



**INTERNATIONAL CONFERENCE ON WATER AND
SUSTAINABLE DEVELOPMENT
19-21 MARCH 1998**

The International Conference on Water and Sustainable Development took place from 19-21 March 1998 at UNESCO Headquarters in Paris. The conference, sponsored by the Government of France, gathered approximately 600 participants, including Ministers and high-level officials from public bodies in charge of water management in 84 countries and representatives of civil society, UN agencies, international organizations and development banks involved in the water sector. The objective of the conference was to contribute to the elaboration of strategies necessary for improving freshwater resources conservation and management in rural and urban areas to ensure better-controlled drinking water supply, sanitation and irrigation, while integrating desertification control into these objectives.

Over the course of the conference, participants convened in three parallel experts' workshops, on improving knowledge of water resources and uses for sustainable management, favoring the development of regulatory tools and institutional capacity building, and defining strategies for sustainable management and identifying appropriate financial resources. In these workshops, delegates heard presentations on a number of case studies and discussed a series of draft recommendations which they later finalized and submitted to the Ministerial session for adoption. Two special workshops were also convened by the Global Water Partnership and the World Water Council and by the International Network of Basin Organizations. A Ministerial session took place during the second half of the conference, where delegates were addressed by more than 120 Ministers, high-level officials and representatives of international organizations, including French President Jacques Chirac and French Prime Minister Lionel Jospin. A drafting committee also convened and formulated a Ministerial Declaration.

The conference adopted a Programme for Priority Actions, comprised of recommendations from the three expert workshops, as well as a Ministerial Declaration. These documents will be submitted as official documents and will provide input for discussion at the sixth session of the Commission on Sustainable Development (CSD-6) in April.

**A BRIEF HISTORY OF RECENT WATER-RELATED
DECISIONS**

UNGASS

At the 19th Special Session of the UN General Assembly (UNGASS) in June 1997, delegates adopted a Programme for the Further Implementation of Agenda 21, which contains recommendations for action in the area of freshwater. The text notes that, in view of growing demands, water will become a major limiting factor in socio-economic development unless early action is taken. It identifies an urgent need to, *inter alia*: formulate and implement policies and programmes for integrated watershed management;

strengthen regional and international cooperation for technology transfer and the financing of integrated water resources programmes and projects; provide an environment that encourages investments from public and private sources to improve water supply and sanitation services; recognize water as a social and economic good; and call for a dialogue under the aegis of the CSD, beginning at its sixth session, aimed at building a consensus on the necessary actions, means of implementation and tangible results, in order to consider initiating a strategic approach for the implementation of all aspects of the sustainable use of freshwater for social and economic purposes.

A decision taken at UNGASS regarding the CSD work programme for 1998-2002 deemed that "strategic approaches to freshwater management" would be the sectoral theme for CSD-6. In his address to the Assembly during UNGASS, French President Jacques Chirac proposed to host an international conference in France in March 1998, gathering all actors involved in water policy.

**EXPERT GROUP MEETING ON STRATEGIC APPROACHES
TO FRESHWATER MANAGEMENT**

In preparation for the CSD's Intersessional *Ad Hoc* Working Group and CSD-6's consideration of strategic approaches to freshwater management, an Expert Group met in Harare, Zimbabwe from 27-30 January 1998. The Co-Chairs' summary of the meeting notes that integrated water resources management, within a national economic framework, is essential for achieving efficient and equitable allocation of water resources and for promoting sustainable economic development and poverty alleviation. The summary includes several recommendations for action on capacity building, information management, environment and development, economics and finance, participation and institutions and international cooperation.

CSD INTERSESSIONAL AD HOC WORKING GROUP

The CSD's Intersessional *Ad Hoc* Working Group on Strategic Approaches to Freshwater Management met from 23-27 February 1998 at UN Headquarters in New York. Delegates exchanged views on freshwater issues and offered comments on two iterations of a Co-Chairs' draft report. The revised report incorporates remarks on the second iteration and will provide the basis for negotiation at CSD-6. The report: contains an introduction and background; outlines key issues and challenges; calls for action and means of implementation in the areas of information for decision making, institutions, capacity building and participation, technology transfer and research cooperation, and financial resources and mechanisms; and presents recommendations for follow-up and assessment.

**INTERNATIONAL CONFERENCE ON WATER AND
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Prior to the conference, a call for papers was launched to identify case studies illustrating present situations and ongoing reforms, as well as proposals for the application of recommendations resulting from previous international conferences. A selection of

case studies reflecting innovative experiences of States, civil society and international organizations were chosen to be presented in the conference's workshops.

An international Steering Committee was also formed prior to the conference, which consisted of the Ministers chosen to chair the three expert workshops, and representatives of States, civil society, UN agencies and international organizations. The Committee was responsible for preparing the conference's draft recommendations, using the papers received and analyzing the conclusions of previous international meetings, the Harare experts' group meeting of January 1998 in particular. The Steering Committee met in Paris from 12-13 February 1998. Its preliminary conclusions were forwarded to all countries and organizations invited to the conference and were discussed as draft recommendations during the first two days of the conference in the three experts' workshops.

REPORT OF THE CONFERENCE

OPENING PLENARY

At the opening Plenary on Thursday morning, 19 March, Dominique Voynet, French Minister of Regional Planning and Environment, welcomed participants and thanked the conference organizers. She highlighted lack of access, wasteful use and pollution of water resources as pressing problems that the international community must heed. She emphasized several prerequisites for addressing these problems, including: improved knowledge of water resources; regulatory tools and institutional organization for sustainable management; and financial resources for sustainable management.

Dr. Mahmoud Abu-Zeid, President of the World Water Council, said the finite volume of freshwater is in a state of crisis. He emphasized: increasing water scarcity; lack of accessibility to clean drinking water and sanitation; water quality deterioration; the fragmentation of water management; decline of financial resource allocation; and lack of awareness by decision-makers and the public.

