

# Validation Report

Reference Number: PVR-387 Project Number: 36432-013 Loan Number: 2116 January 2015

# People's Republic of China: Dali–Lijiang Railway Project

Independent Evaluation Department

Asian Development Bank

#### ABBREVIATIONS

ADB	_	Asian Development Bank
AFD	_	Agence Française de Développement
DLR	_	Dali–Lijiang Railway
EIRR	-	economic internal rate of return
EMDP	-	ethnic minorities development plan
FIRR	-	financial internal rate of return
GDP	-	gross domestic product
GMS	-	Greater Mekong Subregion
km	-	kilometer
MOR	_	Ministry of Railways
PCR	-	project completion report
PMO	-	project management office
PPMS	-	project performance and monitoring system
PRC	-	People's Republic of China
WYRC	_	West Yunnan Railway Company

#### NOTE

In this report, "\$" refers to US dollars and CNY refers to yuan.

#### **Key Words**

adb, asian development bank, independent evaluation department, lessons, performance evaluation, prc, people's republic of china, project completion report, railway, roads, transport

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#### **PROJECT BASIC DATA**

Project Number:	36432-013	PCR Circulation Date:	Jul 2013	
Loan Number:	2116	PCR Validation Date:	Jan 2015	
Project Name:	Dali–Lijiang Railway Project			
Country:	People's Republic c	of China	Approved (\$ million)	Actual (\$ million)
Sector:	Transport and ICT	Total Project Cost:	548.00	800.65
ADB Financing:	<b>ADF:</b> 0.00	Loan:	180.00	179.99
		Borrower:	328.00	581.43
	OCR: 180.00	Beneficiaries:	0.00	0.00
		Others:	0.00	0.00
Cofinancier:	AFD	Total Cofinancing: AFD	40.00	39.23
Approval Date:	2 Dec 2004	Effectiveness Date:	25 Sep 2005	14 Nov 2005
Signing Date:	27 Jun 2005	Closing Date:	30 Jun 2010	9 Jul 2012
Project Officers:	M. Parkash X. Chen	Location: ADB headquarters ADB headquarters	From: Dec 2004 Dec 2008	<b>To:</b> Nov 2008 Jul 2012
Validators:	J. Supangco, Consultant F. D. De Guzman, Senior Evaluation Officer, IED2	Peer Reviewer:	T. Yokota, Senior Evaluation Specialist, IED2	
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ADB = Asian Development Bank; ADF = Asian Development Fund; AFD = Agence Francaise de Développement; ICT = information and communication technology; IED2 = Independent Evaluation Department, Division 2; OCR = ordinary capital resources; PCR = project completion report.

#### I. PROJECT DESCRIPTION

#### A. Rationale

1. The railway system of the People's Republic of China (PRC) has the highest freight transport density in the world and the second highest passenger transport density after Japan. Between 1978 and 2003, railway freight grew from 535 billion to 1,725 billion tons per kilometer (km), or an annual growth rate of 4.8%. Passenger traffic grew at 6.1% annually, increasing from 109 billion to 479 billion passengers per km during the same period. The average distance for railway journeys increased from 134 km in 1978 to 492 km by 2003, compared with the average journey per passenger on roads—from 35 km to 53 km—for the same period.

2. At the end of 2003, the PRC railway system already comprised a total of 73,000 routes per km. However, the railways' capacity had failed to keep up with the demand, resulting, for

example, in delays in coal delivery to power plants. These capacity limitations, could adversely affect economic growth.<sup>1</sup>

3. Partly due to inadequate transport, the largely mountainous project area had not been integrated into the economic mainstream. The then existing class II roads had to pass through difficult terrains, had limited passing capacity, and were affected by rain. Despite abundant natural resources, many people in the area were poor, with most working in the agriculture sector. In the mountainous areas, people supplement their incomes by engaging in animal husbandry or becoming migrant laborers. Economic growth has not improved partly due to inadequate transport services and high transport costs. Local governments and people in the project area expected the railway investment to address the problems of slow economic development and poverty.

