



Forum Bulletin

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A Daily Report of the 3rd World Water Forum and Ministerial Conference

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SUMMARY OF THE 3RD WORLD WATER FORUM & MINISTERIAL CONFERENCE: 16-23 MARCH 2003

The 3rd World Water Forum met from 16-23 March 2003 in Kyoto, Osaka and Shiga, Japan, and was organized jointly by the World Water Council and the Government of Japan. The Ministerial Conference on the occasion of the Forum, organized by the Government of Japan, took place from 22-23 March in Kyoto. Representatives from over 170 countries as well as participants from UN agencies, inter-governmental organizations (IGOs) and non-governmental organizations (NGOs), academia, business and industry, youth organizations and media outlets attended the eight-day meeting in Kyoto, Osaka and Shiga, three cities located in the Lake Biwa and Yodo River Basin Area. During the Ministerial Conference, delegates considered a Ministerial Declaration and launched a Portfolio of Water Actions. A Senior Official's Meeting was held on Wednesday, 19 March and Thursday, 20 March to discuss the Ministerial Declaration. On Friday, 21 March, a Dialogue between Forum participants and Ministers was held in two rounds to discuss challenges in water and poverty and post-Forum actions. A Water Fair and Festival "Mizu-En" took place throughout the meeting, including a Water Expo, along with other cultural events, three award ceremonies and a ceremony for the 3rd World Water Forum Memorial Forest.

From Monday, 16 March, to Friday, 21 March, participants met in 351 sessions organized around 33 themes and five Regional Days. Theme issues included a range of topics related to water including: climate; supply, sanitation, hygiene and water pollution; cultural diversity; nature and environment; cities; governance; floods; integrated water resources management and basin management; peace; agriculture and food; poverty; financing water infrastructure; and dams and sustainable development. During the five Regional Days, sessions were held on water issues related specifically to Africa, Asia and Pacific, the Americas, the Middle East and Mediterranean, and Europe. The Forum concluded on Sunday, 23 March, following issue of a preliminary Summary Forum Statement, drafted by the 3rd World Water Forum's Secretariat.

On Saturday, 22 March, and Sunday, 23 March, delegates to the Ministerial Conference convened in Kyoto to discuss five themes in sub-groups: safe drinking water and sanitation; water for food and development; water pollution prevention and ecosystem conservation; disaster mitigation and risk management; and water resources management and benefit sharing. The Conference closed on Sunday following adoption of a Ministerial Declaration and a Portfolio of Water Actions.

This report summarizes the outcomes and issues discussed at the Forum and Ministerial Conference, structured in chronological order and by discussion themes.

A BRIEF HISTORY OF GLOBAL WATER ISSUES

Freshwater is a finite resource imperative for sustainable development, economic growth, social stability, world health and poverty eradication. Convened every three years, the World Water Forum was created by the World Water Council (WWC) to discuss these important issues. The WWC is an international water policy think tank established in 1996 to respond to pressures on the Earth's freshwater resources. The Forum's objectives are to: raise the importance of water on the political agenda; support the deepening of discussions toward the solution of international water issues in the 21st Century; formulate concrete proposals; and generate political commitment.

PREVIOUS WATER FORUMS: The first 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. The Second World Water Forum met in The Hague, the Netherlands, in March 2000. The resulting Declaration identified key challenges for the future as meeting basin water needs, securing food supply, protecting ecosystems, sharing water resources, managing risks, and valuing and governing water wisely. In this Declaration, Ministers agreed to review progress on implementation on a regular basis and provide support to the UN system to periodically re-assess the state of freshwater resources.

INTERNATIONAL CONFERENCE ON FRESH-WATER: Under the theme of "Water – A Key to Sustainable Development," the International Conference on Freshwater convened in Bonn in December 2002, in preparation for the World Summit on Sustainable Development (WSSD). The Conference was held ten years after the Dublin International Conference on Water and the Environment, which provided input on freshwater issues for the 1992 UN Conference on Environment and Development.

Multistakeholder dialogues addressed the themes of equitable access and sustainable supply of water for the poor, strategies for sustainable and equitable management of water resources and integration of gender perspectives, while working groups considered the crosscutting issues of: governance, integrated management and new partnerships; mobilizing financial resources; and capacity development and technology transfer. Ministers also met to consider the equitable and sustainable use of water resources, and the mobilization of financial resources for infrastructure.

UN MILLENNIUM SUMMIT: At the UN Millennium Summit in September 2000, world leaders adopted the Millennium Declaration containing eight Millennium Development Goals (MDGs), one of which was to halve the proportion of people living in poverty and suffering from hunger by 2015.

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Governments also pledged to meet 18 targets, including the target to halve the proportion of people without access to safe drinking water by 2015.

WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT (WSSD): World leaders convening in Johannesburg at the WSSD in 2002 took the MDG target on safe drinking water a step further by agreeing to halve the number of people lacking adequate sanitation by 2015. Other water-related targets in the WSSD Plan of Implementation include the commitment to develop integrated water resources management and water efficiency plans by 2005. In addition to these political commitments, governments, lending agencies and international organizations also launched several voluntary partnerships and initiatives (Type II outcomes) in the area of water and sanitation.

INTERNATIONAL YEAR OF FRESHWATER: In an effort to raise awareness and initiate action on managing and protecting the world's clean water resources, the UN General Assembly proclaimed 2003 the International Year of Freshwater. According to the UN, 1.2 billion people live without access to freshwater, 2.4 billion people lack proper sanitation and, if current trends persist, the UN estimates that two-thirds of the world's population will be living with severe water shortages by 2025. In addition, the UN estimates that 3 million people die each year from diseases caused by unsafe water.

REPORT OF THE 3RD WORLD WATER FORUM

OPENING CEREMONIES: Ryutaro Hashimoto, Chair of the National Steering Committee of the 3rd World Water Forum, opened the Forum in Kyoto on Sunday, 16 March. He stressed the importance of dialogue and the need for concrete actions on water issues. Mahmoud Abu-Zeid, World Water Council (WWC) President, said the Forum provides an opportunity to assess work on water issues. Crown Prince Naruhito of Japan noted that the water crisis is expected to become more severe. Prince Moulay Rachid of Morocco remarked on the need to establish good governance over water resources. Prince of Orange Willem Alexander of the Netherlands highlighted the need for more investment in the water sector. In his Memorial Speech, Crown Prince Naruhito addressed the historical importance of water transport in the Lake Biwa and Yodo River Basin. In a video address, President of France Jacques Chirac called on governments to recognize the human right to water.

Prince Moulay Rachid then presented the King Hassan II Great World Water Prize to Mahmoud Abu-Zeid (Egypt) and Jerson Kelman (Brazil) for their contributions in water resources management and development.

On Tuesday, 18 March, Ryutaro Hashimoto opened the Forum in Osaka. Mahmoud Abu-Zeid highlighted inadequate and unsafe water as a bottleneck to development. Fidel Ramos, former President of the Republic of the Philippines, emphasized the need to compensate those impacted by infrastructure development. Fusae Ohta, Governor of Osaka Prefecture and President of the Osaka Committee of the Forum, highlighted the shared water resources of the three cities hosting the Forum. Anna Tibaijuka, UN-HABITAT Executive Director, stated that resolving water issues is key to developing sustainable human settlements.

On Thursday, 20 March, Ryutaro Hashimoto opened the Forum in Shiga. René Coulomb, WWC Vice-President, said international organizations must facilitate the resolution of water conflicts. Princess Takamado of Japan emphasized that water should be managed at the basin level. Mikhail Gorbachev, Green Cross International President, stressed the need for more political

will. Yoshitsugu Kunimatsu, Governor of Shiga Prefecture, said that future generations should inherit "mother Lake Biwa" undamaged.

THEMES

The Forum's 38 Themes were categorized into Issues, Topics, Special Programmes, Major Groups and Regional Days; 351 sessions convened around these Themes. Due to overlapping sessions, *Forum Bulletin* coverage was limited to a selection of sessions from some of the 38 Themes. This report's summaries of these Themes include details of discussions; those in the category "Issues" not attended by *Forum Bulletin* writers have been summarized in less detail. Final Theme Statements for a number of themes were not available at the time of publishing this report; draft Theme Statements are therefore summarized instead. Final Theme Statements for all themes will be available at <http://www.world.water-forum3.org/>.

WATER AND CLIMATE: This theme was convened by the International Secretariat of the Dialogue on Water and Climate (DWC) from 16-17 March, with participants meeting in opening and closing plenaries and 11 sessions. The sessions discussed, *inter alia*: what science can offer; water in small island States; risk, insurance and finance; building capacity to cope; integrated monitoring of the world's freshwater to address the impacts of global warming; water cycle research and observational activities for understanding climate and water resources management and sustainable development; and adapting water management to climate change.

During the sessions, participants discussed the results of the DWC, highlighting the importance of enhancing collaboration between the climate and water communities and building on alliances created through the dialogue. Several participants drew attention to the water-related vulnerabilities of developing countries and the impact of climate change on the hydrological cycle. Participants also highlighted the need for, *inter alia*: site-specific water management practices; better precipitation models; the integration of disaster preparedness into sustainable development programmes; the identification and enhancement of local coping capacities; international cooperation; and creative mechanisms for funding adaptation strategies.

Theme Statement: The theme statement acknowledges that the consequences of climate change on water affects many sectors, including health and sanitation, food security, energy and nature. It notes that everyone is affected, but the greatest impacts are on the poor and remote, and that climate variability and weather extremes will derail achievement of the MDGs. The statement stresses the need to increase greenhouse gas abatement efforts and initiate actions for coping with climate variability. It also states that a greater appreciation of climate issues among water policy-makers, water managers and society is the basis for effective actions.