EXPERT WORKSHOPS

The conference's international Steering Committee prepared a set of draft recommendations in the areas of knowledge of water resources and uses for sustainable management, human resources development and institutional capacity building, and sustainable water management and financing. These draft recommendations were used as a basis for discussion in the three experts' workshops, which met during the first day and a half of the conference. On the final day of the conference, the attending Ministers in charge of water management officially approved the recommendations of the workshops, which were amended based on their discussions and compiled into a Programme for Priority Actions. In addition to commenting upon and amending the recommendations, workshop participants benefited from the presentation of several case studies.

WATER RESOURCES AND USES: J. Szyszko (Poland) chaired the workshop on improving knowledge of water resources and uses for sustainable management. Keynote speaker Derek Osborne (European Environment Agency) called for a high priority to be assigned to: sanitation and reuse of water; broader administrative structures taking into account complete catchment areas; proper pricing allocation; and partnerships and cooperation.

The first day of the workshop was devoted to presentations and general discussion. The Observatoire du Sahara et du Sahel said the adequacy of water in arid zones in Africa will be a major problem in the future and called for improved management, particularly joint management, of nonrenewable resources. Spain focused on water reutilization as a sustainable option for integrated water resources management, particularly for agriculture, landscape irrigation and industrial uses. The World Health Organization (WHO) highlighted the linkage between health, water and sanitation, and noted the absence of health issues in the draft recommendations. The World Meteorological Organization (WMO) highlighted the disparity among regions in integrated information management systems and noted that only in South America has the number of monitoring stations increased, while in Africa it has decreased. He also highlighted the World Hydrological Cycle Observing System as a global supplement to other information management systems.

Italy highlighted the Euro-Mediterranean Information System on Know-How in the Water Sector, comprising 27 countries, as an example of regional cooperation and information management.

The Ramsar Convention noted the key role of wetlands in addressing the global water crisis and called for greater focus on an ecosystem approach instead of a user-based approach. Japan detailed the development of its nationwide hydrological and water quality database network on the Internet. A representative of Euro-waternet showcased its information gathering and reporting service. Burkina Faso, Niger, Cameroon, Germany, Brazil, Cote d'Ivoire and Romania shared their experiences in water resources management.

Cross-cutting themes emerging from the discussion included linkages between water and health, poverty alleviation, food security and natural disasters. Consensus emerged concerning the quality and reliability of data and the need for proper assessment and evaluation of such data so that projects and their results are not jeopardized. Participants stressed that people must know how to use information provided to them; technology as a quick fix will not work. The importance of cooperative research, community stakeholder involvement, information and technology sharing, information management systems and data gathering centers, and financial support for such centers by the international community, were also highlighted.

On the second day of the workshop, delegates heard additional presentations and discussed the draft recommendations. Presentations were made on: watershed and ecosystem planning in the US; Poland's creation of a river basin observatory; Spain's integrated approach to water resources inventories; and implementation of an alternative system of water management in India.

In their discussion on the workshop's draft recommendations, delegates achieved a broad level of consensus. It was agreed that greater focus should be given to the river basin approach. It was also agreed that more emphasis should be placed on land-plant-water interactions and disaster forecasting and warning systems. Regarding a proposal to add text noting the lack of water assessment capacity in African countries, several Latin American countries stressed that information systems are needed in all developing countries. Participants decided to include no specific reference to Africa. Delegates agreed that national, regional and international programmes require strengthening. The European Commission warned against turning recommendations on facilitating regional and international cooperation to improve knowledge into a shopping list of preferred programmes. Participants agreed to include examples of good practice.

INSTITUTIONAL DEVELOPMENT: The workshop on promoting human resources development and institutional capacity building was chaired by Antonio A. Dayrell de Lima (Brazil), who outlined deficits in water resource management. Keynote speaker Ismael Serageldin (World Bank) made a presentation on institutional fragmentation, participatory approaches and subsidiarity, equity, private sector financing, and best practices. In the ensuing discussion, participants highlighted: the development aspects of water (Ethiopia); partnerships (Egypt and Cote d'Ivoire); nomadic people (Mauritania); indigenous people (Mexico and Japan); and women and underprivileged people (US). South Africa qualified a reference to subsidiarity and Sudan called for information exchange between riparian States.

Presentations were also made on: national transition from top-down water management systems (Czech Republic); background to national legislation (Mexico); water basin management and the Mediterranean water crisis (Morocco); "barefoot" solutions and rainfall harvesting (India); irrigation and rational use of water resources (Jordan); natural water purification (Vietnam); Mediterranean regional cooperation (the Blue Plan); and the Euro-Mediterranean Partnership (Italy).

The Chair summarized several written amendments to the workshop's draft recommendations which delegates had submitted, and invited discussion on those referring to the "polluter pays principle," transboundary water systems and economic information. Ethiopia called for the national application of the polluter pays principle. The Chair welcomed another amendment stating that polluters' capacity to pay should be considered.

Regarding transboundary water systems, the Chair, supported by Egypt and Haiti, agreed that "transboundary" should replace a reference to "international" water bodies. He reassured the two countries proposing deletion of the paragraph that no mandatory regime was being proposed in the draft recommendation. Supported by Mauritania, he urged countries not to delete the reference to transboundary systems. China said the reference should be deleted or replaced with non-specific text encouraging cooperation. The Secretariat said it is understood that the issue is essentially political. He said the Ministerial Declaration would encourage States to promote dialogue at the basin level, involving civil society, government authorities, and, to the extent possible, riparian States where international water bodies are concerned. Regarding a reference to the GEF, Australia expressed concern that any proposed expansion in the action programme to accommodate freshwater initiatives could call the incremental costs principle into question. Regarding its proposal to delete text on the collection and dissemination of economic information, China explained that data collection should be at the discretion of the country concerned. Ethiopia said monitoring systems should be "national."

