



# Validation Report

---

Reference Number: PVR-316  
Project Number: 32203  
Loan Number: 1870  
September 2014\*

## India: West Bengal Corridor Development Project

Independent Evaluation Department  
**Asian Development Bank**

\* Revised May 2015.

## ABBREVIATIONS

ADB	–	Asian Development Bank
EIRR	–	economic internal rate of return
FYP	–	five-year plan
GWB	–	Government of West Bengal
IED	–	Independent Evaluation Department
km	–	kilometer
MORTH	–	Ministry of Road Transport and Highways
PCR	–	project completion report
PIU	–	project implementation unit
RARs	–	rural access roads
WBPWRD	–	West Bengal Public Works (Roads) Department

## NOTE

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

### Key Words

adb, asian development bank, independent evaluation department, india, lessons, performance evaluation, project completion report, road maintenance, roads, transport

The guidelines formally adopted by the Independent Evaluation Department (IED) on avoiding conflict of interest in its independent evaluations were observed in the preparation of this report. To the knowledge of IED management, there were no conflicts of interest of the persons preparing, reviewing, or approving this report.

In preparing any evaluation report, or by making any designation of or reference to a particular territory or geographic area in this document, IED does not intend to make any judgments as to the legal or other status of any territory or area.

## PROJECT BASIC DATA

<b>Project Number:</b>	32203	<b>PCR Circulation Date:</b>	Oct 2012	
<b>Loan Number:</b>	1870	<b>PCR Validation Date:</b>	Sep 2014	
<b>Project Name:</b>	<b>West Bengal Corridor Development Project</b>			
<b>Country:</b>	India		<b>Approved</b> (\$ million)	<b>Actual</b> (\$ million)
<b>Sector:</b>	Transport and ICT	<b>Total Project Costs:</b>	323.00	133.60
<b>ADB Financing:</b> (\$ million)	<b>ADF:</b> 0.00	<b>Loan:</b>	210.00	79.20
		<b>Borrower:</b>	113.00	54.40
	<b>OCR:</b> 210.00	<b>Beneficiaries:</b>	0.00	0.00
		<b>Others:</b>	0.00	0.00
<b>Cofinancier:</b>		<b>Total Cofinancing:</b>	0.00	0.00
<b>Approval Date:</b>	11 Dec 2001	<b>Effectiveness Date:</b>	11 Mar 2003	7 Jan 2003
<b>Signing Date:</b>	10 Dec 2002	<b>Closing Date:</b>	30 Jun 2007	23 Jun 2011
<b>Project Officers:</b>	T. Kandiah A. Akanda A. Bajaj S. Tsukada P. Dutt	<b>Location:</b> India Resident Mission India Resident Mission India Resident Mission India Resident Mission India Resident Mission	<b>From:</b> Mar 2002 Sep 2002 Jun 2005 Oct 2005 Nov 2007	<b>To:</b> Aug 2002 May 2005 Sep 2005 Oct 2007 Jun 2011
<b>Validators:</b>	J. Supangco, Consultant F. D. De Guzman, Evaluation Officer, IED2	<b>Peer Reviewer:</b>	P.V. Srinivasan, Evaluation Specialist, IED2	
<b>Quality Reviewer:</b>	B. Nguyen, Senior Evaluation Specialist. IED2	<b>Director:</b>	B. Finlayson, IED2	

ADB = Asian Development Bank; ADF = Asian Development Fund; ICT = information and communications technology; IED2 = Independent Evaluation Department, Division 2; OCR = ordinary capital resources; PCR = project completion report.

## I. PROJECT DESCRIPTION

### A. Rationale

1. The West Bengal north–south transport corridor extends from Haldia port via Kolkata to the northern parts of West Bengal. The corridor divides into routes to Nepal and Sikkim in the west; and Assam, Bhutan, and the northeastern states of India in the east.<sup>1</sup> A large portion of the West Bengal corridor and the eastward links to Bangladesh were in deteriorated two-lane, intermediate lane, and single-lane standard. The National Highway 34 (NH-34), which forms the spine of the transport system in the corridor, provides the nearest access to ports (Kolkata and Haldia) for the northeastern states of India and neighboring Bhutan and Nepal. Two state highways provide links from the border with Bangladesh to the north–south corridor and the Indian national road network. An efficient transport system along the north–south corridor would provide the basis for economic growth and poverty reduction in West Bengal and have significant implications for improving subregional economic cooperation. Connectivity through improved transport has important implications for poverty reduction, as new economic opportunities through improved market linkages and employment possibilities could be generated.

