Global Environment

Nature Conservation/Environmental Management (Pollution Control)/Water, Disaster Prevention

Overview of the Global Environment Field

Trends in Environmental Cooperation

At the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992, the seriousness of environmental issues was widely recognized throughout the world. The agenda 21 was adopted as guidelines for an approach to global environmental issues, and achievement of sustainable development was determined as a common global goal. The United Nations General Assembly Special Session (UNGASS) was held in June 1997, five years later, and the Millennium Development Goals (MDGs) adopted at the UN Millennium Summit, which was held subsequently in September 2000, advocated “to ensure environmental sustainability.”

In the disaster prevention area, under the basic policy that societies resistant to disasters bring about sustainable economic growth, the Yokohama Strategy was formulated at the World Conference on Disaster Reduction held in 1994. In January 2005 the Second World Conference on Disaster Reduction was held in Kobe to sum up the ten-year activities, including the Yokohama Strategy, and create a new strategy.

In Japan, environmental issues in developing countries are recognized as important issues that have a serious impact not only on the developing countries concerned but also on international communities, and environmental measures through ODA have conventionally been emphasized. At the UNCED the Japanese government announced the expansion and enforcement of its environmental ODA from ¥900 billion to ¥1 trillion within five years starting in 1992, and subsequently announced the Kyoto Initiative (assisting developing countries in combating global warming) at the third Conference of the Parties to the United Nations Framework Convention on Climate Change (COP3) in December 1997. Also the Medium-term Plan on ODA issued in August 1999 specifies environmental conservation as one of the primary issues, and refers to the proactive promotion of the Kyoto Initiative and more consideration for the environment when implementing assistance.

In September 2002, the Japanese government announced the Environmental Conservation Initiative for Sustainable Development (EcoISD) at the World Summit on Sustainable Development in Johannesburg, designating (1) efforts to address global warming; (2) pollution control; (3) fresh water issues; and (4) conservation of natural environment as priority areas. As for the disaster prevention area, at the Second World Conference on Disaster Reduction in January 2005 the Japanese government announced its commitment to cooperation in disaster prevention suitable to stages such as disaster prevention, emergency relief, and subsequent rehabilitation and reconstruction assistance. Utilization of excellent disaster prevention techniques cultivated through Japan’s past experience in disasters was expressed here as well.

JICA’s Response

JICA has realized concrete plans in the environment field based on these basic principles and action plans. However, its past efforts took various forms of aid and crossed over several sectors. JICA established the Global Environment Department on April 1, 2004, to build a system that allows consistent effective and efficient operation, from identification of issues to formulation and implementation of a project, in order to address complicated problems in developing countries. In addition, the Guidelines for Environmental and Social Considerations targeting all the projects were formulated and implemented in fiscal 2004.

Recently, biodiversity conservation, desertification control, and global warming prevention measures, acid rain control, preventive measure for earthquakes, and other disasters, have become major issues. To address these complicated environmental issues, JICA extensively implements cooperation for global environment problems based on a conventional approach consisting of (1) nature conservation; (2) environmental management (pollution control); and (3) water, disaster prevention. At the same time, JICA accumulates know-how in the global environmental conservation field to develop and implement effective aid methods.

Nature Conservation

Overview

Human societies have developed thanks to a wide variety of blessings from nature, including forests, lakes, marshes and the ocean. However, in recent years, the natural environment has rapidly deteriorated due to excessive utilization of natural resources, threatening the foundations of existence for future generations. Such degradation, combined with poverty and starvation, could lead to serious social problems such as regional conflicts. Therefore, there is an increasing need for developing a more appropriate relationship between human beings and nature, which
leads to a society living in harmony with the environment.

**JICA’s Efforts**

JICA considers nature conservation as an important area of international cooperation. JICA has actively provided assistance in line with its goal to achieve harmony between nature and human activities. To accomplish this goal, it is important to understand nature scientifically and empirically (understand), to develop technical expertise and a resource utilization system for preventing environmental degradation (protect) and to establish sustainable use by society (use).

JICA provides a broad range of assistance for developing countries in enhancing research and study capabilities; raising community awareness; improving policies and institutions; developing appropriate technologies; enhancing managerial capacity of institutions engaged in environmental conservation; developing communities that exist in harmony with the environment; and other diverse cooperation.

JICA places special importance on activities to promote understanding and participation of stakeholders, including the residents. Conservation of the natural environment is not attainable by the government alone, but understanding and proactive participation in activities for conservation by the stakeholders including the residents are essential. JICA aims to improve administrative capacities as well as promote participation of communities in order to establish a system to conserve the regional natural environment in cooperation with the stakeholders.

