council of Manche, France, noted that most parliamentarians agreed in principle to the right to water and sanitation, which should be recognized by governments in line with environmental concerns. Maged Abu Ramadan, Mayor, Gaza and Chair of the Association of Palestinian Local Authorities, noted that most Palestinians lack adequate access to water because of occupation and inequitable sharing,



Maged Abu Ramadan, Mayor, Gaza, and Chair of the Association of Palestinian Local Authorities

and stressed the need to speed up implementation of the Johannesburg Plan of Action to achieve the MDGs.

Discussions by parliamentarians and local authorities focused on the human right to water and the need for effective legislation and financial support for local authorities to realize this right. Participants voiced support for devoting 1% of official development assistance (ODA) to facilitate effective management of water resources by local authorities in developing countries and to support implementation of the MDGs. A parliamentarian from Turkey suggested including a provision in the Forum's outputs on compensation for destruction of water infrastructure during conflict.

Zekai Şen, Istanbul, summarized the discussions, highlighting the need to, *inter alia*: translate the discussion's outcomes into concrete actions; continue the dialogue between parliamentarians and local authorities; translate the human right to water into access to water for all; and address global climate change through application of the polluter-pays principle.

LOCAL AUTHORITIES: In the afternoon, Chair Charles Josselin, Former Minister of Foreign Affairs, France, opened the General Assembly of Local and Regional Authorities. Henry Bégore, Mayor, Maxeville, France, said local authorities



A bird's eye view of the Dialogue between Local Authorities and Parliamentarians session



L-R: Jean-Yves Pidoux, Vice-Mayor, Lausanne, Switzerland; and Gaye Doğanoglu, Congress of Local and Regional Authorities of the Council of Europe



The Mayor of Istanbul **Kadir Topbaş** (right) with a participant from the local authorities meeting

must assume responsibility and be able to mobilize financial means for water treatment and sanitation in rapidly growing cities.

Facilitator Margaret Pageler, WWC and Local Governments for Sustainability (ICLEI), noted the importance of adaptation measures for avoiding hydrological stress, including: education; flexibility; assessment of the likely impact of climate change; and disaster planning and management. Zekai Şen, Istanbul, Turkey, said the water cycle is changing because of human activities and pollution, and noted that these changes affect health and nutrition.

Pageler asked local authority representatives what key messages they wanted to convey to parliamentarians and ministers. During discussions, local authorities stressed the need to be empowered through effective regulatory frameworks and financial support, and to conserve scarce resources. They emphasized that local-level authorities best understand citizens' needs and are well-positioned to implement water as a human right, provided that resources from the national and international levels are targeted towards governance at this level.

Kadir Topbaş, Mayor, Istanbul, chaired a session on the "final adoption of the Istanbul Water Consensus (IWC)," emphasizing the role of local and regional authorities to achieve water security and the MDGs. Facilitator Selahattin Yildirim, Secretary General, United Cities and Local Governments-Middle East and West Asia, noted the IWC represents not only a consensus but also the start of a longer process of implementation.



Participants at the Water Expo

Reinaldo Asperin Bautista, Mayor of Baguio, the Philippines, noted that the IWC provides local authorities with a framework of action, and urged local authorities to return to the World Water Forum in 2012 with concrete progress on implementation of its principles.

Representatives from four signatory cities, namely Atakpamé, Togo; Lausanne, Switzerland; Barcelona, Spain; and Thessaloniki, Greece, urged local authorities to sign the document. Gaye Doğanoglu, Congress of Local and Regional Authorities of the Council of Europe, congratulated cities that have already signed the Consensus, and noted that local and regional authorities have demonstrated better financial performance than their national partners in both borrowing and spending.

Some local authority representatives regretted that they could not sign the Consensus unless the reference to "inter-basin water transfers" was removed from the annex on Guidelines for a Plan of Local and Regional Action. Others noted that they were already sharing water between basins and opposed deletion of the phrase. Facilitator Yildirim suggested limiting the reference to "inter-basin transfers" to "within domestic boundaries." This proposal was opposed by some local authorities, who emphasized the potential importance of such transfers for developing countries with transboundary waters. Those concerned about the inclusion of the reference continued discussions through the coffee break. Facilitator Yildirim recommended deleting "inter-basin transfer" and inserting a footnote listing those local authorities in favor of the principle.

Dominique Lefebvre, Mayor, Cergy-Pontoise, France, opened the session on implementation of the IWC and introduced "Champion Cities," noting that these cities, in addition to commitments in the IWC, agree to: act as ambassadors of the IWC and to promote it within their regions; shepherd a theme and promote cooperation among local authorities on it; and share information and knowledge on their implementation experiences. Local authorities from Lausanne, Switzerland; Vienna, Austria; and Incheon, Republic of Korea agreed to take lead roles in the implementation of the IWC.

On implementation, local authorities discussed the need to: maintain control of water provision, particularly when services have been privatized; share benefits of water and burdens of its treatment; and add access to water for all households and enterprises as a prerequisite for being a "Champion City."

In closing, Mayor Topbaş stressed that water and sanitation needs should be met by local authorities and gave full support to the IWC. He also proposed the establishment of a water committee inside local authorities, adding that the authorities should fulfill the principles of the IWC and report on progress made at the next World Water Forum.

THEMATIC SESSIONS

GLOBAL CHANGE AND RISK MANAGEMENT

WATER MANAGEMENT DURING AND AFTER DISASTERS AND CONFLICTS: Robert Mardini,

International Committee of the Red Cross, remarked that disasters are initially characterized by intense media coverage and goodwill from donors, but that a financing gap opens once international attention wanes. He said the session would focus on protecting access to drinking water and sanitation in the Palestinian Occupied Territories.

Noting that the water sector in Palestine is in “total disarray,” Stephanie Oudot, French Development Agency (AFD), said the lack of progress does not stem from the absence of capacities or funds, but is a direct consequence of the political situation. She explained that a large number of donor-funded projects have stopped due to the difficulty of negotiating transfers of materials and labour across the border with Israel. On alternative options, she said the situation can be alleviated by constructing a desalination facility either in Gaza or Egypt, but that such investments could not be guaranteed under the threat of renewed conflict.

Annika Johansson, Swedish International Development Cooperation Agency, stressed the need for close on-the-ground coordination, flexibility and a long-term perspective by Palestine’s development partners. Takeshi Naruse and Okazaki Yuji, Japan International Cooperation Agency (JICA), outlined JICA’s work in bridging water divides between Palestine, Israel and Jordan through provision of water infrastructural development assistance. Alain Boinet and Pierre Gallien, Solidarités, France, emphasized the need for: enhanced knowledge sharing; community participation in reconstruction efforts; and mobilization of funds for post-conflict reconstruction.

Representatives from the League of Arab States and the Palestinian Authority discussed legal issues related to water access rights in the region. They emphasized that water is protected by international humanitarian law, as a “civilian object indispensable to the survival of the human population.”

Describing himself as the “Minister for Virtual Water,” Shaddad Attali, Head of the Palestinian Water Authority, underscored the difficulty of finding concrete solutions to Palestine’s water insecurity. He noted that President Abbas has called for water to be “taken out of” the Palestinian-Israeli conflict, and announced that the Palestinian Authority would support the 1997 UN Watercourses Convention and continue to seek dialogue with Israel. Commenting on some technical options on the table, Attali concluded that desalination entails “abandoning the water beneath our feet,” and instead urged the use of international law to find a way to share transboundary resources.

THEMATIC WRAP-UP “GLOBAL CHANGE AND RISK MANAGEMENT:” Ger Bergkamp, WWC, moderated a session that synthesized the theme’s topics, namely climate change, migration and disasters.

On “adaptation to climate change,” Henk van Schaik, Cooperative Programme on Water and Climate, highlighted key points from the regional dialogues on climate change adaptation, planning and financing, discussing, *inter alia*, the need for: information exchange; national budgets geared to adaptation; and a framework for finance. Panelists and

participants discussed: adaptation as a “way of life;” local-level adaptation mechanisms; securing water supply in arid and semi-arid areas; the need for international financing for local actions; and the recovery of species in mangroves, forests and wetlands.

On the topic “migration,” Tim Kasten, UNEP, and Janos Bogardi, United Nations University - Institute for Environment and Human Security, highlighted the importance of identifying underlying causes of migration and re-prioritizing rural development initiatives. They distinguished between urban and rural, and intra-national and international migration, stating that migration is a form of adaptation and not just a failure to adapt. Ensuing discussions addressed, *inter alia*: differing views on water as a direct cause of migration; the need to plan water systems that can cope with increasing urbanization; and gender considerations.

On the topic “disaster management,” Kuniyoshi Takeuchi, International Hydrological Society, highlighted recommendations and conclusions, including: the need to make a paradigm shift from reactive policy processes to proactive ones; the importance of national responsibility; and the need for effective early warning systems. Issues addressed by panelists and participants included: financing both emergency response and prevention; using simple language to communicate messages to the outside world; recognizing the right to water and sanitation and the rights of women in the decision-making process; combining modern and traditional communication tools; sharing water equitably; and good water governance.

Following final reflections from van Schaik, in which he described climate change, migration and disasters as global phenomena with regional impacts that need local solutions, several panelists articulated the need for an integrated and multi-disciplinary approach. A representative from the Youth Forum called for the prioritization of water on the climate change agenda and the need to consider prevention measures, such as early warning systems, in addition to adaptation.

Participants considered the importance of: engaging with the private sector to find solutions; designing mechanisms to monitor the use of adaptation funding; building institutional capacity to use funds effectively; coordinating planning for adaptation and development activities; and linking water and adaptation.

ADVANCING HUMAN DEVELOPMENT AND THE MDGs HOW CAN BETTER WATER MANAGEMENT REDUCE POVERTY AND HUNGER? A SYNTHESIS:

Chandra Madramootoo, International Commission on Irrigation and Drainage (ICID), introduced the synthesis session and placed the debate on poverty and hunger in the context of the food crisis, which he said threatens progress on the MDGs.

Jonathan Woolley, Consultative Group on International Agricultural Research, stated that, despite being the major user of diverted water resources, agriculture has remained on the margins of the Forum; he urged consideration of how to place agriculture more centrally in discussions.

Salih Abdin, Arab Water Council, identified challenges to food production, including population growth, natural disasters and the use of agricultural products for biofuels. He underscored the need for international cooperation and systematization of international food trade.

Rapporteurs from the theme’s three sessions on water and agriculture summarized conclusions from their discussions. Suresh Kulkarni, ICID, presented the recommendations,



Delegates during the wrap-up session

commitments and initiatives on “achieving food production to meet growing demand,” including devising short- and long-term solutions to deal with increased food demand, improving data collection and analysis, and involving women in water management and decision-making processes.

Teshome Atnafie Guyo, Ministry of Water Resources, Ethiopia, summarized key conclusions from the session “how can food market measures boost rural development and poverty alleviation?” He noted that farmers need access to credit and markets.

On the session “water for bioenergy or food?” Isobel Van der Stoep, WSM Leshika Consulting, explained that the session’s participants focused on water for both food and fuel, farmer participation, integrated policy development, and investment for research and development.

The panel’s chair, Khalid Mohtadullah, Global Water Partnership, lauded the recommendation to link water-related sectors, and Guyo summarized final recommendations, including advising a shift from integrated water management to integrated resource management and mainstreaming water in national and international strategic plans.

In discussions, participants considered the implications of the financial crisis on poverty and hunger and called for coordinated action across ministries at national and international levels. One participant noted that the right to water has been recognized, but that this has not been extended to the protection of the right to water for food.

Panelists and participants discussed, *inter alia*: land tenure and water rights; preparing for higher commodity prices; dialogue with the donor community; technology transfers and technology for increasing water productivity; the link between oil prices and food prices; and threats to food production from land degradation and drought.

FINANCE

PRICING WATER SERVICES – PROCESS MATTERS: OVERCOMING CONFLICTS, BUILDING A DIALOGUE: Robin Simpson, Water Dialogues, explained that the session would focus on actualizing the paradigm shift from a framework of full cost recovery from tariffs to one of sustainable cost recovery based on multiple pricing mechanisms. He invited panelists, representing diverse perspectives, to address: policy objectives in designing pricing strategies; dilemmas in the tariff-setting dialogue; and ways to build a transparent, informed and participatory process.

João Simão Pires, Institute for the Regulation of Water and Solid Waste, Portugal, noted that although a significant proportion of the population can afford to pay for services,

benchmarking of water pricing criteria is still needed. Vibhu Nayar, IAMWARM Project, Tamil Nadu State, India, discussed common misconceptions in this debate, including that substantial financial investments are needed and that cost recovery leads to greater efficiency in service provision and sustainable use of resources. He stressed that water management needs full public participation in making policy choices, which requires decision makers to share power. Maurice Bernard, AFD, highlighted donor initiatives to facilitate pro-poor policies in water service pricing, noting that a portion of ODA flows should be allocated to reducing information and capacity asymmetries, as this is an important precondition for full public participation and improved governance.

Perry Rivera, Manila Water, the Philippines, said his company has been successful in managing the competing “dilemmas” of satisfying high public expectations, meeting its service obligations and raising tariffs seven-fold within a decade despite having a predominantly poor client base. He attributed this to predictable and high-quality services and regular monitoring of income trends to determine the “coping cost” of poor consumers. David Boys, Public Services International, stressed that workers bear a disproportionately high cost in the search for greater efficiency. He called for cost recovery mechanisms based on the 3Ts concept (tariffs, taxes and transfers) to ensure that heavy users and those that can afford it pay a higher share.

In discussions, several participants stressed that addressing the core issue of sustainability requires cost recovery mechanisms targeting water for agricultural production, which accounts for the bulk of water use. Other issues raised included, *inter alia*: the need to factor in hidden costs of building public-private partnerships; dealing with poor project design and sovereign debt; and tools for building a transparent, informed and participatory process.

AROUND THE CONFERENCE CENTRE

YOUTH PARADE AND OTHER: During lunch, participants to the Youth Forum paraded across the pedestrian bridge that joins the 5th World Water Forum’s two venues on either side of the Golden Horn. During the evening, the Youth attended a thematic synthesis in preparation for their closing ceremony, which will take place on Friday, 20 March.

UPCOMING CULTURAL EVENTS: As part of the Forum’s cultural programme, participants can look forward to a concert by world-renowned Turkish percussionist, Burhan Öçal, at the CRR concert hall on Friday, 20 March at 8:30 p.m.



Photographs of the Youth Parade



World Water Forum Bulletin

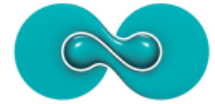
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5TH WORLD WATER FORUM HIGHLIGHTS: FRIDAY, 20 MARCH 2009

On Friday, the 5th World Water Forum's political process continued with a High Level Trialogue among ministers, parliamentarians and local authorities in the morning and the opening of the Ministerial Conference in the afternoon. The regional process concluded with the Asia Pacific regional session. Participants continued to attend thematic sessions on "managing and protecting water resources" and "education, knowledge and capacity development." Youth delegates attended the Youth Forum closing ceremony.



L-R: Oktay Tabasaran, Secretary General, 5th World Water Forum, and Ahmet Mete Saatçi, Deputy Secretary General, 5th World Water Forum



L-R: Ahmet Mete Saatçi, Deputy Secretary General, 5th World Water Forum; Sumru Noyan, Chair, Ministerial Process of the 5th World Water Forum; Veysel Eroğlu, Minister for Environment and Forestry, Turkey; Jacques Diouf, Director General, UN Food and Agricultural Organization (FAO); and Loïc Fauchon, WWC President

POLITICAL PROCESS

MINISTERIAL CONFERENCE OPENING: Sumru Noyan, chair of the ministerial process, opened the Ministerial Conference by stating that the Istanbul Ministerial Declaration (IMD) and the Istanbul Water Consensus will be the Forum's key outputs. Ahmet Mete Saatçi, Deputy Secretary General, 5th World Water Forum, Loïc Fauchon, WWC President, Jacques Diouf, FAO Director General, and Veysel Eroğlu, Minister of Environment and Forestry, Turkey, welcomed ministers to the Forum and reminded them of their collective duty to resolve global water challenges.

In the area of transboundary water cooperation, the representative from Syria called for negotiation between Turkey, Iraq and Syria on sharing transboundary watercourses in a reasonable manner, while Kazakhstan noted the progress made on transboundary cooperation in the Aral Sea basin. The Danube basin was cited as an example of regional water cooperation by the representatives from Hungary and the Czech Republic.

A minister from Hungary highlighted the extreme importance of finance, and called for the launching of a "new green deal" to simultaneously resolve the financial crisis and provide water and sanitation for all. Others noted the importance of investment

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L-R: **Muammer Güler**, Governor of Istanbul, and **Veysel Eroğlu**, Minister for Environment and Forestry, Turkey



L-R: **Şirin Payzin**, CNN Türk; **Michael Vauzelle**, President of the PACA Region, France; **Kasségné Adjonou**, Mayor of Atakpamé, Togo; **M. Hani Abdul Massih**, Mayor of Beit Sahour, occupied Palestinian territories; **Ines Ayala Sender**, Parliamentarian, European Parliament; **Rashad Ahmed**, Minister of Environment and Water, United Arab Emirates; **Mustafa Öztürk**, Parliamentarian, Turkish Grand National Assembly (TGNA); **Oscar Castillo**, Parliament of MERCOSUR, Argentina, and **Ruth Zavaleta Salgado**, Minority Deputy, Chamber of Deputies, Mexico

in technology and technical cooperation, while a representative from the Democratic Republic of Congo stressed the need for actual investment in the infrastructure of developing countries.

Many ministers emphasized the critical need to address climate change given the severe impacts on climate variability and hydrological extremes that will occur, as well as the need to manage water within the context of sustainable development and environmental protection. Brazil in particular recognized the challenges these present for Latin America and noted that countries have common but differentiated responsibilities to take action. The minister from Ecuador emphasized the special heritage of water and the critical need to protect and preserve aquatic ecosystems and the environment. Other ministers expressed support for sustainable management and conservation of resources to avoid “water bankruptcy.”

The Minister from Bolivia, supported by several other delegates, stated that several issues are not sufficiently recognized in the draft Ministerial Declaration, including: a human right to water; the issue of collective rights, including participation of native people and local communities in policy setting; and the link between water and culture. In addition, many ministers voiced support for explicit recognition in the Declaration of the fundamental human right to basic water supply and sanitation as well as implementation of the MDGs. The representative from Spain highlighted the need for gender equality in water and sanitation issues.

The US representative said the Obama administration is determined to work for a “water secure future,” and noted that the US “Water for the Poor Act” sets water and sanitation as a clear objective of foreign assistance.

Chair Noyan, stressed that the IMD and the IWC are not legally binding agreements. The co-chairs of the 5th Forum’s Political Process, Vural Altay, Ministry of Foreign Affairs, Turkey, and András Szöllösi-Nagy, UNESCO-IHP, closed the session.

HIGH-LEVEL TRIALOGUE: Yaşar Yakış, Former Minister of Foreign Affairs, Turkey, opened the High Level Dialogue among ministers, parliamentarians, and local authorities. He congratulated local water authorities for adopting the Istanbul Water Consensus (IWC) on March 19, announcing that 50 authorities have already committed to signing the document.

In the panel session, Rashad Ahmed, Minister of Environment and Water, United Arab Emirates, highlighted the importance of unconventional sources of water and emphasized that the equitable sharing of water is a prerequisite for peace.

Oscar Castillo, Parliament of the Southern Common Market (MERCOSUR), Argentina, noted that the solution to the global

water crisis can only be solved by addressing root causes.

Ruth Zavaleta Salgado, Minority Deputy, Chamber of Deputies, Mexico, regretted that more progress had not been made on implementation of a human right to water since the 4th World



Yaşar Yakış, Former Minister of Foreign Affairs of Turkey

Water Forum. She emphasized that ongoing efforts should include civil society, would require the support of developed countries and benefit from the creation of a world water parliament.

Mustafa Öztürk, Parliamentarian, Turkish Grand National Assembly (TGNA), noted the need to, *inter alia*: exchange technologies and information; strengthen the capacity of local authorities; prevent pollution; raise awareness; and improve water legislation and management of transboundary watercourses.

Ines Ayala Sender, Parliamentarian, European Parliament, Spain, stressed the need to recognize access to water and sanitation as a human right, ensure safe water quality and diversify energy sources without harming the environment.

Kasségné Adjonou, Mayor of Atakpamé, Togo, Michael Vauzelle, President of the Provence-Alpes-Côte d’Azur Region, France, and M. Hani Abdul Massih, Mayor of Beit Sahour, occupied Palestinian territories, recommended the empowerment of local authorities through the provision of financial and technical resources and stressed that water is a human right.

Participants discussed, *inter alia*: the obligation not to target water infrastructure during conflict; the necessity of protecting water resources to secure a human right to water; and the challenges posed by corruption and lack of finance.

