

## Ex-ante Evaluation

### 1. Name of the Project

Country: Republic of the Philippines

Project: Central Luzon Link Expressway Project

Loan Agreement: 30 March 2012

Loan Amount: 22,796 million yen

Borrower: The Government of the Republic of the Philippines

### 2. Background and Necessity of the Project

#### (1) Current State and Issues of the Industrial Corridor Development in the Philippines

Metro Manila, which only account for 0.2% of land in the country, is the center of economic activities in the country, serving around 37% of total GDP produced and 13% of the total population in the country. Although, it has scarce available land left for the development of an industrial parks, and suffers from severe traffic congestion. Therefore, industrial parks are expanding to the South and North of Metro Manila. In order to further expand investment opportunities in the surrounding areas of Metro Manila, where economic growth is expected to continue, the Government of the Philippines (hereinafter referred to as “GOP”) intends to establish a Mega Manila Economic Sphere covering Central Luzon Region and CALABARZON Region (Cavite, Laguna, Batangus, Rizal and Quezon provinces) through the development of a logistical corridor, such as the Subic–Clark–Manila–Batangas (SCMB) Corridor. Central Luzon, situated approximately 100 km North of Metro Manila, is an area expected to rapidly grow, since the neighboring Clark Airport is expected to become an international airport, contributing to the convenience of the region. On the other hand, in evolving the industrial clustering in Luzon area, Central Luzon needs to address accessibility issues of its hindered linkage with logistics hubs, such as Metro Manila, Clark Airport, Subic Port and Batangas Port, by extending the SCMB Corridor to the North through the construction of expressways.

#### (2) Development Policies Regarding the Industrial Corridor Development in the Philippines and Priority of the Project

The GOP claims to enhance productivity and strengthen international competitiveness through improved logistics between the economic center and the surrounding areas, specifically the logistics corridors in the surrounding areas of Metro Manila, in the “Philippine Development Plan (2011-2016).” (hereinafter referred to as “PDP”) PDP indicates that GOP plans to develop the SCMB Corridor first and extend it to the North and South. Central Luzon Link Expressway Project (hereinafter referred to as “the Project”), which expands the SCMB corridor to the North by constructing expressways, is well aligned with the above. In addition, “Public Investment Program (2011-2016)” (hereinafter referred to as “PIP”) formulated by the Department of Public Works and Highways (hereinafter referred to

as “DPWH”) prioritizes the project to be completed by 2016. Therefore, the Project is fully in line with the GOP’s developmental policies.

### (3) Japan’s and JICA’s Policy and Operations in the Industrial Corridor Development

Under the Country Assistance Program for the Republic of the Philippines (June 2008), Japan is committed to provide “Sustained Economic Growth Aimed at Creating Employment Opportunities” as one of its priority development issues and focuses on the improvement of infrastructure. Responding to it, JICA’s Country Assistance Strategy and Rolling Plan intend to help alleviate traffic congestion in Metro Manila and prepare/improve key transportation and traffic networks that support the country’s economic growth. In line with this, Japan implemented “The Master Plan on High Standard Highway Network Development in the Republic of the Philippines” in 2010 and helped DPWH prepare PIP. Japan has supported the preparation of the SCMB Industrial Corridor with ODA Loans, such as “South Luzon Expressway Construction Project (I)” (1990), “Central Luzon Link Expressway Project” (2001) and “Subic Bay Port Development Project” (2000).

### (4) Other Donor Operations

The Asian Development Bank (ADB)’s private sector financing and the World Bank Group’s International Finance Corporation (IFC) have provided financial assistance to private companies for the rehabilitation and widening of North Luzon Expressway under the Public-Private Partnership (hereinafter referred to as “PPP”) scheme (2000). Furthermore, the World Bank (WB) is supporting the conduct of feasibility study (hereinafter referred to as “F/S”) and transaction advisory service for Cavite– Laguna Expressway (CALAX) (Cavite Section), situated in the South of Metro Manila.

### (5) Necessity of the Project

Central Luzon, situated approximately 100 km North of the Metro Manila, is anticipated to see economic growth in the near future. Lack of expressway connecting the East and West sides of Central Luzon, disturbing the smooth transport between Central Luzon and Metro Manila, remains an obstacle to the development of the whole region. Therefore, JICA’s support to the Project is necessary and relevant.

## **3. Project Description**

### (1) Project Objectives

The Project aims to improve the logistics between Metro Manila and Central Luzon through the extension of the SCMB Corridor to the North. It intends to construct an expressway that links Tarlac city with Cabanatuan city, which in turn contributes to the evolution of the Industrial Corridor Development in Central Luzon.

### (1) Project site/Target Area: Central Luzon

### (2) Project Outline

- 1) The construction of expressway (Exclusive motor vehicle roadways) (Tarlac - Cabanatuan, about 31km, 4 lanes)
- 2) The construction of 4 expressway interchanges (Tarlac, Aliaga, Cabanatuan city bypass)

and Cabanatuan)

