Supporting Sustainable Economic and Social Development of India, A Country That Has the Largest Impoverished Population

--JBIC Provides New ODA Loans for Poverty Reduction, Economic Development And Environmental Conservation Projects--

1. Japan Bank for International Cooperation (JBIC; Governor: Kyosuke Shinozawa) singed today ODA loan agreements totaling up to 134.466 billion yen, consisting of seven loan agreements up to 118.55 billion yen with the Government of India, and a loan agreement up to 15.916 billion yen with National Thermal Power Corporation Limited (NTPC). As a result, the amount of this year's loan package JBIC provided to India increased by 7.6% from the previous fiscal year.
2. Of India's total population of some 1.1 billion, 35% are living under a dollar a day. The country is thus home to one third of the world's poor. To accelerate poverty reduction, to which the government places the top priority, the promotion of economic growth and increase of employment and income opportunities are called for. However, underdeveloped infrastructure such as power, transportation, irrigation and water supply and sewerage has impeded efforts to strengthen industries and get the economy back on a growth track. In the meantime, environmental problems are worsening in India, as the shrinking forest and urbanization has brought about contaminated river water and air pollution. Given the large size of pollution, these problems might have direct impacts on global environment issue. In the 10th Five-Year Plan (April 2002-March 2007), the Government of India called for the equitable and sustainable growth, and to achieve this goal, it has designated the following as the priority development issues: not only eradication of the existing poverty but long-term poverty reduction through economic growth and environmental conservation to make these efforts sustainable.
3. India has been pushing forward its strategic approach by strengthening economic and trading ties with ASEAN members, the United States and others, and by mending political and economic relations with neighboring China and Pakistan, thereby increasing its presence in the international community. While Japan has traditionally enjoyed close ties with India in terms of history, culture and religion, Japanese firms are now paying growing attention to the country as one of the promising markets for trade and foreign investments in the coming years, due to the recent emergence of the country as the major IT power, as well as its 300 million middle-income citizens-well over the entire ASEAN population. "Outlook for Japanese Foreign Direct Investment", a study that JBIC conducts annually, indicates that India has been gaining significance as "a promising destination of investments over the medium-term". Results of JBIC FY2004 Survey rated India the 3rd promising country after China and Thailand.
4. Given this situation, this year's ODA loan package will support economic infrastructure development, regional development that benefits the poor, and environmental improvement. The highlights of this year's ODA loan package for India are as follows:

   (1) Economic infrastructure development
   North Karanpura Super Thermal Power Project (I) is aimed at constructing a large scale coal-fired thermal power plant with capacity of 1,980 MW (660MWx3) in the state of Jharkhand, eastern India, thereby serving to alleviate chronic power shortage and reinvigorate the industry.
   JBIC provides continued support for Delhi Mass Rapid Transport System Project (VI), which aims at constructing a mass rapid transport system, in an effort to mitigate deteriorating traffic congestion and prevent further environmental pollution that is the worst among the major cities of the world. When all the lines are in operation (March 2006), the system is expected to carry 2.26 million passengers a day, the nearly same volume that Tokyo Metropolitan Subway currently carries.
   Bangalore Water Supply and Sewerage Project (II-I) is intended to support activation of the industry and poverty alleviation in the rapidly growing Bangalore metropolitan area which is dubbed as Silicon Valley of India by developing water supply and sewerage facilities, putting in place measures for comprehensive improvement of water business management, and developing water supply and sewerage system in the slums, With some 40 Japanese companies operating in Bangalore, including a factory owned by a leading automobile manufacturer, the Project is expected to benefit a number of Japanese and other firms as well.

   (2) Regional development that benefits the poor
   Rajasthan Minor Irrigation Improvement Project aims at increasing agricultural output by rehabilitating existing minor irrigation facilities, organizing farmers' water user associations and disseminating farming technology in the state of Rajasthan, western India, where rainfall is extremely scarce even by Indian standards, and farmers have to resort to irrigation facilities for its farming water. Under this project, JBIC will help upgrade the living conditions of the poor, in partnership with local NGOs, by supporting their saving/financing activities and taking anti-malaria measures.
   Uttar Pradesh Buddhist Circuit Project aims at making effective use of tourist resources and promoting regional industries by improving tourism-related infrastructure and capabilities along the Buddhist Circuit in the state of Uttar Pradesh, northern India, where the largest stratum of impoverished people concentrates, thereby contributing to the regional development conducive to the employment creation and poverty reduction in the State.

