

## Ex-ante Evaluation

### 1. Name of the Project

Country: The Islamic Republic of Pakistan

Project: Indus Highway Construction Project (III)

(Loan Agreement: December 15, 2006; Loan Amount: 19,455 million yen; Borrower: The President of the Islamic Republic of Pakistan)

### 2. Necessity and Relevance of JBIC's Assistance

In Pakistan, the road sector meets about 90% of the country's land transportation needs, and so the top priority challenges are appropriate operation and maintenance, new construction, widening and rehabilitation of national highways (where traffic is usually very heavy). In particular, the north-south corridor that runs between Karachi, Lahore and Peshawar is a route of primary importance linking Karachi Port, which handles about 95% of Pakistan's entire foreign trade, to Punjab Province, where economic activities are the most animated, and requires urgent improvement.

The Indus Highway (National Highway No. 55), the target of this project, linking Karachi and Peshawar on the western bank of the Indus River, is one of the key transport routes in Pakistan. As such, the Indus Highway forms a part of the national trade corridor whose development is being promoted strongly by the government of Pakistan. However, as the matter now stands, although the Indus Highway reduces the travel distance between Karachi and Peshawar by 500 km as compared with the travel distance between the same two cities on National Highway No. 5 (N-5), which runs along the eastern bank of the Indus River, since some sections of the Indus Highway, including the area targeted by this project, are still undeveloped, most of the traffic tend to be diverted to N-5.

JBIC has so far extended a total of six ODA loans to support the development of the Indus Highway, contributing support for about 65% of the 1,200-km total length. The remaining road sections have been funded by the government of Pakistan and the Asian Development Bank, and construction is currently underway. This project will enable the completion of the entire route of the Indus Highway. It is thus believed that the project will contribute to producing the planned effect of the highway: reduced transportation costs through substantial reduction of the travel time between Karachi and Peshawar, increased long-distance bulk shipment, and improved access to public services.

The project will also help make regional cities like Larkana (in northern Sindh Province where rice production thrives) and Dadu (in central Sindh Province) more mutually accessible. In addition, the project will improve access to public services and markets in large cities in southern Sindh Province such as Karachi and Hyderabad, and thereby contribute to social and economic development in the province's local communities.

In its Medium-Term Strategy for Overseas Economic Cooperation Operations (April 2005), JBIC sets forth "foundation for sustained growth" as one of its priority areas; and in providing assistance to Pakistan, "achievement of balanced regional socio-economic development" is one of its priority areas. This project, which promotes the development of the west bank of the Indus River through the construction of an arterial road, is therefore consistent with the medium-term strategy. Consequently, it is highly necessary and relevant that JBIC should support the project.

### 3. Project Objectives

This project aims to eliminate bottlenecks in the areas from central Sindh to northern Sindh through construction of an additional road in the undeveloped section of the Indus Highway (about 200 km between Sehwan and Ratodero) that forms a part of the national trade corridor; thereby contributing to the production of the planned effect of the entire Indus Highway and economic development of communities along the highway.

#### **4. Project Description**

(1) Target Area

Between central and northern Sindh Province

(2) Project Outline

- (a) Additional road construction: approximately 200 km in length, 2-lane (partially 4-lane bypass), including tollgates
- (b) Installation of traffic control centers
- (c) Consulting services

(3) Total Project Cost / Loan Amount

23,079 million yen (Japanese ODA Loan Amount: 19,455 million yen)

(4) Schedule

December 2006–December 2013 (85 months)

(5) Implementation Structure

- (a) Borrower: The President of the Islamic Republic of Pakistan
- (b) Executing Agency: National Highway Authority (NHA)
- (c) Operation and Maintenance System: Same as (b)

(6) Environmental and Social Consideration

(a) Environmental Effects / Land Acquisition and Resident Relocation

(i) Category: A

(ii) Reason for Categorization

This project is categorized as a road sector project which is likely to have significant adverse impact on the environment under the “Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Considerations” (established in April 2002). Thus, this project is classified as Category A.

(iii) Environmental Permit

The Environment Impact Assessment (EIA) report concerning this project was approved by the Environmental Protection Agency of Sindh Province in October 2005.

(iv) Anti-Pollution Measures

Since the project provides for a detour route that can be used to avoid going through urban areas, it is assumed that there will be no adverse impacts like air pollution and noise caused by increased traffic when the road is placed in service. Additionally, noise-reduction measures, including installation of sound-proof walls in the vicinity of school and residential zones

especially susceptible to such impacts, will be adopted as the need arises.

(v) Natural Environment

The area targeted by this project is not located in or around sensitive areas such as national parks, and so adverse impact on the natural environment is assumed to be minimal.

(vi) Social Environment

This project will involve the acquisition of about 430 ha of land and resident relocation of 198 households. Discussions has been held with residents who will be asked to relocate. The land acquisition and resident relocation will be carried out on the basis of a relocation plan prepared by NHA pursuant to the domestic laws of Pakistan. Additionally, cultural relics found along the Indus Highway will be protected in accordance with the domestic laws.

(vii) Other/Monitoring

In this project, NHA will monitor air quality, noise, land acquisition, resident relocation, etc.

(b) Promotion of Poverty Reduction

None

(c) Promotion of Social Development (e.g. Gender Perspective)

None

(7) Other Important Issues

None

**5. Outcome Targets**

(1) Evaluation Indicators (Operation and Effect Indicator)

Indicator	Baseline (2005)	Target (2014, 2 years after completion)
Annual average daily traffic (PCU/day)	6,404	11,013
Time saving (minutes)	-	108

(2) Internal Rate of Return

Economic Internal Rate of Return (EIRR): 12.2%

(a) Cost: Project cost (excluding land acquisition compensation cost and tax), operation and maintenance expenses

(b) Benefit: Time saving, vehicle operation cost saving

(c) Project Life: 10 years

**6. External Risk Factors**

Deterioration in the security situation

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

As premature deterioration of road surfaces due to overloaded vehicles and the rash of traffic accidents caused by reckless driving are mentioned in the ex-post evaluations of similar projects in Pakistan, the lesson learned is that the Ministry of Communications and NHA should strive to make sure drivers observe traffic laws and thereby ensure traffic safety by expanding the sections that should be policed by the National Highway and Motorway Police (NHMP), installing traffic safety facilities, and promoting driver education.

In this project, in addition to installing traffic safety facilities, NHA will introduce a basic traffic control system through installation of traffic control centers, and, after the project is completed, will expand the sections that should be patrolled by NHMP to include the Indus Highway.

### **8. Plans for Future Evaluation**

(1) Indicators for Future Evaluation

- (a) Annual average daily traffic (PCU/day)
- (b) Time saving (minutes)
- (c) Internal rate of return: EIRR (%)

(2) Timing of Next Evaluation

After project completion