- 3) Consulting service (detailed design (D/D)), bid assistance, construction supervision, bid assistance for lease rights)
- (3) Total Project Cost:  
27,773 million yen (Yen Loan Amount: 22,796 million yen)
- (4) Project Implementation Schedule  
March 2012-March 2017 (61 months) The commencement date of service (December 2016) shall be the time of the Project's completion.
- (5) Project Implementation Structure:
  - 1) Borrower: The Government of the Republic of the Philippines
  - 2) Project Executing Agency: DPWH
  - 3) Operation and Maintenance System: The operation and maintenance of the expressway after the Project completion will be conducted by a private company under a lease contract.
- (6) Environmental and Social Consideration, Poverty Reduction, and Social Development
  - 1) Environmental and Social Consideration:
    - ① Category: A
    - ② Reason for Categorization: The Project falls into the categories of the "roads" sector and "sensitive sectors" (which have characteristics that are liable to cause adverse environmental impacts), as specified in the "Japan International Cooperation Agency (JICA) Guidelines for Environmental and Social Considerations" (April 2010).
    - ③ Environmental Permit: Environmental Compliance Certificate (ECC) for this project has been issued by the Department of Environment and Natural Resources (hereinafter referred to as "DENR"). Later, ECC reflecting modifications in road alignment was issued on 2<sup>nd</sup> November 2011.
    - ④ Anti-Pollution Measures: Measures to reduce noises, dusts and sediment runoff during the construction include the set-up of sound barrier walls, the use of low-noise construction machines, sprinkling water, the formulation of construction plan adapted to rainy season. Prior to starting service, sound barrier walls will be set up and trees will be planted to reduce noise and alleviate air pollution.
    - ⑤ Natural Environment: The Project is not conducted in or near a sensitive area such as national parks, and is expected to cause little adverse environmental impacts.
    - ⑥ Social Environment: The project may cause about 201 ha of land acquisition and resettlement of 67 households (334 persons). Land acquisition and resettlement will be implemented in accordance with the country's laws and regulations and Resettlement Action Plan (RAP). At the stakeholder meetings, the residents requested for resettlement sites. Based on their request, resettlement site(s) will be prepared. No residents have expressed severe disapproval of the Project.
    - ⑦ Other/Monitoring: Based on the environmental management plan, contractors will monitor noises, air quality, water quality and wastes during the construction. After the

commencement of the service, organization in charge of operation and management will monitor noises and air quality. DPWH will monitor the progress of land acquisition, resettlement and livelihood restoration, which will be also monitored by a third party organization.

- 2) Promotion of Poverty Reduction: The unemployed applicants in and near the Project site will be preferentially hired for the construction of expressway.
- 3) Promotion of Social Development (e.g. gender perspective, measure for infectious diseases including AIDS, participatory development, considerations for persons with disabilities, etc.) Gender Perspective): During the construction, it is expected that a significant number of workers (migrant workers) will come from areas outside of the Project site. This might possibly cause development of infectious diseases (including HIV/AIDS) at the Project sites. To cope with this issue, JICA will request the Executing Agency to incorporate an HIV/AIDS clause into bidding documents so that construction contractors can provide measures to prevent the development of HIV/AIDS among construction workers.

(8) Cooperation with other donors: None

(9) Other Important Issues: The Project intends to draw a trial plan for drainage pavement at the time of D/D and examine the feasibility to apply the technology to a part of the expressway. Drainage pavement is the first trial of its kind in the Philippines and is expected to contribute to traffic safety in the country that has a large amount of rainfall. In addition, the Central Luzon region is one of important regions as Japanese companies have their production base and domestic sales offices. The Project, which contribute to the revitalization of the local industry, will in turn contribute to enhancement of efficiency and revitalization of the economic activities by the Japanese companies operating in the region.

#### 4. Outcome Targets

(1) Quantitative effects

1) Performance Indicators (Operation and Effect Indicators)

Indicator	Target section	Baseline (2011 Actual)	Target (2018) 【2 years after the Project completion】
Annual average daily traffic (vehicle/day)	Tarlac IC - Aliaga IC	—	13,147
Average time required (minute/vehicle)	Cabanatuan - Balintawak	134 (Aliaga, via Central Luzon Expressway) 186 (via Philippines - Japan Friendship Highway)	113 (via Central Luzon Expressway and Central Luzon Link Expressway)
Travel cost reduction due to	Cabanatuan - Balintawak	—	11

reduction in travel time (00 million peso/year)			
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As a reference indicator, the number of offices in the Central Luzon region (Region III) will be monitored (79,445 as in 2009).

## 2) Internal Rate of Return

Assuming the conditions listed below, the Project's economic internal rate of return (EIRR) is 19.6%, and financial internal rate of return (FIRR) is 5.07%.

### 【EIRR】

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

Benefit: Reduction in travel cost and time required

Project Life: 35 years

### 【FIRR】

Cost: Project cost, operation and maintenance expenses

Benefit: Toll income

Project Life: 35 years

## (2) Qualitative Effects

- Improvement in logistics between Metro Manila and Central Luzon
- The promotion of Industrial Corridor Development and economic development in region

## 5. External Conditions/Risk Control

Delay in the project implementation due to natural disasters, etc.

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

### (1) Findings of Similar Projects:

The ex-post evaluations of past similar projects that involved a large scale resettlement point out that issues and risks that may arise from land acquisition should be analyzed at a stage of preliminary research to acquire land without troubles, and mapping out effective resettlement plan is also needed.

### (2) Lessons Learned:

The Project also requires a large scale resettlement. Potential risks has been analyzed and the resettlement plan has been drafted under the F/S conducted by JICA. In order to implement the Project smoothly, the progress of resettlement will be monitored during each stage of the Project implementation and supervision.

## 7. Plans for Future Evaluation

### (1) Indicators for Future Evaluation

- 1) Annual average daily traffic (Vehicle/day)
- 2) Average time required (minute/vehicle)
- 3) Travel cost reduction due to reduction in travel time (00 million peso/year)
- 4) EIRR
- 5) FIRR
- 6) The number of office in the Central Luzon region (Region III) (Reference indicator)

(2) Timing of Next Evaluation

Two years after Project completion

END