   (3) Environmental improvement
   Tamil Nadu Afforestation Project (II) and Karnataka Sustainable Forest Management and Biodiversity Conservation Project will plant trees in the land space equivalent to 80~85% of Tokyo in respective states with the participation of community residents. Both projects aim at reviving forest and improving living conditions of the local populace by providing occupational training and micro-finance to those who depend on forests for living. Meanwhile, Karnataka Sustainable Forest Management and Biodiversity Conservation Project is aimed at implementing measures to preserve bio-diversity in the Western Ghats, where 75% of mammals, birds and amphibians on the endangered list inhabit in only 2.3% of the land surface of the planet.
   Ganga Action Plan Project (Varanasi) is intended to support the improvement of water quality of Ganges River by enhancing water treatment capacity of the sewerage facility. Under this Project, with a view to improving the overall public health environment, the awareness raising campaign will be held to enlighten citizens and government officials about public hygiene, and community toilets will be constructed in slums and bathing places as well.

   (4) Promotion of knowledge assistance
   To heighten sustainability of project effectiveness, JBIC will provide knowledge assistance and technology transfer in various forms under the projects above. Major examples include:
   Delhi Mass Rapid Transport System Project: Safe and effective Japanese working culture has been transferred to the Project. All construction workers wear crash helmets and safety shoes, and keep their workplace completely clean and tidy; those are the reasons why people refer the Project as cultural revolution which changes traditional working culture in India. In addition, to mitigate HIV infection risk to a large number of migrant workers engaged in the Project, JBIC launches anti-HIV activities for such workers based on the results of study that JBIC has committed to a local NGO.
   Bangalore Water Supply and Sewerage Project (II-1): is intended to support comprehensive improvement of water business management by fostering human resources, introducing automatic fare paying machines, and delegating operations to the private sector. The project will also carry out public relations activities designed to promote understanding of the Bangalore citizens about water supply service, and will enlighten consumers on the significance of saving water.
   Uttar Pradesh Buddhist Circuit Development Project: To further increase usefulness of this project as a stimulant to regional rejuvenation, JBIC made partnerships with Nara Prefecture (both prefectural government and MICHINO EKI), a leading tourist city taking pride in its Buddhist heritages, and National Research Institute for Cultural Properties, Tokyo, an Independent Administrative Institution, during the preliminary study. A local seminar was held to present to the local community how MICHINO EKI was established primarily by citizens of Nara, and their experiences were shared. In addition, the MICHINO EKI system of Japan will be incorporated in this Project.
   Ganga Action Plan Project (Varanasi): will be implemented under the feasibility study, which has been prepared on the basis of Japanese expertise and know-how with support from JICA. In the preparation stage of this Project, experiences and know-how of Okayama Prefecture were conveyed to Indian agencies engaged in the Project, since Okayama is active in raising awareness of local residents on environment conservation and sewerage projects under the "Lake Kojima Environmental Conservation Program", as well as in providing environmental education.
5. The list of individual projects is shown below. Visit JBIC website for detailed information on these projects.

   (Click here for details)

Reference

1. Loan Amount and Terms

Project Name	Amount (Mil. Yen)	Interest Rate (% per annum)	Repayment Period/ Grace Period(Years)	Procurement
Delhi Mass Rapid Transport System Project (VI)	19,292	1.3	30/10	General Untied
North Karanpura Super Thermal Power Project (I)	15,916	0.75	15/5	
Rajasthan Minor Irrigation Improvement Project	11,555	1.3	30/10	
Tamil Nadu Afforestation Project (II)	9,818	0.75*	40/10*	
Karnataka Sustainable Forest Management and Biodiversity Conservation Project	15,209	0.75*	40/10*	
Ganga Action Plan Project (Varanasi)	11,184	0.75*	40/10*	
Bangalore Water Supply and Sewerage Project (II-1)	41,997	1.3	30/10	
Uttar Pradesh Buddhist Circuit Development Project	9,495	1.3	30/10	
Total	134,466			

*In the Overseas Economic Cooperation Operations, JBIC actively supports developing countries' efforts to address global issues by applying lower-than-ordinary interest rates to environmental projects.

