



# Validation Report

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Reference Number: PCV:PHI 2008-02  
Project Number: 23233  
Loan Number: 1473  
February 2008

## Philippines: Sixth Road Project

Operations Evaluation Department

**Asian Development Bank**

## ABBREVIATIONS

ADB	–	Asian Development Bank
DPWH	–	Department of Public Works and Highways
EA	–	executing agency
LAR	–	land acquisition and resettlement
PCR	–	project completion report
TA	–	technical assistance

## Key Words

adb, asian development bank, philippines, roads, lessons, operations evaluation department, performance evaluation

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## OED PCR VALIDATION REPORT

1. Basic Project Data		PCR Review Date Posted		
<b>Project Number</b>	23233		<b>Appraisal</b>	<b>Actual</b>
<b>Project Name</b>	Loan 1473-PHI: Sixth Road Project	<b>Total Project Costs</b> (\$ million)	652.80	576.88
<b>Country</b>	Philippines	<b>Loan/Credit</b> (\$ million)	167.00	148.58
<b>Sector</b>	Transport and communications (Roads and highways)	<b>Cofinancing</b> (\$ million)	203.40	197.34
<b>Subsector</b>				
<b>Financing</b> (\$ million)	<b>ADF</b>	<b>Borrower Contribution</b> (\$ million)	282.40	230.96
	<b>OCR: 167.00</b>	<b>Board Approval Date</b>	30 Sep 1996	
		<b>Closing Date</b>	30 Jun 2002	26 Feb 2007
<b>Cofinanciers</b>	Japan Bank for International Cooperation/Export-Import Bank of Japan OPEC Fund for International Development Kuwait Fund for Arab Economic Development Department for International Development/Overseas Fund for International Development (UK)			
<b>Project Officers</b>	<b>Name</b>	<b>Designation</b>	<b>From</b> (month/year)	<b>To</b> (month/year)
	Charles Melhuish	Sr. Project Economist, IETC	—	1998
	Robert Ostermiller	Transport Specialist, IETC	—	2000
	Pierre Poinsignon	Transport Specialist, SEID	2000	2003
	Shihiru Date	Transport Specialist, SEID	2003	2007
<b>Evaluator</b>	Thomas F. Jones	<b>Director</b>	Ramesh B. Adhikari, OED2	
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### 2. Project Description (from the report and recommendation of the President)

#### a. Rationale

Lack of reliable infrastructure in reasonably good condition is a severe constraint on economic and social development. This is particularly true in many rural areas, where adequate accessibility can be the catalyst for investments in local resource development. The Project was formulated to support the Government's strategy, set out in its 6-year Medium-Term Public Investment Program at the time, of improving rural transport infrastructure and thereby reducing transport costs. The roads selected for improvement were in some of the least-developed areas of the country, where accessibility was considered a major constraint.

Because the infrastructure not only had to be improved but had to remain in good condition and continue to benefit the local communities, a major focus of the Project was preserving previous investments and ensuring sustained economic and social benefits. The structural overlay program would preserve asphalt concrete pavements that had reached the end of their design life by providing them with strengthening layers that would extend their life by 10 years. The bridge program would replace failed and structurally weak bridges, as well as repair and retrofit bridges to withstand acceptable seismic risks. Better, safer transport links were expected on important lifeline routes.

Institutional weaknesses often underlie poor performance; considerable effort was therefore made to assess how these weaknesses might be lessened. The Project was intended to support urgently needed institutional development through a multifaceted program of capacity building in the critical areas of bridge design, road maintenance and management, road planning, road safety, training, and project management.

#### b. Objectives or Expected Outcomes

The Project was primarily aimed at supporting the Government in carrying out its programs and policies for the development of the national road network, particularly in less-developed, hard-to-reach areas.

In addition, the Project was designed to strengthen the Department of Public Works and Highways (DPWH) in the critical areas of road safety, highway planning, and road maintenance; bridge design and project management; and road surface dressing techniques. A further objective was to assist the Government in preparing detailed engineering designs for a future project that the Asian Development Bank (ADB) might consider funding.

The Project was expected to increase income and to reduce poverty, unemployment or underemployment, travel time, vehicle operating costs, road maintenance costs, and accident rates.