**Three Priorities**

In order to work on conservation of the natural environment in a strategic way, JICA provides cooperation by identifying three priorities (Figure 3-6 and Figure 3-7).

The first priority is sustainable use of natural resources. In the regions where the people overuse natural resources for their living, thereby deteriorating the natural environment, JICA provides cooperation with the aim of improving the incomes and living situations of residents and conserving the natural environment.

In these regions, people rely on natural resources for their livelihood. Therefore, sustainable use of natural resources, which offer livelihood sustenance, is essential to protect the life of the people, instead of using them up. JICA provides support to enhance people’s capacity to manage natural resources and to establish a system to appropriately manage the natural resources so that the people can protect and use their own resources con-
tinuously. Additionally, in order to enable developing countries to sustainably use natural resources such as forests in a planned manner, JICA supports studies on forest resources and formulating forest management plans, in an attempt to ensure compatibility between the improvement of forest management capacity and forest conservation. In recent years, JICA’s cooperation has paid attention to the function of forests in fixing carbon dioxide.

The second priority is biodiversity conservation. In regions endowed with rich biodiversity and where the value of nature is left intact for posterity, collection of data on the natural environment (to accurately understand the current conditions), development of management system of reserves, environmental education, measures for waste and contaminated water treatment, and support for livelihood that does not adversely affect nature (such as ecotourism) are implemented. All these activities are designed for the conservation of valuable nature and improving the income of the people living in the environment.

The third priority is rehabilitation of degraded land. In regions where the destruction of the natural environment has been accelerated by excessive grazing, cultivation, and logging, soil erosion, desertification, and other problems emerge, imposing difficulties on people's lives. In these regions, JICA provides support for the development of appropriate restoration technologies and maintenance and management system in an effort to restore the natural environment, which is the basis of livelihood for the people.

The Sustainable Watershed Management Project in the Upper Area of the Sabana Yegua Dam in the Dominican Republic

In the vicinity of the Sabana Yegua Dam, which provides the major water supply for southern part of Dominican Republic, native forests are lost because of slash-and-burn cultivation and forest fires, and watershed conservation has become a critical issue. From 2000 to 2002, JICA formulated a forest management plan in the upper watershed of the dam. This plan was adopted as the country’s priority program. Under the 15-year contract term, the Ministry for Environment and Natural Resources has commissioned the implementation of the project to a local NGO called Sur Futuro Foundation.

For three years starting in 2006, JICA supports this foundation, offering cooperation to promote watershed management activities by the local residents and strengthening the project management capacity of the foundation. While maintaining close contact with local communities, JICA supports the introduction of simple irrigation agriculture and agroforestry* in the mountainous areas. JICA has made a deal to the effect that local residents will discontinue slash-and-burn cultivation and instead plant trees, in an attempt to establish a framework which allows both the improvement of livelihood and the restoration of forests. It is also planned that the foundation will collect and manage some of the proceeds from irrigation agriculture to secure funding for expanding their activities. It is our aim that local people will, by their own initiative, protect forests and improve their own livelihood through these activities.

In order to utilize the know-how of the private sector, JICA has commissioned the implementation of this project to a Japanese private group. This project, which works to conserve the watershed and improve the livelihood of the people through the involvement of various organizations, such as administration, a local NGO, and a Japanese private group, is a good example of JICA's cooperation that responds to various issues.

* A method of land-use that cultivates various crops and stock-breeding, while growing various types of trees

CASE STUDY

President Leonel Fernandez (center) attends the signing ceremony for the launch of the project, indicating high expectations towards the project.

Mangrove afforestation by a residents' group (The Study on Integrated Mangrove Management through Community Participation in the Ayeyawady Delta in Myanmar)

Environmental Management (Pollution Control)

Overview

It is becoming apparent that air and water pollution and the problem of solid waste disposal resulting from globalization and growth in developing countries is having a deleterious effect on health and living conditions. There is now a strong sense of crisis about cross-border environmental problems, such as global
The Project for Regional Environmental Management Improvement in the Arab Republic of Egypt

In Egypt which is experiencing rapid growth of its urban population and industrialization, air and water contamination in urban areas has become a pressing issue and health issues of the citizens have gradually surfaced. In the meantime, there have been signs of a downturn in tourism. Particular concerns are air contamination in the greater Cairo metropolitan area where the population is concentrated, and water contamination in the Suez Canal and the Red Sea Coast. Air pollution in the greater Cairo metropolitan area is said to be caused by emission gas from cars and factories and smoke from slash and burn agriculture in rural areas. Water contamination in the Suez Canal is said to be caused by spilled oil (emission, leakage) from ships crossing the Canal and oil-related facilities in the canal basin.

