



Validation Report

Reference Number: PVR-236
Project Number: 31304
Loan Number: 1952
December 2012

Bangladesh: Rural Infrastructure Improvement Project

Independent Evaluation Department

Asian Development Bank

ABBREVIATIONS

ADB	–	Asian Development Bank
EIRR	–	economic internal rate of return
FRB	–	feeder road type B
LGED	–	Local Government Engineering Department
PCR	–	project completion report
RRP	–	report and recommendation of the President
VOC	–	vehicle operating cost

NOTE

In this report, “\$” refers to US dollars.

Key Words

adb, asian development bank, bangladesh, highways, independent evaluation department, lessons, performance evaluation, project completion report validation, road maintenance, transport

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PROJECT BASIC DATA

Project Number:	31304	PCR Circulation Date:	Sep 2010	
Loan Number:	1952	PCR Validation Date:	Dec 2012	
Project Name:	Rural Infrastructure Improvement Project			
Country:	Bangladesh		Approved (\$ million)	Actual (\$ million)
Sector:	Transport	Total Project Costs:	112.4	123.4
ADB Financing: (\$ million)	ADF: 60.0	Loan: (SDR equivalent)	60.0	58.4
			45.5	38.5
	OCR: 0.0	Borrower:	34.0	34.0
		Beneficiaries:	0.0	0.0
		Others:	18.4	31.0
Approval Date:	2 Dec 2002	Effectiveness Date:	4 May 2003	7 Sep 2003
Signing Date:	3 Feb 2003	Closing Date:	30 Jun 2009	12 Aug 2009
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ADB = Asian Development Bank, ADF = Asian Development Fund, IED1/2 = Independent Evaluation Department (Division 1/2), OCR = ordinary capital resources, PCR = project completion report, SDR = special drawing right, SF = special fund.

I. PROJECT DESCRIPTION

A. Rationale

1. The Khulna and Barisal divisions comprise 24.1% of the total area of Bangladesh and account for 18.4% of the country's population, of which 47% lived below the upper poverty line in 2000. Efficient rural transport and supporting infrastructure, in particular improved access were essential for poverty reduction and economic development in Bangladesh. Better quality rural roads raised service levels in public transport, improved comfort, made private trips less costly, and provided savings on vehicle operating costs (VOC) of 30%–50% for all vehicles. According to the report and recommendation of the President (RRP) for the Rural Infrastructure Improvement Project,¹ the Government of Bangladesh had identified 2,100 rural markets of the estimated 8,600 rural markets as growth center markets to serve as focal points and catalysts for poverty reduction and economic and social development.

2. Improvements in the road network were expected to increase the demand for road transport in the area, leading to significant reduction in poverty. Only 39% of the feeder roads type B (FRB) and 30% of the growth center markets in the area have been improved to all-

¹ ADB. 2002. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to Bangladesh for the Rural Infrastructure Improvement Project*. Manila.

weather standard, hence, there was considerable potential for further investment in rural infrastructure. The rationale for the project was consistent with the government's strategy for rural development in emphasizing agricultural development, improving physical infrastructure, and generating income for the poor.

B. Expected Impact

3. The expected economic impacts included increased economic growth, reduced VOCs, travel time savings for road users, better access to markets and essential services, lowered prices for farm inputs and consumption goods, enhanced marketing opportunities, and more job opportunities in the road and market construction and maintenance programs. Improvements in growth center markets would allow for more efficient trading. In addition, the project was to provide reliable and regular access to education and health services. The project would maximize social benefits by targeting construction work opportunities for local people, particularly women. Based on the project framework, the impacts were to be measured by (i) an annual increase of 6% in regional gross domestic product by June 2012 and (ii) 50% reduction in spatial poverty with 44,500 households removed from the upper poverty line.

C. Objectives or Expected Outcomes

4. The RRP cited poverty reduction in 16 districts of southwest Bangladesh as the objective of the project. To achieve this objective, the project was to increase economic opportunities for the rural poor through participatory improvement of sustainable rural infrastructure, social and gender development, and better local governance in the project area. Poverty reduction was to be achieved by (i) targeting poor areas; (ii) closely involving the poor and other stakeholders, including women, in prioritizing and planning subprojects for project assistance, and maintaining rural infrastructure, while at the same time building their capacity; and (iii) indirectly assisting in the development of economic opportunities through partnership arrangements. Performance targets in the project framework required that more than 10 million people would use the all-weather roads to access economic and market opportunities by 30 June 2010, and income levels of 89,000 poor households would increase by at least 25% in constant terms by 31 December 2009.

