

**1. Name of the Project**

Country:	Republic of the Philippines
Project:	Road Upgrading and Preservation Project
Loan Agreement:	March 31, 2011
Loan Amount:	40,847 million yen
Borrower:	The Government of the Republic of the Philippines

**2. Background and Necessity of the Project****(1) Current State and Issues of Development of the Road Sector in the Philippines**

Road traffic is the largest mode of transportation in the Philippines, which accounts for around 90% of the passenger transportation and 50% of the freight transportation. The Government of the Philippines (GOP) has been actively working to establish and improve the road network. However, while the main emphasis is on expansion of the road network, improvement of the quality of existing roads remains insufficient. For example, pavement of arterial national roads has been delayed and roads have deteriorated due to insufficient maintenance, causing problems in terms of effective transportation along the road networks. Though the road operation and management system has been gradually improved due to the efforts of the GOP and international donors, there still remain unsolved problems. For instance, medium-term plans for maintenance budget allocation is yet to be formulated, there has been a delay in the promotion of outsourcing to private sector which is planned to make maintenance works more efficient, the system to promptly respond to disasters is not consolidated sufficiently, and not enough measures have been taken to tackle overloading issue.

As stated above, the country has a pressing need to improve arterial national roads (pavement of unpaved road sections) and improve/enhance its system to implement efficient maintenance of national roads in order to deliver sustainable service of the road networks in the country.

**(2) Development Policies for the Road Sector in the Philippines and the Priority of the Project**

The GOP defined increasing the ratio of paved national roads and placing more emphasis on effective use of existing road assets as goals under its Medium-Term Philippine Development Plan (2004-2010) and Medium-Term Infrastructure Program (2005-2010) formulated by Department of Public Works and Highways (DPWH). As this project aims to enhance the system for implementing adequate maintenance of roads and to increase the pavement ratio of arterial national roads, this project is positioned as one of the prioritized projects of the GOP.

**(3) Japan and JICA's Policy and Operation in the Road Sector**

As the largest donor for the road sector of the Philippines, JICA has provided various assistances, including formulation of development plans and improvement of the arterial road network, through ODA Loan, Grant Aid, and Technical Cooperation.

Under its Country Assistance Program for the Philippines as well, Japan is committed to providing assistances for main transportation networks which support economic growth, including maintenance.

**(4) Necessity of the Project**

The purpose of the project is to improve existing arterial national roads and enhance the road operation and management system. The project will address some of the challenges in the road sector in the Philippines: increasing the ratio of paved roads and enhancing the operation and management system (e.g. ensuring adequate budget allocation, promoting the utilization of the road operation and management system, promoting outsourcing to the private sector, and improving control of road use). Accordingly, as outlined above, this project is aligned with the challenges of the road sector in the Philippines and is consistent with the country's development policy and assistance policies of Japan and JICA's. Thus, it is highly necessary and relevant for JICA to support this project.

**3. Project Description**

(1) Project Objectives

The objective of the Project is to enhance transportation capability and efficiency, and to ensure sustainability of roads through improvement and maintenance of arterial national roads across the Philippines as well as enhancement of the road operation and management system by supporting the introduction of outsourcing of maintenance works to the private sector, improvement of related equipment, and enhancement of institutional capacity, thereby contributing to the improvement of socio-economic development of the country.

(2) Project site/target area: Throughout the Philippines

(3) Project Components

1) Civil engineering work

- (a) Road Upgrading and Improvement works (International Competitive Bidding): Pavement of unpaved roads, Total: about 130 km
- (b) Long-term performance-based maintenance works<sup>1</sup> (International Competitive Bidding): Rehabilitation of damages and maintenance of roads under long-term performance-based maintenance contract (5 years), Total: about 650 km
- (c) Preventive maintenance works (Local Competitive Bidding): Asphalt overlay to reinforce existing pavement before severe damages occur, Total: about 600 km

2) Procurement of equipment

Equipment for emergency disaster recovery and weighbridge stations to detect overloading (International Competitive Bidding)

3) Consulting services

Detailed design, bidding support, supervision of construction work, and enhancement of DPWH's capacity for road operation and management

(4) Total Project Cost

65,247 million yen (Loan Amount: 40,847 million yen)

(5) Project Implementation Schedule

Scheduled from March 2011 to December 2021 (130 months in total). The project will be deemed complete when long-term performance-based maintenance contracts (5 years) are completed (December 2020).

