

JICA's Position Paper on SDGs: Goal 6

Goal 6: Ensure availability and sustainable management of water and sanitation for all

1. Recognition of the present situation

(1) Why is support in the fields of water and sanitation necessary?

Water is critical to the survival of human beings, and directly and indirectly supports human life as drinking water, domestic water, and water necessary for economic activities to secure food production and human livelihoods. For us as individuals and for society as a whole, it is necessary to establish and maintain a sound water cycle by preserving water environments and using water appropriately and efficiently.

The supply of safe water and improvement of sanitation are very important challenges in terms of human security. Approximately 500,000 people die from waterborne diseases such as diarrhea, dysentery, cholera, etc., per year, and most of these people are infants. 50% of infants' low weight and malnutrition is related to parasitic diseases and frequent diarrhea caused by unsafe water, inadequate sanitation, and insufficient handwashing. In 2015, approximately 660 million people could not use improved drinking water sources, and many people had to collect water themselves every day. Time and labor spent on fetching water deprive people of economic activities that create incomes and opportunities to educate their children, as well as impede social and economic development. In addition, there are many countries where fetching water is women's or children's labor. This has become a serious problem from the perspective of gender, education, maternal and child health, etc. Furthermore, 2.4 billion people could not use basic sanitation facilities (toilet). Among them, 1 billion people continued to practice open defecation. In addition to an increase in waterborne diseases that cause serious risks to people's health, open defecation has become a problem from the perspective of personal dignity and privacy protection.

There are growing concerns over water- and sanitation-related problems. It is thought that water demand and wastewater discharge will continue to increase due to population growth, economic development, improved living standards, etc., and water scarcity and water pollution will pose a risk to social stability and economic development. In 2010, the rate of scarcity of stable global water resources available for agricultural water, domestic water, industrial water, etc. was 7%. It is estimated that the rate may increase to 40% by 2030 due to increased water demand in the future. In addition, in 2015, it was estimated that the number of people affected by water scarcity was over 2.9 billion. They could not secure sufficient water for their lives and industries due to low rainfall or undeveloped infrastructures. In addition to increased water demand, shifts in rainfall patterns and increasing extreme precipitation events such as droughts and floods are predicted due to the effects of climate change, which will have a more serious impact on people in the future. Since approximately 70% of water withdrawal is used for irrigation, and water is also used for power generation, there is a concern that water scarcity will be a constraint on guarantees of security including securing food, energy, etc. In addition, more than 80% of discharged water from human activities flows into rivers and seas without

being treated, which causes serious problems such as deterioration of living environments, pollution of public water bodies, impact on ecosystems, etc. Water- and sanitation-related problems extend over other fields and are mutually related. Therefore, it is necessary to manage water resources through comprehensive consideration to aspects of water use, flood control, and water environment, as well as a wide range of stakeholders. It is also thought that the demand for better water supply and sanitation services will increase as living standards improve.

(2) Japan's efforts

Japan has faced many problems, such as an epidemic of cholera and other waterborne diseases, frequent water supply restrictions due to drought, a 70-80% leakage rate immediately after the end of World War II, land subsidence due to excessive pumping of groundwater, frequent floods, and river and lake water pollution due to domestic and industrial wastewater, but overcame them. At present, Japan achieves an almost 100% coverage rate of the water supply system, and water suitable for drinking is supplied from the tap all day and night. Land subsidence is kept under control. Japan is now one of the world's leading countries in efficient water use, such as reuse of industrial water and leakage control. In addition, with an approximately 90% coverage rate for sewerage systems and other sewage treatment facilities, Japan is overcoming ambient water pollution, which has been a serious problem since 1960s. It has achieved excellent performance and boasts technical expertise in advanced sewage treatment, storm water control in urban areas, use of reclaimed wastewater, reuse of sludge generated during the process of sewage treatment, etc. Japan also leads Water Environment Partnership in Asia (WEPA) and other international efforts.

By using its experience, Japan has actively extended international cooperation, and has been the world's top development partner in the fields of water supply and sanitation since 2007 in terms of disbursement.

(3) JICA's strength

To address water- and sanitation-related problems, infrastructure development, such as water supply and sewerage systems, irrigation channels, and dams, is often necessary. In addition, developing a comprehensive capacity covering individuals, organizations, institutions and social systems is essential for realizing water resources development, fair allocation of water resources, operation and maintenance of facilities, recovery of construction investments and recurrent costs, development of standards and guidelines, etc. JICA has provided cooperation combining financial support and technical cooperation for such infrastructure development and capacity development.

In providing technical cooperation for master plan development, etc., and financial support through in-depth preliminary examination by preparatory surveys, JICA emphasizes cooperation from a long-term perspective based on data and technical examination.

Utilizing its extensive network with various organizations in Japan, including ministries and agencies, local governments, public organizations/institutions, universities,

research institutions, and private enterprises, JICA can mobilize knowledge, experience, and technology that Japan has accumulated.

2. Priority targets

Goal 6 has eight targets. Considering Japan's initiatives, JICA's strengths, and the importance of future challenges, JICA selects four targets provided in (1) below as priority targets for reasons provided therewith.

(1) Priority targets based on JICA's strengths

- 6.1 Universal and equitable access to safe and affordable drinking water

In this field, JICA has the most cooperation experience in previous water- and sanitation-related cooperation, and achieved remarkable results. This target is important in terms of human security.