D. Components and Outputs

5. **Rural Roads.** The project was to upgrade about 1,030 kilometers of FRBs to bitumen-surfaced standard and construct 3,000 meters (m) of bridges and culverts along them to provide all-weather access to rural growth center markets. When completed, bridges and culverts totaling another 2,000 m were to be built on other FRBs and type 1 rural roads. Women labor contracting societies were to be used to improve road shoulders, plant trees on roadsides, and maintain the roads.

6. **Rural Infrastructure.** The project was to improve 60 growth center markets and 50 boat landings. Management committees for the growth center markets were to be elected and made responsible for proper management. Small ferries were to be built to improve access in riverine areas and management committees for the boat landings and ferries were to be formed. New union council offices were to be built in 99 unions to improve local governance.

7. **Infrastructure Maintenance.** Road maintenance was to be improved through reforms, better district operations, and assignment of responsibilities to union councils for maintenance of type 2 and 3 rural roads. The government was to provide sufficient funds to maintain all roads

for which the Local Government Engineering Department (LGED) would be responsible. The project would also support policy dialogue to establish a mechanism to fund adequate and permanent road maintenance.

8. Local Government Engineering Department Capacity Building and Local Governance. LGED staff were to be trained in maintenance, procurement, financial management, and use of participatory approaches. Organizational reforms were to be introduced in the LGED to strengthen its capacity to undertake environment and social assessments, project performance management, and impact monitoring. The demarcation of responsibilities for road construction and maintenance between the Roads and Highways Department, LGED, and the union councils were to be reformed. A system for uniform financial management and procurement procedures were to be introduced in the LGED and a new gender strategy implemented. The project was to support the improvement of local governance by training members of 899 union councils in local government issues, planning, financial management, administration, and participatory methodologies, and more intensively train members of 32 pilot union councils. Union development coordination committees were to be formed in the 32 pilot union councils. Staff of subdistricts and union councils would be trained in managing and maintaining type 2 and 3 rural roads, boat landings, and ferries; and citizens' forums were to be established in each of the 32 pilot unions. A system for retaining locally generated funds from market leases for local union operations and maintenance was to be tested in the 32 pilot union councils.

9. Project Management Support. The project was to provide LGED incremental staff for project management, including implementation supervision in the field. A combination of international and domestic consulting services provided support project implementation management and capacity building.

E. Provision of Inputs

10. Project inputs comprised civil works, land acquisition and resettlement, the purchase of vehicles and equipment, consulting services, training, and surveys and studies. The estimated project cost was \$112.4 million equivalent, inclusive of physical and price contingencies, taxes and duties, and interest and service charges during construction. Foreign exchange cost was estimated at \$30.1 million, about 26.8% of the total cost. Local currency cost was estimated at \$82.3 million equivalent, including \$6.8 million for taxes and duties, or about 73.2% of the total cost. Asian Development Bank (ADB) was to provide a loan of \$60.0 million from its special funds resources to finance 53.4% of the project cost. The loan was to finance 78.1% of the total foreign exchange cost and 44.4% of the total local currency cost. The Government of Germany was to provide a grant of \$11.9 million (10.5% of the project cost) through KfW and \$5.0 million (4.5% of the project cost) equivalent through GTZ. The Government of Bangladesh was to provide \$34.0 million equivalent, or 30.3% of the project cost, and union councils were to provide \$1.5 million equivalent, or 1.3% of the project cost.

F. Implementation Arrangements

11. The LGED was the executing agency. The existing interministerial steering committee established under ADB's ongoing Third Rural Infrastructure Development Project provided project implementation oversight. The project was implemented by a project management office that LGED established at its headquarters, led by a project director, and in LGED's Jessore and Barisal district offices, headed by a deputy project director. Consultants with expertise in engineering, finance and accounting, social and gender development, and capacity building and

local governance staffed the project management office. The project was implemented over a 6-year period beginning in the second quarter of 2003. The loan utilization period was terminated on August 2009.