The statement recommends, *inter alia*: continuing greenhouse gas mitigation efforts and enhancing policies and measures toward climate change adaptation; continuing the multistakeholder approach at national, basin and regional levels to prepare adaptation action plans; implementing the water and climate agenda under the Integrated Water Resources Management (IWRM) framework; developing national, basin and regional capacities and securing financial support for preparing and implementing national water sector adaptation plans; creating a "Water and Climate Alliance"; establishing a "Water and Climate Associated Programme" under the GWP; mainstreaming climate change and variability considerations into national water and land management policies and practices; and reversing the trend of deteriorating

rating *in-situ* data collection and observational networks. It also recommends enhancing efforts to integrate and mainstream "Water and Climate Associated Programme" initiatives with related processes, including the Intergovernmental Panel on Climate Change's fourth assessment report and national communications by Parties to the UN Framework Convention on Climate Change (UNFCCC), and disaster preparedness and management strategies.

The statement also contains an Annex listing the water and climate-related commitments of various States, IGOs, NGOs, research institutions and businesses.

WATER SUPPLY, SANITATION, HYGIENE AND WATER POLLUTION: This theme was convened by the Water Supply and Sanitation Collaborative Council (WSSCC), World Health Organization (WHO), UN Children's Fund (UNICEF), Japan Water Research Center and Japan Sewerage Committee for the Forum. Twenty-one sessions met from 16-17 March to discuss, *inter alia*: water, sanitation and hygiene; wastewater management, treatment and water pollution; arsenic contamination; ecological sanitation; household security and quality; and sustainable and secure water delivery.

In several sessions, participants agreed that the Ministerial Declaration should include a commitment to recognize the human rights to water and to health as tools to promote achievement of international water and sanitation-related goals. They also called for small-scale and low-cost approaches focused on the "poorest of the poor," and for more attention to be given to "software" solutions, such as education and capacity building at the household and community levels. The need to guarantee roles for women in the management, decision making, planning and design of water systems, and to ensure people-centered approaches, recognizing children as agents of change, were emphasized. Participants discussed the need to "upscale" projects and called for the supply and sanitation agenda to: incorporate greater support for research and development of appropriate technologies; focus on water quality, noting the problems of fecal, arsenic and fluoride contamination; and involve the media in promoting new attitudes and understanding. Participants called for programmes addressing the health threats of human excrement and stated that the MDGs are not sufficiently ambitious, noting that commitments are required for delivering safe drinking water and sanitation to the remaining population.

Participants committed to increase efforts to mobilize technical and financial resources with regard to wastewater management and water pollution control. Delegates also: recommended that the WWC champion the global water agenda and develop global guidelines for water delivery; emphasized the use of ecological sanitation as a low cost and ecologically sound technology; and called for an initiative to ensure affordable access to water, sanitation and health information. With regard to technologies and urban sanitation, participants urged governments to stimulate demand for sanitation and to recognize its importance to women.

Draft Theme Statement: The draft statement urges leaders and decision makers to, *inter alia*: address unserved populations; increase investment in human and financial resources; raise the profile of sanitation, hygiene and water quality in political and developmental processes; develop clear policies and institutional frameworks; initiate national campaigns; and integrate sanitation and pollution control in IWRM. Tools identified for addressing the challenges include: integrating efforts in the management and allocation of resources; developing clear and measurable indicators for monitoring progress; increasing stakeholder participation; and developing partnerships.

WATER AND CULTURAL DIVERSITY: This theme was convened by UNESCO, the French Water Academy and the Japanese National Museum of Ethnology from 16-17 March, in opening and closing plenaries and six sessions. Sessions addressed: tools and methods for understanding people's perceptions of, and attitudes toward, water; water management and cultural heritage; indigenous world views and spirituality; community life and water management; and indigenous water rights and water management strategies.

During the sessions, participants discussed the need to prevent further losses of cultural heritage relating to practical water management practices, which can contribute to disaster prevention. Several participants stressed the importance of adapting water management practices to specific cultures, as they constitute distinct systems of knowledge and behavior, and highlighted traditional peoples' sustainable water and land management practices. Participants emphasized that governments, transnational corporations and trade organizations should recognize the cultural dimensions of water, and that indigenous peoples should be involved in decision-making processes. Participants also highlighted the importance of reminding ministers that culture is the most fundamental aspect of water resources development and management and must therefore be taken fully into account both in the development and implementation phases of water management schemes.

Theme Statement: The theme statement notes that: relations between peoples and their environment are embedded in culture; culture influences the way in which water is conceived, valued and managed; water sharing is an ethical imperative; water resources management strategies must take culture into consideration; cultural diversity is a source of sustainable practices and innovative approaches; and indigenous knowledge holders and scientists should cooperate in finding solutions to water-related problems. The statement stipulates that: cultural diversity be sustained; participatory decision making in IWRM take cultural diversity into account; cultural diversity, stakeholder involvement and intercultural dialogue be guiding principles for raising awareness and developing educational tools; and UNESCO, the World Commission on the Ethics of Scientific Knowledge and Technology and related institutions elaborate appropriate guidance for the development of these educational tools.

The statement's action plan proposes: publishing and disseminating the results of the water and cultural diversity theme; establishing a WWC working group on the relationship between water and culture; incorporating sessions on relevant indigenous knowledge and practices into scientific and professional conferences; and establishing legislative and institutional policies to facilitate these actions.

WATER, NATURE AND ENVIRONMENT: This theme was convened by IUCN-The World Conservation Union (IUCN) and UNEP, from 17-18 March, in opening and closing plenaries and 17 sessions. The sessions discussed, *inter alia*: biodiversity and lakes; wetland and river basin management; mountainous areas; oceans and freshwater; ecosystem approaches to water management; environmental flows; and water and forests.

During the sessions, participants discussed the need for full recognition of the environmental dimension of water and highlighted the importance of the Ramsar Convention's guidelines for the allocation and management of water for maintaining the ecological function of wetlands. Several participants called for consideration of the environmental impacts of increasing water supply and sanitation on ecosystems and proposed several priorities in this regard, including: compensating the upstream poor; maintaining environmental flows; and empowering the poor. Participants also stressed the importance of information exchange

among stakeholders and of an ecosystem approach to protect ecosystems for promoting basic development needs. Setting environmental criteria for financing water projects was also highlighted. Several speakers noted the need for interaction and cooperation between different water-related conventions and the application of ecological economics to valuing water.

Theme Statement: The theme statement calls for action in relation to: protecting and restoring ecosystems and aquifers; implementing environmental flows; developing multistakeholder approaches; integrating adaptive management of land, mountain, forest and water resources; promoting basin-wide pollution prevention and treatment plans; and implementing water-demand management approaches. With regard to implementing an ecosystem approach to water management, it calls for: protecting mountains and forests with appropriate compensation; ensuring enough water in rivers to maintain downstream benefits; restoring ecosystems, springs and aquifers; and integrating the management of land and water resources with special attention to environmental protection and resource conservation. Recognizing that pollution is a major threat to water resources, the statement stresses that action to improve sanitation needs to be directly linked to pollution reduction and prevention. It calls for the implementation of: basin-wide pollution treatment and prevention plans; partnerships; financial, legal and institutional incentives for pollution prevention; and capacity building and technical support for demand-side water management. Emphasizing the importance of aquatic ecosystems for livelihoods, the hydrological cycle and biodiversity, it recommends: ensuring stakeholder-based valuation of ecosystem functions; integrating wetland conservation in water and land-use planning; and establishing management regimes for critical aquatic biodiversity.

WATER AND CITIES: This theme was convened by UN-HABITAT. It met from 18-19 March in Osaka in opening and closing plenaries and 26 sessions. Sessions addressed, *inter alia*: water in Asian cities; technologies for water supply and sanitation; urban water governance; urban poverty and water; flood control in urban areas; and financing urban water infrastructure.

During discussions, participants stressed that action on water supply and sanitation in cities is key to achieving the water-related MDG. Participants advocated the implementation of local action plans to provide sustainable water supply to cities under national policy frameworks. They noted that decentralized, transparent and accessible institutions can allow for stakeholder participation in all phases of water policy, highlighting the importance of education. Some participants called for technical and financial assistance for knowledge mapping and database development projects and emphasized the need for project evaluation.

Participants noted that groundwater sources are close to exhaustion and/or contaminated in some cities, explaining that sedimentation following abstraction may provoke "disaster." The application of water saving technologies, demand-side water management and rainwater harvesting were proposed as cost-effective solutions to urban water scarcity.

The issue of funding water infrastructure through public-private partnerships (PPPs) was raised in several sessions. Proponents of PPPs highlighted a lack of government infrastructure, resources and capacity, and suggested that local governments should define prices and coverage, but use private sector expertise to provide services. Discussion focused on key characteristics of pro-poor PPPs, including: enhanced stakeholder participation; multilevel collaboration; increased research and information dissemination; and the obligation that companies serve the poor. While some participants proposed tariff increases to fund extended service coverage, others pointed to political difficulties

in raising urban water tariffs. A participant noted that one-off installation charges for domestic water infrastructure form an access barrier for the poor, even when supply charges are low. Some participants stressed that the private sector should recognize the key role of small-scale water providers operating in marginal urban areas.

Theme Statement: The statement recognizes that population growth in urban areas amplifies the challenges of: equitably allocating urban water resources; ensuring supply security for the urban poor; protecting freshwater sources from urban waste; and mobilizing financial resources for urban water infrastructure. It calls for an integrated approach to urban water resources management through the harmonization of urban spatial and economic planning with water planning. The statement supports the use of appropriate technologies to reduce wastage and encourages a new ethic of responsible water use. It highlights the need for transparent governance through stakeholder participation and for support of community-based initiatives, recognizing the role of women's groups and small-scale water providers. The statement recommends the use of innovative funding mechanisms and the introduction of progressive tariffs with due safeguards for the poor.