<sup>1</sup> ADB. 2001. *Report and Recommendation of the President: Proposed Loan to India for the West Bengal Corridor Development Project*. Manila.

2. At the time of project preparation, road transport, the dominant mode of transport in the state of West Bengal, had a primary network of 17,623 kilometers (km) consisting of 1,966 km of national highways, 3,388 km of state highways, 5,833 km of major district roads, and 6,436 km of other district roads. Of the primary network, 95% was paved. The state had a village and urban road network of 35,600 km, with 47% of the villages connected. Most of the primary network was constructed before the 1980s. According to the report and recommendation of the President (RRP), “the capacity constraint of the road network has been exacerbated by inadequate attention to, and funding for, network maintenance, which hastened the deterioration of the state road system”. Funding for road maintenance was less than 50% of the requirement in the last decade. There was a need for the funding gap for maintenance to be progressively reduced. Likewise, there was a need for the development of an effective road management system to maintain the existing road assets.

3. A 1998 Asian Development Bank (ADB) technical assistance (TA) was provided to the Government of West Bengal (GWB) for the preparation of a strategy and investment plan to develop the north–south corridor. It was completed in June 2000. It identified a number of high-priority multimodal transport infrastructure components for financing and implementation, with NH-34 as the highest priority component in terms of economic development and poverty reduction impact, strategic importance, and suitability for public funding. Two other priority components were the connections between Haldia and Kolkata and the national highway network, which were preparing detailed feasibility studies.

## **B. Expected Impact**

4. The project was expected to reduce poverty in the project area by promoting economic growth and subregional cooperation. The impact indicators were economic development and improved infrastructure in the north–south corridor and subregional economic growth and social development.

## **C. Objectives or Expected Outcome**

5. The project’s expected outcome was a developed transport infrastructure in the north–south corridor. The outcome indicators were: (i) reduced transport costs by 15%, (ii) reduced travel time by 34%, (iii) decrease in traffic congestion in urban areas, (iv) reduced occurrence of accidents, (v) increased rural incomes and reduced unemployment rate, and (vi) improved access to health services and schools. The other expected project outcome was an improved policy environment for the efficient delivery of transport infrastructure. The outcome indicators were: (i) institutional development strategy for the Public Works Department, (ii) options for improved road financing, (iii) improved corridor and transport sector management, and (iv) private sector development through a pilot public–private partnership project and policy framework for private participation.

## **D. Outputs**

6. The project was designed to improve the two-lane standard in 370 km of NH-34 from Barasat–Raiganj (a corridor access component). Also, about 150 km of state highways from SH-1: Chakda–Bangaon and SH-10: Gajol–Hilli (subregional connectivity) were to be rehabilitated and improved to two-lane standard with asphalt concrete pavements and paved shoulders. The third output—rural access roads (RARs)—was improvement on roads, small bridges, and other rural infrastructure, which was to provide rural communities access to major roads.

## **E. Provision of Inputs**

7. The initial project design was prepared through three TA projects with a combined value of \$450,000 (i.e., 0.13% of the appraisal project cost and 0.34% of actual project cost) conducted in 2001.<sup>2</sup> At appraisal, the estimated project cost was \$323 million equivalent. Foreign exchange cost was estimated at \$204 million (63%), while local currency cost, including taxes and duties, was estimated at \$119 million equivalent (37%). The Government of India requested and ADB agreed to provide a \$210 million (65% of total project cost) loan to finance the entire foreign exchange cost of \$204 million and \$6 million equivalent of local currency cost. The central government and the GWB were to provide the remaining local currency cost of \$113 million equivalent. The portion of the loan relating to the state highways and RAR components for \$61.3 million, was to be lent to GWB. At project completion, the actual total project cost was \$133.6 million, of which \$79.2 million was a loan from ADB and \$54.4 million in government contribution.