2. Delhi Mass Rapid Transport System Project (VI)

(1) Project Background and Necessity

In India, the accelerating population growth in major cities, coupled with the rapid spread of private car ownership (from 1.83 million vehicles in 1990 to 3.3 million in 1999), have given rise to intense urban traffic congestion which has exacerbated serious environmental problems, including air pollution caused by vehicle emissions, in recent years.

The Indian rail system has been developed primarily as a means for long-distance transport to date. It is for this reason that neither short-distance rails connecting suburbs to the city center nor an intra-city rail network has been developed in the city of Delhi (population: approximately 14 million) where the Project is being implemented. Thus the citizens have to rely on buses and private vehicles for urban transport. In 2001, buses and private vehicles respectively accounted for 60.0% and 39.5% of transport volume in Delhi, while rails accounted for only 0.5%. (Comparable figures in Tokyo are: buses at 12.7%; private vehicles at 15.9%; and rails at 52.1%.) This has given rise to chronic traffic congestion in Delhi. Furthermore, both the low quality fuel used by these buses and private vehicles as well as their older engines are contributing to the already serious air pollution. Delhi has the world's highest average annual atmospheric concentration of suspended particulate matter.

Under these circumstances, there is a need to construct a mass rapid transport system, which will relieve traffic congestion and have a less detrimental impact on the environment.

(2) Project Objectives and Description

The Project aims to relieve traffic congestion and improve the urban environment through the reduction of vehicle emissions in the capital territory of Delhi by constructing the capital's first mass rapid transport system. The overall system has a total length of 245 kilometers, with underground, elevated and at-grade sections. In the first phase of the Project, a about 59- kilometer rail track, comprised of three lines, will be constructed. JBIC has already provided an aggregate total of 143.459 billion yen as ODA loans for the five tranches of the first phase. The breakdown of this aggregate amount is as follows: 1st tranche: 14.76 billion yen (February 1997); 2nd tranche: 6.732 billion yen (March 2001); 3rd tranche: 28.659 billion yen (February 2002); 4th tranche: 34.012 billion yen (March 2003); and 5th tranche: 59.296 billion yen (March 2004). This loan is for the sixth and final tranche of the first phase of the Project.

Operation on the Project has already started on the about 26-kilometer portion to date. When the entire length of the first phase becomes operational in March 2006 (as scheduled), the mass transit system is expected to carry 2.26 million passengers a day, a figure comparable to the volume of passengers carried by the subway system in Tokyo or in Osaka. (The municipal subway systems in Tokyo and Osaka carried 2.30 million and 2.28 million passengers respectively in 2003.)

India has the world's second largest population of HIV-infected people, totaling more than three million. Since the Project involves many migrant laborers, the project executing agency has introduced some measures to prevent HIV risks. As an initiative to curb the spread of HIV infection, HIV prevention activities will be carried out, including awareness-raising sessions targeting migrant laborers, based on surveys that the local NGOs conducted upon commission from JBIC. Furthermore, the use of crash helmets and safety shoes had not been an established practice at construction sites in India. In this Project, however, each laborer is required to wear a helmet and safety shoes, and a conscious effort was made to implement strict organization and neatness at construction sites. The Project, which has spread the awareness of safety and efficiency, is therefore said to have brought a cultural revolution to traditional construction work in India.

The proceeds of the loan will be used in civil works for a metro corridor, procurement of the rolling stock, consulting services, etc.