Loïc Fauchon, WWC President, remarked that water is a political issue that requires political decision making. He encouraged continuation of the dialogue following the Forum.



L-R: **Julia Marton-Lefèvre**, IUCN Director General; **Tineke Huizinga**, Vice Minister for Transport, Public Works and Water Management, the Netherlands; **Jean-Louis Borloo**, Minister of Ecology, Energy, Sustainable Development and Land Planning, France; **Veysel Eroğlu**, Minister of Environment and Forestry, Turkey; **Jan Dusík**, First Deputy Minister of Environment, Czech Republic; **Angela Cropper**, Deputy Executive Director, UN Environment Programme; **Roger Pulwarty**, National Oceanic and Atmospheric Association; and **David Bresh**, Swiss Re

Yusuf Ziya İrbeç, Parliamentarian, TGNA, closed the session stating that significant progress had been made on several issues, including *inter alia*: transboundary waters, decentralization and the provision of water and sanitation services.

HIGH-LEVEL PANEL

ADAPTATION: Ger Bergkamp, WWC Director General, noted that in the water community, the term “climate change” means “adaptation.” He then emphasized the high anticipated cost of adaptation. Noting Turkey’s recent approval of the Kyoto Protocol, Veysel Eroğlu, Minister of Environment and Forestry, Turkey, said his country is determined to contribute to international efforts to address climate change.

Jean-Louis Borloo, Minister of Ecology, Energy, Sustainable Development and Territorial Development, France, said the 2009 UN climate change negotiations in Copenhagen must focus on water and stressed that the water and climate “families” must work together. Jan Dusík, First Deputy Minister of Environment, Czech Republic, said a framework for action on adaptation should be agreed to in Copenhagen and highlighted work to create such a framework for Europe.

Roger Pulwarty, National Oceanic and Atmospheric Association, stressed that processes for learning and sharing knowledge are not yet part of the climate change dialogue. On financing, Eroğlu urged development of a financial structure for adaptation, and prioritizing between adaptation options. David Bresh, Swiss Re, stressed the need to direct adaptation funding under a post-Kyoto regime at preparedness prevention, technology and risk transfer mechanisms.

Borloo highlighted the link between climate change, water and energy, and under the authority of the Czech presidency of the EU called for immediate and concrete action on at least 10 major water and energy projects. Angela Cropper, Deputy Executive Director, UN Environment Programme, highlighted the cross-sectoral nature of water and creation of UN-Water to address this challenge.

Lindiwe Benedicta Hendricks, Minister of Water Affairs and Forestry, South Africa, discussed her country’s “Water for Growth and Development Framework,” which sees water as a life-sustaining scarce resource. She highlighted the implications of adapting water use to availability rather than focusing on supply management.

Stressing that adaptation is as important as mitigation, Tineke Huizinga, Vice Minister for Transport, Public Works and Water Management, the Netherlands, described the establishment of a high-level committee under her ministry to prepare a flexible national adaptation strategy for the next 100 years. Julia Marton-Lefèvre, IUCN Director General, said that discussions on adaptation often highlight the role of infrastructure, such as dams and dikes, but should also include natural infrastructure, such as aquifers and river basins.

Summarizing, Bergkamp noted that on the public-private sector debate, discussions at the Forum had converged on the need to strengthen the public sector to facilitate adaptation.

REGIONAL SESSIONS

ASIA-PACIFIC: Yoshiro Mori, Asia-Pacific Water Forum (APWF), opened the Asia-Pacific regional session, introducing the APWF’s Ministers for Water Security Initiative as a platform for dialogue among ministers across sectors.

Siva Thampi, Economic and Social Commission for Asia and the Pacific, highlighted the activities of the APWF, noting in particular the first Asia-Pacific Water Summit held Japan in 2007, and underscored the importance of regional cooperation.

Wouter Lincklaen Arriens, Asian Development Bank (ADB), stated the ADB’s commitment to increasing investment in water in the Asia-Pacific region, and said dedicated leadership and the use of existing technologies can improve water management.

Sub-regional representatives from Northeast Asia, Central Asia, the Caucasus, South Asia, and Southeast Asia, discussed *inter alia*: specific regional challenges including floods, saltwater intrusion and water storage limitations; the impacts of climate change, population growth, energy demands and urbanization; transboundary water governance strategies; and the importance of environmental protection, water conservation and meeting the MDGs.

Speaking as hosts of a leadership meeting held in the region, Yaacob Ibrahim, Minister for the Environment and Water Resources, Singapore, identified the importance of knowledge networks and low-cost water technology, and Yasushi Kaneko, Senior Vice-Minister of Land, Infrastructure, Transport and Tourism, Japan, lauded the Ministers for the Water Security Initiative.

Ravi Narayanan, Vice-Chair, APWF Governing Council, launched the Regional Document, saying it addresses, *inter alia*: water financing and capacity development; water-related disaster management; monitoring of investments and results; and water for development and ecosystems. He highlighted its guiding principles, including decentralization accompanied by adequate financing and capacity building.

Ministers and representatives from the Asia-Pacific region outlined national initiatives to increase water security, including: modifying legal frameworks and tariff structures; upgrading outdated infrastructure; sustainably harvesting water resources; and making river basins fundamental planning units. On transboundary water sharing, some suggested that upstream states mitigate or compensate for damages to downstream states.

Updating participants on the G8 Experts Group on Water and Sanitation's work, Akihiko Furuya, Ministry of Foreign Affairs, Japan, noted that the Group's most recent meeting was



Margaret Catley-Carlson, Chair of the World Economic Forum Global Agenda Council on Water Security

held at the 5th World Water Forum, and that in addition to writing an update report on the G8 Evian Water Action Plan, the Group would also develop an implementation strategy on water and sanitation.

Margaret Catley-Carlson, Chair of the World Economic Forum Global Agenda Council on Water Security, moderated a discussion among APWF partners, challenging panelists to recommend priorities for improving water security and to name the most

important actions that could be taken by water ministers. The priorities identified included: improving scientific knowledge and data harmonization; developing technology, including for rainwater harvesting; improving mitigation strategies, water storage and groundwater recharge; increasing agricultural water efficiency; and promoting broader stakeholder participation, particularly in communities responsible for stewardship of upstream water.

Key recommendations for ministerial actions were: the implementation of existing commitments by governments; creation of strong policies and extension services; coordinated planning by water ministers and ministers in other sectors; promotion of community-led activities, particularly for short-term adaptation; and mainstreaming of water activities by governments, evidenced through budget allocations.



South African dancers at the forum

THEMATIC SESSIONS

MANAGING AND PROTECTING WATER RESOURCES ENSURING ADEQUATE WATER RESOURCES AND STORAGE INFRASTRUCTURE TO MEET AGRICULTURE, ENERGY AND URBAN NEEDS FOR SUSTAINABLE DEVELOPMENT: Peter Van Niekerk,

Department of Water Affairs and Forestry, South Africa, described his country's national water resource strategy, "Water for Growth and Development Framework," which includes catchment and reconciliation strategies, inter-basin transfers and dams, water reuse, desalination and groundwater use. Adem Şanlısoy, Water Supply Istanbul, highlighted the regulatory framework used to protect the lake basins supplying the city of Istanbul with drinking water, and noted in particular the importance of conserving these basins by reforestation and limiting settlements and economic activity in zones around the lakes.

Kazuya Kumagai, Ministry of Health, Labor and Welfare (MHLW), Japan, highlighted two large-scale bulk water supply challenges in Japan, namely treatment and transport. He noted that environmental protection provides the benefit of improving water quality.

Ángel García Cantón, Ministry of Public Works, Spain, underscored that increased water demand has traditionally been addressed by constructing dams, but in the future must be tackled through water demand management, wastewater reuse, desalination and use of integrated planning approaches that consider quantity and quality within the framework of ecosystem health. Felix Bogliolo, Via-Marine, described



Tadahiko Sakamoto, Japan Commission on Large Dam

the advantage of a new method for transporting freshwater in large quantities and over long distances by underwater flexible pipelines. Tadahiko Sakamoto, Japan Commission on Large Dams, stressed the importance of dams and reservoirs to cope with water demand, noting that project benefits and environmental and social impacts must be carefully balanced.

Participants noted: the need for a paradigm shift among water users to reduce water demand; the role of water use efficiency and water demand management in meeting domestic water supply needs; the need to promote water recycling and cost reduction; and the importance of stored water for the "green revolution." They exchanged examples of best practices for water saving, such as increasing irrigation system efficiency.

Ryosuke Kikuchi, Japan Water Agency, concluded by stressing the need for urgent implementation of IWRM, including water reuse, environmental assessments and improved finance frameworks for infrastructural development.

EDUCATION, KNOWLEDGE AND CAPACITY DEVELOPMENT

THINKING OUTSIDE THE WATER BOX: Kala Vairavamoorthy, UNESCO Institute for Water Education, provided an overview of the 5th World Water Forum topic "water science and technology: appropriate and innovative solutions for the 21st century to address the needs of society." Introducing the session "thinking outside the water box," Lies Janssen, Netherlands Water Partnership, said participants

would be encouraged to explore perspectives from outside the sector, and to use short message service (sms) and email to post comments to an interactive website during the session.

Drawing on the animated film “Madagascar” as a backdrop, Djeevan Schiferli, IBM, summarized lessons for water entrepreneurs from IBM’s restructuring process, including “dare to dream, collaborate beyond your comfort zone by forging non-traditional partnerships and start your journey today.”

Rebecca Straw, Charity Water, drew attention to innovative ways of raising funds for water projects, including micro-blogging on Twitter, public service announcements incorporating celebrities and use of global positioning satellite system (GPS) to track funded projects for individual donors. She emphasized that combining such technologies with routine site visits and local partnerships is critical for delivering on-the-ground results.

Henk Roulofs, Water board, De Dommel, and Bjorn Hoogwout, Brabant Water, the Netherlands, presented the “Helixer” project, which brings together businesses in



Bjelkeman-Petersson, akvo.org

the south of the Netherlands to brainstorm on creative solutions in the area of water and health. Bjelkeman-Petersson, akvo.org, presented on “akvo.org,” an open source initiative comprising: “Aquapedia,” an

online resource of low-cost solutions and best practice; an online market place to match donors to beneficiaries; and a simplified reporting tool combining GPS technology and micro-blogging tools to show project results in real time.

On internet and innovation, Alix Zwane, Google, encouraged water managers to make use of information technologies in their work, highlighting: sms channels to monitor, track and evaluate water service provision; Google Earth to make earth resources and earth systems’ information more accessible; and expanding support for “cloud computing.”

Ben White, Africa Interactive, noted that the pan-African network enables local reporters to directly post stories, images and video. He underscored its potential for monitoring implementation of water and sanitation projects on the ground. Gurdal Ertek, Sabanci University, Turkey, presented an open source software application to enhance decision making for water efficiency in the chemicals industry. Speaking on “games for water” Joke Witteveen, xmediaworks, the Netherlands, discussed the use of online gaming techniques to stimulate creative thinking in the water management sector.

During interactive discussions, participants discussed ways to apply new information and communication tools to address water and sanitation issues, including: demanding greater accountability from governments; exploring opportunities to combine “old” and “new” knowledge; and encouraging youth involvement.

WATER AND HISTORY: UNDERSTANDING THE WATER CULTURES OF PAST CIVILIZATIONS AND DERIVING LESSONS FOR THE PRESENT:

Nurunnisa Usul, Middle East Technical University, introduced the session,

noting it would continue discussions on how water-related knowledge systems, practices and values have evolved throughout history, and provide lessons in water management today. Zieaoddin Shoaie, International Center for Agricultural Research in Dry Areas, described the 3000-year old qanat underground water supply system as a successful model of public participation in water resource management. Orhan Baykan, Pamukkale University, presented on the water structures of Hellenistic, Roman and Byzantine periods in Turkey. Other presentations discussed the water historical library in Mexico and water rituals in eastern cultures and their applications in modern technology. Participants noted that the motivation for developing such advanced water systems was to use the best technology possible to ensure reliable delivery of clean water, and emphasized that the underlying institutional structures and cultural norms that ensured their success is as important as the actual engineering achievements.

FOSTERING SOCIO-CULTURAL PERSPECTIVES IN WATER SCIENCES AND MANAGEMENT:

IDENTIFYING BRIDGES AND BARRIERS: Lida Schelwald van der Kley, Dutch Water Board, and Linda Reijerkerk, Center for Conflict Resolution, the Netherlands, explored the theme of water as a source of life, inspiration, power, conflict, cooperation and sustainability. Canguzel Zulfikar, Carolina Center for the Study of the Middle East and Muslim Civilizations, drew insights from the Sufi writings of Sāmiha Ayverdi, whose images of water works illustrated her belief that reaching water through digging symbolizes an effort to reach unity with truth.

Prachanda Pradhan, Farmer Managed Irrigation Systems Promotion Trust, Nepal, noted that the promulgation of the Nepali Water Resources Act in 1992 undermined traditional value systems that treated water as a community resource. He underlined that national legal frameworks should foster pluralistic governance models based on collaboration and community leadership over shared water resources.

Jeroen Warner, Wageningen University, the Netherlands, presented on water and conflict resolution, using case studies on flood management from the Netherlands and France to illustrate the importance of engaging local communities in problem analysis, project design and management of flood programmes.

Sasaki Takatsugu, City of Saijo, and Taniguchi Makoto, Research Institute for Humanity and Nature, Japan, provided an overview of community-science collaboration around groundwater in Saijo, Japan. They noted that as a result, sustainable groundwater management in Saijo can be based on both precise scientific data and customary principles, enabling the codification of traditional norms for the benefit of future generations.

Barbara Rose Johnston, Centre for Political Ecology, USA, cited research on the human and environmental impact of large dams, concluding that “development-induced displacement is a major cause of global poverty.” She said water infrastructure projects should: comply with national and international law; recognize “off-the-map” protected areas; respect the human right to water; implement indigenous peoples’ rights to free, prior, informed consent; and ensure the right for all affected people to access information about projects to allow meaningful participation in decision making, and to share the benefits of development.

In closing, participants discussed 10 draft policy recommendations prepared by the session convenors to be forwarded to the Secretariat of the 5th World Water Forum. They highlighted the role of the Forum in building bridges across the natural and social sciences and called for water to be viewed as a human as well as a cultural right.

INSTITUTIONAL CAPACITY DEVELOPMENT: GETTING THE BALANCE RIGHT FOR EQUITABLE WATER ALLOCATION: Matt Hare and Reza Ardakanian, UN-Water Decade Programme on Capacity Development (UNW-DPC), and Raoul Darwish, Arab Water Council, said the session aims to find ways to support equitable water allocation and inform policy reforms and institutional capacity building.

Hare asked panelists to identify: drivers for and barriers to ensuring equitable allocation of water; policy and legal frameworks needed to overcome barriers and strengthen drivers; and capacity development activities needed to support development of these institutions.

Tarek Majzoub, Association of the Friends of Ibrahim Abd El Al, emphasized the importance of mechanisms that support the participation of women and for institutional accountability; Ebenizario Chonguica, Permanent Okavango River Basin Water Commission, stated that equitable allocation requires quantifying available water resources and that assessments of demand must consider possibilities for enhanced efficiency; and Patricia Avila-Garcia, National Autonomous University of Mexico, said that economic terms alone are insufficient for addressing water resource management. Kenichi Tsukahara, Japan International Cooperation Agency, stated that capacity building requires consideration of diverse backgrounds; Abbasgholi Jahani, UN Educational, Scientific and Cultural Organization, listed “pillars” of equitable allocation, including effective, flexible and transparent water law; and William Moraka, United Cities and Local Governments of Africa, underscored the importance of a “sector-wide approach,” with all stakeholders involved in finding collective solutions.

Participants divided into working groups, to address six themes: definitions of equitable allocation; integrating traditional knowledge and traditional water rights into legislation; strengthening regulation and enforcement of legislation; developing an effective mix of governmental regulation and market mechanisms to promote water access; developing tools for measuring water demands; and establishing knowledge-sharing platforms for institutional capacity development.

Each group reported back on their discussions. Participants shared success stories, noting that although solutions are context-dependent, lessons can be learned across experiences. No consensus was found on the definition of “equitable allocation,” but some saw the term as a description of the allocation of water to meet the minimum needs of all sectors and individuals, contingent upon availability of water resources. Participants noted the need for: tariffs as incentives for efficient water use; clear mandates and accountability in water resource management chains; community-oriented management approaches; and organizing existing information networks.

Fatma Abdel Rahman Attia, Ministry of Water Resources and Irrigation, Egypt, concluded the session by stressing the need to consider cultural and social values in water allocation decisions.

YOUTH FORUM

CLOSING OF THE YOUTH FORUM: Oktay Tabasaran, 5th World Water Forum Secretary General, congratulated the youth on their successful session, emphasizing that they had been important stakeholders at the Forum. Assuring them that their recommendations would be taken into consideration “at the highest level of the Forum,” he urged them to continue communicating to solve water problems.

A statement from Turkey’s Environment Minister reiterated the youths’ important role in shaping the future of the continent, welcoming the Youth Declaration as a manifestation of their courage and determination.

David Boys, Public Services International, emphasized the need to make legislators accountable for their actions, stressing that water is a basic human right. Alison Bartle, Aquamedia, commended the youth on their dedication to addressing water problems. Highlighting themes within the Youth Declaration she expressed hope that their “voices would continue to be heard.”

Amanda Cleghorn, World Wildlife Fund, encouraged the youth participants to pursue their dreams. Speaking on behalf of WWC President Loïc Fauchon, Charles-Louis de Maud’huy, WWC, expressed hope that the youth had felt like “part of the family of stakeholders” at the Forum, and urged participants to transmit the accomplishments of their Forum to future generations.

Meera Karunanathan, Council of Canadians, speaking on behalf of the Alternative Water Forum and the People’s Water Forum, applauded the youth on recognizing water as a human right and regretted that, where water is concerned, “human need has become subservient to human greed.” Calling the World Water Forum a “big-corporation affair,” she challenged the WWC stand on the commodification of water.

Youth representatives gave an overview of: graffiti around the conference, the “Wave” initiative, the “Water from the Youth Perspective” publication, and the Blue Ribbon campaign to raise awareness on water issues. Stating that the Youth Declaration will be available online, Yiğit Canay, Secretary General, Youth Forum, called the Forum to a close.

ISLAMIC MINISTERS’ MEETING: Ministries of Muslim countries convened at the Forum to discuss their countries’ water concerns. Organization of the Islamic Conference Secretary-General Ekmeleddin Ihsanoğlu noted that the region’s populations are being impacted by regional conflicts, the global financial crisis, climate change and limited access to drinking water. Veysel Eroğlu, Minister of Environment and Forestry, Turkey, commended the group’s efforts to collaborate through projects related to water.



David Boys, Public Services International



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5TH WORLD WATER FORUM HIGHLIGHTS: SATURDAY, 21 MARCH 2009

On Saturday, participants attended two special focus sessions on “irrigation: efficient use of water in agriculture” and “climate-related disasters.” The thematic process came to a close, with wrap-up sessions on the themes “advancing human development and the Millennium Development Goals (MDGs),” “managing and protecting water resources,” and “education, knowledge and capacity development.” Ministers prepared for the Forum closing by attending a series of roundtables.



L-R: Mehmet Mehdi Eker, Minister of Agriculture and Rural Affairs, Turkey, and Chen Lei, Minister of Water Resources, China

SPECIAL FOCUS SESSIONS

IRRIGATION: EFFICIENT USE OF WATER IN AGRICULTURE: Chaired by Akif Özkaldı, Deputy Director of Turkey’s Directorate of State Hydraulic Works (DSI), the session focused on country experiences in Mexico, China and Turkey. Chair Özkaldı outlined three focal areas for the presentations, namely legal and institutional arrangements, planning and development, and operation and maintenance of irrigation systems.

In the panel on Mexico, presentations addressed institutional structures and specific policy initiatives. One described the main recommendations of a water tribunal held in Zaragoza in 2008 on water resource management, including developing

participatory governance strategies. Panelists outlined the institutional framework in Mexico, noting that Conagua assigns water permits for both water withdrawals and wastewater emissions, and emphasized the need for investment in activities that improve water savings and productivity. They described the shift to decentralized administrative control over irrigation districts.

In the panel on China, Chen Lei, Minister of Water Resources, China, highlighted his country’s central role in world food security. He stated this security is challenged by land degradation, population growth, climate change and water scarcity for food production. Panelists described: the need to rehabilitate ageing irrigation infrastructure; the legal framework for water resource management, including legislation on state



The dais during the session on Irrigation: Efficient Use of Water in Agriculture

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Mehmet Mehdi Eker, Minister of Agriculture and Rural Affairs, Turkey

water resource ownership and conservation requirements; the need to balance public and private sector roles for irrigation system management; and participation by farmer water user associations in irrigation management activities.

