Ever since the Earth Summit in 1992, JICA has been addressing global issues, including the environment, with a view toward sustainable development. The importance of comprehensive initiatives, including water, education, and health, was reconfirmed at the Johannesburg Summit in 2002. Climate change, which is becoming increasingly more important every minute, is vividly showing the diversity and complexity of the global issues faced today. The greenhouse gases that humanity emits into the atmosphere lead to worldwide climate change. Climate change accelerates poverty, creates refugees, and threatens peace, thereby accelerating a vicious cycle. The energy and food problems accompanying population increases and economic growth are inextricably linked to climate change. Global issues can be solved only when the people active on the ground in different countries and fields of endeavor work together with a global perspective that goes beyond individual interests. As a bridge between Japan and developing countries, JICA will continue contributing to sustainable social development by making the utmost use of its networks in and outside Japan and its experience obtained thus far in the fields of development and the environment. Right now there is a need for each and every Japanese person to think about the lives of people in developing countries and to act in order to help realize the principle of “human security” that is upheld by Japan’s aid programs.

1 Addressing Climate Change

A number of trends have appeared in the international arena in recent years regarding the fight against climate change. Among these trends, Japan has been pursuing coexistence of the environment and development, thereby pushing sustainable development forward. As it takes a leading role in this endeavor, what kind of initiatives is Japan attempting to undertake, based on what kind of technology and experience?

International Trends relating to Climate Change and Development in Developing Countries

The Intergovernmental Panel on Climate Change (IPCC) declared in its Fourth Assessment Report (IPCC/AR4) that, “Warming of the climate system is unequivocal, as it is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level.” As the IPCC expressed,
the problem of climate change is already apparent and is in need of appropriate responses from the international community. The percentage of greenhouse gases emitted from developing countries accounts for approximately half the world total. Reducing these emissions requires efforts in developing countries in addition to action spearheaded by developed countries.

However, developing countries are of the opinion that it is unfair that they should carry the burden of reducing emissions when global warming is the responsibility of developed countries. India, the People’s Republic of China, Brazil, and other newly-emerging countries in particular strongly stress this notion. The challenge is how to give concrete shape to “common but differentiated responsibility.” This issue is being debated toward a final agreement in 2009.

At the same time, many developing countries are faced with other important challenges that must be addressed to achieve sustainable development, including poverty reduction; the securing of water and energy resources, and other resources; the improvement of health and medical services; and urban and regional development. For this reason, they are not in a position of having the adequate leeway that developed countries have to take measures focusing solely on climate change. In order for climate change countermeasures to be pushed forward sustainably and with autonomous progress in developing countries, they need to be advanced together with efforts to solve development challenges.

In this situation, the IPCC AR4 raises the importance of a co-benefit approach to climate change that contributes to both sustainable development and the fight against climate change. The report points out that making development more sustainable is effective as a means of mitigating climate change. It also calls attention to the fact that how to incorporate the perspective of climate change mitigation into development plans, with the aim of realizing both development benefits and climate benefits, is an important challenge.

Heavy damage due to the effects of climate change is a concern especially in the world’s poorest countries in Africa and elsewhere, and in island nations and other developing countries. The related problems surrounding developing countries are major challenges and there is concern that they will impede achievement of the Millennium Development Goals (MDGs). Yet, developing countries do not have enough capital and adaptation-related technology to cope with the effects of climate change. Accordingly, broad technology transfer and financial assistance from developed countries has become an important issue.

## Toward New Policy Challenges

In the midst of such international trends, Japan has advocated the halving of global greenhouse gas (GHG) emissions by 2050. At the Davos Forum held in Switzerland in January 2008, Prime Minister Yasuo Fukuda unveiled the Cool Earth Partnership as a new financial mechanism with funds amounting to US$10 billion (JPY 1.25 trillion) to be used toward that goal.