4. The railway link was to allow connectivity from northwestern Yunnan province to Kunming, Shanghai, and Beijing via three of the 16 east–west and north–south national rail corridors. The project was to provide accessibility to Fangcheng and Beihai ports and promote regional cooperation in the Greater Mekong Subregion (GMS) through Yunnan province, which has borders with other GMS countries. Through the rail network, the project area would be linked to Haiphong port in Viet Nam and the Pan-Asian railway. The project and associated developments could stimulate industrial and natural resource development, tourism, and related industries; generate employment; increase living standards; and help reduce poverty.

#### B. Expected Impact

5. The envisaged project impacts were promotion of sustainable economic growth and poverty reduction in the northwestern part of Yunnan province. The identified impact performance indicators were (i) increase in gross domestic product (GDP) during 2009–2020 from 4.5% to 5.4% per annum for Yunnan province and from 6.6% to 7.4% for the project area, (ii) increase in per capita rural income from CNY2,202 in 2002 to CNY3,000 by 2013, and (iii) reduction in rural poverty incidence in the project area from 30% in 2003 to 15% in 2013.

# C. Objectives or Expected Outcome

6. The project's expected outcome was the development of an efficient, reliable, and affordable railway transport system to improve access and reduce transport costs in the project area. The identified performance indicators were (i) a project economic internal rate of return (EIRR) of 17.0%, (ii) increased railway freight traffic from 5.4 million tons in 2010 to 7.2 million tons by 2015, (iii) increased railway passenger traffic from 3.1 million passengers in 2010 to 4.4 million passengers in 2015, (iv) a maintained operating ratio of less than 0.75, (v) reduced travel time from Kunming to Lijiang from 17 to 11 hours and from Dali to Lijiang from 8 to 4 hours, and (vi) reduced cost of travel from CNY0.38/km to CNY0.27/km.

7. Another envisaged project outcome was the promotion of local economic development, especially tourism. Outcome indicators were increased number of tourists travelling on the project railway from 2.4 million in 2010 to 3.3 million by 2015; and increased number of shops, tourist centers, hotels, and business establishments in the vicinity of station areas.

<sup>&</sup>lt;sup>1</sup> ADB. 2004. Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grant to the People's Republic of China for the Dali–Lijiang Railway Project. Manila.

8. The project completion report (PCR)<sup>2</sup> reformulated the project framework and did not include outcome indicators (i) and (iv). Likewise, the outcome statement on local economic development was dropped. However, the performance indicator on increased number of tourists was retained.

# D. Outputs

9. The project had three intended outputs. The first targeted output was the construction of 167 km of single-track, standard gauge, class I railway between Dali and Lijiang. This was to include railway tracklaying consisting of rails and accessories, concrete sleepers, and stone ballast; construction of 11 new railway stations; provision of modern technology and equipment for signaling, communications, and dispatch management information system; freight yard operation; and mechanized maintenance of tracks, among others. The second targeted output was generation of employment opportunities for the poor and vulnerable groups. The last was institutional strengthening of the Ministry of Railways (MOR) and the West Yunnan Railway Company (WYRC). This was to include the development of a marketing program to attract tourism and new industry along the Dali–Lijang Railway (DLR).

# E. Provision of Inputs

10. The total cost of the project at the time of approval was \$548.0 million, but the actual project cost was \$800.7 million, which was 46% higher than the appraisal estimate. This was attributed to the (i) local currency appreciation of about 30% from 2004 to 2011, (ii) 20%–50% increases in the price of construction materials due to high inflation, (iii) design modifications, (iv) increased compensation for land acquisition and resettlement, and (v) increase in consulting services.

11. The project was to be financed by a \$180 million loan from the Asian Development Bank (ADB) comprising 33% of the total project cost, a loan of \$40 million equivalent from the Agence Francaise de Développement (AFD) or 7% of the total project cost, and counterpart funds of \$328 million or 60% of the total project cost. At completion, the actual financing share for the project decreased to 22.5% for ADB and 4.9% for AFD, while domestic financing increased to 72.6% of the actual project cost. In view of the cost overrun, three reallocations of loan proceeds were made to transfer savings under other items to the civil works and materials. At loan closing date, the total disbursement was 99.99% of the loan amount. The remaining unutilized amount of \$13,128 was canceled.

12. The project was classified as category A under the ADB environmental categorization requirements. The PCR indicated that an environmental impact assessment was approved on 26 October 2004. A summary of this assessment concluded that impacts from project construction were mostly short term and reversible, while long-term impacts were to result mainly from land conversion for the right-of-way and induced development.

