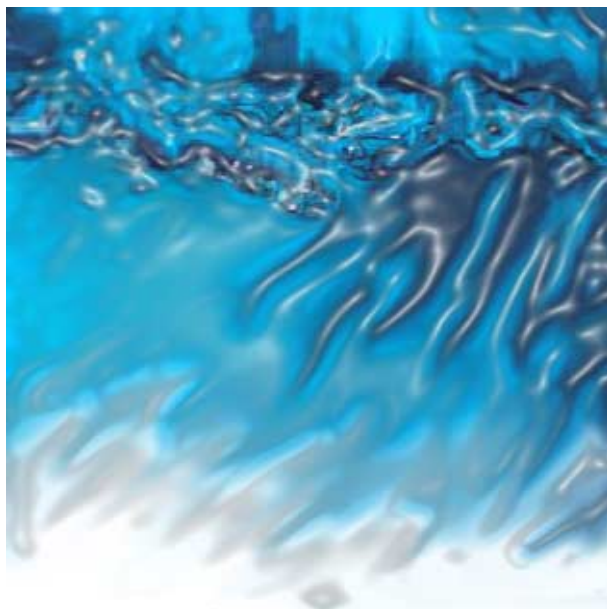


THE SECONDARY WATER RESOURCES PROJECT STUDY

FINAL REPORT (Summary)



March 2003

CTI Engineering International Co., Ltd.

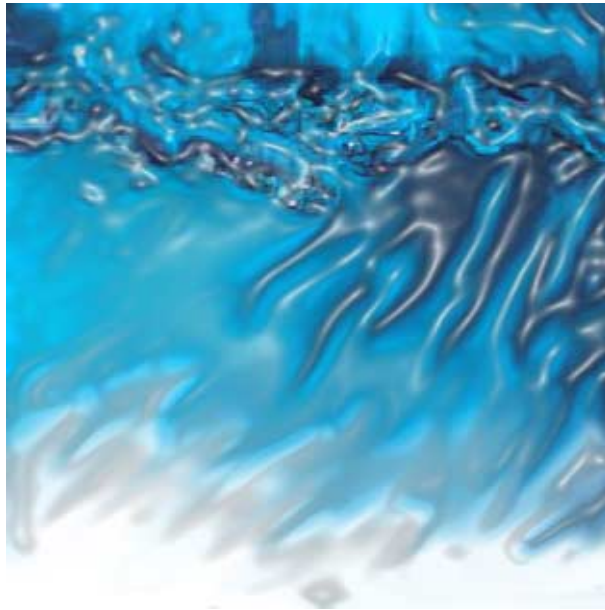
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**THE SECONDARY WATER RESOURCES PROJECT STUDY
FINAL REPORT**

(SUMMARY)



March 2003

REPORT ON THE SECONDARY WATER RESOURCES PROJECT STUDY

SUMMARY

The intensity of water shortage, drought and flood damage has increased all over the world due to population increase and global climatic changes. Since the first water congress was held in the United Nations in 1977, several attempts had been made to discuss such global water issues aiming to arrive at a long-lasting solution. Along this line, the Second World Water Forum in 2000 had adopted the Hague Declaration on Water Security for the 21st Century proposing an action plan for the solution of water issues.

Following those activities, the Third World Water Forum was held in Kyoto, Japan in March 2003 and the Japan International Cooperation Agency (JICA) had greatly contributed to its success. Together with the Ministry of Land, Infrastructure and Transportation (MLIT) of Japan and the Asian Development Bank (ADB) in Manila, JICA spearheaded the session on “Poverty and Floods”, performed a significant role in the “Water Development Partnership Panel”, and presented JICA’s experiences in the other sessions of the forum and the related workshops held in Asian countries.

This report compiles information and experiences on activities of the water sector all over the world as well as records of JICA’s performance presented through the forum and the workshops. It also presents recommendations derived from the analysis of information and experiences that may contribute to JICA’s further activities in future. Hereunder summarized is the Main Report of The report consists of the following parts:

First Part: (Relevant to the first component of the specification) Compilation of JICA’s Experiences on the Water Sector

Second Part: (Relevant to the second component of the specification) Collection and Compilation of Information on Water Sectors from External Sources.

Third Part: (Relevant to the third and fourth components of the specification) Report on Participation in International Meetings specified in the Specification including the Third World Water Forum.

Fourth Part: (Relevant to the fifth component of the specification) Conclusion and Recommendation

I. FIRST BOOK

(1) First Part: Compilation of JICA's Experiences on the Water Sector

On the global aspect, population has been increasing rapidly. This is exacerbated by the increase of damage on people's lives and crops due to floods and the expanding areas of desert and water shortage due to recurrent droughts. In addition, livelihoods have been affected by water pollution that deteriorates the environment and by the decrease of service quality of water supply due to timeworn structures and systems and insufficient maintenance.

Aiming at providing solutions to such water issues, JICA has been implementing various projects. This report presents a recommendation that may contribute to the better implementation of JICA's further projects for international cooperation based on the analysis of the good practices providing useful ideas for such solutions.

- (a) **In the water resources/water environment part**, the "Jordan Water Resources Management Plan" is cited as a good practice considering the seriousness of water shortage in the Middle East. Non-conventional water resources are also presented as new schemes of water resource development.

Among the items of the non-conventional water resources, water reuse is selected for additional study as a challenging representative of non-conventional water resources; examining the practices of developed countries and the Middle East as well as Japan.

The results of the additional study on water reuse in the United States of America (USA), Israel and Japan show that technology on the reuse of water is well-developed to achieve water quality for drinking. However, there is mental resistance to drinking so that reuse is still limited mainly for irrigation in these countries. In the USA, it is necessary to specify the required water quality in detail according to the kind of crop or vegetable.

In Japan, the technology for water reuse is well-developed both in improved water quality and in sludge treatment to prevent side effects to the environment. This technology can contribute to new water resources development and also to the conservation of environment.

No discussion has been made on the suitability for drinking of water intake from a river where sewage, treated or not treated, is drained. This is because it is expected that the river has enough natural purification and dilution capacity to make the water safe for drinking. In this regard, sewage drained into river is thought to contribute to environmental conservation through the recovery of river maintenance flow.

The quantity of reuse water should be taken into account as additional quantity of water resources from the river. This is not the primary purpose but the additional quantity from reuse water will promote a more precise water management towards a more effective river water use.

- (b) **In the Flood Control Part**, three projects are selected as good practices, appreciating their contribution to poverty alleviation; namely, the “Flood-Proofing and Livelihood Improvement Project” in Bangladesh, the “Brantas River Basin Development Project”, and the “Flood Control Project in Ormoc City” in the Philippines.

The results of analyses on these projects show the necessity of integrated river basin management for effective flood mitigation and poverty alleviation. The results also show that flood-proofing and livelihood improvement are good guidance for the poor to break vulnerability to flood damage by the setup of various livelihood capacity building seminars and flood-proofing structures.

- (c) **In the Water Supply Part**, two projects are selected. One is the “Phnom Penh City Water Supply Facility Project”, considering the sequence of JICA assistance and variety of problems, postwar rehabilitation, system deterioration, increase of non-profitable water and so on. The other one is the “Central Highland Groundwater Development” in Vietnam, considering the provision of a well-organized institution for management.

Results of analysis on the former project show that technology transfer on system operation and maintenance provided by JICA is important and effective to keep sustainable management and maintain good services to consumers. The latter project shows that a well-established groundwater management is essential for sustainable development. Many other developing countries have failed because of lack of proper institutional arrangement.

- (d) **In the Poverty Part**, “Al-Tai Groundwater Development Project” in Mongolia and the “Flood Proofing and Livelihood Improvement Project” in Bangladesh are selected, appreciating that the planning of a projects is based on careful social study over the study areas.

Planning for poverty alleviation should be made with an approach focusing at the poor, based on precise investigation and appropriate analysis of socio-economic conditions over the study area. In this regard, the methodology used in these two projects present a good model for further practice towards poverty alleviation.

- (e) **In the Gender Part**, “Northeast Rural Water Supply” in Lao and the “South District Groundwater Development” in Cambodia are selected because they have effectively addressed the gender issue. The “Drinking Water Pumping Project” in Sunba, East Nusa Tenggara Province, Indonesia is also selected because it presents how women have participated in livelihood improvement and shouldered the responsibility of regional development.

The results of analyses on these projects show that such project arrangement promotes participation of women in groundwater development resulting in sustainable management. This is achieved through hands-on participation by securing a sustainable water source and reducing water transportation time for women and children resulting

in increase of their own free time. The results also show that it is important for all genders to participate and take ownership of the project.

(2) Second Part: Collection and Compilation of Information on Water Sector from External Sources

This part presents a compilation of information on the water sector collected from international organizations, as shown in the following table. The information has been collected mainly through the Internet.

International Development Organizations	Asian Development Bank; World Bank
International Organizations	World Water Council; World Water Partnership; Gender & Water Alliance; World Meteorological Organization; United Nations
Foreign Governments	UK, USA, The Netherlands
Third World Water Forum	Virtual Forum, Water Voice

Recognized in common among the international organizations is the importance of participation of all stakeholders including the poor in the planning stage, and for decision makers to have accountability and transparency in every stage of decision-making.

The importance of integrated water resource management in a river basin is recognized to be common in the water management aspect. Integrated river basin management is also widely accepted to cover land use and agricultural production of farmers including the poor.

In the technical aspect, discussed and proposed is the consideration of non-structural methods aside from the structural method which is not the only countermeasure for flood mitigation.

ADB, among many other organizations, has been showing its own water policy relatively specifying it in seven items, as follows:

- Promote a national focus on water sector reform
- Foster the integrated management of water resources
- Improve and expand the delivery of water services
- Foster the conservation of water and increase system efficiencies
- Promote regional cooperation and increase the mutually beneficial use of shared water resources within and between countries
- Facilitate the exchange of water sector information and experience
- Improve governance

World Bank had presented its Water Resources Strategy Policy aiming at poverty reduction in a way of implementation of proper water resource development and management in developing countries as well as emphasizing the necessity to invest in appropriate management of water resources and other

infrastructure, and development of small scale or large scale water infrastructure with responsibility to environment and society.

It is shown in this strategy that water resources management and development are key issues for sustainable development and poverty reduction. Evaluations on how water resources projects affect the poor through classification according to project type give the following results:

- First, water resources management policies and investments affect the poor in a variety of direct and indirect ways, most of which are important in most contexts.
- Second, there has been substantial improvement in the way in which Bank-financed water projects directly address poverty and social concerns, from the recent review by the Operations Evaluation Department (OED).
- Third, there are important distinctions in the fiscal implications of different interventions. Broad interventions (Types 1 and 3) generally stimulate growth and revenue, whereas targeted interventions (Types 2 and 4) usually depend on subsidies.
- Fourth, there are also important distinctions between the impact of management interventions (where the benefits are often indirect and long-term) and the impact of development projects (which are direct and immediate).
- Fifth, there are distributional distinctions between the poverty impact of rehabilitation (which benefits those who benefited from the initial investments) and new projects (where new people benefit and which are more equitable, *ceteris paribus*).
- An appropriate strategy for countries is a blend of all of these interventions: operating on the resource and on water services, intervening in a broad, systemic manner and directly targeting the poor.

How Water Interventions Affect Poverty according to the World Bank

		Nature of intervention	
		broad	Poverty - targeted
Affecting water-	Resource development & management	Type 1 : Broad region-wide water resource interventions	Type 2 : Targeted water resource interventions
	Service delivery	Type 3 : Broad impacts through water service delivery reforms	Type 4 : Targeted improved water services

For instance, multi-purpose river basin development and aquifer management

For instance, watershed management in

For instance, reform of water supply utilities and water users associations for irrigation management

For instance, rural water supply and sanitation projects

(3) Third Part: Report on Participation in International Meetings specified in the Specification including Third World Water Forum

International meetings like the Earth Summit in Johannesburg in September 2002 have been held to promote the Third World Water Forum (WWF3) in Kyoto, Japan in March 2003. The Asia-Pacific Consultation Workshop on Water and Poverty held in Dhaka, Bangladesh from September 22 to 26, 2002 was designed by ADB under its own program of “Water and Poverty Initiative” in concert with the WWF3’s themes. JICA had joined the meeting, presenting some case studies on poverty and gender issues.

The Regional Consultation Workshop on Poverty and Floods from October 17 to 19, 2002 in Manila, Philippines was held and organized by JICA, MLIT and ADB. JICA organized the presentation of eight case studies and was responsible for managing the workshop. In addition to those organized by JICA, ADB held two more workshops on poverty and floods in which JICA participated in alliance with ADB for the “Poverty and Floods” session planning.