Through Japan’s ODA programs, the Cool Earth Partnership will provide developing countries that go through concrete policy consultations with Japan with approximately 250 billion yen in grant aid and technical cooperation over five years to support adaptation and clean energy and 300 billion yen in Climate Change Japanese ODA Loans over five years for mitigation efforts. Policy consultations have already been held with Indonesia. Japan plans to expand its ODA support for tackling climate change in African and South Pacific island countries in the future.

## JICA’s Initiatives

Thus far, JICA and the Japan Bank for International Cooperation (JBIC), whose overseas economic cooperation operations will be integrated into JICA in October 2008, have cultivated experience and accomplishments in assisting developing countries. JICA and JBIC are driving initiatives forward to enable the aggressive implementation of climate change countermeasures based on the following basic policies developed in light of the policy of the Government of Japan. Toward that end, JICA and JBIC will make the utmost use of Japan’s experiences and technology as well as their own past experiences and accomplishments while striving to realize synergies from their integration.

1. Assist developing countries that are working on dual efforts to reduce GHG emissions and to achieve economic growth simultaneously.
2. Emphasize development cooperation that enables the simultaneous pursuit of economic growth and improved livelihoods for residents of developing countries together with the reduction of GHG emissions.
3. Actively utilize Japan’s advanced technology, including private-sector technology.
4. Promote research that contributes to the international community.

Those who are most susceptible to the adverse effects of climate change are the disadvantaged members of society in developing countries. Accordingly, JICA will practice a human security approach that improves the ability of individuals and society to resist climate change in order to minimize the risks posed by it.

## Specific Action and Direction

JICA has put together ideas on the direction of specific actions to take in light of the basic policies mentioned above. Below is a description of these ideas, divided between mitigation, in which efforts are made to reduce GHG emissions and enhance GHG sinks in the long-term, and adaptation, in which efforts are made to cope with the unavoidable effects of climate change on the overall global climate system.

### Mitigation

1. Supporting the simultaneous pursuit of sustainable development and the reduction of GHGs in developing countries

Many developing countries attach importance to measures to fight poverty; and, since they are under no obligation to reduce GHGs, they regard cooperation with the sole objective of fighting global warming as unattractive. For that reason, JICA is committed to developing a co-benefit approach
to cooperation that enables the simultaneous attainment of development benefits and a reduction in GHGs. Toward that end, JICA is building an integrated cooperation framework for actively assisting the efforts of developing countries that are attempting to contribute to climate stability by concurrently pursuing emissions reductions and economic growth.

For example, JICA is conducting the Participatory Forest Management Project in Belete-Gera Regional Forest Priority Area (Phase 2) to achieve forest conservation and management while also improving livelihoods in the Belete-Gera region of southwestern Ethiopia, which is home to a precious forest ecosystem. The project aims to diffuse sustainable participatory forest management, by government and local residents, which is implemented based on Forest Management Agreements regarding the utilization and management of forests. These agreements are entered into between forest management associations organized by local residents and local government with assistance from the project. At the same time, the project is encouraging residents’ motivation to protect forests and promoting the improvement of livelihoods by simultaneously facilitating a rise in the commercial value of indigenous forest coffee through production and quality management improvements.

(2) Supporting the private sector’s initiatives to reduce greenhouse gases

The private sector must work aggressively on reducing GHGs in order to achieve autonomous reductions in society as a whole. For that reason, JICA will provide financial assistance to support the formulation and implementation of policies and systems by the governments of developing countries, the strengthening of organizations that nurture private sector technicians and provide information, and the implementation of GHG reduction projects by the private sector in developing countries.*1

In Saudi Arabia, JICA conducted a Master Plan Study for Energy Conservation in the Power Sector with the aims of proposing energy conservation policies and systems and developing human resources. The study ascertained the current status of energy conservation initiatives in businesses and households through consultations with government agencies, especially the Ministry of Water and Electricity, and industrial organizations in the country. The study findings can then be used to help establish nationwide numerical targets for energy conservation and to draw up a concrete course of action. It is hoped that collaboration with the private sector will be promoted after a plan is formulated and that energy conservation initiatives will make good progress in the country.