13. The environmental monitoring reports and the findings of ADB review missions, including the PCR mission, indicated that environmental mitigation and monitoring measures were implemented satisfactorily. A detailed environmental management and monitoring program was not prepared as recommended. Also, there was no reporting done on environmental quality monitoring since the environmental and water bureaus of Dali and Lijiang did not release the data. Government counterparts confirmed that the required environmental and water quality

<sup>&</sup>lt;sup>2</sup> ADB. 2013. Completion Report: Dali–Lijiang Railway Project in the People's Republic of China. Manila.

standards were met. However, no evidence was presented to support these reports. The PCR noted that environmental management and monitoring program limitations could have been identified and addressed by ADB at an earlier stage had there been more environment specialist input during implementation.

14. The PCR indicated that a resettlement plan was prepared in accordance with PRC and ADB policies. Actual permanent land acquisition of 6,228.7 *mu*<sup>3</sup> was higher than the planned acquisition of 5,913 *mu*. At appraisal, 4,159 individuals were to be affected by permanent land acquisition. During implementation, 45,280 individuals were actually affected by partial land loss. The increase was partly attributed to the methodology and in part to the resettlement approach used in the Gucheng district of Lijiang city. The latter was based on a readjustment of the remaining village land after acquisition to ensure that the peoples' agriculture-based livelihoods were not adversely affected, i.e., all villagers were affected by partial land loss instead of a few villagers being affected by total land loss (PCR, para. 52).

15. Also, the PCR indicated that house demolition affected 554 households, a lesser number than the 680 households estimated at appraisal. The actual temporary land occupation of 3,567 *mu* was higher than the planned occupation of 1,600 *mu*. Likewise, four schools were relocated instead of one, while 14 enterprises were relocated as against the planned allocation of just one enterprise. The total cost of resettlement was CNY246.06 million compared with the original estimate of CNY141.00 million. The cost increase was mainly due to higher compensation rates paid for permanent land acquisition and house relocation.<sup>4</sup> The PCR noted that external monitoring reports indicated cases of delays in the relocation and provision of amenities. However, subsequent survey reports showed improvement in the affected people's living standards after resettlement (PCR, para. 54).

16. The project was classified as category A for indigenous peoples due to its high potential impact on ethnic minorities. The PCR indicated that in 2003, 73% of the 1.1 million people in the project area were ethnic minorities. An ethnic minorities development plan (EMDP) was, thus, implemented from 2005 to 2009 to enhance the socioeconomic conditions of ethnic minorities and ensure the project's compliance with the 1998 Indigenous Peoples Policy of ADB.

17. The PCR indicated that the following achievements were made as a result of specific actions included in the EMDP: (i) improved access to transport and rail services since about 20% of the railway passengers were ethnic minorities; (ii) employment of ethnic minorities as unskilled labor; (iii) employment of 91 ethnic minorities for train-related services, and of 105 (29.5%) more who were women; (iv) participation of 98,221 in income-recovery training programs mostly by ethnic minorities; and (v) 467,812 ethnic minorities benefited from afforestation activities. The PCR noted that the EMDP was satisfactorily implemented.

18. At appraisal, a total of 5,472 person-months of domestic consultants were to be engaged and financed by the government for detailed project design, international procurement, construction supervision, and environmental supervision and management, among other activities. The ADB loan was to finance 12 person-months of international consulting services for (i) strengthening marketing and business development functions of the WYRC; and (ii) strengthening the development, operation, and management of the joint venture railway systems in the PRC. During the construction phase, 21,000 person-months of national

<sup>&</sup>lt;sup>3</sup> A *mu* is a Chinese unit of measurement (1 mu = 666.67 square meters).

<sup>&</sup>lt;sup>4</sup> For instance, compensation for permanently acquired paddy fields was CNY20,000 per *mu* against the planned compensation of CNY12,960 per *mu*.

consulting services were provided for construction activities. The PCR indicated that international consulting services were not provided since the executing agency was able to develop its own marketing strategy and long-term business development program. A technical assistance <sup>5</sup> was provided, in conjunction with the loan, to enhance the project benefits to the poor and the ethnic minorities, and assist in the preservation of local culture.

