

3. Addressing Global Issues

(1) Environment and Climate Change Issues

International discussions on environmental issues began in the 1970s. Through discussions at the United Nations Conference on Environment and Development (UNCED, also called the Earth Summit) in 1992, at the World Summit on Sustainable Development (WSSD) of 2002 and at the United Nations Conference on Sustainable Development (Rio+20) in June 2012, their importance has been increasingly recognized. Following Rio+20, negotiations on Sustainable Development Goals (SDGs)* and the high-level political forum on

sustainable development are currently in progress. Additionally, environment and climate change issues are repeatedly taken as one of the main agendas at G8 and G20 Summits, and candid and constructive discussion among the leaders are held. The entire international community must address the environmental issues to ensure the prosperity of humankind in the future. In order to address global issues and build a sustainable society, UNESCO, as the leading agency, promotes “Education for Sustainable Development (ESD).”*

<Japan's Efforts>

● Environmental Pollution Control

With Japanese knowledge, experience and technology on environmental pollution control, Japan is working for the resolution of pollution issues in developing countries. In particular, Japan supports measures against pollution and the improvement of the living environment in urban areas, mainly in Asian countries that are achieving rapid economic growth. The “Minamata Convention on Mercury,” which aims to address global mercury issues, was agreed upon, and the diplomatic conference for its adoption and signing was held in Kumamoto City

and Minamata City, Kumamoto Prefecture, Japan from October 9 to 11, 2013. Based on the experience of the Minamata Disease, Japan has proactively participated in the negotiations on the convention and as the host country it has strived for the success of the conference. In addition, Japan announced that it would provide \$2 billion over three years to support measures against air pollution, prevention of water contamination, and waste management in developing countries.

Mongolia

Capacity Development Project for Air Pollution Control in Ulaanbaatar City Technical Cooperation Project (March 2010 - March 2013 (Phase 2 to be commenced before the end of 2013))

Mongolia has achieved rapid economic development in recent years, and many people have been moving into the nation's capital, Ulaanbaatar, seeking employment and better education opportunities. However, the development of urban infrastructure has not kept pace with the rapid urbanization and population growth, which has led to a number of issues.

One of the most serious issues is air pollution. According to WHO research, Ulaanbaatar City is said to have the second poorest air quality in the world. In addition to increased exhaust emissions from severe traffic congestion attributed to the rapid uptake of personal vehicles, smog haze caused by coal heaters and emissions from power plants and boilers blanket the city during the winter months as temperatures plummet to the negative 30 and 40°C. This has given rise to an increase in health issues such as respiratory disease.

Improving the air quality requires the implementation of science-backed countermeasures. However, in Mongolia, air quality analysis had never been conducted. In order to swiftly address these problems, the 2010 Capacity Development Project for Air Pollution Control provided guidance on the development of an atmospheric dispersion simulation model, on measurement technology and on Japan's environmental measures and schemes. The project identified the level of influence that major sources of air pollution in Ulaanbaatar have on atmospheric pollution. Following this, the Ulaanbaatar City Assembly approved the recommendations for air pollution countermeasures based on the atmospheric analysis.

It is anticipated that the second phase of the project will facilitate further utilization of the expertise and experience of Japan in strengthening Ulaanbaatar City's capacity to combat air pollution. (As of August 2013)



A view from the sky of Ulaanbaatar City (Photo: JICA)

● Climate Change

Climate change threatens human security transcending national borders. According to the latest report published by the Intergovernmental Panel on Climate Change (IPCC) in September 2013, the global average air temperature increased 0.85°C from 1880 to 2012. Under such circumstances, the international community including both developed and developing countries should work together to strengthen measures to address climate change.

