China is experiencing rising demand for energy in step with its economic growth and is said to be the world’s top country in terms of CO₂ emissions. China especially uses a large amount of coal, which is a cause of environmental pollution such as acid rain. The Chinese government is working to reduce emissions of CO₂ and environmental pollutants by switching from coal-burning boilers to boilers fuelled by clean energy (natural gas).

Responding to this policy of the Chinese government, in 2002 JICA provided an ODA Loan for the Beijing Environmental Improvement Project, which targets industrial and residential areas within the Beijing Electronic Zone in northeast Beijing. In this region, numerous aging small coal-fired boilers were used and these were one of the causes of environmental pollution in Beijing. With the participation of Japanese companies possessing advanced energy-conservation technologies, the Chinese government introduced Beijing’s first natural gas cogeneration facility (gas combined cycle: heat produced along with power generation is also recovered and reused). This facility not only provides electricity but also supplies hot water to the surrounding industrial regions and households. The cogeneration facility began operating in winter 2008. As a result, 102 of 128 small coal-fired boilers were removed from operation, enabling an annual 300,000-ton reduction in coal use and a 200,000-ton reduction in CO₂ emissions.

Ji Peng, chairman of the Beijing Municipal People’s Government, which is executing the project, gave high praise, stating, “I am impressed by the high level of Japan’s energy-conservation technologies and the diligence and integrity of the Japanese people. I would like to expand the introduction of cogeneration systems to other regions using this project as a model.”

A new cogeneration facility. With consideration given to minimizing noise in the surrounding areas, the facility’s gas turbine has been enclosed inside a large case (far right).
which it has been entrusted and will further raise the efficiency of its programs and organization.

Development in Cooperation with the Activities of Private-Sector Enterprises

The development needs of developing countries are enormous. However, ODA funds presently account for only around 17% of all money flowing into these countries, with private-sector capital making up over 80% of these funds. As these figures suggest, it is not possible to respond to the needs of developing countries with ODA funds alone. On the other hand, when considering that private-sector capital in fact accounts for the lion’s share of funds flowing into developing countries, and contributes significantly to the development of each country, a desirable approach will be to make efforts to ensure that ODA and the private sector can build meaningful partnerships, raise development effectiveness and accelerate growth. Companies also have expectations regarding the role of government in terms of reducing business risk in developing countries and businesses that can be realized if governments assume a certain portion of the business risk and cost. Therefore, such methods as Public-Private Partnerships (PPP) are being utilized internationally, and structures for addressing development issues in developing countries are being realized through public-private sector cooperation. This movement is expected to strengthen and develop further going forward.

In view of such circumstances, JICA will continue promoting cooperation with private-sector enterprises as well as with industrial, economic and industry organizations. JICA will also provide assistance through public-private sector collaboration to businesses undertaken by the private sector, including BOP businesses and PPP infrastructure that contribute to development in developing countries. Concurrently, JICA also implements various types of schemes to assist with the establishment of an investment environment in developing countries with the aims of promoting foreign direct investment (FDI) by Japanese companies, expanding opportunities such as promoting trade in the products of developing countries and supporting corporate social responsibility (CSR) related activities.

Assistance for Science and Technology

Advances in science and technology as well as technical innovation are indispensable elements for realizing growth. To achieve sustainable development, JICA is working to promote human resource development in science and technology and to establish a network of higher educational institutes in these fields through AUN/SEED-Net, an ASEAN engineering higher education network and Egypt-Japan University of Science and Technology (E-JUST). In fiscal 2009, projects got fully on track under the Science and Technology Research Partnership for Sustainable Development (SATREPS), a Technical Cooperation project undertaken as a science and technology cooperation scheme on global issues, and Dispatch of Science and Technology Researchers (Individual Expert Dispatch). JICA will continue its proactive support of science and technologies for realizing sustainable growth, focusing mainly on environmental and energy conservation technologies, fields in which Japan boasts a comparative advantage in terms of technologies and experience.

Linkage with New Growth Strategies—Growth Together with Asia under the Principle of Mutual Prosperity

Among its “new growth strategies,” the Japanese government has defined its “Asia economic strategy” as one of its strategic fields. In other words, by utilizing Japan’s superb technologies and know-how to solve problems facing Asia, this strategy aims for even more dynamic and sustainable development in Asia, which has attained tremendous economic growth in recent years. This strategy is also based on the concepts embodied in the principle of mutual prosperity, whereby Japan also is vitalized by and grows together with Asia.

