

(Provisional Translation)

**Report of the Study Group of Academics and  
Government Officials on Water**

December 2007

## Forward

Earth is the water planet, which has liquid water on its surface, and water is the origin of every life. Since ancient times, water has been a major concern for humankind as it has striven to secure necessary water, utilize it for daily life, and control damage to human societies caused by water-related natural disasters such as floods. Even today, water continues to have such importance for humankind. Current problems, including rapid urbanization as well as population growth in developing countries, have further enhanced the longtime recognition that water is truly essential to human life. In addition, climate change, an emerging global concern, has drawn attention to an adaptive aspect of water. Thus, the world's attention to water has been growing.

With the above recognition in mind, the Study Group of Academics and Government Officials on Water, composed of five experts from academia who specialize in various water-related areas and government officials currently engaged in water-related administration, gathered and exchanged frank views on how international community should address the issues of water and sanitation. As a result, this report was produced.

This report is divided into two parts. The first part presents the recommendations of the Study Group, based on its discussions, in connection with the action to be taken by the Government of Japan at the upcoming G8 Hokkaido Toyako Summit and other international efforts relating to water. The second part lists envisaged measures suggested by government officials.

The contents of the report, however, reflect the views of the Study Group of Academics and Government Officials on Water only, and hence does not present views of the Government of Japan. In addition, it will not forejudge Japan's future policies.

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Ministry of Foreign Affairs (Coordinator)

Ministry of Education, Culture, Sports and Technology

Ministry of Agriculture, Forestry and Fisheries

Ministry of Economy, Trade and Industry

Ministry of Land, Infrastructure, Transport and Tourism

Ministry of Environment

Japan Bank for International Cooperation

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**【Meeting Dates】**

1<sup>st</sup> meeting: 26 September 2007

2<sup>nd</sup> meeting: 22 October 2007

3<sup>rd</sup> meeting: 26 November 2007

## <Part I>

### **TOWARD WORLD WATER WELFARE**

Achieving A Society with A Safe and Reliable Water Cycle

Recommendations for the International Efforts on Water,  
including the G8 Summit Meeting

December 26, 2007

Chairpersons

#### **1. Introduction**

The members of the Study Group on Water, composed of academics and government officials, are of the views that due consideration should be given to the following when the international community addresses water and sanitation issues, including such occasions as the upcoming G8 Hokkaido Toyako Summit.

#### **2. Current Situation**

##### **(1) Uneven Distribution of Water Resources**

Water is a cycling resource, and it is essential to the maintenance of every life as well as the conservation of the environment and the ecosystems. There is sufficient water on the earth, and if it is managed and utilized properly, it will be sustainably used. Yet water resources are unevenly distributed with respect to geography and season as well as within societies. As a result, there are still many people who are without access to needed water on both a quantity and quality basis due to the lack of adequate monitoring and management capabilities, the non-existence and/or aging of water-related infrastructure, such as monitoring, intake, reservoir and water supply facilities, and an insufficient number of skilled personnel.

##### **(2) Water Issues affect not only the Environment but Human Society**

Today, one fifth of the world's population is without access to safe drinking water and two fifths are without access to suitable sanitation facilities. For both these reasons, 1.8 million infants die every year.

As a result of the growing number of water-related natural disasters such as floods, landslides, and tidal waves in recent years, over 200 million people are affected by these devastations and more than 50,000 people are losing their lives on average a year. In 2007, floods damaged broad areas of East, Southeast and South Asia, Africa, Caribbean and Latin America, and Oceania. It is worth noting that floods have beset not only developing but also developed countries, including the United Kingdom and central areas of the United States of America.

Because of the concentration of population in urban areas, an increase in the demand for water and climate change, water-related environmental resources, such as forests, arable lands, wetlands, and coastal areas, are rapidly being exhausted due to the diminishing surface area of water, a diminished inflow of river water, and a deterioration in water quality. The consequences, deterioration of the water environment and a loss of biodiversity, are grave.

With rapidly increasing food demands due to population increase and economic growth, the lack of supply of water, which is necessary to sustain agricultural production and meet the demands, has become an issue, with the result that over 800 million people around the world now suffer from hunger and malnutrition.

### **(3) Ensuring Human Security through Water**

As outlined in the Millennium Development Goals (MDGs), on which world leaders reached agreement at the United Nations Millennium Summit held in New York in September 2000, provision of safe drinking water and improvement of sanitation, which are related not only to human health but also to the solutions of other MDG-related issues, including primary education, gender equality, and poverty eradication, would contribute to improve human security significantly. The poor are especially vulnerable to water-related disasters such as floods and droughts, which may hinder the effects of development drastically. Water is closely linked to the issues of land, food, ecosystems, and energy, and it is therefore essential to maintain harmonized interactions among these issues in order to achieve sustainable development.