At the 18th Conference of Parties (COP18) to the United Nations Framework Convention on Climate Change (UNFCCC) held in Doha, Qatar, at the end of 2012, Japan proactively contributed to discussions, aiming to send a clear message to the international community that “a basic arrangement for negotiations has been set up” towards the construction of a new framework beyond 2020 which will be applicable to all parties. As a result, the existing two working groups (the Ad-Hoc Working Group on Long-term Cooperative Action under Convention [AWG-LCA] and (the Ad-Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol* [AWG-KP]) concluded their work, and created an environment for focusing on negotiations on the construction of a new international framework that will serve as the post Kyoto Protocol. As for the Kyoto Protocol, the agreement was adopted regarding the setting of the second commitment period. In addition, with regard to Japan's pledge to provide \$15 billion to developing countries by the end of 2012, which was announced in 2009, Japan provided assistance approximately \$17.6 billion from public and private sector sources (approximately \$1.4 billion of public finance and approximately \$3.6 billion of private finance) as of the end of December 2012. Such steady implementation of assistance encouraged developing countries to take a constructive attitude towards the global negotiation on climate change, as well as contributed to the overseas diffusion of low-carbon technologies* of Japanese companies through ODA, etc.

Japan is actively promoting measures against global warming, including through the “Proactive Diplomatic Strategy for Countering Global Warming” that aims to contribute to the international community through technology. As a part of this initiative, Japan has been promoting the Joint Crediting Mechanism* to globally spread superior low-carbon technologies of Japan. Complementing the Clean Development Mechanism*, this Mechanism allows Japan to help reduce the greenhouse gas (GHG) emissions of its partner country by providing low-carbon technologies and allows Japan to use its contribution to GHG emission reductions towards achieving its emission reduction targets. In order to start its operation as early as possible, Japan has made progress in consultations with Asia and African countries.

In total, 238 feasibility studies have been implemented in 31 countries (as of October 2013). Japan also started implementation of the JCM demonstration projects and the JCM model projects in 2013, and in total 11 projects have been selected in five countries (as of October 2013). Japan has signed bilateral documents related to this Mechanism with several countries, including Mongolia (January 2013), Bangladesh (March), Ethiopia (May), Kenya and Maldives (both June), Viet Nam (July), and Laos and Indonesia (both August) (as of August 2013).

In addition, Japan has been promoting various kinds of regional cooperation to achieve low-carbon growth globally. In May 2013, Japan held the Second East Asia Low Carbon Growth Partnership Dialogue, aiming to promote the establishment of models for low-carbon growth in East Asia, which is the largest GHG emissions area. The representatives of the governments of participating countries and international organizations attended the dialogue to conduct active discussions. The discussions at the dialogue focused on technologies that contribute to low-carbon growth, and participating countries shared the understanding in terms of: (i) strengthening cooperation between governments, local governments and private sector; (ii) dissemination of appropriate technologies for achieving low-carbon growth; and (iii) importance of full utilization of policy tools including market mechanism. Additionally, as for the relations with African countries, the “Yokohama Declaration 2013” refers to the strategy towards low-carbon growth and climate resilient development, and the Yokohama Action Plan 2013-2017 set out that the provision of assistance and the dissemination and promotion of Joint Crediting Mechanism based on this strategy. Furthermore, Japan and the United States agreed to cooperate in addressing climate change, and have decided to deepen discussions in the following three areas: (i) leading the negotiations in the UN towards the establishment of a new framework beyond 2020; (ii) realization and dissemination of low-carbon growth with utilization of advanced technologies of Japan and the United States; and (iii) building a resilient society to global warming.



A corporate booth at the Second East Asia Low Carbon Growth Partnership Dialogue. Superior low carbon technology of Japan was introduced to participants from all over the world.

● Promotion of the Education for Sustainable Development (ESD)

Japan will host the UNESCO World Conference on Education for Sustainable Development (ESD) in Okayama City, Okayama Prefecture and Nagoya City, Aichi Prefecture in November 2014, the last year of the Decade of Education for Sustainable Development (DESD). In addition, Japan has been donating funds for

the Japanese Funds-In-Trust since 2005, the first year of the DESD, and actively promoting ESD through the implementation of projects such as education about climate change, disaster risk reduction, and biodiversity around the world.