WATER AND GOVERNANCE: The Global Water Partnership (GWP) convened this theme. Participants met in opening and closing plenaries and 14 other sessions from 18-19 March to discuss, *inter alia*: effective water governance; lessons from multi-stakeholder partnership projects; intergenerational water management; private sector participation; the right to water; best practices in water law; and water pricing.

During the sessions, participants discussed the current water crisis, noting that it has arisen from poor governance. Some participants drew a distinction between effective and good governance, noting that water governance can be effective even when not based on democratic principles. Participants agreed that the role of government is to create an enabling environment for effective governance. Participants discussed the need for water pricing and the problem of water affordability. Several participants highlighted the importance of strong legal frameworks and community-based responses involving all stakeholders, particularly women. Many participants said that addressing corruption and providing capacity building are prerequisites for effective governance, and called for governance dialogues at local levels. Many participants questioned the legitimacy of the Forum's water and governance process and demanded a more participatory dialogue in the future.

Theme Statement: The statement notes that good governance and political openness and stability are the most significant factors for reducing poverty, improving equity and attracting investment. It remarks that investment is low because water is seen as a high-risk, low-return activity. It notes that effective governance requires effective socio-political and administrative systems adopting an IWRM approach, with transparent and participatory processes addressing ecological and human needs. It says that, though primary responsibility rests with governments to establish effective frameworks, achieving effective water governance will require action through partnerships.

Regarding current actions, the statement notes that several countries have developed new water laws and that dialogues on water governance have been held in over 30 countries. The statement recommends that donors provide increased aid to developing countries for water services and management and that governments: commit to the preparation of IWRM plans by 2005, in accordance with the WSSD Plan of Implementation; strengthen their capacity for sustainable management of water resources;

commit to institutional development and the preparation of clear legal and regulatory frameworks; and promote access to information to help establish accountable and transparent systems and reduce corruption.

A number of additional issues raised by some participants are annexed to the statement, including the need to: exclude water services from General Agreement on Trade in Services negotiations; set and enforce minimum standards of effective governance; and ensure that governance systems embody democratic principles and prevent the exploitation of water by powerful actors at the expense of the poor and disadvantaged.

FLOODS: This theme was convened by the International Flood Network (IFNet) Preparatory Unit from 18-19 March in opening and closing plenaries and eight sessions. The sessions discussed, *inter alia*: integrated flood management; urban flood risk mitigation; poverty and floods; flood warning dissemination; and people, floods and vulnerability in South Asia.

During the sessions, participants discussed the role of international cooperation programmes in reducing flood-related casualties and destruction and stressed: the need for good and just mitigation practices; the importance of structural and non-structural response measures; and the benefits of information sharing through IFNet. Participants emphasized the importance of interdisciplinary teams of specialists acting in coordination with political bodies and affected populations, and joint consideration of mitigation, response and recovery when addressing flooding. Participants also agreed that technological innovation has greatly improved flood forecasting in recent years, while noting the need to translate forecasts into flood warnings and emergency action. Participants debated the need to adopt different flood control and adaptation approaches for the poor, according to area-specific conditions, and to give priority to projects that contribute to poverty alleviation. Participants stressed the importance of effectively communicating information to communities and involving local governments and suggested enhancing capacity building of meteorological offices and communities. Participants noted that some communities have the potential for implementing flood-control measures. The feasibility of human resettlement and ways of successfully involving the public in developing and implementing integrated management strategies were discussed. On sediment-related issues, participants outlined the: threats posed by loss of land; importance of international information networks; and need to collect relevant data and implement prompt counter-measures.

Theme Statement: The statement calls for integrated flood management within the context of IWRM, and notes that better planning and re-direction of investment can mitigate the poor's vulnerability to water-related hazards. The statement suggests that governments note the need to develop innovative structural and non-structural response approaches and the importance of encouraging local community and stakeholder participation in decision-making processes, while giving them access to appropriate mechanisms for conflict resolution. It calls on the international community to further develop mechanisms to exchange information on flood management and to encourage bilateral and multilateral cooperation in the resolution of flood problems. The statement urges donors to attach high priority to incorporating flood management into projects on IWRM.

AGRICULTURE, FOOD AND WATER: This theme was organized by the UN Food and Agriculture Organization (FAO), International Commission on Irrigation and Drainage (ICID) and Japan's National Committee of ICID. Participants met in 14 sessions from 19-20 March to discuss: water as a source of food security; diversity and multifunctional roles of irrigation; agricul-

tural water productivity and externalities of irrigation; water for food and rural development; alternative forms of agriculture; and agriculture, food and water in semi-arid areas.

During the sessions, participants called for recognition of the diversity of irrigation practices and awareness raising on the positive externalities and multifunctional roles of irrigation. Other sessions emphasized greater investment in irrigation infrastructure and modernization. Delegates stressed the need to support capacity building of farmers and incorporate participatory approaches into planned irrigation projects. Some participants urged a shift in approach from the traditional participation of farmers in government projects to the participation of governments in farmers' projects. Also recommended were a database of appropriate technologies and experiences in rice paddy cultivation, and research and development in arid-zone irrigation. The irrigation industry stressed that it possesses the technology and know-how to improve yields with less water, but not the decision-making power to help the poor. Several sessions emphasized the need for rural development, supporting: an integrated water resources development and management approach to food production; the building of more dams for irrigation; the rehabilitation of wasteland; and the recycling of water to increase arable lands.

Some participants recommended that effective micro-organisms be considered as an environment-improving technology for sustainable food production. Some recommended establishing new institutions and technologies to harmonize agricultural development with environmental conservation. Regarding integrated management of water with a human face, participants stressed recognition of challenges faced by communities devastated by HIV/AIDS. Delegates also highlighted the challenge of keeping projects autonomous and farmer-centered when partnerships with government and experts are necessary.

Several participants raised concerns regarding ownership of irrigation systems and problems caused by large-scale agriculture, and suggested including reference to the following issues in the draft statement: ecosystem functions of agriculture; environmentally-friendly technology; national population control; and addressing the global-shift towards non-vegetarian diets.

Draft Theme Statement: The draft statement recommends more strategic development of available land and water resources. It also recommends that investment in irrigation systems be affordable and pro-poor, and calls for the modernization of irrigation, including upgrading existing infrastructure, adapting institutional frameworks, and encouraging participation of users in the decision-making process. It recommends research in options for increasing agricultural water productivity and in understanding the multiple roles of agriculture. The statement encourages constructive dialogues between irrigation farmers and other stakeholders, and states that the agricultural sector must be proactive in shouldering the negative environmental and health impacts of irrigated agriculture and enhancing its positive externalities.

WATER AND POVERTY: This theme was convened by the Asian Development Bank (ADB) and met from 19-20 March. Participants met in 16 sessions as well as opening and closing plenaries to exchange views on a range of issues relating to poverty and water. Session topics addressed: ethical dilemmas in water management; capacity building; wastewater agriculture; hunger eradication; disaster prevention and risk management; MDGs and poverty reduction strategy papers (PRSPs); water supply, sanitation and PPPs; vulnerability reduction; and policies for improving governance for water security for the poor.

The ADB introduced their Water Poverty Initiative, which aims to provide the poor with safe water. Panelists said that past promises regarding poverty reduction and access to clean water

had been “washed away” by globalization. Several others remarked that governments have failed in delivering services to the poor and called for widespread reform. Participants urged governments, water providers and international organizations to guarantee basic water needs. Participants said that using groundwater is the most efficient way to achieve the water-related MDGs. Others noted that famine is a political issue, caused by inadequate political response to vulnerability. Discussants said the challenge is not always to build the water infrastructure itself, but to alter unhygienic habits.

Participants also discussed accessing information from private companies, the IMF and World Bank, and the need for governments to increase their fiscal budgets for water. A number of panelists noted opportunities for private provision of water services to informal settlements in circumstances where public provision is politically unfeasible because it amounts to recognition of slum-dwellers’ ownership of land.

Theme Statement: The theme statement notes that links between poverty and water security are widely understood and enshrined in MDGs and the WSSD. It also states that water is a key input into many livelihood activities, and is critical to large-scale economic development.

Regarding actions to improve water security for the poor, the statement urges the delivery of improved water services, sanitation and hygiene, and the management of water resources guided by good policies and governance that improve equity and target the most vulnerable in society. It calls for empowerment of the poor, particularly women, children and other vulnerable groups, and their involvement in decisions over services and water resources management. It stresses that governments should include pro-poor water management as a key element in national poverty reduction strategies. Recommendations on pro-poor partnerships for water security include: participation by all stakeholders, based on common but differentiated responsibilities; and action should support effective national policies and strategies on poverty reduction and water investments.

INTEGRATED WATER RESOURCES MANAGEMENT AND BASIN MANAGEMENT: This theme convened in opening and closing plenaries and 35 sessions from 20-21 March in Shiga and was organized by GWP, International Network of Basin Organizations, UNEP, International Lake Environment Committee, Foundation Masahisa Nakamura, Japan Water Partnership Initiative and the Shiga Prefectural Government. Sessions divided into three sub-themes relating to lake management, river management and IWRM.

Regarding lake management, participants highlighted a number of key elements for sustainability, including: stakeholder participation, political support, scientific foundation for actions, cooperation between management agencies, and a range of technical solutions. Participants noted that institutional structures should reflect the specific social, economic and environmental circumstances around lakes, and that existing institutions should be integrated to incorporate the broader scope of IWRM.