### **3. Future Concerns**

#### **(1) Impact of Relative Water Scarcity**

Due to the rapid increase in population and high rate of economic growth taking place in the world today, especially in Asia and Africa, it is expected that demand for water and food will continue to grow. The accelerating concentration of populations in urban areas is an issue with implications for the likelihood of more frequent water shortages, degradation of environmental and hygienic conditions and an increase in potential of water-related disasters, which in turn jeopardize sustainable development.

#### **(2) Impacts of Climate Change on Water Resources**

Climate change is a threat to human security. As pointed out in the Fourth Assessment Report prepared by the Intergovernmental Panel on Climate Change (IPCC), it produces changes in the patterns of hydrological cycles, which in turn produces: an increase in the frequency and severity of drought, with associated changes in the already difficult food supply-demand balance; a loss of human life and property and health problems due to water-related disasters such as floods and landslides; an increased risk of tidal waves/water damage and loss of lands caused by the rise in sea level; an increased likelihood of glacial lake bursts; declining water quality due to elevated water temperatures; and changes in water ecosystems. Thus, changes in hydrological cycles caused by climate change will pose a grave threat to both developed and developing countries.

Conflicts over scarce water resources will exacerbate human security and damage global economic growth, not only along international river basins but everywhere.

### **4. Desirable Strategies on Water for Developed Countries, especially Members of the G8**

#### **(1) The Recognition of the Importance of Water Issues as well as the Urgency of the Enhanced Responses to Them**

In order for the international community to grasp the occurrence and the existence of the issues caused by water before they arise, or at an early stage, developed countries,

especially members of the G8, which have had experience in this field and continuously addressed the water issues, should take a lead in addressing them within the international community. They should facilitate raising awareness that issues caused by water are one of our top priorities. Measures should be promptly taken to prevent or reduce impacts and damages arisen from water issues, not only through measures taken by members of the G8 but also in cooperation between developed countries, especially the members of the G8, and developing ones.

To that end, it is essential to address the water issues at the policy-making level, in addition to the efforts made at the working level. In this regard, the leaders and ministers of developed countries, especially members of the G8, should accurately acknowledge the current situation and issues relating to water and encourage each other to facilitate responses to resolve the issues by exercising political leadership.

Countries and regions that are deemed to be experiencing less water issues at present may suffer from such issues in times of disaster or armed conflict. It is therefore necessary that developed countries, especially members of the G8, take a leading role in formulating measures to reduce such risks.

## **(2) Efforts Based upon Existing International Frameworks**

Developed countries, especially members of the G8, need to strengthen measures to resolve the water issues through activities undertaken in connection with the MDGs, existing action plans and/or international frameworks on water as well as existing basin commissions addressing issues relating to international rivers, including the United Nations Commission on Sustainable Development Water Action and Networking Database (CSDWAND) and the Network of Asian River Basin Organizations (NARBO). In concrete terms, the following measures should be taken:

- Collaborate with the United Nations agencies such as the United Nations Educational, Scientific and Cultural Organization (UNESCO) and World Health Organization (WHO), which have promoted the World Water Assessment Program (WWAP) and the World Water Development Report (WWDR), as well as the United Nations Development Programme (UNDP) and United Nations Human Settlements Programme (UN-HABITAT), international financial institutions including the World Bank, which established the Global Facility for

Disaster Reduction and Recovery (GFDRR) in 2006, and the Asian Development Bank.

- Promote Integrated Water Resources Management (IWRM) under the Johannesburg Plan of Implementation on which agreement was reached at the World Summit on Sustainable Development in 2002. In this regard, reaffirm that the “Water and Sanitation Broad Partnership Initiative (WASABI)” presented by Japan in 2006 should be welcomed and similar initiatives should be taken by other members of the G8.
- Acknowledge the progress that has been made in implementing the “Water - A G8 Action Plan” adopted by the G8 members at the Evian Summit in 2003 in a serious manner. Reaffirm to move forward to address water issues for their solutions.
- Support the efforts made at the highest level during the first Asia-Pacific Water Summit held in Japan in December 2007. Recognize water issues as important trans-boundary ones and commit to provide active support to developing countries in their efforts to address them through measures adequate for their regional characteristics such as culture, climate, and history.
- Raise further awareness regarding sanitation, taking advantage of the opportunity provided by the “International Year of Sanitation 2008.”
- Consider ways to follow-up these issues at appropriate occasions.

