

UN-Water



There are 23 UN agencies and conventions concerned with the freshwater resource. Their interests and mandates overlap: it is recognized that there is a need for mechanisms to bring them to common purpose. Until the UN Administrative Committee on Co-ordination (ACC) was abolished in early 2002, its Sub-committee on Water Resources (SWR) provided a co-ordination mechanism.

In October 2002, on the instructions of UN Secretary General Kofi Annan, the former ACC-SWR was reconstituted as 'UN-Water', the United Nations Inter-Agency Committee on Freshwater. The mandate of the Committee is to respond to the many types of requests coming from member states requiring integrated action. These range from the organization of single events requiring coordination between the agencies to long-term programmes designed to address major policy issues and to produce and effect comprehensive plans of action.

The creation of UN-Water with revised terms of reference brings a new sense of vitality to the system of UN agencies concerned with freshwater. This further emphasizes that the UN system is more committed than ever before to working as a joint force on water resource management. The World Water Assessment Programme is now recognized as the flagship programme of UN-Water bringing the UN agencies together.

UN Water Partner agencies



The contribution of the World Water Assessment Programme of the text and chart of official UN sessions presented in this guide is gratefully acknowledged.

UNITED NATIONS FUNDS AND PROGRAMMES

UN Centre for Human Settlements (HABITAT)

UN Children's Fund (UNICEF)

UN Department of Economic and Social Affairs (UNDESA)

UN Development Programme (UNDP)

UN Environment Programme (UNEP)

UN High Commissioner for Refugees (UNHCR)

UN University (UNU)

SPECIALIZED UN AGENCIES

Food and Agriculture Organization (FAO)

International Atomic Energy Agency (IAEA)

International Bank for Reconstruction and Development (World Bank)

World Health Organization (WHO)

World Meteorological Organization (WMO)

UN Educational, Scientific and Cultural Organization (UNESCO)

UN Industrial Development Organization (UNIDO)

UNITED NATIONS REGIONAL COMMISSIONS

Economic Commission for Europe (ECE)

Economic and Social Commission for Asia and the Pacific (ESCAP)

Economic Commission for Africa (ECA)

Economic Commission for Latin America and the Caribbean (ECLAC)

Economic and Social Commission for Western Asia (ESCWA)

SECRETARIATS OF UNITED NATIONS CONVENTIONS AND DECADES

Secretariat of Convention to Combat Desertification (CCD)

Secretariat of Convention on Biological Diversity (CBD)

Secretariat of UN Framework Convention on Climate Change (CCC)

Secretariat of the International Strategy for Disaster Reduction (ISDR)

"The United Nations at the

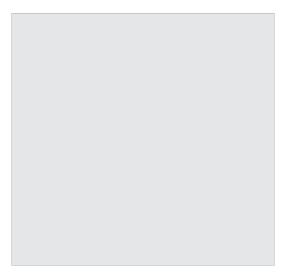
Third World Water Forum – DELEGATE'S Guide"

KYOTO, MARCH 2003

At the Millennium Summit in 2000, world leaders agreed to reduce by half, by the year 2015, the proportion of people who are unable to reach, or to afford, safe drinking water. And at the World Summit on Sustainable Development in Johannesburg, a matching target was adopted – a commitment to halve the proportion of people without access to basic sanitation services, also by 2015. If we fail to meet these goals, grave consequences lie ahead, including the persistence and spread of deadly diseases, further damage to the global environment, and threats to food security and stability itself. And while water problems are most acute in the developing world, developed countries are also at risk.

This guide for delegates at the Third World Water Forum describes the wide-ranging work of the United Nations in helping the world confront this urgent challenge. It includes, on CD-ROM, an overview of the first edition of the *World Water Development Report*, "Water for People, Water for Life", a joint project of 23 United Nations specialized agencies and other entities. The report provides a comprehensive look at today's water problems, offers recommendations for meeting future water demand, and makes clear the strong commitment of all parts of the United Nations system to working with each other and with all partners in this quest. I urge you, the delegates to this important forum, to pool your efforts. Together, we can safeguard the world's precious freshwater resources – our lifeline for survival and sustainable development in the 21st century. In that hopeful spirit, I offer you my best wishes for a productive and successful week.