In presentations on Turkey, panelists identified new financing strategies for irrigation investments, including public-private partnerships and Mehmet Mehdi Eker, Minister of Agriculture and Rural Affairs, Turkey, highlighted policies and action plans to address climate change impacts. Presenters cited rural activities as important contributors to the national economy and encouraged land consolidation for increasing irrigation efficiency and land productivity.

Chair Özkaldı highlighted the common challenges and priorities across the countries, particularly the need to modernize irrigation. He said all three panels noted the regional variability of water availability and the consequent importance of water efficiency for meeting future food production demands. All panelists mentioned the necessity of accounting for social, political, economic and technical considerations in water management for agriculture.

In the ensuing discussions, a question about corruption raised the issue of “water banks” to regulate the transfer of water rights and the need for transparency and dialogue between governments and water users. Other participants commented on: the economic sustainability of water user associations; implications of energy costs and irrigation technology; the need for a stepwise approach to increasing irrigation efficiency; and the use of flexible financing and agricultural development funds to increase productivity in water use.

Participants also discussed, *inter alia*: the need to consider water quality as well as quantity in irrigation discussions; biological research on crop growth and water uptake to increase irrigation efficiency; wastewater treatment and reuse; the use of international funds for transboundary water cooperation, and the role of domestic water efficiency in reducing demands for water from transboundary basins; impacts of the financial crisis on the viability of public-private partnership projects for irrigation infrastructure; implications of land use, including forestry, on water availability; mechanisms for water pricing; minimization of pesticide and fertilizer use; and associations for farmer training.

CLIMATE-RELATED DISASTERS: On “management of water-related disasters in view of climate change: challenges and future directions from the perspectives of meteorological services and water managers,” Mehmet Karaca, Istanbul Technical University, introduced a series of presentations made during two panel sessions on issues including: climatological

monitoring in Turkey; technologies that monitor aspects of climate and environment, including various satellite monitoring systems; the World Meteorological Organization’s strategy to mitigate and adapt to the effects of climate change; validation of climate data; the decision to release water from dams along the Euphrates river in 2004; the duties of hydro-meteorological services in Azerbaijan; effects of climate change in Turkey and the Mediterranean; and decreasing water levels in Turkey.

Participants addressed, *inter alia*: the need to prepare for the extreme effects of climate change; the importance of interdisciplinary cooperation in mitigation efforts; the potential for establishing a network of national climate services that will improve management of reservoirs and food production; catering for the needs of the world’s most vulnerable; reducing the ecological footprint of humanity; and the potential for Turkey to halve its water consumption and still meet all its water needs.

Panelists also encouraged: engaging with the various stakeholders in drought and flood management to prevent loss of life in Turkey; establishing early warning systems and response capacity to address disasters; recognizing the Southeastern Anatolia Project (GAP) as a good example of sustainable development providing livelihood opportunities and flood protection; and improving climate data and modeling products to provide better seasonal predictions of rain and to provide data that is scaled to time-frames understood by politicians. Participants noted that ways of conserving water include: replacing old irrigation systems with new ones, including a shift from open canal systems to closed-piped and drip irrigation technology and replacement of older distribution networks in urban areas.

During discussions, one participant suggested studying correlations between decreases in water levels and precipitation in Turkey. Others noted: the need to decrease greenhouse gases and promote green sources of energy, especially wind energy; that the energy sector is one of the most active sectors in Europe despite the economic crisis; the validation of ground observations; the need to make data and information available to the general public to facilitate public participation in Integrated Water Resource Management (IWRM); and the importance of considering the unintended ecological consequences of development when making policy decisions.

Participants also suggested that to address climate change in Turkey, the government should: undertake IWRM; draft climate change policies for every sector; consider the relationship between energy and water; undertake short-, medium-, and long-term planning processes; and recognize the role of local governments. They also considered the role of large-scale infrastructure, such as long-distance tunnels and dams in climate change adaptation.



Children at the Forum



L-R: Clarissa Brocklehurst, UNICEF; Pasquale Steduto, Chair, UN-Water; Michael Fink, International Hydropower Association; Daniel Renault, FAO; Akkineni Bhavani Prasad, Confederation of Indian Farmers Association; Peregrine Swann, UK DFID; and Martin Walsh, Global Water Partnership

THEMATIC SESSIONS

ADVANCING HUMAN DEVELOPMENT AND THE MDGs

THEME WRAP-UP: Pasquale Steduto, Chair of UN-Water, introduced the wrap-up session on the four topics under the theme, namely “ensuring water, hygiene and sanitation (WASH) for all,” “water for energy, energy for water,” “water and food for ending poverty and hunger,” and “multiple use and functions of water services.”

Clarissa Brocklehurst, UNICEF, summarized discussions on WASH. She stressed the need for: sanitation advocacy and collaboration on global, national and sub-national monitoring; utility reforms; and urban sanitation learning exchange, including WASH in schools.



Clarissa Brocklehurst, UNICEF

On the topic “water for energy, energy for water,” Michael Fink, International Hydropower Association, said discussions centered on, *inter alia*: technology and sustainability, including ecological footprints; policy strategy and partnerships; the water-energy-climate nexus; the importance of having a sound information base for decision making; and resource-use efficiency.

On “water and food for ending poverty and hunger,” Akkineni Bhavani Prasad, Confederation of Indian Farmers Association, highlighted the importance of: micro-finance mechanisms; integrated approaches for food and energy; and the development of local markets. He noted that “farmers are part of the solution not the problem,” and announced that a draft synthesis report will be made available through the Forum website.

On “multiple uses and functions of water services (MUFS),” Daniel Renault, Food and Agriculture Organization, defined MUFS as a process whereby the same water is used for different uses, functions and services within a given system. He highlighted that MUFS could serve a market of 1 billion people, with high potential returns on both investments and poverty reduction.

Martin Walsh, Global Water Partnership, noted the importance of working across sectors, and Peregrine Swann, UK Department for International Development, stressed that funding must flow where needs are greatest, noting that this is not yet happening. Swann argued that accountability mechanisms for both donors and governments could improve the situation. A representative of the Youth Forum called for more efficient implementation of the MDG on WASH and the recognition of access to water as a human right.

Participants discussed: the question of finance versus technology for improving access to water; the need to close the gap between energy and food production as well as between the scientific community and policy makers; and mutual learning. Johan Kuylenstierna, UN-Water, closed by noting that the focus should be on implementing existing frameworks and better integrating financial issues, including investments beyond 2015.

MANAGING AND PROTECTING WATER RESOURCES WHICH ARE THE OPERATIONAL TOOLS THAT ALLOW ACHIEVING TRANSBOUNDARY COOPERATION AND SOUND BASIN MANAGEMENT?:

Co-chairs Shammy Puri, International Association of Hydrogeologists, and Jean-Yves Grosclaude, French Development Agency (AFD), said the session aimed to identify the operational tools that facilitate transboundary cooperation and sound basin management. They identified three questions for consideration: how to specify the role of official development assistance (ODA) in transboundary cooperation; how to develop sustainable financial mechanisms; and how to achieve financial solidarity for resource provision across basin countries.



L-R: Jean-Yves Grosclaude, French Development Agency (AFD), and co-chair Shammy Puri, International Association of Hydrogeologists

Panel presentations outlined diverse regional experiences in transboundary water management, including: cooperation in the Nubian Sandstone Aquifer System of Egypt, Libya, Chad and Sudan; the GAP in the Euphrates-Tigris basin; and inter-provincial cooperation over the Yangtze River in China. They highlighted efforts to harmonize methodologies for the global classification and mapping of transboundary aquifers.

A second set of panelists offered reflections on operational tools, addressing: the role of third parties in international conflicts; the role of international basin organizations in assisting with sub-national harmonization of governance; the need to allocate benefits from water rather than water itself; the creation of standardized measurement methods and shared databases, using the example of the Water Framework Directive in Europe; the value of progressive confidence-building measures to overcome mistrust, as enacted in projects in Northwestern Europe; dispute resolution mechanisms; inventories of potential transboundary water concerns; plans for mobilizing stakeholders; and capacity building in the Mekong River basin.

During discussions, participants debated whether there is a distinction between “international” and “transboundary” watercourses. Turkish participants stressed the need to manage the Tigris and Euphrates rivers in an equitable, reasonable and optimal manner, but noted that while willing to cooperate, “interference in their affairs” made them uncomfortable. They said dam construction in Turkey will not affect downstream neighbors and will continue even if loans are not forthcoming from international financial institutions. Participants also considered, *inter alia*: finance and ODA to support transboundary management; equitable allocation of water and participation in conservation activities across upstream and downstream countries; and mechanisms to encourage the development of trust among basin stakeholders.

HOW CAN WE BRIDGE THE DIVIDE BETWEEN VARIOUS USERS WHOSE LIVES DEPEND ON COMMON WATER RESOURCES? AND HOW SHOULD WE JUST DO IT!:

László Kóthay, State Secretary of the Ministry of Environment and Water Management, Hungary, and Amb. Muhammad Zamir (Bangladesh), opened the wrap-up of the topic “basin management and transboundary cooperation,” which comprised four sessions.

Summarizing key outcomes from the session on successes and failures of hydro-solidarity, panelists noted that riparian state interactions are based on hydro-sovereignty not hydro-solidarity, and that discussions in the session had addressed whether “international” is equivalent to “transboundary” when referring to water resources.

On the session addressing stakeholder involvement in basin management and transboundary water cooperation, panelists explained that participants had noted the importance of stakeholder inclusion in transboundary water management and highlighted challenges presented by stakeholder participation including, *inter alia*: motivation to participate; lack of hydro-diplomatic knowledge; and modeling to facilitate common understanding.

On cooperation over transboundary surface and groundwater resources, a session that evaluated tools for the development of sustainable cooperation and the prevention of conflict, panelists summarized key conclusions, including that: there is no common definition for sustainable cooperation; political will and trust are fundamental; legal enforcement frameworks facilitate cooperation; basin-wide approaches are necessary; management must protect aquatic ecosystems; and water treaties should be used as tools to establish joint arrangements and institutions for cooperation. They summarized suggestions on the 1997 UN Watercourses Convention, including calls for its ratification and the establishment of an interim body by the UN Secretary-General to support and promote the Convention.

Summarizing the session on operational tools for enabling transboundary cooperation and sound basin management, panelists presented categories of operational tools that participants had proposed for achieving sustainable cooperation, including: basin management plans; legal and institutional instruments; information systems; medium-term development plans and investment programmes; and funding mechanisms and financial resources.

In the ensuing discussion, differing views were offered on the 1997 UN Watercourses Convention. Some participants said the Convention must be revised and updated prior to its ratification, particularly to reflect environmental concerns and the need for sustainable development. Others opined that the Convention must serve as the basis of international law for transboundary waters. A representative from the Youth Forum called for the inclusion of youth as decision makers. Participants also discussed: successful examples of cost and benefit sharing; the role of third parties in facilitating cooperation; and the importance of confidence building.

Léna Salamé, UNESCO, and Jean-François Donzier, International Network of Basin Organizations, closed the session with a description of the participatory process used to develop this topic and a summary report. They emphasized the need for comprehensive, integrated information and management at the basin level.

THE NEED FOR BETTER MANAGEMENT AND PROTECTION OF SURFACE, GROUND, SOIL AND RAIN WATER:

Hasan Akyar, DSI, said panelists would summarize conclusions from three sessions that contributed to this topic, namely: groundwater; strategic frameworks for effective and sustainable water resources management and protection; and public awareness and stakeholder participation for sustainable water resources management.

On groundwater, Michael Campana, Oregon State University, said participants had stressed that groundwater behaves differently from other water sources and is poorly understood by policy and decision makers. He noted that groundwater use does not require large infrastructure, and that while this can be advantageous, it makes the resource susceptible to exploitation, thus necessitating new forms of governance.



Young talent at the Forum



Hasan Akyar, DSI, Turkey

On water resources management, Ari Michelsen, American Water Resources Association, said participants agreed unanimously on the need for IWRM, but not on its definition. He said ground, surface and rain water must be managed together, and that non-renewable groundwater must be incorporated into IWRM. He stressed the need for adaptive management. Nilgün Harmancıoğlu, Dokuz Eylül University, added that scientific solutions will not work unless preceded by appropriate policy frameworks.

On public awareness and stakeholder participation, Peter Mulvihill, International Commission on Large Dams (ICOLD), said participants had discussed the need to, *inter alia*: train the public on the effects of their water-use behaviors; ensure participation at all levels and phases of IWRM; and make meaningful participation a requirement at the statutory level. He noted that they also discussed the need for governments and donors to consult farmers on payment schemes.

During the ensuing discussion, participants focused on problems related to groundwater. They agreed that as an open-access resource, regulation is needed to manage groundwater sustainably. They emphasized challenges related to illegal well construction, transboundary management of shared groundwater resources and the likelihood that climate change will negatively impact groundwater resources.

Participants also noted: an insufficient emphasis on the protection of water and on the linkage between soil protection and water; techniques and technologies for groundwater recharge and rainwater harvesting; the potential of satellite imaging for data collection and monitoring; the need to engage agricultural stakeholders, given extensive water consumption in this sector; the extent to which external actors should engage in internal water-sharing debates; and the potential of self regulation to minimize overexploitation of water resources. They also discussed whether groundwater should be privately or publicly managed.

THEME WRAP-UP: Describing the thematic process, Karin Krchnak, The Nature Conservancy, said “water for environment is water for growth and development,” and stressed the need not only for technical solutions, but also for policy solutions.

Luis Berga, ICOLD, presented outcomes from the topic “ensuring adequate water resources and storage infrastructure to meet agricultural, energy and urban needs.” He underscored that water infrastructure is linked to economic and social development and that experience in infrastructure development over the past century reveals that large water and energy projects can have major social and environmental impacts. Noting the need to integrate the objectives of water

management and conservation of environmental and cultural resources, he stressed that significant attention must be paid to defining environmental flow regimes within river basins.

On the topic “preserving natural ecosystems for water and life,” Mathieu Pinkers, Dutch Ministry of Agriculture, Nature and Food Quality, underscored that ensuring access to knowledge and education is a prerequisite for achieving conservation goals.

Ahmet Sargin, General Directorate, DSI, Turkey, summarized the key issues emerging in discussions on “managing and protecting surface, groundwater and rainwater,” highlighting the need to strengthen links between decision makers and technicians.

Synthesizing the key follow-up issues arising from the thematic sessions, Sibylle Vermont, Federal Office of the Environment, Forests and Landscape, Switzerland, stressed the need to frame the water message in language that policy makers, as well as stakeholders from other sectors, can understand. Concluding, she emphasized the need to move from water to ecosystem management, and proposed that the concept of “hydro-solidarity” become the new organizing framework for action.

Presenting recommendations from the Youth Forum, Ramazan Caner Sayan and Natalia Coibanu emphasized that young people are united in their aim to create a secure future and bridge divides across different cultures, countries and capacities, and called for a greater role in decision making and management of water resources and supply systems. These youth representatives noted that education plays a critical role in empowering young people to live more sustainably, hence there is a need for training and apprenticeship programmes to develop their leadership skills. On their own contribution to the Forum process, they drew attention to a youth internet platform, which will create a market place for matching youth water initiatives with financing opportunities.

With regard to the World Water Forum process, several participants noted a disconnect between the thematic process and the ministerial and local authority discussions at the Forum. Calling this a lost opportunity for exerting political leverage, they proposed that organizers work towards greater synergies at the 6th Forum. One participant noted that “water is a power issue,” and said that the Forum must include the “voices of the voiceless.” On the content of future thematic sessions, participants proposed, *inter alia*: the inter-linkages between population growth and water security; a focus on water-sector reform, not just land reform; and developing guidelines on governing water flows.

EDUCATION, KNOWLEDGE AND CAPACITY DEVELOPMENT

WATER EDUCATION AND SCHOOLS: BRIDGING DIVIDES FOR FUTURE GENERATIONS: Opening the session, John Etgen, Project for Water Education for Teachers (Project WET), highlighted: hands-on solutions for local actions; the role of children in water management; community actions leading to pertinent solutions; and water education as a water-management tool.

Teddy Tindamanyire, speaking on behalf of the Ugandan Minister for Water and Environment, discussed barriers to effective water education, including: the low economic value attached to water; the lack of investment in water safety; “and the fixed mindset of water as a human right and ‘free-for-all’ resource.” In describing the interdisciplinary approach to water

education in Mexico, Heidi Storsburg, CONAGUA, noted that low commitment of educators to teaching water management is a challenge.

Santa de Yonge, Project WET, described Project WET initiatives, including ActionEducation, Discover Floods and a partnership with UNESCO-International Hydrological Programme. She said Project WET education tools are successful because they are interactive, adaptable, contemporary and solution-oriented.

Sabrina Barker, UN Environment Programme, described the “Living on the Edge” youth initiative, highlighting its objectives, namely: awareness raising, knowledge and information sharing; multi-sectoral communication; and connecting different regional perspectives.

Hirokazu Miyao, Center for Supporting Children’s Waterside Activities (CSCWA), drew attention to CSCWA’s work as well as the correlation between “social manners” and “nature experience,” stressing that nature experiences are critical in early childhood development. Şevket Alp, Ministry of National Education, Turkey, highlighted his country’s use of water education, underscoring the importance of water reuse and conservation.

Panelists and participants then discussed, *inter alia*: using native languages to transmit water education messages; cultural considerations in water education; mainstreaming gender; incorporating water education in national curricula; and creating linkages between water and health. They also discussed cultural considerations in water education and water-saving strategies.

USING THE ASSETS OF PROFESSIONAL ASSOCIATIONS AND NETWORKS TO ACHIEVE THE MDGs: Paul Reiter, International Water Association, opened the summary of three sessions held under this topic. He said broad consensus had emerged that professional associations (PAs) are critical stakeholders in delivering results and sustaining projects on the ground. He highlighted their key support roles in: strategy development; technical assistance; the development of models and systems to enhance efficiency; and brokering, training and capacity development.

Rebecca West, Water Environment Federation, explained that the strategic intent behind the sessions was to build bridges with the mainstream development community and with civil society organizations.

On how to build on the strong spirit of collaboration during the preparatory process and at the Forum, participants highlighted, *inter alia*: building bridges with networks outside the sector, particularly with health and environmental PAs; twinning of strong and weak associations; and reforming PAs’ “elitist” structure through partnerships with rural associations and community-based organizations. Specific examples of new alliances cited included an International Water Association initiative to publish a series on water and sanitation in the medical journal *The Lancet*; and the preparation of a five-year business plan by the African Water Association to promote dialogue with the African Development Bank.

At the close of the session, the convening associations announced they would initiate a legacy project to ensure implementation of the meeting’s outcome.

THEME WRAP-UP: András Szöllösi-Nagy, UNESCO, explained that the theme “education, knowledge and capacity development” had five topics. On the topic “education and capacity-building strategies,” participants noted that water should be part of education curricula and stressed

the importance of local needs assessments and innovative and non-traditional means for communication and capacity development.

A representative of the Youth Forum stated that education is interlinked with the Forum’s other themes and all educational programmes must be gender-sensitive. He highlighted the need for increased financial and logistic support in developing countries and supported the use of the concept of “virtual water,” which considers the amount of water used in the production of goods.

Discussions on “water science and technology: appropriate and innovative solutions for the 21st century to better address the needs of society,” centered on how science and innovation can help to address future water issues. Participants highlighted the need to, *inter alia*: embrace new technologies and explore their full potential; learn from other sectors; and create an imperative for change by working with stakeholders and by developing demand-led projects.

On the topic “using the assets of professional associations and networks to achieve the MDGs,” discussions centered on: bridging perceptions between professional networks and development groups; improving efficiency of development instruments; and showcasing successes and building on progress.

On “data for all,” several participants highlighted: the importance of data collection; the need for an integrated and holistic framework, which includes economic variables; legal and institutional barriers as well as leadership to overcome these barriers and lack of resources; and the potential of the System of Environmental-Economic Accounting of Water for national data collection.

On the topic “water and culture,” participants noted that educators must also be educated and that preconceptions must be deconstructed. Some stressed the need to learn lessons from elders and emphasized that there are as many similarities as there are differences in culture.

Szöllösi-Nagy, closed the session by stressing that investments in water, education, culture and capacity development are “investments in peace.”

AROUND THE VENUE

Oktay Tabasaran, Secretary General of the 5th World Water Forum, thanked Mexican friends for the help they provided in preparing for the 5th Forum having hosted the 4th World Water Forum in Mexico City, Mexico in 2006.



L-R: Estrellita Fuentes, Mexico, and Oktay Tabasaran, Secretary General, 5th World Water Forum



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5TH WORLD WATER FORUM HIGHLIGHTS: SUNDAY, 22 MARCH 2009

The 5th World Water Forum concluded deliberations in Istanbul, on Sunday afternoon. Ministers met at a closing session in the morning, during which they presented summaries on eight roundtable sessions and adopted their Declaration. Participants at a celebration of UN World Water Day then joined the ministers for the closing ceremony of the Forum.