The project executing agency is the Delhi Metro Rail Corporation Limited.
Address: 3rd Floor, East Tower, N.B.C.C. Place, Bhishma Pitahmah Marg, Pragati Vihar, New Delhi 110003, India
Tel: +91-11-2436-5202 Fax: +91-11-2436-5370

3. North Karanpura Super Thermal Power Project (I)

(1) Project Background and Necessity

Chronic power shortages have been a stumbling block to industrial development and the improvement of living standards in India, and mitigating power shortages remain an urgent challenge to economic development and poverty reduction. In particular, the northern and western regions, which account for more than 60% of the nation's power demand, are facing a power shortage of 8.3% relative to power demand on an annual basis and as much as 14.2% during the peak hours. To remedy this situation, there is a need to build power plants and strengthen transmission networks for supplying power to these regions. Meanwhile, the state of Jharkhand (population: approximately 27 million) in eastern India is endowed with abundant coal deposits, providing an ample opportunity for developing power through coal-fired power generation.

Under these circumstances, there is a need to construct a coal-fired power plant and strengthen the power transmission network in Jharkhand to reduce the gap between power demand and supply.

(2) Project Objectives and Description

The Project aims to alleviate power shortages in India's eastern, northern and western regions by constructing a supercritical coal-fired power plant with a capacity of 1,980 MW

(3 x 660-MW turbines) in the eastern state of Jharkhand, thereby contributing to economic development in these regions. The plant will have one half of the power capacity of the Hekinan Thermal Power Plant in Aichi Prefecture, Japan's largest supercritical coal-fired power plant.

India is promoting the 100% reuse of coal ash, while it faces serious power shortages. Thus, there is a need for thermal power plants that perform highly efficient power generation. The Project will employ supercritical pressure technology, which enables highly efficient power generation with boilers that operate at high steam pressures and temperatures. Since this technology has never been operated for power generation in India, foreign specialists with extensive experience in this field will be hired for the implementation of the Project, as well the transfer of new technology will take place through support for trial operation, operation and management, and staff training programs.

The proceeds of the loan will be used for the procurement of power generation equipment and other needs.

The project executing agency: National Thermal Power Corporation Limited.
Address: NTPC Bhawan, Scope Complex 7, Institutional Area, Lodhi Road, New Delhi 110003, India
Tel: +91-11-2436-0201 Fax: +91-11-2436-1018

4. Rajasthan Minor Irrigation Improvement Project

(1) Project Background and Necessity

Agriculture plays a main role in the economy of Rajasthan (population: approximately 56 million), a state in northwestern India, employing two-thirds of the labor force and accounting for nearly one-third of the state's output. Rainfall in the state is concentrated within the June-September monsoon season, and the volume of rainfall is extremely low compared to other Indian states. The average rainfall during the monsoon season in the period of 1995-2000 was 612 mm in the eastern region of Rajasthan and 300 mm in the western region, compared with a national average of 851 mm. Thus irrigation facilities had been first been developed decades ago. However, in recent years, aging facilities and inadequate operation and maintenance have resulted in leakages and sedimentation, which has reduced the efficiency of irrigation. In addition, inequity in the allocation of irrigation water has emerged as a problem.

Under these circumstances, there is a need to rehabilitate existing irrigation facilities, to put in place an institutional setup for water management, and to spread agricultural technology with a view of increasing agricultural production in Rajasthan..

(2) Project Objectives and Description

The Project aims to increase agricultural production in the state that has extremely low rainfall compared with the rest of India by: rehabilitating the existing minor irrigation facilities dotted across Rajasthan; building water management systems; and conducting agricultural technology extension service. The Project thereby pursues poverty reduction by increasing agricultural income. The Project will benefit a total land area of about 100,000 hectares, which is roughly equivalent to one half of Metropolitan Tokyo.

Specific measures in the water management and agricultural technology extension components are as follows: (1) in partnership with Indian NGOs, enable local farmers to form water users' associations, provide training that is properly customized to their needs, and manage irrigation facilities after their rehabilitation; (2) improve the technical skills of the staff employed in the irrigation, agricultural and other relevant departments of the state government, and promote farmers' participation, while providing training in state facilities as well as allowing the staff to make a visit to Japan; (3) form sub-groups, comprised of men and women in poor households, in some water users' associations, and conduct savings and lending activities in the sub-group by utilizing wage incomes they earn as employees of the rehabilitation work; (4) enhance coordination among the government's agriculture-related departments, as they have been compartmentalized and very inefficient to date, and set up technical support groups with the participation of relevant government departments and Indian NGOs in an effort to ensure that increases in irrigated water are efficiently linked to increased agricultural output; and (5) take measures to reduce malaria, thereby improving the overall standard-of-living of local residents, in view of concerns over increased malaria infection, as irrigation water sources (reservoirs) would become breeding grounds for malaria mosquitoes because of increased irrigation water in the target areas of the Project.