(3) Supporting the wide use of the clean development mechanism

JICA supports the regions and fields where the application of the clean development mechanism (CDM)*2 is lagging behind. Specifically, it assists the creation of environments in which CDM operators in the private sector and other areas can more smoothly implement projects. JICA does this by helping to improve government agencies’ competence in matters such as CDM approval, project formation, and education.

JICA also pushes forward planning and project development assistance for CDM implementation with a view toward raising the effectiveness of projects whose public interest is high, such as power generation and afforestation.*3 JICA is already assisting the application of the CDM through the improvement of implementation capacity of parties involved in afforestation projects in Viet Nam (see “Useful Examples of Environmental Cooperation Projects” on page 19).

Adaptation

(1) Supporting the formation and implementation of policy relating to adaptation corresponding to the anticipated effects on a country-by-country basis

The effects of climate change differ by country. Accordingly, JICA provides assistance relating to meteorological observation, climate change forecasting, and climate change impact assessment in order to promote the formation and implementation of adaptation measures suited to the circumstances of each country based on scientific rationale.

(2) Strengthening adaptation in countries, regions, and fields where the effects of climate change are serious

JICA provides support to strengthen the “climate-proofing” of more fragile regions (low-lying coastal areas, small islands, arid/semi arid regions, and glacier regions, etc.) and more fragile fields (water resources, disaster prevention, agriculture, and health, etc.) where the future effects of climate change could be especially serious. These regions are already having difficulty handling current weather conditions, including rising sea levels in small Pacific island nations, the outburst of glacial lakes in sub-Himalayan countries (see photo), cyclone damage in the lowlands of Southwest Asia, and the increasing shortage of water in Africa.*4

(3) Considering adopting the concept of “climate risk”

It is conceivable that the need will arise to pay due consideration to the risks accompanying climate change (i.e. climate risk) for projects in regions and fields with a high probability of being affected by climate change. Going forward, JICA intends to study views of climate risk and specific ways of dealing with it, taking into consideration international trends.

Innovative technologies and the existing technologies patented by private sector companies in developed countries are necessary to achieve the goal of halving global GHG emissions by 2050. The method of transferring that technology and of providing financial cooperation is under continual discussion in the Conference of Parties to the United Nations Framework Convention on Climate Change.

*1. Innovative technologies and the existing technologies patented by private sector companies in developed countries are necessary to achieve the goal of halving global GHG emissions by 2050. The method of transferring that technology and of providing financial cooperation is under continual discussion in the Conference of Parties to the United Nations Framework Convention on Climate Change.
Useful Examples of Environmental Cooperation Projects

Project on Conservation of the Galapagos Marine Reserve in Ecuador

The Galapagos Islands are located in the Pacific Ocean approximately 1,000 km off the coast of Ecuador. Isolated from the continent, a very unique ecosystem formed in the island environment. For that reason the islands are registered as a World Heritage site. They are also famous as the location where Charles Darwin came up with the theory of evolution. However, preservation of the coastal zone is lagging behind the mainland. Furthermore, the islands’ precious natural environment is being damaged by the rapid increase of tourists, fishing, and population. The conflict between Parque National Galapagos (the national park service), which attempts to regulate the fishing industry in order to protect the natural environment, and the fishermen is also a serious problem. El Niño and other exceptional weather conditions also have a major impact on the islands’ ecosystem. Building a sustainable environmental protection system has become important to protect the Galapagos’ marine environment.

This system must accurately ascertain the status of the islands’ changing environment and ecosystem, and achieve harmony between preservation of the marine environment, with the understanding and cooperation of local residents, and the sustainable utilization of marine resources.

Therefore, JICA project team is working to improve the abilities of Parque National to conduct surveys and ascertain the current situation by conducting marine studies and water quality monitoring. At the same time it is striving to improve residents’ understanding through environmental education, including communicating the current status of the marine environment and preservation efforts to people via TV and radio. In addition, the project is studying and supporting a variety of schemes that enable fishermen to earn a living without overexploiting marine resources. For example, fishermen are supported to offer hands-on fishing experiences that allow them to make an income from providing fishing experiences to tourists.