12. ADB-financed goods, related services, and civil works were to be procured following ADB procurement guidelines.² Two groups providing consulting services were to facilitate project implementation and strengthen the LGED and improve local governance. Infrastructure implementation consultants were to provide consulting services for engineering design, planning, tender evaluation, supervision, and monitoring of project works. Another group of consultants was to provide capacity building and local governance support.

13. Training under several ADB and externally financed projects, mitigated risks from using inexperienced local contractors to carry out the civil works. Measures such as advance procurement action, use of ADB's standard tender documentation, and strengthened project management arrangements would minimize potential delays in project implementation. The introduction of a guaranteed mechanism for funding road maintenance was expected to significantly reduce the risk of inadequate maintenance.

14. Appendix 8 of the project completion report (PCR) contains 49 covenants associated with the loan for the project.³ Most covenants were related to project implementation, counterpart financing, and reporting requirements.

II. EVALUATION OF PERFORMANCE AND RATINGS

A. Relevance of Design and Formulation

15. The PCR essentially repeated the RRP's rationale for the project and concluded that the project was consistent with the government's development priorities and that its objectives were highly relevant for accelerating agricultural, economic, and social development in the project area. In the PCR's view, the project was well conceived to combat rural poverty in the project area. However, the justification for the PCR's *highly relevant* rating should have been more thoroughly argued. Moreover, the designed benefit and monitoring evaluation system was not assessed to gauge its relevance to the overall project. Overall, the project design lacked exceptional value-adding features that substantiate the *highly relevant* rating. For these reasons, this validation downgrades the rating to *relevant*.

B. Effectiveness in Achieving Project Outcomes

16. The PCR rated the project *highly effective* in achieving outcomes. To support this rating, the PCR cited improvements in physical infrastructure that resulted in increases in traffic flow by 140% for motorized traffic and 50% for nonmotorized traffic. In addition, the PCR claimed that (i) the project encouraged farmers to produce high-value crops and cash crops; (ii) 9.8 million people using the all-weather roads gained access to economic and market opportunities; and, (iii) incomes of 95,200 poor households increased by 25% in constant terms. However, the PCR gave no evidence that farmers were encouraged to produce high-value crops and cash crops. The PCR pointed to other achievements to support the *highly effective* rating; but these were essentially project outputs that were expected to underpin outcomes.

² ADB. 2010. *Procurement Guidelines*. Manila.

³ ADB. 2010. *Completion Report: Rural Infrastructure Improvement Project in Bangladesh*. Manila.

17. Although all physical infrastructure targets were achieved or exceeded, the PCR provided little evidence that the expected outcomes, items (ii) and (iii) in para. 16 were solely a result of project intervention. The project framework in Appendix 13 of the PCR indicated that outcomes were based on terminal survey results of benchmark monitoring and evaluation. However, the PCR did not assess the benchmark monitoring and evaluation system. It was not possible, therefore, to verify whether the system was appropriately designed or implemented and whether the results of the system were valid. For example, some or all of the 25% increase in incomes may have been the result of a generally good economic environment in Bangladesh and not only a result of the project. Given these shortcomings, this validation rates the project *effective*.

C. Efficiency of Resource Use in Achieving Outputs and Outcomes

18. The PCR rated the project *efficient* in achieving outcomes and outputs. It reevaluated the economic internal rate of return (EIRR) of the project with an EIRR of 38.1%, more than the 22.8% indicated in the RRP. The PCR gave little background information regarding the methodology and assumptions used in the calculation. For example, the PCR did not give an overview of the counterfactual—the without-project scenario. It did not discuss how project output was valued in terms of existing, generated, and diverted traffic. The valuation of VOCs and passenger time savings was not discussed. The PCR stated that financial prices were converted into economic prices using a standard conversion factor of 0.9. Shadow pricing of inputs and outputs did not seem to consider taxes or indicate whether they were traded or nontraded.

19. Resource mobilization was adequate and timely. Except for the first 2 years, disbursements were efficient and often exceeded projections. The government and local government institutions contributed their respective share toward infrastructure development and operational costs as agreed at appraisal. The project was implemented over a 7-year period, beginning in July 2003 and ending on 30 June 2010, with only a 1-year delay from the RRP's estimated completion date. No significant procurement problems were encountered in packaging the contracts, preparing tender documents, and evaluating bids for equipment and vehicles. Procurement costs did not exceed the RRP estimate. Consultants performed satisfactorily. Therefore, this validation concurs with the PCR rating of *efficient*.