The state of Rajasthan is currently implementing reforms in the irrigation sector through support from the World Bank. These reforms include: strengthening of the management of agricultural industry; formation of water users' associations; establishment of desirable water charge level; and efforts to strengthen the capabilities of government organizations. JBIC will positively support these reform efforts, in partnership with the World Bank, by promoting the steady implementation of the above measures with the provision of technical assistance at the grassroots level.

The proceeds of the loan will be used primarily for civil works pertaining to irrigation facilities and consulting services.

The project executing agency: Irrigation Department of the Government of Rajasthan
Address: Jaipur 302 004, India
Tel: +91-141-2227112 Fax: +91-141-2227112

5. Tamil Nadu Afforestation Project (II)

(1) Project Background and Necessity

The proportion of land covered by forests is relatively low at around 20% in India, compared to the world average of around 30%. India's per capita forest area is only one sixth of the world average. Large numbers of people, including those living in poverty, depend on these forests for livestock fodder, firewood and fruits as a source of income. However, India's annually growing population and livestock, along with a sharp increase in demand for timber induced by the rapid economic growth that accelerates urbanization and industrialization, have led to more trees being cut down in the forests. As a result, continued degradation of forests and deterioration in their water retention and soil conservation capacities have lowered water tables, causing shortages of agricultural and drinking water and exerting pressure on the lives of the poor. And as their lives have become more dependent on forests, more forests have been cut down, which has resulted in the perpetuation of a vicious circle.

In the southern state of Tamil Nadu (population: approximately 62 million), forest degradation is proceeding as well. The degradation of around 700,000 hectares of forestland has provoked urgent remedial action. In response, the Tamil Nadu Afforestation Project was undertaken, and JBIC provided an ODA loan for the first phase of this Project (Loan Agreement signed in February 1997 for 13,324 million yen), helping to plant trees in around 430,000 hectares of degraded forest. Although forest cover has increased in Tamil Nadu as a result of this Project, it still remains at a low of 16.5% as of 2001, less than India's average. Therefore, there is a need to ensure a more sustained effort to regenerate degraded forests.

(2) Project Objectives and Description

This Project aims to regenerate degraded forests and improve the living conditions of the local inhabitants through community-participated afforestation of around 180,000 hectares (equivalent to about 80% of the Tokyo metropolitan area) in 800 villages of Tamil Nadu in southern India. It will thereby contribute to the ultimate goal of poverty reduction in the targeted areas. This is the second phase of the Tamil Nadu Afforestation Project described above.

This Project has adopted "Joint Forest Management," an arrangement in which the local people and Tamil Nadu Forest Department jointly undertake afforestation and forest management activities that will lead to better livelihoods for the people living near the forests. Also under the Project, the Geographical Information System (GIS), which uses satellite images, will be expanded, and training will be provided for government employees, local inhabitants, members of NGOs and others on foresting skills and how to conduct Joint Forest Management for more effective forest management.

To ensure sustainable forest regeneration, it is essential to secure alternative sources of income and promote self-help efforts to improve livelihoods for the people living near the forests, because, forced by poverty, they have no choice but to impede afforestation by felling trees or grazing their livestock. Therefore, under this Project, livelihood improvement initiatives will be implemented, including job training, microfinance (financial services providing small loans for the poor and low-income people to reduce poverty), and development of small infrastructure such as wells, based on community needs. As part of these initiatives, sericulture skills will be offered by the staff of the Department of Sericulture trained under technical cooperation provided by the Japan International Cooperation Agency (JICA) to utilize Japanese expertise and know-how.