Through such activities, the project has helped deepen residents’ understanding of the ocean and enhance the survey capabilities of Parque National. By helping improve the relationship between Parque National and the local residents, including fishermen, JICA has won the trust of the people, who have provided feedback such as, “JICA is the only one to have considered and supported the position of the local residents.”

A Marine Iguana, an endemic species in the Galapagos Islands.

Study on Capacity Development for AR-CDM Promotion in Viet Nam

For the benefit of the forest, people, and the Earth

After the ratification of the Kyoto Protocol, the Government of Vietnam has been aggressively attempting to push sink CDM (AR-CDM*) projects forward, not only with the aim of reducing GHGs, but also out of their need to re-green more than 8 million ha of bare land (nearly the size of Hokkaido) remaining in the country. However, at present AR-CDM is internationally an extremely new undertaking, with very limited knowledge and techniques.

The aim of the present development study is to develop the capacity of the relevant organizations by supporting the understanding of the system, the creation of a system for information dissemination, the planning of an actual pilot project, and the validation and registration procedures for the project. JICA is also helping propose strategies for promoting AR-CDM in Vietnam as well as schemes for actualizing and spreading AR-CDM. The pilot project is aiming for approval by the CDM Executive Board during fiscal 2008. If implemented, the project is expected to make a contribution to the reduction of carbon dioxide on the order of approximately 41,000 tons over 16 years.

The pilot project will be operated with a social fund established mainly by the relevant organizations in Vietnam. Honda Vietnam Co., Ltd., has pledged its financial support for implementation of the project as part of its CSR activities.

* CDM projects that aim to remove GHG by sink through forestation. Amount of removed GHGs will be approved as Carbon Credits. AR stands for afforestation and reforestation.

A boundary survey using GPS at the pilot project candidate site in Hoa Binh Province.
Japan has been implementing peace building projects in Sudan and Afghanistan, two countries that have recently emerged from conflicts. This section covers efforts in these countries. In Sudan, speed was valued as an important factor based on JICA’s experiences gained in Asia. In Afghanistan, JICA works on the possibilities of various development assistance programs, centered on human security, with the aim of helping to build a new nation.

II Efforts toward Peacebuilding Projects

Working to Consolidate Peace in Sudan

Sudan is Africa's largest country in terms of territory. It also plays a crucial role in the stability of the entire African continent. However, a long-term civil war has continued since the country achieved independence. Numerous people have fled the civil war, becoming refugees or internally displaced persons. Civil war then broke out in the Darfur region of western Sudan, starting around 2003, again creating numerous refugees and internally displaced persons.

JICA started providing assistance to Sudan in the 1960s in the midst of civil war. In 1989, it opened the JICA Sudan Office. However, the office was closed in 1993 when the Government of Japan decided to limit aid to Sudan to that of a humanitarian and emergency nature on the grounds that gross human rights violations were committed in Sudan in 1992. Since then, aid to Sudan has been at a virtual standstill.

Developing an Implementation Structure

In January 2005, the Comprehensive Peace Agreement (CPA) was signed between the Government of Sudan and the Sudan People’s Liberation Army/Movement (SPLA/M), which had continued antigovernment action until then. The CPA brought to an end the civil war that had been ongoing for over 20 years and established that two governments – the Government of National Unity and the Government of Southern Sudan – would be set up within the single country. In response to the signing of this peace agreement, the Government of Japan decided to resume aid to Sudan. At the Donors’ Conference (Oslo Conference) held in Oslo, Norway in April 2005, it committed to providing aid to both Northern and Southern Sudan to help cement peace in the country.

Based on its past emergency assistance experience, Government of Japan judged that it needed to rapidly rebuild its assistance structure for Sudan and dispatched a mission to Sudan in December 2004, just before the CPA was signed, to confirm the situation on the ground and study paradigms for cooperation after the resuming of assistance, and otherwise started preparing to resume assistance.