# F. Implementation Arrangements

19. The WYRC was the executing agency responsible for overall project implementation, the setting up of on-site construction management units, and for reporting to ADB, as envisaged at appraisal. It established the Dianxi Railway Construction Headquarters as the project management office (PMO), which consisted of project management, safety and quality, planning and finance, materials and equipment, and general affairs departments. A resettlement office, supervised by the vice chief of the PMO, was established at the PMO with resettlement units at two field offices. The resettlement office was responsible for the overall coordination, fund raising, internal monitoring of land acquisition and resettlement, information disclosure, consultation, complaints, supervision of land acquisition, building structure demolition, and relocation. The MOR coordinated project management activities, supervised the procurement of the goods and services, and reviewed reports for submission to ADB. This validation notes that the implementation arrangements were appropriate and helped facilitate project implementation.

20. Of the 38 loan covenants, 34 were complied with, two were considered not applicable, and compliance on two others were not yet due at the time of PCR preparation. Two covenants were considered not applicable since the AFD provided cofinancing for the project. The covenant requiring the WYRC to have an operating ratio of not more than 75% was targeted for achievement only in 2013. The project performance monitoring system (PPMS) was considered as an ongoing activity with a final project performance monitoring report due only in 2015. This particular covenant required the MOR and the WYRC to establish baseline and target values for a set of indicators to evaluate project performance, measure project indicators, and compare these to the baseline values at the start of project implementation, at project completion, and 3 years thereafter. There was no discussion in the PCR if the required surveys and evaluation were actually undertaken. However, in Appendix 14 of the PCR (para. 19), this validation notes that the WYRC did not complete a baseline or any other socioeconomic survey, as required in the PPMS.

# II. EVALUATION OF PERFORMANCE AND RATINGS

# A. Relevance of Design and Formulation

21. The PCR rated the project *highly relevant* to the government's strategy for railway network expansion, as set out in the Western Development Strategy and Railway Development Plan, and to ADB country and sector strategies. It also indicated that the project provided a link to the railway network of the GMS. This validation assesses that the project was consistent with the country's development needs and priorities and to ADB country partnership strategies. While the project was not a part of any GMS transport corridor, Dali is within the GMS northwestern corridor. This allowed users of the project to gain the extra benefit of access to the GMS rail network from Dali.

<sup>&</sup>lt;sup>5</sup> ADB. 2004. Technical Assistance to the People's Republic of China for Preparing the Support to Ethnic Minorities Development Plan. Manila.

22. This validation notes a few design modifications undertaken during implementation. These included an upgrade to a 60 kilogram continuously welded rail, additional environment work of "green environment corridor," and upgrade of the train dispatching command system to a centralized traffic control system. These design improvements may not have been considered initially. This validation is of the view that they contributed to an improved service quality, reduced maintenance costs, and resulted in a more efficient and environmentally friendly operation. These improvements helped to ensure that the project's design remained relevant at completion.

23. This validation notes that traffic forecasts were overly optimistic at appraisal. Given its greenfield nature, the project would need to attract existing bus and private vehicle users to divert to the new rail service for new traffic to be generated. As shown in the PCR, the actual passenger traffic in 2010 was 1.04 million passengers, or about one-third of the 3.10 million forecast at appraisal. The PCR also reported that freight traffic was insignificant in 2011 and even in 2012 at 0.07 million tons (PCR, Appendix 10, para. 2). Based on these observations, this validation rates the project *relevant*.

# B. Effectiveness in Achieving Project Outcome and Outputs

24. The PCR rated the project *effective* in achieving its intended outcome of developing an efficient, reliable, and affordable railway transport system. This validation notes that the results for the outcome indicators were mixed. At project completion, travel time from Lijiang to Kunming was reduced from 17 hours to 9 hours. Also, the travel time from Lijiang to Dali was reduced from 8 hours to 2 hours. Likewise, the cost of travel decreased from CNY0.38/km to CNY0.22/km.

25. This validation notes that the envisaged outputs were generally achieved. The 167 km DLR line and 10 stations were constructed in 2009. The remaining station was completed 2 years after. Likewise, equipment were procured and installed as scheduled. About 88,000 person-years of construction-related employment were generated as against the target of 96,800 person-years at appraisal. Some 3,748 individuals participated in the on-the-job trainings conducted during 2009–2012.