Secretariat staff posed for a photograph at the end of the Forum

WORLD WATER DAY - TRANSBOUNDARY WATERS

Participants watched "One Water," the award-winning documentary by Sanjeev Chatterjee and Ali Habashi, which was filmed in 14 countries over five years and can be downloaded online at: <http://1h2o.org/>.

András Szöllösi-Nagy, UNESCO-International Hydrological Programme, on behalf of UNESCO's Director General,



András Szöllösi-Nagy, UNESCO

introduced the high-level roundtable on "adapting to global changes in transboundary basins." He noted that there are 263 shared watersheds and 273 shared groundwater aquifers worldwide, on which 3 billion people directly depend. He said cooperation and solidarity must be governing principles so that these populations avoid water-related

conflict engendered by the growing competition for shared water resources. He then highlighted numerous obstacles to cooperation, including conceptual and historical differences and the lack of: financial resources; technical and institutional capacity; and political will. Rhoda Tumusiime, African Union Commission (AUC), underscored that World Water Day is a unique opportunity to raise awareness of the links between water and environment, and health and economic development, and to reflect individually and collectively on how to achieve internationally agreed goals. Noting that the bulk of Africa's

transboundary water resources are underutilized, she highlighted recent regional initiatives facilitated by the AUC and its partners.

During the roundtable discussions, panelists deliberated on key drivers that will shape future water management and best practices that countries and regions can draw on to enhance the sustainable use of transboundary resources. Alfred Duda, Global Environment Facility (GEF), underscored the role of the GEF and its partner agencies, including: seed funding provision to start the process of trust building and cooperation; technical support; and third-party facilitation. Noting that transboundary agreements increasingly deal with issues of climate variability, he underscored that GEF support can help prepare basin organizations to implement larger projects under the UN Framework Convention on Climate Change.

Shaddad Attali, Chair, Palestinian Water Authority, noted that there is currently no transboundary agreement that governs equitable sharing of the Jordanian river basin by all users due to the conflict in the region. Stating that there is sufficient capacity to manage these water resources, he reiterated the call by Palestinian Authority President Mahmoud Abbas that Palestinians should not be forced to wait until a peace agreement is reached to access their rightful share of transboundary water resources. He called on more countries to ratify the 1997 UN Watercourses Convention to enable it to enter into force.

Sibylle Vermont, Vice Chair, UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes, noted that the Convention has developed a range of technical guidelines and tools for managing transboundary resources. She said the Convention fosters cooperation because it obliges countries to enter into bilateral

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and multilateral negotiations and to establish joint bodies. Angela Cropper, Deputy Executive Director, UN Environment Programme (UNEP), highlighted her organization's role in research and information dissemination and institutional capacity building.

Anders Berntell, Stockholm International Water Institute, highlighted a number of conceptual "clashes" in the discussion, including between "transboundary" and "international" waters and the principle of state sovereignty and that of shared governance of resources. He called for discussions on transboundary resources to consider not only national boundaries, but also federal, regional, ethnic and cultural divides as well.

Discussing the role of existing international instruments in managing conflicts over transboundary resources, panelists highlighted: a common framework for conducting Environmental Impact Assessments developed by the UN Economic Commission for Europe; arbitration provisions under the UN Watercourses Convention and related international law instruments; UNEP guidelines for the application of integrated water resource management at the transboundary level; and a UNESCO 'toolbox' on methods and practices for transboundary water resources management.

With regard to the issue of power asymmetry and mechanisms to ensure greater participation of non-governmental stakeholders in transboundary agreements, panelists underscored the importance of building strong community institutions, financing consultative processes, mainstreaming water and environmental awareness in education programmes, and considering the role of external mediators in facilitating contacts between parties.

In closing remarks, UN-Water Chair Pasquale Steduto, highlighted the active involvement of youth at the Forum, and underscored the role of education in nurturing a new generation of environmentally conscious future leaders.

The closing of the Forum's Ministerial Conference began with statements from the floor. Ethiopia requested the deletion of reference to "conformity with existing agreements" in the Ministerial Declaration's principle 16 on transboundary watercourses.

CLOSING OF THE MINISTERIAL CONFERENCE

SUMMARIES OF MINISTERIAL ROUNDTABLES:

Chairs of eight ministerial roundtables held on Saturday summarized key outcomes from their sessions. The ministerial roundtable on "freshwater-coastal areas" acknowledged that an international legal framework already exists on this topic but that implementation is low due to poor governance. It noted the importance of sub-regional initiatives as well as international strategies for integrated ocean and coastal management.

On "reducing the impact of water-related disasters," the ministerial roundtable highlighted the need for: robust policies for water-related disasters and risk reduction; national flood and drought management plans; information sharing, data collection and harmonization of indicators; and preventive actions.

During roundtable discussions on "bridging the water and climate agendas," country representatives noted the increasing importance of adaptation, the different needs faced by various regions and the synergies between mitigation and adaptation. In order to adapt to climate change, it highlighted the critical need to: develop financing mechanisms to ensure investment; use public awareness to catalyze action and invest in science and technology development; and present a clear message that water should be used as a framework for planning and action to the 3rd World Climate Conference in September 2009 and at the climate change negotiations in Copenhagen in December 2009.

The roundtable discussions on "water for energy, energy for water" emphasized, *inter alia*: coordinating and integrating the water and energy sectors; addressing the multiple uses of water; managing water resources at the basin level using IWRM; and sustainably developing water projects through the use of environmental impact assessments. It also encouraged greater interaction between the World Water Forum, the World Energy Forum and other international processes addressing energy issues.



Musicians performed during the closing ceremony

On “financing water infrastructure and energy services,” the ministerial roundtable emphasized the importance of: developing and implementing national financial plans and strategies; improving the bankability of proposals; establishing public-private partnerships; and building in-country capacity for financial planning. It also stressed that the financial crisis should not be an excuse for inaction but an incentive to improve efficiency.

In the roundtable discussions on “water for development in Africa,” ministers highlighted the need for: effective mechanisms for implementation and monitoring of progress; gender mainstreaming; regional integration; improved delivery of water and sanitation through existing instruments; and scaling up of finance to meet the MDGs. They also stressed their commitment to the implementation of the African water development agenda.

On the subject of “water for food and poverty eradication” ministers addressed the inter-sectoral aspects of water for agriculture, noting that agriculture uses more water than any other sector. Highlighting the critical need to prioritize water for agriculture, representatives discussed actions including: investing in technology; enhancing infrastructure; improving cooperation including south-south partnerships; improving participation of agricultural stakeholders in decision making; addressing climate change; and providing adequate funding to mobilize and upscale investments.

Presenting the roundtable discussion “beyond the international year on sanitation (IYS) and implementing the right to water and sanitation,” representatives noted that the IYS was successful in raising awareness but that there is a need for innovative pro-poor approaches, creation of effective national policies and financing regimes, and mobilization of resources to achieve the MDGs. The “right to water” was also discussed during this session. Ministers said a right of access to water and sanitation has gained significant attention since the 4th World Water Forum and stated that it is crucial to achieving the MDGs. They also acknowledged that several countries have already protected the right to water as a constitutional right in national legislation. Several ministers highlighted that the Istanbul Ministerial Declaration does not sufficiently recognize a human right to water and sanitation, while others argued that it was premature to insert an express reference to existing human rights obligations related to access to safe drinking water and sanitation before the outcome of the report of the Human Rights Council’s Independent Expert.

Response to roundtables by major stakeholders: On the protection of a right of access to water and sanitation, a representative of the Gender and Water Alliance argued that “the Ministerial Declaration seems to go back in time.” She stressed that it is the role of governments to protect their people, in particular the most vulnerable. She said it is essential to provide a basic quantity of free water for each person as well as a right for each child to have safe sanitation, while taking into account the particular needs of girls.

A representative of Business Action for Water said that: water is critical for business, and business for the economy and employment; water, energy and food are inextricably linked; and that technologies are available to address water-related problems in coastal areas. On finance, he said progress had been achieved since the 4th World Water Forum.

Public services and trade union representatives noted the need to hold Fora such as the World Water Forum within the context of the UN to produce binding outcomes on the right to water and sanitation and called on governments to use the tools available to them to provide sustainable access to water and sanitation, while considering the roles of workers in the water sector.

OFFICIAL ADOPTION OF THE MINISTERIAL DECLARATION: India stressed the need for the Forum to send a powerful message to the 2009 UN climate change negotiations that all nations have the duty to mitigate climate change within the context of common but differentiated responsibilities and that stronger action on climate change must emerge.

Highlighting the Ministerial Declaration and the Istanbul Water Consensus as the two most important outcomes of the 5th World Water Forum, Veysel Eroglu, Minister for Environment and Forestry, Turkey, called for the official adoption of the Ministerial Declaration. He said the draft, finished March 4, 2009, represented the final product of a longer preparatory process and that it would not be reopened as requested by some delegations. He congratulated all who participated in the drafting of the document and predicted successful outcomes if adopted.

The Ministerial Declaration includes commitments to, *inter alia*:

- Intensify efforts to achieve MDG targets;
- Implement IWRM at the river-basin level;
- Improve water-demand management;
- Preserve environmental flows, increase resilience and restore ecosystems;
- Prevent and respond to water-related disasters;
- Recognize water as a basic human need and acknowledge work on human rights and access to water in the UN system;
- Prioritize water and sanitation in development planning;
- Promote cooperation on sustainable use and protection of transboundary water resources; and
- Agree to respect international law protecting water resources during conflict.

Principle 15 on water as a basic human need garnered attention during debates at the Forum. Representatives from some countries called for recognizing the human right to water and basic sanitation as well as acknowledging the cultural value of water, and the inclusion of indigenous peoples in water management.



L-R: **Oktay Tabasaran**, Secretary General, 5th World Water Forum, and **Veysel Eroglu**, Minister for Environment and Forestry, Turkey, who shared a Turkish proverb with participants.



Youth delegates during the closing ceremony

CLOSING STATEMENTS: WWC Director General Ger Bergkamp, encouraged governments and participants to move the world water agenda forward and expressed the WWC's readiness to help implement the commitments made by providing support for capacity development.

Eroğlu highlighted that the Forum had brought together over 120 countries and helped create a better understanding of water issues as well as designing water policies for sustainable development. He concluded by highlighting that the decisions taken at the Forum and their implementation are a platform for "fraternity, cooperation and peace."

CLOSING OF THE FORUM

READING OF YOUTH FORUM DECLARATION:

Youth delegates said their participation at the World Water Forum was due to their capability, not their vulnerability, and stressed that they wanted to be partners in the process, not stakeholders. They said language in the Ministerial Declaration should have stated more clearly that water and sanitation is a human right.

Youth representatives then read their Youth Declaration, written by young people from 25 countries. Organized according to the 5th Forum's themes, the Declaration states, *inter alia*, that:

- Recommendations from the 5th Forum should be taken to the 2009 UN climate change negotiations in Copenhagen;
- Access to clean, affordable, secure and readily accessible water should be considered a basic human right and defined as such in national legislation;
- Good governance cannot exist without participation;
- Governments should create mechanisms to provide access to drinking water for all people, regardless of their ability to pay for it; and
- Youth should be engaged in decision-making processes related to their education, which should be sensitive to gender and current social challenges.

KYOTO WORLD WATER GRAND PRIZE: Hitoshi Ohshima, Executive Officer on Global Environmental Policy, Japan, introduced the Kyoto World Water Grand Prize, awarded to an NGO for grassroots activities. William Cosgrove, Chair of the Prize jury, noted that the 10 finalists, who gave final presentations on Saturday, had included women and youth in their diverse projects. He expressed optimism that their activism would encourage politicians at the Forum to also act. He then presented the Prize to the Watershed Organization



Winner of the Kyoto World Water Grand Prize

Trust, India. Marcella D'Souza accepted the prize on the organization's behalf, stressing that water must be a uniting force.

CLOSING STATEMENTS: Oktay Tabasaran, 5th World Water Forum, said the knowledge obtained and results achieved at the Forum would be Istanbul's gift to the world. He highlighted the equitable participation of women at the Forum. He thanked the DSI, Water Agency of Istanbul and the Municipality of Istanbul for supporting the Forum and commended the DSI, WWC, and thousands of individuals who cooperated to make the Forum a success.

In his closing remarks, Ben Braga, WWC Vice President, noted that water issues deserve new thinking and concrete actions, highlighting that the 5th World Water Forum had



Ben Braga, Vice-President, World Water Council

set in motion a new process characterized by open and democratic participation and knowledge sharing. Klaus Toepfer, former UNEP Executive Director, described the three-year task of organizing the 5th Forum. He highlighted UNEP's "New Green Deal," emphasizing that it is a sustainable way of addressing the economic crisis. He lauded participants for recognizing

the role of women in water management. Highlighting the desertification process, he emphasized the need to address both water and desertification issues in a post-Kyoto framework.

Tomris Türmen, former Executive Director, World Health Organization, said clean water and sewage disposal are scientists' greatest discoveries. She stressed the importance of meeting the MDG targets to ensure a more sustainable future for the world's most vulnerable groups.

Hasan Zarikaya, Under-Secretary, Ministry of Environment and Forestry, Turkey, noted that "water can exist without us, but we cannot exist without it." Citing the question on how best to manage water as the Forum's greatest challenge, he praised participants for the democratic and transparent manner of their participation. He noted that the Forum had achieved its objectives of putting water on the political agenda and sharing best practices, and suggested that the WWC prepare indicators to monitor the actions carried out by the relevant stakeholders after Istanbul. He declared the Forum closed at 1:45pm.



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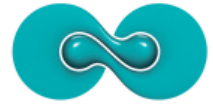
World Water Forum Bulletin

A Summary Report of the 5th World Water Forum

5th WORLD WATER FORUM
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SUMMARY OF THE 5TH WORLD WATER FORUM: 16-22 MARCH 2009

The 5th World Water Forum convened in Istanbul, Turkey, from Monday, 16 March to Sunday, 22 March 2009. The Forum is the largest international event on freshwater, and seeks to enable multi-stakeholder participation and dialogue to influence water policy-making at a global level, in pursuit of sustainable development.

The 5th Forum's main theme, "bridging divides for water," was addressed through six framework themes: global change and risk management; advancing human development and the Millennium Development Goals; managing and protecting water resources; governance and management; finance; and education, knowledge and capacity development.

The Forum theme was explored through more than 100 thematic sessions, seven regional sessions, and a series of political processes involving local authorities, parliamentarians, ministers and heads of State. A Water Expo, Water Fair, Children's Forum, Youth Forum and meetings of various stakeholder groups, including women, were also held. More than 25,000 participants attended, representing governments, UN agencies, intergovernmental organizations, non-governmental organizations, academia, business and industry, indigenous groups, youth and the media. An additional 8,000 participants attended the Forum's Water Expo.

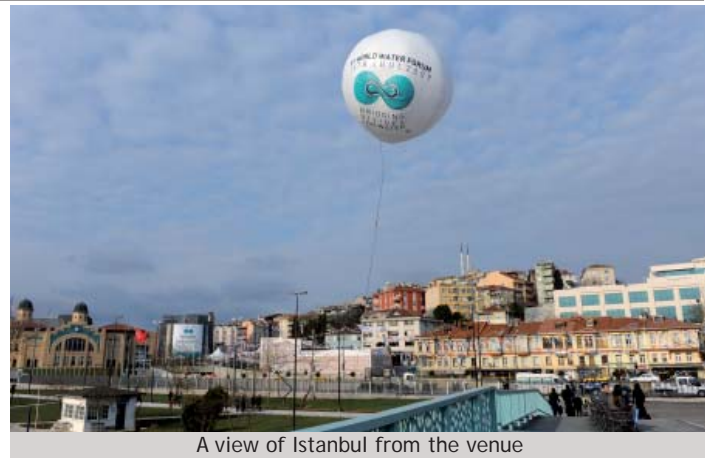
The Forum concluded Sunday, 22 March. Its main outputs include a Ministerial Declaration and the Istanbul Water Consensus, agreed to by local authorities.

The following report contains a selection of the sessions convened during the Forum. More detailed information can be found at <http://www.iisd.ca/ymb/water/worldwater5/>

A BRIEF HISTORY OF GLOBAL WATER ISSUES

Freshwater is a finite resource that is imperative for sustainable development, economic growth, political and social stability, human and ecosystem health, and poverty eradication. While water issues have long been on the international agenda, the debate on how to meet the growing global demand for freshwater has intensified in recent years: over 800 million people currently lack access to safe drinking water, while about 2.5 billion lack access to adequate sanitation.

In response to these challenges, the World Water Forum was initiated as a platform to include water issues on the international agenda. This Forum is convened every three years by the World Water Council (WWC) and a host country. The WWC, an international policy think-tank established in 1996, addresses global concerns over the pressures on the Earth's freshwater resources. The Forum is an open, all-inclusive,



A view of Istanbul from the venue

multi-stakeholder process that aims to: raise the importance of water on the political agenda; support deeper discussions to help solve the international water issues of the 21st century; formulate concrete proposals; and generate political commitment. The World Water Forum takes place in the context of other international, regional and national water dialogues.

1ST WORLD WATER FORUM: The 1st World Water Forum, held in Marrakesh, Morocco, in March 1997, mandated the WWC to develop a long-term "Vision on Water, Life and the Environment for the 21st Century." This Forum also cautioned against treating water as a marketable good and established priorities, namely: water and sanitation; shared water management; ecosystem conservation; gender equality; and efficient use of water.

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2ND WORLD WATER FORUM: The 2nd World Water Forum took place in The Hague, the Netherlands, in March 2000. The Ministerial Declaration identified key challenges for the future, including: meeting basic water needs; securing food supply; protecting ecosystems; sharing water resources; managing risks; and valuing and governing water wisely. In the Declaration, ministers agreed to regularly review progress in meeting these challenges and to provide support to the UN system for periodic reassessment of the state of freshwater resources.

UN MILLENNIUM SUMMIT: At the UN Millennium Summit held at UN headquarters in New York, in September 2000, world leaders adopted the Millennium Declaration, which inspired eight Millennium Development Goals (MDGs) with 18 targets, including the target to halve the proportion of people without access to safe drinking water by 2015.

INTERNATIONAL CONFERENCE ON FRESHWATER: The International Conference on Freshwater convened in Bonn, Germany, in December 2001, in preparation for the World Summit on Sustainable Development (WSSD). The Conference addressed: equitable access to and sustainable supply of water for the poor; strategies for sustainable and equitable management of water resources; integration of gender perspectives; and mobilization of financial resources for water infrastructure.

WSSD: During the WSSD, held in Johannesburg, South Africa, in August-September 2002, world leaders expanded the MDG target on safe drinking water by also agreeing to halve the number of people lacking adequate sanitation by 2015. Other water-related targets in the Johannesburg Plan of Implementation included the commitment to develop integrated water resource management (IWRM) and water efficiency plans by 2005. Governments, lending agencies and international organizations also launched several voluntary partnerships and initiatives in the area of water and sanitation.

3RD WORLD WATER FORUM: During the 3rd World Water Forum, held in Kyoto, Osaka and Shiga, Japan, in March 2003, ministers adopted a Declaration underscoring the role of water as a driving force for sustainable development. They also launched the Portfolio of Water Actions, which is an inventory of more than 3,000 local actions with respect to this vital resource. The "Financing Water for All" report of a high-level panel chaired by Michel Camdessus, former Managing Director of the International Monetary Fund, was presented, leading to the establishment of the intersessional Task Force on Financing Water for All.

29TH G8 SUMMIT: At their annual Summit, held in Evian, France, in June 2003, leaders of the Group of Eight (G8) countries adopted the Action Plan on Water to help meet the MDG and WSSD goals of halving the number of people without access to clean water and sanitation by 2015. In this Action Plan, G8 leaders committed themselves to: promoting good governance; making use of all financial resources; building infrastructure by empowering local authorities and communities; strengthening monitoring, assessment and research; and reinforcing engagement of international organizations.

12TH and 13TH SESSIONS OF THE UN COMMISSION ON SUSTAINABLE DEVELOPMENT (CSD-12 AND CSD-13): At its 12th and 13th sessions held in New York, in April 2004 and April 2005, respectively, the CSD focused on policies and options to expedite the implementation of international commitments in the areas of water, sanitation

and human settlements. The section on water in the CSD-13 outcome document calls for, *inter alia*: accelerating progress toward the MDGs and the WSSD 2015 water access targets by increasing resources and using a full range of policy instruments such as regulation, market-based tools, cost recovery, targeted subsidies for the poor, and economic incentives for small-scale producers; improving water demand and resource management, especially in agriculture; and accelerating the provision of technical and financial assistance to countries that need help to meet the 2005 target on IWRM.