In May 2005, just after the Oslo Conference, JICA invited five people each (a total of 10 people) from the Government of Sudan (the Government of National Unity) and the then present Government of Southern Sudan (GOSS) to Japan. They were given an overview of Japan’s ODA and an introduction to JICA’s cooperation programs and learned about Japan’s postwar reconstruction in Okinawa.

Furthermore, in July 2005, JICA dispatched a project formation study team during the same period as the government mission and decided on directions for assistance to Sudan, specifically, “action on emergent issues” and “assistance to help establish a structure for the new Sudan.” In September 2005, JICA dispatched aid coordination experts to the Ministry of International Cooperation in Khartoum, which is the organization in Sudan’s Government of National Unity in charge of accepting aid, in order to build an in-country assistance structure. The experts gathered information locally and worked on coordination with the relevant organizations. In November, JICA applied the Fast Track System* to assistance projects to be implemented in Sudan, ensuring promptness up to the start of project implementation. Application of this system enabled unbroken progression of assistance from humanitarian assistance to development assistance.

On-going Reconstruction Assistance Projects: Action on Emergent Issues and Assistance to Help Establish a Structure for the New Sudan

The building of infrastructure and the improvement of basic social foundations had hardly taken place due to the effects of the protracted civil war in Sudan. Moreover, there was a serious shortage of human resources, including administrators, police, and technicians, making human resources development an urgent issue in all spheres.

In September 2005, JICA started providing assistance in Juba, which had become the capital of the Government of Southern Sudan. Juba had almost no public facilities to start with, and during the past 20 years of civil war the city’s infrastructure had hardly been developed or maintained. Capital functions will accumulate in the city, the population of which is anticipated to grow in the future as a result of the return of refugees. This means that the development of basic infrastructure, such as water supply facilities, has become an urgent issue. At the same time, there was a need to swiftly expand and improve basic social services to facilitate the settlement of returnees in communities in the surrounding rural areas.

Under these circumstances, the Government of Sudan asked in the later part of September 2005 that JICA conduct an emergency development study, the Emergency Study on the Planning and Support for Basic Physical and Social Infrastructure in Juba City and Surrounding Areas. In October, JICA made the decision to provide assistance. In November, JICA dispatched a preparatory study team, which verified the request and established the content of the project. Since the project was approved for the Fast Track, procedures were pushed forward swiftly and on-site work on the project was launched in January 2006. The project consisted of three parts: (1) preparation of a Juba City Plan with the target year of 2015; (2) the development of a river port on the Nile River as a pilot project for emergency reconstruction of basic infrastructure; and (3) the implementation of training programs for people to learn the basic skills needed to build community foundations.

These training programs, carried over from the Project for Strengthening Basic Skills and Vocational Training in Southern Sudan, were set up in the Juba Multi-Service Training Center. In Southern Sudan, the number of human resources with no marketable skills is growing as a result of the influx of internally displaced persons and the DDR (disarmament, demobilization, and reintegration) process. Consequently, the increasing unemployment rate of the Sudanese is predicted to become
a major element of instability in society. Hence, the development of human resources with acquired skills has become an urgent matter for cementing peace through economic growth. This project provided training in woodworking, auto mechanics, construction, welding, and information technology, and facilitated linkages with the International Labor Organization (ILO).

However, it is not the case that all things progressed smoothly. During the initial stages of the project there was a difficult situation in which, due to the lack of human resources, the only person from the Government of Southern Sudan who made himself available for a meeting was a minister. But, there were times when the project staff had no choice but to leave the minister’s office after waiting in vain for the minister for many hours. Due to the shortage of lodgings, project staff proceeded with the project while staying in tents. In addition, land problems arose at a pilot project site during project implementation, causing a situation in which construction was halted for nearly half a year. This resulted in the facility being completed behind schedule in November 2007.

Working to Consolidate Peace in Sudan

Sadako Ogata, President of JICA, visited Juba in February 2008. She met with Salva Kiir, President of Southern Sudan, and many other concerned ministers, from whom she was able to confirm that JICA’s post-conflict rapid responses were highly appreciated.

