

Ex-ante Evaluation

1. Name of the Project

Country: India

Project Title: Hyderabad Outer Ring Road Project (Phase 2)

Loan Agreement: November 21, 2008

Loan Amount: 42,027 million Yen

Borrower: The President of India

2. Background and Necessity of the Project

In Delhi, Hyderabad and other large cities in India, traffic congestion caused by rapid increase in road traffic demand has become a serious problem. Since this causes economic loss as well as atmospheric contamination, noise and other forms of vehicle-related pollution, there is an urgent need to establish an integrated road network for regional economic development and improvement of urban environment through traffic congestion alleviation.

In the 10th Five-Year Plan, and continuing in the 11th Five-Year Plan (April 2007–March 2012), the Government of India proposes the development of balanced nationwide road network. In addition, citing construction of new roads, widening and strengthening of existing roads, replacement of damaged bridges, strengthening of operation and maintenance of roads, promotion of public-private partnerships, necessity of safety and environmental measures, the Government of India proposes realization of a seamless transportation system by improving access to airports, ports and harbors. In particular, the government is positively committed to the development of main national roads based on the National Highway Development Plan.

In the “Japan’s Country Assistance Program for India” prepared by the Japanese Government, “Promotion of Economic Growth” has been set down as a major goal. Accordingly, JICA has set down (1) support of sustainable growth through development of economic infrastructure, (2) support for economic growth increasing employment (3) support for poverty reduction and (4) support for environment / climate change measures as major assistance areas. This project complies with these goals.

The population of the Hyderabad metropolitan area increased between 1991 and 2001, from 4.67 million to 6.38 million (representing an annual growth rate of 3.2%), while the number of vehicles leaped up from 0.59 million to 1.45 million, causing serious traffic congestion. The population is furthermore predicted to reach 9.05 million in 2011, and 13.64 million in 2021, while the annual growth rate of vehicles is expected to exceed 7%. In addition to private vehicles and buses for transportation within the city itself, a large number of vehicles enter the city only to pass through using radial roads, causing serious traffic congestion. Therefore, construction of an

outer ring road will promote regional development in the area surrounding the city, ease congestion by reducing the number of vehicles passing through the city, thereby contributing to regional economic development of the Hyderabad metropolitan area and improvement of the urban environment. Thus JICA's support for this project is highly necessary and relevant. Additionally, in order not only to improve the project effects of the outer ring road, but also to advance effective urban transport infrastructure development, this project will also involve the development of radial roads in accordance with the urban road development master plans of the state.

3. Project Description

(1) Project Objectives

This project aims to respond to increasing road traffic demands through the construction of the northern section of the outer ring road and radial roads in the Hyderabad metropolitan area in India's southern state of Andhra Pradesh, thereby easing traffic congestion in the city center and promoting regional economic development.

(2) Project Site / Target Area

State of Andhra Pradesh, Hyderabad metropolitan area

(3) Project Outline

The project will construct an expressway approximately 33 km in length (total length of outer ring road is 158 km) in the section connecting National Highway No.7 and No.9 which are major radial roads, and radial roads in the Hyderabad metropolitan area.

1) Road construction: Civil works and electric works involving highway, service roads, junctions, toll booths, Intelligent Transport System, radial roads, etc.

2) Social development: HIV prevention activities, etc.

* In relation to social development activities, Phase 1 of this project that was signed in FY2007 covers the entire length of the Outer Ring Road.

3) Consulting services: Construction supervision, strengthening of operation and maintenance system, etc.

(4) Total Project Cost/Loan Amount

54,046 million Yen (Including 42,027 million Yen in Japanese ODA loan)

(5) Project Implementation Schedule

Planned for January 2008 ~ August 2013 (Total 68 months). Project will be considered complete when construction works and consulting service have finished.