**c. Components or Expected Outputs**

The Project had the following components:

**1. Civil Works**

- (i) improvement of about 840 kilometers (km) of national roads on the islands of Luzon, Masbate, Mindanao, Palawan, and Panay;
- (ii) rehabilitation and structural overlay of about 800 km of national roads on the islands of Cebu, Luzon, Masbate, Mindanao, Negros, and Panay; and
- (iii) replacement, repair, or retrofitting of about 400 bridges in the national road network on the islands of Luzon, Mindanao, and Panay.

**2. Consulting Services**

- (i) construction supervision of road improvements;
- (ii) field investigations for, design, and construction supervision of the road rehabilitation and structural overlay program;
- (iii) field investigations for, detailed engineering design, and supervision of the replacement, repair, and retrofitting of bridges, as well as training in bridge design; and
- (iv) detailed engineering design for a future project.

**3. Capacity Building**

- (i) civil works for the road resealing training program (8 km), trial pavements for the pavement investigation and technical development program (4 km), and implementation of physical measures relating to road safety, including road signing and marking and remedial measures for accident black spots;
- (ii) equipment for a road resealing unit to be used for training, minor items of equipment for monitoring pavement performance, and specialist equipment needed to establish the pavement management system and to develop routine and preventive maintenance capabilities; and
- (iii) consulting services to develop DPWH capabilities in road resealing, pavement investigation, highway planning, routine maintenance, and road safety, project coordination, and benefit monitoring and evaluation.

**3. Evaluation of Design and Implementation (evaluator assessment of envisioned versus actual)**

**a. Relevance of Design and Formulation**

The Project, as planned, conformed to ADB's country strategy and program and the Government's main objectives in the road sector. It was meant to promote economic activity, reduce travel times and costs in the project areas, and increase ease of access in the rural corridors. It was also designed to develop the capability of DPWH in many areas and to introduce new and sustainable road management tools. The Project is considered to have been highly relevant.

**b. Components (Key Conditions in the Case of Program Loans): Outputs and Costs by Component as Envisioned during Appraisal as Compared with Actual Costs and Outputs Achieved; Reasons for Deviations**

Except for structural overlays, which exceeded expectations, road improvements and bridgeworks were delayed or canceled mainly because of delays in procurement. Capacity building appears to have been problematic; only that related to project coordination and pavement investigation was completed satisfactorily. No specific reason was given in the project completion report (PCR) for the lack of success of the other capacity-building activities.

Equipment procurement was largely successful, but some of the 170 vehicles purchased for project implementation were reportedly misused. Consulting services were completed within the parameters of the Project as implemented, except for the design of a future project.

**Project Outputs, Planned and Actual: Civil Works**  
(as of 31 May 2006)

<b>Project Component (% of Actual Cost)</b>	<b>Planned Output</b>	<b>Actual Output</b>	<b>Percentage Achieved</b>
A. Road Improvement (41.6)	Improvement of 840 kilometer (km) of national roads	687 km of national roads improved under 15 contract packages	82
B. Structural Overlay (25.5)	Rehabilitation and structural overlay of 800 km of national roads	959 km of national roads under 20 contract packages	120
C. Bridge Program (9.5)	Replacement, repair, or seismic retrofitting of 400 bridges in national road network	128 bridges with total length of 17,431 meters replaced, repaired, or retrofitted under 16 contract packages	32

**Project Outputs, Planned and Actual: Capacity Building and Consulting Services**  
(as of 31 May 2006)

<b>Project Component</b>	<b>Planned Output</b>	<b>Actual Output</b>	<b>Percentage Achieved</b>
A. Capacity Building	Road safety	Completed; partly successful	<100
	Highway planning	Completed; partly successful	<100
	Routine maintenance management planning	Completed; partly successful	<100
	Road resealing training	Canceled	0
	Pavement investigations	Completed; highly successful	100
	Hazard mapping	Canceled	0
	Project coordination	Completed; satisfactory	100
	Benefit monitoring and evaluation	Completed; partly successful	<100
	Field investigations for, design, and supervision of replacement, repair, and retrofitting of bridges, plus training	Completed	100
	Detailed design for future project	Canceled	0
B. Equipment	Procurement of 170 project vehicles	Procured and delivered	100
	Procurement of other minor equipment	Partial procurement and delivery, equipment for resealing training canceled	<100
	Procurement of two falling weight deflectometers	Procured and delivered	100
C. Consulting Services	Supervision of road improvement construction	Completed	100
	Field investigations for, design, and construction supervision of the rehabilitation and structural overlay program	Completed	100
	Field investigations for, design, and supervision of the replacement, repair, or retrofitting of bridges, plus training	Completed	100
	Detailed design for future project	Canceled	0