On the second day of the workshop, the Chair presented an amended version of the workshop's draft recommendations based on the above discussion and invited delegates to comment on it. In the paragraph encouraging riparian States to cooperate on transboundary water resources, China added "taking into account the interests of all the riparian States concerned." Egypt, supported by Turkey, proposed an introductory reference to the UNGASS Programme for Further Implementation of Agenda 21. Ethiopia noted that UNGASS had reached no consensus on the issue. Egypt objected to text taken from the CSD Intersessional Working Group because it has not been adopted. Ethiopia, supported by Colombia, said he could only accept references to Agenda 21 and the Rio Declaration. Regarding human resources development, Mexico introduced a reference to developed country commitments. China added a reference to promoting the transfer of environmentally sound technology and know-how and on technical cooperation between developing countries.

Additional presentations were made on: water privatization in Cote d'Ivoire; national water policy in Lebanon; the impacts of irrigation management; cooperation between the NGO Wateraid and the Tanzanian government in community water management and sanitation provision; water services restructuring in Port-au-Prince; and UNDP-World Bank assistance to poor people for access to sustainable water and sanitation services.

MANAGEMENT AND FINANCIAL RESOURCES: The workshop on defining strategies for sustainable water management and identifying appropriate means of financing, chaired by S. Toure (Cote D'Ivoire), began with a keynote address from A. Poullieute of the French Development Fund (CDF). He said investment policies should be guided by three principles: rehabilitating rather than creating new investment when possible; selecting cost-saving technologies suited to particular conditions; and developing a participatory approach. He underscored that users must pay a price for water close to its actual cost. He stressed the need to reduce costs through professional and efficient management within a clear institutional framework, and said ODA should maximize leveraging of local finance and be set aside for less profitable priorities such as training and institutional strengthening.

Delegates commented on the workshop's draft recommendations. Colombia said the recommendations overemphasize fundraising at the national and local levels and downplay the importance of international fundraising. He called for the establishment of a mechanism to channel new and additional international financing to developing countries. China proposed noting that differences in countries' priorities and conditions should be respected and underscoring that new and additional financial resources must be made available to developing countries. Switzerland suggested emphasizing measures for ecosystem and watershed protection. Australia stressed that bilateral assistance must be based on recipient countries' priorities and highlighted innovative financial mechanisms to leverage private sector capital based on the user pays principle. Ethiopia proposed highlighting food production and hydropower development as important for poverty alleviation.

Regarding priorities for ODA, the EU proposed support for creating an enabling environment and for research and disaster preparedness. He called for more openness to public-private financing. Turkey recommended greater emphasis on private sector involvement, the use of market mechanisms and a specific reference to underprivileged groups and women. Senegal and Peru highlighted the importance of maintenance of water supply systems. Mauritania and Burkina Faso emphasized the continuing need for international assistance in financing water supply.

Several developing countries highlighted difficulties with implementing "user pays" pricing systems in developing countries. Cape Verde said pricing schedules must reflect consumption levels. The US underscored the importance of: participation of women and poor people in determining funding priorities; cost recovery to improve investment efficiency; coordination of funding efforts for water at the national level and among donors; and adequate protection of intellectual property rights in access to and transfer of technology. Argentina stressed the need to include the polluter pays principle. Ghana proposed focusing on public education on health and economic aspects of water and the link between population growth and water resource depletion.

The Netherlands proposed noting that water should be used as a catalyst for regional cooperation rather than conflict. Nigeria said recommendations on finance mobilization should indicate the need for basin resource management. To a list of basic needs that must be met, Spain added flood and drought control and Peru added food security. A Water Club representative called for greater stakeholder involvement in the design stage of projects. A civil society representative of Dakar emphasized mobilization of human resources and local knowledge.

Case studies were presented on: water and sanitation provision in low-income settlements in Buenos Aires; watershed agencies in France; the Asian Technical and Research Network; water management, performance and challenges in OECD countries; World Bank financing strategies in water supply and sanitation; European Community water policies in the context of development cooperation; GEF efforts to address international waters problems; and public-private collaboration on water supply in Gdansk, Poland.

On the second day of the workshop, participants heard additional presentations of case studies on: the Senegal Valley integrated basin management project; involvement of Morocco's farmers in irrigation; FAO perspectives on water and food security; a water concessions model in Aguascalientes, Mexico; sustainable development and drinking water provision in Casablanca; and strategic sanitation planning in Kumasi, Ghana.

Delegates were presented with and discussed an amended version of the workshop's draft recommendations based on the comments made on the first day. Lebanon preferred to delete references to "regional" consultations and emergency funds from text on natural disaster preparedness. Regarding Colombia's proposal to establish a funding mechanism, the Chair noted that the Steering Committee agreed not to recommend such a mechanism but to rely on existing institutions. Egypt proposed that the introduction note that strategies for sustainable water management should be guided by Chapter 18 of Agenda 21 and the Programme for Further Implementation of Agenda 21, rather than by the Harare expert meeting's conclusions. The US added programmes to improve the status of women and the poor and increase their meaningful participation in decision making. Australia added the need for a comprehensive, integrated, strategic approach to water management. The GEF proposed adding a section on developing appropriate financing models and mechanisms.

SPECIAL WORKSHOPS

GLOBAL WATER PARTNERSHIP/WORLD WATER COUNCIL WORKSHOP: In this workshop, chaired by Ismael Serageldin (World Bank), participants exchanged experiences in water management and development networks. An overview was provided of the World Water Council (WWC), a new membership organization set up as an advocacy water policy think-tank comprised of public, private, intergovernmental, international and non-governmental organizations. The GWP was described as a comprehensive global framework that builds on past lessons and fosters global cooperation. Members of regional partnerships under

the GWP made statements about ongoing capacity building, awareness raising and information exchange activities in their regions. Discussions highlighted the complexity of water problems and the limitations of existing measures and underscored the importance of policy frameworks to support technological solutions. It was noted that incorporation of research in similar water partnerships and programmes is essential and the use of future scenarios to guide present actions should be considered. Concerns were raised about tendencies to focus on scarcity as the main water crisis while neglecting problems of poor water management and about the proliferation of regional coordination activities. Participants reiterated that water problems will only be managed once societies learn to live with existing resources and plan better for the future. WWC and GWP were called upon to give attention to aspects of efficient use of existing resources and linkages between water and energy as well as other sectors. The Chair closed the workshop with a call for a shift in paradigms governing short- and long-term practices.

