

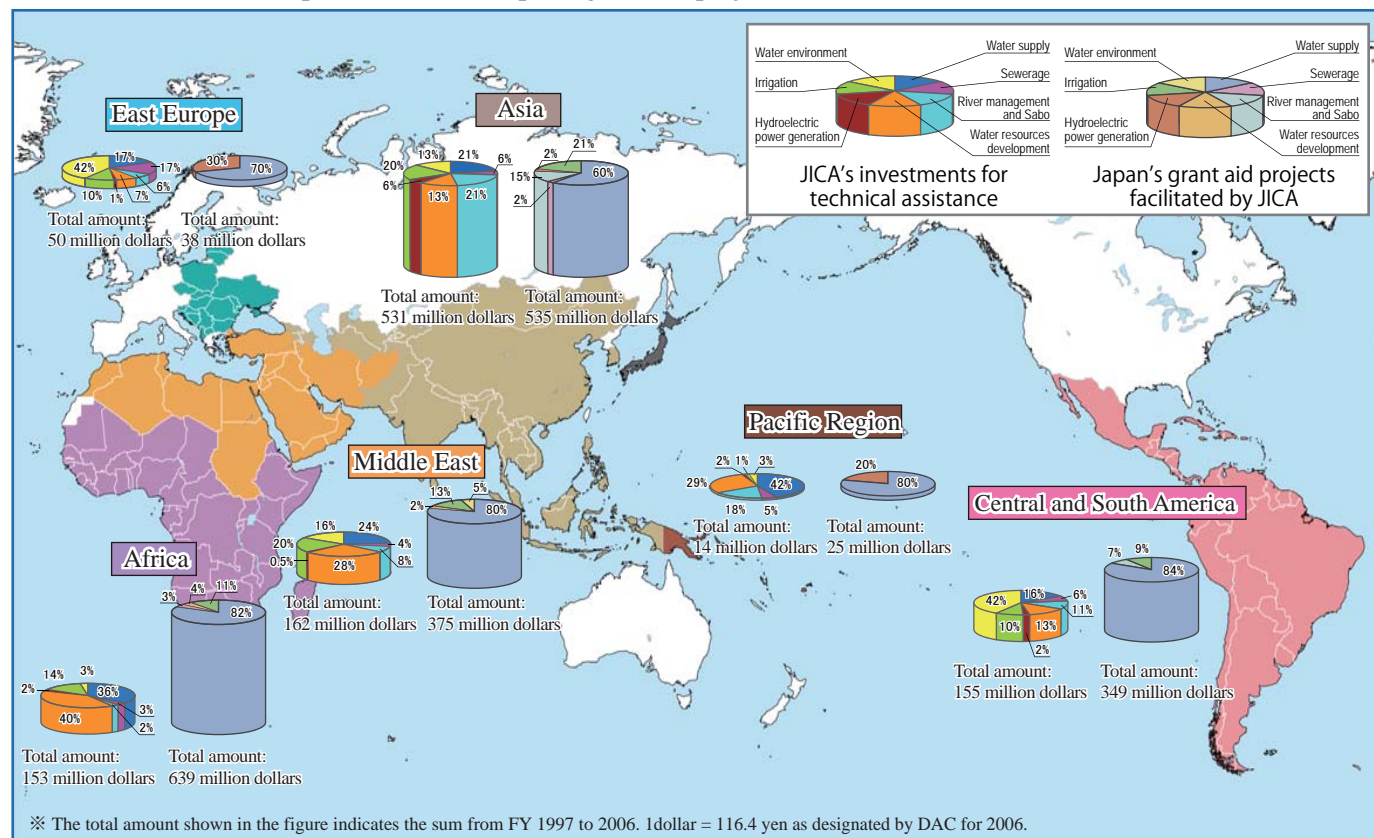
JICA's Performance in the area of Water Resources

Performance

In the area of water, JICA has extended assistance amounting to approximately 1,064 million dollar on aggregate over the last ten years. In particular, JICA has focused upon sectors that are key to the lives of people, such as the development of water resources and water supply systems.

Half of this total was directed to Asia. In recent years, however, JICA has been increasing its support to Middle East and Africa.

JICA facilitated the implementation of Japan's grant aid projects, whose total amount was 1,960 million dollars.