Participants in the session on river management addressed the following elements for sustainable river basin management, *inter alia*: recognition of water as a common good; inter-sectoral management; basin-level management systems; clear legal frameworks; multilevel participation; information distribution; monitoring systems; financial systems based on contributions from consumers and polluters; and formalized regional cooperation for transboundary river basin management.

Discussions in relation to IWRM noted the range of legal systems under which water basins are managed, with participants highlighting the following key elements of successful systems: participative management systems; information distribution; value attribution; and democratic political processes. Participants also identified the need for an institutional shift from jurisdiction planning to basin planning. Some participants highlighted the need for focused monitoring to provide information necessary for decision making and for concrete guidance on identifying stakeholders and achieving participation, stressing the importance of involving women in all levels of basin management. The GWP’s IWRM toolbox was introduced as a dynamic compendium of practical knowledge and experience, freely accessible on the Internet. Participants recommended that new technologies harnessing ecosystem properties be integrated with conventional ones.

Theme Statement: Recognizing that the water sector faces a governance crisis, not a water crisis, the statement praises IWRM for addressing the “three E’s”: economic efficiency, environmental sustainability, and social equity. It calls for use of the basin as the basic unit for water planning and management through application of the ecosystems approach. Emphasizing that IWRM starts at the local level, the statement recommends the inclusion of local knowledge and rights in decision making and the need to build multistakeholder partnerships. Noting the WSSD’s target for the development of IWRM plans, it calls for the integration of water policies with other relevant sectors and into PRSPs. The statement also calls for the creation and support of organizational structures for IWRM through: regulations; standards; financial arrangements; information management; and capacity building. It recommends the support and promotion of the World Lake Vision.

WATER FOR PEACE: This theme was convened by UNESCO and Green Cross International from 20-21 March in opening and closing plenaries and 11 sessions. The sessions discussed, *inter alia*: the transition from potential conflict to cooperation; successes in preventing and resolving transboundary water disputes; transboundary water management; twinning of river commissions; and the Palestinian-Israeli water conflict.

During the sessions on moving from potential conflict to cooperation, participants noted that ineffective water distribution and management are the basis of the water crisis, and emphasized that preventing water conflict is central to peace. Participants discussed priorities in addressing water problems, including reducing water consumption and implementing water-saving technologies in agriculture. Several speakers noted the lack of political will to address the water crisis and said aspects of peaceful transboundary water utilization include: balancing the competing uses of basin resources; acknowledging that upstream water development affects downstream users; and improving knowledge on the causes of conflicts. The importance of the entry into force of the UN Convention on the Law of the Non-Navigational Uses of International Watercourses was stressed. Participants emphasized the need for river basin States to identify appropriate levels of cooperation and highlighted the importance of providing market incentives for cooperation. Participants also discussed equitable river basin sharing and conflict resolution through alternative dispute resolution approaches. A speaker announced that UNESCO, with the Permanent Court of Arbitration, is in the process of establishing a Water Cooperation Facility, which will aim to: anticipate, prevent and resolve international water-related conflicts; improve water governance; promote awareness on water-related issues; and create a network of international legal experts to provide relevant support and advice.

Theme Statement: The theme statement recommends: focusing transboundary-cooperation discussions on benefits arising from cooperation; promoting stakeholder participation and integrating poverty reduction strategies into the redistribution of shared benefits; respecting ecosystem integrity by adopting inter-state and basin agreements; raising stakeholder capacity to fully participate in developing basin and aquifer strategies, agreements and institutions through increased transparency and information availability; implementing awareness raising and education strategies to improve government and public capacity in addressing issues arising from water sharing; increasing efforts to reach integrated and effective basin-wide and shared aquifer management agreements; and promoting international financial assistance for cooperation in transboundary river basins.

FINANCING WATER INFRASTRUCTURE: This theme was convened by the GWP and the WWC from 20-21 March in opening and closing plenaries and in 10 sessions. The sessions discussed, *inter alia*: water and finance; finance for local water management; future water needs; public and private sector management; urban investment; environmental financing strategies; and the need to mobilize local capital. The presentation of the World Panel on Financing Water Infrastructure's (WPFWI) report, entitled "Financing Water for All," chaired by Michel Camdessus, former Managing Director of the International Monetary Fund (IMF), was the key session of this theme. The Report contains 85 proposals on action to attract financing for water infrastructure and offers specific proposals on how this can be achieved by governments, donors, regions, civil society, the private sector, development banks and small-scale providers. The Panel's proposals address the need to: promote local capital markets; ensure sustainable cost recovery; increase managerial capacity; address corruption and ethical practices; develop legal and regulatory frameworks; attract international commercial lending; and secure private investment and operation. The Panel proposed, *inter alia*: doubling the flow of finance for water infrastructure; decentralizing decision making to the appropriate levels; reforming institutions; targeting capacity building; providing resources to local community organizations and local businesses; and increasing and focusing ODA flows. In the discussion, presenters addressed the need for tariff reform, sustainable cost recovery and lifeline tariffs for the poor. Others underscored the need for policy changes regarding land and land reform, and financing for irrigation and drainage, ecosystem management, IWRM, agriculture and hydropower. Chair Camdessus recommended that subsequent international gatherings, such as the IMF/World Bank Development Committee and the G8 Summit, advance the Panel's proposals. Several participants opposed the Report's focus on the role of the private sector, privatization and emphasis on "profit over people."

Draft Theme Statement: The statement identifies the following key challenges and issues: establishing water as a priority by governments and key decision makers; mitigating financial risks; improving finances of sector agencies while preserving affordability; building partnerships for service delivery from different parts of society; and creating new models for combining public, donor, NGO and private funding.

WATER AND ENERGY: This theme was convened by the International Hydropower Association. Participants met in three sessions and a closing plenary, from 16-17 March, to inaugurate the first international summit on the sustainable use of water for energy and to address hydropower and the environment and large hydropower infrastructure.

Theme Statement: The theme statement recognizes the need to secure sustainable and equitable supplies of water and energy. It notes several key issues, including that: water and energy resources are interlinked; global population growth is intensifying the pressure on water and energy needs; sustainable development requires greater expenditure to minimize the negative impacts of infrastructure; and developing countries lack the financial capacity necessary to meet the high capital cost of development. It also lists current actions, including the development of: tools and methodologies to evaluate options and identify good practices; new approaches to sustainable water and energy management; and energy supplies.

The statement recommends: integrating water and energy issues; working to maximize hydropower's contribution to sustainable development; promoting stakeholder consultation and awareness; increasing political and financial commitments; introducing stronger financial incentives to reduce consumption, improve efficiency, extend less-polluting schemes and promote new development; using the criteria of availability, flexibility and reliability of supply in options assessments; interconnecting power systems to increase security, optimize plant operation and minimize environmental impact; and further studying the net greenhouse gas emissions from reservoirs in tropical lowland areas.

WATER AND TRANSPORT: This theme was convened by Japan's River Bureau and Ports and Harbours Bureau, the Netherlands' Ministry of Transport, Public Works and Water Management, and the International Navigation Association. Participants met in opening and closing plenaries and seven other sessions from 17-18 March to discuss: the intergenerational transmission of inland waterway transport technology; waterways, transport and IWRM; the efficiency of water transport; navigation on the lower Mekong River; regional development and water transport; inland water transport and intermodal transport systems; and the knowledge gap in the field of inland waterway transportation.

Theme Statement: Key issues identified in the statement include: poor recognition of the potential contribution of inland waterway transport (IWT) to the solution of a broad range of economic, environmental and social issues; a general lack of basic waterway infrastructure, technology and financial resources; and a failure to integrate IWT in transport systems and IWRM. The statement notes a rise in river-oriented leisure activities and the recent recognition of IWT as an effective form of disaster-relief transport.

The statement recognizes that incorporating IWT into IWRM and comprehensive transport systems would result in a significant expansion of its use, which in turn would: contribute to sustainable development; promote traditional culture and technologies; and realize safer and more peaceful human societies. The statement contains a commitment to: promote the development of IWT; establish an information-sharing network; promote capacity building; develop a comprehensive decision-support framework for evaluating IWT-related programmes; support adjustment to institutions, legislation and development policy; and develop new applications for IWT in disaster management and waste recycling.

WATER, EDUCATION AND CAPACITY BUILDING: UNESCO, UNESCO-IHE Partnership for Water Education and Research, and Cap-Net convened this theme. Participants met in opening and closing plenaries and 10 other sessions from 20-21 March to discuss, *inter alia*: perspectives for new management strategies, partnerships for capacity building, water and environmental education, knowledge sharing and learning systems.

Theme Statement: The statement acknowledges that without effective capacity building, the water-related MDGs will never be achieved. It calls for a new strategy for capacity building that

reflects the need for local ownership, partnerships and demand responsiveness. It notes the need to train decision makers and leaders at all levels in the principles of IWRM, and to address the widening information technology gap between developing and developed countries. It stipulates that knowledge and learning systems should be promoted to enhance capacity building, and that effective capacity-building cases need to be documented and promoted.

The statement recommends increasing capacity building for IWRM and integrating capacity building into all water programmes, noting that the demand for human capacity can only be met by increasing long-term funding on a global scale. It calls for greater attention to water education in primary and secondary schools and suggests developing toolkits for teachers. The statement notes that UNESCO will launch a platform to bring stakeholders together, and that capacity-building institutions will share their expertise and resources with the help of Cap-Net.

WATER AND INFORMATION: The American Water Resources Association, the Japanese Foundation of River and Basin Communication, and the National Space Development Agency of Japan convened this theme. Participants met in opening and closing plenaries and nine other sessions from 18-19 March to discuss, *inter alia*, the Water Resources e-Atlas, Water Information Day, hydrological information systems, information and indigenous disaster prevention technologies, translating awareness into action, and knowledge sharing.