Kofi A. Annan



THE UNITED NATIONS

World Water Development Report

EXECUTIVE SUMMARY

ON CD ROM



THE SECRETARY-GENERAL

UN Led and Supported Official Sessions at the **Third World Water Forum** For assigned times and venues, please consult the final WWF3 programme

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22	ources Management in Management	Crisis: Sharing Knowledge, e Basin Management Intifative r, The World Bank, IEC)	Integrated Watershed Management (UNE-DIE-ETC & UNESCO)	Virtual Opportunifies: Using the Internet to Promote Public Participation and Improved Decisions (ELI, UNVI), TIAT)	Strategies and Actions to implement the World Lake Vision (ILEC, UNEPDITEJETC, Shiga Prefectural Government)	(NEC, UNEPDIFIEIC, Shiga Prefectural Government) Other Sessions		Governers' and Chairpersons' Meeting for Sustainable Licke Management (Shiga Prefectural Government, ILECF & UNEPLETC)		Water Quality Monitoring and Modeling The Present Situation and Partnership for the Future (ISWE, MaE, UNU, IGES)				Ministers' Meeting on Water, Food and Agriculture (MOAF, Japan & FAO)	Minister's Meeting on Water, Food and Agriculture (MOAF, Japan & FAO)
20	Integrated Water Resources Management (IWRM) and Basin Management	World's Lakes and Freshwater Crisis: Sharing Knowledge, Experiences and Vision for Lake Basin Management Initiative Supported by GEF (LBR), The World Bank, ILEC)	World Lake Vision: A call to Action (International Lake Environment Committee Foundation, UNEP-DITE-IEIC, Shiga Prefectural Covernment)			Total Street Section S								od and Water	
wed	nd Cliies \BITAT)	Special Session on "Water and Cities" – Financing (UNHABITAT)	High level Ministerial and Mayoral Session on Water for Asian Cifies (UN-HABITAT)		Water and Information	Water Information Day (AWRA, Water Web Consortium & UNESCO)	Hydrological Information Systems (W/MO)		Groundwater (World Bank, GWWATE, UNESCO, FAO Marcelino Botin Foundation & Association of Environmental Hydrogeologists)			ds		Agriculture, Food and Water (FAO)	Water: Source of Food Security (FAO)
7 0 €	Water and Cities (UNHABITAT)	Special Session on "Water and Cities" – Water for Asisan Cities (UNHABITAT)	Water for Cities: Dynamic Solutions for Meeting the Urban Water Challenge (UNEP-DITE IETC, UNEP-GPA, UNHabitat, UNDP-TUG), IMA & WRC)	History of Water: Lessons to Learn (ICID, IWHA, UNU & Sayamaike Museum)			Environment		Groundwater (Wend Bank, GWWATE, UNESCO, FAO Marcelina Botin Foundation & Association of Environmental Hydrogeologists)	Groundwater for Socioeconomic Development – Improving Management and Practice (The World Bank, UNESCO, 1AH, FAO & IAEA)	Groundwater for Socioeconomic Development – Enhancing Understanding for Better Management (UNESCO, FAO & UNECE)	Hoods	Integrated Flood Management (WMO)	nd Environment UNEP)	Freshwater and Coast – A Missing Link in Integrated Water Management (UNEP/G9A & University of Delaware UCC/DH)
WON NON	tygiene and Water Pollution apan Sewerage Comm for WWVF3) 7. Nane Annan	Water Sanitation and Health (WHO)	Safe Water: Household Security and Quality (UNICEF)	Technology Alternatives for Developing Countries (UNEPLETC)	(UNESCO, Academy de l'eau um of Ethnology)	Itural Diversity Idemy de l'eau)	Water Food and Environment	Virtual Water – Trade and Geopolitics (FAC, WWC, UNESCO IHE)						Water, Nature and Environment (IUCN & UNEP)	Industrial Development and Water/Comprehensive Role of UNIDO (UNIDO)
s UN	Water Supply, Sanitation, Hygiene and Water Pollution (WSSCC, WHO, UNICEF, JWRC, Japan Severage Comm for WWF3) Casing plenary: Nane Annan	Global Initiative on Wastewater and Sanitation, Revisited (UNEP.GPA)	Technology and Policy Dimensions of Arsenic Contamination in the Asian Region (UNU)		Water and Cultural Diversity (UNESCO, Academy de l'eau & National Museaum of Ethnology)	Water and Cultural Diversity (UNESCO & Academy de Feau)	Other Sessions	Water Resources Management in Costal Zones and Small Islands (UNESCO)							

