

FY2009 Japanese ODA Loans for INDIA

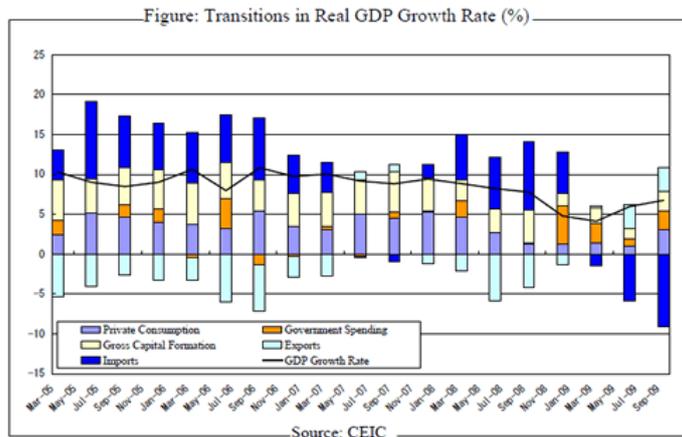
Promoting Biodiversity Conservation and Environmentally Friendly Development

1. On March 31, the Japan International Cooperation Agency (Ogata Sadako, President) and the government of India signed Japanese ODA loan agreements for six projects with a total limit of 215.611 billion yen.

2. India has pursued economic reforms since 1991 and has achieved an economic growth rate of about 5% to 8% since that time; and as a BRIC country, it has held center stage due to this remarkable economic growth. The nation has shown quick recovery from the global economic crisis and its projected growth for FY2009 is about 7%, firmly maintaining a high growth rate. As a major rising economic state, India's strong economic growth is expected to continue. On the other side, approximately 40% of its population is forced to subsist on less than \$1.25/day, and the country faces enormous poverty reduction challenges. In these circumstances, the Indian government has promoted "Faster and Inclusive Growth" in its 11th Five-year Plan (April 2007 to March 2012) with the aim of achieving swift growth that would benefit its citizens through an overall expanded economic pie.



signing ceremony



3. To help India achieve its economic growth targets, JICA will provide financial assistance characterized by the following measures under the Japanese ODA loans signed this time.

(1) Cooperation related to environment, climate change, and energy issues

This year (2010) has been designated as the International Year of Biodiversity by the United Nations; and as the host country, Japan will be hosting the Convention on Biological Diversity, "10th Conference of the Parties" (COP10) in October 2010. The following COP11 conference in 2012 may be held in New Delhi, India. The Japan-India commitment to biodiversity conservation has been drawing increasing global interest.

Despite high global biodiversity throughout the world, there are 34 regions (biodiversity hotspots) that are in critical danger of being destroyed [1]. One of these hotspots is located in the eastern Himalayan region of Sikkim State in India. Assistance for biodiversity conservation, including environmental conservation shall be provided by JICA through the Sikkim State Biodiversity Conservation and Forestry Management Project that will assist activities such as baseline survey of the region, regional development and livelihood improvement of the people in Sikkim state, strengthening management skills for protected areas (including strengthening local community organizations), and carrying out a study to facilitate the designation of the Kanchenjunga National Park as a World Heritage site.

(2) Promoting economic growth by strengthening Japan-India economic relations

As a result of rapid economic development, India's freight volume continues to grow at about 15% per annum. The transport capacity of existing railway system has almost reached its limit; and improving and strengthening the railway system has become an urgent necessity. In order to address the issue, dedicated freight corridors along the western and eastern parts of the country are being planned. Assistance will be provided to construct dedicated freight lines in the prioritized section between Rewari and Vadodara (950km) of western corridor between Delhi and Mumbai (1,500km) in the Dedicated Freight Corridor Project (Phase-1) (II). Electric locomotives with enlarge carrying capacity at higher speeds operating in an environment friendly manner in contrast to road transport, will be introduced.

Under the high profile Japan-Indian government initiative, this project will become the foundation of Delhi-Mumbai Industrial Corridor (DMIC) Conceptual Outline, an integrated industry development project to build the country's largest industrial area between Delhi and Mumbai, aimed at promoting direct investments by Indian and Japanese companies. With this project concretely moving forward, it is expected to trigger the first step to realizing the various projects currently in the planning and conceptual stages.