The sum total of JICA's projects in the area of water (FY 1997 - 2006)

JICA's approach to MDGs

JICA has been striving to assist in the achievement of the Millennium Development Goals (MDGs) in the field of water. The MDGs comprise 8 goals, 18 targets and 48 indicators. The seventh goal, which is related to the area of water resources, is to "ensure environmental sustainability."

Its specific goals are:

- 1) To reduce by half, by 2015, the proportion of people without sustainable access to safe drinking water in the world
- 2) To reduce by half, by 2015, the proportion of people without sustainable access to basic sanitation in the world

Related homepages :

Homepage of MDGs <http://www.un.org/millenniumgoals/index.html>

JICA's approach to MDGs <http://www.jica.go.jp/infosite/mdgs/index.html>

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To live with water

- JICA's approach to the water resources sector -

It is reported that approximately 1.1 billion people in the world do not have access to a safe water supply, and 2.4 billion people do not have access to basic sanitation.

Furthermore, various problems loom large before us in the area of water, including water contamination, floods and droughts. It is believed that the issue of water will pose the most serious challenge in the middle of this century, when the world population is estimated to exceed nine billion people.

These water-related problems have the most serious impact on the socially vulnerable, such as the poor and children in developing countries.

JICA considers the sustainable development of water resources as one of the most important goals. JICA is ready to extend a wide range of cooperation, such as the promotion of integrated water resource management, capacity development and the use of Japan's experience, thereby contributing to solve global water problems that become increasingly complicated and acute.



JICA's Approach: Four development goals

JICA has set up four strategic development goals and has been playing an active role in solving various global water problems.

Development goal 1: Promotion of integrated water resources management

The integrated water resources management requires a holistic approach in which the issues of water use, water/flood control and water environment are dealt with as one problem of the same origin, and measures are taken from administrative and interdisciplinary perspectives. Currently, various sectors and organizations are involved in water-related projects. Thus, it is often the case that each project is implemented individually to address one particular aspect.

In other words, measures have not been taken in full consideration of the overall water system. It is essential to strengthen the laws and form a system in which sector-wide measures are taken beyond the framework of a single management organization.

JICA enhances the integrated management of water resources aiming to control them more effectively.

Case (in Syria): Technical transfer in the management of water resources

Since the early 1990s, Syria has suffered badly from a severe scarcity of water, primarily due to rapid increases in population and the related demand for water. In 2000, water resources were depleted in its metropolitan area. Damascus was in a state of an emergency in which people had to endure the water supply being turned off for more than 12 hours a day for a period of six consecutive months. In addition to the water shortage, chronic water contamination caused serious waterborne diseases. Despite this situation, no effective measures were undertaken due to the delay in developing information on water resources.

Since 2002, JICA has extended its support to establish the "Water Resources Information Center" that provides necessary information on managing water resources. JICA has also been transferring technology on hydrologic observations, an information system and operational maintenance and management.



Training on the CIS database system

<http://www.wri-sy.org/english/index.htm> The project on the Water Resources Information Center Planning in Syria
http://www.jica.go.jp/evaluation/before/2002/syr_01.html Exit-site evaluation (Development study)
<http://www.jica.go.jp/syria/english/index.html> JICA Syria Office

Development goal 2: Water supply aiming to ensure efficiency, safety and stability

Residents living in areas where there is no sustainable access to safe water are trapped in a situation in which they are forced to depend upon contaminated well-water or unsanitary surface water. As a result, they are susceptible to contagious waterborne diseases, such as cholera and typhoid.

It is vitally important to ensure a sustainable supply of "safe water" for people in poverty-stricken areas in that it is directly connected to their living. Therefore, this issue needs to be solved as soon as possible.

JICA provides a range of cooperation, with an emphasis on the socially weak and poor. For example, JICA investigates water resources, designs development and water supply plans, and promotes education on health and hygiene.

Case (in Tanzania): Water supply plan suited for a local community

On the Coast and in Dar Es Salaam Provinces in Tanzania, a large-scale pipeline water supply system was constructed based upon the water supply plan of 1979. However, the water supply facilities did not receive adequate maintenance and management due to social and economic problems, thereby failing to supply safe water to 65% of the residents.