			World Water Assessment Programme (UN-WATER)												
		adiy Building (UNESCO)			Water for Peace (UNESCO & GCI)	ation Potential: Water for Peace & GCI)	Transboundary Water Resources, Impact Assessment of Human Activities, The Global GIWA Project (UNE-GIWA)	pment (UNEP.DDP & WWC)	oting Dialogue for Improved				ler Forum (UNICEF)	Europe	Water Pollution: New Approaches to Face Risks to the Environment and Human Health (Swiss Agency for the Environment, Forests and Landscape & UNECE)
Water and Poverty	Water, Education and Capacity Building (UNESCO)		Capacity Building for Integrated Water Resource Management (UNESCOLHE & UNDP.CAPNET)	(UNESCOLHE & UNDP.CAPNET)		From Potential Conflict to Cooperation Potential: Water for Peace (UNESCO & GCI)		Dams and Sustainable Development (UNE-DDP & WWC)	Dams and Development: Promoting Dialogue for Improved Decision-making (UNEP.DDP & WW/C)	Day of Middle East and the Mediterranean (The World Bank)	Water Demand Management in the Middle East and North Africa Region: Breakthrough, Development and Challenges	Sustrindbe Wider Resources Management in the Middle East and North Africa region – Sponsored by the Partnership Program between the Secretariat of the 3MWF and the World bank Middle East and North Africa Regional Water Initiative (World Bank)	Children's World Water Forum (UNICEF)	nd Management Panel	programme to Solutions
	Living with Risk – Towards Sustainable Development (UNISDR)													Science, Technology and Management Panel	Contributions of the IHP programme to Solutions through Innovation (UNESCO)
Water, Food and Agriaulture Lapanese National Committee for ICID & FAO)	Minister's Meeting on Water, Food and Agriculture (MOAF, Japan & FAO)	ansportation	Managing the Knowledge Gap in the Field of Inland Waterway Transportantion (UNESCO)	Integration of Inland Water Transport within Intermodal Transport Systems (UNESCAP/ADB)	Youth World Water Forum	Youth and the International Year of Freshwater (UNESCO & UNDESA)	Asia and Padific (UNU, GWP SASTAC, GWP SEATAC, GWP CHINATAC)	Shared Water Resources in Central Asia-Aral Sea Session (UNU, ICWC, ADB)					Informal dialogue with children (Mrs. Nane Annan) and Launch of "WASH In Schools" (UNICEF & WSSCC)		
Ecosystem Approach to Water Monitoring and Management (UNE), IECF & Kyoto University, Japanese Ministry of Environment and Horiba Ltd)	Water Resource Management in Mountainous Areas (UNESCO)	Water and Transportation										Activities in Kyoto Activities in Osaka Activities in Shiga			



Six months after the World Summit on Sustainable Development in Johannesburg

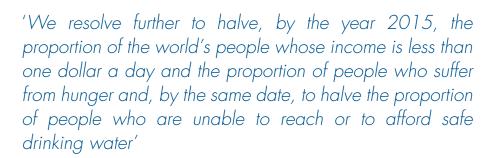
The global water scene

As we enter the 21 st century a global water crisis threatens the security, stability and environmental sustainability of all nations, particularly those in the developing world. Millions die each year from water-borne diseases, while water pollution and ecosystem destruction grow. Those in developing countries are hardest hit. Critical challenges lie ahead in coping with progressive water shortages, water pollution, and our slow movement forward in providing water and goods and services derived from water to those who need them.

Freshwater issues were given paramount importance by the World Summit on Sustainable Development, held in Johannesburg South Africa from Aug. 26 to Sept. 4, 2002. They are now high on the political agenda in all regions of the world. Water is increasingly acknowledged as **the** basis for sustainable development.

World leaders recognized the role of water in basic survival, for the sustainability of supporting ecosystems and for socioeconomic development. They have all shown their concern over dwindling supplies and the deterioration of water quality. One key issue identified is the increasing competition between uses and users of water, which has made it more urgent than ever before to act in unison so that water resources can be managed as wisely as possible.