2005-2015 INTERNATIONAL DECADE FOR ACTION "WATER FOR LIFE": Organized by the UN, the International Decade focuses on the implementation of water-related programmes and projects and on strengthening cooperation on water issues at all levels. Priorities include: access to sanitation; disaster prevention; pollution; transboundary water issues; water, sanitation and gender; capacity building; financing; and IWRM. Africa is identified as a region for priority action for the Decade.

4TH WORLD WATER FORUM: The 4th World Water Forum was held in Mexico City, Mexico, in March 2006. In their Declaration, ministers emphasized the need to include water and sanitation as priorities in national processes, particularly national sustainable development and poverty reduction strategies. They reaffirmed commitments to achieve the internationally agreed goals on IWRM and access to safe drinking water and basic sanitation, and underscored the supporting role that parliamentarians and local authorities can play in this regard. The Declaration also recognized the importance of domestic and international capacity-building policies and cooperation to mitigate water-related disasters.

DEVELOPMENTS SINCE THE 4TH WORLD WATER FORUM

5TH WORLD WATER FORUM PREPARATORY PROCESS: A number of preparatory meetings took place ahead of the 5th World Water Forum, including meetings to advance the Forum's thematic, political and regional processes. The Turkish Women's Water Alliance met twice to define their role in the Forum.

Thematic process meetings: Several multi-stakeholder meetings were held to establish the themes, topics and sessions to guide discussions at the Forum.

Political process meetings: Four Preparatory Committee meetings were held to negotiate the draft Ministerial Declaration and the Istanbul Water Strategy Guide. The Guide is a non-binding document to create an agenda for action that national governments and their partners can use to address the areas of water resources management, governance and finance. Parliamentarians met to prepare their agenda for the Forum at the Parliaments for Water meeting in Strasbourg, France, in November 2008. Local authorities met several times, including at the United Cities and Local Government World Council meeting in Istanbul, Turkey, in November 2008, to draft the Istanbul Water Consensus.

Regional process meetings: The Forum's four regions (Africa, the Americas, Asia-Pacific and Europe) and three sub-regions (In and Around Turkey, the Mediterranean, and the Middle East and North Africa and Arab countries) held meetings to prepare for the Forum and identify contributions for the draft Ministerial Declaration.

2008 INTERNATIONAL YEAR OF SANITATION: Organized by the UN, the goal of the International Year of Sanitation was to raise awareness and accelerate progress

towards the MDG target on sanitation. The Action Plan for the Year included activities to raise awareness, release and update publications, monitor access and commitments, advance implementation, strengthen capacities, and evaluate costs and benefits.

16TH SESSION OF THE CSD: Held in New York in June 2008, CSD-16 included a review of the implementation of CSD-13 decisions on water and sanitation. Delegates observed that: according to current trends, Africa will realize its MDG targets on water and sanitation no sooner than 2076; the implementation of the CSD-13 decision on IWRM has been slow; and indicators to monitor changes, especially among the poor, are lacking. Delegates urged: investment for upgrading and maintaining infrastructure, building capacity, and promoting good governance; consideration of transboundary water management; and consideration of the vital importance of financial assistance, particularly for Africa.

34TH G8 SUMMIT: At their annual Summit held in Toyako, Japan, in July 2008, leaders of the G8 countries agreed to reinvigorate their efforts to implement the Evian Water Action Plan, which they will review prior to the 2009 G8 Summit. They further agreed to promote IWRM and "Good Water Governance," with a focus on sub-Saharan Africa and Asia-Pacific, including by: strengthening transboundary basin organizations; sharing water-related expertise and technology with developing countries; and supporting capacity building for water-related initiatives, data collection and use, and adaptation to climate change.

"PEACE WITH WATER": Held in the European Parliament in Brussels, Belgium, in February 2009, and led by former Soviet leader Mikhail Gorbachev, the World Political Forum, the European Parliamentary Groups and the European Research Institute on Water Policy, this meeting called for the inclusion of water issues in a successor agreement to the Kyoto Protocol on climate change. Participants proposed a Memorandum for a World Water Protocol, focusing on conflict prevention, the promotion of the right to water for all, and safeguarding the global water heritage for future generations.

1ST G77 MINISTERIAL FORUM ON WATER: In their Muscat Declaration on Water, G77 ministers attending this meeting in Muscat, Oman, in February 2009, *inter alia*: stressed the need to improve South-South exchanges of scientific and technological know-how; called on the UN system to play an important role in supporting relevant research; highlighted the potential of biotechnologies to reduce poverty; and emphasized the need to better understand these technologies. They agreed to meet annually, as necessary.

1ST JOINT FORUM MEETING OF THE NETWORK OF WOMEN MINISTERS AND LEADERS FOR THE ENVIRONMENT (NWMLE): Held in Nairobi, Kenya, in February 2009, this joint meeting between NWMLE and the UN Environment Programme (UNEP) discussed issues also under consideration at the 25th Session of the UNEP Governing Council/ Global Ministerial Environment Forum. On water, participants recommended that: women be recognized as central to the provision, management and safeguarding of both water and environmental resources; policies and strategies on water and environmental management respect gender differences; and particular attention be given to collecting gender and gender-disaggregated data and developing gender indicators to track implementation of multilateral and national policies.

5TH WORLD WATER FORUM REPORT

OPENING OF THE FORUM

OPENING STATEMENTS:

Oktay Tabasaran, Secretary General of the 5th World Water Forum, opened the Forum on Monday, 16 March, describing it as a venue to address the urgent objective of efficient water use and to discuss local water management, economic and human development, and the Millennium Development Goals (MDGs).



Oktay Tabasaran, Secretary General of the 5th World Water Forum

Loïc Fauchon, World Water Council (WWC) President, stressed the urgency of ensuring access to water. He highlighted the role of political will in enabling



Loïc Fauchon, WWC President

harmonious water sharing and pointed to effective water management, protection of the poor and virtual water as important considerations.

Kadir Topbaş, Mayor of Istanbul, welcomed participants to the city. Noting that urban centers are major consumers of water resources, he said local authorities play a central role in protecting natural resources and safeguarding long-term water security.

Veysel Eroğlu, Minister of

Environment and Forestry, Turkey, emphasized that peace and stability can be achieved only through the equitable division of water resources. He described the Forum's objective as providing "good quality water for all." Commenting that water is critical for development, he underscored the role of large infrastructure in attaining water security in Turkey and the need to address drought, particularly in Africa.

José Luis Luege Tamargo, Director General of the Mexico National Water Commission, spoke on behalf of President Felipe Calderón of Mexico, describing projects on water management, climate change and infrastructure initiated following the 4th World Water Forum in Mexico City.

UN Under-Secretary-General Sha Zukang, in a statement on behalf of UN Secretary-General Ban Ki-moon, described the value of the Forum in facilitating dialogue between civil society and the policy community. He suggested focusing on four areas of strategic action: linking water and climate change; improving and financing capacity-building for



UN Under-Secretary-General Sha Zukang



L-R: Albert II, Prince of Monaco; Abdullah Gül, President of the Republic of Turkey; and Emomali Rakhmon, President of Tajikistan

individuals and institutions; increasing adaptive capacity through disaster risk reduction; and recognizing the importance of cooperative transboundary water management.

Abbas El Fassi, Prime Minister of Morocco, placed the Forum in a broader context, noting that it follows the 2008 High-Level Conference on World Food Security and should feed into the upcoming 2009 UN negotiations on a post-2012 climate regime. He also framed the Forum within the context of the current international financial crisis.

Naruhito, Crown Prince of Japan, described regional summits and dialogues at the ministerial level as opportunities to foster collaboration. He called attention to the importance of financing for the water sector, the link between water and climate change, the need to resolve water issues to achieve the MDGs, and the role of UN-Water in monitoring and capacity-building.

Referring to the theme “bridging divides for water,” Abdullah Gül, President of Turkey, said the Forum presents an opportunity to move forward on cooperative efforts to improve water management. He noted that water issues are not only technical, but also political.

Closing the plenary, children from 21 countries came onstage as a symbol of cultural cooperation, followed by a performance by the Tekfen Philharmonic Orchestra, with musicians from 23 Caspian and Eastern Mediterranean countries.

TURKISH REPUBLIC PRIME MINISTER’S WATER PRIZE: Presented on behalf of Turkey’s Prime Minister by Irfan Aker, the WWC Board of Governors, the Turkish Prime Minister’s Water Prize honored media representatives for coverage of national and international water issues. Alison Bartle, Aqua-Media International, was awarded the international prize. National prizes were presented to Özgür



Children hold up messages to participants of the opening ceremony

Çoban (Anatolian Agency), Özgür Yılmaz (Channel 24), Gürhan Savgı (Zaman Daily Newspaper), and the programme Yeşil Ekren on NTV (accepted by Erman Yerdelen).

KING HASSAN II GREAT WORLD WATER PRIZE:

The third King Hassan II Great World Water Prize, awarded in recognition of cooperation and solidarity in the fields of management and development in water resources, was introduced by Prime Minister El Fassi and presented by Abdelkébir Zahoud, Morocco’s Secretary of State for water and environment. The prize was awarded to Abdulatif Yousef Al-Hamad, Director General of the Arab Fund for Economic and Social Development.

LAUNCH OF 3RD WORLD WATER DEVELOPMENT REPORT

On Monday afternoon, the UN Educational, Scientific and Cultural Organization (UNESCO) Director-General, Koichiro Matsuura, introduced the Third World Water Development Report (WWDR-3), “Water in a Changing World.” He presented the report’s key findings on addressing future water challenges, including the need to:

- Involve water specialists in decision making;
- Recognize the impact on water use of efforts in the energy sector to address climate change;
- Monitor and assess for sound water management; and
- Strengthen capacity in developing countries.

Emomali Rahmon, President of Tajikistan, said the Report will help policy makers to apply the most advanced approaches and technologies to water management. To address these challenges, Narcio Rodrigues da Silveira, Vice President, Brazil, proposed the immediate constitution of a “World Water Parliament.” National and local policy makers, representatives of development and UN-affiliated organizations, and other speakers welcomed the WWDR-3 as a useful tool for sustainable water resource management, underscored its paradigm shift from a water-specific focus to one that addresses the external drivers of water-resource use, and encouraged collaboration among countries, sectors and stakeholders.

HIGH-LEVEL PANELS

Five high-level panels were held between Tuesday and Friday, addressing: water and disasters; finance; water, food and energy; sanitation; and adaptation. Three of the panels are described below.

WATER AND DISASTERS: On Tuesday morning, the Crown Prince of Japan gave a keynote address to introduce the High-Level Panel on Water and Disasters. He emphasized the need to learn from past experiences and use creativity and collaboration to develop a vision for water management.



L-R: UN-Under-Secretary-General **Sha Zukang**; Prince of Orange **Willem-Alexander** of the Netherlands; **Naruhito**, Crown Prince of Japan; **Han Seung-Soo**, Prime Minister, Republic of Korea; and **Hong Soja**, his wife

Three speakers opened the session, followed by two panel discussions moderated by Margareta Wahlström, UN Assistant Secretary-General for Humanitarian Affairs, and Margaret Catley-Carlson, Chair of the World Economic Forum Global Agenda Council on Water Security.

Initiating the session, WWC President Loïc Fauchon outlined “urgent imperatives” needed to realize the Hyogo Framework for Action 2005-2015, including incorporating disaster risk reduction and climate change adaptation in development planning. Han Seung-soo, Prime Minister of the Republic of Korea, highlighted strategies to increase global resilience, including sharing hydrological data and creating appropriate legal and policy frameworks. UN Under-Secretary-General Sha Zukang lauded the efforts of UN agencies in assisting vulnerable countries to create and implement national disaster plans.



Han Seung-soo, Prime Minister, Republic of Korea

In the panel discussions, panelists said emergency response and prevention are complementary. They emphasized the need to shift from a reactive approach to a proactive and preventive disaster management strategy, and presented relevant country experiences. On infrastructure, information exchange and institutional capacity, panelists suggested that: dams and reservoirs are an “efficient” way to mitigate drought and flood impacts; forecasting and early warning systems play an important role in prevention; and organizational preparedness, capacity building, and financial assistance and technical transfers for developing countries are critical.

Panelists also discussed, *inter alia*: priority setting for the international community; education; stricter zoning laws; and the role of the World Bank in climate change mitigation and adaptation.

FINANCE: On Tuesday, two panels discussed financing for the water sector in the context of the international financial crisis in a session chaired by Mehmet Şimşek, Minister of State, Turkey.

Patrick Cairo, Suez Environnement, said cash flows, revenue streams, capital improvements and low-income assistance programmes in the water sector are affected by the financial crisis. Chair Şimşek suggested that despite increased stress on funding due to the economic crisis, financing mechanisms can be found to secure water and sanitation for the most vulnerable. Angel Gurría, Organization for Economic Cooperation and Development (OECD), recommended acting quickly to encourage governments to incorporate water projects into fiscal stimulus packages.

Participants then considered sector-specific financing, with Alexander Müller, UN Food and Agriculture Organization (FAO), stressing the need for investment in water for agriculture. He listed benefits from irrigation, including increased crop yields, stabilized output, increased farm incomes and poverty reduction.

Panelists reflected on multiple sources of and strategies for financing for the water sector, with Prince of Orange Willem-Alexander of the Netherlands, Chair of the UN Secretary General’s Advisory Board on Water and Sanitation (UNSGAB), highlighting the potential of local currency-based debt markets and targeted official development assistance (ODA). Simon Brooks, European National Bank, discussed blended financing strategies, and Kazushi Hashimoto, Japan



L-R: Katherine Sierra, World Bank; Chair Mehmet Şimşek, Minister of State, Turkey; Patrick Cairo, Suez Environnement; and Alexander Müller, FAO

International Cooperation Agency (JICA) suggested mobilizing local financial resources and using ODA to leverage private funds. Participants also discussed investment in infrastructure by the private sector.

The theme of efficiency emerged in the discussion. Arjun Thapan, Asian Development Bank (ADB), stated that sustaining water and sanitation supply gains requires a focus on governance and efficiency, and Katherine Sierra, World Bank, recommended linking water and energy efficiency initiatives. Panelists emphasized the need to recommit to the MDGs, and UN Under-Secretary-General Sha Zukang said provision of safe water and sanitation is “a moral imperative.”

ADAPTATION: On Friday, two keynote speakers opened the session, followed by a panel discussion. Ger Bergkamp, WWC, noted that for the water community, the term “climate change” means “adaptation.” Veysel Eroğlu, Minister of Environment and Forestry, Turkey, said his country is determined to contribute to international efforts to address climate change.

During the panel, Tineke Huizinga, Vice Minister for Transport, Public Works and Water Management, the Netherlands, said adaptation is as important as mitigation. Julia Marton-Lefèvre, IUCN, stressed the importance of natural infrastructure, such as aquifers and river basins, in addition to built infrastructure, such as dams and dikes. Lindiwe Benedicta Hendricks, Minister of Water Affairs and Forestry, South Africa, highlighted the implications of adapting water use to availability rather than focusing on supply management.

Panelists discussed the linkages between water, climate change and energy, with Jean-Louis Borloo, Minister of Ecology, Energy, Sustainable Development and Territorial Development, France, commenting on the need for a focus on water and Jan Dusík, First Deputy Minister of Environment, Czech Republic, noting the need for the development of a framework for action on adaptation at the climate change negotiations in Copenhagen in December 2009. Roger Pulwarty, National Oceanic and Atmospheric Association, US, noted that processes for learning and sharing knowledge must be added to the climate change dialogue. Panelists called for concrete action on water and energy projects and highlighted the cross-sectoral nature of water. Angela Cropper, UNEP, explained that UN-Water had been launched to address this challenge.

On the high anticipated costs of adaptation, Eroğlu urged development of a financial structure for adaptation. On priorities for adaptation funding, David Bresh, Swiss Re, suggested directing resources at preparedness prevention, technology and risk transfer mechanisms. The balance between public and private sector funding was addressed, and Bergkamp commented that discussions at the Forum had converged on the need to strengthen the public sector to facilitate adaptation.



South African dancers performed at the Forum

THEMATIC PROCESS

The 5th Forum's main theme, "bridging divides for water," was addressed through six framework themes from Monday to Saturday, namely: global change and risk management; advancing human development and the MDGs; managing and protecting water resources; governance and management; finance; and education, knowledge and capacity development. These themes were divided into 23 topics, which were explored through more than 100 thematic sessions. This report lists the topics under each theme and provides a summary from a selection of the sessions convened under each topic.

OPENING OF THEMATIC PROCESS

Representatives of the six themes' convening organizations introduced the thematic process. On the theme "global change and risk management," convened by the Co-operative Programme on Water and Climate (CPWC), UNEP, and World Meteorological Organization (WMO), Henk van Schaik, CPWC, highlighted the links between water, climate change, disasters and migrations. On "human development and the MDGs," convened by the FAO and UN-Water, Pasquale Steduto, UN-Water Chair, urged strengthening national capacity to enable on-the-ground action. On "managing and protecting water resources," convened by the American Water Resources Association, General Directorate of State Hydraulic Works (DSI) Turkey and The Nature Conservancy (TNC), Karin Krchnak, TNC, emphasized the importance of integrated water resource management (IWRM) to meet human and environmental needs.

On "governance and management," convened by the UN Human Settlements Programme (UN-HABITAT), Andre Dzikus, UN-HABITAT, highlighted that the water and sanitation crisis is one of governance and management, not of resources. On "finance," convened by the World Bank, Abel Mejia, World Bank, discussed: barriers to sustainable financing; pricing of water services; and access to water and sanitation for the poor. On "education, knowledge and capacity



L-R: Henk van Schaik, Co-operative Programme on Water and Climate; Pasquale Steduto, UN-Water Chair / FAO; Karin Krchnak, The Nature Conservancy; Piers Cross, Water Research Commission; Mark Smith, IUCN Water Programme; Letitia Obeng, Global Water Partnership; Bert Diphoom, UN-HABITAT; and Doğan Altınbilek, 5th World Water Forum

building," convened by UNESCO and the Cultural Association of Turkish Women (TURKKAD), András Szöllösi-Nagy, UNESCO-International Hydrological Programme (UNESCO-IHP), noted that the draft 5th Forum Ministerial Declaration had weaker language than was called for during preparatory thematic meetings.

Panelists stressed that the Forum's six themes must be translated into the ministerial process and that the thematic process should develop common understandings of critical topics, including cost recovery and water pricing.

THEME 1: GLOBAL CHANGE AND RISK MANAGEMENT

Participants attended sessions under this theme from Tuesday to Thursday. The theme addressed three topics. Key outcomes on the topic "adapting to climate change," included the need to: gear national budgets towards adaptation; develop a framework for adaptation financing; engage with the private sector to find solutions; gear mechanisms to monitor the use of adaptation funding; link water and adaptation; and see adaptation as a "way of life." They agreed that water must be a priority on the climate change agenda.

On the topic "water-related migration, changing land use and human settlements," participants highlighted the importance of identifying underlying causes of migration and re-prioritizing rural development initiatives. They distinguished between urban and rural, and intra-national and international migration, stating that migration is a form of adaptation and not just a failure to adapt. They also discussed differing views on water as a direct cause of migration.

On "dialogues as an effective and interactive process between government, science and civil society to prevent and mitigate disasters," participants emphasized the need for a paradigm shift from reactive to proactive policy processes, the importance of national responsibility and the need for effective early warning systems.

Managing water-related risks in a changing climate: Participants discussed the increase in disasters caused by climate change, with some noting that extreme events may create the potential for disaster, but that disaster is created by human response to those extreme events. Some encouraged a focus on impacts rather than probabilities. Participants discussed means to minimize damages and increase resilience, including: implementation of integrated flood management; information exchange; inclusion of urban meteorology in urban-planning strategies; use of innovative and unconventional technologies; "building with nature"; construction of appropriate infrastructure by incorporating climate change projections into design considerations; development of a culture of quick response; and conduction of regular risk assessments. Other considerations included the establishment of an international flood resilience center to demonstrate and share innovations in management and technology, means to address cross-border river basin flooding, and the need to downscale climate models. Participants stressed the need to focus simultaneously on mitigation of greenhouse gas emissions and adaptation to climate change.

Can adaptation to climate change be adequately financed?: Participants discussed the need to develop not only new sources of and mechanisms for funding, but also well-designed, viable projects that use funds effectively. Speakers stressed that governments must prioritize water investment if donor communities are to support the sector.

Participants discussed the distinction between adaptation and development, with some noting that confusion between the two has hindered project design and funding and others noting similarities in actions needed to address these two challenges.

On financing, participants discussed the impacts of the financial crisis on government funding and called for secure, long-term, predictable funding for adaptation. Some speakers emphasized that traditional cost-benefit assessments and technical approaches are inadequate for addressing climate change adaptation. Participants also discussed equity and burden-sharing concerns.