Additionally, the urban metros have garnered interest as an environmental friendly mode of public transport system in recent years. In the three metropolitan cities of Delhi, the capital, Kolkata, the political and economic center in eastern India, and Chennai, the political and economic center in southern India, rapid population and vehicular growth have resulted in deteriorating traffic situation in these cities. Measures to build a high-speed, environment friendly mass transport system need to be pursued. The Delhi Mass Rapid Transport System Project Phase 2 (V), Kolkata East-West Metro Project (II), and the Chennai Metro Project (II) would help alleviate traffic congestion and reduce exhaust fumes, especially acute air pollution and global-warming emissions in these major global cities.

With the introduction of an electric regenerative braking system, the Delhi Mass Rapid Transport System Project Phase 2 (V) is registered as the world's first clean development mechanism (CDM) in railway sector [2].

(3) Poverty reduction and social sector development

Drought in India last year recorded deficit of rainfall by 20% less than normal, which resulted in crop failures, skyrocketing food prices, and a drop in farmer income. In Orissa State, located in eastern India, about 40% of its population lives below the poverty line. Agriculture comprises about 30% of production in the state and about 70% of its working population is engaged in farming and activities related to agriculture. However, about only 30% of cultivable area has been irrigated so far, and much of its agriculture is dependent on rain-fed farming. To achieve stable production volume and improve the living standard of farmers, it is vital to develop the agricultural infrastructure such as irrigation facilities that will enable cultivation during the dry season. The Rengali Irrigation Project (III) will contribute to the improvement of the living standard of farmers by expanding arable land, increasing and diversifying agricultural production, and promoting the efficient use of water resources through improvements in agricultural infrastructure.

4. Current Japanese ODA loans that assist development projects have implemented a variety of intellectual cooperation aimed at raising the effectiveness and sustainability of the projects. There are plans to continue with them. The major projects are summarized below.

(1) The Sikkim State Biodiversity Conservation and Forestry Management Project is supported by Japanese academic experts to examine the possibility of applying the rigorous impact evaluation methodology on forestry projects, which is the first attempt for the Japanese ODA forestry projects. In addition, technical cooperation is under consideration to help formulate Sikkim state's ecotourism policy that will serve as the foundation for economic development without compromising environmental conservation.

(2) In the Delhi Mass Rapid Transport System Project Phase 2, the training seminars based on Tokyo's subway system has been conducted to better assimilate Tokyo subway operations and experiences in the crisis management. Similarly, the Japanese expert has been also dispatched from the Tokyo Metro Co., Ltd. to help Delhi Metro Rail Corporation in improving safe driving, operations, and maintenance of subway trains.

(3) To control the risk of HIV/AIDS infection among migrant workers employed in all subway construction works, the advocacy and awareness-raising programs, etc. in HIV/AIDS prevention activities have been implemented. In addition, the universal design of the passenger cars and stations has been introduced with consideration for the needs of the elderly and disabled passengers. There are plans to impart special training to the station personnel to assist these passengers for the better metro use.

(Reference)

Project Map (PDF/KB)

[1] Conservation International, an international NGO, has been designated.

[2] For further information on the world's first clean development mechanism (CDM) in railway sector. Please visit the following website.
<http://www.jica.go.jp/press/archives/jbic/autocontents/japanese/news/2008/000001/>.

Reference

1. Term and Amount of Loan

Project Name	Amount (Mil. Yen)	Interest (%/year)		Maturity (year)/ Grace Period (year)	Tying Status
		Project	Consulting Service		Project
Delhi Mass Rapid Transport System Project Phase 2 (V)	33,640	1.40	0.01	30/10	General Untied
Kolkata East-West Metro Project (II)	23,402	1.40	0.01	30/10	
Chennai Metro Project (II)	59,851	1.40	0.01	30/10	
Dedicated Freight Corridor Project (Phase-1) (II)	90,262	0.20*	0.01	40/10*	Tied*
Rengali Irrigation Project (III)	3,072	1.40	0.01	30/10	General Untied
Sikkim State Biodiversity Conservation and Forestry Management Project	5,384	0.55**	0.01	30/10	
Total	215,611				

* The Special Terms for Economic Partnership (STEP) loans in Japan's technical projects used to transfer Japan's unique technology and know-how has been applied (interest 0.20%/year, maturity 40 years, grace period 10 years)

**To actively assist the approach to environmental issues in developing countries, moderate loan conditions are applied to environmental projects (interest 0.55%/year, maturity 30 years, grace period 10 years).

(Note) The FY2009 total approved loan amount was 218,217 million yen, including the 2,606 million yen loan for the Dedicated Freight Corridor Project (Phase-1) signed by Japan and India on October 27, 2009.