Third World Water Forum had been held from 16 to 23 March 2003 in Kyoto, Japan, where JICA organized and sponsored ‘Poverty and Floods’ together with MLIT and ADB, organized ‘Water Development Partnership Panel’ together with ADB, and participated in several sessions with presentation on its experimental studies.

Records of these international meetings are tabulated below.

Record of International Meetings with Dispatch of Consultants

World Summit on Sustainable Development (WSSD)

Venue: Johannesburg, South Africa, Date: August 26 to September 4, 2002

Outline

- Johannesburg Summit 2002, the World Summit on Sustainable Development, brought together tens of thousands of participants, including heads of State and Government, national delegates and leaders from non-governmental organizations (NGOs), businesses and other major groups to focus the world's attention and direct action toward meeting difficult challenges, including improving people's lives and conserving natural resources in a world that is growing in population, with ever-increasing demands for food, water, shelter, sanitation, energy, health services and economic security.
 - At the 1992 Earth Summit in Rio, the international community adopted Agenda 21, an unprecedented global plan of action for sustainable development. However, the best strategies are only as good as their implementation. Ten years later, the Johannesburg Summit presented an exciting opportunity for today's leaders to adopt concrete steps and identify quantifiable targets for better implementing Agenda 21.
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Regional Workshop on Water and Poverty

Venue: Dhaka, Bangladesh, Date: September 22-26, 2002

Outline

- Addressing the water security needs of the poor is a top priority in water management and there is an urgent need to focus on actions that will put this into practice.
- This was the main conclusion of a major regional consultation workshop held in Dhaka in four days that brought together over 250 senior representatives of government, civil society and the private sector.
- The meeting was organized by the Asian Development Bank (ADB), Bangladesh's Water Resources Planning Organization (WARPO) and BRAC, a leading poverty-focused non-governmental organization (NGO), and supported by the Governments of the Netherlands and Denmark, and the Japan Water Resources Association.
- It came just three weeks after delegates at the Earth Summit in Johannesburg reaffirmed their commitment to cut by half the number of people in the world with inadequate clean water and sanitation by the year 2015 and is a milestone event in the run-up to the Third World Water Forum in Kyoto, Japan in March 2003.
- While different perspectives were expressed at the workshop, there was broad agreement on a series of measures that must be taken to ensure that continual rounds of discussion now be translated into action. These include:

- Implementation of existing policies.

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- Assurance of meeting the most basic needs of the poor, for life and livelihoods.
 - Better targeting of actions to the needs, priorities and capabilities of the poor.
 - Focus on the achievable. Partnerships are a key to success;
 - Focus on opportunities rather than problems created by water;
 - Well-planned investments are a core component of required actions.
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Regional Workshop on Water in Cities

Venue: Manila, Philippines, Date: October 14-16, 2002

Outline

- The Asian Development Bank (ADB) conducted a Study on Water in Asian Cities under a regional technical assistance, RETA 6031: Promoting Effective Water Management Policies and Practices. The main objective of the study is to increase awareness of stakeholders of the issues faced by the urban water sector in developing member countries (DMCs) of ADB and provide policy makers with better strategies to provide access to water for the urban poor.
 - Under the study, a team of international and domestic consultants conducted studies on the water situation in 21 Asian Cities:
Bangkok/ Colombo/ Delhi/ Dhaka/ Ho Chi Minh/ Hong Kong/ Jakarta/
Karachi/ Kathmandu/ Kuala Lumpur/ Manila/ Osaka/ Phnom Penh/ Seoul/
Shanghai/ Singapore/ Suva/ Taipei/ Tashkent/ Ulaan Baatar/
Vientiane
 - Another team of consultants simultaneously conducted a study on small-scale private water providers in 8 cities to look into the services provided in most areas that are not served by the formal water utility. These are:
Cebu /Delhi /Ho Chi Minh /Jakarta/ Kathmandu/ Shanghai /Ulaan Baatar
 - The results of the study were presented and discussed in the Regional Consultation Workshop (RCW) on Water in Asian Cities. The RCW focussed on the role of civil society in improving water supply and sanitation in Asian cities. The results of the consultation and the study were inputs to the 3rd World Water Forum in Kyoto, Japan in March 2003. It was the regional contribution of ADB to the Water and Cities theme presented in the forum under the overall coordination of UN-Habitat.
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Regional Workshop on Poverty and Floods

Venue: Manila, Philippines, Date: October 17-19, 2002

Outline

- JICA, ADB, and the Ministry of Land, Infrastructure and Transport (MLIT) jointly sponsored the Regional Consultation Workshop on Poverty and Floods to provide a setting for such discussions. The outputs of this workshop served as inputs to the 3rd World Water Forum in Kyoto, Japan in March 2003.
 - The workshop brought together government and non-government stakeholders to review regional initiatives aimed at reducing the vulnerability of the poor to the adverse impacts of floods. It aims to help build a better understanding of the
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linkages between floods and poverty in the region, and to offer a dynamic and interactive process designed to:

- highlight good practices for flood mitigation and management in the Asia-Pacific region
 - promote further action at the local level for flood preparedness to ensure the attainment of flood security, especially for the poor
 - strengthen the regional network of development agencies working on various facets of flooding and poverty reduction
 - JICA organized the presentation of eight case studies and was together with MLIT and ADB. responsible for managing the workshop. In addition to those organized by JICA, ADB held two more workshops on poverty and floods in which JICA participated in alliance with ADB for the “Poverty and Floods” session planning.
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Regional Workshop on Poverty and Floods

Venue: Beijing, China, Date: January 9-11, 2003

Outline

- This workshop was sponsored by ADB in cooperation with the Research Center on Flood and Drought Disaster Reduction, Ministry of Water Resources, PRC.
 - Workshop inputs included case studies and thematic papers. The process involved theme and background presentations, workshop discussions, plenary discussions; and field visits to flood, drought and other water disaster mitigation project sites near Beijing. Outputs provided the basis for presentations and discussions on floods, poverty, and gender at the 3rd WWF in Kyoto in March 2003.
 - A field trip was held on Saturday, January 11 to the location of flood mitigation projects around Beijing. The objective of the field trip was to observe ongoing government interventions designed around the Government’s water disaster mitigation policy.
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Regional Workshop on Poverty and Floods

Venue: Ho Chi Minh, Vietnam, Date: January 20-22, 2003

Outline

- This workshop was sponsored by ADB in cooperation with the Vietnam Government Central Committee for Flood and Storm Control (CCFSC) and the United Nations Development Programme (UNDP).
 - The workshop aims to build on the Government’s Second National Strategy and Action Plan for Disaster Mitigation in Vietnam 2001-2020.
 - Workshop inputs included case studies and thematic papers. The workshop process involved presentations, plenary discussion sessions, and field visits to flood, drought, and other water disaster mitigation project sites in the Mekong Delta of Vietnam. Outputs provided the basis for presentations and discussions on water disaster mitigation strategies and action plans at the 3rd WWF in Kyoto in March 2003.
 - A field trip was held on Wednesday, January 22, to the Mekong Delta of Vietnam.
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The objective of the field trip was to observe ongoing government and donor interventions designed around the disaster mitigation concept of “Living together with Floods”.

The Third World Water Forum

Venue: Kyoto, Japan, Date: March 16-23, 2003

Outline (Refer to Annex 1)

- The Forum was held in the three neighboring cities of Kyoto, Shiga and Osaka from March 16-23, holding 351 separate sessions on 38 interlocking themes dealing with water, especially on how to bring safe water and sanitation to the entire world. Some 24,000 participants from 182 countries, more than triple the number of participants expected, attended the sessions. The key issues that they addressed revolved around balancing increasing human requirements for adequate water supply and improved health and sanitation with food production, transportation, energy and environmental needs, while most countries will require more effective governance, improved capacity and adequate financing
 - JICA organized sessions on “Poverty and Floods” under the theme of “Floods” together with ADB and MLIT as well as the “Water Development Partnership Panel” with JBIC, ADB, WB and some countries. In addition, JICA invited the counterparts from some Asian countries to present their case studies and/or participate in some sessions.
 - Recognizing ‘Water for Poverty’ as one of main themes of the Forum succeeding the result of the Johannesburg Earth Summit, relations between water and poverty had been discussed in various sessions.
 - In the sector of water resources, Integrated River Basin Management was proposed to integrate and coordinate various stakeholders’ benefits aiming unified water resources management in the whole area of each river basin, while small-scaled water resources development and management in communities level were discussed as one of the major subjects.
 - In respect of poverty, some of NGO groups criticized against privatization of water supply management and merchandising of water, which the international development institutes have been promoting.
 - Concept of ‘Living with Floods’ was symbolized in the flood group participants for human activities conformed to natural environment and how flood management to be integrated with land use plan and water resources management was discussed.
 - Required in common over the sessions by the participants were participation of local government and residents including the poor, transparency and accountability through the process of decision making.
 - Discussed and proposed in common over the sectors were on information management accessible by people and establishment of global networks for water issues.
 - Ministerial declaration was adapted in the closing plenary on March 23.
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(4) Fourth Part: Conclusion and Recommendation

In this part, the following matters are proposed as recommendation for JICA's further implementation of its activities based on the assumption of acknowledgement of the Second Water Resources Project Study conducted by the Consultant:

- Necessity of a Framework Study on Integrated River Basin Management prior to a further study or implementation, because the scope of work seems to be wider than the conventional way and vague so that it is difficult to focus on specific plans.
- Necessity to establish a specific action plan to integrate some sectors related to water development and management, and users, because the planning may present only a paper plan due to difficulty of intervention between sectors.
- Importance of ideas proposed in the JICA study entitled "Flood-Proofing and Livelihood Improvement" going along with the concept of "Living with Floods" propounded by the Flood Group as a new direction of flood mitigation measures.
- Importance of water supply management for poverty alleviation and better services including reduction of non-profitable water.
- Necessity of establishment of poverty initiative policy of prioritization on selective projects, information collection, guideline, targeting practices, analysis on IDOS (Institutional Development Organization Strengthening) and monitoring.
- Necessity of establishment of gender mainstreaming with guideline and tool kits elaborated on the basis of Knowledge and Management.

**ANNEX
ON
THE SECONDARY WATER RESOURCES PROJECT STUDY**

- Annex 1. THE THIRD WORLD WATER FORUM SUMMARY REPORT**
- Annex 2. Ministerial Declaration
--- Message from the Lake Biwa and Yodo River Basin---**
- Annex 3. Sub-group Chairs' Summary**
- Annex 4. PRELIMINARY FORUM STATEMENT
(March 21 draft)**
- Annex 5. Draft STATEMENT FLOODS**
- Annex 6. “ We must learn to LIVE WITH FLOODS” (Draft
STATEMENT FLOODS – 2)**

THE THIRD WORLD WATER FORUM SUMMARY REPORT

Forward

The Forum was held in the three neighboring cities of Kyoto, Shiga and Osaka from March 16-23, holding 351 separate sessions on 38 interlocking themes dealing with water, especially on how to bring safe water and sanitation to the entire world. Some 24,000 participants from 182 countries, more than triple the number of participants expected, attended the sessions. The key issues that they addressed revolved around balancing increasing human requirements for adequate water supply and improved health and sanitation with food production, transportation, energy and environmental needs, while most countries will require more effective governance, improved capacity and adequate financing

JICA organized sessions on “Poverty and Floods” under the theme of “Floods” together with ADB and MLIT as well as the “Water Development Partnership Panel” with JBIC, ADB, WB and some countries. In addition, JICA invited the counterparts from some Asian countries to present their case studies and/or participate in some sessions.

Recognizing ‘Water for Poverty’ as one of main themes of the Forum succeeding the result of the Johannesburg Earth Summit, relations between water and poverty had been discussed in various sessions.

In the sector of water resources, Integrated River Basin Management was proposed to integrate and coordinate various stakeholders’ benefits aiming unified water resources management in the whole area of each river basin, while small-scaled water resources development and management in communities level were discussed as one of the major subjects.

In respect of poverty, some of NGO groups criticized against privatization of water supply management and merchandising of water, which the international development institutes have been promoting.

Concept of ‘Living with Floods’ was symbolized in the flood group participants for human activities conformed to natural environment and how flood management to be integrated with land use plan and water resources management was discussed.

Required in common over the sessions by the participants were participation of local government and residents including the poor, transparency and accountability through the process of decision-making.

Discussed and proposed in common over the sectors were on information management accessible by people and establishment of global networks for water issues.

Ministerial declaration was adapted in the closing plenary on March 23.

Outline of the outcomes is shown with copies of the Web-site of the 3rd World Water Forum Secretariat (<http://www.world.water-forum3.com/>) in the following pages.

