

Global Environment

Creating a Livable Environment for People while Pursuing Harmony between Development and the Environment



*Of the 17 Sustainable Development Goals (SDGs), strongly associated goals are shown.

Nature Conservation

Economic development enhances human society, but at the same time, it can deteriorate the natural environment in deforestation, soil degradation, and the extinction of species, among others. This highlights the essential need to promote economic development in harmony with the natural environment.

JICA pursues harmony between human activity and the natural environment in providing development cooperation in the following strategic areas, thus contributing to the Sustainable Development Goals (SDGs) 13, 14, and 15.

1. Climate Change Mitigation and Adaptation, and Sustainable Natural Resources Management

JICA's development cooperation in this strategic area includes assistance for policymaking and management capacity development for forest and ecosystem conservation as well as livelihood improvement for local residents. These efforts constitute both mitigation measures such as REDD+ and adaptation measures for climate change, a major global challenge today. By region, JICA extends such assistance to the Amazon region, the Congo Basin, and Southeast Asia, all of which are rich in forest resources. In the Sahel and the Horn of Africa, JICA supports local communities with the sustainable use of natural resources and livelihood improvement activities in order to enhance their resilience to climate change as part of efforts to build capacity to deal with drought and desertification.

2. Conservation of Biodiversity through Management of Protected Areas and Buffer Zones

In protected areas and surrounding buffer zones, JICA is providing various forms of support for the conservation of biodiversity: formulation of management plans, implementation of surveys and monitoring, capacity building of key individuals, introduction of ecotourism, and environmental education.



Indonesia: An oriental dwarf kingfisher found in the special protection area of Gunung Palung National Park

Environmental Management

Many developing countries are facing serious environmental problems under urbanization. These problems often lead to health hazards and other threats to human security. If priority is given to economic development, it often results in leaving environmental pollution control behind. In many cases, it is difficult to find a short-term solution because of the complexity and the multilayered nature of environmental problems. Taking

these factors into consideration, among the SDGs, Goals 6, 11, and 12 include goals for environmental management.

JICA places special emphasis on preventing pollution and focuses its resources on capacity development for organizations and individuals engaging in environmental management in cooperation with such stakeholders as local governments, private-sector entities, universities, and development partners. JICA also offers financial assistance to projects in this sector, such as development of sewage treatment infrastructure.

1. Solid Waste Management and Establishment of a Sound Material-Cycle Society

As the waste problem is closely associated with the level of national economic development, JICA's cooperation accommodates different development stages, covering public health and sanitation or reducing environmental stress and establishing a sound material-cycle society. JICA is also advancing efforts to tackle marine plastic waste issues, a problem attracting recent attention.

2. Addressing Pollution of the Water, Air, etc.

JICA offers integrated assistance that includes sewage treatment facilities, building the capacity to operate and maintain systems, water-environment management primarily in urban areas, and addressing air pollution. Through these activities, JICA assists policy, regulatory, and institutional development based on assessments of the situation on the ground, infrastructure development, and capacity building for organizations and individuals.

Water Resources

Water supports human life not only through drinking water and domestic water but also as a vital resource for food production and economic activity. It is estimated, however, that as of 2015, over 2.9 billion people lack access to water.* Competition over water resources will likely intensify. In this light, the SDGs include Goal 6, to "ensure availability and sustainable management of water and sanitation for all." To help achieve Goal 6, JICA's development cooperation covers the following areas:

1. Safe Water Supply

For urban areas, JICA works with Japanese local governments—which are the water service providers in Japan—to support infrastructure development with financial assistance as well as capacity building aimed at improving the financial status and services of water supply utilities [➡ see the case study on page 33]. In rural areas, JICA assists in developing water supply facilities while securing safe water sources and strengthening sustainable operation and maintenance. This assistance helps rural communities to strengthen their resilience to droughts and other effects of climate change and improve their nutritional

* United Nations, "The Millennium Development Goals Report 2015"

and health status [→ see the case study below].

2. Integrated Water Resources Management

To settle conflicts over water, JICA assists in building consensus among various stakeholders, making available more scientific information on water resources, and building the capacity to formulate and implement water resources management plans. JICA also takes into consideration climate change and mainstreaming disaster risk reduction (DRR).

Disaster Risk Reduction

With population growth, urbanization, economic development, and climate change, recent years have witnessed a trend of more frequent natural disasters and greater economic losses. Once a large-scale disaster strikes a developing country, the outcomes of development and opportunities for sustainable growth for the country will be lost, making it difficult for the country to untangle itself from the downward spiral of disaster and poverty. The Sendai Framework for Disaster Risk Reduction 2015–2030, which was adopted by the United Nations in 2015, reflects many of the concepts Japan put forward based on its own experience, such as ex-ante investment in disaster risk reduction (DRR) and Build Back Better. Some of the SDGs include DRR indicators of the Sendai Framework, reflecting the fact that the international community has recognized DRR as a key development challenge.

JICA extends DRR assistance in line with the priorities for action of the Sendai Framework and promotes “mainstreaming of DRR” in every development project, as shown below.

1. Developing the Capacity for DRR Planning and Governance

JICA provides support for disaster risk assessment and



Fiji: Training on how to calibrate meteorological equipment in the Project for Reinforcing Meteorological Training Function of FMS

disaster risk reduction planning based on scientific data. It also promotes public understanding about disaster risks. Additionally, JICA assists the central and local governments of partner countries in strengthening institutional capabilities and governance for DRR through capacity building of organizations and personnel responsible for DRR [→ see the case study on page 27].

2. Implementing Measures to Prevent and Mitigate Disasters

Based on disaster risk reduction plans, JICA promotes ex-ante investment in DRR that aims to reduce existing and future disaster risks. JICA also assists in (1) improving forecasting and early warning, and (2) developing capabilities of the related authorities and communities. Once a disaster occurs, JICA provides seamless assistance through reconstruction, covering everything from the rehabilitation of infrastructure to the improvement of regulatory and institutional frameworks and the restoration of livelihoods. Such seamless assistance is based on Build Back Better, a concept aimed at building a society that is more disaster-resilient than the pre-disaster level.

Rwanda: Project for Strengthening Operation and Maintenance of Rural Water Supply Systems

Bringing innovation to rural water supply! Facility conditions shown on Smartphone displays



Maintenance workers checking a water supply facility; a Web-GIS map on a smartphone

Since 2006, Japan has been engaged in improving water supply in the Eastern Province of Rwanda, bringing safe water to more than 130,000 people through Grants and technical cooperation.

This ongoing technical cooperation project has developed a Web-GIS system that locates water supply facilities on a map shown on the smartphone display, thus facilitating the operation and maintenance of these facilities. Tapping on a facility icon on the Web-GIS map shows information on that facility, including its operational conditions. The use of open-source software

has made otherwise costly GIS available at little cost.

JICA is now working with the Department of Rural Water Supply and Sanitation Services of Rwanda's Water and Sanitation Corporation to make this Web-GIS system cover the whole country. Visualization of information about water supply facilities on the smartphone display has already facilitated day-to-day operation and maintenance activities, including repairs. It will also make water supply planning easier.