JICA believes that consolidating peace is critical to ensuring human security in an unstable country. Accordingly, it will continue promoting the firm establishment of peace through economic growth based on the development of economic infrastructure and vocational training. Moreover, it will support human resources development in the fields of health and education in order to foster residents’ trust in the government through improved government services.

At the same time, the number of displaced persons is still on an upward trend in the Darfur region of western Sudan, where an alarming situation continues. Here too, JICA plans to support human resources development in the fields of health, education, and water through training programs.

* Based on JICA’s past experience with peacebuilding projects, the Fast Track System was introduced in July 2005 to enable, as needed, the quick commencement of assistance that is effective for residents by implementing projects more rapidly and flexibly. Southern Sudan was the second place the system had been applied, the first being Palestine.

Creating the Symbol of a New Afghanistan: Cooperation in the Development of the Kabul Metropolitan Area

Afghanistan was once a fertile agricultural country that flourished as a strategic trade center along the Silk Road. But a state of turmoil continued for over 20 years from the end of the 1970s, when the Soviet army invaded, which was followed by civil war, and the collapse of the Taliban regime in 2001. The peace process advanced with the support of the international community from the end of 2001 was carried out according to plan, from the enactment of a new constitution and presidential and legislative elections to the opening of the National Assembly at the end of 2005. Assistance for reconstruction started at the same time as the peace process. It has achieved results in the rehabilitation of impoverished rural communities through the National Solidarity Program, the expansion of basic medical services, and the improvement of the school attendance rate (especially among female students) through the upgrading and expanding of primary education. In addition, the macro-economic situation is showing a certain degree of improvement thanks to measures to control inflation, increase annual government revenues, and grow the economy.

Under this state of affairs, the capital city of Kabul gives the appearance of enjoying prosperity from the reconstruction assistance, including traffic volumes large enough to cause congestion, the opening of upmarket hotels and supermarkets, and the saturation of imported goods and major advertising.

Nevertheless, even today, more than six years since the start of reconstruction, the electrical power supply is critically insufficient and hardly any improvements have been seen in the water supply and sewerage systems. Kabul’s high population growth of 4% per year resulting from an influx of residents from the war-torn countryside and repatriated refugees is aggravating the situation in the capital. The city’s population has nearly doubled in the past 10 years and now stands at approximately 3 million. The strained water supply, deterioration of sanitary conditions, traffic congestion, and an otherwise worsening urban public health environment has reached a level that cannot be overlooked.

With Kabul’s city planning static since it was last updated in 1978, solving Kabul’s urban problems has become a most urgent imperative of the Government of Afghanistan. In 2006, JICA undertook the Project Formation study on the Kabul Metropolitan Area Urban Development. The study examined the upgrading of basic urban functions and formulated a concept for the development of a new city area for the Government of Afghanistan.

The Government of Afghanistan highly regarded the results of JICA’s study. In 2007, it asked Japan to develop the new city area through the introduction of private sector activities and to prepare an urban development master plan for the redevelopment of the Kabul Metropolitan Area. JICA signed the contracts relating to this cooperation project at the end of 2007. Cooperation began in March 2008, and the master plan is expected to be completed in September 2009. The project is broad in scope, specifically including the preparation of an urban development master plan for the Kabul Metropolitan Area in 2025, the strategy for putting the plan into practice, water resource development possibilities, administrative systems, and capacity development. Through this cooperation, JICA is providing high-level advice and guidance to senior officials in the Government of Afghanistan, including Senior Economic Advisor to the President, the Minister of Urban Development, the Mayor of Kabul, and representatives of the private sector.

JICA is ready to provide possible assistance, since the construction of a new metropolitan area symbolizes a new Afghanistan and the building of a new nation, having broken away from its long history of conflict and civil war.

Scope of Work signing ceremony. Senior Economic Advisor to the President and the Minister of Urban Development signed a document in the presence of many local reporters.