- 6.3 Improve water quality by halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse

In this field, JICA has many cooperation achievements in previous cooperation. Water pollution caused by economic development and urbanization will be an increasingly important issue in the future.

- 6.4 Increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity

JICA has a wealth of cooperation experience in non-revenue water reduction, including measures against water leakage, and efficient use of irrigation water, as well as support for development of master plans on water resources development and management. In a situation where efficient use of limited water resources and measures against water scarcity are required, the necessity of this field is increasing more than ever.

- 6.5 Integrated water resources management

The international community has underlined the necessity of integrated water resources management (IWRM), and developing countries are creating systems for IWRM. However, there are not many projects which were implemented based on sufficient understanding of the significance. In a situation where water-related problems have become apparent, efforts in this field should be strengthened.

(2) Targets worked on through collaboration with other goals

- 6.2 Adequate and equitable sanitation and hygiene for all and ending open defecation

To be worked on in coordination with support for Goal 3 (Health), Goal 4 (Education), etc.

- 6.6 Protect and restore water-related ecosystems

To be worked on in coordination with support for Goal 15 (Forest and biodiversity)

3. Priority efforts to achieve the goals

(1) Contribution using JICA's strengths

JICA can provide cooperation for both capacity development and infrastructure development; cooperation from a long-term perspective; and cooperation using its extensive domestic network and knowledge, experience and technology that Japan has accumulated. Cooperation using these strengths will be promoted. By mobilizing knowledge of water- and sanitation-related organizations in developing countries where partner relationships have been established through previous cooperation, South-South cooperation among developing countries will also be promoted.

(2) Efforts in the field of water supply in urban areas (relating mainly to the targets 6.1 and 6.4)

In the field of urban water supply, JICA aims to improve not only access to safe drinking water sources, but also the standards of services that enable people to obtain good quality water at an affordable price in their premises when needed. With population growth, urbanization, and improved living standards, demand for infrastructure development is thought to be ever increasing in urban areas. Securing revenues from water tariffs and mobilizing funds from the public and private sectors are necessary as funds for infrastructure development. In order to mobilize funds, a national water policy and water utilities with sound management and operating capacity will be preconditions. In order to strengthen the management and operating capacity of water utilities, various important efforts are necessary, such as the development of policy and institutional systems, promoting citizens' understanding of water supply services and reducing non-revenue water. Support will be provided for expanding revenue bases through infrastructure development and the strengthening of comprehensive institutional and societal capacity, according to the development stage of partner countries and target water utilities. When capacity is being strengthened, support will be considered from the perspective of autonomous procurement of funds, including private funds, and promoting private sector participation.

In providing support in the field of urban water supply, efforts will be made to continuously strengthen collaboration with local governments and industry-government-academia collaboration, and to use know-how accumulated in Japan over the years. In addition, efforts to contribute to regional revitalization will be made through promotion of the JICA Partnership Program, training programs, and proposal-based programs.

(3) Efforts in the field of water supply, sanitation and hygiene in rural areas (relating mainly to the targets 6.1 and 6.2)

In the field of rural water supply, JICA will continuously improve access to safe drinking water sources, by combining support for strengthening village-level operation and maintenance systems and administrative support systems, with support to raise awareness of sanitation and hygiene. JICA will proactively promote women's

participation. In collaboration with the health and education sectors, JICA will also make efforts to improve sanitation, including improving school toilets and activities to raise awareness of sanitation and hygiene carried out by JICA volunteers, while giving due consideration to the needs of women and girls.

(4) Efforts in the field of water quality improvement (relating mainly to the targets 6.2 and 6.3)

Appropriate wastewater treatment, sludge treatment/disposal and reuse of water are called for in SDGs. In addition to improving access to sanitation facilities, developing wastewater treatment facilities such as sewerage systems, which collect grey water from baths and kitchens as well as black water from toilets, and strengthening the capacity for appropriate operation and maintenance of the facilities will be important. Based on the perspective of comprehensive watershed management, JICA will promote development of legal systems and monitoring systems for conservation of water quality in public water bodies; institutional development and capacity strengthening of sewage treatment facilities and sanitation facilities; and development of relevant infrastructure. To do so, JICA will collaborate with Japanese local governments and private enterprises that possess the necessary knowledge, know-how and technologies, and will make efforts to use Japanese technologies and know-how.

(5) Efforts in the field of integrated water resources management (relating mainly to the targets 6.4, 6.5, and 6.6)

To promote integrated water resources management (IWRM), it is necessary to use natural science technology in combination with social science technology. JICA has extensive experience in studies and projects based on natural science technology for water measurement, development, and management, such as enhancing the monitoring and development of plans on water resources development and management. In a situation where water-related problems have become apparent, JICA will proactively use social science technology to coordinate the interests of various stakeholders in various sectors, and to promote water-related projects, based on social consensus formation. To do so, it will proactively work to: gain sufficient understanding of a project's target society, culture, and stakeholders; provide clear explanations of survey achievements based on natural science technology and share them among stakeholders; form a framework for the consensus formation process and promote it; improve legal systems applying common law and the interest adjustment mechanism; and consider appropriate methods for sharing the process and achievements of interest adjustment and consensus formation. In addition, to ensure the sustainable use of water resources in terms of both water quantity and water quality, JICA will provide support for the development of master plans on water resources development, management and allocation, and for improving the capacity to monitor water resources.