**c. Project Cost, Disbursements, Borrower Contribution, and Conformance with Schedule** (as relevant to project performance)

The Project was completed at a total cost of \$576.9 million, compared with the \$652.8 million estimated at appraisal. There was no cost overrun, despite a delay of 47 months. The cost was lower than the appraisal estimate mainly because some civil works were canceled in mid-2003, following delay in the procurement of six bridge contract packages. This cost total excludes the share of the Kuwait Fund for Arab Economic Development since its part of the Project was provided in parallel and administered separately. The Government contributed \$244.16 million equivalent toward the total project cost. The Project was completed within budget, with most contingencies being used.

Slow internal procurement and land acquisition difficulties caused substantial delays in the Project, such that disbursements for the road improvement component had to be suspended for over a year until the issues were resolved. Disbursements under the loan totaled \$148.58 million. The remaining \$18.42 million was canceled at the loan closing date.

Implementation was delayed by 47 months for several reasons. Road conditions changed, sometimes considerably, in the interval between the original design and the contract award, necessitating redesign or other adjustments. Sometimes the original designs were simply wrong. Land acquisition and resettlement (LAR) was a major issue. Overlooked during project preparation, this issue was very hard to rectify during implementation. The Government at first refused to agree to ADB's conditions; then, once agreement was reached, implementation and monitoring proved difficult. Moreover, DPWH needed more than 12 months, on average, to complete its procurement of the 50 contract packages that were successfully awarded. Supplemental agreements and contract variations also required up to 24 months for approval. Such project delays are common in the Philippines and should have been reflected in the project implementation schedule.

**d. Implementation Arrangements, Conditions and Covenants, and Related Technical Assistance**

DPWH was the Executing Agency (EA) for the Project. The day-to-day activities were assigned to the ADB project management office, an existing unit with considerable experience on ADB-funded projects. The capacity-building components were implemented through the DPWH bureaus concerned. DPWH's undersecretary for operations was responsible for overall coordination and supervision.

Of the 30 loan covenants, 23 were complied with (2 after long delay), 3 were only partly complied with, and 4 were not complied with. One of the two covenants that were complied with late (this one by almost 5 years) pertained to land acquisition. The other involved the project schedule, which was set back by the project delays. The covenants that were not complied with were those for the allocation of routine maintenance (at least 75% of which was to be implemented by contract), vehicle overloading remedy, the recommendations made by the technical assistance (TA) consultants to privatize the Bureau of Equipment, and the submission of the EA's PCR. The covenants for routine maintenance, road safety, and road classification were partly complied with.

An advisory TA approved with the loan reviewed the roles of the Bureau of Equipment and Regional Equipment Services and determined how these institutions could be successfully restructured into commercial operations in the private sector. The TA was completed in 2001 and a completion report was circulated to the Board in July 2003. The TA was rated successful, but ultimately its intended outcome was not achieved.

**e. Performance of the Borrower and the Executing Agency**

Despite the shortcomings of the EA—noncompliance with loan covenants, procurement delays and cancellations—and the 47-month delay in the Project overall, the objectives were substantially achieved, particularly those related to the physical components. The Project was complex in geographic dispersion and number of individual operations: it involved over 55 civil works contract packages and more than 10 capacity-building subcomponents. Many rural areas with a high incidence of poverty, such as Mindanao, Palawan, and Bondoc Peninsula, have benefited significantly from the Project. Given these positive achievements and the continuing efforts of the EA in partnership with ADB, the performance of the Borrower and the EA was rated satisfactory in the PCR.

**f. Performance of the Asian Development Bank**

ADB's previous experience with road projects in the Philippines—it had funded 10 such projects earlier—and its understanding of the shortcomings and procurement difficulties were not fully taken into account in the implementation arrangements and schedule. But while ADB may have made a fundamental error during project preparation by not including the LAR policy in the Loan Agreement and overlooking potential social issues, when serious social issues later arose, ADB continuously strove through 16 formal missions and less formal means, in partnership with the EA, to remedy the situation, to make sure that the affected families were compensated, and to achieve the Project's objectives. ADB's performance was therefore rated satisfactory in the PCR.