8. The project environmental impact was assessed as Category B. The initial environment examination report at appraisal indicated the project would not have significant adverse environmental impacts (RRP, Appendix 9). The project implementation unit (PIU) was strengthened with environmental staff, and an environmental monitoring cell was established to implement the environmental mitigation and monitoring plan. Resettlement plans were prepared. All statutory environmental clearances and approvals for the subprojects were obtained, and the environmental clearance conditions were complied with. The project completion report (PCR)<sup>3</sup> indicated that there were no complaints received from the public on environmental issues.

9. Consulting services were provided to assist the Ministry of Road Transport and Highways (MORTH) implement the improvement works at NH-34, and the GWB implement the improvement of state highways 1 (SH-1) and 10 (SH-10) and the RARs. For Contract 1–NH-34, 375 person-months of international and 2,385 person-months of domestic consultants were estimated. For Contract 2–SH-1, SH-10, and RARs, 90 person-months of international and 1,530 person-months of domestic consultants were to be utilized (RRP, Appendix 8, Table A8.3). At project completion, 5,877.5 person-months of consulting services were provided, including 162.9 person-months for international and 5,714.6 person-months for domestic consultants (PCR, para. 20).

10. The project was to be implemented over 60 months, inclusive of design and pre-construction activities, with planned completion by June 2007. The project's actual completion was June 2011, 4 years after the planned completion date.

## **F. Implementation Arrangements**

11. MORTH was the executing agency for the national highway component, and West Bengal Public Works (Roads) Department (WBPWRD) for the state highway and RAR components. The PCR noted both MORTH and WBPWRD had previous experience in implementing ADB projects in the road subsector. PIUs were established to implement the

<sup>2</sup> The three TAs were: (i) TA 3538-IND: Preliminary Engineering for the West Bengal Corridor Development Project for \$150,000, approved on 13 November 2000; (ii) TA 3539-IND: Resettlement and Environmental Assessment for the West Bengal Corridor Development Project for \$150,000, approved on 13 November 2000; and (iii) TA 3540-IND: Economic and Poverty Analysis for the West Bengal Corridor Development Project for \$150,000, approved on 13 November 2000.

<sup>3</sup> ADB. 2012. *Completion Report: West Bengal Corridor Development Project in India*. Manila.

project, to be staffed with experienced personnel, and were to be delegated sufficient administrative authority. The staff received contract management and social development training, including resettlement under two ADB advisory TA projects.

12. The PCR noted that the PIU for the state highway and RAR components was established in 1997 to implement a World Bank project and it was subsequently designated to implement the project in 2002. With the assistance of consultants, the PIU implemented all aspects of the project including preparation, contract and financial management, construction supervision, and environmental and safeguard measures, among other things.

13. The project had significant delays as WBPWRD was unable to fully mobilize the PIU and procure consultants even with advance action approved by ADB. Some civil works contracts were terminated due to poor performance and re-procurement contributed to the delays. In addition, land acquisition for some road sections was delayed due to court cases and disputes (PCR, paras.13–14). Of the 15 loan covenants, 12 were complied with and three were partially complied with. The covenant on benefit and monitoring and project performance monitoring system was partially complied with. The GWB had partially complied with the covenant on formulating a comprehensive, fully integrated road infrastructure development strategy and road financing master plan, and the covenant on addressing vehicle overloading.

14. In 2005, MORTH, in consultation with GWB, informed the Department of Economic Affairs and ADB of the government's decision to upgrade NH-34 to four lanes. This change was intended to align NH-34 with the government's overall strategy of upgrading major national highways to four lanes. The change would require new detailed designs and other pre-project activities, including additional land acquisition and resettlement plans. The PCR indicated this option was not considered to be practical under the loan, given the loan closing schedule and the time that already elapsed. Therefore, ADB agreed to cancel this component of the loan totaling \$116.3 million (PCR, para. 6).

15. During project preparation, a detailed social analysis was carried out in accordance with ADB guidelines. The principal adverse social impact was the dislocation of the roadside small business enterprises. A 2001 census generated a full inventory of assets and nature of losses by those to be relocated. A total of 9,200 small business enterprises, 1,300 households, and 452 community properties were to be affected. These parties were largely informal settlers and encroachers on the right-of-way, particularly around bus stops, road intersections, rural markets, and town centers.

16. The PCR indicated that at appraisal, the resettlement plans were prepared mainly based on the preliminary socioeconomic assessment, which resulted in a large variation in the estimated number of affected people and utility relocations during implementation. The PCR indicated that compensation and assistance were provided even to people with no land titles but were considered to be affected by the project in accordance with ADB guidelines. Compensation and special assistance to vulnerable people was also monitored.