Draft Theme Statement: The statement notes that actions to address the world's water-related issues must be grounded in credible, relevant and timely information. Additionally, the statement says the collection, analysis, dissemination and utilization of water data and information requires greater investment, and that raising public awareness and political will requires multimedia strategies.

The statement contains a commitment to the following principles: all people should have access to relevant and understandable water information; effective, transparent and accountable water governance is ultimately built upon a foundation of credible, timely and relevant information; and collaborative efforts to acquire data, exchange information and develop knowledge partnerships are needed to empower water institutions.

The statement calls on governments and international institutions to: recognize the importance of capacity building, knowledge sharing and publicly-accessible information; increase the transparency and accountability of water-related decision-making processes; mobilize funds to support information-based activities and capacity building; support problem-based research and assessment efforts; and participate in collaborative information and knowledge-sharing initiatives.

GROUNDWATER: This theme was convened by the World Bank, Groundwater Management Advisory Team, International Association of Hydrogeologists, UNESCO, FAO, Marcelino Botín Foundation and the Association of Environmental Hydrologists, from 18-19 March. Discussions in the opening and wrap-up plenaries and 10 other sessions focused on, *inter alia*: the management of groundwater for socioeconomic development; groundwater contamination; the relationship between groundwater resources and rainwater harvesting; submarine springs in coastal areas; groundwater and related disasters; and property rights over groundwater.

Theme Statement: Recognizing the social and economic benefits from groundwater in providing low-cost, drought-reliable and high quality water supply, the statement emphasizes that the rate of aquifer replenishment is finite and that excessive resource development is causing widespread degradation of groundwater

resources. It highlights a need for urgent advances in management, but stresses that there is no "blueprint for action" due to the variability in groundwater systems and their socioeconomic context. The statement highlights the need to reallocate existing abstraction rights and identifies enhanced public awareness, improved scientific understanding, and local capacity building as key elements of sound groundwater management. Recommendations for policy prioritization include: recognizing groundwater as essential for freshwater supplies; investing in institutional capacity for managing groundwater resources; prioritizing groundwater initiatives by development banks and donors; and promoting dialogue between professionals for the international dissemination of best practices in groundwater management.

WATER, FOOD AND ENVIRONMENT: This theme was convened by the Secretariat of the Dialogue on Water, Food and Environment from 17-18 March, and entailed discussions in opening and closing plenaries and 11 sessions on water needs for nature and food production. The sessions discussed, *inter alia*: water management for agriculture; on-farm assessments of live-stock production for environmental improvement; management of water resources and biological production in coastal environments; and local visions on water, food and environment.

Theme Statement: The theme statement notes challenges for the water, food and environment debate, including: simultaneously achieving water, food and environmental security; bridging the gap between the agriculture and environment sectors; and creating a balance between water for food and water for the environment. The statement recognizes key international initiatives addressing these challenges, such as the Dialogue on Water, Food and Environment, which aims to improve water resources management by bridging the gap between the food and environment sectors through open and transparent dialogues and knowledge sharing. Recommendations in the theme statement include: adopting water resources management at the river basin level as the guiding principle for striking the balance between water for food and water for environmental security; considering the environmental, social, economic and political implications of using virtual water trade as a strategic instrument in water and food security policies; elaborating the concept of environmental flow requirements; and adopting a target for productive use of water.

DAMS AND SUSTAINABLE DEVELOPMENT: This theme was convened by the UNEP Dams and Development Project and the WWC from 20-21 March in opening and closing plenaries and 10 sessions. The sessions addressed, *inter alia*: promoting dialogue for improved decision making; challenges to financing institutions; the role of large dams in water resources mismanagement and of water harvesting in sustainable and equitable water management; storing water for sustainable development; and whether dam constructions are necessary.

During the sessions, many participants underscored that the growing global population necessitates the building of more dams to meet agricultural, domestic, industrial, energy and flood-control needs. Several participants also stressed the need to consider how dams affect livelihoods, the environment and existing rights and access to water. The value of the World Commission on Dams' (WCD) 27 guidelines was emphasized by many participants, particularly regarding: comprehensive needs and options assessments; public acceptance and benefit sharing; impact minimization; and existing dams.

A number of presenters demonstrated that dams play a major role in social and economic development around the world. Some participants called for transparent and participatory decision-making processes and for international lending agencies to update their investment guidelines in accordance with the WCD's stra-

tegic priorities. Other issues discussed by participants included the need to: integrate water storage projects into water resources planning strategies; quantitatively assess both direct and indirect impacts of reservoir development; address inequities in the distribution of the costs and benefits of dams; and empower local communities.

Theme Statement: The theme statement acknowledges that dams are an important element in water resources development, but that dams have been contested due to their adverse social and environmental impacts and examples of underperformance. It states that, where there is a need for increased water, electricity, food and flood attenuation, all options should be considered, including: the construction of new dams; measures to increase the productivity of existing dams; and other policy and technical options.

The statement notes general acceptance of a framework for planning and implementation, based on values of equity, efficiency, participatory decision making, sustainability and accountability. It recommends infrastructure planning, constructing and operating practices, and water and energy policies that, *inter alia*: consider all benefits and impacts of all options; introduce participatory processes that influence decision making by recognizing the rights of all stakeholders; find solutions that benefit all stakeholders, so that those adversely affected are among the first to benefit; recognize the value of ecosystems and their contribution to livelihoods; increase productivity and reduce the impacts of existing systems; provide incentives and effective national legislation to ensure implementation of policies and procedures; and work together across administrative boundaries for cooperative IWRM. It also recommends that projects based on sound economic, social and environmental principles, and in accordance with national laws, regulations and policies, be supported, and encourages government agencies to review policies and procedures to incorporate the statement's recommendations.

WORLD WATER ACTIONS: This session was convened by the WWC on 16 March to discuss the release of the World Water Actions Report and its database of water actions. The report outlines general and urgent needs facing the water sector, with regard to water management, international cooperation, gender equality in decision making and finance. It also identifies regional issues and examines the needs of the WEHAB (Water and Sanitation, Energy, Health and Environment, Agriculture, Biodiversity and Ecosystem Management) sectors. The Report contains a database of 3000 worldwide actions in the water sector, including water projects, applied research and studies, campaigns, policies and legal and institutional reform. In the discussion, participants proposed the development of indicators for assessing water management and implementation, and a water action ranking similar to the UNDP's Human Development Index. Other participants addressed appropriate criteria to validate water projects included in the database and the need to include community-based water campaigns.

Theme Statement: The theme statement outlines the 13 recommendations presented in the World Water Actions Report, including the need to develop multistakeholder partnerships, adapt to climate variability and reduce human suffering caused by floods and droughts, and to establish a global monitoring system covering the state of water resources, activities in the water sector and progress toward the MDGs.

WORLD WATER ASSESSMENT PROGRAMME: This theme was convened by the World Water Assessment Programme (WWAP) on 22 March in one session. The WWAP's mandate is to: identify and describe the nature of water crises; assess the coping capacity of societies and the effectiveness of policies;

develop indicators to monitor and report progress in reaching targets; and enhance the capacities of participating countries to perform in-country assessments. The session launched the World Water Development Report (WWDR), entitled "Water for People, Water for Life." The WWDR reviews progress on 11 challenges, including to provide water for basic needs and health, enhance food security, promote cleaner industry, develop energy, protect ecosystems, mitigate risk and govern water resources. Participants praised the WWDR's coverage of, *inter alia*, water pricing, governance, health and biodiversity issues. Five case studies from the WWDR were presented from the following river basins and regions: Chao Phraya (Thailand), Tokyo (Japan), Lake Peipsi (Estonia, Russia), Rhuhunu (Sri Lanka), Seine-Normandy (France), Senegal (Senegal, Mali, Mauritania), and Lake Titicaca (Bolivia, Peru).

Theme Statement: The theme statement notes that WWAP will build on partnerships already forged between UN agencies and governments, and will establish partnerships with NGOs, IGOs, the private sector, regional financial institutions and academic organizations. It states that WWAP is committed to producing a global report every three years with supplementary regional and country reports, the first being the Africa Water Development Report to be published in 2003. WWAP also commits to develop: a web-based global data and information world water portal; indicators for monitoring progress against global, regional and national targets; and national capacities to undertake country assessments.

PRELIMINARY SUMMARY FORUM STATEMENT

A draft of the "Preliminary Summary Forum Statement" was distributed by the Organizing Committee of the Forum on 21 March. It provides a summary of the main outcomes of the Forum. The Preliminary Summary Forum Statement reflects the content of all session reports and thematic and regional statements that were received before 21 March, which include 14 of the 38 thematic and regional statements and approximately half of the session reports. The Preliminary Summary Forum Statement is open for comment until 30 April 2003, and is available on <http://www.world.water-forum3.com/>. A final statement will be issued on 15 May 2003 as an input to the preparations for the G-8 meeting in Evian, France in June 2003.

The Preliminary Summary Forum Statement commits participants to meeting the goals and targets identified in the Millennium Declaration, the International Freshwater Conference in Bonn and the WSSD. It notes that freshwater is a precious and finite resource that is central to sustainable development, economic growth, social stability and poverty alleviation. It identifies key water issues including safe and clean water for all, governance, capacity building, financing, participation, regional priorities, global awareness, political support and local action.

Recommendations: In relation to partnerships, participation and dialogue, the Preliminary Summary Forum Statement calls for the empowerment and involvement of local people, local authorities, the research community, farmers, industry, women and minority groups in the development of basin and aquifer strategies, agreements and institutions. It emphasizes the need for stakeholder representatives and local authorities to be given a permanent and official role in decision making and implementation, and the inclusion of community knowledge, practices and rights in water management.