**4. Evaluation of Performance (evaluator assessment)**

**a. Relevance**

The Project, as planned and formulated, accorded with ADB's country strategy and program and the Government's main objectives in the road sector. For this reason, it was rated highly relevant at approval. However, several issues relating to the ability to implement the Project emerged during implementation. The most difficult issue involved LAR, a component missing from the Project as approved. The geographic dispersion of the road links (causing difficulties for implementation and administration), the apparent lack of commitment from the Government to the capacity-building initiatives, and changing government priorities over the extended implementation period—all these detracted as well from the relevance of the Project as implemented. Overall, the Project was rated relevant in the PCR.

**b. Effectiveness in Achieving Outcome**

The Project was undertaken to complete a program of civil works and to strengthen the capabilities of DPWH. The road improvement component was 82% completed; the structural overlay component, 120%; and the replacement, repair, and retrofitting of bridges in the national road network, only 32%. Capacity building had mixed success: half of the subcomponents were rated only partly successful, two were canceled, and only two components were satisfactory or highly successful. Project vehicles were procured early in the implementation cycle for implementation supervision and monitoring, but wide misuse of these vehicles by DPWH and other agencies was reported. In view of the less-than-full completion of the road improvement component and the fact that most contracts, and hence the benefits, were delayed or did not materialize, as well as the shortcomings of the bridge component, which was integral to the functioning of the road network, and the lack of success in the capacity-building component, the Project could have been rated only partly successful. But the importance attached to the road improvement and overlay component based on cost led to a rating of effective.

**c. Efficiency in Achieving Outcome and Outputs**

Economic rates of return were shown in the PCR to be high, ranging from 18% to 90%. But delay or non-implementation of civil works meant benefits forgone. The Project was thus rated efficient.

**d. Preliminary Assessment of Sustainability**

Issues like overloading and the insufficient maintenance budget of DPWH have not been resolved, after almost 10 years of project intervention, and capacity building is unlikely to be sustainable. The sustainability of the Project was therefore rated less likely.

**e. Impact (both intended and unintended)**

The assumption at appraisal that there would be no major environmental impact because all roadworks would be within the existing right-of-way was borne out during the Project. The major implementation issue was LAR, and it resulted in considerable delay. At the time of the Project Completion Review Mission, the LAR activities were not yet complete, leaving some affected persons at a disadvantage. The PCR did not include a review of socioeconomic impact. It is therefore difficult to determine if incomes indeed increased and poverty and unemployment were reduced as expected in the project framework.

## **5. Overall Assessment, Lessons, and Recommendations** (evaluator assessment)

### **a. Overall Assessment**

Given its ratings of relevant, effective, efficient, and less likely to be sustainable, the Project was rated successful.

### **b. Lessons**

The PCR identified a number of very relevant lessons to be learned from the Project and its implementation. They are summarized here, as there appears to be very little to add to them.

- (i) LAR issues must be carefully evaluated, and ADB policies must be clearly understood and included in the loan agreement.
- (ii) For more efficient implementation, it is advisable to concentrate on a specific geographic area rather than to pursue a scattered, large project.
- (iii) Long delays between design and actual construction often necessitate major modifications in the engineering designs, thus causing further delays. A related issue is the relevance and completeness of the designs.
- (iv) Project implementation arrangements would be more efficient if the project management office were provided with the authority needed to undertake procurement, supplemental agreements, and contract variations.
- (v) To avoid misuse of project vehicles, the possibility of renting or leasing these vehicles could be studied as a means of ensuring proper use and accountability.
- (vi) Complete buy-in by the agencies concerned with institutional development must precede commitments to avoid waste of resources.
- (vii) An overly optimistic implementation schedule at appraisal places an additional burden on the EA and ADB.