First Day (March 16)

The 3rd World Water Forum opened Monday in Kyoto, Japan, with Dr. Mahmoud Abu-Zeid, President of the World Water Council and Egyptian Minister of Water Resources and Irrigation, "saying "the world's attention and eyes are focusing on us today." Other speakers vowed that global commitments to solve the water crisis must emerge from the international down to the village level during the 8-day conference.

Dr. Abu-Zeid of the World Water Council (WCC), a main convener of the Forum, introduced four priorities of WWC as follows;

- Developing a body of global water ethics, including a world water convention; a definition of water rights and obligations; and a legal framework for such issues as water privatization and regulation.
- A global fund for water infrastructure required, with the emphasis on helping the poorest and most needy. One benefit of such a fund would be to lighten the debt burden on water facilities.
- Raising the profile of water issues in global trouble spots. This would include the protection of water facilities and water heritage sites during conflicts.
- Tackling water issues in the developing world, ranging from improved water storage and irrigation to capacity building in water management.

The Crown Prince and Princess of Japan, the Prince of Orange of the Netherlands and the Prince of Morocco were among the dignitaries who opened the World Water Forum, which is held every three years in a different host country.

The King Hassan II Global Water Prize was awarded to co-recipients Dr. Abu Zeid and Dr. Jerson Kelman, Director President of Agencia Nacional de Auas (ANA) of Brazil.

The thematic discussion had been made in plenary and sessions in the afternoon.

In the plenary of 'Water and Climate' was confirmed the linkage between global climate change and water issues and the necessity of cooperation between both fields in expert level as well as were discussed technical and financial issues on natural disaster related to the climate change.

Second day (March 17)

On the second day of The 3rd World Water Forum, discussion additionally started in three themes, 'Water, Food and Environment', 'Water, Nature and Environment' and two major groups including 'Gender and Water Panel'.

In 'Water, Food and Environment' urgency of food security was recognized accompanying global population increase and majority was placed on claiming expansion of irrigation capacity to increase crop production in agricultural sector. Latest studies in sessions were reported on water management and agricultural/husbandry technology as well as food trading aiming effective water use to support crop production increase.

Discussed in 'Water, Nature and Environment' were present situation on pollution and decrease water quantities giving impacts to ecology, and how to restore or conserve natural environment, including discussion on water management and impact evaluation methodology, and life style to protect fresh water resources.

In a session of 'Water and Energy', both of pros and cons to large-dam-construction issue faced each other; one of NGOs on the opposition claimed showing cases that the construction cost exceeded benefit and ODA procedure was in opacity. Meanwhile, requirement of additional water storage capacity was recognized in developing countries.

In 'Gender in Court', the panel heard four cases in which gender advocates sought to prove that incorporating gender perspectives increases effectiveness, efficiency and sustainability in the water sector. Among the cases were community water projects in Colombia and Cambodia, the implementation of organization strategies in the Dominican Republic and Mali, institution building in Pakistan and Laos and policy development in South Africa. Counterparts of JICA's water supply project in Laos presented a case on first attempt in the country to introduce institution focusing gender issues, which became a trigger for the government both of central and local and men to get aware of consideration to gender issues.

In the session of 'The Trends and Prospects of International Cooperation in Technologies of Water Supply System' for 'Water Supply, Sanitation, Hygiene and Water Pollution' Issue, Ms. Yamamoto, JICA Senior Adviser, introduced JICA training program and its results and Mr. Ek Sonn Chan, Phnom Penh Water Supply Authority, presented a case study on the rehabilitation project for the Phnom Penh Water Supply Facilities as JICA counterpart.

Third day (March 18)

The third day added opening in Osaka Grand Cube, Osaka International Conference center, to the 3rd World Water Forum. Some new issues started this time were 'Floods' and 'Water and Governance' in Kyoto, and. 'Water and Cities', 'Water and Information', 'Groundwater' and 'Public Private Partnership' in Osaka.

In 'Floods', JICA held a session of 'Poverty and Floods' coordinating with Ministry of Land, Infrastructure and Transportation (MLIT) and Asian Development Bank (ADB) as one of eighteen sessions for two-day-discussion on Flood Issue. JICA had contributed with organizing,

planning and managing this session in cooperation with the other two organs.

Mr. Oi, JICA Senior Adviser, chaired this session emphasizing necessity to break elements of linkage between poverty and floods or other water related disaster as opening remark. Three case studies out of five were derived from JICA projects, which were on 'Ormoc Urgent Flood Control Project in the Philippines', 'Brantas River Basin Development Project in Indonesia' and 'Flood Proofing and Livelihood Improvement in Bangladesh'. Ms. Kimura, JICA Director, presented JICA principle policy on poverty and floods as one of panelists for this session.

The opening plenary of 'Public Private Partnership' was organized by both of World Water Council (WWC) and Council of Canadians (NGO), which had promoted private resources introducing to water supply management and had opposed privatization respectively. Representative from WWC proposed how to supply safe water for the poor and to make cooperation between public and private sector while NGO claimed that the public should be responsible for issues on water, health and education, showing cases of privatization leading a monopoly in developing countries.

In 'Water Governance' was discussed importance of governmental regulation over and of private investment to water management as well as of participation of local governments and residents to decision process.

Fourth Day (March 19)

The senior official's meeting started the fourth day. Around two hundreds of senior official from 111 countries and 16 organs were holding discussion on draft of 'Ministerial Declaration' to be proposed to Ministerial Conference on the final day of the forum. 'Water and Poverty', 'Agriculture, Food and Water' and 'Science, Technology and Management Panel' were additionally opened this day.

One of conclusions of the senior officials meeting this day was recognition of importance on integrated water resources management and participation of all stakeholders on gender issue in addition to the previous conclusion that resources be invested twice than before to reduce people not accessible to safe water by half by end of 2015.

'Poverty and Water' was sponsored and organized by ADB, introduced the Water & Poverty Initiative (WPI), which aims to provide the poor with safe water, promoting improved water supply, sanitation and hygiene; effective water management for productive uses; and mitigation of water-related disasters. Privatization of water supply management in developing countries was also promoted in this session because of its capacity for effective supply water to the poor in case the government didn't have enough. While, participants from developing countries opposed it claiming 'water is not for business' with showing a case that water price raised due to privatization in a developing country.

In the plenary of 'Floods' a reporter of the session 'Poverty and Floods', which JICA organized as one of the conveners recommended adoption of different approaches for the poor according to area-specific conditions and giving priority to projects contributing to poverty alleviation.

Fifth Day (March 20)

To the fifth day of the 3rd World Water Forum were added 'Integrated Water Resources Management' and 'Water for Peace' in Shiga and 'Dam and Sustainable Development', Water, Education and Capacity Building' and 'Financing Water Infrastructure' in Kyoto while the senior official's meeting continued to discuss draft of 'Ministerial Declaration'.

'Integrated Water Resources Management' had the most of sessions among the issues in the forum including sessions for discussion ranging from Japanese domestic issues like Lake Biwa Conservation and Management to the international issues like management on Mekong River and Nile River.

The opening session of 'Dam and Sustainable Development' was organized by the UNEP Dams and Development Project and had discussion on the report of World Commission on Dams (WCD). Mahmoud Abu-Zeid, WWC., noted that the growing global population necessitated the building of more dams to meet agricultural, domestic, industrial, energy and flood control needs, stressing the need to consider how dams affect livelihoods, environment and existing rights and access to water. One of the panelist said the question is not "dams or no dams?", but how to improve their environmental, social and economic performance. In the session of 'Dams and Development: Challenges to Financing Institutions' organized by WWF, a representative of World Bank (WB) said that WB supported dams that were economically, socially and environmentally appropriate. A representative of ADB said that many of the WCD guideline conform with existing ADB policies. Participants discussed the value of small-scale projects and the need for capacity building for appraising dam projects in LDCs.

Sixth Day (March 21)

In Kyoto and Shiga the participants to the 3rd World Water Forum met in the final sessions. The Ministers' Meeting on 'Agriculture, Food and Water' was held in Shiga, adopting a Ministerial Recommendation on its issue. The Dialogue between Participants and Ministers was held in Kyoto. 'Water Development Partnership Panel (WDPP)' was held organized by ADB, which JICA contributed by Mr. Matusi, JICA deputy president, with presentation on JICA activities and policy on water and poverty.

The recommendation on 'Agriculture, Food and Water' identified food security and poverty

alleviation, sustainable water use, and partnerships as three key challenges for the agriculture sector, outlining several actions including to: Modernize and improve agricultural water use; increase water productivity; promote better governance; consider environmental aspects; undertake research development; and foster international cooperation and partnerships.

The dialogue between the Forum participants and Ministers provided an opportunity for a 'Large-scale and direct' discussion. In the first dialogue, approximately 300 participants, Ministers and senior officials discussed challenges related to water and poverty, including to: overcome gender inequality; develop good water governance and legal frameworks; attract investment; empower local authority and promote community participation in water management. The second dialogue session, attended by another group of participants, discussed important actions that should be taken after the Forum conclusion, including: ensuring that the next forum is more participatory; implementing the recommendations of the WCD; acknowledging the human right to water in an international agreement ; creating global fund for water and sanitation; mobilizing the media to inform people about MDGs; developing a UN convention on water and poverty; disseminating the results of Forum; and implementing the Forum's outcomes through country-level plans.

Seventh Day (March 22)

The Ministerial Conference was held for an opening plenary in the morning and discussed in the sub-groups in the afternoon on the issues; safe drinking water and sanitation; water for food and rural development; water pollution prevention and ecosystem conservation; disaster mitigation and risk management; and Water resources management and benefit sharing. In addition, the World Water Assessment Program was discussed with 'World Water Development Report (WWDR)' entitled 'Water for People, Water for Life'.

The secretariat of the 3rd World Water Forum presented 'Portfolio of Water Actions (PWA)' in the Ministerial Conference, which was composed of the action plans with 422 plans proposed by 36 countries and 16 international institutions. Japanese Government proposed 91 plans including water resources development aspect based on utilization of technology like desalination in the Middle East as well as promoting integrated water management over international river basins and developing evaluation methodology for multi-function of water-fed paddy field.

Final Day (March 23)

The Forum was held in the three neighboring Japanese cities of Kyoto, Shiga and Osaka from March 16-23, holding 351 separate sessions on 38 interlocking themes dealing with water, especially on how to bring safe water and sanitation to the entire world.

Some 24,000 participants from 182 countries, more than triple the number of participants expected, attended the sessions.

The ministerial declaration, approved by senior government delegates, said governments worldwide must take the lead on water issues while considering getting the private sector involved. Ministers also agreed on various steps to tackle water issues in five different areas: water resources management, safe drinking water and sanitation, water for food and rural development, water pollution prevention and disaster mitigation. In order to meet the United Nations' goal of halving by 2015 the number of people worldwide who lack access to safe drinking water, the declaration stressed it was important for each country to develop strategies to achieve these objectives.

The following is a summary of the ministerial declaration adopted Sunday at the World Water Forum in Kyoto.

- Access to clean water is essential for sustainable development and the eradication of poverty and hunger.
- The forum notes a report calling for doubling the spending on water infrastructure in developing countries.
- The report calls for private-sector participation and public-private partnerships to tackle water issues.
- The report vows to devise integrated water-resources management plans by 2005, and to assist developing countries.
- Far more investment in water supply and sanitation is needed to halve the proportion of people without access to safe drinking water and basic sanitation by 2015.
- Collective efforts should be redoubled to mobilize financial and technical resources, both public and private, to achieve the goals.
- Effective and equitable management of water is required to eradicate poverty in rural areas.
- Farm-use water management should be improved via innovative investment, research and development, and cooperation.
- Better legislative frameworks are necessary to protect water resources and prevent water pollution.
- Land-use regulations, disaster-warning systems and national risk-management systems are needed to limit the impact of floods and droughts.
- Data and knowledge should be shared between states to minimize disaster damage.

(Refer to Annex 2 for Ministerial Declaration)

Prior to the Ministerial Declaration, the chairpersons presented the Chair's summary of discussion of Sub-Group Meeting.

(Refer to Annex 3 for Sub-Group Chair's Summary)

The Organizing Committee issued a preliminary 8-page Forum Statement, in which the Committee agreed that they will be “solemnly committed to facing the global water challenges and to meeting the goals set forth at the Millennium Summit of the United Nations in New York (2000)” – cutting in half the proportion of poor people without secure access to water and sanitation by 2015.

(Refer to Annex 4 for PRELIMINARY FORUM STATEMENT (March 21 draft))

JICA's Activities in the Third World Water Forum

JICA had contributed to the Third World Water Forum in several ways of activities. One of them was to project sessions, to organize and manage regional preparatory meetings and the Third World Water Forum itself, where 'Poverty and Floods' session and 'Water Development Partnership Panel' were classified.