With regard to nature and ecosystems, it recommends: protecting and restoring ecosystems and aquifers; implementing environmental flows; developing multistakeholder approaches; integrating land, mountain, forest and water resources manage-

ment; developing basin-wide pollution prevention and treatment plans; creating innovative financing and legal frameworks; and prioritizing water-demand management.

On financing and investment it recommends that governments translate water laws, strategies and plans into realistic budget estimates and financing plans for water in all WEHAB sectors. It suggests that governments and local authorities take adequate measures to reduce risk and improve cost recovery, and stresses that the primary responsibility for such investments rests with national governments. It encourages governments and donors to give particular attention to pro-poor, affordable and appropriate technologies in their investment strategies.

Noting the need to prioritize water issues in policy and strategic planning, the Preliminary Summary Forum Statement underscores the importance of preparing IWRM plans by 2005 in accordance with the WSSD's outcomes. It also encourages national and local governments to develop and implement basin-wide pollution treatment and prevention plans, and adopt financial, legal and institutional incentives for pollution prevention. Underscoring the need to adopt strategies that mitigate effects of climate variability and natural hazards, it recommends the development of comprehensive and integrated flood and drought management policies. It notes the importance of considering appropriate targets for the productive use of water through increasing food production, and of achieving targets for decreasing malnourishment and rural poverty.

With regard to institutions and legislation, the Preliminary Summary Forum Statement recommends that governments start or continue reforms of public water institutions, and emphasizes good governance, cost-efficiency, transparency and accountability, stakeholder participation and public-private partnerships.

FORUM CLOSING CEREMONY

On Sunday, 23 March, Ryutaro Hashimoto, Chair of the National Steering Committee of the 3rd World Water Forum, thanked participants for their attendance and enthusiasm. He stressed the importance of collecting and sharing water-related information and expressed hope that participants will take concrete actions at the basin level.

Mahmoud Abu-Zeid, WWC President, thanked the Government of Japan, the Prefectural Governments of Kyoto, Osaka and Shiga, and others. He noted that the Forum had highlighted the need to, *inter alia*: devolve greater responsibility to local governments and communities; promote poverty eradication by providing safe drinking water, sanitation and food; and protect water resources during armed conflicts and natural disasters.

Koki Chuma, Japan's Vice-Minister of Land, Infrastructure and Transport, praised the Forum as a success. He noted that 422 water-related actions had been submitted by countries and organizations to the Portfolio of Water Actions and urged participants to implement their commitments at home.

William Cosgrove, WWC, presented the three winning organizations of the Water Action Contest for effective grassroots actions in the field of water: Gansu Research Institute for Water Conservancy, China; Technology Transfer Division, Bombas de Mecate, Nicaragua; and Voluntary Action for Development, Uganda. Hashimoto presented a prize of US\$15,000 to the winners. The closing plenary concluded at 2:50 pm.

MEETINGS IN PREPARATION FOR THE MINISTERIAL CONFERENCE

Three events, the closed Senior Official's Meeting, the Minister's Meeting on "Water, Food and Agriculture" and the Dialogue between Forum Participants and Ministers, were held prior to the opening of the Ministerial Conference as a link between the Forum and the Conference.

SENIOR OFFICIAL'S MEETING: The Senior Official's Meeting of the Ministerial Conference, hosted by the Government of Japan, met from 19-21 March. Officials met in a session open to Forum participants and several closed-door sessions, concluding their work in the early hours of Friday morning, 21 March. The meeting negotiated the Ministerial Declaration, which was presented to the final plenary of the Ministerial Conference on 23 March for adoption. During the closed session, some delegates proposed the inclusion and prioritization of the following issues in the Ministerial Declaration: water as a human right; the recognition of water as being indispensable for human security; subsidiarity; gender empowerment; household and community neighborhood strategies; regional water management strategies; the impacts of population growth on freshwater resources; national adaptation coalitions and mechanisms to cope with climate vulnerability; best practice guidelines for water service delivery; and the Report of the World Panel on Financing Water Infrastructure. During the negotiations, several countries tabled new proposals, including: ensuring that cost-recovery approaches do not prevent the poor from securing access to water and sanitation; identifying water priorities in national strategies for sustainable development; emphasizing the valuation and payment of environmental services; intensifying global efforts to protect inland fisheries; and strengthening water-related issues within the CSD.

DIALOGUE BETWEEN PARTICIPANTS AND MINISTERS: A dialogue between 519 Ministers, senior officials and Forum participants was held on Friday, 21 March as a bridge between the Forum and the Ministerial Conference. It was introduced by a keynote speech by Koki Chuma, Japan's Vice-Minister of Land, Infrastructure and Transport, and facilitated by Jerome Delli Priscoli, US Army Corps of Engineers.

In the first session, Dialogue participants discussed challenges related to water and poverty, including to: overcome gender inequality; develop good water governance and legal frameworks; attract investment; empower local authorities; and promote community participation in water management. Several participants noted that the draft Ministerial Declaration fails to acknowledge the human right to water and poorly reflects priorities generated in the Forum.

In the second Dialogue session, a different group of participants discussed actions that should be taken after the Forum's conclusion, including: ensuring that the next forum is more participatory; implementing the recommendations of the WCD; acknowledging the human right to water in an international agreement; creating a global fund for water and sanitation; mobilizing the media to inform people about the MDGs; developing a UN convention on water and poverty; disseminating the results of the Forum; and implementing the Forum's outcomes through country-level plans.

Final Report: The Dialogue Final Report contains a consolidated list of ideas generated during the Dialogue and notes "strong support" for IWRM and for affirming rights to water, and "strong calls" for accountability, transparency and stakeholder participation in decision making on water issues.

MINISTERS' MEETING ON "WATER, FOOD AND AGRICULTURE": This meeting convened in Shiga on 21 March. It was organized by Japan's Ministry of Agriculture, Forestry and Fisheries and FAO, and chaired by Tadamori Oshima, Japan's Minister of Agriculture, Forestry and Fisheries. Opening the session, Oshima recalled the UN Secretary-General's appeal for a "blue revolution" that would garner "more crop per drop" to feed the world's undernourished population. Noting that current efforts will not achieve the World Food Summit target of halving the proportion of hungry people by 2015, Jacques Diouf, FAO Director-General, stressed the role of irrigation in meeting crop production goals and urged greater investment in small-scale irrigation projects and rural development.

In country statements, several countries, including Burkina Faso and China, stressed the need to ensure food security and self-sufficiency. Morocco called for increased access to agricultural markets. Turkey underscored the role of dams in meeting water demands and the potential for cooperative water projects to promote peace. "Water wealthy" countries, such as Cambodia and Malaysia, noted seasonal variations in water availability, and stressed the need to control water supply and store water for the dry season. India and Pakistan noted the effects of climate change on water availability and outlined short and long-term national strategies to address the problem.

Many countries stressed the need to increase water productivity and reported on irrigation and rural development programmes and policies, highlighting farmer training, pollution prevention, IWRM and participatory approaches. The Governor of Shiga presented on irrigation initiatives in the Shiga Prefecture and preservation projects of Lake Biwa. Nepal stressed the importance of education on sustainable water management. Poland highlighted an academic programme linking agrology with water protection. Japan and the Republic of Korea highlighted the multi-functional roles of paddy cultivation. The Netherlands stated that integrated river basin management is an important policy tool for tackling water allocation problems. Greece stressed the importance of appropriate technology transfer and capacity building for developing countries. South Africa emphasized the need for farmers to assume more responsibility for protecting natural resources. Highlighting water wars, Bolivia invited cooperation from its neighbors to help solve its water problems. Colombia noted the destructive effects of illicit crop cultivation on water resources and called for international support to stem the demand for illicit drugs. The International Federation of Agricultural Producers said it did not advocate total privatization of water access and called on financial institutions to support sustainable water management programmes. Delegates thanked the organizers for bringing together Agriculture Ministers at the Forum.

Ministerial Recommendation: Chair Oshima presented, and delegates adopted by acclamation, the Ministerial Recommendation on Water for Food and Agriculture. The Recommendation, which was negotiated by senior officials on 20 March, identifies food security and poverty alleviation, sustainable water use and partnerships as key challenges for the agricultural sector. It outlines a plan of action, including commitments to: modernize and improve agricultural water use; increase water productivity; promote better governance; consider environmental aspects; undertake research and development; and foster international cooperation.

REPORT OF THE MINISTERIAL CONFERENCE

The Ministerial Conference officially opened on Saturday, 22 March, and closed on Sunday, 23 March. The primary outcomes of the Conference were a Ministerial Declaration and a Portfolio of Water Actions.

MINISTERIAL CONFERENCE OPENING PLENARY

Chair Chikage Oogi, Minister of Land, Infrastructure and Transport, identified population growth as one of the greatest challenges in securing water and food supplies. On behalf of UN Secretary-General Kofi Annan, UNEP Executive Director Klaus Töpfer said that lack of water and sanitation is a social, environmental, economic and political crisis requiring the highest prioritization. Noting that 2003 is the International Year of Freshwater, he called for action and implementation and declared World Water Day open.

Wang Shucheng, Chinese Minister of Water Resources, described China's water resources challenges, highlighted its IWRM practices, and described several disaster mitigation and water allocation projects. Regarding international cooperation, he proposed, *inter alia*, that water solutions be integrated with social and economic development policies.

Roseline Bachelot-Narquin, France's Minister of Ecology and Sustainable Development, said water solutions should combine local culture and traditional knowledge with modern technology. She stressed the importance of financial and human resources, and good governance in water management. She noted the role of the private sector in maintaining infrastructure and of river basin organizations in transboundary cooperation.