In the first phase of the Project, a Japanese NGO, SOMNEED (Society for Mutual Aid, Networking, Environment, Education & Development), was commissioned by JBIC to conduct a study on livelihood improvement activities, and its results have been reflected in this Project.

The proceeds of the loan will be used for afforestation and livelihood improvement activities.

The project executing agency: Forest Department, State Government of Tamil Nadu
Address: No. 1 Jeenis Road, Panagal Building, Saidapet, Chennai 600 015, India
Tel: +91-44-24348059 Fax: +91-44-24337307

6. Karnataka Sustainable Forest Management and Biodiversity Conservation Project

(1) Project Background and Necessity

Forest degradation has been taking place in the state of Karnataka (population: approximately 53 million) as well. In particular, urgent remedial action is required for around 820,000 hectares. JBIC thus supported the Karnataka Sustainable Forest Management and Biodiversity Conservation Project (Loan Agreement signed in February 1997 for 15,968 million yen), with afforestation conducted in around 200,000 hectares. As a result, forest cover increased in the state to 19.3% in 2001. But this is still lower than the national average of around 20%, and there is a continued need to regenerate the degraded forests in the state.

(2) Project Objectives and Description

One objective of this Project is to reduce poverty by regenerating forests and raising the living standards of local community inhabitants. Thus, while trees will be planted in 190,000 hectares (equivalent to about 85% of the Tokyo metropolitan area) with community participation, job training will also be provided and microfinance will be made available in 1,200 villages of the state to improve the livelihoods of local populations. In addition, as in the case of the Tamil Nadu Afforestation Project described above, "Joint Forest Management" will be adopted in which the local people and Karnataka's Forest Department jointly undertake afforestation and forest management; and at the same time, training programs will be provided for government officials, local community residents, NGO members and others to ensure more effective forest management. As part of the overall job training, sericulture skills introduced by JICA will be disseminated for sustainable forest regeneration.

Another objective of this Project is to preserve biodiversity. The state of Karnataka contains the Western Ghats, which was designated as one of the 34 hotspots by Conservation International, an international NGO. Hotspots are regions where 75% of the world's most threatened mammals, birds and amphibians survive within a habitat covering just 2.3% of the Earth's surface. The Western Ghats is a habitat for 2,180 unique plant species, yet more than 90% of the original ecosystem areas have already been lost. The Project thus aims to conserve biodiversity through soil conservation by building ditches that separate the habitat of elephants and wildlife from cultivated land.

The proceeds of the loan will be used for afforestation, livelihood improvement, and biodiversity preservation activities.

The project executing agency: Forest Department, State Government of Karnataka
Address: Aranya Bhavan, Malleshwaram, Bangalore 560 003, India
Tel: +91-80-3343090 Fax: +91-80-3315780

7. Ganga Action Plan Project (Varanasi)

(1) Project Background and Necessity

In India, sewerage system development has failed to catch up with both the rapid influx of population into urban areas and increasing industrialization. As a result, raw sewage far exceeding the self-purification capacity is flowing into the main river. This has caused health hazards for local residents, including diarrhea, hepatitis and other waterborne diseases, not to mention bad odor.

Situated in the northern state of Uttar Pradesh, the Project site Varanasi (population: approximately 1.3 million) is on the Ganges River, a river revered as the holiest in India. It is the most sacred place in Hinduism and attracts more than 1 million visitors yearly who come for religious bathing and sightseeing. However, the sewerage treatment plant is capable of handling only one-third of the sewage generated in the city. As a result, water in the Ganges River is so polluted that it is far below the water quality standards required for bathing, and this has long raised concerns over the health risks that it poses to city residents, pilgrims and tourists.

Under these circumstances, there is an increasing need to develop a sewerage system to improve the public health environment in the city.

(2) Project Objectives and Description

The Project aims to improve the water quality of the Ganges River in the city of Varanasi, Uttar Pradesh, by increasing its sewerage treatment capacity to a level that matches the volume of sewage generated in the city, thereby serving to improve the public health environment. Specifically, the Project has the following components: the construction/ rehabilitation of water treatment facilities and sewer lines; public participation and awareness activities to improve public health; and the construction of community toilets in slums and at bathing sites to improve the public health environment.