Another way was to perform a part of session like panelist of the session, which was that of Water Voice Panel Discussion and the other way was to participate to sessions with presentation on lessons and learned derived from JICA experiences, like participation to the sessions of 'Groundwater Property Rights for Managing Groundwater', 'Water and Poverty' and 'Trends and Prospects of International Cooperation in Technologies of Water Supply System' as well as like presentation as panelist of Award Ceremony of "Water Voices" Messengers Prize and days of Africa and MEME.

In addition, JICA had maintained Information Booth in Event Hall to exhibit posters and booklets presenting JICA activities contributing water security over the world.



P -1 JICA Exhibition of Information Booth in Event Hall

JICA Organized Programs

(1) Poverty and Floods

Poverty and Floods was one of the sessions that discussed issues concerning flood in the Third World Water Forum in Kyoto, Japan, in March 2003. This session was jointly organized by Japan's Ministry of Land, Infrastructure and Transport (MLIT), Japan International Cooperation Agency (JICA), and the Asian Development Bank (ADB).

In the Third World Water Forum, Mr. Hidetomi Oi, JICA's Senior Advisor, was assigned as Chairman of the Session on Poverty and Floods, and Mr. Senichi Kimura, JICA's Director of the Second Social Development Study Division, was a member of the Discussion Panel. Three out of five case studies involving projects implemented with JICA's cooperation were chosen and presented by the JICA counterpart in each country. JICA also acted as the core of the Preparatory Committee that gathered more than 240 participants, contributing to the successful conclusion of the Session as follows;

Session Report

1. Key Issues

- Millions of people suffer from floods every year through loss of life, property, means of livelihood, social services and access to vital infrastructure. These adverse impacts affect the poorest segments of the society most severely
- Flood vulnerability of the poor has been increasing as a result of the cycle of population growth, environmental deterioration and the increase in the number of poor living in high flood risk areas
- The lack of capacity to limit the negative impact of floods remains a major burden for developing countries; mainly due to limited resources and the unlimited need for these resources to address pressing issues in all sectors of development
- Thus, despite achievements made to date, flooding has been increasing in terms of frequency, damage and vulnerability of the poor; aggravating poverty conditions and hampering the social and economic development of communities/regions/countries

2. Actions and Recommendations

- In the selection of projects, priority should be placed on projects, which will contribute more to poverty alleviation, by including "poverty alleviation" in the criteria for project selection.
- In the decision-making process of projects, opinions of the poor should be appropriately reflected, so as to minimize the adverse impact and to maximize the beneficial impact of the projects for the poor.
- Likewise, in the design of projects, livelihood improvement, job creation and other pro-poor elements should be considered, in order for the poor to benefit from the projects as much as possible.
- Different approaches should be adopted according to the conditions of flood prone areas: High priority areas should be identified through regional and river basin planning for a high standard of flood protection; while in other areas providing protection of essential sources of livelihood, and maintaining the benefit of positive impacts from floods for agriculture, aquaculture, etc.
- The advantage of traditional means of coping with frequent, low-intensity floods developed by communities should also be considered.
- Flood vulnerability analysis should be the starting point of preparation and operation for flood mitigation and management plan.

In view of the ever increasing vulnerability to floods in many countries, more resources should be allocated to flood mitigation and management projects of various types appropriate to local conditions.



P -2 Almost all of seats were occupied in the session of ‘Poverty and Floods’

Mr. Marshall Silver presented the above statement at the plenary of Floods Group on 19 March, where the secretariat of the group announced the Statement as conclusion of thematic discussion on floods. (Refer to Annex 5 and 6)

JICA together with MLIT and ADB, moreover, had contributed to organize and manage several meetings and four regional workshops held in preparation for the Third World Water Forum shown as follows;

Table 1 Schedule of Preparatory Meetings/Workshops on Poverty and Floods

	Topic	Date	Location	Remarks	Participant
1	Kick-off Meeting	February 2002	Manila, Philippines	ADB planned the “Water & Poverty Initiative” and the first meeting on Poverty and Floods.	JICA Representative Office, Philippines
2	Coordination Meeting on Water & Poverty	May 2002	Manila, Philippines	ADB presented the progress of preparation.	JICA Representative Office, Philippines
3	Meeting on the Poverty and Floods session	July 2002	Tokyo, Japan	Confirmed the Poverty and Floods session by JICA, ADB and MLIT	JICA, ADB, MLIT and Consultant
4	Meeting on Water and Poverty	September 2002	Dhaka, Bangladesh	ADB held Workshop for Case Studies on Water and Poverty. Four cases on JICA projects were presented.	JICA, MLIT and Consultant
5	Meeting on Poverty and Floods	October 2002	Manila, Philippines	JICA, ADB and MLIT held a Workshop	JICA, MLIT and related Officials from Manila
6	Meeting on Poverty and Floods	January 2003	Beijing, China	Participants nationwide. The presentation of case studies was in Chinese.	Consultant attended the Workshop.
7	Meeting on Poverty and Floods	January 2003	Ho Chi Minh, Vietnam	Participants nationwide. Brainstorming was adopted by session leaders; discussions in Vietnamese only.	Consultant attended the Workshop.

(2) Water Development Partnership Panel

Water Development Partnership Panel, organized and convened by Asian Development Bank cooperation with JICA, had panel discussion with dialogue together with participants in this session. Mr. Matsui, JICA Deputy President, joined the session as one of the panelists. Topics emerged in the session were project formulation to response people's needs promoting multi-stakeholders focusing poverty and gender, efficiency and reliability of water services, financing to realize such projects and so on.

During the panel discussion, Mr. Matsui said that: The issue on "Water" is one of the most essential official assistance programs to the developing countries where Japan has been practicing a vast amount of aid: "Water and Poverty" issue is recognized to be desperately serious, and thus we intend to make a significant contribution through Japan's ODA programs to overcoming those problems spreading all over the world: He also added recognizing that it is of a great importance to improve water management effective for poverty reduction, and will make efforts to formulate projects with residents' participation, focusing on the poor and gender, to meet the local people's needs. Also, to implement projects more smoothly and effectively, establishing partnership with NGOs having had solid accomplishments.



P -3 Water Development Partnership Panel

JICA Participation

In Table 2 below are described JICA activities in the Third World Water Forum including two sessions mentioned above.

Table -2 Description on JICA Activities in in the Third World Water Forum

Themes	Sessions	Dates	Venues	Conveners	Types of Contribution	Performers
Day of Africa [AFRI]	Mainstreaming Gender and Mobilising a Peoples Movement for Water in Africa [AFRI-02]	16 March	Room J	Africa Water Task Force	Presentation on case study on JICA related project	Mr. Astrid Milimo Choongo from Zambia
Day of Africa [AFRI]	Opening	17.March	Takaragaike Prince Hotel Prince Hall	Africa Water Task Force	Speech	Mr. Mochizuki (JICA Vice President)
Day of Africa [AFRI]	Ditto	17.March	Ditto	Ditto	Ditto	Mr. Nabetani (Director, JICA) presented on the JICA Water Initiative in Africa
Water Supply, Sanitation, Hygiene and Water Pollution [SANI]	The Trends and Prospects of International Cooperation in Technologies of Water Supply System [SANI-14]	17.March	Room E	Japan Water Research Center	Panel Discussion and presentation on case study on JICA related project	Mr.Ek Sonn Chan (Phnom Penh Water Supply Authority, JICA-C/P) and Ms. Yamamoto JICA Senior Expert)
Gender Panel [GENP]	Gender in Court [GENP-01]	17.March	Room D	Gender and Water Alliance	Panel Discussion and presentation on case study on JICA related project	Dr. Keooudom Namsena/ Ms. Keokokmay Phouipaseuth (Lao, JICA-C/P) and Ms. Ookawa JICA Deputy Director)
Floods	Poverty and Floods	18 March	Room D	JICA, ADB, MLIT	Panel Discussion and presentation on case study on JICA related project	Mr. Oi JICA Senior Expert as a chairperson, Mr. Kimura JICA Director as one of the panelist and 3 JICA C/P(Mr. A. Rusfandi Usuman from Indonesia, Mr. Md. Zahagir form Bangladesh and Mr. Bernardo Amam form the Philippines)

Water, Nature and Environment [NATE]	Water and Forest [NATE-17]	18 March	Room A	Water and Forest Committee	Presentation on case study on JICA related project	JICA C/P
Water and Poverty	Water and Poverty	19 March	Annex Hall	ADB	Presentation on case study on JICA related project	Ms. Ookawa (JICA, Deputy Director)
Groundwater [GRDW]	Groundwater Property Rights for Managing Groundwater [GRDW-10]	19 March	Grand Cube Osaka Room801	India Natural Resource Economics and Management (INREM) Foundation	Presentation on case study on JICA related project	Mr. Le Thine Son, Vietnam, JICA study counterpart
Day of the Middle East and the Mediterranean [MEME]	Opening	20 March	Takaragaike Prince Hotel Prince Hall	WB, UNDP, IDRC, GWP-MED, IDB, ICBA	Panel Discussion	Mr. Matsuura (JICA Director General)
Agriculture, Food and Water	Sustainable and Efficient Use of Irrigation System & Water, and Farmers Participation [AGRI-09]	20 March	RoomB-2	JICA, JBIC	Presentation on case study on JICA related project	JICA C/P
Agriculture, Food and Water	Agriculture, Food and Water in Africa (Rural Development Methods and Combating Desertification for Semi-Arid Area in Africa) [AGRI-14]	20 March	RoomB-2	JICA, JGRC	Presentation on case study on JICA related project	JICA C/P
Award Ceremony of "Water Voices" Messengers Prize [CERM-WV]	Ceremony	21 March	Room A	3rd WWF	Panel Discussion	Mr. Izumi (JICA Vice President)
Water Development Partners Panel [WDPP]		21 March	Annex Hall	ADB	Panel Discussion	Mr. Matusi (JICA Deputy President)

Ministerial Declaration
--- Message from the Lake Biwa and Yodo River Basin---

23 March 2003

We, the Ministers and Heads of Delegation, assembled in Kyoto, Japan on 22-23 March 2003, on the occasion of the 3rd World Water Forum. Building upon the outcomes of the Monterrey Conference on Financing for Development, the World Summit on Sustainable Development (WSSD), and the United Nations Secretary General's Water, Energy, Health, Agriculture and Biodiversity (WEHAB) initiative as well as other water-related events, we assert our common resolve to implement the appropriate recommendations in order to achieve the internationally agreed targets and goals including the United Nations Millennium Development Goals (MDGs).

Taking note of the thematic and regional statements and recommendations from the 3rd World Water Forum, we declare the following:

[General Policy]

1. Water is a driving force for sustainable development including environmental integrity, and the eradication of poverty and hunger, indispensable for human health and welfare. Prioritizing water issues is an urgent global requirement. Each country has the primary responsibility to act. The international community as well as international and regional organizations should support this. Empowerment of local authorities and communities should be promoted by governments with due regard to the poor and gender.
2. Whilst efforts being undertaken so far on water resources development and management should be continued and strengthened, we recognize that good governance, capacity building and financing are of the utmost importance to succeed in our efforts. In this context, we will promote integrated water resources management.
3. In managing water, we should ensure good governance with a stronger focus on household and neighborhood community-based approaches by addressing equity in sharing benefits, with due regard to pro-poor and gender perspectives in water policies. We should further promote the participation of all stakeholders, and ensure transparency and

accountability in all actions.

4. We are committed, in the long term, to fortify the capacity of the people and institutions with technical and other assistance from the international community. This must include, among others, their ability to measure and monitor performance, to share innovative approaches, best practices, information, knowledge and experiences relevant to local conditions.

5. Addressing the financial needs is a task for all of us. We must act to create an environment conducive to facilitating investment. We should identify priorities on water issues and reflect them accordingly in our national development plans/sustainable development strategies including Poverty Reduction Strategy Papers (PRSPs). Funds should be raised by adopting cost recovery approaches which suit local climatic, environmental and social conditions and the "polluter-pays" principle, with due consideration to the poor. All sources of financing, both public and private, national and international, must be mobilized and used in the most efficient and effective way. We take note of the report of the World Panel on Financing Water Infrastructure.

6. We should explore the full range of financing arrangements including private sector participation in line with our national policies and priorities. We will identify and develop new mechanisms of public-private partnerships for the different actors involved, while ensuring the necessary public control and legal frameworks to protect the public interests, with a particular emphasis on protecting the interests of the poor.