D. Preliminary Assessment of Sustainability

20. The PCR rated the project *likely sustainable*. It stated that the government was gradually and steadily increasing its budget for maintenance of the completed facilities, thus reflecting the government's intention to maintain the project facilities and achieve sustainability. However, this statement is at odds with the RRP's statement that "the project will require the government to close the gap in funding for maintenance by providing sufficient funds to maintain all roads for which LGED is responsible." This implies that adequate maintenance was required for more than just the project facilities. The PCR then stated that "... the gap between the required funds and the allocation widened ...". Some data was provided on the growth of maintenance funding in nominal terms over 17 years in the case of the LGED as a whole and over 6 years for the project area, but it was not possible to determine whether maintenance funding grew in real terms. Given the PCR's statement that funding gap widened, project sustainability seems at risk. Therefore, this validation downgrades the sustainability rating to *less than likely*.

E. Impact

21. The PCR stated that about 10 million rural people of the project area were using the all-weather roads to access economic and market opportunities. Job opportunities increased and surplus farm labor moved into the nonfarm sector, making families less dependent on their land holding size. The income of 95,000 poor households increased by 25%. Infrastructure improvement and maintenance generated 82,000 person-years of employment. There was a modal shift from nonmotorized to motorized vehicles and road improvements reduced travel time by 27% for trucks and 69% for motorcycles. Travel time for passengers was also considerably reduced. The number of shops along the roadside increased by 276%. Roadside markets also increased, from 49 to 61 along 14 project roads. Student enrollment in roadside educational institutions increased by 28.4% per kilometer from the baseline survey to the terminal survey. Average roadside land value along the project roads increased by 88%, from about Tk5,000 to Tk9,500 per one-hundredth acre. The PCR did not rate impact. However, it is not clear to what extent these impacts were a result of the project only. Therefore, this validation rates impact as *significant*.

III. OTHER PERFORMANCE ASSESSMENTS

A. Performance of the Borrower and Executing Agency

22. The PCR stated that overall performance of the borrower and the LGED in implementing the project was satisfactory.⁴ The borrower assumed responsibility for its obligations and the LGED implemented the project on time. Furthermore, allocations of counterpart project funds were timely and adequate. It also ensured that local government bodies contributed 10% in cash for construction costs. However, the maintenance budget did not meet the LGED's growing requirements, and the gap widened between the demand for funds for road maintenance and the actual allocation. The LGED acted promptly on requests from and recommendations of the review missions. Cooperation between ADB and the LGED was relatively good, and ADB presented the project team with awards for outstanding performance in 2005, 2007, and 2008. This validation concurs with the PCR's *satisfactory* rating.

B. Performance of the Asian Development Bank

23. The PCR stated that ADB responded promptly to the government's request to prepare the project under a technical assistance grant. ADB fielded 13 missions, including 9 review missions to monitor implementation, assess progress, and identify problems through field visits and discussions with the government, LGED, project consultants, and other stakeholders, including beneficiaries. ADB monitored closely and acted promptly on requests for approval, disbursement, and modifications, as needed from time to time and resolved implementation matters through discussions with cofinanciers. The PCR did not rate ADB performance. Given the PCR's assessment and the absence of major issues, this validation rates ADB performance as *satisfactory*.

C. Others

24. **Environmental Impact, Land Acquisition, and Resettlement.** The PCR adequately discussed measures taken to minimize negative environmental impacts and mentioned that only

⁴ The project was investigated by ADB's Office of Anticorruption and Integrity but the case was closed.

a small amount of land was acquired and resettlement was not required.

25. **Gender.** The PCR adequately demonstrated the project's gender impact: 12,478 disadvantaged women attended 759 training courses to ensure economic self-sufficiency, and the increase in the ratio of female workers to 19% in Barisal Division and 25% in Khulna Division in 2008 versus 0% in Barisal Division and 14% in Khulna Division in 2004.