17. As of 2012, the PCR noted the following: (i) 5.7 hectares of land was acquired for the state highways (no land acquired for the RARs); (ii) 7,141 people were affected, including 1,576 legal land title holders and 5,565 informal dwellers and small business enterprises; (iii) 399 legal land title holders made voluntary land donations of 2.48 hectares for the RARs; (iv) 102 common property resources were restored or replaced; (v) total costs were Rs113.47 million, including Rs73.35 million for the acquisition of land and assets, and Rs40.12 million for resettlement and rehabilitation; (vi) all compensation and assistance costs for affected people were disbursed;

and (vii) most of the affected people (98%) rebuilt their shops and business establishments and are earning their livelihood in the same place (PCR, para. 38).

## II. EVALUATION OF PERFORMANCE AND RATINGS

### A. Relevance of Design and Formulation

18. The PCR rated the project *highly relevant*. It noted the project was consistent with the government's strategy for economic growth and poverty reduction by developing highways and RARs. India's 9th to 12th five-year plans (FYP) consistently aimed to achieve a balanced development of the road network—comprising the primary (national highways and expressways), secondary (state highways and major district roads), and rural roads.<sup>4</sup> The plans aimed at phased removal of deficiencies in the existing NH network with emphasis on upgrading high-density corridors into four lanes, and improving the quality of life in rural areas. These were intended to ensure balanced regional development by achieving the PMGSY target of providing connectivity through all-weather roads to all habitations with a population of over 500 persons (as per the 2001 census).<sup>5</sup>

19. The PCR noted the ADB country partnership strategy (CPS) for India supported the government's efforts addressing some of the constraints identified in the 9th, 10th, and 11th FYPs, including strengthening the infrastructure development of the poorer states, regional cooperation, and promoting public–private partnerships in infrastructure. The ADB Country Partnership Strategy 2013–2017 for India supported India's 12th FYP by focusing on infrastructure development to support more rapid growth, attract private investment, improve connectivity, and create and improve access to jobs and investments anchored on the South Asia Subregional Economic Cooperation program with emphasis on economic corridors.<sup>6</sup> Road transport is the dominant mode of transport in the state of West Bengal (para. 2). The project responded to the needs of the existing system by improving the quality of state highways and rural roads.

20. The validation notes that ADB funding for the corridor access component was cancelled. At appraisal, about 370 km of NH-34 were proposed for upgrading to two-lane standard. However, in December 2005, during implementation, the government decided to upgrade NH-34 to four lanes using its own funds, to align NH-34 with the overall national strategy of upgrading major national highways to four-lane standards. The cancellation resulted in a significant reduction in project outputs (removal of 370 km highway) and loan size (cancelled \$231 million of \$323 million). It also meant initial works for land acquisition and resettlement under NH-34 during January 2003–December 2005 were foregone. The total cost reduction was Rs41.5 million (PCR, footnote 8).

<sup>4</sup> Planning Commission, Government of India. *9th Five Year Plan, 1996–2001; 10th Five Year Plan, 2002–2007; 11th Five Year Plan, 2007–2012; 12th Five Year Plan, 2013–2017*. New Delhi.

<sup>5</sup> Pradhan Mantri Gram Sadak Yojanawas (PMGSY) was launched in October 2000. Its primary objective is to provide connectivity, by way of all-weather roads, to the unconnected habitations in the rural areas, so that habitations with a population of 1,000 and above are covered in a span of 3 years (2000–2003). All unconnected habitations with a population of 500 persons and above are to be covered by the end of the 10th plan period (2007). As to the hill states (north–east, Sikkim, Himachal Pradesh, Jammu and Kashmir, Uttarakhand) and the desert areas, the objective is to connect habitations with a population of 250 persons and above. The program, as a related objective, also aimed to achieve an equitable development of the rural roads network in different states and/or districts so as to fully exploit the latent potential for rural growth. The PMGSY is being implemented as a 100% centrally sponsored scheme (Planning Commission, Government of India. 2007. *10th Five Year Plan, 2002–2007*. New Delhi).

<sup>6</sup> ADB. 2013. *Country Partnership Strategy: India, 2013–2017*. Manila.