Freshwater issues congregate where questions of health security, food security and environmental sustainability meet. The Millennium Development Goal agreed by Heads of State in 2000 seeks improvements in the lives of billions, in many different ways – and quickly. Separate targets have been set in economic growth, health, agriculture, and poverty alleviation. Water security is central to meeting each of the individual challenges. There are also specific targets in water – in supply and sanitation. Significantly, the Millennium Development Goal embraces the different dimensions in a single statement:



This goal cannot be met by 2015 unless <u>all</u> outcomes are achieved; in other words, the individual challenges related to water must be resolved but in concert with the others.

The Plan of Implementation adopted in Johannesburg reiterated the Millennium Development Goal on water, and set a new target of halving the proportion of people who do not have access to basic sanitation by 2015. It also recognized the key role of water in combating poverty and in the realms of agriculture, energy, health, biodiversity and ecosystems.





The importance of water for sustainable human development was recognized by its primacy among the Summit's five interrelated priority areas, as proposed by UN Secretary-General Kofi Annan: Water and sanitation, Energy, Health, Agriculture and Biodiversity – (WEHAB).

Realization of the Millennium goals and the WEHAB framework hinge on the world's commitment to design and implement policies based on the principles of Integrated Water Resource Management (IWRM).

IWRM is "a process which promotes the co-ordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems." (Technical Advisory Committee of the Global Water Partnership.)

Agreeing to social, economic and ecosystem sustainability goals in the short and long terms, and finding the right balance between them lie at the heart of this process. It embraces integration across many different dimensions, within both natural and human systems. The process of balancing and making trade-offs relies on means that are practical and scientifically sound. IWRM does not focus on sub-sectoral strategies and implementation per se – but rather on the interfaces between them.

It is a framework that prevents problems and costs being merely shifted to other sectors – to the desks, inboxes and budgets of other people. Or, as is more often the case, that problems are shifted to those with the weakest voices – the poor and disadvantaged segments of the populations, the environment and future generations. Or at worst, that they are left unspoken, unaddressed and unresolved.

RESPONSE OF THE UN SYSTEM

Acceptance of the need for a more people-oriented and integrated approach to water management and development has evolved as a result of a number of major conferences and international events. The Mar del Plata Action Plan of the 1977 UN Conference on Water, the Dublin Conference on Water and the Environment and the 1992 Rio Earth Summit, which produced the landmark Agenda 21 document, and the subsequent World Water Vision exercises have successively reinforced the need for better management of the world's freshwater to achieve sustainable development. UN agencies with interest in water resources have singly or as a well-coordinated team initiated several actions for freshwater resource management.

Of late, at the urging of the Commission on Sustainable Development and with the strong endorsements by the Ministerial Conference at The Hague in March 2000, the United Nations has responded by undertaking a collective system-wide reporting process, **the World Water Development Report** (WWDR).

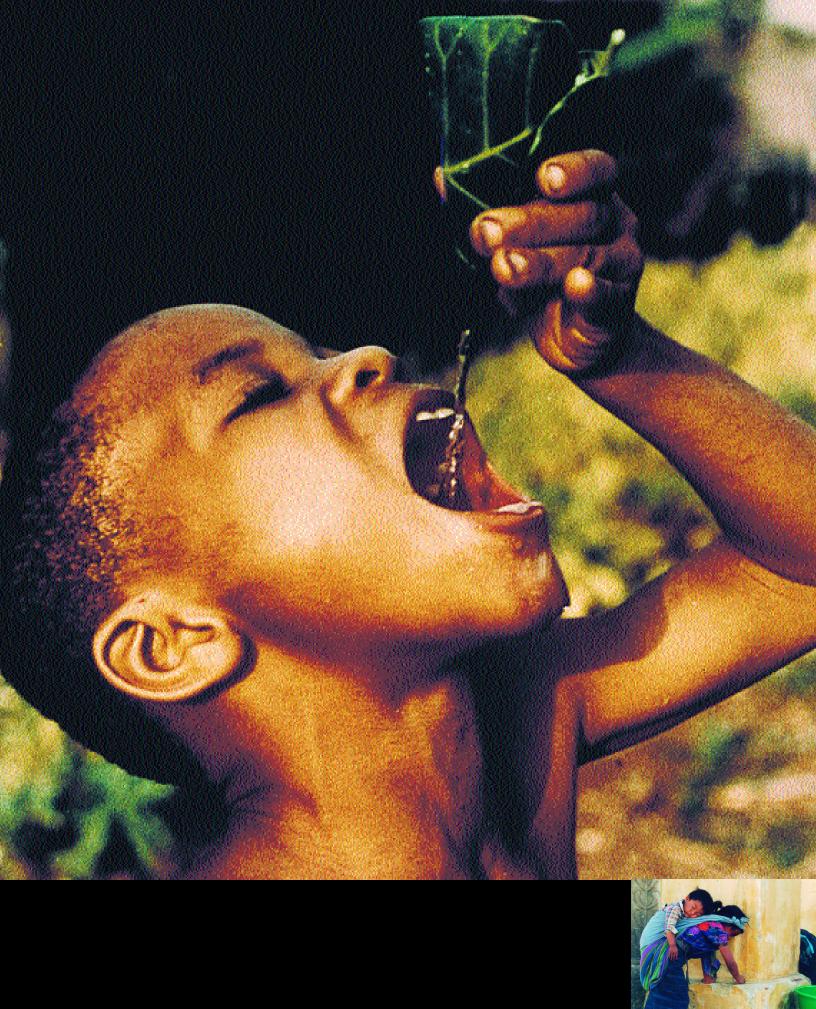
The system of United Nations agencies has the mandate, credibility and capacity to take on the task of systematically marshalling global water knowledge and expertise to develop, over time, the necessary assessment of the global water situation, as the basis for action to resolve water crises.