7. As water situations differ from region to region, we will support established regional and sub-regional efforts such as the vision of the African Ministerial Conference on Water (AMCOW) to facilitate the New Partnership for Africa's Development (NEPAD) and the Central American Integration System (SICA), and the implementation of the program of action in favor of Least Developed Countries (LDCs). Recognizing the uniquely fragile nature of water resources in small island developing states, we support specific programs of collaboration such as the Caribbean Pacific Joint Program for Action on Water and Climate in Small Island Countries.

8. We reaffirm the necessity for countries to better coordinate monitoring and assessment systems at local, basin and national levels, with development of relevant national indicators where appropriate. We call

upon the United Nations, inter alia through the Commission on Sustainable Development, to take a leading role and cooperate with other organizations involved in the water sector to work in a transparent and cooperative way. We welcome the willingness of the Organization for Economic Cooperation and Development and other organizations to periodically inform the international community of aid activities in water-related areas. Ways to track progress on water issues may be usefully explored on the basis of existing facilities and relying upon information from countries and relevant UN agencies, regional development banks and other stakeholders, including civil society organizations.

9. We welcome the proposal to establish a new network of websites to follow up the Portfolio of Water Actions that will publicize actions planned and taken on water-related issues by countries and international organizations in order to share information and promote cooperation.

[Water Resources Management and Benefit Sharing]

10. As we aim to develop integrated water resources management and water efficiency plans by 2005, we will assist developing countries, particularly the least developed countries, and countries with economies in transition, by providing tools and further required assistance. In this context, among others, we encourage regional development banks to take a facilitating role. To this end, we invite all stakeholders, including private donors and civil society organizations, concerned to participate in this process.

11. Recognizing that cooperation between riparian states on transboundary and/or boundary watercourses contributes to sustainable water management and mutual benefits, we encourage all those states to promote such cooperation.

12. We will further encourage scientific research on predicting and monitoring the global water cycle, including the effect of climate change, and develop information systems that will enable the sharing of such valuable data worldwide.

13. We will promote measures for reducing losses from distribution systems and other water demand management measures as a cost-effective way of meeting demand.

14. We will endeavor to develop and deploy non-conventional water

resources by promoting innovative and environmentally sound technologies, such as the desalination of seawater, water recycling and water harvesting.

15. We recognize the role of hydropower as one of the renewable and clean energy sources, and that its potential should be realized in an environmentally sustainable and socially equitable manner .

[Safe Drinking Water and Sanitation]

16. Achieving the target established in the MDGs to halve the proportion of people without access to safe drinking water by 2015 and that established in the Plan of Implementation of the WSSD to halve the proportion of people without access to basic sanitation by 2015 requires an enormous amount of investment in water supply and sanitation. We call on each country to develop strategies to achieve these objectives. We will redouble our collective efforts to mobilize financial and technical resources, both public and private.

17. We will address water supply and sanitation in urban and rural areas in ways suitable for the respective local conditions and management capacities, with a view to achieving short-term improvement of water and sanitation services as well as cost-effective infrastructure investments and sound management and maintenance over time. In so doing, we will enhance poor people's access to safe drinking water and sanitation.

18. While basic hygiene practices starting from hand washing at the household level should be encouraged, intensified efforts should also be launched to promote technical breakthroughs, especially the development and practical applications of efficient and low-cost technologies tailored to daily life for the provision of safe drinking water and basic sanitation. We encourage studies for innovative technologies to be locally owned.

[Water for Food and Rural Development]

19. Water is essential for broad based agricultural production and rural development in order to improve food security and eradicate poverty. It should continuously contribute to a variety of roles including food production, economic growth and environmental sustainability. We are concerned with increasing pressure on the limited fresh water resources and on the environment. Noting that a diverse array of agricultural practices and agricultural economies has evolved in the world, we should make every effort to reduce unsustainable water management and improve the

efficiency of agricultural water use.

20. Through effective and equitable water use and management, and extending irrigation in areas of need, we will promote neighborhood community based development, which should result in income-generating activities and opportunities and contribute to poverty eradication in rural areas.

21. We encourage innovative and strategic investment, research and development and international cooperation for the progressive improvement of agricultural water management, by such means as demand-driven management including participatory irrigation management, rehabilitation and modernization of existing water facilities, water-harvesting, water-saving/drought-resistant crop varieties, water storage and dissemination of agricultural best practices.

22. Inland fisheries being a major source of food, freshwater fish production should be addressed through intensified efforts to improve water quality and quantity in rivers and protection or restoration of breeding areas.

[Water Pollution Prevention and Ecosystem Conservation]

23. We recognize the need to intensify water pollution prevention in order to reduce hazards to health and the environment and to protect ecosystems, including control of invasive species. We recognize traditional water knowledge and will promote the awareness of positive and negative impacts of human activities on watersheds for the entire water cycle through public information and education, including for children, in order to avoid pollution and unsustainable use of water resources.

24. To ensure a sustainable water supply of good quality, we should protect and use in a sustainable manner the ecosystems that naturally capture, filter, store, and release water, such as rivers, wetlands, forests, and soils.

25. We urge countries to review and, when necessary, to establish appropriate legislative frameworks for the protection and sustainable use of water resources and for water pollution prevention.

26. In view of the rapid degradation of watersheds and forests, we will concentrate our efforts to combat deforestation, desertification and land

degradation through programs to promote greening, sustainable forest management, the restoration of degraded lands and wetlands, and the conservation of biodiversity.

[Disaster Mitigation and Risk Management]

27. The growing severity of the impacts of floods and droughts highlights the need for a comprehensive approach that includes strengthened structural measures such as reservoirs and dikes and also non-structural measures such as land-use regulation and guidance, disaster forecasting and warning systems and national risk management systems, in harmony with the environment and different water uses, including inland waterway navigation.

28. We will cooperate to minimize damage caused by disasters through enhancing the sharing and exchange, where appropriate, of data, information, knowledge and experiences at the international level. We encourage the continuation of collaboration between scientists, water managers, and relevant stakeholders to reduce vulnerability and make the best prediction and forecasting tools available to water managers.

29. Finally, we thank the Government and people of Japan for hosting this Ministerial Conference and the Forum.

Sub-group Chairs' Summary

**Ministerial Conference
on the occasion of the 3rd World Water Forum
Kyoto, Japan
22-23 March 2003**

**Chair's Summary
Sub-group Meeting on Water for Food and Rural Development
22 March 2003**

Agriculture accounts for a global average of 70% of all water withdrawals. Irrigated agriculture occupies less than 20% of the cultivated land, but produces 40 % of world food supplies and almost 60 % of cereal production in the developing world. - Global food production will need to increase by 60% to close nutrition gaps, cope with population growth and accommodate changes in diets. Currently, daily drinking water needs are 4 liters, but to produce food for one person for one day 4,000 liters are needed. - It is anticipated that agricultural water withdrawal will increase by 14% from 2000 to 2030 in order to meet food production needs, implying a net global expansion of arable irrigated land of some 45 million ha. - At the same time, there is no additional freshwater available to allocate to agriculture. Thus, the water crisis is an agriculture crisis, and without a change in agriculture, the water equation will not be solved.

In this context, the Vice Minister of Agriculture, Forestry and Fisheries of Japan, H.E. Mr. Kitamura reported the result of the Ministerial Meeting on Water for Food and Agriculture, organized by the Ministry and FAO. The Meeting adopted three key recommendations, relating to (i) food security and poverty alleviation, (ii) sustainable use of water, and (iii) partnership. These recommendations provided a valid framework for integrating working group participants' contributions as follows.

(i) Food security and poverty alleviation: Economic growth is essential for poverty reduction. Agriculture will play an important role in economic growth amongst low-income countries. Food production and rural development play central roles in achieving such growth.

There is a clear need for increased investments in rural areas, including well-functioning infrastructure – both related to irrigation and rainfed agriculture in order to meet world food demands, today and in the future. – Improved management of existing infrastructure, although important, is not enough. Additional investment is clearly needed. This also includes investment in research and extension services to increase water-use efficiency and develop less water using crops that permit increasing food production without increasing water demand, investments that fully recognize hydrological uncertainty and volatility, and investment strategies, in some cases involving several countries.

But also actions outside of the water sector are needed. Some delegates noted that an improved and more equitable trading regime is needed and that investments in rural infrastructure, including rural roads and electrification, market services, etc. will be required.

Water strategies should be linked to existing commitments and instruments including those of the international agreements such as the UNCCD and the WSSD. Countries' poverty reduction strategies (PRSPs) should reflect national water policies and strategies. Thus, countries should build on existing agreements including those at the World Summit for Sustainable Development.

(ii) Sustainable use of water: Sustainability includes environmental, social, and economic dimensions to ensure sustainable rural development. - Policies that provide incentives for environmentally sustainable water and land use need to be implemented, to avoid destruction of watersheds, desertification, diminishing local water availability through unsustainable farming, salinization, pollution, aquatic resources and inland fisheries. Specifically, groundwater use needs to take place in a sustainable manner, including in non-renewable aquifers the use of which needs to be maximized to achieve long-term social and economic

benefits. - To ensure social and economic sustainability of investments and activities, policies ensuring demand driven and participatory management, including devolution of irrigation management systems to farmers, and stable water use rights are paramount.

(iii) Knowledge and Partnership: Partnerships need to be enhanced at all levels, from government coordination at national level to government and community coordination at local level. Locally, active participation of all users, including women, is crucial. Women need to take their place as actors and participants, and should not be considered only as “vulnerable”. After all, 70% of agricultural producers are female and need to be empowered to make poverty reduction a reality. These issues were reemphasized by the representative of the Gender Panel who reported back to the working group participants.

At the regional level, cooperation will also increase benefits for food security and socio-economic growth alike, and should be pursued.

At the global level, harmonization and coordination of aid efforts is needed to make partnerships work and ensure common standards, as an important complement to increased funds and investments. And at the national level, ministries dealing with the different dimensions of water – such as agriculture, rural development, irrigation, hydro, water supply and sanitation – should enhance their cooperation towards a more integrated approach.

International and local knowledge systems and public good research should be strengthened. This should include global public good research, particularly aiming at increased water efficiency and increased productivity in agriculture, as well as research and development adapted to local conditions. There is also scope for increased South-South collaboration.

Particular emphasis is needed on public awareness and communication about water management and agriculture. This must be at all levels, including the local community level. This point was also emphasized by the representative of the Journalists’ Panel in his report to the working group.

Chair's Summary
Sub-group Meeting on Safe Drinking Water and Sanitation
22 March 2003

On World Water Day - 22nd March – 2003, Ministers and senior representatives of 49 countries and international organizations discussed *safe drinking water and sanitation*.

Poverty and disease are inseparable from inadequate water, sanitation and hygiene; whilst the sustained contributions of water and sanitation provide the foundations of health and sustainable development. The focus was “moving forward to action” to achieve the goals established in the millennium declaration and the priority that should be given to water supply and sanitation in development policies and plans.

Achieving the millennium development goals (MDGs) for access to water and sanitation will yield important benefits. Factors such as pressures on natural resources, emergencies and disasters, population growth, climate change and conflict may divert attention and resources. Priorities include accelerating access to basic sanitation and hygiene improvement.

The benefits of water sanitation and hygiene must be especially extended to disadvantaged and vulnerable populations without access even to basic services. Effective measures are available that can be deployed rapidly and effectively to enable the poor - especially the poorest of the poor - to benefit. These include household water treatment and hygiene behaviour.

Effective programmes in water, sanitation and hygiene depend on financing. Transparent approaches are needed to secure investment from all sources. To mobilize partnerships, measures to facilitate investment and effective regulation are also needed. Cost recovery is necessary but must not bar access to minimum requirements of the poor to meet their essential needs. In financing increased attention is required for actions directly serving the needs of the poor. Where subsidies are applied they should be targeted to assist the most needy.

Speedy and efficient progress requires good governance and priority to disadvantaged and vulnerable groups. Governance should support development of all types of partnerships.

Combinations of technical and institutional approaches that provide meaningful choices for households and communities are essential. Shortfalls in capacity remains a significant impediment in some areas and should be a priority for technical cooperation and NGOs. Technological innovation channels human creativity to the solution of important problems.

Children are effective agents of change and schools must be used to promote hygiene and sanitation. The role of women must be adequately reflected in planning, implementation and management of basic services. Preventive health care - including water supply sanitation and hygiene – must be a fundamental component of health sector activities.

Information provides the basis for identifying priorities and effective action. Better monitoring, reporting and sharing of knowledge would accelerate progress. National plans provide a basis for effective action and reflection on progress. Internationally, WHO with UNICEF must continue to report on progress for MDGs, to the UN Commission for Sustainable Development and as a contribution to the World Water Development Report.