Delhi Mass Rapid Transport System Project, Phase 2 (V)

1. Background and Necessity

In recent years, India's major cities have undergone a rapid population growth, and the increase of the number of private owned vehicles has resulted heavy traffic congestion and acute environmental problems due to automobile emissions. In the national capital region of Delhi, the population has doubled to 14 million over the past 20 years in conjunction with the rapid increase of private owned vehicles. The number of registered vehicles swelled from 520 thousand in 1980 to 4.17 million in 2004. Since Delhi has long lacked both a city railway network and short-distance rail lines connecting the suburbs, transportation has been forced to depend on only buses, private owned cars and two/three wheelers [1]. The result is chronic congestion, and today the average vehicle speed in the city is extremely low at 13km/h. The acute problem of air pollution is further exacerbated by the low quality fuel and inefficient engines used in cars and buses. [2]

It is therefore critical that a mass rapid transit system is developed in order to alleviate Delhi's traffic congestion as well as to reduce air pollution caused by exhaust fumes and emission of greenhouse gases through accelerating the modal shift from automobile to the metro system.

2. Objective and Summary

Under this project, as the phase 2 of the entire Delhi Mass Rapid Transport System Project envisaging the construction of more than 400km of urban railway in Delhi, underground and elevated railway totaling 83km in length will be constructed to cope with the growing traffic demand as well as to accelerate the modal shift from automobile to the metro system, thereby contributing to regional economic development and improving the urban environment through alleviation of traffic congestion and reduction of exhaust fumes. In addition, reduction in emissions of global-warming gases by replacing automotive traffic is anticipated. During the phase 1 of the Project, three lines totaling 65km in length were constructed with the primary objective of alleviating congestion in the commercial and government districts at the core of Delhi. The whole phase 1 part became available along the entire line from November 2006. In the current phase 2, another six radiating lines (three for extension of the existing lines) from the city center to outer Delhi are being constructed. With the full opening of phase 2 lines targeting before the Commonwealth Games held in Delhi on October 2010 [3], the improvement of transport access to the city of Delhi from the major economic regions around the city as well as the airport is expected.

The Loan will be appropriated for subway construction, procurement of train cars, consulting services (support of tendering, supervision of works, safety control, etc.) and so on.

3. Executing Agency

Delhi Metro Rail Corporation Limited
Address: Metro Bhawan, 13, Fire Brigade Lane, Barakhamba Road, New Delhi, 110001, India
Tel: +91 (11) 2341-7910, Fax: +91 (11) 2341-7921

4. Planned Implementation Schedule

- (i) Scheduled project completion: December 2010
(the Project is completed when all the railway lines open.)
- (ii) Consultant services (supervision of works, etc.), tentative period for sending out letters of invitation: consultants already employed
- (iii) First tender announcement of procurement package based on international competitive bidding for this project works: first tender already announced

[1] As of 2001, the ratio of transportation means in Tokyo was 12.7% buses, 15.9% private automobiles and 52.1% rail, compared to 60.0% buses, 39.5% private automobiles and 0.5% rail in Delhi.

[2] The annual average concentration of airborne particulates is the highest of the world's major cities, greatly surpassing even Beijing and Bangkok. The average concentration in Tokyo is 42 micrograms per cubic meter, compared to 177 in Delhi. This exceeds India's domestic standard of 140 micrograms per cubic meter.

[3] A multi-sport event held every four years, with nations and regions belonging to the Commonwealth of Nations participating. More than 70 nations and regions take part, making this the largest sporting event after the Olympic Games.

Kolkata East-West Metro Project (II)

1. Background and Necessity

The project is located in Kolkata, the political and economic center of eastern India. Unlike, Delhi, the capital city, other metropolitan cities in India have also been witnessing significant population growth. In recent years, the number of private owned vehicles has grown rapidly, resulting in severe traffic congestion, crawling vehicular movements and depleting air and noise pollution levels over the city road network. Vehicular exhaust gases have become an acute environmental problem.

With the population density of 25,000 people/km², Kolkata city is one of the most overpopulated cities in the world [1]. The major means of public transport in the city is buses, however, the area under transport usage in Kolkata city is mere 6% and extremely small in contrast to many other major Indian cities. Traffic congestion has been a serious problem in the city, however, expanding the road capacity by widening existing roads or constructing new roads is difficult due to excessive overcrowding and narrow right-of-ways. Under these conditions, building a mass rapid transit system has become a pressing issue for Kolkata city in order to alleviate traffic congestion as well as to reduce air pollution caused by exhaust fumes and emission of global-warming gases.