As a prime example of this approach, many of Asia’s large cities are plagued by environmental pollution and declining urban functions. In response, Japan can contribute to the building of low-carbon and functional cities drawing on its outstanding environmental technologies, urban infrastructure technologies and its know-how in the establishment and operation of various systems. Moreover, to further promote ASEAN economic integration, Japan possesses the technologies and know-how in “establishing package-type infrastructures,” which combine soft and hard infrastructures, to further invigorate the circulation and flow of people, goods, money and information. Japan also has technologies and know-how needed for contributing to the realization of even more-sophisticated systems that include systems related to customs clearance, intellectual property rights and standard certifications.

JICA’s knowledge and networks can be utilized to support the establishment of the foundations for dynamic and sustainable growth of Asia, which will also help maintain the vitality of Japan’s economy and society. JICA aims to build such types of “Win-Win” relationships.

Toward an Open Japan—The Internationalization and Vitalization of Japanese Society

More than ever, in today’s deeply interdependent world, for Japan to continue to enjoy the benefits of globalization and to fulfill its responsibilities, it will be necessary to carry out international cooperation at the governmental, private-sector and citizen levels. JICA has positioned the promotion of citizen participation as “a JICA initiative for supporting and promoting international cooperation activities by Japanese citizens as a bridge linking Japan with developing countries.” JICA aims to make international cooperation part of Japan’s culture and will provide support for
development-related education at schools and citizen groups as well as build collaborative networks. These efforts aim not only at promoting the internationalization of Japanese society, which tends to be inwardly focused, but to contribute to the vitalization of society, which includes encouraging interchanges through wider human networks, expanding export markets for locally produced goods, uncovering latent technologies and transferring these overseas.

Under JICA’s volunteer program, since 1965 over 40,000 people have been dispatched to overseas locations. Through these volunteer activities that involve working hand in hand with local people, participants acquire a broad perspective of the world, a greater awareness of various problems and advanced communications skills. By re-evaluating Japanese society from an international perspective, participants can also rediscover Japan’s good points, become more aware of problem areas and return to Japan as truly internationally minded people. JICA intends to continue this volunteer program as a hands-on initiative that will serve as a basis for a more-open Japan.

### The Path JICA Must Take for New Development Assistance

**Responding to a Diversified Global Framework**

—Expanding Partners

The Bretton Woods System and the G8, which underpinned the world’s financial system and economy in the past, are facing major

### Case Study

**A New Approach in International Cooperation**

**Triangular Cooperation through the Japan-Brazil Partnership Program (JBPP)**

Japan’s economic cooperation for Brazil began in 1959 and was undertaken in a wide range of sectors that include agriculture, health and environmental preservation. Having subsequently achieved economic development, Brazil then began providing assistance to such developing countries as the Latin American and Caribbean Countries, Portuguese-speaking African countries and Timor-Leste in the latter half of the 1980s as South-South cooperation, whereby developing countries assist other developing countries. Besides South-South Cooperation, in 1985 Japan and Brazil began the first triangular cooperation scheme through the Third Country Training Program (TCTP).

In March 2000, the Japanese and Brazilian governments agreed to form the Japan-Brazil Partnership Program (JBPP), which further built on the achievements made through long years of cooperation and partnership between the two countries. With the establishment of JBPP, both countries reconfirmed their commitment to the further promotion of triangular cooperation through the three modalities such as the Joint Cooperation Project, Joint Training Program, Third Country Training Program and Joint Seminar/Workshop. In 2007, the first Joint Cooperation Project in a beneficiary country, Training for Capacity Building of Josina Machel Hospital, was commenced in Angola.

### Implementing the Partnership Program with 12 Countries

#### The Partnership Program is a framework under which developing countries that have achieved development with cooperation from Japan then work with Japan to provide assistance to other developing countries. There are numerous instances in which the country providing assistance and the recipient country share similar or common linguistics, histories, cultures and development processes, and this creates the advantage of being able to provide assistance more efficiently and effectively.

#### Japan has currently concluded Partnership Programs with 12 countries, including Brazil, Singapore and Egypt. JICA is actively undertaking joint cooperation activities with each of these countries under the framework of the Partnership Program.

**TCTP has been traditionally implemented by JICA. In fiscal 2009, Third Country Training was provided to a total of 3,406 persons in 117 countries, of which Brazil accepted 132 persons from 23 countries. Brazil is the only TCTP host country that accepts trainees from the three regions of Latin America, Africa and Asia, and has become one of the world’s largest host countries for TCTP.**

Since commencing joint projects in 2007, Japan and Brazil have been selectively undertaking priority partnership initiatives, centered on those “joint projects” with a large impact for development in beneficiary countries. As a process for formulating these projects, JICA is effectively utilizing Joint Seminars and TCTP. By achieving the best mix of human and financial resources from both countries, JICA aims to provide even more effective and innovative cooperation.