The Environment Agency of Egypt has taken measures to control contamination sources through monitoring and on-site inspections at the factories that are the sources of contaminants. However, in order to address environmental issues that possibly involve multiple contamination sources, a specific ability to recommend measures based on accurate and scientific knowledge is required. In response, JICA launched a three-year project in November 2005 to pave the way to solve complex environmental contamination issues.

In order to tackle these complex environmental contamination issues, it is important that competent authorities and local governments, as well as businesses such as factories, maritime operators, and citizens understand the issues and the importance of measures and make concerted efforts together. To that end, JICA divided the project into two components: capacity development of the Environment Agency, and training for business operators and awareness-raising activities for citizens. JICA decided to undertake the former component and leave the latter to Egypt in respect of ownership of the partner. For the former component, JICA provides support for capacity development of the government officials to accurately manage, analyze, and evaluate data and information obtained through monitoring, so that they can make convincing recommendations consequently. For the latter, JICA provides support to raise awareness of various stakeholders. This series of activities is being carried out in three cities, Cairo, Alexandria and Suez, and the experience gained there will be applied and spread to other local areas in Egypt.

In response to the announcement of Our Common Future by the World Commission on Environment and Development in 1987 and the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992, JICA has strengthened its response to environmental management (pollution control). Environmental issues are widespread, involving many factors and people, so these problems cannot be solved in a short period of time. Therefore, JICA is implementing cooperation projects that aim to improve the capacity for dealing with the environment (capacity development) so that the people in developing countries and related organizations can solve the problems on their own in a sustainable way. The focus is placed on graduated cooperation suitable for the development situations of partner countries, various types of participation in development, and the development of effective environmental management capacities based on environmental science and technology. In cooperation for environmental centers that serve the base of environmental analysis and human development in each county, South-South cooperation to support neighboring countries is implemented to spread the effects of cooperation efficiently and promote cross-border support for environmental issues.

JICA’s specific measures are as follows.

1) Support for environmental centers: JICA indirectly provides assistance through environmental centers and similar facilities, helping developing countries disseminate the necessary expertise for environmental analysis and measures on a nationwide scale.
2) Air pollution countermeasures: JICA provides support to strengthen environmental-monitoring capacity and countermeasures planning capacity.
3) Water pollution countermeasures: JICA provides support for measures to prevent the pollution of rivers, lakes, and seas.
4) Solid waste disposal: JICA provides support for measures related to the collection, transport, disposal, and 3Rs (reduce, reuse, recycle) of general and industrial waste.
5) Global warming: JICA supports building a foundation for global warming control systems, including designated national authorities (DNA)*1 and other relevant bodies that will play a pivotal role in fighting global warming.

With cooperation from the Egyptian government, local authorities, the private sector and academia, the project is expected to contribute to preventing environmental problems, contributing to sustainable development of the region, and ensuring the quality of human life. A high level of cooperation and the spread of technology is expected to contribute significantly to the development of Egypt, and to promote cross-border support for environmental issues.
The Fourth World Water Forum was held in Mexico in March 2006. The World Water Forum is an international conference to discuss global water issues every three years. It is held around the World Water Day, March 22, for about one week. The Fourth World Water Forum was attended by approximately 19,800 participants from 149 countries, including officers and representatives of governments, international organizations, private companies, NGOs, research institutes, etc.

The theme of the Fourth Forum was “local action for a global challenge,” and individual countries presented their activities, based on the Third World Water Forum held in Japan in 2003. The Fourth World Water Forum comprises session meetings, ministerial level meetings, exposition/water fair, etc. Together with the Ministry of Health, Labor and Welfare and the International Water Association (IWA), JICA co-hosted a session meeting to discuss appropriate operation and maintenance of water supply and sanitation facilities. In the meeting, the project officers from each country made presentations about their activities in JICA’s technical cooperation projects, the Project on Capacity Building for Water Supply System in Cambodia and the Project on Safe Water and Community Activities in Senegal (PECTAC), and JICA Partnership Program, Project on Improvement of Water Supply Management in Mexico City. JICA set up its own booth at the Exposition Hall to conduct PR activities with regard to JICA’s efforts in the field of water and the activities of JICA Mexico Office.

The importance of water issues for sustainable development

The main water issues discussed at the Fourth Forum were as follows.

6) Acid rain countermeasures: JICA supports training of personnel needed to operate the Acid Deposition Monitoring Network in East Asia (EANET).