Appendix to Chair's Summary
Sub-group Meeting on Safe Drinking Water and Sanitation
22 March 2003

On World Water Day - 22nd March – 2003, Ministers and senior representatives of 49 countries and international organizations participated in a sub-group discussion on *safe drinking water and sanitation*. Participants listened to remarks from H.E. Mr. Hans Christian Schmidt, Minister of Environment, Denmark, on the EU Water Initiative, H.E. Maria Mutagamba, Minister of State for Water, Uganda, on the African Water Facility, Sir Richard Jolly, reporting on the Forum theme "Water, Sanitation and Pollution Control". Presentations were also heard from Dr. Kati Myllymaki concerning the Forum session on Water Life and Medical Care; from Ms. Wenonah Hauter on the session concerning Public Private Partnerships; from Mr. David Boys on the Forum session concerning the Union Panel; from Mr. Gerard Payen on the Forum session concerning the CEO Panel and from Mr. Michael Rouse on the Forum session concerning Science, Technology and Management. H.E. Ronnie Kasrils, Minister of Water Affairs and Forestry, South Africa chaired the sub-group. Dr Jamie Bartram of WHO acted as rapporteur.

Context

Water supply and sanitation are at the centre of major policy themes of today. Poverty and disease are inseparable from inadequate water, sanitation and hygiene; whilst the sustained contributions of water and sanitation provide the very foundations of health and sustainable development. The thrust of discussions was "moving forward to action" to achieve the goals established in the millennium summit and the priority that should be given to water supply and sanitation in development policies and plans – both nationally and through access to international grants, financing and technical assistance.

The millennium development goals and benefits from their achievement

Achieving the millennium development goals for access to safe drinking water and sanitation will yield important benefits and also will contribute to achieving the goals for child mortality, malaria, environmental sustainability and partnerships. At the same time factors such as increasing pressures on natural resources, emergencies and disasters; population growth, climate change and conflict may divert attention and resources. Some specific priorities can be identified including accelerating access to basic sanitation combined with hygiene improvement

Addressing the unserved

The benefits of water sanitation and hygiene must also be extended to the large disadvantaged and vulnerable populations who remain - and will continue to remain - without access even to basic services. Effective measures are available that can be deployed rapidly and effectively to enable the poor - especially the poorest of the poor - in marginalized rural, informal peri-urban and urban settlements to benefit. These include household water treatment (including the International Network on Household Drinking-water Safety) and hygiene behaviours (the topic of the WASH campaign and the school sanitation initiative).

Financing

Effective programmes across water sanitation and hygiene will depend on financing: to address the needs of the unserved; to increase coverage with basic services; to progressively upgrade services to consumers; and to sustain ongoing services. To

achieve this, transparent approaches to secure investment from all sources and to mobilize partnerships are necessary; and measures both to facilitate investment and to provide effective regulation are needed. Cost recovery is necessary to sustain services and maintain investment; and must not bar access to minimum requirements of the poor to meet their essential needs. Increasing attention is required in overall financing to favour actions directly serving the needs of the poor, including especially sanitation and hygiene in addition to safe drinking water, which may benefit especially from revolving funds. Where subsidies are applied they should be targeted to assist the poor in accessing reliable services and not to those who can afford to pay for these services.

Governance and partnerships

Achieving gains speedily and efficiently is a priority and requires that the range of political, social, economic and administrative systems at different levels of society (good governance) are used to enable community participation in decision-making, access to information, to transparency and accountability and in order to pursue equity through policies and actions to give due priority to disadvantaged and vulnerable groups. Governance should support development of partnerships – whether public-public or public-private; partnerships amongst government sectors; among interest groups and stakeholders; among local government internationally. Efforts are needed to build basic confidence, trust and consensus amongst government, interest groups and all stakeholders.

Hardware and software

Combinations of hardware and software (education, communication, advocacy and capacity building) that provide meaningful choices for households and communities are essential to extend benefits and to their sustainability. Shortfalls in capacities remain a significant impediment in some areas. They should be a priority for international technical cooperation and may benefit from activities by NGOs. Technological innovation channels human creativity to the solution of important problems. Critical issues relate to water management in water scarce areas (including tapping fossil water, desalination, groundwater recharge; dry or semi-dry sanitation; and drinking water quality issues).

Special roles of women, children and the health sector

It is children who disproportionately carry the burden of water-related disease and women who disproportionately carry water. Children can act as effective agents of change and the schools provide opportunities to promote hygiene and sanitation. The important role of women remains inadequately reflected in their participation in planning and implementation and management of water and sanitation facilities and services outside the household. The health sector has a special role and should recognize that preventive care - including water supply sanitation and hygiene - is a fundamental component of its activities and that they have unprecedented access to households to promote and support household level actions in particular.

Monitoring

Information and access to information provide the basis for identifying priorities and for effective action. Better coordination in monitoring and reporting and sharing of knowledge and experience from local, national and international levels would contribute to accelerating progress. National plans with specific targets, based on an understanding of the national and local situation, which integrate water supply and

sanitation in integrated water resource management and identify the specific needs and priorities of poor, vulnerable and disadvantaged populations provide a basis for effective progress and for review and refinement of strategies and approaches. At an international level, the willingness of WHO with UNICEF through their "Joint Monitoring Programme", to continue reporting on progress on water supply and sanitation on a harmonized basis so as to inform reporting on MDGs, the UN Commission for Sustainable Development (CSD) and as a contribution to the World Water Development Report was noted. The participants encouraged them to continue to adapt the Programme to progressively improve data quality and comparability; to respond to emerging priorities (such as discrimination of coverage by service level and water quality); and to use the programme to support the development of national capacities.

Chair's Summary
Sub-group Meeting on Water Pollution Prevention and Ecosystem Conservation
22 March 2003

On 22 March 2003, representatives from 29 countries, and 10 intergovernmental and other organizations participated in the Sub-group Meeting on Water Pollution Prevention and Ecosystem Conservation at the Ministerial Conference held on the occasion of the 3rd World Water Forum in Japan. Dr. Philippe Roch, State Secretary for the Environment, Forests, and Landscape, Switzerland, chaired the meeting.

The first condition to ensure a sustainable water supply of good quality is to protect and use in a sustainable manner the ecosystems that naturally capture, filter, store and release water — such as rivers, wetlands, forests, and soils. This ecosystem approach is a precondition for poverty alleviation; ecosystems are the basic infrastructure for water supply and sanitation. "Ecosystems for water, water for people, ecosystems for people." The chair summarized the discussion as follows.

- Integrated water resources management at the watershed level (whether national or transboundary) must include the conservation and sustainable use of ecosystems.
- The water cycle should be considered from the first drop falling from heaven, onto the land and mountain forests, until water reaches the sea. A higher value should be assigned to protecting and sustainably using groundwater, which accounts for 97 percent of the world's freshwater.
- The prevention of pollution must be realized at the source, by using life cycle management for products, implementing sustainable production and consumption patterns, enacting legislation, introducing economic instruments based on the polluter- or user-pay principles, and developing civil liability regimes.
- The ecosystem approach needs other innovative tools, such as the valuation of ecosystem services and the payment for ecological services. Every local, regional and international project should have an ecosystem conservation aspect. Water tax revenues should be returned to local stakeholders who take care of water resources through an ecosystem approach.
- Multistakeholders must be involved at national, regional and local levels. Ministries within a country should cooperate for proper integrated water resources management, i.e., between water and agriculture, water and industry, water and spatial planning, water and finance, etc.
- Cooperation is also needed between the public and private sectors. The public sector should define the framework to protect the environment and the interests of the poorest.
- International cooperation is crucial, through multilateral, global and regional conventions on water management, such as the Ramsar Convention on wetlands — the first convention to protect and advocate the wise use of ecosystems — as well as other conventions such as the Basel, POPs, and PIC conventions.
- Regional cooperation on a watershed level, source of potential conflicts, should be a priority to be addressed with the help of multilateral neutral institutions such as UNEP, UNECE, and ESCAP, etc.
- Due care should be given to the intertwined relationships of water and biodiversity (including the problem of alien species), water and forestry, water and agriculture, including soils, and others.
- The impact of climate change on ecosystems and the subsequent influences on the water cycle were deemed as extremely important.
- Water and culture are closely linked. Recognizing values of traditional knowledge will enhance the sustainable management of ecosystems and water resources.
- In order to manage water resources efficiently and assess the measures taken to protect ecosystems, it is important to monitor ecosystems, water resources, including

groundwater, and factors affecting the availability of safe water, through reliable data collection and the use of geographical information systems (GIS).

- The contribution of the 23 UN agencies that produced the World Water Development Report should be recognized, despite some concerns about the methodology and indicators used, and such work should continue.
- The public awareness should be developed through information dissemination and education.
- Capacity building is an essential element to achieve the conservation of ecosystems and prevention of water pollution.

Chairman's Summary
Sub-group Meeting on Water Resource Management and Benefit Sharing
22 March 2003

On 22 March 2003, representatives from 62 countries, 1 region and 8 international organizations discussed the theme of Water Resource Management and Benefit Sharing as part of the Ministerial Conference under the Chairmanship of Hon'ble Minister for Water Resources, India, Shri Arjun Charan Sethi.

Several themes emerged in the discussion, in particular how to implement Integrated Water Resource Management, benefit sharing in practice, the major challenges to water resource management posed by climate change, the construction of dams, the promotion of dialogue and the sharing of information, the needed international support, the role of innovative technology etc. This report summarizes the discussions on the various themes, but does not claim to be a consensus report.

The importance of Integrated Water Resources Management as a way to address the water crisis is now generally accepted. The important question is how to put IWRM into practice. There are two points. First is the 'People Principle', in other words the need to listen to people, the need for multistakeholder participation and dialogues. The participatory approach in irrigation management is important in this regard. The second point is the importance of governance, water laws, the polluter pays principle put in practice and river and lake basin management arrangements. Appropriate policies on regulation, management, cost recovery and incentives are required for the wise use of water. The WSSD called for IWRM plans to be in place by 2005. These targets are very important and they need to be based on broad consensus. There is concern though on the difficulty of meeting this deadline.

Benefit sharing is important within and between countries. Within countries there should be benefit sharing between urban and rural areas and between rich and poor. In many cases, unfortunately, water services to rich are almost free, whereas the poor pay a higher price for a poorer quality of service. This should be avoided. Controlling water pollution is also important – as poor people suffer more from contaminated water. Water prices need to be redefined in the context of consumer welfare, using principle of access, affordability and sustainability. Special emphasis is required to help the poor and to have a fair sharing of costs within the countries.

Participants discussed that on international waters win-win situations are possible, even in difficult conditions. Some participants said that benefits in shared river basins - for instance in irrigation, energy, etc. - should be shared. Others said that benefits in shared river basins - for instance in irrigation, energy, etc. - should be shared where possible. Similarly, information and data across basins could be shared. What is important is to first invest in confidence building, capacity building and in dialogues.

In view of climate change, dams have become more relevant. There is a need for additional water storage in water stressed regions. Dams are also needed for irrigation, energy and flood control, etc. The development of dams however should follow environmental and social impact assessment and the development of resettlement plans.

We also need to make increasing use of innovative and appropriate technology for water use – such as desalination, reuse of treated water and obtaining water from the atmosphere. We need to better conserve and manage water.

Lastly, participants discussed the need for international support, especially to those countries that have difficulty in meeting the important WSSD targets on water supply and sanitation. Donors should play a more active role. Support is required: financially, in capacity building and in transfer of innovative and appropriate technology and experiences with governance systems.

Chair's Summary
Sub-group Meeting on Disaster Mitigation and Risk Management
22 March 2003

On 22 March 2003, representatives from 27 countries and regions, and 5 intergovernmental and other organizations met to discuss this important problem, under the chairmanship of Dr. Sunarno, Minister of Settlements and Regional Infrastructure, the Republic of Indonesia.

The representatives of countries summarized the situations they faced and reported on the actions they were taking to reduce the impact of natural hazards. The observers reported on the outcome of relevant discussions in the Forum and brought to the meeting various recommendations.