21. During the validation process, the South Asia Regional Department (SARD) explained that a four-lane option was considered at appraisal but was not adopted because it was not economically viable and the two-lane alternative was found to be the least cost solution at that time. Also, government was not ready to conceptualize the entire road development plan during that period. The upgrade of NH-34 was expected to be done incrementally by widening from two to four-lanes after 2015 when the two-lane road reaches its capacity (RRP, Appendix 11, footnote 1).

22. The validation recognizes the decision to upgrade NH-34 to four lanes ahead of time was made by the government. Also, as explained by SARD, given the remaining project time, it was not possible for ADB to finance the four-lane upgrade and therefore the NH-34 component was cancelled from the loan. However, the validation is of the view that the government's plan to upgrade the NH-34 to four lanes just 3 years after the project was approved should have been generally anticipated during the project preparatory stage since the NH-34 was the spine of the north-south transport system and the government's strategy to upgrade major national highways to four-lane standards was already indicated in the 9<sup>th</sup> Five Year Plan of India for 1997–2002.<sup>7</sup> The cancellation of the project's main component reduced more than two thirds of the target outputs. At completion, the \$323 million project became \$133.6 million (41% of original design) and ADB's loan reduced from \$210 million to \$79.3 million (38% utilization), largely due to the cancellation of the NH-34 component. This huge reduction in the project scope implied an inadequate sector assessment during preparation and a significant shortcoming in the project design. The validation agrees with the PCR that the state highways and the RAR components remained relevant to the objectives of boosting economic development in the project area. On these bases, the validation considers a *highly relevant* rating unjustified and assesses the project *relevant*.<sup>8</sup>

## **B. Effectiveness in Achieving Project Outcome and Outputs**

23. The PCR rated the project *effective* in achieving its purposes and outcomes. It indicated that the project improved 149.2 km of the state highway, some 9.2 km more than the 140 km target. It also indicated that vehicle travel speeds on the project roads improved to about 60–80 km per hour (from 20–50 km per hour before the project), resulting in travel time savings (PCR, para. 27). For the RAR component, the PCR indicated that 81.7 km was improved out of a target of 100 km. Most roads were in very poor condition before the project with some sections prone to disruption during the rainy season. It indicated that the average vehicle travel speed of 40–60 km per hour reduced both travel time and transport costs, and stimulated transport related services. Rural incomes increased by 10%–15% per year upon completion of the project roads (PCR, para.27).

24. The PCR indicated some gains in reducing transport costs and travel time for the remaining components. Based on the traffic counts, the annual average daily traffic in 2011 was 2,382 vehicles on SH-1 and 2,934 on SH-10 (PCR, Appendix 10, Table A10.1). These traffic flows were about two thirds of the 2010 traffic forecasts of 3,228 and 4,575 for SH-1 and SH-10, respectively (RRP, Appendix 11, Table A11.3). The PCR claimed improved access to health services and schools, but did not provide supporting data. In addition, the validation notes that at project completion, 12 of the 15 loan covenants were complied with, while the other three covenants were partially complied with (PCR, Appendix 8). These were: (i) the covenant on

<sup>7</sup> Government of India. 1997. 9<sup>th</sup> Five Year Plan Document. Planning Commission. New Delhi. <http://planningcommission.nic.in/plans/planrel/fiveyr/9th/vol2/v2c7-1.htm>

<sup>8</sup> The regional department disagrees with the downgrade of the PCR rating.



performance monitoring data (the report submitted in 2012 was too simple for future monitoring); (ii) the covenant on road infrastructure development strategy including road maintenance strategy and road financing master plan (as at PCR preparation, work to formulate the strategy was still ongoing); and (iii) the covenant on vehicle overloading on RARs (concrete measures did not seem to have been undertaken). The validation is of the view that the project underperformed in the remaining components and that the project's overall expected outputs and outcomes were not fully achieved. On these bases, the validation assesses the project *less than effective*.<sup>9</sup>

### C. Efficiency of Resource Use in Achieving Outcome and Outputs

25. The PCR rated the project *efficient*, given the results of the economic reevaluation, despite an extended project implementation period. The PCR noted that after project completion, traffic flow increased and better traffic flows are expected once the NH-34 is upgraded into four lanes. Traffic on SH-1 and on SH-10 had increased, but was lower than forecast at appraisal (para. 24). Since the appraisal did not make any forecast on RAR traffic, no comparison was made for the RAR component.