The WWDR is a triennial report that builds on the achievements of previous endeavours and focuses on capturing the developing freshwater situation throughout the world. The WWDR will be continuously updated, designed to give an authoritative picture of the state of the world's freshwater resources and our stewardship of them.

Production of the triennial WWDR is supported by a UN system-wide programme called the **World Water Assessment Programme** (WWAP). To produce the WWDR, the WWAP is strengthening data compilation (geo-referenced meta-databases), providing supports for information technologies, data interpretation, comparative trend analyses, data dissemination, methodology development and modeling. The recommendations from the WWDR include capacity building to improve country-level assessment, with emphasis on developing countries. This includes the building of capacity in education and training, in monitoring and database science and technology and in assessment-related institutional management. The Programme identifies situations of water crisis and thus provides guidance for donor agencies. It develops knowledge and understanding necessary for further capacity building.

The First Edition of the World Water Development Report will be formally launched in Kyoto on World Water Day, March 22, 2003, with high-level participation of the delegates from the member states, and UN agencies.





UN inputs to the Ministerial Conference, Third World Water Fourm

1. BASIC PRINCIPLES

- a. Access to water is intimately linked to poverty, basic human needs and sustainable human development and maintenance of the natural environment.
- b. Consideration of basic human needs, maintenance of sustainable livelihoods, the need to eradicate poverty and the inclusion of human rights are the guiding principles in promoting improved water management and in developing national and local policies for water supply and management.
- c. Linkages between water, poverty and the health of the natural environment are particularly acute in the developing countries. Since more than two thirds of the population lives in developing countries, especially Africa and South Asia, the need to preserve natural catchments, maintain river systems, provide clean water, and adequately treat wastewater is especially urgent in those regions.
- d. Degradation of freshwater ecosystems exacerbates the frequency and impact of droughts, floods, and other natural hazards, particularly in ecologically-fragile areas where the poor often live, and can intensify competition and the potential for conflict over access to shared water resources.
- e. Environmentally sustainable freshwater management is a pillar of sustainable development, including poverty reduction, and integrated environmental, social and economic approaches are necessary to achieve environmentally sustainable water management.
- f. Effective systems of governance are important in ensuring the access of the poor and disempowered to safe and adequate water resources and related services, and play a vital role in making the complex trade offs necessary for long-term, sustainable development in the context of integrated water resources management. Weak and ineffective institutions, policies and legislation result in the inefficient and inequitable provision of water and related services.
- g. Critical challenges lie ahead in coping with progressive water shortages and water pollution.