26. For freight traffic, the PCR indicated that the actual volume for 1 month in 2011 was 2,000 tons as the freight operations started toward the end of the year. For passenger traffic, the actual number of passengers was 1.04 million in 2010 or about one-third of the forecast of 3.10 million. For tourist traffic, the actual 2010 volume was 0.84 million as compared to the appraisal estimate of 2.40 million. The traffic data of 2013, provided by the project team after the draft validation, showed traffic growth with freight, passenger, and tourist traffic already exceeding appraisal and PCR forecasts for 2015.<sup>6</sup> This growth in 2013 traffic requires further analysis, which is beyond the scope of this validation, to determine if this could sustain over the medium- and long-term periods and is not just a 1 year occurrence. However, based on the achievement of project outputs and outcome to date, this validation rates the project *effective*.

<sup>&</sup>lt;sup>6</sup> The memo signed by Director EATC, Tyrell Duncan dated 14 November 2014 stated: "The 2,000 tons freight traffic for 2011 in the PCR represented traffic for one month only as the freight operations started toward year-end. Although the actual freight traffic was 70,000 tons in 2012, it reached 8.35 million tons in 2013. This exceeded the 7.2 million tons projected in the RRP for 2015 and was much higher than the PCR projection of 0.97 million tons for 2013. For passengers, actual traffic reached 6.5 million persons in 2013, which exceeded the RRP projection of 4.4 million persons for 2015 and the PCR projection of 2.81 million persons for 2013. Tourist traffic reached 4.8 million persons in 2013, higher than the RRP projection of 3.3 million persons for 2015."

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

27. The PCR rated the project *efficient* in achieving its intended outcome and outputs. This validation notes that the project incurred an implementation delay of 9 months, which was commendable for a railway of this length. After 1 year of trial operation, commercial operation commenced in January 2011, about a year later than expected at appraisal. The loan was closed on 9 July 2012, almost 2.5 years after physical completion due to protracted negotiations with contractors over contract variation claims, and MOR approval for the agreed claims (PCR, para. 20). This validation notes that the total approved cost was \$548.00 million and the actual cost at completion was \$800.65 million, having a cost overrun of 46% as compared to the approved cost.

28. The PCR reevaluated the project's economic viability based on the revised traffic forecast and actual project investment and operating costs. The economic benefits included operating cost savings for diverted freight and passenger traffic from roads, benefits attributed to generated passenger traffic, time savings for diverted passengers, and economic value of additional tons of generated traffic due to the project. The PCR did not include the net economic value of generated tourist days as was considered at appraisal, to avoid the possibility of double counting. As in the appraisal, the PCR considered salvage value as a benefit and was estimated based on the economic life of project components. The reevaluation yielded an EIRR of 14.5% compared to the 17.0% estimated at appraisal in the base case, and of 12.5% in the worst case, which is marginally higher than the hurdle rate of 12.0%. The lower EIRR was attributed to lower traffic during the early years of operation as compared with the appraisal traffic forecast (para. 26). This validation notes that the PCR calculated the benefits and costs flow only up to 2028 or less than the 20 years assumed economic life of the project. Based on these observations, this validation rates the project less than efficient.

# D. Preliminary Assessment of Sustainability

29. The PCR rated the project *likely sustainable*. It indicated that the WYRC has the capacity to operate and maintain the project facilities and has installed a centralized traffic control system to control train movements efficiently and reliably. It also reported that the project established a comprehensive maintenance unit by integrating the various specialized units to carry out railway maintenance. The new maintenance system had increased efficiency and reduced operating costs with only five staff per km required instead of the previous 15 staff per km. For financial sustainability, the PCR noted that the WYRC has been implementing its marketing strategy and adjusting its services to the demand. This validation, however, does not find the statement as an assurance of financial sustainability.

30. The WYRC achieved some profitability during 2005–2008. However, profits were negative from 2009 due to lower freight revenues and high interest costs. The company was projected to achieve a small net profit in 2012, increasing significantly in subsequent years with the increased traffic from the DLR. It also indicated that a possible tariff revision would be evaluated during 2013. Of the three financial covenants, two on debt service coverage ratio and debt–equity ratio were complied with in 2011. Also, the operating ratio of the WYRC was 96% in 2011, which was higher than the required 75%. It is expected to meet the target by 2013, the third full year of operation, as stated in the covenants.