(6) Project Implementation Structure

- 1) Borrower: The Government of the Republic of the Philippines
- 2) Executing Agency, Operation and Maintenance: Department of Public Works and Highways (DPWH)

(7) Environmental and Social Consideration/Poverty Reduction/Social Development

1) Environmental and Social Consideration

- (a) Category: B
- (b) Reason for Categorization: The project does not correspond to "a large scale project among road sector projects" under the "Japan Bank for International Cooperation Guidelines for the Confirmation of Environmental and Social Considerations" (established in April 2002) and its potential adverse impacts on the environment are not likely to be significant. The project sites are not located in environmentally and socially sensitive areas, nor has it sensitive characteristics as stipulated in the Guidelines. Therefore, the project falls under the category B.
- (c) Environmental Permit: Among the project sites, the Department of Environment and Natural Resources (DENR) required Environmental Compliance Certificate (ECC) for four road sections: Bongabong-Baler, Lipa-Alaminos, Mindro West Coast road, and Catanduanes Island Circumferential Road. DENR examined the above four sections with Environment Impact Assessment (EIA) reports or Initial Environmental Examination (IEE), a simplified version of an

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<sup>1</sup> A method to package rehabilitation of damages and maintenance for a certain period (5-10 years) as one contract. The payment is made for maintaining predetermined road performance, such as flatness. This method aims to optimize inputs by entrusting private sector to formulate specific maintenance plans to maintain road performance.

EIA report, and issued ECC for all the four sections. Other sections have acquired certificates to prove that they do not need environmental impact assessments, as only rehabilitation and maintenance works will be conducted for paved roads in these sections and their environmental impact is minor.

- (d) Social Environment: This project may cause about 131 hectares of land acquisition and 29 households of resettlement. Land acquisition and resettlement will be implemented by executing Agencies and Local Government Units in a proper manner in accordance with the laws and regulations in the Philippines.
- 2) Promotion of Poverty Reduction: N/A
- 3) Promotion of Social Development (Gender Perspective, Infectious Disease including HIV/AIDS, Participatory Development and Considerations for Disabled Persons): During construction, it is expected that a significant number of workers will come from areas outside of the project sites. 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.

#### 4. Targeted Outcomes

##### (1) Quantitative effects

##### 1) Performance Indicators (Operation and Effect Indicators)

Component	Section	Baseline (2008, actual)		Target (2022) [Expected level 2 years after project completion]	
		Annual average daily traffic	Traveling time (min.)	Annual average daily traffic	Traveling time (min.)
Road Upgrading and Improvement works	Bongabong-Baler	2,077	10	3,117	5
	Lipa-Alaminos	768	65	1,861	40
	Mindro West Coast road	1,125	85	2,767	65
	Catanduanes Island Circumferential Road	709	190	1,477	80
Long-term performance-based maintenance works	Aringay-Laoag	8,850	360	17,050	290
	Santa Rita-Nueva Ecija province border	10,750	250	17,100	200
	Sipocot-Pao	7,746	130	12,298	110
	Surigao-Agusan del notre province	4,493	150	6,847	125
Preventive maintenance works	Talavera-Rizal	2,077	30	3,117	20
	Alaminos-Tiaong	14,010	25	26,203	20
	Carmen-Davao city	19,212	50	29,786	40

##### 2) Internal Rate of Return (EIRR)

Based on the conditions below, the Economic Internal Rate of Return (EIRR) of Road Upgrading and Improvement component of the project is 27%. EIRR is not applied to other components due to the nature of their works.

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

Benefit: Vehicle operating cost savings and travel saving time

Project Life: 20 years

##### (2) Qualitative Effects

Economic and social development by improving the convenience of arterial national roads and enhancement of road operation and management system by reinforcing organizational capabilities and improving systems

## **5. External Factors and Risk Control**

Delay in project implementation and/or changes in the project scope due to natural disasters, etc.

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

It is pointed out in ex-post evaluations of past yen loan projects in the road sector that the current road operation and management system has challenges in securing and appropriately allocating maintenance budget. In the implementation of this project, the GOP is expected to timely provide matching counterpart funds with the formulation of a medium-term plan of road maintenance. The said evaluations also point out delay in projects implementation as another challenge. The implementation of this project is expected to be accelerated with the support of JICA consultants to assist the Executing Agency to start up the Project.

## **7. Plans for Future Evaluation**

(1) Indicators to be used:

- (a) Annual average daily traffic (cars/year)
- (b) Traveling Time (min.)
- (c) EIRR (%)

(2) Timing:

Two years after the project completion