2. THE NEED FOR THE INTEGRATED APPROACH

- a. Water issues must be set within the broader context of global change. Important elements of global change include significant population growth in many parts of the world (especially in the developing world and in cities), changes in geo-political and economic circumstances, changes in technologies and changes in climate.
- b. Human influence of runoff is now global and we are significant players in the hydrological cycle. The per capita use is increasing and population is growing. By the middle of this century, about 7 billion people in 60 countries may be water-scarce. Even under the best scenarios, 2 billion people in 48 countries will be water-scarce.
- c. Recent estimates suggest that climate change will account for about 20 percent of the increase in global water scarcity.
- d. An integrated approach to water resource management is critical to the long-term integrity and productivity of water resource management.
- e. As more than 70 percent of the world's population lives within 50 km of the coastline, the integration of coastal area and river basin management is critical to the long-term integrity and productivity of coastal ecosystems. Linking the management of freshwater and coastal areas implies overcoming substantial institutional, legal and management barriers.
- f. Innovative approaches are needed to reduce water stress in arid regions supported by strong management and scientifically-based policy.
- g. Linkages between science and policy when implementing integrated water resource management should be appreciated.
- h. Concerted action is needed to reduce the freshwater impacts in mountains, the "water towers of the world", from pollution, population growth, climate change and exploitative agricultural, forestry, mining and tourism practices.





- i. Lack of adequate capacity continues to be a major constraint to implementation of integrated resource management. There is a need for additional resources, as well as more innovative approaches to capacity building that are firmly based on genuine ownership by the beneficiaries.
- i. Since in many societies women are directly responsible for the management of water resources (water supply and sanitation, and agriculture), it is of great importance that women be fully involved in water resources planning and decision making. Policy and legal frameworks should be modified in consideration of gender equality.

3. THE URGENCY FOR ACTION IN PARTICULAR AREAS

a. Basic health issues

- Give top priority to health gains from improved water management.
- Safeguard health of children most affected by water-associated diseases and who can get the biggest health gains from improved water management most cost-effectively.
- Promote risk management based strategies and immediate mitigation measures to improve drinking water quality.
- Recognize the leadership of women in water supply, sanitation and hygiene to effect substantial gains
 in family health and reduced health expenditure at the household level.
- Promote the need to increase the financial and human resources available to achieve these targets, and ensure that adequate resources are also available to monitor progress.
- Recognize basic needs, sustainable livelihoods and the human rights approach as the guiding principles in promoting improved water management and develop national and local policies for water supply and management.
- Create policy, legal and institutional frameworks, and develop skills for Health Impact Assessment (HIA)
 of water resources development.
- Carry out studies that better define the attributable fraction of the burden of water-related vector-borne diseases (malaria, schistosomiasis, Japanese encephalitis and filariasis) to components of water resources development projects, in terms of infrastructure and management.
- Incorporate adequate and effective interventions in water supply and sanitation in situations of emergencies and disasters.
- Recognize that "Western solutions" are often inappropriate for the needs of developing countries.
 Western waste management practices, such as water-based sewage disposal where safe drinking water is used to flush away human excreta, are abusive to human well-being, economically unaffordable and environmentally unsustainable.
- Develop new, decentralized management systems in order to reach communities and households.
 Affordable, non-polluting systems for water, sanitation and waste management must be developed to improve access for the poor.
- Shift policy in lower-income countries towards better household water-quality management, coupled with improved individual and family hygiene, as well as the continued expansion of water supply and sanitation coverage, linked to upgraded service levels, that ensure reliable supplies and acceptable water quality.

b. Food security issues

 A much more strategic development of the available land and water resources will be needed to service effective demand for food products and agriculture commodities at local, national and regional scales. This needs to be based on much broader economic awareness of the efficiency and productivity gains that can be made in improving irrigated and rain-fed agriculture, thereby creating opportunities to conserve the resource base – rainfall, surface and ground water.



- A re-adjustment is needed in the balance between formal irrigation water management and pro-poor, affordable agricultural water management. Low cost, small-scale options in water harvesting, irrigation and drainage are necessary to alleviate poverty and local food security in small rural communities; but these also need to be matched by complementary improvements in rain-fed production.
- Programmes of irrigation modernization that adapt institutional and technical practices are needed to turn existing rigid command and control systems to much more flexible, service delivery systems.
- A structured and regulated participation of water users individual farmers and farmer groups is essential to protect the public interest in land and water resources.
- The experience in the transfer of irrigation assets and operational responsibilities from public control
 to private user associations has been mixed. Such transfers need to be negotiated on the basis of
 declared rights in use and a clear understanding of the respective obligations and liabilities between
 public and private actors.
- A realization is needed that agriculture has to be much more proactive in shouldering the negative environmental and health impacts of irrigated agriculture.
- Opportunities for restoring the productivity of natural ecosystems through better management should be sought.