INTERNATIONAL NETWORK OF BASIN ORGANIZATIONS WORKSHOP: At this workshop, chaired by Juan Manuel Aragonés Beltrán (INBO), presentations were made on, *inter alia*: French experiences with river basin agencies; funding of basin organizations; user participation in local authorities; civil society participation in international river management; and the conclusions of the recent Bonn conference on international rivers management. Participants called on the international community to facilitate dialogue between all stakeholders and interest groups.

The workshop recommended the establishment of legal frameworks that take into account the scale of river basins and aquifers, stakeholder participation, long-term water resources master plans and their prioritized investment programmes, and the mobilization of appropriate financial resources. Stakeholder participation may be organized through river basin committees and councils. The workshop also recommended the application of basin water charges and said water charges should be progressive to allow adaptation to the different situations of each country. They called for the mobilization of bilateral and multilateral development aid as well as the integration of user participation in international conventions for transboundary rivers while respecting sovereignty.

MINISTERIAL SESSION

The one-and-a-half day Ministerial session commenced on Friday morning, 20 March with an address by Federico Mayor, Director General of UNESCO. He noted that since its inception, UNESCO has included water resources management in its programmes. Observing that in the past, management and harnessing of water resources have not been compatible with sustainable development, he noted the gradual emergence of integrated water resources management as part of a comprehensive approach that is necessary in the future.

Jacques Chirac, President of the French Republic, highlighted degradation of rivers and lakes, desertification, water-related diseases, lack of access to safe drinking water and sanitation, and water-related conflicts as serious problems facing humanity, and emphasized that it is time to act to address them. He called for pragmatism, the establishment of deadlines and timeframes, and an end to waste. He stressed that calls for international cooperation do not threaten national sovereignty but strive for joint management of shared heritage. He proposed the establishment of an international water academy under the aegis of an existing institution through which all stakeholders can exchange water management experiences. He called for political will to implement and ensure follow-up of the conference's action plan.

Following these addresses, more than 120 speakers, including Ministers, high-level officials and representatives of international organizations, delivered statements. Several delegates highlighted national experiences and efforts to address water problems, including: flood control plans (BANGLADESH); legislative developments to coordinate water use and head off the consequences of climate change (COTE D'IVOIRE); a programme to introduce water points to villages and enable villagers to participate in management (GABON); use of irrigation to meet national food grain demand (INDIA); the use of recycled water in irrigation (JORDAN); long-term efforts to contend with growing water scar-

city (MOROCCO); the use of watershed pilot projects to determine effects of various management systems and use of appropriate technologies (PERU); work on management technology, environmental protection and legislation in the Mekong basin (VIETNAM); implementation of intensified sanitation programmes and a decentralized system for drinking water services (VENEZUELA); adoption of a federal water code and establishment of federal and regional management units (the RUSSIAN FEDERATION); and the creation of a central agency to gather and coordinate data on water resources management (THAILAND).

A number of speakers, including BOLIVIA, SWEDEN, ETHIOPIA, the NETHERLANDS, GERMANY, the FRENCH COMMISSION ON SUSTAINABLE DEVELOPMENT and the CONVENTION ON BIOLOGICAL DIVERSITY (CBD), reiterated the need for integrated approaches to water management. SRI LANKA reiterated the need for effective coordination of environment and water policies. Several countries emphasized that water is an economic asset. BELGIUM and HAITI stressed the need to consider not solely the economic but also the social aspects of water resources protection. ZIMBABWE highlighted the need for balance between economic policies to combat water wastage and ensuring equitable access by communities to water resources, and underscored the importance of subsidies in water provision to rural communities. TURKEY highlighted irrigation as one of the largest users of water and asked delegates to consider the appropriateness of agricultural subsidies.

AUSTRALIA recommended improving economic instruments for efficient management. ITALY highlighted the need for adequate pricing systems. GREECE said costs must be paid by users with due consideration to the strengths and weaknesses of different groups. MEXICO said prices must be rationalized with environmental and social criteria. The PHILIPPINES noted its use of water pricing that combines full cost recovery with consideration of capacity to pay, consistent with the view of water as an economic good. ENGINEERS WITHOUT BORDERS stated that the costs of water maintenance must be borne by consumers on the basis of the user pays principle. The INTERNATIONAL ASSOCIATION OF WATER DISTRIBUTORS said populations are generally prepared to pay the right prices for quality service if they are properly informed and involved in decision making. PORTUGAL underscored the importance of taking into account the costs of water based on national circumstances and within an international framework. The NETHERLANDS stated that a successful water resources management strategy will require: a balance of needs; protection and conservation of water resources that take into account the varied degrees of resources; streamlining; and proper management. THIRD WORLD ENVIRONMENT AND DEVELOPMENT (ENDA) said water should not be treated merely as a commodity and that its growing commercialization should be called into question.

Many speakers stressed the need to strengthen cooperation. UNESCO called for increased cooperation from UN agencies. INDONESIA called for solidarity in tackling problems of unequal access to water resources. GERMANY called for increased cooperation from the private sector. PANAMA expressed concern with the prioritization of industry over freshwater provision for local populations and called for solidarity in dealing with the human aspects of water management. The CZECH REPUBLIC said solutions to water problems require national, international and global cooperation to address all the socio-economic and political aspects. The COMPAGNIE GENERALE DES EAUX called on governments to create an enabling environment to foster cooperation.

MAURITANIA stated that water problems are a constraint to sustainable development and pose considerable potential for conflict. TUNISIA said water should be a source of cooperation and partnership rather than conflict. NORWAY said a proactive approach is fundamental to conflict prevention and resolution in transboundary watershed areas. BELGIUM, GHANA and GREECE underscored the importance of regional cooperation in managing joint hydrological resources. UGANDA and TANZANIA called upon the international community to support efforts by riparian States of the Nile basin to develop and adopt an integrated water management programme.