### Cooperation Format for the Partnership Program (as of 2010)

<table>
<thead>
<tr>
<th>Joint Cooperation Project</th>
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<tbody>
<tr>
<td>Project-type Technical Cooperation that introduces resources from both countries (Experts from Japan and partner countries, training in Japan and partner countries, providing necessary equipment, etc.)</td>
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<tr>
<th>Third Country Training Program (TCTP)</th>
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<tbody>
<tr>
<td>This is a traditional triangular cooperation scheme.</td>
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</table>
Technicians from developing countries are trained in partner countries (the developing country providing assistance). Implementation costs are shared based on the Cost Share basis of the Partnership Program and Japan jointly works with the partner country in planning, course implementation and monitoring and evaluation. |

<table>
<thead>
<tr>
<th>Joint Seminar/Workshop</th>
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<tbody>
<tr>
<td>These are seminars/workshops in recipient countries and/or resource countries that are held jointly by Japan and the partner countries. Expert from both countries are participating and implementation costs are shared by Japan and the partner countries.</td>
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### Expanding Cooperation under the Framework of JBPP

A major Latin American country, Brazil maintains friendly relations not only with other Latin American countries but also with the African countries especially Portuguese-speaking countries. In international cooperation as well, besides facing no “language barrier,” Brazil also has development experience under the same circumstances currently faced by recipient countries. Therefore, Brazil is able to provide and transfer technologies in a format easily adaptable to recipient countries. Additionally, Brazil has experience in capacity development in a wide range of sectors through many years of bilateral cooperation with Japan, and passing along this experience to other countries through JBPP is truly meaningful.

While providing this technical assistance

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1. Only after Timor-Leste gained independence
2. The Joint Training Program was integrated into the Third Country Training Program in 2009, and currently all the training programs are implemented as TCTP.
3. The Third Country Training Program was integrated into the JBPP modality in 2007.
changes triggered by the so-called Lehman shock in 2008. Today, formulating effective measures for the global financial system and economy is difficult without the participation of the G20 nations. Besides economic issues, there are also security-related concerns, as nuclear proliferation and regional conflicts show no signs of abating, and there are even calls for reviewing the framework of the United Nations Security Council.

Environmental and climate change problems, food and energy issues, financial and economic problems and the prevalence of infectious diseases are problems directly facing humankind as negative legacies of the advance of industry. These problems transcend national boundaries and can instantly affect the entire world.

Economies and public goods have undergone rapid globalization. At the same time, there has been a diversification in organizations and parties with vested interests that exert influences in these areas. Nevertheless, governance that should function on a global scale has been unable to effectively respond to these movements, and this is said to be one of the largest problems we face today.

Amid this situation, to realize an even better world, it will be necessary for every country to not only focus on its short-term and direct national interests, but to take actions that give further consideration to international interests as well. By fulfilling its

from Brazil, there are also high expectations for Japan’s human resources, who possess advanced technical skills. By organically combining the specialized technologies and knowledge of both countries, even larger development outcomes can be realized.

Recipient countries and Brazil also have hopes for management that encompasses project formation, training implementation management and evaluation/monitoring. By transferring its know-how in international cooperation management, JICA will contribute to Brazil becoming a more significant Developing Partner and will focus on the advancement of development assistance through triangular cooperation.

The First Japan-Brazil Joint Cooperation Project in a Beneficiary Country

Training for Capacity Building of Josina Machel Hospital in Angola

With experts from Brazil serving as instructors and supervisors, from 2007 training was provided to approximately 750 health professionals of two reference hospitals and 13 health centers over a three-year period at the Josina Machel Hospital, the reference hospital in Angola, for which rehabilitation was implemented via Grant Aid from the Japanese government. The training covered four courses, such as nursing care, hospital management (including equipment maintenance and management), clinical laboratory and radiology technologies.

A Grassroots View

Ritsuko Tanida RN
Heart Institute of University of Sao Paulo

As I am of Japanese descent, it is a great honor for me to have been chosen as an expert representing the Japanese and Brazilian governments. Theory can be learned anywhere, but without putting this into practice you cannot acquire any technical skills. In the future I would like to continue working to improve health services in Angola driven by my sense of responsibility. (2008)

Third Country Training Program (TCTP)
International Course on Agroforestry Systems Technology

This training has been implemented since fiscal 2006 by the Brazilian Agricultural Research Corporation Eastern Amazon Research Center (EMBRAPA CPATU). Over a five-year period, this training has developed approximately 75 technicians from Pan-Amazon countries as well as almost same number of Brazilian technicians living in the Amazon region. Agroforestry is said to be “agriculture that creates forests.” Agroforestry has proven successful in a community of Japanese descendants within the city of Tomé-Açu in the state of Para. Technology levels have been raised through a JICA project featuring Japan-Brazil cooperation, and these technologies have been highly acclaimed throughout the world. Under the framework of JBPP, Japan and Brazil are cooperating in promoting initiatives to protect the world’s tropical rainforests, with efforts centered on the aforementioned initiative, an international course for tropical forests monitoring using satellites and training for natural forest management through the mechanism of REDD+-.

