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TOWARD WORLD WATER WELFARE

A MORE SYSTEMATIC APPROACH NEEDED

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Given that water is a renewable resource and that there is ample water on Earth, sustainable water use is not an impossible dream. However, according to global statistics, more than one out of five people lack access to safe drinking water, two out of five people live without adequate sanitation, and two million children lose their lives every year due to lack of access to safe drinking water. These are the unfortunate results of an absence of effective monitoring, poor social infrastructure and a shortage of skilled personnel in the field of comprehensive water management.

As is implicitly demonstrated by the award of this year's Nobel Peace Prize to the Intergovernmental Panel on Climate Change (IPCC) and former US Vice President Al Gore, climate change is now a great potential security threat to international society. Global warming is expected to change water circulation patterns and ecosystems on Earth, which will cause severe droughts, floods and food shortages leading to heavy losses of human life and property as well as the impairment of human health. The most affected will be already impoverished people living mostly in developing countries.

Concern over water, however, is not limited to the developing countries. There is strong demand for safe and clean drinking water in developed countries as well. Urban centers in particular are facing a greater need to improve water environments. What is required is the development of environmentally friendly, sustainable drainage basins that accommodate diverse natural environments along rivers. Such basins should be supported by social infrastructure designed to maintain harmony between rural and urban areas and to increase the resilience of local communities against water-related natural disasters.

Water is a key factor in sustainable development and can be a driving force in addressing the global challenges of poverty and hunger. The international community and Japan need to address water problems, which have a significant bearing on human health and welfare, in a more systematic manner.

It is certainly true that world leaders have taken the initiative in strengthening international frameworks to deal with water issues in recent years. The targets for improving water and sanitation conditions are listed among the Millennium Development Goals (MDGs). Ministerial-level meetings took place during the 3rd World Water Form organized in 2003 by the World Water Council, a prominent international nongovernmental organization (NGO) in this area. Furthermore the first water summit in the Asia-Pacific region (the Asia Pacific Water Summit) is to be held in the southern Japanese city of Beppu in December 2007 at the same time as the 13th UN Conference on climate change in Bali, Indonesia. Although water issues have not featured highly on the G8 agenda since the 2003

Evian summit, international cooperation has been steadily enhanced through such mechanisms as the World Water Assessment Program, a collective UN system-wide continual freshwater assessment process. The fact that nearly all major countries are giving high priority to water in their overseas aid policies also attests to the growing importance of water as a global issue.

To ensure stable supplies of safe and inexpensive “indispensable water,” it is necessary to encourage investments in social infrastructure designed to increase access to safe drinking water in densely populated areas, especially large cities in developed countries. Meanwhile, to ensure “profitable water” necessary to sustain agricultural and industrial production, it is important to promote effective use of limited water resources such as by encouraging the introduction of more efficient irrigation systems and the use of recycled water in industrial facilities. To ensure “comfortable water” necessary for wholesome and cultured living, the development and diffusion of cutting-edge technology will help. This would include cost-effective, environment-friendly systems to treat and recycle waste and domestic water, water-conserving home electric appliances, and advanced sanitation systems capable of low-energy wastewater treatment through the use of membrane and microbial technologies.

To realize and maintain the aforementioned water welfare, it is also important to build infrastructure that allows safe use and control of water with as little damage as possible to ecosystems, to promote the safe and sustainable use of ground and rain water, to raise public awareness regarding better water services, and to create a model of sustainable management of water supply and sewerage projects as well as irrigation facilities.

Furthermore, industrial nations need to develop international regulations and standards to control water pollution together with compliance mechanisms. They should also consider transferring to developing nations their integrated water resources management (IWRM) policies supported by earth observation systems and advanced information and communications technology. Of course, this should be followed by the training of personnel to take charge of the IWRM policies.

Water is closely linked to other important global issues pertaining sustainable developments, such as poverty, energy, and food. With energy, for instance, sea water can be converted into drinkable freshwater, and the energy can be obtained by hydroelectric power generation. Agricultural production requires a large amount of water, but the provision of food to water-scarce areas will allow the areas to allocate precious water resources towards other ends (this is the idea of virtual water trade). While a large amount of energy is used in agricultural production and consumption, the increasing use of food plants as energy fuels is boosting the prices of both food and energy. Given limited land space on Earth, appropriate use of these resources will be a key to developing a sustainable society.

So far Japan's contribution to the world water community has mainly been made in the form of technical assistance, such as the transfer of water recycling and conservation technologies, the construction of water control facilities, and the training of personnel. In addition to these fields of expertise, Japan will be able to present a long-term vision to solve global water problems that takes into account demographic shifts, economic growth and, climate change. It will also be able to contribute to promoting appropriate management of water facilities and organizations. Last year, Japan announced its new ODA initiative on water and sanitation, WASABI (Water and Sanitation Broad Partnership Initiative), which places particular emphasis on the sustainability of water use, human security, and broad partnerships with international organizations, other donor countries, local governments, and NGOs. With this and measures against climate change in mind, Japan needs to develop a comprehensive scheme involving the government, private and academic sectors to tackle water problems by integrating the findings of research institutes and introducing private investments.

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