GERMANY noted the results of the recent Petersberg Declaration on the transboundary movement of water resources and said that this can serve as a starting point for regional cooperation. BURKINA FASO highlighted the importance of implementing the recent Ouagadougou Declaration on freshwater management, which calls for commitments to: implement national integrated management plans; develop a regional cooperation framework; establish a framework for dialogue between riparian States; and mobilize financial resources. SENEGAL noted its adoption of the Ouagadougou Declaration and called for combined management and fair sharing of water resources. PORTUGAL called on governments to ratify the Convention on the Law of the Non-Navigational Uses of International Watercourses as it provides a reference point in the definition of a framework to govern water use. The RAMSAR CONVENTION recommended that the international community fully utilize the potential of the Convention in the preservation of water resources and noted that Parties to the Convention have called for a water protocol in light of growing water problems. The US emphasized that solutions to water problems must primarily be found at the local and national levels.

Numerous speakers addressed financial matters related to water management. CHINA, BENIN and HUNGARY called upon developed countries to provide new and additional financial resources and transfer technology to developing countries. LUXEMBOURG called on the international community to muster fresh public and private financial resources. UNED-UK said financial investments in water resource management must be doubled if the recommendations of the conference's action programme are to be achieved, and called on the CSD to develop the capacity to monitor levels of financial commitment. COLOMBIA and BOLIVIA called for the establishment of a financial mechanism to guarantee funds for developing countries for sustainable water use and management. The US said a new financial mechanism is not necessary and would divert attention from water needs into a new institutional bureaucracy. He emphasized bilateral efforts and continuing contributions to existing financial institutions.

The EUROPEAN COMMUNITY promoted more effective donor cooperation and use of existing resources. The UK emphasized the importance of international partnerships and expressed its commitment to increase expenditure and bilateral support for water projects in developing countries. The WORLD BANK pledged its commitment to provide half of the US\$60-80 billion it predicted would be necessary over the next decade to carry out the recommendations of the action programme, and called for the adoption of the polluter pays principle.

WWF warned against overemphasizing financial issues in the water debate. The BAREFOOT COLLEGE called for an international code of conduct for international donors. MEED noted that inappropriate water management practices are caused by inadequate project design rather than a lack of financial resources. The INTERNATIONAL WATER SECRETARIAT called for promotion of innovative financial tools that build capacity and give women equal opportunity in business. DENMARK said equity considerations must be included and balanced with proposed financial schemes. BRAZIL noted that equity considerations cannot be adequately addressed in the market system, and said international assistance should be used to leverage national action. IRAN noted the unfulfilled promises of past regional and international water conferences, notably with regard to finance, technology and capacity building.

AUSTRALIA called for facilitation of private sector contributions. ETHIOPIA called for increased involvement of the private sector, regional and international cooperation and financial assistance and capacity building. BURUNDI, COLOMBIA, GHANA and others called for improved coordination of funding of water management efforts. The WHO called for increased investment in improving sanitary conditions. PAKISTAN supported the commission on large dams and expressed hope that its work will lead to further investments in the water sector.

The REPUBLIC OF KOREA underscored the role of technology transfer in preserving developing countries' water base, particularly publicly-funded technologies. The CONVENTION TO COMBAT DESERTIFICATION called on developed countries to facilitate access to technology and know-how. IFOAM-MEDI-

TERRANÉE said that, in assisting third world countries, "elitist" technologies ill-suited to their needs continue to be used. The PHILIPPINES called for a free exchange of information technology to improve international actions for water protection. UNESCO noted that global water problems cannot be solved by technology alone, and highlighted its activities to strengthen the participation of all stakeholders.

Other speakers, including ALGERIA, NORWAY, EGYPT, HAITI, MEXICO, LEBANON, PANAMA, PERU, the PHILIPPINES, ARGENTINA, TUNISIA, the MAGHREB-MACHRECK ALLIANCE FOR WATER and UNICEF, emphasized the importance of stakeholder involvement in water management. The participation of particular groups were highlighted: local governments and farmers (REPUBLIC OF KOREA); local communities (IRELAND, NIGER and the BAREFOOT COLLEGE); women (SWEDEN, DENMARK, the US, MEXICO and the WATER SOLIDARITY PROGRAMME); business (the PHILIPPINES); and poor people (SWEDEN and DENMARK). The HYDRO CONSEIL highlighted the significant role of private informal providers, such as those who drill village wells or carry water to remote neighborhoods.

Several speakers, including SWEDEN, CANADA and EGYPT, underscored the importance of partnerships to achieve sustainable freshwater use. SUEZ-LYONNAISE DES EAUX and COMPAGNIE GENERALE DES EAUX highlighted public-private partnerships in supplying water. The REPUBLIC OF KOREA, the ASSOCIATION OF LOCAL AND MUNICIPAL AUTHORITIES and the WORLD FEDERATION OF CITIES called for partnerships with local authorities. The COMPAGNIE GENERALE DES EAUX said involvement of industry can only be considered in close cooperation with public authorities. WATERAID said water problems are political rather than technical and are related to poverty, and urged governments to foster partnerships with civil society in addressing poor peoples' needs.

The importance of capacity building and information on water resources were also highlighted. UNDP called for capacity building for the sustainable development of water resources and the aquatic environment. LUXEMBOURG called on the international community to step up capacity for scientific and technical know-how. MEXICO called for increased coordination of information systems and, with CHILE, for the development of institutional capacities for training. ACADEMI DE L'EAU called for pilot projects on sustainable water management to enable the dissemination of best practices. PAKISTAN called for the exchange of experiences between developed and developing countries on sound means of water management. POLAND expressed support for national and international programmes that promote human resources development, formation of joint programmes on sustainable development and on appropriate means of financing water schemes as well as exchange of information and experiences on water management.