31. The PCR conducted a financial reevaluation of the project using actual construction costs, updated traffic forecast, operating costs, and current passenger and freight tariffs data.

The recomputed financial internal rate of return (FIRR) was 4.6%, which was lower than the 6.7% estimated at appraisal. The lower FIRR was attributed to the delay in achieving the forecast traffic levels and the higher construction cost as indicated during appraisal. The recalculated FIRR exceeded the 3.86% weighted average cost of capital.

32. This validation notes that the initial years' freight and passenger traffic were lower than the appraisal forecast (para. 23). Given these, project operations may have to be subsidized until such time that revenues become sufficient. These could be sourced from profits generated by the other lines of the WYRC. Also, this validation is of the view that the opening of new lines and stations could improve project sustainability, assuming that the gap between actual and forecast traffic could be narrowed down. Based on these observations, this validation rates the project *likely sustainable*.

# E. Impact

33. The PCR indicated that the project made significant contributions to sustainable economic growth and poverty in the region. It also indicated that during 2009–2011, Yunnan's GDP increased from CNY616.8 billion to CNY875.1 billion, at 19.1% per annum. The GDP for the project area increased from CNY52.4 billion to CNY74.7 billion, at 19.4% per annum. It also reported that per capita rural income increased from CNY2,202 in 2002 to CNY3,952 in 2010. Likewise, rural poverty incidence in the project area was reduced from 30.0% (CNY900) in 2002 to 9.1% (CNY1,274) in 2010. However, it is difficult to attribute these socioeconomic developments solely to the project.

34. The project contributed to lowering the cost of living in Lijiang and to making a wider range of products available, compared to 2004. Since project operation, prices had decreased and were only slightly higher than those in Kunming. Since the WYRC did not complete a baseline (or any other) socioeconomic survey as required, it was difficult to ascertain specific improvements attributable to the project. Nonetheless, this validation rates the project's impact *significant*.

# III. OTHER PERFORMANCE ASSESSMENTS

# A. Performance of the Borrower and Executing Agency

35. The PCR rated the performance of the borrower, the WYRC as executing agency, and the MOR *satisfactory*. It indicated that the organizational structure for project implementation was set up and maintained during project implementation with the WYRC establishing a PMO, the Dianxi Railway Construction Headquarters, and with the MOR being made responsible for coordinating project management activities, supervising the procurement of goods and services, and reviewing reports to be submitted to ADB.

36. The PCR also indicated that the joint venture arrangement between the MOR, Yunnan provincial government, and WYRC mobilized resources and was effective in project implementation and operation. Sufficient counterpart funds were provided, including additional funding for the cost overruns. The project accounts were audited annually by an independent auditor and in accordance with auditing standards acceptable to ADB. However, the PCR failed to cite that the WYRC did not complete the baseline or any other socioeconomic surveys as required and that loan closing was delayed by almost 2.5 years after physical completion due to negotiations with contractors on contract variation claims and MOR approval for the claims. On the whole, this validation rates the performance of the borrower, the WYRC, and the MOR *satisfactory*.

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

37. The PCR rated the performance of ADB *satisfactory*. The project was administered and supervised from ADB headquarters, with ADB fielding missions once a year and communicating with the WYRC and the MOR during project implementation. ADB provided guidance on a range of issues, including environment, resettlement and ethnic minority development monitoring and reporting, procurement, and disbursement. The PCR indicated that the timely approval by ADB of bidding documents, bid evaluation reports, loan reallocation requests, and extension of completion date contributed to the successful implementation of the project, with the WYRC and MOR satisfied with ADB performance. With the failure of the WYRC to comply with the required baseline and other surveys for the PPMS, this validation is of the view that ADB should have ensured that the PPMS was operational and all the required surveys and reports were submitted on time through regular follow-ups with the WYRC. Given these observations, this validation rates ADB performance *satisfactory*.

# IV. OVERALL ASSESSMENT, LESSONS, AND RECOMMENDATIONS

#### A. Overall Assessment and Ratings

38. The PCR rated the project *successful*. This validation rates the project *successful* although with lower ratings on project relevance and efficiency. This validation also notes that the few design modifications undertaken during implementation contributed to improved service quality, reduced maintenance costs, resulted in a more efficient and environmentally friendly operation, and helped to ensure that the project's design remained relevant at completion. Also, the traffic forecasts for the initial years were too optimistic. For efficiency, this validation notes a significant cost overrun, the loan closing being delayed due to protracted negotiations with contractors, and the recalculated EIRR being marginally above the 12% hurdle rate.