*1 Designated national authorities (DNA) are governmental bodies whose establishment was stipulated under the Marrakesh Accords, which provides detailed rules for implementing the Kyoto Protocol. A CDM project requires the approval of the DNA.

*2 Monitoring Network in East Asia (EANET) was formed at the initiative of Japan in January 2001, and consists of 13 East Asian countries. Its activities include monitoring, data assessment, and quality assurance/quality control (QA/QC), with the purpose of strengthening the monitoring network with respect to acid rain.

The importance of addressing integrated water resource management (IWRM), which is cross-cutting management of water resources including groundwater

(2) Necessity of efforts that combine improvement of hygiene with improved access to drinking water

(3) Importance of participation of stakeholders from a wide-range of communities in all local activities

JICA also needs to seek ways to support developing countries in the future, while paying attention to the world trend.

On the closing day, a ministerial declaration that reaffirmed the importance of water issues for sustainable development and specified the contributions of the Fourth World Water Forum to further promoting international accords and commitments was adopted. The Fifth World Water Forum will be held in Istanbul, Turkey in 2009.
JICA announced its basic policy of cooperation in the water sector for the future, and reinforced measures in the disaster management field after participation in the Second World Conference on Disaster Reduction held in 2005. As concrete measures, four goals are set for water and disaster prevention, respectively.

The goals for water are as follows.

1) Promoting comprehensive water resources management: JICA proactively supports integrated and comprehensive water resources management systems, considering the multifaceted nature of water resources, including flood control, water usage, and water environment.

2) Ensuring efficient and sustainable supply of safe water: JICA supports safe and stable water supply for all people.

3) Improving flood control to protect life and property: JICA supports implementation of balanced flood control measures for the entire watershed from the upstream to the downstream in view of a combined approach with the focus on hardware and software aspects.

4) Conserving the water environment: JICA provides support for enhancement of the framework for conserving the water environment through a range of activities, including establishment of environmental standards, implementation of monitoring, control measures for contamination sources, and educational activities.

The goals for disaster prevention are as follows.

1) Addressing socioeconomic development incorporating the viewpoint of disaster prevention: JICA supports sustainable development including mitigation measures for existing risks and preventive measures for new risks.

2) Supporting study on disaster risks: JICA supports activities to identify disaster risks such as creation of a hazard map as well as sharing risk information at each level by utilizing the technology of Japan, which is an advanced country in disaster prevention.

3) Supporting planning for comprehensive disaster prevention: JICA supports formulation of an comprehensive disaster prevention plan (master plan) based on identification of risks, improvement of disaster prevention system and capacity of the administrative organizations, modernization of related legal systems, improvement of disaster prevention awareness and strengthening the capacity to deal with disasters, and the formulation of related action plans.

4) Support from the perspective of human security through education and diffusion activities to the residents: JICA supports direct activities to strengthen the disaster prevention capacity of the community and individuals, and coordinated activities for disaster prevention by the administration, communities, and individuals.

**Front Line Turkey**

Disaster Mitigation Project

Aiming to Improve the Capacity for Responding to Disaster of Administration and Enhancement of Disaster Prevention System

**Developing unique training curriculum for Turkey**

Turkey was affected by two great earthquakes of magnitude 7 on the Richter scale in 1999, which claimed the lives of more than 25,000 people. Since the extent of the damage was considerably greater than expected, government agencies were unable to accurately respond to the disasters. Learning from the experience, the Turkish government has made various efforts to improve the response capacity of the administration and strengthen disaster prevention system.

JICA has been working on capacity development of the disaster prevention of administrators since 2001, in cooperation with the Turkish Ministry of Interior. In 2003 and 2002, deputy governors and county governors, who are responsible for disaster prevention in the local governments of Turkey, visited Hyogo prefecture and received training in measures for restoration and reconstruction from the Great Hanshin-Awaji Earthquake. Turkey then realized that disaster prevention training for administrators was of great use. Led by those returned training participants and in cooperation with JICA overseas office, Turkey has devised its own training curriculum. In 2003 and 2004, the Disaster Management Training Project was carried out for deputy governors and county governors of the Turkish Ministry of Interior, and attended by 260 participants, which account for roughly one third of the incumbent deputy governors and county governors of Turkey.

**Training for local governments**

After the completion of the project, training participants made a request for training for officials of local governments, which serve as actual construction administrative bodies. In response to the request, JICA launched the Disaster Mitigation Project, focusing on training for mayors and officers in charge of urban planning in local governments in 2005. After a six-month-long preparation for training curriculum and training for trainers, four training sessions for mayors were held from March 20, 2006. Attendance in the training sessions was more than expected, with 130 participants.

(JICA Turkey Office)