### **c. Recommendations**

- (i) At the project level, there is a need for additional assistance in setting up a computer-based management system for national roads, overloading, and road safety programs, as well as in completing the LAR activity of compensating the remaining affected families through disturbance allowances.
- (ii) Compliance with outstanding covenants must be followed up. In the future, all parties should strive to ensure that all covenants, especially those related to sustainability, are complied with.
- (iii) Advance action for timely land acquisition should be taken where the LAR process is complex and time-consuming.
- (iv) An effective and efficient external monitoring agent for LAR activities is essential.
- (v) In future interventions, the EA's major institutional constraints on procurement should be resolved or remedied, possibly with external assistance.
- (vi) The bridge component of the Project was only 32% completed. Considering the importance of good bridges to the highway network, DPWH should pursue the completion of this component.

## **6. Monitoring and Evaluation System Design, Implementation, and Use** (evaluator assessment)

Apart from the misunderstanding or poor consideration of the LAR requirements, the project design at appraisal was adequate. The LAR situation was discovered and corrective action taken largely through review missions to project sites. Thus, pertinent data were eventually collected and used, but because of extensive delays LAR activities were still incomplete at the time of the PCR. The Government's commitment to institutional development was misconstrued during preparation. The initiatives appear valid and should, if possible, be pursued.

## **7. Others** (safeguards, including governance and anticorruption; fiduciary aspects)

Governance emerged as an important issue in the Project. Procurement took an unusually long time and often diminished the relevance of preparatory work. The Department of Budget and Management sometimes released funds late. Some covenants were not complied with and project vehicles were misused. The EA and the Government were so slow in complying with ADB's requirements that some payments under the loan had to be suspended until compliance could be confirmed. The capacity-building efforts were only partly successful, indicating a lack of interest within the EA to implement change. The intended outcome of the piggybacked advisory TA was not achieved.

<b>8. Ratings</b>	<b>PCR</b>	<b>OED Review</b>	<b>Reason for Disagreement/Comments</b>
<b>Relevance</b>	Highly Relevant	Relevant	Quality-at-entry was affected by the absence of a clear LAR policy, poor subproject selection, and adequate government ownership.
<b>Effectiveness in Achieving Outcome</b>	Effective	Effective	About 80% of the objectives identified at appraisal were achieved. Acceptance of the EA and positive political will were correctly identified as significant risk factors.
<b>Efficiency in Achieving Outcome and Outputs</b>	Efficient	Efficient	
<b>Preliminary Assessment of Sustainability</b>	Less Likely	Less Likely	
<b>Borrower and EA</b>	Satisfactory	Satisfactory	The satisfactory rating is on the low side, reflecting the EA's lack of commitment to institutional capacity building, protracted procedures, and lack of good governance specifically regarding project vehicle use, among others.
<b>Performance of ADB</b>	Satisfactory	Satisfactory	
<b>Impact</b>	Positive	Positive	
<b>Overall Assessment</b>	Successful	Successful	
<b>Quality of PCR</b>		Satisfactory	

### 9. Comments on PCR Quality

These comments are based on:

- (i) quality and completeness of evidence and analysis to substantiate claimed ratings;
- (ii) consistency with PCR Guidelines (PAI 6.07);
- (iii) PCR candor and internal consistency, and consistency of narrative/ratings with monitoring indicators and other data;
- (iv) candid, accurate consideration of exogenous factors (positive and negative), and attribution of results; and
- (v) extent to which lessons and recommendations are based on evidence and analysis.

The PCR is well written, comprehensive, and candid. The reasons for the relative failure of the bridge component could have been more thoroughly explained and its long-term effect evaluated and recommendations made in the text, if needed. Similarly, as the capacity-building component was for the most part only partly successful, some further evaluation and recommended action would have been welcome. The inclusion of an impact assessment would have been useful in evaluating the achievement of outcomes. In this regard, the project framework selected outcomes that were not easily attributable or measurable.

The figures in Basic Data section C.1 are not consistent with those in Appendix 4 (e.g., the Basic Data section shows \$576.88 million as foreign exchange cost whereas Appendix 4 shows it as total cost). Appendix 4 also has typographical errors.

**REGIONAL DEPARTMENT'S RESPONSE TO THE PROJECT COMPLETION REPORT  
VALIDATION REPORT**

On 21 January 2008, Director, OED2, Operations Evaluation Department (OED), received the following comments from the Infrastructure Division, Southeast Asia Department.

We refer to OED's requesting our comments on the draft Project Completion Report (PCR) Validation Report for Loan 1473-PHI: Sixth Road Project. We have reviewed the draft report and have no comments.