IV. OVERALL ASSESSMENT, LESSONS, AND RECOMMENDATIONS

A. Overall Assessment and Ratings

26. The PCR rated the project as *successful* and this validation concurs with the rating (see table). However, the ratings on relevance, effectiveness, and sustainability were downgraded. The designed benefit and monitoring evaluation system was not assessed to gauge its relevance to the overall project. The PCR did not provide sufficient evidence that the project was *highly effective*. It did not demonstrate that the outcomes achieved were solely the result of the project and erroneously pointed to outputs in support of its effectiveness rating. The funding gap for maintenance widened when the project was completed, therefore, sustainability was at risk. This validation downgraded the sustainability rating to *less than likely*.

OVERALL RATINGS

Criteria	PCR	IED Review	Reason for Disagreement and/or Comments
Relevance	Highly relevant	Relevant	The designed benefit and monitoring evaluation system was not assessed to gauge its relevance to the overall project (para. 15).
Effectiveness in achieving outcomes	Highly effective	Effective	The PCR did not provide concrete evidence that outcomes were mainly attributable to the project (para. 17).
Efficiency in achieving outcomes and outputs	Efficient	Efficient	
Preliminary assessment of sustainability	Likely sustainable	Less than likely sustainable	Maintenance funding gap widened, putting project sustainability at risk (para. 20)
Overall assessment	Successful	Successful	
Borrower and executing agency	Satisfactory	Satisfactory	
Performance of ADB	No rating	Satisfactory	ADB closely monitored the project and coordinated well with other donors (para. 23).
Impact	No rating	Significant	Refer to para. 21.
Quality of PCR		Satisfactory	Refer to para. 30.

ADB = Asian Development Bank, IED = Independent Evaluation Department, PCR = project completion report.

Note: From May 2012, IED views the PCR's rating terminology of "partly" or "less" as equivalent to "less than" and uses this terminology for its own rating categories to improve clarity.

Source: ADB Independent Evaluation Department.

B. Lessons

27. The PCR identified four lessons pertaining to the following: (i) early procurement action of contract packages and recruitment of consultants, (ii) the need to reduce the time in

producing subproject appraisal reports; (iii) responsibility for managing low-cost water supply operations; and (iv) the cultural aspects of women working with men. This validation concurs with these lessons.

C. Recommendations for Follow-Up

28. The PCR recommended that ADB monitor the government's allocation of funds for maintenance to ensure that respective covenants are achieved and proposed that ADB provide further assistance to reduce poverty in the project area. The following general recommendations were included: (i) flexibility for additional works identified during implementation, (ii) additional boat landings in future projects, (iii) review the need for insurance to cover project risks, (iv) project design to take into account climate change, (v) advance action for recruitment of consultants in future projects and the early fielding of consultants, and (vi) replication of the low-cost water supply scheme at Haibatpur growth center. This validation concurs with these recommendations.

V. OTHER CONSIDERATIONS AND FOLLOW-UP

A. Monitoring and Evaluation Design, Implementation, and Utilization

29. Although the project provided for a benefit monitoring and evaluation system, the PCR gave no assessment of its design, implementation, and utilization.

B. Comments on Project Completion Report Quality

30. The PCR was generally well written, concise, clear in its discussions, and consistent with ADB guidelines. Although safeguards and gender issues were discussed, the PCR omitted discussion on governance, corruption, fiduciary aspects, and the government's PCR, possibly because the PCR guidelines do not require these discussions. The quality of identified lessons and recommendations was satisfactory. The PCR's main shortcoming, however, was the lack of substantiation of the rating for the effectiveness criterion. The PCR also used results of the benefit monitoring and evaluation system to justify the rating without first assessing the system. There was insufficient discussion of methodology and assumptions of the EIRR calculation. Overall, the quality of the PCR is *satisfactory*.

C. Data Sources for Validation

31. The sources of data for this validation consist of (i) the project RRP, (ii) back-to-office reports and aide memoires of ADB missions and related correspondence, (iii) ADB PCR, and (iv) the government's PCR.

D. Recommendation for Independent Evaluation Department Follow-Up

32. The PCR recommends that a project performance evaluation report be undertaken. The main issue with the project, as with most road projects in Bangladesh, is maintenance funding and sustainability. Furthermore, this validation raised some concerns on the PCR effectiveness and efficiency ratings, citing several issues concerning attribution, methodologies, and assumptions. Therefore, this validation suggests that a project performance evaluation report be considered.