26. The validation notes a four-year delay in project completion (Target: June 2007; Actual: June 2011). Implementation activities were delayed by the shortage of PIU staff and procedural delays. Some civil works contracts were terminated due to poor performance resulting in repeated procurements. Land acquisition for some road sections was delayed due to court cases and disputes. Civil works were completed in January 2010 for SH-1, June 2011 for SH-10, and between August 2008–June 2011 for the RARs. Moreover, the actual cost for the remaining components and, despite the under achievement of RAR km, was 45% higher than the estimated cost at appraisal (Appraisal: \$92 million; Actual: \$133.6 million). In addition, as a result of the cancellation of NH-34, the GWB incurred a cost of Rs41.5 million for land acquisition and resettlement (PCR, footnote 8). The implementation delays had resulted in the investment cost flow of over 9–10 years and delayed the benefit flows by several years.

27. The PCR recalculated the economic internal rate of return (EIRR) using the same methodology at appraisal, but it added 20% to the vehicle operating cost and time cost savings to reflect other benefits such as socioeconomic development in the project area, poverty reduction, and maintenance cost savings (PCR, Appendix 10, para. 4). The validation considers such added benefits arbitrary and not justified. Moreover, the PCR did not adjust the benefit flows to the actual opening to service of the project roads. To correct the EIRR for these factors, the validation recalculated the EIRRs using the data provided in the PCR (Appendix 10, Table A10.3-Table A10.6), assuming no additional benefits and adjusting for civil works completion conservatively by 2 years based on the work schedule provided in Appendix 6 of the PCR. The resulting EIRRs for the whole project, SH-1, SH-10, and RARs were 11.2%, 9.8%, 12%, and 9.6%, respectively, compared to 17.1%, 15.9%, 16.9%, and 19.3% as reported in the PCR (PCR, para. 30). The project turned out hardly economically viable and therefore, the validation assesses the project *less than efficient*.<sup>10</sup>

### D. Preliminary Assessment of Sustainability

28. The PCR rated the project *likely to be sustainable*. In West Bengal, the WBPWRD is responsible for road maintenance. It has a well-developed institutional framework for road

<sup>9</sup> The regional department disagrees with the downgrade of the PCR rating.

<sup>10</sup> The regional department disagrees with the downgrade of the PCR rating.

maintenance, with routine maintenance undertaken by its regional field offices, and large maintenance projects, including periodic maintenance implemented through procurement managed at its headquarters. The state government constituted a road advisory board that will formulate state road policy and strategic planning, prepare a sector road map, and set benchmarks for quality standards. To enhance financing for road development, the government passed the West Bengal Transport Infrastructure Development Fund Act 2002. The revenue collected is shared between the WBPWRD and the State Transport Department on a 60:40 basis. According to the WBPWRD, the current allocation for road maintenance is higher than the average allocation for the past 5 years and adequate funds will be provided for the maintenance of project roads (PCR, para. 32). To control overloaded vehicles, the WBPWRD coordinates with district administrations to check axle load, in consultation with the Transport Department. The PCR noted that the loan covenant on a road infrastructure development strategy was partially complied with. Likewise, the formulation of the strategy, including a road financing master plan, was ongoing at the time of PCR preparation (PCR, Appendix 8).

29. This validation notes that the PCR did not show whether or not road maintenance funds have been provided after project completion. However, according to the India Resident Mission,<sup>11</sup> the road stretches, as improved by ADB funding under the project, were all turned over to the concerned local divisions of the Public Works Department. As reported by the concerned local officers, the pavement conditions are good and are being maintained by the budgetary provision of the department. Releases of the West Bengal budget for 2014–2015 indicated that nearly Rs17.8 billion were allocated to the Public Works Department and Rs4 billion to the Transport Department.<sup>12</sup> In view of these findings, this validation assesses the project *likely sustainable*.