FINLAND supported efforts to improve knowledge, assessments and capacity. ITALY stressed the need for an accurate database of information on water resources. The WMO called for a reversal of the deterioration of the hydrological knowledge network. TANZANIA proposed the establishment of hydro-informatic systems for information dissemination and a global water week dedicated to public awareness. The REGIONAL CENTER FOR POTABLE WATER (CREPA) noted the importance of public involvement and access to information on water development and management. IRELAND called for continued commitment to improving knowledge of water resources and making accurate assessments of demand and activities likely to threaten supplies. IRAN called for well-defined objectives and performance indicators. ENDA, the BAREFOOT COLLEGE and the CBD called for the recognition and utilization of local knowledge and practices. LEBANON, EGYPT, ITALY, NICARAGUA, SUDAN and ARGENTINA supported President Chirac's proposal for the establishment of an international water academy.

CLOSING PLENARY

Following the Ministerial statements, delegates adopted by acclamation the Priority Action Programme and the Ministerial Declaration, which will be submitted as working documents and will provide input for further discussion of freshwater issues at CSD-6 in April.

Klaus Töpfer, Executive Director of UNEP, stated that the scientific and technological means to avert a pending water crisis are available, but collective political will and leadership to act innovatively and decisively must be demonstrated. He noted the potential eruption of conflicts over water in many parts of the world and called on the international community to elevate the issue of water quality for peace policy. He stated that UNEP, in close cooperation with all relevant institutions, must systematically identify solutions to water problems by: inventorying freshwater resources and identifying hot spots for conflict over water; assessing key priority freshwater issues; and developing innovative economic, legal, financial and institutional instruments for sustainable use and greater public awareness, education and participation. He emphasized the need to develop a holistic approach to water and sanitation activities, to make more efficient use of existing and innovative financial resources, and to forge partnerships to protect and conserve freshwater resources.

Nitin Desai, Under-Secretary General, UN Department of Economic and Social Affairs, said the comprehensive assessment of water resources indicates that present uses of water are unsustainable and that conflicts in water use are bound to increase. He underscored the need for: integrated management of water to encourage the establishment of institutional, regulatory and participatory frameworks; access to effective production systems; focus on human needs; and mobilization of necessary financial resources. He urged the conference to heed the call for an enhanced international dialogue between stakeholders and all interest groups.

Cielito Habito, Chair of the CSD, stated that the conference served to further the global dialogue on strategic freshwater resources. He noted the political commitments expressed during the conference and underscored the need for a collaborative approach to water management. He emphasized the global nature of water that transcends national, social, religious and ethnic borders and called for increased partnerships among nations, civil society and public and private sector organizations. He said the problem of water is not only a resource problem but also a "people problem" that must be solved collectively and requires integration of efforts. He called for a redefinition of the concept of security to encompass environmental security. He recalled the challenges raised by President Chirac to seek means of translating the stated commitments into programmes of action.

French Prime Minister Lionel Jospin said water would become a major challenge in the coming years, with its social, technical and economic aspects having a growing impact on national policy making. He noted that civil society would play an increasing and decisive role in managing water and paid tribute to their success in introducing sustainable development into water policy. He affirmed two principles discussed at the conference, the first being that good water management must take place at the level of the hydrographic basin, implying international cooperation in areas where, up to now, States had not been successful. The second principle holds that water management must be conducted as close as possible to the users, with the participation of civil society, notably women. User involvement would encourage them to share expectations and accept constraints and limits.

On water costs, Jospin said the conference had considered polluter-pays and user-pays approaches and these approaches could serve as incentives to help change behavior. Conference participants had abandoned the previous notion that water is a "gift from the heavens" and free of charge. He said this economic approach should not be confused with a purely commercial or market approach to supply and demand, and called for a balanced approach to user contributions toward costs. He noted the surprising conclusion that those countries most exposed to water scarcity often lack knowledge of their own water resources, and he

affirmed the importance of training together with technology transfer and knowledge. He also underlined the importance of education and changes in consumer behavior.

PROGRAMME FOR PRIORITY ACTIONS

The recommendations finalized in the three expert workshops were compiled into a Programme for Priority Actions, which was adopted during the Ministerial session on Saturday, 21 March. Following is a summary of the Programme.

IMPROVING KNOWLEDGE OF WATER RESOURCES AND USES FOR SUSTAINABLE MANAGEMENT

ESTABLISHING AND IMPROVING INTEGRATED SYSTEMS FOR MONITORING WATER RESOURCES, THEIR USES AND ECOSYSTEMS: This section states that a high priority should be given to the strengthening or establishment of local, national or international integrated water information systems in order to mobilize information for water resource and ecosystem management, water use regulation and protection against point or non-point source pollution, and prevention of crisis situations. A better assessment of water resources, their different uses and their efficiency is essential.

Strengthening and establishment of integrated information systems: Integrated information systems should be developed on various scales, from local to global. They should be structured as long-term monitoring systems, particularly at the level of large river and lake basins, and aquifers. Governments are responsible for their sustainability and must also ensure improvements in quantity and quality of information.

Development of data exchange: Priority should be given to the national and international standardization of definitions, development of user-friendly formats, and access to and exchange of information.

STRENGTHENING REGIONAL, NATIONAL AND INTERNATIONAL PROGRAMMES FOR ACQUIRING FUNDAMENTAL KNOWLEDGE OF WATER RESOURCES AND THEIR USES:

Understanding major trends and their impact: In order to improve research capacities, international scientific, institutional and technical cooperation should be strengthened to develop concepts along with indicators and common methodologies, particularly with regard to the characterization of:

- reliable and "usable" resources on the basis of rational demand management;
- different consumptive or non-consumptive water uses in basins, their evolution and efficiency;
- point and non-point pollution sources;
- the condition of aquatic ecosystems, rivers, lakes, wetlands and groundwater;
- eutrophication and biological degradation of rivers, lakes and reservoirs;
- extreme meteorological and hydrological events;
- economic and social values of ecosystem functions;
- modification of watercourse flow regimes and functioning of aquifer systems caused by infrastructures, withdrawals and discharges; and
- changes in land use and soil degradation, biological diversity and living aquatic and terrestrial resources.

