



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.

IN THIS ISSUE

A Brief History of Global Water Issues	1
5th World Water Forum Report	3
Opening the Forum	3
Launch of 3rd World Water Development Report	4
High Level Panels	4
Thematic Process	6
Opening of Thematic Process	6
Regional Process	11
Special Plenary Sessions	13
Political Process	15
Closing of the Forum	18
Upcoming Meetings	20
Glossary	20

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 Undersecretary-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 Kotaishi, 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; the Crown Prince of Japan; Han Seung-Soo, Prime Minister, 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 Scoullas, 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.



WWC Director-General
Ger Bergkamp

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.”

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

Sumru Noyan, Chair of the Ministerial Process of the 5th World Water Forum, announced that the 6th World Water Forum will be held in South Africa, in March 2012.

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, 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