On adaptation planning, a case study from the Netherlands presented a model whereby the national government manages infrastructure investment, regional authorities oversee maintenance and smaller-scale infrastructure, and local stakeholders pay regional water taxes to support water management activities. One speaker suggested that targeted taxes could provide both reliable sources of income for water management activities and leverage for bank loans.

Many participants highlighted the need to diversify the range of tools and management practices available to address adaptation. Regional presentations demonstrated the need for distinct approaches in different locations. Participants debated whether setting an estimated price for adaptation based on weak data sends the right signal to decision makers. Others noted that while there is a need to improve existing models, there is sufficient “low-hanging fruit” that can be scaled up as a first step.

Water management during and after disasters and conflicts: Speakers stated that disasters are initially characterized by intense media coverage and goodwill from donors but that a financing gap opens once international attention wanes. The session focused on protecting access to drinking water and sanitation in Palestine.

Representatives from the League of Arab States and the Palestinian Authority emphasized that water is protected by international humanitarian law as a “civilian object indispensable to the survival of the human population.” Shaddad Attili, Head of the Palestinian Water Authority, said the Palestinian Authority would support the 1997 UN Watercourses Convention and urged the use of international law to negotiate transboundary resource sharing.

Panelists said the water sector in the territories is in “total disarray” due to the political situation rather than a lack of funds or capacity. Speakers representing several development agencies highlighted the difficulty of negotiating with Israel to transfer materials and labor into Gaza. While some speakers suggested that desalination could help to alleviate water access problems in Palestine, others argued that this technological solution overlooks that groundwater is available but that access is inequitable.



Panelists of the session on Water management during and after disasters and conflicts. L-R: **Takeshi Naruse**, Japan International Cooperation Agency (JICA); **Robert Mardini**, International Committee of the Red Cross (ICRC); **Jon Martin Trondalen**, Center for Environmental Studies and Resource Management, Norway; and **Alain Boinet**, Solidarités, France.

THEME 2: ADVANCING HUMAN DEVELOPMENT AND THE MDGS

Participants attended sessions under this theme from Wednesday to Saturday, addressing four topics. On the topic “ensuring water, sanitation and hygiene (WASH) for all,” they stressed the need for: sanitation advocacy and collaboration on global, national and sub-national monitoring; utility reforms; and WASH education in schools.

On the topic “water for energy, energy for water,” participants focused on the water-energy-climate nexus. They discussed the question of finance versus technology for improving access to water. On “water and food for ending poverty and hunger,” participants called for improved micro-finance mechanisms, integrated approaches for food and energy, and development of local markets. They agreed that farmers are “part of the solution not the problem.”

On the topic “multiple use and functions of water services (MUFS)” speakers noted that MUFS, a process whereby the same water is used for different uses, functions and services within a given system, could serve a market of 1 billion people. They said the potential returns on both investments and poverty reduction are high.

How can better management reduce poverty and hunger?: Participants addressed poverty and hunger in the context of the food crisis, which they said threatens progress on the MDGs. Some participants lamented that although it is the major consumer of water, agriculture has remained on the sidelines of the Forum.

Participants highlighted population growth, disasters and the use of agricultural products for biofuels as challenges to food production. They underscored the need for international cooperation and systematization of international food trade.

As solutions to meeting the growing demand for food production, participants discussed the need for: both short- and long-term solutions; improved data collection and analysis; improved linkages between water-related sectors; a shift from IWRM to integrated resource management; and involvement of women in water management and decision-making processes. They agreed that farmers need access to credit and markets.

Participants also discussed: land tenure and water rights; how to prepare for higher commodity prices; the link between oil and food prices; and threats to food production from land degradation and drought. One participant noted that although the right to water has been recognized, it has not been extended to the protection of the right to water for food.

THEME 3: MANAGING AND PROTECTING WATER RESOURCES

On Friday and Saturday, participants attended sessions addressing four topics. On “basin management and transboundary cooperation,” some participants encouraged a shift from water to ecosystem management and proposed that hydro-solidarity could be a new organizing framework for action. They stressed that water issues must be framed in language that both policy makers and stakeholders understand.

On “ensuring adequate water resources and storage infrastructure to meet agricultural, energy and urban needs,” they discussed the positive and negative links between large water infrastructure and economic and social development. On “preserving natural ecosystems: ecosystems for water and life,” participants agreed that knowledge and education are prerequisites for achieving conservation goals. On

“managing and protecting surface, ground and rain water,” they highlighted the need to strengthen links between decision makers and technicians.

Ensuring adequate water resources and storage infrastructure to meet agriculture, energy and urban needs for sustainable development: Participants heard presentations on several national infrastructure implementation strategies to meet water requirements. The discussion centered on supply versus demand strategies to meet water needs. Some speakers stressed the importance of dams and reservoirs to cope with water demand, highlighting that project benefits must be balanced with environmental and social impacts. Participants also recommended: desalination; inter-basin transfers and dams; groundwater use; and irrigation system efficiency.

Other participants noted that while increased water demand has traditionally been addressed through dam construction, future approaches should include: water demand management; wastewater reuse; and integrated planning approaches that consider both quantity and quality of water within the framework of ecosystem health. Participants noted the need to improve finance frameworks for infrastructure development.

Which are the operational tools that allow achieving transboundary cooperation and sound basin management?:

Following a series of regional presentations, participants reflected on numerous issues related to transboundary cooperation, including: the role of third parties in international conflicts; the role of international basin organizations in assisting with sub-national harmonization of governance; the need to allocate benefits from water rather than water itself; the creation of standardized measurement methods and shared databases; the value of progressive confidence-building measures to overcome mistrust; dispute resolution mechanisms; and inventories of potential transboundary water concerns.

Participants also debated whether there is a distinction between “international” and “transboundary” watercourses. Turkish participants stressed the need to manage the Tigris and Euphrates rivers in an equitable, reasonable and optimal manner, but noted that while willing to cooperate, “interference in their affairs” made them uncomfortable. They said dam construction in Turkey will not affect downstream neighbors and will continue even if loans are not forthcoming from international financial institutions.

Can we bridge the divide between various users whose lives depend on common water resources and how should we do it?: Participants discussed the importance of stakeholder participation in basin management and transboundary water cooperation, citing as challenges: the motivation to participate; lack of hydro-diplomatic knowledge; and lack of modeling to facilitate common understanding. Some suggested that basin-wide approaches are necessary.



L-R: Jean-Yves Grosclaude, French Development Agency (AFD), and co-chair Shammy Puri, International Association of Hydrogeologists, during the session on Which are the operational tools that allow achieving transboundary cooperation and sound basin management?



Hasan Akyar, DSI, Turkey, during the session on The need for better management and protection of surface, ground, soil and rain water

Participants discussed at length the 1997 UN Watercourses Convention. Some said it must serve as the basis for international law for transboundary waters and called for the establishment of an interim body by the UN Secretary-General to support its ratification. Others said the Convention must be revised and updated prior to ratification to reflect emerging environmental concerns and the need for sustainable development.

The need for better management and protection of surface, ground, soil and rain water: Participants agreed on the need for IWRM, but not on what this term means. They agreed on the need to: manage all types of water holistically; employ adaptive management; implement enabling policy frameworks; educate the public on water-use behaviors; and ensure participation at all levels and phases of IWRM.

Participants focused in particular on groundwater, noting that it: behaves differently from other water sources; is susceptible to overexploitation because tapping it does not require large infrastructure and thus necessitates new forms of governance; and is poorly understood by policy and decision makers. They discussed the challenging of managing transboundary groundwater resources and the need to protect non-renewable groundwater, particular within the context of climate change.

THEME 4: GOVERNANCE AND MANAGEMENT

Participants attended sessions on this theme from Monday through Thursday. The theme addressed four topics: “implementing the right to water and sanitation through improved access”; “institutional arrangements and regulatory approaches for effective water management”; “ethics, transparency and empowerment of stakeholders”; and “optimizing public and private roles in the provision of urban water services.”

Sessions convened for these topics included: making the right to sanitation work; optimizing and improving water services: regulation and transparency as key issues for the water sector; building a corruption-resistant water sector; and opportunities and trends, experience, and policy options for moving towards a vibrant market place.

From right to reality – good government practices for implementing the human right to water and sanitation: Participants from governments, water utilities and authorities, development agencies, and other sectors discussed the role of government in the recognition and implementation of the human right to water. They heard a presentation on the UN Independent Expert on Water and Sanitation’s mandate to



Children at the Forum

advance dialogue on the right to water and sanitation. Some argued that legal entitlements are necessary for accessing the benefits of a right to water and sanitation.

Panelists presented on access to water and sanitation in informal settlements and slums, addressing in particular affordable water pricing. On pricing, country experiences from Zambia and Kenya were presented, and a proposal for an index to calculate water affordability was discussed. Participants also addressed the drawbacks and benefits of water privatization, public advocacy efforts and transboundary water rights. As a recommendation for the Forum outcomes, some stressed the need for the Ministerial Declaration to reflect that water is a human right, while others urged the creation of a complementary declaration that expresses the need to recognize the right to water as a minimum requirement.

Water right in emergency – be principled or get practical: Participants considered the legal framework for the right to water and sanitation, describing how this right applies in emergencies and considering how it can be implemented. They discussed the role of international humanitarian law and human rights law in securing the right to water in emergencies, including times of armed conflict and disasters.

Panelists offered an overview of a WASH project led by the UN Children's Fund (UNICEF) on the right to water and sanitation in emergencies, and considered challenges for community engagement during times of emergency. They also presented on water access and rights in Haiti and Palestine, citing the International Covenant on Economic, Social and Cultural Rights as a useful entry point to discussing the human right to water.

Participants highlighted damages to water and sanitation infrastructure during conflict. One panelist said a focus on equitable and reasonable water access, rather than minimum water needs, is necessary to secure adequate water for sustainable development. Participants also discussed the need to: account for water for food production when setting minimum water needs; establish definitions of "emergencies," especially in the context of recurrent or prolonged emergencies; link emergency responses with longer-term development activities; and recognize the right to water in the Ministerial Declaration.

THEME 5: FINANCE

Participants attended sessions on this theme on Wednesday and Thursday. The theme addressed three topics: "sustainable financing"; "pricing strategies as a tool for a sustainable water sector"; and "pro-poor regulation." Sessions held under these

topic headings included: unlocking the demand for finance; how to enhance the "bankability" of the sector; affordable and sustainable water and sanitation services: the role of tariffs and other instruments; and microfinance.

Pricing water services – process matters: overcoming conflicts, building a dialogue: This session aimed to find strategies to shift from a paradigm of full-cost recovery, based on tariffs, to one of sustainable cost recovery, involving multiple pricing mechanisms. Participants echoed the need for a diversity of financing sources for water services, pointing to the "3T" concept of "tariffs, taxes and transfers." Some suggested, however, that cost recovery does not always lead to greater efficiency in service provision and sustainable resource use.

Participants considered vulnerable groups in the development of pricing options. Participants also addressed dilemmas in the tariff-setting dialogue, such as the challenges in satisfying high public expectations, meeting service obligations and raising tariffs to finance the sector in areas with a predominantly poor client base. They suggested mechanisms such as providing predictable, high-quality services and monitoring income trends to determine the "coping cost" of poor consumers as possible solutions.

On building transparent, informed and participatory processes, participants suggested that decision makers need to share power in making policy choices, and recommended activities to reduce information and capacity asymmetries. They also addressed, *inter alia*: cost recovery mechanisms for water use in the agricultural sector; benchmarking of water pricing criteria; and hidden costs involved in building public-private partnerships.

THEME 6: EDUCATION, KNOWLEDGE AND CAPACITY DEVELOPMENT

Participants attended sessions under this theme on Friday and Saturday, addressing five topics. On the topic "education, knowledge and capacity development strategies," participants highlighted the need to: include water in educational curricula; consider gender-sensitivity; conduct local needs assessments; and incorporate non-traditional means for communication and capacity-development. On "water science and technology: appropriate and innovative solutions for the 21st century," they encouraged the development and promotion of new technologies. On "using the assets of professional associations and networks to achieve the MDGs," they said the gap between development groups and professional networks must be bridged.

On "data for all," they proposed development of an integrated and holistic framework to address economic, legal and institutional factors affecting data collection and



Panelists during the session on Education, Knowledge and Capacity Development. L-R: Elif Erhan, Turkish Water Culture Association; Richard Meganck, UNESCO; Lidia Brito, UNESCO; and Kalanithy Vairavamoorthy, University of Birmingham

management. On the topic “water and culture,” they stressed the importance of educating the educators, and highlighted that the knowledge of elders is important.

Institutional capacity development: getting the balance right for equitable water allocation: Discussions addressed six themes: definitions of equitable allocation; integrating traditional knowledge and traditional water rights into legislation; strengthening regulation and enforcement of legislation; developing an effective mix of governmental regulation and market mechanisms to promote water access; developing tools for measuring water demands; and establishing knowledge-sharing platforms for institutional capacity development.

Participants discussed, *inter alia*: drivers and barriers to ensuring equitable allocation of water; policy and legal frameworks; and capacity development activities needed to support development of these institutions. Institutional accountability, the participation of women in decision making, assessment of water resource availability and demand, and development of flexible and transparent water laws and institutions were mentioned as necessary components of building institutional capacity for equitable water allocation.

Water education and schools – bridging divides for future generations: Participants described water education as a water-management tool and highlighted the importance of interdisciplinary programmes and community-based action. Presenters outlined education projects and initiatives, highlighting the benefits of tools that are interactive, adaptable, contemporary and solution-oriented. They addressed barriers to effective water education, including the low economic value attached to water, the lack of investment in water safety and the low commitment of educators to teaching water management. Proposed strategies for improving education included: using native languages to transmit water education messages; incorporating cultural considerations in water education; and mainstreaming gender in these activities.

Water science and technology – appropriate and innovative solutions for the 21st century: thinking outside the water box: Panelists described tools to raise funds for water projects and creatively solve problems in the areas of water and health, including: animated films; micro-blogging on Twitter; open source initiatives and online market places; and the use of global positioning systems (GPS). Participants engaged in interactive discussions to consider new ways to use information and communication tools to address water and sanitation issues, such as exploring opportunities to combine “old” and “new” knowledge and encouraging youth involvement.

The road less travelled (no more)?: Participants discussed the need to build bridges among professional associations, the development community and civil society organizations. They noted that broad consensus had emerged that professional associations are critical stakeholders in delivering results and sustaining projects on the ground, and their role was



During the session on Institutional capacity development: getting the balance right for equitable water allocation, participants shared success stories from their regions

mentioned in strategy development, technical assistance and capacity development. Participants discussed actions to bridge the divide between development and civil society groups including: building bridges with networks across sectors; twinning strong and weak associations; and reforming “elitist” professional association structures through partnerships with rural associations and community-based organizations.

Water and history: understanding the water cultures of past civilizations and deriving lessons for the present: Participants discussed changes in water-related knowledge systems, practices and values over time, and considered the lessons that could be learned for current water management. They heard presentation on water structures in Hellenistic, Roman and Byzantine periods in Turkey, the 3000-year old qanat underground water supply system, a water historical library in Mexico and water rituals in eastern cultures. Participants highlighted the importance of underlying institutional structures and cultural norms in addition to engineering achievements of these historical water systems.

Fostering socio-cultural perspectives in water sciences and management: identifying bridges and barriers: Participants discussed water as a source of life, inspiration, power, conflict, cooperation and sustainability. Presentations highlighted conflicts between government legislation and traditional value systems and also noted the human and environmental impacts of large dams. Community-based management approaches were discussed, including community involvement in the design of flood programmes in the Netherlands and France and community-science collaboration for groundwater management in Japan. Participants suggested that: national legal frameworks should foster pluralistic governance models; management should include both precise scientific data and customary principles; and water infrastructure projects should respect indigenous peoples’ rights.



Bjerkeman-Petersson, akvo.org, during the session on Water science and technology - appropriate and innovative solutions for the 21st century: thinking outside the water box



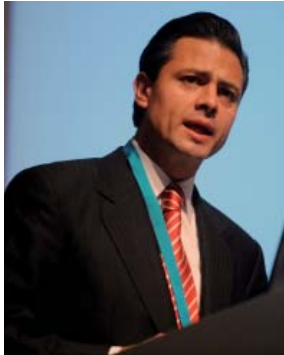
Young talent at the Forum

REGIONAL PROCESS

Seven regional sessions took place from Tuesday to Thursday, highlighting a broad range of region-specific issues. The regional discussions emphasized the need to enhance transboundary cooperation on water resource management, and to build adaptive capacities of institutions in each region to manage emerging challenges, particularly those related to climate change.

AMERICAS: On Tuesday, Jerome Delli-Priscoli, US Army Corps of Engineers, introduced the Americas Regional Document, describing the multi-stakeholder process from which it was created. He said it contains twelve recommendations, which include: promoting social inclusion and poverty eradication through universal access to water supply and sanitation and through productive water use; and developing good regulatory and economic incentives to ensure water sustainability.

During the opening session, sub-regional representatives reported on key outcomes of their consultative processes.



State of Mexico Governor
Enrique Peña Nieto

State of Mexico Governor Enrique Peña Nieto said innovative approaches are needed to address the growing burden of recharging and transporting water. Gerald Sehlke, American Water Resources Association, said the US must develop a national water vision. Tomás Vaquero, Minister of Natural Resources and Environment, Honduras, Horace Chang, Minister of Water and Housing, Jamaica, and Patricia Aquino, Caribbean

Environmental Health Institute, stressed that the Central American and Caribbean regions are vulnerable to climate change and require support from developed countries. Luis Zurita Tablada, Vice Minister of Environment and Natural Resources, Guatemala, said his sub-region is developing a Central American Action Plan to access and manage water resources. José Luís Genta, Ministry of Housing, Land Planning and Environment, Uruguay, called for an international water pact and stressed that water is a public good. José Machado, National Water Agency, Brazil, emphasized that all stakeholders must be involved in IWRM to avoid conflict over water resources.

In a panel on sub-regional case studies, panelists highlighted, *inter alia*, the need for: flexible legal frameworks that incorporate international cooperative bodies to avoid “diplomatic gridlock”; institutions to ensure that laws are mediated and implemented; regional knowledge sharing; and the importance of international groundwater agreements.

A second panel on financing and capacity building addressed, *inter alia*, the need for: technology transfer of low-cost, low-investment technologies; improvements in water operator efficiency; and investments in wastewater treatment.

In closing discussions, some participants lauded the participatory process by which the Americas document was created, while others said the process was not sufficiently inclusive and that the document’s recommendations were not new.

EUROPE: On Tuesday, Tom Vereijken, European Water Partnership, described the European preparation process for the Forum, which elaborated a water vision for the region

and established a European water-house to share technologies and best practices. He introduced the European report, which provides concise information on regional challenges and solutions, policy recommendations and key messages to benefit other regions.

During keynote presentations, WWC President Loïc Fauchon stated that it is the role of political leaders to take up solutions proposed in the Forum, and emphasized the importance of regional cooperation. Marta Moren, Ministry of Environment and Rural and Marine Affairs, Spain, presented on water scarcity and drought in the EU within the context of the European Water Directive. Jacqueline McGlade, European Environmental Agency, noted that no part of Europe is immune to water scarcity and said supply-led management is unsustainable.

Three panel discussions then took place. On Europe’s achievements and challenges on water, panelists highlighted, *inter alia*: the need for a long-term and inclusive governance framework for sustainable water use; the role of water partnerships in initiating water dialogues; and technical innovations to enhance wastewater treatment and reuse. Panelists noted the need for locally adaptive solutions and macroeconomic stability at the national level to ensure the “bankability” of water projects and discussed risk-management tradeoffs in improving water infrastructure.

During the panel discussion on European actions to achieve sustainable sanitation for all, participants highlighted key drivers for reform, including health issues, funding and incentives for sanitation. They also noted key principles of EU policy on sanitation, wastewater treatment and drinking water standards.

In the final panel session, on basin management and transboundary cooperation, panelists highlighted a number of pan-European and international instruments for harmonization of practices, including: the European Water Directive; the UN Economic Commission for Europe (UNECE) Water Convention; the International Commission for the Protection of the Danube River; and the EU-China River Basin Management Programme.

AFRICA: On Wednesday, Mandla Gantsho, African Development Bank, presented the Africa Regional Paper, underscoring that it is the culmination of a comprehensive consultative process and complements the Africa Water Vision 2025. He said the report builds on existing political commitments and provides guidance in three implementation areas: building infrastructure for basic services; strengthening institutional capacity and operational mechanisms; and refining strategies and policies. He emphasized that it establishes concrete targets, including to deliver improved sanitation to 60% of Africa’s population. During an opening high-level panel, Bai-Mass Taal, Africa Ministers’ Council on Water



Bai-Mass Taal, AMCOW

(AMCOW), said the meeting aimed to mobilize broad regional and international support to consolidate existing commitments. Asfow Dingamo, Minister of Water Resources, Ethiopia, noted that the World Water Forum offers an opportunity to announce Africa’s successes, “not just doom and gloom.” Prince of Orange Willem-Alexander of the



Erastus Mwencha, Deputy Chairperson, AU Commission

Netherlands, UNSGAB Chair, noted that there is a growing consensus on key water issues and offered UNSGAB's support in leveraging ODA funds.