Sustainable Development Goals (SDGs)

At Rio+20, participants discussed and agreed to begin the intergovernmental negotiation process to formulate SDGs. SDGs should apply to all countries but take into account the capabilities of each. They are supposed to be incorporated into the post-2015 development agenda. The Open Working Group on SDGs was established in January 2013, and discussions are in progress in each field.

Education for Sustainable Development (ESD)

Awareness to nurture people who will bear a sustainable society. "Sustainable development" means to create a society that "meets the needs of the present without compromising the ability of the future generation to meet their own needs." It is necessary for each of us to be aware of this concept in our daily lives and economic activities and change our behaviors. Educational activities to achieve such purposes are called "Education for Sustainable Development." According to a UN General Assembly resolution, the 10-year period beginning from 2005 was declared the Decade of Education for Sustainable Development (DESD), and global initiatives have been promoted with UNESCO being the leading agency.

Kyoto Protocol

A legal document adopted at the 1997 COP3 in Kyoto that determines responsibility for the reduction of GHG emissions. It mandates that the developed countries specified in the UNFCCC and countries that are undergoing the process of transition to a market economy achieve a fixed reduction of GHG emissions compared to 1990 levels over the 5-year period of 2008 - 2012. Japan bore a reduction responsibility of 6% (first commitment period). At COP18 in 2012, amendments to the setting of the second commitment period were adopted, and Japan's position of not participating in this period was reflected in the amended Annex B.

Low-carbon technologies

Environmentally-friendly technologies with low GHG emissions. As a technologically superior country in this field, Japan makes use of these technologies to reduce GHG emissions through assistance for high-efficient power plants, sustainable forest management, promotion and development of systems for energy-conservation and renewable energy, and assistance for solid waste management.

Joint Crediting Mechanism

Through the provision of technologies, products, systems, services, infrastructure, etc. related to the reduction of GHG emissions, this mechanism allows Japan's contributions to emissions reduction and absorption of GHG in developing countries to be evaluated quantitatively, while also allowing Japan to make use of its contributions towards achieving its emission reduction targets.

Clean Development Mechanism

Introduced by the Kyoto Protocol as a means for each country to reach its GHG emission reduction targets. It is a system that allows countries to make use of GHG emission reductions of developing countries to achieve their own emission reduction targets.

Viet Nam

Forestry and Natural Environment Conservation Program Technical Cooperation Project (August 2010 - Ongoing)

Forest coverage of Viet Nam decreased from 43% in 1945 to 28% in 1990 due to war, conversion of forests to agricultural land driven by population growth and poverty, and illegal logging. In order to improve this situation, the Government of Viet Nam has set a policy goal of recovering forest coverage of the nation's land mass to 45% by 2020. The Government is conducting reforestation initiatives and sustainable forest management.

Through the Natural Environment Conservation Program, Japan provides comprehensive assistance in areas such as the balancing of sustainable forestry management and improving productivity as well as biodiversity conservation. For instance, through the Protection Forests Restoration and Sustainable Management Project (loan aid), Japan is providing support for establishing protection forests and the development of a forestry and community infrastructure for the 11 provinces in central Viet Nam. The project aims to improve the environment of forested regions, allowing mountains to retain water to ultimately adjust the volume of water carried by rivers and conserve biodiversity. Furthermore, in the northeast region, the Project for Sustainable Forest Management in the Northwest Watershed Area (technical cooperation project) encourages residents from 51 villages to practice forest management. Through this project, Japan is providing Education for Sustainable Development (ESD), which is designed to increase resident awareness of sustainable development. Additionally, the program is working to improve the livelihoods of communities by encouraging fruit and vegetable cultivation and cattle farming.