Joint Cooperation Project
Agricultural Development Cooperation in the Tropical Savannah in Mozambique-ProSAVANA-JBM

This program aims at regional and agricultural development in a tropical savannah of Mozambique through various triangular cooperation activities among Japan, Brazil and Mozambique. The program draws on the experience from Japan-Brazil cooperation in the 1970s that converted barren cerrado, or savannah grasslands, in Brazil into a vast agricultural region that now serves as a world breadbasket. Based on the results of a joint survey in 2009, a specific project is now being formed. In August 2010, a joint detailed design study team was dispatched and the first Technical Cooperation project of ProSAVANA-JBM entitled the Project for Improving Research and Technology Transfer Capacity for Nacala Corridor Agriculture Development, Mozambique, which is one of the biggest triangular cooperation projects in the world, will commence within the fiscal year.
responsibilities through international cooperation, JICA will truly contribute to the “pursuit of international interests” that also focus on Japan’s interests. Also, by bringing together capabilities and knowledge in their respective fields of expertise and implementing practical measures for finding solutions, each institution can contribute to the realization of meaningful achievements with limited resources and time. To respond to the growing need for and importance of expanding and enhancing partnerships internationally in this manner, JICA will strengthen its collaboration and undertake programs with diverse partners such as various types of assistance agencies that include emerging donors.

In 1975, JICA commenced initiatives for enhancing partnerships among developing countries in the form of the Third Country Training Program. JICA boasts world top-class achievements and experience as a development assistance agency in South-South cooperation, which is showcased in the case examples. This South-South cooperation is now approaching a new phase. JICA has come to play a leading role in promoting wide-area cooperation and is sharing its development experience, which includes the start of assistance for agricultural development in Mozambique in Africa together with Brazil, utilizing the past experience in agriculture development in Brazil’s savannah regions through Japanese cooperation. While cooperating with developing countries that have achieved growth, with this type of assistance (triangular cooperation), JICA strives to apply its experience and know-how gained from participating in the growth processes of developing countries to support the Least Developed Countries (LDC). At the same time, JICA is enhancing partnerships among developing countries while progressing with ingenious ways for efficiently and effectively deploying limited assistance resources.

Applying Experiences of Asia to the World—Strengthening Relations with the Asian Region and Assisting Fragile Countries

With further growth expected in Asia, JICA will continue to make efforts to ensure this growth becomes a reality and realize improvements in people’s livelihoods. The number of people in the middle-income in Asia has increased sharply in step with advances in reducing poverty, and Asia represents both a large market as well as a production base for Japan. The prosperity of Asia is thus desirable not only for Japan but also for the entire world.

Through Technical Cooperation such as accepting trainees and cooperation such as ODA Loans and Grant Aid implemented by Japan to date, Japan and the governments of various Asian countries have built strong human networks and relationships of trust.

Utilizing these valuable assets accumulated over many years, for Asia, JICA aims to devise countermeasures for urbanization and establish hard and soft infrastructures that include wide regions to invigorate economic activities, address global-scale environmental problems such as climate change to realize sustainable growth, narrow the gap among countries and regions, and develop human resources capable of supporting growth along with a strengthening of human networks developed to date.

Assistance that focuses on Asia’s future is also important. If the number of middle-income and wealthy persons increases, it will become necessary to devise proper social security measures such as pension and health insurance schemes to ensure that the savings of these persons are channeled toward investment and consumption within the region. For these same issues faced by emerging nations as well, Japan can share its numerous experiences in Asian countries.

Regions outside of Asia, particularly Africa, are saddled with a mountain of economic, social and safety issues. In countries such as Iraq and Afghanistan, solid channels must be established to move toward post-conflict development. JICA will aim to quickly achieve meaningful results in development in these fragile countries with high needs for economic and social development by continuing to share its development-related experience acquired in more developed countries, including those in Asia.

Human Security and Growth

“Human security” is a concept aimed at “realizing the freedom and capabilities of all people” and is linked to initiatives for the growth and prosperity of the world.

Through its experiences to the present, JICA has confirmed that ODA, which is implemented as a program of the Japanese government, should be executed based on the fundamental policies of “human security” and “growth.”

Amid an ever-changing world, JICA is striving for the effective and efficient implementation of “inclusive and dynamic development” as a “means for Japan to co-exist with the world” with the aim of not only ensuring the mere existence of humans, but to realize a society that ensures human dignity.