c. Industrial and energy issues

- The projected growth in industrial demand for water can only be met by integrating improved supplyside considerations with enhanced demand-side management at government and enterprise levels.
 Demand-side initiatives play an important role in increasing the water efficiency of industrial processes and lowering the pollutant load of effluents discharged by industry.
- The productivity of river basins, coastal zone and marine ecosystems must be preserved.
- There is a need for strict enforcement to reduce industrial pollution to water environments.
- Public-private partnerships in water governance should be considered where appropriate in order to promote cleaner production technology and reduction of industrial water consumption.
- Promote the use of hydropower where appropriate to reduce the emissions of greenhouse gases
 and other atmospheric pollutants from thermal power plants, as well as minimize the pollution
 associated with the mining of the fossil fuels needed for them.

d. The challenges of urbanization

- Urban areas, generally, provide the economic resources to install water supply and sanitation, but they
 also concentrate wastes. Where good waste management is lacking, urban areas are among the
 world's most life-threatening environments.
- Good city water management is complex. It requires the integrated management of water supplies for
 domestic and industrial needs, the control of pollution and the treatment of wastewater, the
 management of rainfall runoff (including storm-water) and prevention of flooding, and the sustainable
 use of water resources. To the above must be added cooperation with other administrations that share
 the river basin or groundwater source.

e. Preservation of the natural environment

- Water is a fundamental and predominant ingredient of the natural environment and cannot be managed in isolation from broader environmental issues.
- The identification and coordination of expertise and knowledge worldwide relating to the environmental aspects of water quality should be a political priority and the transfer of that knowledge must be facilitated.
- The Johannesburg World Summit agreed Target on Sanitation (halving by 2015 the proportion of people without access to basic sanitation services) needs a holistic approach incorporating not only the provision of household sanitation services, but all other components of the water management process, including wastewater collection, treatment, re-use, and re-allocation to the natural environment.



 The 10 Key Principles on Municipal Wastewater Management, developed jointly by UNEP, WHO, UN-HABITAT and WSSCC, provide the standard for reaching the WSSD target as it relates to wastewater and building consensus on sustainable approaches.

f. Mitigation and reduction of risk

- Between 1991 and 2000, the number of people affected by natural disasters rose from 147 million per year to 211 million per year. In the same period, more than 665,000 people died in 2,557 natural disasters, of which 90 percent were water-related.
- Governments are encouraged to incorporate disaster risk reduction into national planning processes, including land use legislation and building codes.
- Governments are encouraged to address the problems created by urban areas, the location of settlements in high-risk areas and other manmade determinants of disasters.
- Worldwide, there is a shortage of effective disaster preparedness and mitigation methods, due to the
 fact that risk reduction is not an integral part of water resource management, as it has mainly been
 viewed as a technical problem, unrelated to the factors that force people to live in risky areas. Thus,
 develop early warning systems, vulnerability mapping, technological transfer and training.
- Support is needed for interdisciplinary and intersectoral partnerships to improve scientific research on the causes of natural disasters and better international cooperation to reduce the impact of climate variables, such as El Niño and La Niña.
- Encouragement should be given to the dissemination and use of traditional and indigenous knowledge to mitigate the impact of disasters, and promote community-based disaster management planning by local authorities, including through training activities and raising public awareness.
- The risks of flooding and drought in vulnerable countries needs to be reduced by, inter-alia, promoting
 wetland and watershed protection and restoration, improving land-use planning, improving and
 applying more widely techniques and methodologies for assessing the potential adverse effects of
 climate change on wetlands and, as appropriate, assisting countries that are particularly vulnerable to
 these effects.
- Support is needed the on-going voluntary contribution of, as appropriate, NGOs, the scientific community, and other partners in the management of natural disasters.
- Emergency action is required to reduce the impacts of arsenic pollution of groundwater on tens of
 millions of people in the Asian region, so as to avert a health crisis of unprecedented proportions.
 Provision of clean, safe water to all those affected is an essential and urgent requirement.