In southern regions, the Project for Strengthening Community-based Management Capacity of Bidoup-Nui Ba National Park (technical cooperation project) assists national parks and local residents operate eco-tourism businesses and promote environmentally-friendly agricultural practices. Through these efforts, the program enhances residents' awareness and livelihood as well as achieves environmental conservation. (As of August 2013)



Participatory forestry management. Residents discussing forest protection, afforestation and sustainable use. (Photo: JICA)

Cameroon, Central Africa, Republic of Congo, and Democratic Republic of the Congo**Capacity Building for Sustainable Management of Tropical Rainforests and Biodiversity Conservation in the Congo Basin Countries (Cooperative project with ITTO)****Grant Aid (March 2012 - Ongoing)**

Located in Central Africa, the Congo Basin has the world's second largest tropical rainforest (approx. 200 million ha) after the Amazon and is rich in biodiversity*. However, African nations, particularly those in the Congo Basin, lack experts in forest management. As a result, sustainable forest management has not been advanced compared to tropical forest management in Asia and Latin America and the Caribbean.

Although the Congo Basin requires 600 additional engineers each year, training centers in the region are only able to produce approximately 320 engineers and specialists annually. Furthermore, due to a lack of training equipment at the training centers, trainees are unable to gain the skills and knowledge required for the field.

In this light, in cooperation with the International Tropical Timber Organization (ITTO), which has operated extensively throughout tropical forests in the Congo Basin, Japan has been working to improve the training centers of Cameroon, the Republic of Congo, the Democratic Republic of the Congo, and Central Africa. Japan's support includes the development of training programs for sustainable forest management and the improvement of facilities and equipment needed to implement the training programs. New trainers will also be trained for the forest management training centers of each country, equipping them with the skills to use the provided facilities and equipment so that they can train additional engineers. These efforts will improve the quality of education at each training center and will increase the number of new engineers trained annually to 350.

These trained engineers will drive sustainable forest management of the Congo Basin countries. Furthermore, the engineers will contribute to reducing poverty and increase the incomes of agricultural communities that are dependent on forests by increasing resident and business awareness of sustainable forest management. These efforts are expected to equip the region with the knowledge and skills required to maintain biodiversity and address climate change.

(As of August 2013)

* See page 80



Engineers studying at a training facility



A training facility for forestry development personnel, which has not been rehabilitated since the civil war in 1997 (Republic of Congo) (Both photos: ITTO)

Bangladesh**Third Country Training on Solid Waste Management for Officials from South Sudan and Sudan****Third Country Training (December 2012)**

In December 2012, the Third Country Training on Solid Waste Management was held in Dhaka, the capital of Bangladesh, for officials from Sudan and South Sudan.

Dhaka is home to nearly 15 million people and has long experienced worsening urban sanitation issues. In light of this, Japan has provided continual assistance for over 10 years through a number of schemes. The schemes include the Technical Cooperation Project for the Improvement of Solid Waste Management; Grant Aid, which has been used to acquire 100 waste collection trucks with reduced exhaust emissions; and deployment of Japan Overseas Cooperation Volunteers (JOCVs) who are working to increase local community awareness of sanitation issues. This assistance not only resulted in an approximately 40% increase in waste collection and transportation, it also significantly improved waste management standards through the introduction of semi-aerobic sanitary landfill system known as the Fukuoka Method at waste disposal sites.*

Both Sudan and South Sudan are experiencing growing amounts of waste as urban area population increases. Furthermore, the countries' economic issues and inadequate public infrastructure have prevented the development of an effective waste disposal system and has led to a deteriorating urban sanitation environment. Japan has been dispatching experts to Sudan since 2010, while it has been implementing technical cooperation projects in South Sudan since 2011.

The officials of Sudan and South Sudan were very inspired by the solid waste management system of Dhaka, commenting that they would like to draw on Dhaka's policy of delegating solid waste management responsibility and authority to each region. It is hoped that the representatives of all three countries will learn from each other.

* Landfill technology jointly developed by Fukuoka City and Fukuoka University in the 1970s. Compared to the anaerobic landfill system commonly adopted by developing countries, the Fukuoka Method reduces methane gas emissions. Furthermore, compared to the aerobic landfill system commonly found in developed countries, its structure is simplistic and therefore cost efficient.