2. Objective and Summary

Under this project, the underground and elevated railway totaling 14km in length in Kolkata, the state capital of West Bengal will be constructed to cope with the growing traffic demand as well as to accelerate the modal shift from automobile to the metro system, thereby contributing to regional economic development and improving the urban environment through alleviation of traffic congestion and reduction of exhaust fumes. In addition, reduction in emissions of global-warming gases by replacing automotive traffic is anticipated.

The project envisages construction of railway in east-west direction throughout Kolkata city, passing under Hooghly River and the commercial district in the city center, and is expected to cater to about 500,000 passengers/day once it begins functional. In the past, one Japanese ODA Loan was extended for construction of the Calcutta subway (North-South Line) that is currently under full operation. For the better service to realize the modal shift from private owned vehicles to the metro system, the Project will bring about synergistic effect of a network with the North-South Line.

The Loan will be appropriated for subway construction, procurement of train cars, consulting services (support of tendering, supervision of works, safety control, etc.) and so on.

3. Executing Agency

Kolkata Metro Rail Corporation Limited
Address: 4th Floor, HRBC House, Munsii Premchand sarani, Kolkata 700021, India
Tel: +91-33-2213-4350, Fax: +91-33-2213-4347

4. Planned Implementation Schedule

- (i) Scheduled project completion: October 2014 (project is completed when all the railway lines open.)
- (ii) Consultant services (supervision of works, etc.), tentative period for sending out letters of invitation: consultants already employed
- (iii) First tender announcement of procurement package based on international competitive bidding for this project works: first tender already announced

[1] The population density of the 23 wards of Tokyo is 13,000 people/km² (2001).

Chennai Metro Project (II)

1. Background and Necessity

The project is located in Chennai, the state capital of Tamil Nadu and the economic and political center of southern India. As the gateway to Southeast Asia, the city is also known as a regional hub of transport and commodity distribution. Due to its exploding population growth in recent years, the population density of Chennai city today is Chennai has become one of the world's most overpopulated cities [1] with its population density of 24,000 people/km². Along with rapid urbanization, the growth of private owned vehicles has resulted in chronic traffic congestion, which has incurred the economic loss and acute environmental problems.

Under these conditions, building a mass rapid transit system has become a pressing issue, in order to alleviate traffic congestion as well as to reduce air pollution caused by exhaust fumes and emission of global-warming gases.

2. Objective and Summary

Under this project, the underground and elevated railway totaling 45km in length in the metropolitan area of Chennai, the state capital of Tamil Nadu will be constructed to cope with the growing traffic demand as well as to accelerate the modal shift from automobile to the metro system, thereby contributing to regional economic development and improving the urban environment through alleviation of traffic congestion and reduction of exhaust fumes. In addition, a reduction in emissions of global-warming gases by replacing automotive traffic is anticipated.

Regarding the safety management, taking advantage of past experiences from JICA's urban transportation projects in India, several efforts toward the improvement of safety and efficiency of the construction, such as use of safety helmets and protective footwear, maintaining order at construction site, will be implemented in the Project. In addition, to mitigate the risk of HIV/AIDS infection among single migrant workers, the Tamil Nadu AIDS Control Society as well as each contractor will collaborate for implementation of HIV/AIDS prevention activities. There are also plans to incorporate universal design in station facilities such as elevators with Braille block, space for wheelchairs and other aspects that address the needs of the elderly and disabled persons.

The Loan will be appropriated subway construction, procurement of train cars, consulting services (support of tendering, supervision of works, safety control, etc.) and so on.

3. Executing Agency

Chennai Metro Rail Limited
Address: No.11/6, Seethammal Road, Alwarpet, Chennai 600018, India
Tel: +91-44-2431-3322, Fax: +91-44-2431-2430

4. Planned Implementation Schedule

- (i) Scheduled project completion: March 2015 (project is completed when all the railway lines open.)
- (ii) Consultant Services (supervision of works, etc.), tentative period for sending out letters of invitation: consultants already contracted
- (iii) First tender announcement of procurement package based on international competitive bidding for this project works: first tender already announced

[1] The population density of the 23 wards of Tokyo is 13,000 people/km² (2001).