Sfara Giorgio, Chair of the G8 Expert Group for Water and Sanitation, announced the G8-Africa Alliance on Water, saying it would build on the lessons learned from the Evian and Toyako G8 Summits. Loïc Fauchon, WWC President, encouraged reinventing Africa's water institutions based on African experiences and priorities, which should include finding an African "expression" of the right to water. Erastus Mwencha, Deputy Chair, African Union Commission, welcomed the inclusion of the outcomes of the Sharm el Sheikh African Union Summit in 2008, which endorsed 25 commitments to tackle water security and sanitation goals. Michel Jarraud, Secretary-General, WMO, highlighted the WMO's hydrological framework to strengthen water management systems in Africa.

During the technical panel, speakers underscored the scale of the water and sanitation problem in Africa, noting that US\$50 billion annually will be required to meet targets in three key areas: access to drinking water and safe sanitation; water for agriculture; and hydroelectric power and multi-purpose storage. They called for investments in knowledge and learning, diversity, proper institutional arrangements and adequate infrastructure.

In the closing session, South Africa announced that it would host the 7th session of AMCOW and the 2nd Africa Water Week in November 2009.

ASIA-PACIFIC: On Friday, Ravi Narayanan, Vice-Chair, Asia-Pacific Water Forum (APWF) Governing Council, launched the Regional Document, saying it addresses, *inter alia*: water financing and capacity development; water-related disaster management; monitoring of investments and results;



South African dancers performed during the Africa Regional Day

and water for development and ecosystems. He highlighted its guiding principles, including decentralization accompanied by adequate financing and capacity building.

Yoshiro Mori, APWF, introduced the APWF's Ministers for Water Security Initiative as a platform for dialogue among ministers across sectors. Siva Thampi, UN Economic and Social Commission for Asia and the Pacific, highlighted the activities of the APWF, noting in particular the first Asia-Pacific Water Summit held Japan in 2007. Wouter Lincklaen Arriens, ADB, stated the ADB's commitment to increasing investment in water in the Asia-Pacific region, and said dedicated leadership and the use of existing technologies can improve water management.

Sub-regional representatives discussed, *inter alia*: specific regional challenges such as floods, saltwater intrusion and water storage limitations; the impacts of climate change, population growth, energy demands and urbanization; the need to implement existing commitments by governments; transboundary water governance strategies; and the importance of environmental protection, water conservation and meeting the MDGs.

Ministers and representatives from the Asia-Pacific region outlined national initiatives to increase water security, including: modifying legal frameworks and tariff structures; upgrading outdated infrastructure; sustainably harvesting water resources; and making river basins fundamental planning units. On transboundary water sharing, some suggested that upstream states should mitigate or compensate for damages to downstream states.

In a session on priorities for improving water security, participants highlighted: improving scientific knowledge and data harmonization; developing technology, including for rainwater harvesting; improving mitigation strategies, water storage and groundwater recharge; increasing agricultural water efficiency; and promoting broader stakeholder participation, particularly in communities responsible for stewardship of upstream water.

Updating participants on the G8 Experts Group on Water and Sanitation's work, Akihiko Furuya, Ministry of Foreign Affairs, Japan, noted that the Group's most recent meeting was held at the 5th World Water Forum, and that in addition to writing an update report on the G8 Evian Water Action Plan, the Group will also develop an implementation strategy on water and sanitation.

SUB-REGION "IN AND AROUND TURKEY": On Wednesday, Haydar Koçaker, DSI General Director, Turkey, introduced the regional report, noting that it drew on 22 regional preparatory sessions based on full stakeholder consultation. The report highlights the strategies that emerged during these meetings, organized under the six themes covered during the Forum.

During keynote presentations, Veysel Eroğlu, Minister of Environment and Forestry, Turkey, noted that "environmental fluctuations" necessitate implementation of adaptation and mitigation strategies, emphasizing that Turkey has centuries of experience in managing water. Süleyman Demirel, former President, Turkey, stressed that human beings have an obligation to protect the earth through better water management and highlighted the importance of dams for economic growth and social advancement.

During a ministerial panel on climate change impacts in the region, panelists highlighted, *inter alia*: the importance of legislation, early warning systems, adaptive strategies and



Süleyman Demirel, former President, Turkey

cooperative mechanisms and legal regimes for transboundary waters; the role of science and technology; and the need to consider the MDGs and the goals of the International Decade for Water in the regional process. A proposal to name 2012 the International Year for Water Diplomacy was discussed.

MEDITERRANEAN COUNTRY GROUP: On Wednesday, Hachmi Kennou, Mediterranean Water Institute, opened the session on the Mediterranean region. The session's conclusions contributed to the regional document, which aims to, *inter alia*: define the Mediterranean context in relation to key water data and water resources management; review progress in meeting the MDGs and Johannesburg targets; present the viewpoints of regional stakeholders; and explore ways to further develop collaborative action.

During the opening session, Amb. Roza Ieremia, Greece, listed political priorities for the region, including: sustainable financing; climate change adaptation and mitigation; and synergies between IWRM and integrated coastal zone management (ICZM). Abdelkebir Zahoud, Secretary of State, Morocco, noted the importance of knowledge and technology transfers. Michael Scoullos, Global Water Partnership-Mediterranean, said the region is approaching the Forum with renewed political commitment.

During the first of three panel discussions, participants addressed, *inter alia*: demand management and efficiency; the role of education, stakeholder participation and gender awareness for addressing governance challenges; the concept of virtual water; water management in situations involving occupation, conflict and transboundary waters; the interaction between water, energy and food needs; and opportunities for north-south cooperation in the Mediterranean basin.

In a second panel, on water and coastal development, panelists cited tourism, urbanization and migration as stresses on coastal regions, noting that the role of modern technologies in the Mediterranean, although controversial, must be explored. Other issues addressed included: impacts of poor integration of management of marine and terrestrial regions; tourism and agriculture as competing sectors for water in coastal areas; the importance of desalination and wastewater treatment; means to simultaneously implement IWRM and ICZM; the implications of the EU Water Framework Directive in the EU's coastal regions; and the potential for regional initiatives, such as the Euro-Mediterranean Partnership and the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, for building regional cooperation.

In a concluding panel, speakers highlighted public awareness, pricing policies and policy integration as critical components of water-demand management. They underscored

the need to translate political commitments into action, and highlighted regional efforts, such as the EU Horizon 2020 programme, in improving water management.

ARAB COUNTRY GROUP: On Thursday, Safwat Abdel-Dayem, Executive Director, Arab Water Council (AWC), described the regional report, which highlights necessary measures to improve water management, including implementing the right to water, and bridging the divides between people's knowledge through collaboration and information exchange.

During the high-level panel, Loïc Fauchon, WWC President, highlighted four main obligations, namely to: implement the right to water; find and efficiently use funding for water and sanitation; ensure that water managers are in place to provide clean, continual water supply; and provide education about water resources. Mahmoud Abu Zeid, AWC President, highlighted the challenges of delivering sufficient quantities of water for agriculture, industry and household use, and underscored the role of the Arab Water Academy in fostering information exchange.

Sadiq Al-Mahdi, Former Prime Minister of Sudan, stressed the importance of dialogue to reach agreement on equitable sharing. Abdul Latif Rashid, Minister of Water Resources, Iraq, highlighted renewed efforts to promote dialogue with Turkey and Syria, and urged Arab countries to ratify existing international treaties on transboundary watercourses.

Kevin Cleaver, International Fund for Agricultural Development, called for restructuring the existing incentive systems to promote more efficient technologies and crop production.

Kaoru Ishikawa, Japan's Ambassador to Egypt, underlined five needs related to water and science, namely to: respect existing resources through efficient use; use techniques such as desalination; use technology to clean polluted water sources; strengthen water user associations for equitable water use; and adjust public perceptions of sanitation and water reuse.

In a closing panel discussion, panelists from academia, policy institutions, government and civil society discussed, *inter alia*: exploring innovations outside the water sector; disseminating good practices; strengthening education and research collaboration; promoting IWRM approaches; and accelerating ratification of international treaties to address water-based conflicts.



Sadiq Al-Mahdi, Former Prime Minister of Sudan

SPECIAL PLENARY SESSIONS

LAUNCH OF OECD REPORT ON PRICING AND FINANCING: On Tuesday, Angel Gurría, OECD Secretary-General, presented "Managing Water for All: An OECD Perspective on Pricing and Financing – Key Messages for Policy Makers." He called for a political focus on freshwater in addition to the areas of finance, fuel and food, and for the use of tariffs, taxes and aid transfers for sustainable cost recovery.

Participants discussed, *inter alia*: risk management and other incentives for private-sector involvement; positive experiences in cost recovery in developing countries; and building the capacity of water utilities. Other issues included



L-R: **Milagros Couchoud**, Mediterranean Water Institute; **Marta Moren**, General Director of Water, Spain; and **Hachmi Kennon**, World Water Council

ensuring predictability of public funding, developing sustainable cost recovery measures to leverage investments in the sector, raising tariffs and scaling up environmental sanitation services in megacities as potential win-win strategies and the need to improve benchmarking of cost recovery.

RUNNING DRY! HOW TO TURN DROUGHTS INTO OPPORTUNITIES FOR BETTER MANAGEMENT:

On Monday, participants engaged in two panels on turning droughts into opportunities for more effective water management. Marta Moren, Ministry of Environment and Rural and Marine Affairs, Spain, underscored the need for effective drought management at the national and global levels. Other panelists elaborated on the need to share lessons and best practices in water management and for sustained public awareness campaigns to enhance water efficiency. They also discussed: transitioning from crisis to risk management; shifting the focus to adaptation strategies; developing flexible drought mitigation plans; developing bottom-up approaches to reduce water-related conflicts; and establishing priorities for a comprehensive drought policy.

During the ensuing discussions, participants suggested linking water management to other environmental sectors and promoting drought-resistant crops and animal species. They queried the legal basis for inter-basin water transfers and the availability of finances for upgrading water systems. They stressed the importance of farmers' education on best practices and called for greater children's participation in water management planning.

HEALTH, DIGNITY AND ECONOMIC PROGRESS:

THE WAY FORWARD FOR GENDER EQUITY: On Monday, participants attended an opening panel in which speakers called for an end to the "speechlessness" surrounding sanitation and urged development partners to insist that adequate toilets be preconditions for releasing funding for health and education projects. Panelists discussed the Women and Water Preparatory Conference, which preceded the Forum, including the recommendations requesting heads of states and ministers to implement gender-responsive budgeting in water and sanitation, and presented experiences in water and sanitation in Central Asia, highlighting successes in training women as regional sanitation facilitators.

In the second session, Nimet Çubukçu, Minister for Women and Family Affairs, Turkey, noted the specific role of women in agriculture and irrigation. Santha Sheela Nair, Ministry of Rural Development, India, highlighted the taboos surrounding discussion of menstruation and defecation, emphasizing that sanitation facilities must be context-appropriate. Asfaw Dingamo, Minister of Water Resources, Ethiopia, illustrated the incorporation of gender issues into his country's national agenda over the last 20 years, including the recent Water Supply, Sanitation and Hygiene Movement.

Participants then discussed: gender in relation to disaster management; gender disaggregated water-use data; and social barriers to using the Ecosan dry toilet. Other issues raised include the creation and use of gender indicators, data collection, funding for water and sanitation, and capacity building for women's participation.

TECHNICAL EXPERTS PANEL ON WATER AND THE FINANCIAL CRISIS: On Tuesday, a panel of technical experts, speaking in their personal capacities, convened to discuss issues relating to water and the financial crisis.

One panelist stressed that every dollar invested in water and sanitation saves US\$4-12 dollars in health and social costs and said the challenge confronting the sector is to use available research to "to tell the good story." Other panelists highlighted measures by international financial institutions and partners to attract long-term financing and equity capital and underscored the need to minimize risk and increase affordability of water services in developing countries. They discussed measures to attract private capital in local and national initiatives and underlined the need for efficient finance and water-resource use. They further suggested that to attract more funding from finance ministries, water projects should emphasize their ability to deliver health, education and poverty alleviation benefits. Others drew attention to a reduced "willingness to pay" by domestic and industrial consumers.

Contributions from the floor questioned: the appropriate balance of the taxes, tariffs and transfers; the role of institutional mechanisms in the water sector reform process; how to balance payments for water; and how to reduce the risk of water investments in developing countries.

IRRIGATION: EFFICIENT USE OF WATER IN AGRICULTURE: On Saturday, three panels discussed irrigation in Mexico, China and Turkey. The panels addressed legal and institutional arrangements, planning and development, and operation and maintenance.

Panelists from Mexico considered: the recommendations of a water tribunal held in Zaragoza in 2008 on water resource management including a proposal to develop participatory governance structures; Mexico's institutional framework; and the shift to decentralized administrative control over irrigation districts.

In the panel on China, Chen Lei, Minister for Water Resources, China, highlighted his country's central role in world food security, noting that this security is challenged by land degradation, population growth, climate change and water scarcity for food production.



L-R: **Mehmet Mehdi Eker**, Minister of Agriculture and Rural Affairs, Turkey, and **Chen Lei**, Minister of Water Resources, China

Turkish panelists identified, *inter alia*, the importance of new financing strategies for irrigation investments and of rural activities to the national economy. Mehmet Mehdi Eker, Minister of Agriculture and Rural Affairs, Turkey, highlighted policies and action plans to address climate change impacts.

Panelists further described: the need to rehabilitate ageing irrigation infrastructure and the legal framework for resource management, including legislation on state water resource ownership and conservation requirements. They also encouraged participation by farmer water user associations in irrigation management activities.

In ensuing discussions, participants and panelists drew attention to: corruption and the issue of water banks to regulate the transfer of water rights; the need to modernize irrigation; and the economic sustainability of water user associations. They discussed the implications of energy costs and irrigation technology and the use of flexible financing and agricultural development funds to increase productivity in water use.

CLIMATE-RELATED DISASTERS: On Saturday, participants heard several presentations in two panel sessions on “management of water-related disasters in view of climate change: challenges and future directions from the perspectives of meteorological services and water managers.”

The first panel, which represented a more technical perspective, focused on: satellite monitoring systems; the WMO’s strategy to mitigate and adapt to the effects of climate change; and validation of climate data.

The second panel addressed engaging various stakeholders in drought and flood management to prevent loss of life and establishing early warning systems and response capacity to address disasters. The Southeastern Anatolia Project (GAP) was recognized as a good example of sustainable development providing livelihood opportunities and flood protection. Panelists called for the improvement of climate data and modeling products to provide better seasonal predictions of rain and highlighted the need to provide data that is scaled to timeframes that politicians understand.

Participants and panelists discussed: the need to prepare for the extreme effects of climate change; the importance of interdisciplinary cooperation in mitigation efforts; and the potential for establishing a network of national climate services to improve management of reservoirs and food production.

POLITICAL PROCESS

The 5th World Water Forum’s political process comprised four levels of politicians: heads of state; ministers; parliamentarians; and local authorities. These groups met from Monday through Sunday to finalize their outputs. The heads of state adopted a high-level appeal for action to governments worldwide; the ministers adopted a Ministerial Declaration; the parliamentarians summarized discussions on numerous contentious issues surrounding water; and the local authorities adopted the Istanbul Water Consensus.

LOCAL AUTHORITIES

LOCAL AUTHORITIES’ DIALOGUE: Some 91 local authorities and 200 mayors met on Wednesday and Thursday afternoon to discuss the Istanbul Water Consensus (IWC). On Thursday a panel focused on: the responsibilities of local authorities; the need to mobilize financial resources for water and sanitation; the impacts of climate change; and disaster planning and management. Participants emphasized their key



Participants of the Local Authorities session posed for a photograph

messages to parliamentarians and ministers, namely that local authorities must be empowered through effective regulatory frameworks and financial support, and local authorities best understand the needs in their communities and are well-positioned to implement water as a human right, provided financial resources are made available.

Kadir Topbaş, Mayor of Istanbul, introduced the IWC, which addresses rural and urban water-related challenges. Dominique Lefebvre, Mayor, Cergy-Pontoise, France, then led a panel on implementation, highlighting the roles of “Champion Cities” to promote cooperation, advance key issues, and share knowledge and information on implementation experiences. He said 45 local authorities have agreed to be Champion Cities.

While some local authorities fully endorsed the IWC, others said they would not be able sign it unless the reference to “inter-basin transfers” was removed from the document. Others opposed deletion of the phrase. Limiting the reference to “within domestic boundaries” was suggested, but several authorities opposed this proposal because of the potential importance of such transfers for developing countries with transboundary waters.

ISTANBUL WATER CONSENSUS: Highlights of the ICW include recognition of the following principles:

- Good quality water supply and sanitation is a basic human right;
- Water is a public good that should be under strict public control;
- A consistent approach at the local, regional and national levels is needed to adapt to global change and achieve equitable and optimal sustainable management of water resources;
- Cost recovery should be achieved in an equitable manner that ensures provision of services to the most vulnerable in society;
- Water security should be based on the principle of equitable and reasonable allocation;
- Capacity building, creative finance mechanisms, and regulatory frameworks should facilitate access to water and sanitation; and
- Local and regional decision makers should be integrated into policy processes at higher levels of governance.

In order to address these objectives, local authorities commit themselves to:

- Assessing the pressures on water resources and aquatic biodiversity;
- Making inventories of local and regional policies and planning to be adapted to challenges threatening water resources in the medium and long term;
- Initiating dialogues with stakeholders to define local priorities and plans of action;

- Defining objectives and measurable targets related to the IWC objectives; and
- Implementing the action plans to improve service provision and increase local resilience.

Reference in the annex to “inter-basin transfer” under point three of “measures” in the draft IWC was deleted from the final version and replaced by a footnote listing those local authorities who favored “inter-basin transfer.”

MEXICO WATER PRIZE: On Wednesday, local authorities attended the presentation of the Compromiso Mexico Water Prize, awarded for public policies which have a positive influence on water resources management, and which can demonstrate measurable results related to water supply, sewerage and sanitation services. Awards were presented to: Guangzhou Province, China; León, Guanajuato, Mexico; and Lima, Peru.

PARLIAMENTARIANS

Köksal Toptan, Speaker, Turkish Grand National Assembly, welcomed 263 parliamentarians from around the world to discuss water issues organized around the themes of global change, transboundary waters, decentralization, and the right to water and sanitation.

During discussions, many countries stressed the need for transboundary “benefit sharing” and cooperation. Some parliamentarians recommended bringing the 1997 UN Watercourses Convention into force, while others called for separate framework agreements on “transboundary” and “international” watercourses. Decentralization was encouraged and parliamentarians noted the important role of legislation in creating effective water governance at the local level. A parliamentarian from Iraq called for a trilateral agreement on the Tigris and Euphrates rivers to enhance regional cooperation. Some parliamentarians supported creation of a World Water Parliament to facilitate continued cooperation among parliamentarians on water issues.

The right to water was highlighted in discussions, with many stressing the need for effective governance, public resource monitoring, access to courts to enforce rights, compliance and partnerships as means of implementing the right. Others noted the challenges in constitutionalizing water as a human right. The session ended with a video from Richard Durban, Senator, US, on legislation in the US Senate that could contribute ODA to efforts to provide clean water for 100 million people in developing countries.

PARLIAMENTARIAN OUTPUT: In their output, parliamentarians encouraged the need to:

- Recognize, codify and implement water as a human right;
- Not target water infrastructure during conflict;
- Create a World Water Parliament;
- Devote 1% of national water budgets to helping developing countries meet MDG targets;
- Decentralize the water sector to empower local authorities;
- Establish a link between water issues and climate change at the 2009 UN climate change negotiations in Copenhagen;
- Protect the environment and reduce pollution in the framework of sustainable development; and
- Increase the role of women and civil society.

DIALOGUE BETWEEN LOCAL AUTHORITIES AND PARLIAMENTARIANS

Following separate meetings, parliamentarians and representatives from local authorities convened on Thursday for a joint dialogue on decentralization and a right to water and



A bird's eye view of the Dialogue between Local Authorities and Parliamentarians session

sanitation. Mustafa Östürk, Turkish Grand National Assembly, opened the session noting the critical need for coordination between different levels of government. Moderator Mohamed Saäd El Alami, Minister in Charge of Relations with Parliament, Morocco, said it is necessary to ensure sustainable water resource use through appropriate laws and policies. Panelists then discussed the roles of national- versus local-level governance and the process of decentralization. Discussions touched on: the human right to water; devoting a portion of water budgets in developed countries to support attainment of the MDG targets in developing countries; and compensation for destruction of water infrastructure during conflict. Zekai Şen, Istanbul Technical University, concluded the session by noting the need to translate outcomes into specific actions.