The main points discussed were the following:

1. The increasing severity of water-related disasters, in particular floods and droughts, is of world wide concern as they affect the safety and well-being of all. In particular in developing countries, they cause economic disruption and poverty. Poverty itself increases greatly the vulnerability of communities and thereby helps to create disasters. Water resources management should therefore be also focused on alleviating poverty.
2. The potential impact of climate change is expected to include an increase in the frequency of floods and droughts, and this must be monitored and allowed for in future management strategies. Enhanced cooperation between scientists and water managers will be very beneficial in this regard. The vulnerability of small island states to any rise in sea level should also be considered.
3. Assessment of the risk of floods and droughts and their prediction using new technological developments, particularly in the field of meteorology, can be very effective in reducing vulnerability.
4. There is a need to integrate flood and drought management with the broader aspects of water management and land use planning and to link these with economic planning. Flood management should be balanced with water use and environmental concerns, based on a river-basin approach calling for solidarity among all stakeholders.
5. A proactive approach should be taken to the management of water related disasters, involving the implementation of both preventative and emergency response measures.
6. Surface water reservoirs and aquifers are essential for the alleviation of droughts, and a range of structural measures has a role to play in reducing natural disasters. However, non-structural measures such as forecasting and spatial planning can be equally, if not more, effective in many cases.
7. We cannot eliminate the floods themselves, and so we must concentrate on reducing the vulnerability of the communities at risk.
8. Awareness raising and community involvement, including education and participation of youth and children, must be ensured.
9. The public sector has a key role to play, in particular by establishing legislation and providing national coordination.
10. International cooperation, particularly in shared river basins and aquifers, is essential for ensuring the sustainable development of the countries concerned.
11. Data, information and past experience are essential for the implementation of sound management practices and their collection, exchange and use in developing technical guidance must therefore be ensured, both nationally and internationally.
12. Governments are called upon to implement the recommendations of the WSSD relating to natural disasters, using an integrated, multi-hazard, inclusive approach as laid out in para. 37 of the Summit's Plan of Implementation.

PRELIMINARY FORUM STATEMENT (March 21 draft)

Preamble

We, the participants of the 3rd World Water Forum, are solemnly committed to facing the global water challenges and to meeting the goals set forth at the Millennium Summit of the United Nations in New York (2000), the International Freshwater Conference in Bonn (2001) and the World Summit on Sustainable Development in Johannesburg (2002).

Freshwater is a precious and finite resource central to sustainable development, economic growth, social stability and poverty alleviation. The Ministerial Declaration of the 2nd World Water Forum in The Hague, 2000, identified meeting basic water needs, securing food supply, protecting ecosystems, sharing water resources, managing risks, valuing water and governing water wisely as the key challenges for our direct future.

The 3rd World Water Forum, March 16-23 2003, held 351 sessions covering 33 themes¹ and 5 regions. This summary statement offers but a glimpse of the issues, actions, commitments and recommendations that we shall support and carry through in order to achieve a safe and secure water future for all.

Key Issues

In addressing the challenge of balancing increasing human requirements for adequate water **supplies** and improved **health** and **sanitation** with **food** production, **transportation**, **energy** and **environmental** needs, most countries will require more effective **governance**, improved **capacity** and adequate **financing**. Inclusive, community level public participation is fundamental to achieving these goals. Our common basic requirement for water is an opportunity for cooperation and **peace**.

Safe clean water for all

Increasing water use efficiency through developments in **science and technology** and improved demand management are essential. But these alone may not be sufficient to meet the growing demand for water in most developing regions and particularly in **cities**. All options to augment the available water **supply**, including increased storage through the use of **groundwater** recharge and **dams**, need to be considered, ensuring that all those who will be affected will also benefit. The recommendations from the World Commission on Dams (2002) can be used as a reference. A wider adoption of good practice is required in order to avoid the **environmental** and social costs and risks of the past.

Excessive resource development, uncontrolled urban discharges, industrial **pollution**, **agricultural** intensification and changes in the global **climate** have caused widespread degradation of surface waters and aquifers. When combined with increased vulnerability to **floods** and other disasters, these factors hinder prospects for economic and social development, **poverty** alleviation and **environmental sustainability**.

¹ *The 33 themes, including issues, topics, major groups, and special programs have been highlighted throughout the “Key Issues”, as have the 5 regions that were the focus of regional days. It should be noted that some issues, like food, were actually the focus of more than one theme (e.g., Water, Food and Environment and Agriculture, Food and Water). Each theme and region has prepared a statement which is annexed to this document.*

Governance

Many countries face a **governance** crisis, rather than a water crisis. Good water **governance** requires effective and accountable socio-political and administrative systems adopting an **integrated water resources management (IWRM)** approach with transparent and participatory processes that address ecological and human needs. Primary responsibility rests with governments to make water a priority by adopting sector strategies and plans that recognise the principle of secured access to water and sanitation for all human beings, and by implementing policies that utilise all available resource options.

Capacity Building

The need for **capacity building, education** and access to **information** for enhanced effectiveness in water management is unquestioned. These critical elements of the water development process are often treated as an add-on to programmes, with scant regard to local capacity-building institutions, **gender** mainstreaming, **cultural diversity** and traditional knowledge or to long-term commitment.

Financing

Financing infrastructure for the water sector comes mainly from the public sector of developing countries and is “topped-up” with contributions from foreign aid, international financial institutions, commercial loans and private equity. Despite the link between water security, development and poverty alleviation, overall investment in water resources management has been seriously neglected. According to the Vision and other estimates, developing and transitional countries will require \$180 billion annually in order to produce global water security over the next 25 years. This will require greater efficiency and better financial management. Several models for combining public, donor and/or private funding have been attempted, and the results have been mixed. The debate concerning **public-private partnerships** has not been resolved.

Participation

In many regions, countries and local communities have come to realise that water is a multi-stakeholder issue, and that partnerships of all interested and affected parties are a viable mechanism to translate IWRM into practice. Major groups including **CEOs, unions, indigenous people, water journalists, parliamentarians, youth** and **children** all have a point of view and deserve the right to be heard. Yet large segments of society, especially women and the poor, are not given a voice. There is a need for a closer examination of participation based on race, ethnicity, economic status, age, and religion to ensure inclusiveness.

Regional Issues

Although most of the issues outlined above are global, some are of particular concern in certain regions. **Asia and the Pacific** face a main water challenge due to the growth in both water demand and population. Pervasive poverty has confined **Africa** to a vicious cycle of underdevelopment, conflict, and suffering. In the **Americas**, large investments in water-related projects and macroeconomic reforms have failed to stimulate sustainable economic growth. Dwindling water resources are threatening people’s livelihood, the environment, and economic growth in the **Middle East-Mediterranean**. And **Europe’s** water resources are subject to considerable pressure due to the relatively high population density, significant industrial activity and intensive agricultural production.

Actions

Creating Global Awareness and political support

The Habitat Agenda (1996), the Millennium Summit (2000) and the World Summit on Sustainable Development (2002) have underscored the importance of water for development and have set goals and targets for priority action. The human right to water was defined in a General Comment by the UN Committee on Economic, Social and Cultural Rights (2002).

Governance has become firmly established within the water community and more than 40 countries have developed or are in the process of developing new water laws. The Bonn Conference and World Summit in Johannesburg have provided increased political awareness of water governance issues, and many partnerships have been established or strengthened (involving public, private and civil society stakeholders). Continent-wide, the Africa Ministers

Council on Water (AMCOW) and the Africa Water Task Force (AWTF) were established to lead the development of sound policies, coordinate water initiatives and prepare the NEPAD water agenda based on the Africa Water Vision and Framework for Action. The Africa Water Facility will serve as a conduit and facilitator for pooled funds for capacity building and investment support in Africa. Similar continental coordination is ensured by OAS - IWRN in the Americas.

Dialogues on water governance have been held in over 30 countries. New national policies, strategies and laws for water resources development and management are being developed in a large number of countries, most often following the principles of IWRM. This often led to restructuring of the institutional framework, including river and lake basin organisations, and empowered communities and water users associations.

Agreements have recently been reached on many shared rivers (Ganges, Incomati, Senegal, Pungwe-Buzi-Save, Sava, Chu-Talas) and lakes (Victoria, Malawi/Niassa/Nyasa), and broader regional agreements further promote basin cooperation (SADC Water Protocol, EU Water Framework Directive). These and other long-standing structures illustrate how water can serve as a source for peace rather than conflict. In several of the world's most important basins, the international community is providing financial assistance and expertise to stimulate cooperation, such as the Nile Basin Initiative or the Nubian Sandstone Aquifer Regional Strategy. However, many longstanding water related disputes still remain unresolved and the growing demand for finite freshwater resources heightens the risk of future conflicts developing.

The UN, the Water Supply and Sanitation Collaborative Council (WSSCC) and some stakeholders have started to monitor the number of people requiring access to drinking water and sanitation through the Joint Monitoring Programme.

Building Bridges

Programmes such as the Dialogue on Water, Food and Environment and CGIAR's Challenge Program on Water and Food have been established to bridge the gap between the food and environment sectors and to develop mechanisms to increase the productivity of water for food and livelihoods in a manner that is environmentally sustainable and socially acceptable.

The Dialogue on Water and Climate and the Associated Programme on Floods have been building bridges between water managers, climatologists, hydrologist and disaster management organisations, as well as raising awareness amongst water policy makers, water managers and society about the need for better adaptation to climate change and increasing meteorological hazards.

The sustainability of groundwater represents one of the major water challenges. Programs such as GroundWater Management Advisory Team and the Internationally Shared Aquifer Resources Management provide technical support to local initiatives to better understand and manage these resources.

Local Action

There is an increasing number of initiatives worldwide where societal goals are met to prevent pollution whilst the services of ecosystems are protected, for example through watershed protection. These actions, the majority of which are undertaken at the local-level, deserve wider-scale application.

Several local and regional scale initiatives on disaster preparedness and adaptation to climate variability (and change) have been launched, but funding for such activities has been very limited and most have yet to mainstream their recommendations into national policy.

It is estimated that developing and transitional countries spend around \$80 billion annually on all parts of the water sector. As stated above, more than double that amount will be needed to meet Millennium Development Goals. Pooled risk funds, and municipal credit ratings are increasingly used tools that allow local authorities and communities to have access to financing.

The number of stakeholders included in different consultation processes continues to increase. Gender-sensitive participatory processes at the community level have proved effective, and in

some countries they are supported by gender inclusive policies. But generally the overall participatory decision-making process is fuzzy and protracted, and decisions are frequently delayed or cancelled. Education on integrated water resources management needs to continue to be made available to all stakeholders. Greater attention should be given to water education in primary and secondary school, and higher-level water-sector education and training needs to be re-oriented towards IWRM.

Keystone Commitments

Over 100 commitments were made, and it would be too lengthy to list them all here. Most of these are detailed in the thematic and regional statements, others were reported in the session reports. The climate theme accounted for more than 20, and gender issues produced 13.

AT GLOBAL LEVEL

- The benefits of sound water management become more apparent if linked to the WEHAB framework, which includes health, energy, biodiversity, productivity, socio-economic development and poverty alleviation. Recognition of the wide spectrum of water management benefits will stimulate governments to give water a higher priority on their policy agenda and associated budget allocation. The World Water Council is committed to develop and implement with a consortium of International financial institutions, UN agencies, international non-governmental organisations, and research institutions a programme aiming to precisely identify and highlight the benefits brought by sound water management and provide governments with appropriate tools and analysis so that they may be considered in priority setting, planning, development, management, and budgeting for the water sector.
- UNESCO and the World Water Council are committed to promote, develop and support the establishment and operation of an independent, easily accessible facility that can help solving problems related to trans-boundary waters by providing on request access to experienced technical advisers, tools, training sessions and mediators.
- UN-HABITAT signed a memorandum of understanding with the Asian Development Bank (ADB) to create a programme to build the capacity of Asian cities to secure and manage pro-poor investments and to help the region meet the Millennium Development Goals (MDG) of halving, by 2015, the proportion of people without safe drinking water and basic sanitation. The programme will cover a pipeline of US\$10 million in grants from ADB and UN-HABITAT for the first two phases and US\$500 million in ADB loans for water and sanitation projects in cities across Asia over the next five years. Additional funding for Water for Asian Cities has also been made available to UN-HABITAT by the Government of Netherlands.
- The partner international organisations and research institutes (WWC, UNESCO-IHE, FAO, KIP, IFPRI, IWMI and SOAS) are committed to continue their efforts and to lobby for financial support to develop a better understanding of the concept of Virtual Water, its application and its impact and to provide governments with information and tools to consciously utilise virtual water trade as an effective way to promote water saving and make it an integral part of government's national and regional water, food and environmental policies.
- A broad consortium of organisations (GWP, NRC, FAO, WWC, IWA, WMO, UNEP, IUCN, UNESCO, UNDP, WB, ISDR) which supported the International Dialogue on Water and Climate, are committed to continue building bridges between the climate and water sector, and develop activities to better cope with climate impacts. These organisations will form a "International Water and Climate Alliance".
- The United Nations Development Programme (UNDP) commits to a Community Water Initiative, aimed at building on the power of the local community to solve water and sanitation challenges. Its aim is to provide innovative communities with small grants to expand and improve their solutions to the water and sanitation crisis. The Community Water Initiative has an estimated target budget of \$50 million for 2003-2008.