## E. Impact

30. The PCR mission conducted a quick survey and consultations with stakeholders during site visits. It indicated the project: (i) stimulated rapid socioeconomic development in the project area; (ii) significantly improved transport conditions and connectivity; (iii) sharply increased cross-border traffic; (iv) increased land prices along the project roads by about 3–5 times; (v) provided additional employment opportunities during and after the project; and (vi) increased access to various services, such as education, hospitals, banking, and grain markets (PCR, para. 39). It also indicated the project has contributed to economic development in the project area by improving the state road infrastructure in the north–south transport system. Cross-border connectivity with Bangladesh improved. Socioeconomic development in West Bengal was rapidly improving. During 2009–2010, the gross state domestic product was Rs3,989 billion, with an 8.4% annual growth rate. Local people have better access to social centers and facilities, like hospitals, schools, banks, and others (PCR, Appendix 1). Based on these findings, the validation rates the project's impact *significant*.

<sup>11</sup> Based on an email exchange between the resident mission and IED on 27 June 2014.

<sup>12</sup> Centre for Monitoring Indian Economy Pvt. Ltd. 2014. "West Bengal releases its budget for 2014-15." News release, 18 Feb.  
<http://www.cmie.com/kommon/bin/sr.php?kall=wclrdhtm&nvdt=20140218164144306&nvpc=099000000000&nvtype=INSIGHTS>

### III. OTHER PERFORMANCE ASSESSMENTS

#### A. Performance of the Borrower and Executing Agency

31. The PCR rated the performance of the borrower and executing agency *satisfactory*. The borrower was the Government of India while the executing agencies were the MORTH for the national highway component, and the WBPWRD for the state highway and RAR components. With the cancellation of the national highway component, only the Ministry of Finance, the Finance Department of West Bengal, and the WBPWRD participated in the coordination and monitoring of project implementation. The GWB provided \$54.4 million equivalent of counterpart funding for the project. The state government and the PIU supported all ADB missions.

32. Project completion was delayed significantly by a total of 4 years. The PIU was not fully mobilized and the recruitment of consultants started only 2 years after loan effectiveness due to shortage of staff and procedural delays. Some civil works contracts were terminated and required new procurement due to poor performance. In addition, land acquisition for some road sections was delayed due to court cases and disputes (PCR, paras.13–14). Of the 15 loan covenants, three were partially complied with (PCR, Appendix 8). This validation views the overall performance of the borrower and the executing agency *less than satisfactory*.

#### B. Performance of the Asian Development Bank

33. The PCR rated the performance of ADB *satisfactory*. The project was processed at the resident mission, which was responsible for project administration. ADB was closely involved in identifying and resolving issues and conducted capacity building on operations-related themes for project officials. It provided inputs to the PIUs in preparing detailed action plans to expedite field progress. ADB conducted 10 regular loan review missions and five special review missions, including the midterm review. Approval of documents at the processing and implementation stages and claims for payment were processed and disbursed without unreasonable delays. The government recognized the role of the ADB missions in providing timely advice on project matters. This validation considers ADB performance *satisfactory*.

### IV. OVERALL ASSESSMENT, LESSONS, AND RECOMMENDATIONS

#### A. Overall Assessment and Ratings

34. The validation rates the project *less than successful*. The project's strategic importance was well established. However, the project was not fully implemented as planned at appraisal. The adjustment made by the government in the technical specification of the NH-34 resulted in the cancellation of more than two thirds of the project's design outputs and loan. On balance, the validation rates the project *relevant*. The project's remaining components achieved some gains in reducing transport costs and travel time, but underperformed in RAR outputs as well as some other outcome indicators. The validation considers that the project's overall expected outputs and outcomes were not fully achieved, and therefore, as a whole, rates the project *less than effective*. On efficiency, implementation activities extended and project completion was delayed by four years. The actual cost of the remaining components was 45% higher than estimated. The PCR's recalculated EIRRs added 20% as additional benefits without sufficient justification and did not adjust for the delays in the benefit streams. A partial amendment for these flaws shows that the project was hardly economically viable. Given these findings, the validation rates the project *less than efficient*. The validation agrees that the project is *likely sustainable*, given the institutional framework for road maintenance and the availability of financial resources from road user fees.

The GWB had the required institution that had responsibility over road maintenance, although its capacity needs enhancement.