Koichiro Matsuura, UNESCO Director-General, recommended that the WWAP be recognized as the principle UN programme for freshwater monitoring and assessment. Ryutaro Hashimoto, Chair of the National Steering Committee of the Forum, stressed the need for the Ministerial Declaration to address the reconstruction of water infrastructure in Iraq and the water and sanitation needs of internally displaced people impacted by military action. Mahmoud Abu-Zeid, WWC President, presented on the World Water Actions Report, describing it as a database of water actions and a compendium of lessons learned. Noting that the war on Iraq undermines international law and democracy, Mikhail Gorbachev, Green Cross International President, stressed the importance of the Forum's work in ensuring water for peace. He highlighted the need for political will to develop and implement mechanisms for achieving the MDGs, and called for enshrinement of the right to water in the UN Universal Declaration of Human Rights. Hilda Grace Coelho, President of the Center for Rural Studies and Development, presented the outcomes of the NGO panel debate, asserting that water is a public good and that access to safe and affordable water is a human right that should be recognized in the Ministerial Declaration. Michel Camdessus, World Panel on Financing Water Infrastructure Chair, emphasized that the international community must find an additional US\$100 billion per year to meet the MDGs on water and sanitation.

Chair Oogi presented the Portfolio of Water Actions, a compilation of over 400 voluntary actions submitted by governments and international organizations. She expressed the hope that the Portfolio will create new partnerships.

SUB-GROUP MEETINGS

Sub-group meetings on five topics were convened on Saturday, March 22, in three afternoon sessions. The first session of each group was open to Forum participants, while the final two sessions were restricted to Ministerial Conference participants.

SAFE DRINKING WATER AND SANITATION: This meeting was chaired by Ronnie Kasrils, South Africa's Minister of Water Affairs and Forestry. Hans Christian Schmidt, Denmark's Minister of the Environment, presented on the EU Water Initiative and Maria Mutagamba, Uganda's Minister of State for Water, reported on progress of the African Water Facility.

Ministers heard recommendations from the following themes and panels: Water Supply, Sanitation, Health and Pollution Prevention; Water, Life and Medical Care; PPP Panel; Union Panel; CEO Panel; and Science, Technology and Management Panel. Discussions were then guided by a series of questions concerning obstacles to the provision of water and sanitation, types of PPPs and technologies that should be developed, and means of strengthening governance.

Many developing countries identified the lack of capacity and financial resources as the main obstacles to achieving supply and sanitation goals, while many developed countries stressed the key role of appropriate low-cost technologies. On financing, one participant noted that ODA alone cannot achieve the MDGs and another suggested augmenting the proportion of financing allocated to small-scale and low-cost initiatives. One State highlighted that local communities can use revolving funds to mobilize private capital, and others stressed prioritization of water in national budgets and PRSPs. Participants also emphasized the need for national water action plans and targets, and a greater focus on gender participation in water management and decision making.

A UN agency underscored the need for policies ensuring women's health and reproductive choice, and several delegates emphasized that water is not a commodity, but a human right. Others raised concerns that marginal communities have no collective purchasing power and that the poor often pay 10 times more for water bought from individual vendors. Regarding monitoring, participants highlighted the role of schoolchildren and suggested establishing a monitoring institution. Regarding PPPs, delegates highlighted the role of NGOs in capacity building and stressed the importance of confidence building, flexible financing options, and partnership frameworks.

Chair's Summary: The Chair's summary notes the benefits of achieving the water and sanitation-related MDGs and emphasizes the need to address disadvantaged and vulnerable populations. It considers financing, governance and partnerships issues, suggests combining "hard" and "soft" solutions, and urges better monitoring and reporting of information. It also highlights the role of children in promoting hygiene and the importance of involving women in planning, implementing and managing basic services.

WATER FOR FOOD AND RURAL DEVELOPMENT: This meeting, chaired by Ian Johnson, Vice-President of the World Bank, began with presentations and reports from the Water Journalist and Gender and Water Panels. Presenters, *inter alia*: outlined solutions for addressing the impacts of water-intensive agriculture; noted the need to eradicate malnutrition and respond to changing food demands; highlighted the importance of improving irrigation-system management; called for legislation ensuring transparent decision making, and advocated gender-responsive water management activities.

Several countries outlined challenges in, and national strategies on, providing water for food production and rural development, while others addressed the lack of financial resources for

effective water management in developing countries. One developing country called for harmonization and coordination of donor aid activities, while several emphasized the need for fair water pricing. One developing country expressed regret that discussions had not considered existing decisions, including those agreed under the UN Convention to Combat Desertification (CCD). A representative from the CCD Secretariat questioned how poverty reduction and sustainable food production can be achieved if other sectors are given priority in the allocation of resources. Several countries noted the effects of climate change on water resources. On the Ministerial Declaration, one developing country proposed a reference to the link between unsustainable agricultural practices and water scarcity, and a developed country suggested reference to the effect of HIV/AIDS on agricultural production.

Chair's Summary: The summary outlines commitments on food security and poverty alleviation, sustainable water use, and knowledge and partnership. On food security and poverty alleviation, it stresses the need for: increased investments in rural areas; improved management of, and additional investment in, existing infrastructure; and a more equitable trading regime. On sustainable water use, the summary highlights sustainable groundwater use and advocates implementing policies that provide environmentally sustainable water and land use. On knowledge and partnership, it underscores the need to: enhance partnerships at all levels; strengthen international and local knowledge systems and promote public awareness and communication.

WATER POLLUTION PREVENTION AND ECOSYSTEM CONSERVATION: This sub-group meeting, chaired by Philippe Roch, Director of the Swiss Agency for the Environment, Forests and Landscape, began with presentations that outlined the potential for technical innovation to reduce water consumption, the benefits of industrial ecology in reducing pollution, and the crucial role of groundwater in supplying quality freshwater.

The use of the ecosystem approach in water management was strongly supported by several developed countries and the Ramsar Convention Bureau, with two developed countries also emphasizing the need to consider climate change. A developing country stressed the need for more information on ecosystems, emphasizing the importance of technology transfer and capacity building to facilitate monitoring in developing countries. Together with several countries, UNEP called for the economic valuation of ecosystem services, and a developed country identified the need for a valuation toolbox. The Basel Convention Secretariat and a developing country advocated using life-cycle management in controlling pollution.

Several countries highlighted the need for increased financial resources for water resources management, suggesting user fees as a possible source. Two LDCs questioned the relevance of the WPFWI's Report for financing LDCs, where internal markets are inadequately developed to implement proposed mechanisms. A country with an economy in transition (CEIT) remarked that environmental issues compete for limited financial resources with other key priorities like health and education.

Several countries highlighted the need for regional cooperation in river basin management, with one CEIT identifying regional conflict as a challenge to international cooperation. UNESCO, with UNEP, stressed the need to consider indigenous knowledge in water resources decision making.

Chair's Summary: The Chair summarized discussions with the statement "ecosystems for water, water for people, ecosystems for people," and said an addendum to the Ministerial Declaration would encourage recognizing the value of: ecosystem services;

multistakeholder involvement; multilevel basin management; ecosystem monitoring; cultural diversity in managing water; and dissemination of information.

DISASTER MITIGATION AND RISK MANAGEMENT:

This sub-group was chaired by H. Soenarno, Indonesia's Minister of Settlement and Regional Infrastructure. Participants heard reports from sessions on Water and Climate, Water and Information, and the Youth World Water Forum. Delegates noted that disasters roll back progress achieved in developing countries, and that simply living with floods is not a reasonable strategy.

Regarding floods, it was stressed that: disasters and floods are "everyone's business"; innovative "win-win" approaches need to be identified; floods and climate issues are linked; and both positive and negative experiences should be shared.

Several delegates discussed the advantages and disadvantages of structural and non-structural solutions for addressing extreme events, some favoring one type of approach over the other. Other issues discussed include: the need for compensation policies for those affected by floods; the importance of information sharing; the use of forecasting technology to prevent disasters; the ratification of the Kyoto Protocol to the UNFCCC; and the recognition that poverty reduction can only be achieved if a risk management strategy is in place.

Many countries underscored the link between climate change and the frequency of disasters, and noted that the impact of natural hazards is affecting development and hindering attainment of the MDGs.

Chair's Summary: The Chair's summary notes that: increase in the frequency of floods is an expected impact of climate change; assessment of the risk of floods and droughts requires new technological developments; flood management should be based on a river basin approach and be balanced with water use and environmental concerns; both preventative and emergency response measures are necessary; vulnerability reduction must be a priority as floods cannot be eliminated; and governments should implement recommendations of the WSSD relating to disasters using an integrated, multihazard and inclusive approach.

WATER RESOURCES MANAGEMENT AND BENEFIT SHARING:

This sub-group was chaired by Arjun Charan Sethi, India's Minister of Water Resources. The key recommendations from the sessions on Water and Energy and IWRM and Basin Management were presented to the group. Several countries emphasized the importance of the WSSD's water and sanitation-related targets. Some countries called for increased benefit sharing between upstream and downstream users and urban and rural centers, and stressed the need for adequate water pricing policies. Some countries underscored the need to build good and sustainable dams and address the impacts of climate variability. The need for technology transfer and capacity building for conflict resolution in countries sharing transboundary water resources was addressed. A task force to assist countries to monitor their progress in meeting the WSSD's water-related goals was also proposed. Some countries highlighted the link between IWRM and energy in the context of greenhouse gas emissions reductions, emphasized that access to water is a basic right, and stressed the need to apply the principles of access, affordability and sustainability to achieve the MDGs.