- Through the Indigenous Peoples Kyoto Water Declaration, the indigenous participants of the 3rd World Water Forum commit themselves to forming a network on water issues that will strengthen the voice of indigenous people generally, and help empower local communities struggling to protect their water rights.
- The Water and Sanitation Program (World Bank) commits itself to funding national capacity building projects for MDG monitoring. Candidate countries are welcomed to apply.
- The WSSCC is committed to publishing every three years a *'People's Report'* that will present progress towards hygiene, sanitation and water for all. The first one is due in December 2003, and thereafter at each WASH Global Forum.
- PricewaterhouseCoopers, UN Water and Care International commit to a Global Water Initiative, to bring a substantial contribution to the MDG. It will start soon with a pilot project in Africa supported by the French Government, with results by the end of the year 2003.
- The Ministry of Land , Infrastructure and Transport of Japan has supported the establishment of the International Flood Network (IFNet), launched during the Third World Water Forum for flood mitigation at the global stages. IFNET is committed to launching the "Global Flood Warning System" project, with the capacity to create the precipitation maps all over the world every 3 hours. As a result, flood warnings in the world will be vastly improved, benefiting up to 4.8 billion people.

AT REGIONAL LEVEL

- The international organisations active in the American region (IADB, OAS, ECLAC, IUCN, SICA, IWRN, CAN, LANBO and GWP) commit themselves to find and negotiate solutions for the following issues: (a) policy development, including rules for efficient and equitable water allocation; (b) meeting financial needs for water resources management; (c) effect of international trade agreements on national water public interest; (d) capacity building for effective decentralisation, water governance, management and regulation of services; (e) participatory and efficient risk management; and (f) impact of first world agricultural subsidies on sustainable water management.
- Australia commits over AUD\$80 million in the current financial year for water activities, primarily in countries in the Asia-Pacific region.
- Caribbean and Pacific organisations (CEHI and SOPAC) signed a Memorandum of Understanding to implement the Joint Programme for Action (37 member states), providing for co-operation on matters including the freshwater environment, capacity-building, data and information management, applied research, sharing of expertise.
- The Netherlands will concentrate its support to Africa and assist 10 countries in the development of their national plans. Further, it is committed to support the African Water Facility.
- The European Commission is committed through EUREAU to including benchmarking into the EU Water Initiative.
- The Mekong River Commission (MRC) with the governments of Cambodia, Laos PDR, Thailand and Vietnam, in collaboration with partners will prepare a navigation strategy and programme by the end of 2003. The long-term goals of the strategy are to develop sustainable, effective and safe navigation on the Mekong, and to increase the international trade opportunities for the mutual benefit of the member countries of the MRC.

AT NATIONAL LEVEL

- The Kenya Ministry of Water Resources is committed to achieving the Millenium Development Goals, to increasing the proportion of Kenya's rural and urban populations who have access to safe and reliable water supplies, and to reforming the institutions governing water resources in the country.
- Brazil commits to a gender mainstreaming policy, welcoming cooperation with the Gender and Water Alliance, primarily for the "Zero Thirst" Programme that is still being developed.
- River Bureau, Ministry of Land, Infrastructure and Transport of Japan will support inland waterway transport activities that contribute to community revitalisation and urban rejuvenation, establishing a system that can quickly respond to earthquakes and other disasters. It will also provide technical assistance and capacity strengthening to developing countries.

LOCAL/BASIN

- Kenya Rainwater Association is committed to starting an initiative, "The Nyando Basin Food Security Support Project through rainwater harvesting" in the Nyando River Basin in Western Kenya. This is an initiative which is community driven, targets 2000 households and 300 HIV/AIDS patients and orphans per year and is based on provision of water tanks, ecological sanitation units, EM introduction and environmental protection with an emphasis on soil fertility and tree numbers improvement.

Recommendations

The participants of the third World Water Forum recommend the following actions to be taken up as commitments to achieve our goals and responsibilities as water community:

1. *Alliances, Partnerships, Networking, Participation and Dialogue*

Governments, civil society and industry continue to develop ways of collaborating, combining their strengths and skills with those of the others, creating a new ethic of responsible water-use in society through advocacy, information sharing and education. This can only succeed if governments are clear on their strategies and priorities for the water sector, and plan accordingly. Donors, NGOs, IFIs, companies and others will assist, but there has to be real political "ownership" from host governments as a precondition.

Local people, authorities, the research community, farmers, industries, women and minority groups are empowered and involved in the development of basin and aquifer strategies, agreements and institutions. Stakeholder representatives and local authorities are given a permanent and official role in decision-making and implementation. The water-related knowledge, practices and rights of communities in all cultural contexts and their contributions are recognised and better integrated in water management and environmental stewardship. Private companies contribute to achieving the MDG goals by twinning and helping in capacity building.

Governments, industry, agriculture, and people in their daily lives contribute to eradicating existing pollution and ensuring that economic development does not result in increased pollution.

2. *Nature and Ecosystems*

We increasingly see examples where societal goals are met whilst the services of ecosystems are protected. These actions deserve wider-scale application:

- Protection and restoration of ecosystems and aquifers for water services;
- Implementation of environmental flows for downstream ecosystems and users;
- Development of multi-stakeholder approaches for integrated action;

- Integrated adaptive management of land, mountain, forest and water resources;
- Basin-wide pollution prevention and treatment plans;
- Innovative financing and legal frameworks for environmental protection;
- Water-demand management.

3. Financing and Investment

Governments translate water laws, strategies, and plans into realistic budget estimates and financing plans for water in all WEHAB sectors. Governments and local authorities take adequate measures to reduce risk and improve cost recovery, necessary to encourage investment. Primary responsibility for such investments rests with national governments. Donors stand by commitments to increase aid for water.

International agencies and multilateral and bilateral donors give priority in allocating support to countries that are establishing strategies for integrating and coordinating water issues for all water-related sectors and that are increasing investments based on sound planning. Governments and donors give particular attention in their investment strategies to pro-poor, affordable and appropriate technologies and approaches. Governments, donors and the private sector will develop a range of public financial instruments, accessible to local water managers for development and management of infrastructure that provide water to the poor at an affordable cost.

4. Policy and Strategic Planning

Governments and local authorities acknowledge that water is essential to development and poverty reduction and therefore give water priority in all development agendas. The benefits of water and good water management are better quantified so that they may be considered in priority setting, planning, development, management, and budgeting for the water sector.

Governments commit themselves to mainstreaming water in strategies and master plans for all WEHAB sectors and to the preparation of Integrated Water Resources Management (IWRM) plans by 2005 in accordance with the WSSD Plan of Implementation.

National and local governments in collaboration with basin agencies, industries and local communities develop and implement basin-wide pollution treatment and prevention plans; encourage basin and coastal area-wide partnerships and develop financial, legal and institutional incentives for pollution prevention. They also develop comprehensive and integrated flood and drought management policies and adopt strategies for the mitigation of the effects increasing climate variability and all natural disasters. The plans are made with the participation of stakeholders and linked to national poverty reduction strategies adopting user and community-based water demand management as a strategy of first choice. In their planning governments implement the ecosystem approach to water management integrating land and water resources management with special attention to environmental protection and resource conservation. Trade in virtual water is considered as a serious option to enable such ecosystem approach.

Governments consider appropriate targets for water for productive water use namely, increasing food production, to achieve targets for decreasing malnourishment and rural poverty, without increasing global diversions of water to agriculture over the 2000 level. In this regard, mandate international organizations to establish a baseline and monitor progress towards these targets and report to the Ministerial Conferences associated with the World Water Forum series.

5. Institutions and Legislation

Governments start or continue reforms of public water institutions, drawing on public-private cooperation, twinning, private know-how, and other options. Governments promote good governance in water management and service delivery, ensuring cost-efficiency, transparency and accountability through increased stakeholder participation and public, private partnerships. The donor community should commit an increased percentage of their funds for establishing

better water governance systems. Extra support should be given to countries with sensible socio-economic policies to help implement laws and build administrative capacity for efficient public institutions.

Governments, donors and NGO's focus their attention to capacity building of the decentralised agencies in their new institutional context, so that they can work effectively in a participatory, people- and service-oriented approach with user groups, communities, and households. Central agencies also have to be transformed, so that they can take up their new roles and responsibilities.

6. Data Gathering and Sharing

Recognising that access to timely, credible and relevant hydrological and meteorological information is essential to for better resource management, planning and decision making, governments and international institutions build the capacity for increased data monitoring and dissemination. Such information is especially needed for flood and disaster management, and must be made publicly available free of charge to all relevant stakeholders, particularly in transboundary basins. Agencies, ministries and governments that have been withholding data and information under the assumption that "knowledge is power" must be persuaded to revisit their policies.

7. Special consideration under current international situation

On March 20th, military action was taken against Iraq. However unfortunate and undesirable war might be, it became a reality. All that we can do now, is to do our best to help refugees and internally displaced persons to obtain a secure shelter, with access to safe water, sanitation and food. People in Iraq, particularly in rural areas and in the northern part of the country, may be faced with the burden of being cut off from power and fresh water supplies. It is hoped that the protection of water infrastructure during armed conflict, and its subsequent rehabilitation, will be given special attention at the Ministerial Conference.

Draft STATEMENT FLOODS		
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Key Issues

Floods are the most destructive and unavoidable natural hazards, threatening lives, property and the sustainable development of many countries, although they are natural phenomena, which, over time, build up the flood plains that are widely used for agricultural production and urban development.

The number of flood victims has increased from 19 million per year in the 1970s to 131 million per year in the 1990s and, in the first half of 2002, floods in more than 80 countries caused hardship for more than 17 million people worldwide, according to WMO.

To reduce the negative impacts caused by the floods, a comprehensive and integrated approach must be adopted including both preventative and responsive measures.

Actions

National Governments should establish policies for the mitigation of the affects of all natural disasters, including flooding, backed by appropriate institutional arrangements. These should include the compilation and free and open exchange of all relevant data, information and expertise.

Recommendations

In order to reduce the loss of life, injury and damage caused by floods, each country should:

- Adopt comprehensive and integrated flood management strategies based on river basins, giving full consideration to flood control, environmental, ecosystem, health, gender and sustainable use of water resources. Such an integrated strategy should be underpinned by all relevant stakeholders. Specific recommendations are:
 - Consideration of both direct and indirect damages, and flooding as a major obstacle to implementing secure land use and economic activities and to protect urban poor.
 - Recognition of basic knowledge and continuous monitoring of hydrological, morphological and environmental aspects, as an essential pre-requisite for effective flood management.
 - Integration of structural and non-structural measures such as levees, reservoirs, hazard mapping, zoning, flood proofing, flood fighting, forecasting and warning, training and rapid response actions.
 - Strengthening of framework of flood policy and organization, laws, and legislation regarding preventative measures and emergency management from the viewpoint that floods can never be totally eliminated.
 - Promoting information sharing and capacity building for proper maintenance and optimum operation of flood control facilities based on the recognition that improper management of such facilities may aggravate disasters.
 - Giving importance to public participation and community based local cooperation in raising awareness regarding the impacts of floods through appropriate policies and related activities.
 - Investigating and conducting research into the impacts of climate change on future flooding in rivers, estuaries and coastal areas.
- Allocate adequate financial resources to implement the necessary flood management projects in accordance with the above recommendations.
- Cooperate with neighboring countries and with all relevant intergovernmental and non-governmental programs aimed at mitigating the effects of floods, including participation in the newly established International Flood Network (IFNet).

“We must learn to LIVE WITH FLOODS”

Floods are natural phenomena which can never be fully controlled and so we must learn to live with them; protecting people from their destructive power, while benefiting from the freshwater that they bring and the fertile plains that they build.

This calls for an integrated approach to flood management which incorporates it into the wider context of integrated water resources management and links it with policies and practices for land management and the reduction of natural disasters.

National Governments should review and, where necessary, revise their national policies to ensure that they incorporate this necessary level of integration and then put these policies into practice with renewed vigour and as a matter of urgency. They should note in particular that:

- the vulnerability of the poor to water-related disasters can be mitigated through better planning and the re-direction of investment to target their needs;
- there is a need to develop innovative approaches, using both structural and non-structural measures supported by the physical, social and economic sciences, and the compilation of the necessary data. These should address the complex problems of flooding, particularly in urban, delta and coastal regions, and give space to the rivers;
- local communities and other stakeholders must be encouraged to participate, on a continuing basis, in the decision-making processes, with access to appropriate mechanisms for conflict resolution.

The international community should further develop mechanisms, using international networks and projects, to exchange information on flood management and encourage bi-lateral and multi-lateral cooperation in the resolution of flood problems.

Bi-lateral and multi-lateral donors should attach high priority to incorporating flood management into projects on integrated water resources management so as to protect lives and investments, while developing the beneficial use of flood waters and flood plains.