Dedicated Freight Corridor Project (Phase 1) (II)

1. Background and Necessity

Following economic reforms enacted after 1991, India achieved an annual economic growth rate of 5% to 8%; and as a BRIC country, it has held center stage due to its remarkable economic growth. In conjunction with this rapid economic growth, freight transportation volume has grown about 15% annually, and the transport capacity of existing freight railways is reaching its saturation limit. Thus, developing and strengthening the freight railway system is an urgent issue for the country's further economic development. In view of these circumstances, there are plans to expand railway system to allow large volume transport using trunk lines, to introduce high-speed freight cars, and to improve access to port facilities in the Indian government's 10th and 11th Five-year Plan.

2. Objective and Summary

In this project, of the western corridor that runs between Delhi and Mumbai, a new 950km freight line (Rewari to Vadodara) connecting the major cities in Gujarat, Rajasthan, and Haryana states will be constructed, and large-capacity, high-speed freight locomotive will be introduced. Through this project, the purpose is to address the increasing cargo transport demand stemming from anticipated future rapid economic growth and to contribute to dynamic economic development.

This project will be the first STEP [1] loan to be applied for India; and it is a project that intends to promote Japanese technology. The total loan amount is about 450 billion yen and it is the largest loan ever granted to any one project.

This project will become the foundation of the Delhi-Mumbai Industrial Corridor (DMIC) Conceptual Outline, an integrated industry development project to build the country's largest industrial area between Delhi and Mumbai, aimed at promoting direct investments by Indian and Japanese companies. As this project begins to concretely move forward, it is anticipated to become the first step forward to realizing the various projects currently in the planning and conceptual stages.

Presently, surrounding the Delhi-Mumbai western corridor, there are more than 250 Japanese companies based there [2]. Improving the transport infrastructure that is currently the bottleneck of the project will contribute to the economic development of both Japan and India. It is anticipated to become a project symbolizing Japan-India cooperation and to be very beneficial to Japan related parties.

The loan will be appropriated for the construction of railway corridor, procurement of locomotives, Traction & Power supply system, Signaling & Telecommunication System and consulting services, etc. (bid tendering, supervision of works, safety control, etc.).

3. Executing Agency

Ministry of Railway

Address: Rail Bhawan, New Delhi-110001, India

Tel: +91-11-23389101

and

Dedicated Freight Corridor Corporation of India Limited (DFCCIL)

Address: Pragati Maidan Metro Station Building Complex New Delhi-110001

Tel: +91-11-23454780

4. Planned Implementation Schedule

(i) Scheduled project completion: June 2019

(project is completed when all the railway car procurement has been completed)

(ii) Consultant Services (supervision of works, etc.), tentative period for sending out letters of invitation: January 2011

(iii) First tender announcement of procurement package based on competitive bidding for this project works. Procurement package name: Civil Works & Track Works, scheduled period: November 2010

5. JICA Information Service

For information about the procurement schedule, please contact the party and address listed below.

Contact Point for Transport Sector, JICA INDIA Office

Address: 2nd Floor, Dr. Gopal Das Bhawan, 28 Barakhamba Road, New Delhi 110001, India

Tel: +91-11-4768-5500, Fax: +91-11-4768-5555

[1] Abbreviation for Special Terms for Economic Partnership. It is a loan condition created to promote Japan's "invisible assistance" by providing technology transfer using Japan's outstanding technology and know-how.

[2] As of March 2010.

Rengali Irrigation Project (III)

1. Background and Necessity

In Orissa State, located in eastern India, agricultural production comprises about 30% of state production and nearly 70% of its working population is engaged in farming or activities related to agriculture. However, the irrigated area accounts for only about 30%; and much of its agriculture is dependent on rain-fed farming. In the central area of the state where the project will be implemented, the rainfall is confined to the monsoon months (June to September), and the lack of irrigation facilities has been a constraint on agricultural productivity. Thus, improving the agricultural infrastructure and irrigation facilities is critical to improve the living standard of farmers through increased and diversified agricultural production and efficient water use.

2. Objective and Summary

The purpose of the project is to construct irrigation facilities in the Brahmani River basin in eastern state of Orissa that will create about 30,000 hectares of new irrigation land for agriculture (equivalent to half the total area of Tokyo's 23 wards), as well as organizing water users' groups and providing guidance in agricultural technologies that will increase and diversify agricultural production. In turn, this will contribute to the improved living standard of farmers.

In addition, technical assistance activities to raise the overall living standard of farmers such as strengthening the capacity of government organizations that promote the formation of water users' groups, promoting participatory development of farmers using existing Japanese ODA loan projects as an example as well as taking measures to reduce the risk of malaria in collaboration with the state health department are being implemented.