Due to women's role in utilizing and conserving water resources, their knowledge and experience should be considered as a component of any sustainable water management programme. Information systems should rely on data that reflects the role of women. The users of water-related information must be associated with data collection.

Prospective studies should be carried out on water resource availability and changes in water demand to assist in identifying potential water crises. It is particularly important to be able to assess the interaction between inland freshwater resource management and other major environmental issues and to make a connection between water, health, sufficient nourishment and poverty.

Facilitating regional and international cooperation to improve knowledge: To improve knowledge, it is necessary to reinforce regional and global programmes, that will rely, whenever

possible, on national programmes. Considering their geographic coverage and their aim, some should be financially supported, while others call for cooperation. The section lists some ongoing international programmes.

NETWORKING WATER DOCUMENTATION SYSTEMS: The following activities should be promoted:

- collection of easily understood information and wide dissemination to all stakeholders in order to promote professional training, disseminate new knowledge and enhance public awareness;
- creation of interlinked and widely disseminated systems for exchanging institutional, economic and technical documentation and baseline information; and
- development of compatible references, protocols for computerized exchange of documentation and multilingual approaches, and management of the network and training of documentation specialists.

PROMOTING HUMAN RESOURCES DEVELOPMENT AND INSTITUTIONAL CAPACITY BUILDING

An introduction notes that the two key topics in this section are the integrated management of water resources and services for the supply and use of resources, including sanitation. The section builds on the Harare experts group view that an integrated approach requires a significant reinforcement of institutional and human capacities at both national and local levels in a complementary manner and with the involvement of civil society. There is a call for strong political will and long-term financial commitment to make the recommended actions effective and durable.

INSTITUTIONAL CAPACITY BUILDING:

Role of public authorities: The importance of supporting integrated and multi-year projects for the establishment and improvement of administrative, financial and technical frameworks is underlined, in order to improve management of the water sector. Taking account of specific needs, capacities and cultures, projects should address:

- legislation and regulations for integrated water management and enforcement;
- management agencies with well-defined responsibilities and financial resources;
- institutions and procedures to enable participation by local authorities, users and civil society, including women, nomadic people and the poor, in decision-making and project specification;
- detailed studies for long-term water development at the river basin or aquifer level; and
- elaboration of multi-year priority national investment programmes, taking account of user-pay systems and the polluter pays principle.

Role of Local Authorities: Objectives with regard to the devolution of water supply and sanitation responsibilities to local authorities include: improving decision-making capacity for local managers; facilitating exchange of experience between managing agencies; improving economic and technical service efficiency; and promoting local initiatives.

Participation of civil society: Requirements for public and civil society participation in planning, design and funding are: access to and dissemination of information; training of decision makers, including village leaders and NGOs; promoting initiatives within advocacy groups; and full involvement of women and children's awareness raising. It is recommended that a significant share of ODA for large infrastructure, equipment and institutional reform be allocated to these activities.

Implementation of management tools for transboundary freshwater bodies: Referring to Agenda 21, the Rio Declaration and the UNGASS Programme for Further Implementation of Agenda 21, riparian States are encouraged to cooperate on transboundary water matters, taking account of the interests of the States concerned. To this end, it is considered desirable to: promote information exchange between riparian countries; develop dialogue, including at the level of relevant international institutions when appropriate; and define priority actions of common interest. The

section also calls for enhanced action by bilateral and multilateral donor institutions, and invites the GEF to take account of the Priority Action Programme under relevant focal areas.

Collection and dissemination of economic information: Countries undertake to strengthen studies on costs of different water uses, performance monitoring, and national and regional indicators. Monitoring mechanisms should be developed on an appropriate scale.

HUMAN RESOURCES DEVELOPMENT: Multidisciplinary and multisectoral training and information provision for water professionals and users are identified as prerequisites for optimum water use and cost-effectiveness.

Vocational training for professionals: There are calls for a significant increase in funding, in-service vocational training funded by public and private employers, particular attention to the training of women, priority ODA funding for regional training focal points, and the possible establishment of specialized technical and managerial training institutions. Networks for training trainers and developing materials are also proposed. Implementation of integrated water resources management is said to require appropriate high-level training and high priority is attached to training least qualified staff to improve operating conditions, maintenance and administration.

Research and transfer of technology: There is a call for the development of national and regional research programmes linked to higher education, and the exchange of know-how and technology, taking account of indigenous technologies. The responsibility of the international community in this regard is underlined.

Awareness, information and education of users: Water management is described as an increasing responsibility of users and local populations, who should be made more aware of issues relating to wastage control, the economic, social and cultural values of water, disease prevention, soil erosion and environmental protection. This will require a global transdisciplinary approach with strengthened actions to enable women's participation.

DEFINING STRATEGIES FOR SUSTAINABLE WATER MANAGEMENT AND IDENTIFYING APPROPRIATE MEANS OF FINANCING

FORMULATION AND IMPLEMENTATION OF SUB-NATIONAL, NATIONAL AND REGIONAL STRATEGIES: This section states that: countries that have not yet formulated sub-national or national strategies for the water sector should be encouraged to do so; regional strategies should be developed as necessary; existing strategies should be evaluated and updated regularly; and implementation of these strategies should meet requirements for integrated water resources management and include adaptation and modernization of institutional, legislative and regulatory frameworks, improvement of knowledge of resources and uses, and training in service management and equipment maintenance. Instruments to support the use of water as a catalyst for regional cooperation could be emphasized.

MOBILIZATION OF FINANCIAL AND OTHER RESOURCES:

Mobilization of national and local resources: Water planning and management must be considered within a socio-economic development framework while recognizing the vital role of water in fulfilling basic human needs. Incentives to improve water resources use and protection, pricing and financial, as appropriate, should be developed. Ways and means to facilitate a gradual transition toward full cost recovery should be explored and should be transparent. Subsidies for specific groups, particularly poor people, might be considered in some countries.