### Overall Ratings

Criteria	PCR	IED Review	Reason for Disagreement and/or Comments
Relevance	Highly relevant	Relevant	The cancellation of the project's main component NH-34 reduced by more than two thirds the appraisal outputs and loan, and implied an inadequate sector assessment during preparation and shortcoming in the project design (paras. 20-22).
Effectiveness in achieving outcome and outputs	Effective	Less than effective	The project underperformed in the remaining components, and the project's overall expected outputs and outcomes were not fully achieved. (paras. 23-24).
Efficiency in achieving outcome and outputs	Efficient	Less than efficient	Implementation activities extended and completion was delayed by 4 years. Actual cost of remaining components was 45% higher than estimated. The validation's recalculated EIRRs show that the project was hardly economically viable (paras. 26-27).
Preliminary assessment of sustainability	Likely to be sustainable	Likely to be sustainable	
<b>Overall Assessment</b>	<b>Successful</b>	<b>Less than successful</b>	
Impact	Not rated	Significant	Refer to para. 30.
Borrower and executing agency	Satisfactory	Less than satisfactory	The government cancelled NH-34 as it opted for four lanes rather than improvement of the existing two lane highway. The executing agency did not mobilize the PIU and recruit consultants on time. Some civil works contracts were terminated and required new procurement. Land acquisition was delayed due to court cases and disputes. Overall, the completion was significantly delayed. Three of the 15 loan covenants were partially complied with at loan closing.
Performance of ADB	Satisfactory	Satisfactory	
Quality of PCR		Satisfactory	Refer to para. 39.

ADB = Asian Development Bank, EIRR = economic internal rate of return, IED = Independent Evaluation Department, NH = national highway, PCR = project completion report, PIU = project implementation unit.

Note: From May 2012, IED views the PCR 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**

35. The PCR identified four lessons from the project in the areas of: (i) project readiness, (ii) capacity of the implementation agency, (iii) tight monitoring and control, and (iv) land acquisition and resettlement. The validation generally agrees with these lessons. In addition, the validation points to the need to keep abreast of the government's medium-term plan during the project appraisal. The cancellation of the NH-34 component could have been avoided if the government had been forthright about its plans. However, the existing 9th Five Year Plan of India during appraisal had already indicated the upgrading of major national roads to four lanes, and this should have raised concerns and brought to the attention of the Government of India so that cancellation could have been avoided.

## **C. Recommendations for Follow-Up**

36. The resident mission should follow up with the GWB on actions taken on the recommendations to update the project benefits monitoring and evaluation survey. There is a need to conduct the necessary follow-up surveys for future use.

37. Also, the resident mission should follow up on the compliance of the GWB in completing a comprehensive, fully-integrated road infrastructure development strategy, including a road maintenance strategy and a road financing master plan that will review the mechanisms for the increased domestic funding of the road requirements, including the option for establishing a state road fund. This will help ensure the sustainability of project roads.

## **V. OTHER CONSIDERATIONS AND FOLLOW-UP**

### **A. Monitoring and Evaluation Design, Implementation, and Utilization**

38. The ADB completion review mission determined that the follow-on survey to the baseline survey was inadequate. Given that the resident mission was responsible for project administration, action to improve the survey results should have been taken immediately. The measurement of the socioeconomic impacts and findings was superficial.

### **B. Comments on Project Completion Report Quality**

39. The validation rates the PCR quality *satisfactory*. However, it notes a few areas that the PCR could improve. The update survey of the PCR was inadequate and did not demonstrate the project's socioeconomic impacts. The methodology used in the PCR to quantify project benefits was not consistent with established practices in valuation and estimation of economic benefits. The recalculation of EIRR did not adjust the benefit streams for the actual opening to service of the project roads (para. 27).

### **C. Data Sources for Validation**

40. Data sources for the validation include the project's report and recommendation of the President; PCR; ADB loan review missions to India; 9th Five Year Plan, 1997–2002; 10th Five Year Plan, 2002–2007; 11th Five Year Plan, 2007–2012; 12th Five Year Plan, 2012–2017; ADB Country Assistance Plan for India, 2001–2003; ADB Country Partnership Strategy, 2003–2006 for India; and ADB Country Partnership Strategy, 2009–2012 for India.

**D. Recommendation for Independent Evaluation Department Follow-Up**

41. The validation recommends the preparation of a project performance evaluation report only after sufficient time has elapsed in the upgrading of the NH-34 to four lanes. This report would evaluate the project's impact on the remaining road projects (SH-1 and SH-10) and measure the impacts of the RARs, which were not reviewed well in the PCR.