## **5. Recommendations on Concrete Measures**

### **(1) Technical Assistance, Capacity-Development, and Institutional Development to Improve Access to Safe Drinking Water and Sanitation in Developing Countries**

The developed countries, especially members of the G8, should facilitate advancement of water-related technology and its dissemination. They should also give priority to the MDG on safe drinking water and basic sanitation, and provide developing countries with the assistance they need to achieve it. To that end, the following assistance relating to both hard and soft aspects, such as development of infrastructure and rehabilitation of aging facilities as well as strengthening of operation and maintenance of such facilities, and improvement of water-related legal and management systems, is important. In addition, it is also important to develop human resources, enhance capacity-development and strengthen relevant institutions. Developed countries,



especially members of the G8, should give priority to capacity-development assistance that encourages self-reliance and strengthening of local training institutions and facilitates implementation of training programs based on local needs. To these ends, the following measures should be taken:

- Develop energy-efficient technologies for water treatment, desalination, and purification.
- Create societies that conserve water by recycling it via such means as membrane technologies, implementing water-leakage prevention measures, using water-conserving home electronic equipment and water-conserving agricultural practices.
- Build wastewater treatment facilities appropriate to local needs, combining aggregated wastewater treatment facilities, distributed wastewater treatment facilities, and individual septic tank facilities.
- Improve operations through utilization of performance indicators and improve the service standards of drinking water supply and sewerage through strengthening of institutions.

**(2) Action That Can Be Taken by Developed Countries, especially members of the G8, in Connection with Adaptation Strategies to Respond to Climate Change**

In response to climate change, which is a serious challenge to humankind, developed countries, especially members of the G8, should raise awareness on water as one of the principal adaptation strategies they pursue and strengthen measures to deal with it. They need to take immediate action to adapt to climate change by implementing relevant adaptation strategies at home, providing leadership for the world economy and helping developing countries design and implement adaptation measures of their own. More specifically, the following measures should be taken:

- Deliberate an international approach that makes steady promotion of water-related adaptation strategies possible.
- Provide technical assistance that reinforces, in a comprehensive manner, both infrastructure that prevents floods and landslides as well as urban drainage, and soft measures such as preparation of hazard maps.
- Consider measures to deal with floods and landslides, paying due attention to

local and historical conditions.

- Consider adaptive approaches to cope with water shortages via such means as promotion of recycling wastewater and/or utilizing rainwater.

### **(3) Natural Environment, Human Habitat, Food Production, and Water**

Developed countries, especially members of the G8, should conserve arable lands and headwaters, which are the basis for food production, through: rehabilitation of aging facilities in light of local, historical, and diversified conditions of water; development of human resource as well as relevant network-building; organizing relevant local bodies so that they can cooperate; promotion of participatory water management practices by farmers through programs implemented by international organizations and/or networks; introduction of rehabilitation technology and promotion of social forestry. To these ends, the following measures should be taken:

- Promote harmonization between agriculture and biological diversity through enhancing linkages between water and ecosystems
- Secure provision of stable water resources by promoting sustainable forest management and rehabilitation of degraded lands

### **(4) Technology Transfer and Capacity-Development in Developing Countries**

Developed countries, especially members of the G8, packaging hard and soft technologies available to them, should promote technology transfer to developing countries. In concrete terms, the following measures should be taken:

- Strengthen earth observation systems, such as precipitation measurements from satellites.
- Develop information bases that make it possible to convert a wide variety and large volume of earth observation data into information which helps resolving water issues and to provide decision makers with such data.
- Develop an early warning system to detect occurrence of water-related problems.
- Conserve groundwater resources and utilize technologies such as underground dams and groundwater recharge.
- Utilize private sector funding in the water sector and develop associated legal

systems.

#### **(5) Integrated Water Resources Management (IWRM)**

In order to conserve water areas, secure safe and usable water resources, and reduce risks caused by water-related disasters, developed countries, especially members of the G8, need to develop a system that makes sustainable water use possible through consensus-building among relevant stakeholders in watershed areas and encouraging good water governance, while striving to maintain social impartiality and taking regional characteristics into account. To these ends, the following measures should be taken:

- Build a common information platform (i.e., information on monitoring, human resource development, and the effect of investment relating to water issues).
- Share rules to control discharged water quality as well as discharged water quality criteria etc. on a global basis. Develop social systems that ensure compliance with such rules. Promote human resource development to support relevant activities.
- Prepare "Principle Guidelines" to put IWRM into practice.

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