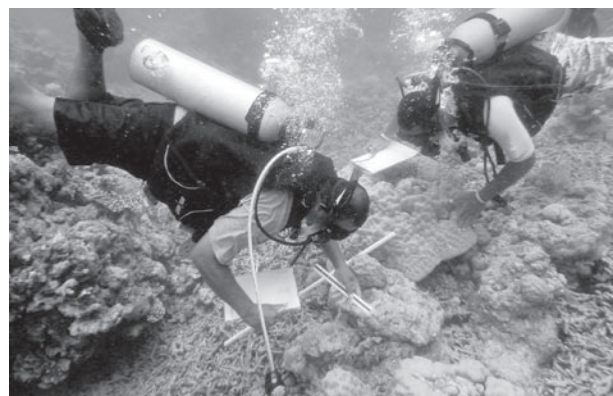
Low emission gas waste collection truck provided through Grant Aid (Photo: JICA)

● Biodiversity

In recent years, due to the expansion of ranges, scales and types of human activities, the loss of biodiversity has become a problem. Under such circumstances, based on the outcome from the 10th Meeting of the Conference of the Parties to the Convention on Biological Diversity (COP10) held in Nagoya City, Aichi Prefecture, Japan has been promoting efforts for the conservation and sustainable use of biodiversity. The 11th Meeting of Conference of the Parties to the Convention on Biological Diversity (COP11) was held in Hyderabad, India, in October 2012. It achieved an agreement that sets an interim target of doubling international financial resource flows to developing countries related to biodiversity in by 2015, and thus enabled the carry-over of the momentum for achieving the Aichi Biodiversity Targets*, which was fostered at COP10, to the next conference.

In addition, the Intergovernmental Science-policy

Platform on Biodiversity and Ecosystem Services (IPBES)* was established in April 2012, and the first session of the Plenary of the IPBES (IPBES-1) was held in January 2013.



The Capacity Enhancement Project for Coral Reef Monitoring in Palau
(Photo: JICA)

Biodiversity



“Biodiversity” refers to the abundance of life, including the many lives in the earth, the ecosystems that balance the life chain, and the genetic traits transmitted from the past to the future.

Biodiversity

Diversity of ecosystems



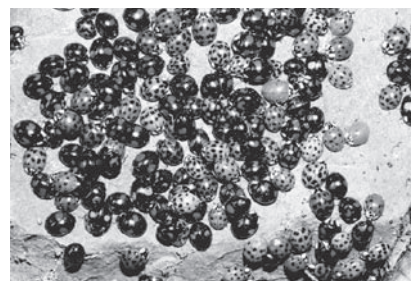
A variation of environments such as forests, wetlands, rivers, coral reefs, etc.

Diversity between species



A variation of species such as the existence of animals, plants, bacteria, microbes, etc.
(Estimated number of species of organism on the earth: 5 million to 30 million)

Diversity within a species



A variation of differences within a species such as the existence of individuals that are resistant to dry or hot environment and resistant to disease

(Photo: All three by Ministry of the Environment)

Since living organisms are borderless, the entire world should tackle biodiversity issues; therefore the “Convention on Biological Diversity” was created.

Objectives: Parties to the Convention should work to achieve (i) the conservation of biological diversity, (ii) sustainable use of its components, and (iii) the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

Developed countries are providing economic and technical supports to developing countries for these objectives.

Glossary

The Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets

They are also called the “Post 2010 Biodiversity Targets.” The mid- to long-term goal is to achieve harmony between humans and nature by 2050, with a short-term target of implementing actions to stop the loss of biological diversity by 2020. The Targets consist of 20 individual goals, including the control and preservation of at least 17% of land areas and 10% of ocean areas.

Intergovernmental Science-policy Platform on Biodiversity and Ecosystem Services (IPBES)

With the four functions of scientific assessment, capacity building, knowledge generation, and policy formulation support at the core, IPBES promotes activities to scientifically evaluate trends related to biodiversity and ecosystem services and to strengthen the linkage between science and policy making.