HIGH-LEVEL TRIALOGUE

The high-level trialogue between ministers, parliamentarians and local authorities was opened on Friday by Yaşar Yakiş, Former Minister of Foreign Affairs, Turkey. He highlighted that 50 local authorities had already committed to signing the IWC.

In a panel session, Rashad Ahmed, Minister of Environment and Water, United Arab Emirates, highlighted the importance of unconventional sources of water and emphasized that equitable sharing of water is a prerequisite for peace. Oscar Castillo, Parliament of the Southern Common Market (MERCOSUR) emphasized that solutions to the global water crisis must address root causes. The lack of progress on a human right to water was lamented by Ruth Zavaleta Salgado, Minority Deputy, Chamber of Deputies, Mexico.

Other parliamentarians noted the need to, *inter alia*: improve the capacity of local authorities; increase transboundary cooperation; conserve water resources; and preserve ecosystems. Mayors recommended the empowerment of local authorities through the provision of financial and technical resources and stressed that water is a human right. Discussions highlighted, *inter alia*: the obligation not to harm water infrastructure during conflict; the necessity of protecting water resources to secure a human right to water; and challenges posed by corruption and lack of finance.

MINISTERIAL CONFERENCE

Nearly 100 ministers met from Friday through Sunday to finalize their Ministerial Declaration. The final session of the Ministerial Conference opened with a statement from the floor by Ethiopia requesting the deletion of reference to “conformity with existing agreements” in the Ministerial Declaration’s principle 16 on transboundary watercourses.

SUMMARIES OF MINISTERIAL ROUNDTABLES:

On Sunday, chairs of eight ministerial roundtables held on Saturday summarized key outcomes from their sessions. The ministerial roundtable on “freshwater-coastal areas” acknowledged that an international legal framework already exists on this topic but that implementation is slow due to poor governance. It noted the importance of sub-regional initiatives as well as international strategies to combine ICZM and IWRM.

On “reducing the impact of water-related disasters,” the ministerial roundtable highlighted the need for: robust policies for the prevention of water-related disasters and risk reduction; national flood and drought management plans; information sharing, data collection and harmonization of indicators; and preventive actions.

During roundtable discussions on “bridging the water and climate agendas,” country representatives noted the increasing importance of adaptation, the different needs faced by various regions and the synergies between mitigation and adaptation. In order to adapt to climate change, they highlighted the critical need to: develop financing mechanisms to ensure investment; use public awareness to catalyze action and invest in science and technology development; and present a clear message that water should be used as a framework for planning and action to the 3rd World Climate Conference in September 2009 and at the climate change negotiations in Copenhagen in December 2009.

The roundtable discussions on “water for energy, energy for water” emphasized, *inter alia*: coordinating and integrating the water and energy sectors; addressing the multiple uses of water; managing water resources at the basin level using IWRM; and sustainably developing water projects through the use of environmental impact assessments. It also encouraged greater interaction between the World Water Forum, the World Energy Forum and other international processes addressing energy issues.

On “financing water infrastructure and energy services,” the ministerial roundtable emphasized the importance of: developing and implementing national financial plans and strategies; improving the “bankability” of proposals; establishing public-private partnerships; and building in-country capacity for financial planning. It also stressed that the financial crisis should not be an excuse for inaction but an incentive to improve efficiency.

In the roundtable discussions on “water for development in Africa,” ministers highlighted the need for: effective mechanisms for implementation and monitoring of progress; gender mainstreaming; regional integration; improved delivery of water and sanitation through existing instruments; and scaling up of finance to meet the MDGs. They also stressed their commitment to the implementation of the African Water Development Agenda.

On the subject of “water for food and poverty eradication,” ministers addressed the inter-sectoral aspects of water for agriculture, noting that agriculture uses more water than any other sector. Highlighting the need to prioritize water for agriculture, representatives discussed actions including: investing in technology; enhancing infrastructure; improving cooperation including south-south partnerships; improving participation of agricultural stakeholders in decision making; addressing climate change; and providing adequate funding to mobilize and upscale investments.

Presenting the roundtable discussion “beyond the international year on sanitation (IYS) and implementing the right to water and sanitation,” representatives noted that the IYS was successful in raising awareness but that there is a need for innovative pro-poor approaches, creation of effective national policies and financing regimes, and mobilization of resources to achieve the MDGs. The “right to water” was also discussed during this session. Ministers said a right of access to water and sanitation has gained significant attention since the 4th World Water Forum and stated that it is crucial for achieving the MDGs. They also acknowledged that several countries have already protected the right to water as a constitutional right. Several ministers noted that the Istanbul Ministerial Declaration does not sufficiently recognize a human right to water and sanitation, while others argued that it was premature to insert an explicit reference to human rights obligations related to access to safe drinking water and sanitation before the outcome of the report of the Human Rights Council’s Independent Expert.

Response to roundtables by major stakeholders: On the protection of a right of access to water and sanitation, a representative of the Gender and Water Alliance argued that the Ministerial Declaration “seems to go back in time.” She stressed that it is the role of governments to protect their people, in particular the most vulnerable. She said it is essential to provide a basic quantity of free water for each person as well as a right for each child to have safe sanitation, while taking into account the particular needs of girls.

A representative of Business Action for Water said that: water is critical for business, and business is critical for the economy and employment; water, energy and food are inextricably linked; and that technologies are available to address water-related problems in coastal areas. On finance, he said progress had been achieved since the 4th World Water Forum.

Public services and trade union representatives noted the need to hold fora such as the World Water Forum under the auspices of the UN to produce binding outcomes on the right to water and sanitation. They called on governments to use the tools available to them to provide sustainable access to water and sanitation, while considering the roles of workers in the water sector.

OFFICIAL ADOPTION OF THE MINISTERIAL DECLARATION: India stressed the need for the Forum to send a powerful message to the 2009 UN climate change negotiations that all nations have the duty to mitigate greenhouse gas emissions within the context of common but differentiated responsibilities and that stronger action on climate change must emerge.

Highlighting the Ministerial Declaration and the IWC as the two most important outcomes of the 5th World Water Forum, Veysel Eroğlu, Minister for Environment and Forestry, Turkey, called for the official adoption of the Ministerial Declaration. He said the draft, finished 4 March 2009, represented the final product of a longer preparatory process and that it would not be reopened as requested by some delegations.

The Ministerial Declaration includes commitments to, *inter alia*:

- Intensify efforts to achieve MDG targets;
- Implement IWRM at the river-basin level;
- Improve water-demand management;
- Preserve environmental flows, increase resilience and restore ecosystems;

- Prevent and respond to water-related disasters;
- Recognize water as a basic human need and acknowledge work on human rights and access to water in the UN system;
- Prioritize water and sanitation in development planning;
- Promote cooperation on sustainable use and protection of transboundary water resources; and
- Agree to respect international law protecting water resources during conflict.

Principle 15, on water as a basic human need, garnered attention during debates at the Forum. Representatives from some countries called for recognizing the human right to water and basic sanitation as well as acknowledging the cultural value of water and the need to include indigenous peoples in water management.

CLOSING STATEMENTS: WWC Director-General Ger Bergkamp encouraged governments and participants to move the world water agenda forward and expressed the WWC's readiness to help implement the commitments made by providing support for capacity development.

Veysel Eroğlu, Minister of Environment and Forestry, Turkey, highlighted that the Forum had brought together over 120 countries and helped create a better understanding of water issues as well as design water policies for sustainable development. He concluded by highlighting that the decisions taken at the Forum and activities for their implementation are a platform for "fraternity, cooperation and peace."



WWC Director-General Ger Bergkamp

HIGH-LEVEL SEGMENT

Heads of State met on Monday to complete a high-level agreement. The agreement makes an appeal to national governments, international organizations and other stakeholders to generate a common vision and framework for the sustainable development and management of water resources and for guaranteeing access to safe water and sanitation for all. It states that water resources cannot be managed without appropriate capacity and properly designed and maintained infrastructure, and that investment in these areas should be given the highest priority.

CLOSING OF THE FORUM

The 5th World Water Forum closed on Sunday afternoon, 22 March, which is also World Water Day.

WORLD WATER DAY – TRANSBOUNDARY WATERS

Participants watched "One Water," an award-winning documentary by Sanjeev Chatterjee and Ali Habashi, which was filmed in 14 countries over five years and can be downloaded online at: <http://1h2o.org/>.

András Szöllösi-Nagy, UNESCO-IHP, introduced a high-level roundtable on "adapting to global changes in transboundary basins." He noted that there are 263 shared watersheds and 273 shared groundwater aquifers worldwide, on which 3 billion people directly depend. He said cooperation

and solidarity must be adopted as governing principles so that these populations avoid water-related conflict engendered by the growing competition for shared water resources.

During roundtable discussions, Alfred Duda, Global Environment Facility (GEF), underscored the role of the GEF and its partner agencies, including: seed funding for trust building and cooperation; technical support; and third-party facilitation. Noting that transboundary agreements should increasingly deal with issues of climate variability, he underscored that GEF support can help prepare basin organizations to implement larger projects under the UN Framework Convention on Climate Change.

Sibylle Vermont, Vice Chair, UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes, noted that the Convention has developed a range of technical guidelines and tools for managing transboundary resources. She said the Convention fosters cooperation because it obliges countries to enter into bilateral and multilateral negotiations and to establish joint bodies.

Anders Berntell, Stockholm International Water Institute, highlighted a number of conceptual "clashes" in the discussion, including between "transboundary" and "international" waters and between the principle of state sovereignty and that of shared governance of resources.

CLOSING CEREMONY

YOUTH FORUM DECLARATION: Youth delegates said their participation at the World Water Forum was a product of their capability, not their vulnerability, and stressed that they wanted to be partners in the process, not just stakeholders. They said language in the Ministerial Declaration should have stated more clearly that water and sanitation is a human right.

Youth representatives then read their declaration, written by young people from 25 countries. Organized according to the 5th Forum's themes, the Declaration states, *inter alia*, that:

- Recommendations from the 5th Forum should be taken to the 2009 UN climate change negotiations in Copenhagen;
- Access to clean, affordable, secure and readily accessible water should be considered a basic human right and defined as such in national legislation;
- Good governance cannot exist without public participation;
- Governments should create mechanisms to provide access to drinking water for all people, regardless of their ability to pay for it; and
- Youth should be engaged in decision-making processes related to their education, which should be sensitive to gender and current social challenges.



Winner of the Kyoto World Water Grand Prize



L-R: **Oktay Tabasaran**, Secretary General of the 5th World Water Forum, and **Veysel Eroglu**, Minister for Environment and Forestry, Turkey, who shared a Turkish proverb with participants

KYOTO WORLD WATER GRAND PRIZE: Hitoshi Ohshima, Executive Officer on Global Environmental Policy, Japan, introduced the Kyoto World Water Grand Prize, awarded to an NGO for grassroots activities. William Cosgrove, Chair of the Prize jury, noted that the ten finalists, who gave final presentations on Saturday, had included women and youth in their diverse projects. He then presented the Prize to the Watershed Organization Trust, India. Marcella D'Souza accepted the prize on behalf of the organization, stressing that water must be used as a uniting force.

CLOSING STATEMENTS: Oktay Tabasaran, Secretary-General, 5th World Water Forum, said the knowledge obtained and results achieved at the Forum would be Istanbul's gift to the world. He highlighted the equitable participation of women at the Forum. He thanked the DSI, Istanbul Metropolitan Municipality, Istanbul Water and Sewerage Administration for supporting the forum and commended the thousands of individuals who cooperated to make the Forum a success.

In his closing remarks, Ben Braga, WWC Vice-President, noted that water issues deserve new thinking and concrete actions, highlighting that the 5th World Water Forum had set in motion a process characterized by open and democratic participation and knowledge sharing. Klaus Toepfer, former Executive Director, UNEP, described the three-year task of organizing the 5th Forum. He highlighted UNEP's "New Green Deal," emphasizing that it is a sustainable way of addressing the economic crisis. He lauded participants for recognizing the role of women in water management. Highlighting the desertification process, he emphasized the need to address both water and desertification issues in a post-2012 climate change framework.

Tomris Türmen, former Executive Director, World Health Organization, said water treatment and sewage disposal are scientists' greatest discoveries. She stressed the importance of meeting the MDG targets to ensure a more sustainable future for the world's most vulnerable people.

Hasan Sarikaya, Under-Secretary, Ministry of Environment and Forestry, Turkey, noted that "water can exist without us, but we cannot exist without it." Calling the question of how best to manage water the Forum's "greatest challenge," he praised participants for the democratic and transparent manner of their participation. He noted that the Forum had achieved its objectives of putting water on the political agenda and sharing best practices, and suggested that the WWC prepare indicators to monitor the actions carried out by the relevant stakeholders after Istanbul. He declared the Forum closed at 1:45pm.

UPCOMING MEETINGS

2ND EUROPEAN WATER CONFERENCE: The conference will take place from 2-3 April 2009 in Brussels, Belgium. Stakeholders from across the EU will discuss strategic water management issues and actively participate in the process of developing River Basin Management Plans. For more information contact: Euro Keys Sprl, tel: +32-02-777-9979; fax: +32-02-770-3601; e-mail: ewc2009@eurokeys.com; Internet: <http://www.ewc2009.eu/>

THE 3RD YANGTZE FORUM: This meeting will be held from 20-21 April 2009 in Yangtze, China. It will include a sub-forum on "climate change and city water safety" aimed at: promoting international communication and discussion; sharing experience, technology and knowledge in dealing with climate change and its impact on hydrology and city water safety; and promoting sustainable city development with regard to water management in modern cities. For more information contact: Wu Quanfeng, Yangtze Forum Secretariat; e-mail: secretariat@yangtzeforum.org; Internet: <http://www.yangtzeforum.com/>

WATER LOSS 2009: This conference will be held from 25-29 April 2009 in Cape Town, South Africa. The conference is the fifth event in a series of IWA water loss reduction specialty conferences, with the aim of discussing international best practices in water loss assessment, management, leakage reduction and control, and improvement of customer metering. For more information contact: Water Loss Task Force Chair Bambos Charalambous; e-mail: bambos@wbl.com.cy; Internet: <http://www.waterloss2009.com/>

INTERNATIONAL SEMINAR ON WATER RESOURCES AND COASTAL MANAGEMENT IN DEVELOPING COUNTRIES: This conference will take place from 4-6 May 2009 in Manado, Indonesia. The conference will share experiences in water resources and coastal development and management in relation to the impacts of climate change. For more information contact: Head Secretariat, tel: +62-21-722-4531; fax: +62-21-7279-2263; e-mail: info@hathi-manado.org; Internet: <http://www.hathi-manado.org/>

17TH SESSION OF THE UNITED NATIONS COMMISSION ON SUSTAINABLE DEVELOPMENT (CSD-17): CSD-17 will take place from 4-15 May 2009, in New York, USA. CSD-17 is a policy session focusing on the following thematic issues: agriculture, rural development, land, drought, desertification and Africa. For more information contact: DESA Secretariat; tel: +1-212-963-8102; fax: +1-212-963-4260; e-mail: dsd@un.org; Internet: <http://www.un.org/esa/sustdev/csd>

34TH WEDC INTERNATIONAL CONFERENCE—WATER, SANITATION AND HYGIENE: SUSTAINABLE DEVELOPMENT AND MULTISECTORAL

APPROACHES: This conference will take place from 18-22 May 2009 in Addis Ababa, Ethiopia. The Water Engineering and Development Centre (WEDC) International Conference is a global platform for practitioners, decision makers, academics and researchers who lead water and sanitation innovation in developing countries. For more information contact: Martine Morton; e-mail: m.c.morton@lboro.ac.uk; Internet: <http://www.wedconference.co.uk/>

UNEP CONFERENCE ON STRENGTHENING TRANSBOUNDARY FRESHWATER GOVERNANCE – THE ENVIRONMENTAL SUSTAINABILITY CHALLENGE: This conference will take place from

20-22 May 2009 in Bangkok, Thailand. The main aim of the conference is to identify challenges and opportunities in transboundary freshwater governance and define priority actions for improvement. For more information contact: Bakary Kante, Division of Environmental Law and Conventions, tel: +254-20-762-4011, fax: +254-20-762-4300; e-mail: bakary.kante@unep.org; Internet: <http://www.unep.org/environmentalgovernance/Events/StrengtheningTransboundaryFreshwaterGovernance/tabid/475/language/en-US/Default.aspx>

2009 WORLD WATER WEEK: This meeting will be held from 16-22 August 2009 in Stockholm, Sweden, hosted by the Stockholm International Water Institute (SIWI). The 2009 session of this annual event will be organized around the theme: "Responding to Global Change: Accessing Water for the Common Good." For more information contact: tel: +46-(0)8-522-139-60; fax: +46-(0)8-522-139-61; Internet: <http://www.worldwaterweek.org/>

WORLD CITY WATER FORUM 2009: Taking place from 18-21 August 2009 in Incheon, Korea, the Forum will act as a platform to discuss possible solutions to the water-related issues that are a result of water pollution, climate change and urban development. For more information contact: Secretariat of WCWF, tel: +82-32-850-5680; fax: +82-32-850-5689; e-mail: info@wcwf2009.org; Internet: www.wcwf2009.org

8TH IAHS SCIENTIFIC ASSEMBLY AND 37TH IAH CONGRESS: This joint conference will take place from 7-12 September 2009 in Hyderabad, India. The International Association of Hydrological Services (IAHS) Scientific Assembly will address the theme, "Water: Vital Resources Under Stress – How Science Can Help," while the International Association of Hydrogeologists (IAH) Congress will deliberate on "Sustainable Development and Management of Groundwater Resources in Hard-Rock Terrains." For more information on the IAHS Scientific Assembly contact: P. Rajendra Prasad, IAHS Vice-President and Convener of the 8th scientific assembly of IAHS, tel: +91-891-257-5500; e-mail: ahivisakha@hotmail.com or rpatyury@yahoo.com; Internet: <http://www.appliedhydrology.org/iahs>; and for more information on the IAH Congress contact: Shammy Puri, tel: +91-40-2343-4626; fax: +91-40-2343-4651; e-mail: ShammyPuri@aol.com; Internet: <http://www.appliedhydrology.org/iahs>

WATER, CULTURAL DIVERSITY AND GLOBAL ENVIRONMENTAL CHANGE: EMERGING TRENDS, SUSTAINABLE FUTURES?: This conference will take place from 1-3 October 2009 in Kyoto, Japan. It is co-organized by UNESCO-IHP, Research Institute for Humanity and Nature, Japan, and United Nations University. For more information contact: Lisa Hiwasaki; e-mail: l.hiwasaki@unesco.org; Internet: <http://typo38.unesco.org/en/themes/ihp-water-society/water-and-cultural-diversity.html>

15TH CONFERENCE OF THE PARTIES TO THE UNFCCC AND 5TH MEETING OF THE PARTIES TO THE KYOTO PROTOCOL: UNFCCC COP-15 and Kyoto Protocol COP/MOP-5 are scheduled to take place from 7-18 December 2009 in Copenhagen, Denmark. These meetings will coincide with the 31st meetings of the UNFCCC's subsidiary bodies. Under the "roadmap" agreed at the UN Climate Change Conference in Bali in December 2007, COP-15 and COP/MOP-5 are expected to finalize an agreement on a framework for combating climate change post-2012 (when

the Kyoto Protocol's first commitment period ends). For more information contact: UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.int; Internet: http://unfccc.int/meetings/unfccc_calendar/items/2655.php?year=2009

6TH WORLD WATER FORUM: The next World Water Forum will take place in South Africa, in March 2012. For more information, contact: World Water Council; tel: +33-49-199-4100; fax: +33-49-199-4101; e-mail: wwc@worldwatercouncil.org; Internet: <http://www.worldwatercouncil.org>

GLOSSARY

ADB	Asian Development Bank
AMCOW	Africa Ministers' Council on Water
APWF	Asia-Pacific Water Forum
CPWC	Co-Operative Programme on Water and Climate
DSI	General Directorate of State Hydraulic Works (Turkey)
ICZM	Integrated Coastal Zone Management
IWC	Istanbul Water Consensus
IWRM	Integrated Water Resources Management
MDG	Millennium Development Goal
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNESCO-IHP	United Nations Educational, Scientific and Cultural Organization-International Hydrological Programme
UNSGAB	UN Secretary-General's Advisory Board on Water and Sanitation
WASH	Water, Sanitation and Hygiene
WMO	World Meteorological Organization
WWC	World Water Council
WWDR-3	Third World Water Development Report



Secretariat staff posed for a photograph at the end of the Forum