The public participation and awareness activities, which are intended to raise the awareness of community residents and government officials on public health, include: advertising in newspapers; conducting extra curriculum programs in schools; putting up advertising boards; and performing roadside skits.

In slums where poor people's huts huddle together, people usually go to the toilet outdoors, since the lack of space makes it difficult for individual households to own toilets. Thus the Project aims to improve the adverse public health environment resulting from poverty by building community toilets.

At the Japan-India summit meeting held in December 2001, Prime Minister Koizumi referred to Japan's cooperation in dealing with the pollution of the Ganges River. The Project will be implemented based on the plan prepared with the support of the Japan International Cooperation Agency (JICA) and by drawing upon Japan's know-how. As part of this knowledge assistance, a local seminar was held in Varanasi during the preparatory stage of the Project, and through this seminar Okayama Prefecture transmitted to relevant Indian organizations its experience and know-how that it had obtained in the process of active implementation of community awareness-raising activities and environmental education on the sewerage development project based on the Lake Kojima Environmental Conservation Program.

The proceeds of the loan will be used for civil works to construct sewerage facilities and community toilets, procurement of machinery and equipment, and consulting services, etc.

The project executing agency: National River Conservation Directorate (NRCD), Ministry of Environment and Forests, Government of India.
Address: Paryavaran Bhawan, CGO Complex, Lodhi Road, New Delhi 110003, India
Tel/Fax: +91-11-2436-2281

8. Bangalore Water Supply and Sewerage Project (II-1)

(1) Project Background and Necessity

In India, the development of water sources and water supply systems has failed to catch up with the rapidly rising demand for water caused by a sharp population growth and industrialization. Water supply is limited to just four hours per day, even in the capital territory of Delhi.

The city of Bangalore, the capital of the southern state of Karnataka, has been called the Silicon Valley of India, and the Bangalore metropolitan area is host to a large number of foreign corporations, including Japan's largest automobile manufacturer. However, water is supplied only for six hours every other day in this area.

With rapid industrial development, the population of Bangalore is expected to increase from the current 6 million to 7.3 million in 2011. Thus there is an urgent need to develop water supply facilities for a stable supply of water, as well as develop sewerage treatment facilities that match the water supply system to improve the public health environment.

(2) Project Objectives and Description

The Project aims to provide stable water supply and sewerage services to meet rapidly increasing water demand by expanding water supply and sewerage facilities in the Bangalore metropolitan area (specifically, by increasing water supply capacity by 500,000m3/day (roughly equivalent to the water supply capacity of Fukuoka city)), thereby serving to improve living conditions and activate industries in the region. The Project will also benefit many Japanese companies operating in the Bangalore metropolitan area.

Located on the Deccan Plateau at an elevation of 900 meters, Bangalore has no room for developing any new water source in its vicinity. A plan is therefore being implemented to transmit water from the Cauvery River, located about 100 kilometers southwest of the city, by pumping up the water by about 300 meters. This Project is Phase II of Stage 4 of this water development plan. JBIC also supported Phase 1, the Bangalore City Water and Sewerage Development Project (Loan Agreement signed in January 1996 for 28,452 million yen).

The Project consists of the construction of water supply and sewerage facilities and efforts to improve the overall water supply service. Specifically, they include: human resource development; rehabilitation of distribution networks to reduce the unaccounted-for-water, which currently exceeds 30%; an increase in the number of automated utility payment machines; and contracting out operations to the private sector. Aside from these, there will be public relations activities to promote the understanding of water service among Bangalore residents and awareness-raising activities for consumers about the importance of water conservation. The Project is also targeting the approximately 360 slums that have poor hygiene conditions. Similarly in these slums, in addition to developing their water supply and sewerage facilities, awareness-raising activities will be conducted, and the

poor inhabitants themselves will get involved in the operation of the water and sewerage facilities, while also securing the participation of women.

The proceeds of the Project will be used for civil works to construct water and sewerage facilities, procurement of machinery and equipment, and consulting services.