(6) Project Implementation Structure

1) Borrower: The President of India

2) Executing Agency: Hyderabad Growth Corridor Limited (HGCL)

3) Operation / management: As per 2)

(7) Environmental/social awareness / poverty reduction / social development

1) Environmental/social awareness

a) Category: A

b) Reasons for categorization: This project falls into a road sector project which is likely to have significant adverse impact on the environment under the Environmental Guidelines.

c) Environmental Permit: The Environmental Impact Assessment (EIA) report has been prepared in May 2006 and approved by the Andhra Pradesh Pollution Control Board in October 2006.

d) Anti-Pollution Measures: The quality of water discharged from the construction site to rivers will comply with the domestic effluent standards by setting up effluent treatment facilities during the execution of the project. The impacts on the project on noise will be mitigated by installing soundproof walls to reduce the noise level.

e) Natural Environment: Most of the project target area is unused land, but where forest is felled, replacement afforestation will be implemented by the Andhra Pradesh Forest Department.

f) Social Environment: The project requires land acquisition of about 485 ha and involuntary resettlement of 54 households which will be implemented in accordance with the Land Acquisition Act of the Government of India, the resettlement policy of the State of Andhra Pradesh, and the resettlement action plan prepared by HGCL.

g) Other/Monitoring: Environmental impacts regarding such items as air quality, water quality, noise and vibration, resettlement, etc. will be monitored by HGCL.

2) Promotion of Poverty Reduction: None

3) Promotion of Social Development (e.g. Gender Perspective, Measures to Prevent Infectious Diseases Including AIDS, Participatory Development, Consideration for Handicapped, etc.):

The project, which will be implemented in a country where there are serious concerns of AIDS infection, involves large-scale construction work in which most of the labors are single itinerant workers. For this reason, the consultant will hire local NGOs and, in cooperation with local health authorities, will conduct labor hygiene and safety activities including HIV prevention activities.

(8) Cooperation with Other Donors.

None

(9) Other Important Issues

In order for traffic in the city center to be alleviated and the Outer Ring Road to have full effect, timely completion of all sections of the Outer Ring Road including the northern section (approx. 33km) – target of this project and the northeastern section (approx 38km) – target of phase 1 of this project signed in FY2007.

4. Outcome Targets

(1) Evaluation Indicators(Operation and Effect Indicator)

Indicator	Target (2015) [2 years after completion]
Annual average daily traffic (PCU*/day)	
Section 7 (Shamirpet –Keesara)	53,659
Section 8 (Keesara –Ghatkesar)	81,726
Section 9 (Ghatkesar –Amberpet)	89,653
Time saving (min./vehicle)	
National Highway No. 7 Jct. - National Highway No. 202 Jct.	60
National Highway No. 202 Jct. - National Highway No. 9 Jct.	30

* PCU (Passenger Car Unit): Unit transforming traffic volume of a number of different types of vehicles into passenger car volumes.

(2) Internal Rate of Return

Based on the conditions indicated below, the Economic Internal Rate of Return (EIRR) of this project is 18.2% and the Financial Internal Rate of Return (FIRR) is 0.04%.

【EIRR】

Cost: Project cost (excluding tax), operation and maintenance expenses

Benefit: Saving for vehicle operating cost, saving for travel time cost

Project life: 30 years

【FIRR】

Cost : Project cost, operation and maintenance expenses

Benefit: Toll revenue

Project life: 30 years

5. External Factors / Risk Control

Changes in transport demand.

6. Lessons Learned from Findings of Similar Projects Undertaken in the Past

From past experience with similar projects, the lesson learned is that appropriate procedure for land acquisition is indispensable for smooth execution of urban transportation projects, and adequate follow up in land acquisition and resettlement process is essential. In light of this lesson, under this project, which involves vast amounts of land acquisition, JICA plans to request the executing agency to report periodically on the progress of the resettlement action plan.

7. Future Evaluation Plan

- (1) Indices for Future Evaluations
 - 1) Annual average daily traffic (PCU/day)
 - 2) Time saving (min./vehicle)
 - 3) EIRR (%), FIRR(%)
- (2) Timing of Future Evaluations
 - 2 years after project completion

End