The loan will be appropriated for the procurement of irrigation related facilities, construction works, technical assistance, consulting services (detailed design, assistance for bid tendering, supervision of works etc.), etc.

3. Executing Agency

DoWR: Department of Water Resources, State Government of Orissa
Address: Rajiv Bhawan, Bhubaneswar 751001, India
Tel: +91-674-2536764, Fax: +91-674-2391731

4. Planned Implementation Schedule

Scheduled project completion: June 2012 (project will end when consultant services have been completed)

(ii) Consultant services (detailed design, etc.) tentative period for sending out letters of invitation: Employment completed

(iii) First tender announcement of procurement package based on competitive international bidding for this project works: There is no international competitive bidding in this project, but competitive domestic bidding is carried on a timely basis. At present, all agreements have been concluded.

Sikkim State Biodiversity Conservation and Forestry Management Project

1. Background and Necessity

Sikkim state, located between Bhutan and Nepal, is in the Eastern Himalayan region, that is a natural hot spot of biodiversity; and the number of species of flora per unit area in this region is extremely high. Despite the fact that this area constitutes only 0.2% of the entire geographic region of India, it is the habitat for nearly one-fourth of all plant species found in the country. Sikkim state lies at the foot of the eastern Himalayas and it is topographically isolated and land locked. The environment is difficult for industries to develop and much of population in the rural region continues to live in poverty. As a result, focus has been placed on developing ecotourism that utilizes the state's abundant natural environment and unique culture for serving as a summer vacation destination to escape the heat of the plains. However, the rapid growth in tourists visiting the state in recent years has markedly brought the negative impact on the natural environment.

Thus, providing a means to improve the livelihoods of local residents that comprise the poverty group and to promote the development of a sustainable socio-economy, in harmony with the natural environment, have become urgent issues.

2. Objective and Summary

The purpose of the project in Sikkim state is to conserve biodiversity, strengthen forestry management skills, and improve the income of local residents, by implementing activities such as baseline surveys, establishment of new protected areas, procurement of needed equipments, promotion of ecotourism, and livelihoods improvement, thereby contributing to balanced socio-economic development and environmental conservation in the region. Reducing the effects of greenhouse gas effects through afforestation activities is also anticipated.

While adopting the Joint Forest Management approach with the active participation of local communities and the State Forest Department, activities to conserve invaluable biodiversity that inhabit this region are also planned in the project. The loan will be applied to biodiversity conservation activities such as baseline surveys, strengthening of the management capacity of protected areas, and promotion of ecotourism. It will also be applied to activities such as regional development and livelihoods improvement, organization and strengthening of basic activities by the State Forest Department, and consulting services.

This project will work in collaboration with the Technical Cooperation Project, "Project for Capacity Building of State Forest Trainings Institutions and State Forest Service Colleges" started in March 2009, aimed at strengthening the skills of field forestry officers in Sikkim state. In addition, it will assist in formulating the state's ecotourism policy in cooperation with external experts.

3. Executing Agency

Department of Forest, Environment and Wildlife Management, Government of Sikkim
Address: Forest Secretariat, Deorali, Gangtok - 737102, Sikkim, India
Tel: +91-3592-281261, Fax: +91-3592-281778

4. Planned Implementation Schedule

- (i) Scheduled project completion: March 2020 (the project will be completed with the end of biodiversity conservation and forestry management activities)
- (ii) Consulting services (supervision of works, etc.), tentative period for sending out letters of invitation: July 2010
- (iii) First tender announcement of procurement package based on competitive bidding for this project works: There is no international competitive bidding for the procurement packages of construction in this project, but procurements required for the project implementation will be conducted in order.

【Project Map】

FY2009 Japanese ODA Loans for INDIA

(Delhi)

Delhi Mass Rapid Transport System Project Phase 2 (V)

(State of Sikkim)

Sikkim State Biodiversity Conservation and Forestry Management Project

(State of Haryana, Gujarat, and Rajasthan)

Dedicated Freight Corridor Project (Phase-1) (II)



Current Freight Railway

(State of Orissa)

Rengali Irrigation Project (III)



Construction of Main Canal



Inside Metro Vehicle



Landscape of Sikkim State

(State of West Bengal)

Kolkata East-West Metro Project (II)



Construction Work

(State of Tamil Nadu)

Chennai Metro Project (II)



Traffic Jam near Project Site