g. Sharing the resource

- There are presently more than 260 international river basins, and 145 nations have territory in shared basins. Rarely do the boundaries of the watersheds coincide with existing administrative boundaries.
- In the past fifty years, 200 non-navigation treaties for international watercourses have been signed, but remain weak for the following reasons: lack of water allocations, poor water quality provision, lack of monitoring/ enforcement/conflict resolution mechanisms, and failure to include all riparian states.
- International cooperation on shared water resources is critical, especially in water scarce regions
 where the upstream and downstream impacts of consumption and pollution are magnified. Shared river
 basin and aquifer systems are a potential source of conflict but also present opportunities for
 cooperation and joint development within as well as between countries. Certain principles must be
 stressed such as political commitment, riparian ownership, shifting the focus and moving from
 challenges and constraints to opportunities; and building broad partnerships among and within the
 riparian countries.
- Mechanisms are needed for sharing the benefits of the water, rather than the water itself. There is a need to ensure adaptable management structures, with equitable distribution of benefits and detailed conflict resolution mechanisms.



h. Valuing the resource

- Much progress has been made in the last decade in understanding that water has not only an
 economic value, but social, religious, cultural and environmental values as well, and that these are
 often interdependent.
- Water valuation, as an integral component of water resource management, has roles in water allocation, demand management and financing investments.
- Financial subsidies are needed to improve access of the poor to water.

4. THE NEED FOR CONTINUED ASSESSMENT AND MONITORING Recommendations:

- a. Develop instruments to enable regular reporting on progress made in addressing the WSSD sanitation target. Wastewater Emission Targets may be considered at the regional, national or local level to facilitate priority setting and adequate reporting.
- b. Further consolidate the WHO and UNICEF Joint Monitoring Program on water supply and sanitation as the official United Nations information system for reporting on access to water supply and sanitation services.
- c. Harness developments in information technology to improve and make available monitoring and modelling tools for water assessment in developing countries.
- d. Promote, implement and fund long-term, demand-driven, integrated capacity building efforts in the developing world, without which the Millenium Development Goals and targets set at the Johannesburg World Summit will not be achieved. To this end, the donor community should meet urgently, hosted by the United Nations, to build commitment and consensus on strategies and processes to greatly expand the scale of effort
- e. Work in partnership with other organizations in developing national plans and programmes towards the international targets for community water supply and sanitation.
- f. Promote the need to increase the financial and human resources available to achieve these targets, and ensure that adequate resources are also available to monitor progress.
- g. Identify and coordinate expertise and knowledge relating to the environmental aspects of water quality and facilitate transfer of that knowledge.
- h. Take further action at the global level to develop and refine appropriate and robust indicators of water consumption and quality, and support the continuing collection of reliable data. Assistance is needed to build these indicators into regional and local water management and to integrate this with industrial, economic and investment planning.
- i. Focus, collaborate and finance research, knowledge sharing, and capacity building on interactions between surface and groundwater, atmospheric and terrestrial part of the hydrological cycle, fresh water and salt water, global watershed and river basin scales, water quantity and quality, and water bodies and aquatic ecosystems.
- j. Finance research and indicator development to better predict water quality and quantity situation as well as to understand aquifer dynamics to understand global changes in water resources.
- k. Support FRIEND (Flow Regimes for International Experimental and Network Data) and HELP (Hydrology for Environment, Life and Policy) initiatives to strengthen knowledge base.



2003 – International Year of Freshwater

www.wateryear2003.org

Lead agencies: UNESCO, UN Division of Economic and Social Affairs

In December 2000, the UN General Assembly proclaimed 2003 the International Year of Freshwater. Supported by 149 countries, the UN resolution encourages increased awareness of the importance of sustainable freshwater use, management and protection. The International Year of Freshwater is a platform for promoting existing activities and spearheading new initiatives in water resources at the international, regional and national levels.

The International Year of Freshwater is expected to follow up on agreements reached at the 2002 Johannesburg World Summit on Sustainable Development, and should have an impact far beyond 2003.

22 March – World Water Day

www.waterday2003.org Lead agency 2003: UNEP

Following the proposal of a World Water Day by the 1992 "Earth Summit" in Rio de Janeiro, the UN General Assembly dedicated 22 March each year to global activities supporting the conservation and development of water resources.

Using as its theme "Water for the Future," the goals for World Water Day 2003 are to inspire political and community action and encourage greater global understanding of the need for more responsible water use and conservation. The main international focus of World Water Day 2003 will be the formal launch of the first UN World Water Development Report at the Third World Water Forum in Japan.



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