- Appropriate frameworks should be established to:
- enable the sustainable mobilization of private or public funds to finance water supply and sanitation networks;
 - facilitate access to credit and encourage micro-credit development;
 - provide, as needed, public or private investors with appropriate risk guarantee schemes for the financing of investments;
 - set up, to the extent possible, user pays pricing systems that cover direct or indirect costs of services with costs billed to users who can afford to pay;

- manage, as needed, the transition toward recovery of, at a minimum, operational maintenance and replacement costs and watershed costs, with, as necessary, an intermediate phase in which these could be partly covered by public funds;
- ensure transparency;
- apply efficiently the polluter pays principle; and
- take into account costs related to acquisition of knowledge, surface and groundwater protection and development, ecosystem preservation and management, among others.

Mobilization of external resources: Bilateral and multilateral donors should assist countries in formulating and implementing integrated water resources management strategies, consistent with defined priorities. Evidence that existing resources are used optimally will help mobilize additional financial resources from national and international sources, both public and private. Joint action and co-financing of multilateral and bilateral donors should be emphasized.

Use of innovative mechanisms: Due consideration should be given to greater private sector involvement, innovative models for local water resources management and use of market mechanisms where appropriate.

Mobilization of local human resources and knowledge stemming from different cultures: Local human resources should be mobilized and the population's diversified know-how utilized.

PRIORITIES FOR ODA: Bilateral and multilateral donors should first concentrate concessional financing on enabling activities and programmes intended to improve the enabling environment in order to meet basic priority needs, building on ongoing activities. Among these:

- meeting basic needs, with special consideration for gender and equality issues;
- organization of integrated monitoring systems and databases to improve information on resources, use and pollution;
- implementation of institutional, administrative and economic reforms;
- vocational and in-service training;
- facilitation of public-private partnerships;
- sustainable management of water-related ecosystems;
- research, training and capacity building;
- natural disaster preparedness; and
- efficiency of irrigation.

ANNEX - PROMOTION OF PARTNERSHIP AND DIALOGUE

An annex to the Programme states that all public authorities, public and private companies and NGOs involved in the water sector are invited to engage in a permanent dialogue with all users and beneficiaries. This dialogue requires sharing all relevant information with stakeholders and discussions on objectives and implementation modalities. Transfer mechanisms of know-how, knowledge, technology and all relevant information for improving efficiency and fostering development of services will be promoted through institutional or business partnerships, among others. All actors will support, as appropriate, sharing and dissemination of experience and exchange of information.

MINISTERIAL DECLARATION

In the Ministerial Declaration of the International Conference on Water and Sustainable Development, Ministers and Heads of Delegations state that they: are convinced that freshwater has mutually linked and supportive social, economic and environmental values and is essential to sustainable development; are guided by the conclusions of UNCED and UNGASS; recall previous deliberations on water by the international community; note the ongoing preparatory process for CSD-6, including contributions from recent expert group meetings; express concern over a number of issues which pose serious threats to social and economic development; are concerned that constraints on access to water could become a major limiting factor in sustainable development; and are determined to take advantage of the opportunities to tackle these problems by promoting local and national systems for managing the sustainable use of water resources based on an inte-

grated approach that links development with protection of the natural environment, participation of all actors and interested parties, and recognition of the social and economic values of water.

The Declaration also underlines the importance of: water resources in satisfying basic human needs, the preservation of ecosystems and for social and economic development; protecting ecosystems to maintain and rehabilitate natural hydrological cycles; water for future prosperity and stability and its recognition as a catalyst for regional cooperation; improving knowledge and understanding of water resources; strengthening institutions, in particular local institutions, and improving training and awareness of professionals and users; promoting the development, management, use and protection of water by public and private partnerships based on participatory decision-making processes; and international cooperation in achieving these objectives at national, regional and global levels.

The Declaration: calls upon the international community, public authorities at every level and civil society to give priority to providing safe drinking water and sanitation to all; calls on the international community to take into account the Harare expert meeting's outcomes and develop a statement of principles to be applied in developing and implementing local and national water management systems and international cooperation to support them; and commits support for the implementation of the following guidelines, where appropriate, and in the framework of national and local strategies, taking into account each country's specific situation:

- promote the integration of all aspects of the development, management and protection of water resources by developing plans that set out to satisfy basic needs and promote efficient and equitable allocation of water resources, protection of ecosystems and maintenance of the hydrological cycle. Shared vision between riparian countries is important for the effective development, management and protection of transboundary water resources. Relevant international conventions can make a contribution to the integration of their special interest in sustainable water use.
- mobilize adequate financial resources from public and private sectors, and as an important part of this task, enhance the effective use of available resources. Provisions for progressive recovery of direct service costs and overheads, while safeguarding low-income users, should be encouraged. ODA should complement and focus programmes designed for creating enabling frameworks for the sustainable development, management and protection of water.
- improve knowledge, training and information exchange by encouraging increased transfer of technology and expertise, development of monitoring and information systems related to water resources and their uses, and support programmes for vocational and continuous training. In parallel, people living in poverty and disadvantaged groups, indigenous communities, youth, local authorities, leaders of local communities and NGOs should be enabled to be more involved in the decision making process. Women should be enabled to participate fully in project definition and implementation.

The Declaration: highlights the importance of following up the guidance contained in the Programme of Priority Actions and submits it for consideration at CSD-6; calls on relevant international institutions to follow-up the actions derived from the recommendations contained in the Declaration and the Programme of Priority Actions; stresses the need to ensure that the problems of achieving sustainable development, management and protection, and equitable use of freshwater resources are kept under review, to improve coordination between UN agencies and other international organizations, and to ensure periodic consideration, within the UN system and in particular the CSD, of the proposed priorities of governments for action, and to emphasize the role of UNEP in the field of environment; and emphasize the need for continuous political commitment and broad-based public support to ensure the achievement of sustainable development, management and protection, and equitable use of freshwater resources and the importance of civil society to support this commitment.