Chair's Summary: The Chair's summary recognizes the importance of: IWRM; governance, water laws and river and lake basin arrangements; and the need for multistakeholder participation and dialogues. It notes the need to develop dams for irrigation, storage, flood control and energy provision, and stresses the importance of environmental and social impact assessments and

resettlement plans. The summary underscores financial assistance for capacity building, technology transfer, good governance and confidence-building measures, and emphasizes the need to increase the use of innovative and appropriate technologies, such as desalinization and the reuse of treated water.

CLOSING PLENARY: The Ministerial Conference final session convened on Sunday morning, 23 March. Ichiro Fujisaki, Japan's Deputy Foreign Minister, chaired this session. The Chairs of the Ministerial Conference sub-groups presented their Summaries. Delegates then commented on the Chairs' Summaries, drawing attention to, *inter alia*: indigenous peoples' rights; the effects of climate change and armed conflict on water and ecosystems; gender issues; the need for financial assistance for developing countries to sustainably manage water and protect ecosystems; an African initiative to create a framework to further develop agriculture to combat malnutrition and poverty; and the effect of HIV/AIDS on all areas of development, including the water sector. Several delegates emphasized that the Chairs' Summaries do not reflect a consensus.

Chair Fujisaki then introduced the Ministerial Declaration. Panama recommended reference to the human right to water. Several countries proposed amendments and Chair Fujisaki said all comments on the Chairs' Summaries and the Ministerial Declaration will be appended to the final report of the meeting, and the Declaration was adopted without amendment. Chair Fujisaki thanked participants for their contributions and adjourned the Ministerial Conference at 11:26 am.

OUTCOMES OF THE MINISTERIAL CONFERENCE:

Portfolio of Water Actions: Available as a hard copy report and on CD-Rom, the Portfolio of Water Actions is a compilation of over 400 actions, submitted by 36 countries and 16 international organizations. Most actions are on water resources management and benefit sharing and safe drinking water and sanitation. Actions from Asia are primarily focused on water for food and rural development and disaster mitigation and risk management, while Europe and international organizations submitted many actions on water resources management and benefit sharing, and Africa submitted many actions on safe drinking water and sanitation.

Ministerial Declaration: The Declaration takes note of the thematic and regional statements and recommendations from the Forum and declares that water is a driving force for sustainable development. With regard to general policies, it emphasizes that Ministers should ensure good governance with a stronger focus on community-based approaches addressing equity, mobilize private and public financing, promote IWRM, and identify and develop PPPs, while ensuring the necessary public control and legal frameworks to protect public interests. It affirms that Ministers are committed, in the long term, to fortify capacity with assistance from the international community.

Regarding water resources management and benefit sharing, Ministers encourage riparian States to promote cooperation on transboundary and boundary watercourses, and to recognize hydropower as a renewable, clean energy source. The Declaration states that Ministers will assist developing countries with the aim of developing IWRM and water efficiency plans by 2005, encourage scientific research on the global water cycle, promote demand management measures, and endeavor to develop and deploy non-conventional water resources.

On safe drinking water and sanitation, the Declaration notes that basic hygiene practices should be encouraged and efforts to promote technical breakthroughs related to the provision of safe drinking water and basic sanitation should be intensified. It calls

on Ministers in all countries to develop strategies to halve the proportion of people without access to safe drinking water and the proportion without access to basic sanitation by 2015.

Regarding water for food and rural development, the Declaration stipulates that every effort should be made to reduce unsustainable water management and improve the efficiency of agricultural water use, and that freshwater fish production should be addressed through intensified efforts to improve riverine water quality and quantity. It encourages international cooperation and investment, research and development for the progressive improvement of agricultural water management, and the promotion of community-based development.

On water pollution prevention and ecosystem conservation, the Declaration recognizes the need to intensify water pollution prevention, and to protect and use in a sustainable manner ecosystems that naturally capture, filter, store and release water. It urges countries to establish and review appropriate legislative frameworks for the protection and sustainable use of water resources and for water pollution prevention, and to concentrate efforts to combat deforestation, desertification and land degradation.

On disaster mitigation and risk management, the Declaration notes the need for a comprehensive approach to mitigate the growing severity of floods and droughts, and says Ministers will enhance where appropriate the sharing and exchange of data, information, knowledge and experiences at the international level.

THINGS TO LOOK FOR

INTERNATIONAL SYMPOSIUM ON ECOLOGICAL SANITATION: This symposium, organized by Deutsche Gesellschaft für Technische Zusammenarbeit, will meet from 7-11 April 2003 in Lübeck, Germany. Discussions will focus on holistic alternatives to conventional sanitation solutions. For more information contact: Christine Werner: tel: +49-6196-79-4220; fax: +49-6196-79-7458; e-mail: ecosan@gtz.de; Internet: <http://gtz.de/ecosan/english/symposia.htm>

SECOND INTERNATIONAL CONFERENCE ON RIVER BASIN MANAGEMENT: This conference, organized by the Wessex Institute of Technology, will meet from 28-30 April 2003 in Las Palmas, Gran Canaria, Spain. Participants will discuss advances in the overall management of riverine systems, including advances in hydrologic modeling, environmental protection and flood forecasting. For more information contact: Stacey Hobbs, Wessex Institute of Technology; tel: +44-238-029-3223; fax: +44-238-029-2853; e-mail: shobbs@wessex.ac.uk; Internet: <http://www.wessex.ac.uk/conferences/2003/riverbasin03/index.html>

IBEROAMERICAN REGIONAL WORKSHOP ON WETLANDS AND SUSTAINABLE DEVELOPMENT: This workshop, organized by the Iberoamerican Programme of Science and Technology for Development, will be held from 26-28 May 2003 in Panama City, Panama. The workshop seeks to join researchers, experts, technicians, *campesinos*, indigenous peoples, entrepreneurs, teachers and professionals from science and technology institutions to discuss forestry-related issues. For more information contact: Lucas Fernández Reyes, coordinator of the XVII CYTED Wetlands Network; tel: +537-203-0245; fax: +537-202-9372; e-mail: lfernandez@geprop.cu; Internet: http://www.ramsar.org/w.n.cytod_monograph.htm

2003 DUBROVNIK CONFERENCE ON SUSTAINABLE DEVELOPMENT OF ENERGY, WATER AND ENVIRONMENT SYSTEMS: This conference, sponsored by UNESCO, will take place from 15-20 June 2003 in Dubrovnik, Croatia. The

Conference will aim to, *inter alia*, promote a new field of sustainability science that seeks to understand the fundamental interactions between nature and society. For more information contact: Organizing Secretariat; fax: +385-1-6156940; e-mail: dubrovnik2003@fsb.hr; Internet: <http://www.dubrovnik2003.fsb.hr>

21ST CONGRESS OF THE INTERNATIONAL COMMISSION ON LARGE DAMS: This triennial meeting organized by the International Commission on Large Dams will convene from 16-20 June 2003 in Montreal, Canada. Decision makers, experts, engineers, geologists and other professionals will come together to discuss issues relating to dams. For more information contact: Lise Pinsonneault; tel: +1-514-289-4628; fax: +1-514-289-4546; e-mail: pinsonneault.lise@hydro.qc.ca; Internet: <http://www.cigb-icold.org>

FIFTH INTERNATIONAL SYMPOSIUM ON WATER: This symposium, to be held from 23-27 June 2003 in Cannes, France, is organized by the International Symposium on Water. Participants will address the topics of water and the environment and capacity building, and assess the outcome of the 3rd World Water Forum. For more information contact: International Symposium on Water; tel: +33-4-92-09-0273; fax: +33-4-92-09-0273; e-mail: water-cannes-symposium@wanadoo.fr; Internet: <http://www.symposium-h2o.com/symposium.html>

STOCKHOLM WATER SYMPOSIUM: This symposium, organized by the Stockholm International Water Institute, will be held from 10-16 August 2003 in Stockholm, Sweden. The plenary theme is "Drainage Basin Security: Balancing Production, Trade and Water Use." A high-level panel debate will address agricultural subsidies. For more information contact: David Trouba; tel: +46-8-522-139-89; fax: +46-8-522-139-61; e-mail: dave.trouba@siwi.org; Internet: <http://www.siw.org/waterweek2003>

SIXTH WATER INFORMATION SUMMIT 2003: This Summit, organized by the IRC International Water and Sanitation Centre, the Water Web Consortium and the UNESCO-IHE Institute for Water Education and International Institute for Communication and Development, will take place from 9-12 September 2003 in Delft, the Netherlands. The Summit's theme is "Breaking the barriers: Let water information flow!" For more information contact: Ingeborg Krukkert, IRC; tel: +31-15-219-2985; fax: +31-15-219-0955; e-mail: <http://www.irc.nl/contact.php?rcpt=krukkert&subject=WIS6>; Internet: <http://www.irc.nl/news/wis6.html>

XI WORLD WATER CONGRESS - WATER RESOURCES MANAGEMENT IN THE 21ST CENTURY: This congress, organized by the International Water Resource Association, will be held from 5-9 October 2003 in Madrid, Spain. Themes include: water planning under uncertainty; valuing water; impact of new technologies in water management; relevance and sustainability of intensive groundwater developments; and water infrastructure development. For more information contact: Manuel Martín Antón; e-mail: wwater2003@cedex.es; Internet: http://www.cedex.es/iwracongress2003/en/hoja2_en.htm

WATER FOR THE POOR: This meeting, organized by the International Water Academy, will be held from 4-5 November 2003 in Stavanger, Norway. It aims to promote international coordination and develop target-oriented measures for the fulfillment of the water-related MDG and WSSD goals. For more information contact: Tor Wennesland, The International Water Academy; tel: +47-51-510373; fax: +47-51-522466; e-mail: stavanger@thewateracademy.org; Internet: <http://www.thewateracademy.org/stavanger/>