JICA's survey indicated that a small self-sustainable supply system would be more appropriate for the areas than a large-sized water supply system.

Based upon this finding, JICA implemented a rural water supply project in which a water supply plan was designed for each village. The plan proposes to involve the full participation of the village residents in the maintenance and management of water supply facilities.



Inspecting water quality

http://www.jica.go.jp/evaluation/before/2004/taan_01.html Exit-site evaluation (Development Study)
<http://www.jica.go.jp/tanzania/> JICA Tanzania Office

Development goal 3: To improve flood control to protect life and property

Many global areas have been subjected to an increasing number of floods and sediment disasters induced by rapid changes in land use, due to urbanization and deforestation. Similarly, in coastal areas, many problems have manifested, such as tsunamis caused by earthquakes, and high tides and coastal erosion caused by changes in sediment deposition.

In order to protect the lives and properties of people from flood disasters, structural measures, such as constructing dikes and dams, have been seen as the solution. Viewed from an environmental perspective and with the frequency of water disasters surpassing the capacity of planned facilities, flood control measures limited to structural solutions yield limited results. Therefore, it is necessary to implement comprehensive flood control measures combined with non-structural measures, such as hazard maps and flood forecasting and warning systems, in addition to the conventional structural measures.

JICA intends to implement effective flood control measures, in which structural and non-structural measures are combined. In other words, JICA will improve flood control facilities and, at the same time, strengthen systems and organizations which are resistant to disasters and introduce community-based disaster management activity.

Case (in Laos):

Flood control measures using Japan's traditional riverbank protection method

The Mekong River flows near the city of Vientiane in Laos. Its riverbank had been badly eroded, prompting a sense of growing crisis due to the flooding of many houses, roads and factories. However, due to a limited government budget, measures to control riverbank erosion lagged behind, meaning the implementation of economical riverbank protection works was urgently required. JICA proposed Japan's traditional and cost-effective riverbank protection technique (the Soda-matress method).

Following the pilot construction of a Soda-matress, JICA implemented a project using this technique, thereby successfully placing riverbank erosion under control with an economical method using local materials.

The Soda-matress comprises various structural forms, making it also useful for creating niches inhabited by diverse organisms.



People working on the construction of Soda-matress

<http://project.jica.go.jp/laos/02451245ED/english/index.html> The Project on Riverbank Protection Works in Laos
<http://www.jica.go.jp/laos/english/index.html> JICA Laos Office

Development goal 4: Conservation of water environment

In many developing countries, water contamination looms large due to increased wastewater from households and industries, caused by rapid economic growth and the heavy concentration of people and industries to urban districts. Water pollution poses a serious problem that not only damages the health of people living in such districts but also contaminates lakes and destroys natural ecological systems.

There is therefore an urgent requirement to improve water quality and promote the use of water conforming to the water circulation of the entire area.

JICA will promote conservation of the aquatic environment. To that end, JICA will extend its support to the establishment or strengthening of a legal system and an environmental monitoring system, including water quality monitoring, transfer of small-scale water treatment technology, distribute sewer system technology, and enhance education on environment.

Case (in Uruguay): To strengthen the water quality monitoring system

The metropolitan area of Montevideo District in the Oriental Republic of Uruguay is confronted with a grave problem in water quality, the contamination of water supply sources by wastewater from households, industries and agriculture, induced by the heavy concentration of people and industries. Nonetheless, few adequate measures have been taken to systematically control water quality within each river basin, thereby seriously aggravating the water quality.

JICA started a project with the Uruguayan government agency that controls rivers with the primary goal of upgrading its capacity for managing water quality by formulating an integrated master plan. In this project, JICA provides its assistance so that the Uruguayan government will be able to enhance the quality of river water through its own efforts, thereby improving sanitation for its residents.



A campaign entitled "Let's take a close look at vegetation on the waterside."

<http://www.dinama.gub.uy/> DINAMA (counterpart) homepage
http://www.jica.go.jp/evaluation/before/2003/uru_01.html Exit-site evaluation (Development study)

Related homepages:

Approach for Systematic Planning of Development Projects

<http://www.jica.go.jp/english/resources/publications/study/topical/app2005/index.html>

JICA Technical Cooperation Projects Portal Site

<http://project.jica.go.jp/english/index.htm>