The project executing agency: Bangalore Water Supply and Sewerage Board (BWSSB)
Address: Cauvery Bhavan, Bangalore 560 009, India
Tel/Fax: +91-80-22945103

9. Uttar Pradesh Buddhist Circuit Development Project

(1) Project Background and Necessity

India has 26 world heritage sites, ranking 6th in the world for their number, as well as a diverse endowment of natural, cultural and religious tourism resources. Yet India receives only 2.4 million international visitors annually (2002), ranking just 53rd in the world. Factors hindering the development of tourism include: poor services attributable to inadequate tourism infrastructure; deterioration of tourism sites such as historical ruins; and low awareness among the local people about the significance of tourism development as a way to contribute to regional development.

The northern Indian state of Uttar Pradesh (population: approximately 166 million) is the most populous and one of the poorest states in India. The state also has an intimate link with the life of the Buddha, embracing four out of the eight major Buddhist ruins: Sarnath, where the Buddha preached his first sermon; Kushinagar, where the Buddha entered Nirvana; and Shravasti, where the famed Jetavana Monastery was located. These Buddhist sites form part of a tourism and pilgrimage route known as the Buddhist Circuit. JBIC provided an ODA loan for the Tourism Development Project (Loan Agreement signed in December 1988 for 9,244 million yen) that targeted the southern part of the Circuit. Partly due to its proximity to Varanasi, the most sacred place of Hinduism, an increasing number of tourists have been visiting this part of the Circuit where the Project has focused. However, its northern part, which includes Kushinagar and Shravasti, has been left behind in regards to development. Aside from the major highways, road conditions in this region are poor, with vehicles hardly being able to travel with speeds of more than 30 kilometers per hour. In addition, inadequate drainage infrastructure has caused flooding in the heritage sites and the surrounding villages during the monsoon season.

The northern part of the Buddhist Circuit is also one of the poorest regions in Uttar Pradesh, and the per capita output of agriculture in this region, its main industry, has been stagnating due to population growth. Thus developing non-agricultural industries has become a major issue on the agenda for this region.

Under these circumstances, there is a need to boost the local economy in the northern part of the Buddhist Circuit with a view to reducing poverty through the exploitation of tourism resources.

(2) Project Objectives and Description

The Project aims to promote tourism development in the Buddhist Circuit in Uttar Pradesh by improving tourism-related infrastructure and implementing programs designed to protect ruins and promote tourism, thereby contributing to regional development and poverty reduction.

The Project consists of developing basic infrastructure, including roads, power supplies, water supplies and drainage systems, and developing visitor centres (Road Station: MICHI-NO-EKI) where tourism information is provided, local products are sold, and tourists can take rest. In addition to the construction of facilities, programs will be implemented to increase the local awareness of tourism and the preservation of heritage sites, and to enable local communities to participate in the planning and implementation of local tourism development. Training and education will also be provided for the preservation and rehabilitation of heritage sites. Furthermore, in an effort to promote tourism, there is a plan, as part of the Project, to host an international conference on Buddhism, invite the media to visit the tourism sites, display exhibits at international travel expositions, make a video for each Buddhist ruins, and prepare guide pamphlets.

In order to ensure that tourism will bring maximum benefits to the local community, JBIC conducted a project formation study in partnership with Nara Prefecture (the prefectural government and its MICHI-NO-EKI), which has world-class Buddhist tourism sites, and the National Research Institute for Cultural Properties, Tokyo. In the course of the study, field seminars were held in India, and presentations were made to the local communities on how MICHI-NO-EKI, owned and operated by the local community, came into being, and its experience. In addition, because Japan's MICHI-NO-EKI system is to be incorporated into part of this Project, experts will be sent to India to offer advice on boosting development in villages and on MICHI-NO-EKI.

The proceeds of the loan will be used for civil works, including provisions for roads, procurement of materials and equipment, and consulting services, etc.

The project executing agency: Ministry of Tourism, Government of India.
Address: Transport Bhavan, Parliament Street, New Delhi 110001, India
Tel: +91-11-23711995 Fax: +91-11-3710518