Criteria	PCR	IED Review	Reason for Disagreement					
			and/or Comments					
Relevance	Highly relevant	Relevant	Some design improvements were made during project implementation, indicating the need for fine-tuning the original design. Also, traffic forecast in the initial years could have been made more conservative given the greenfield nature of the project (paras. 22–23).					
Effectiveness in achieving project outcome and outputs	Effective	Effective						
Efficiency in achieving outcome and outputs	Efficient	Less than efficient	The project incurred a 46% cost overrun, project closing was delayed due to protracted negotiations with contractors, and the recalculated EIRR was marginally above the 12% hurdle rate (paras. 27–28).					
Preliminary assessment	Likely	Likely sustainable						
Overall assessment	Successful	Successful						

Overall Ratings

Borrower and executing agency	Satisfactory	Satisfactory	
Performance of ADB	Satisfactory	Satisfactory	
Impact	No rating	Significant	The PCR did not give an overall rating on impact. This validation acknowledges the various impacts generated by the project, although the absence of baseline and other socioeconomic survey data as required limited the analysis on the project's impact (paras. 33–34).
Quality of PCR		Less than satisfactory	Refer to para. 43.

ADB = Asian Development Bank, EIRR = economic internal rate of return, IED = Independent Evaluation Department, PCR = project completion report.

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

39. The PCR listed a few important lessons drawn from the project, such as the need for sufficient consultations with stakeholders to promote ownership and responsibility. Likewise, there is a need for continuous process of adaptation to the latest construction and operation technology and more environmentally friendly solutions. The PCR also indicated the need to have careful estimation of the costs of construction materials and more realistic traffic forecast.

40. This validation offers three additional lessons. First, before implementing any additional works or contract variation, there should already be agreement on the works to be done and the commensurate costs. While this is an accepted project management practice, it may not have been the case in this project, which resulted in significant delays in loan closing due to the negotiations on pricing for additional works or variations. Second, while work on the land acquisition and resettlement seemed to have progressed well, the executing agency—the WYRC—should have been provided more assistance in its implementation given its inexperience with both PRC and ADB practices. As such, ADB assistance, through more frequent missions during the implementation period, could have provided the guidance needed for land acquisition and resettlement. A third lesson was the need to constantly follow-up with the executing agency on the implementation of the PPMS. It is surprising to note that this loan condition was not readily achieved, although its compliance was considered as ongoing.

#### C. Recommendations for Follow-Up

41. This validation recommends a few follow-up actions for ADB. Given that the required baseline survey and other surveys for the PPMS were not undertaken, the socioeconomic data required under the PPMS should still be collected by the executing agency and reported to ADB on a regular basis as required under the loan covenant. These would be essential during the conduct of the project performance evaluation report, if required. Given the traffic results of the project's initial years of operation, ADB would need to closely monitor the project's traffic to gauge whether it could meet its traffic targets. Likewise, the WYRC compliance with the operating ratio requirement under the loan should be monitored. This validation also supports the PCR recommendations.

# V. OTHER CONSIDERATIONS AND FOLLOW-UP

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

42. The design and monitoring framework in the report and recommendation of the President (RRP) was well formulated. However, the inclusion of the EIRR as an outcome performance indicator was not appropriate and was correctly deleted in the PCR. The implementation of the framework was insufficient, including the measurement of the performance indicators as agreed by ADB, MOR, and WYRC. The indicators to be reviewed at the start and monitored throughout project implementation included the following: (i) economic development and socioeconomic indicators for the DLR, (ii) transport costs and times for passenger and freight services, (iii) transport services offered and transport charges, (iv) accident rates, (v) financial sustainability, (vi) county and/or village incomes, (vii) access to social services, and (viii) jobs created in construction and maintenance. At the beginning of project implementation, the DLR was to establish baseline and target values for these indicators. These were to be measured at project inception, project completion, and 3 years later, and compared with the baseline.

# B. Comments on Project Completion Report Quality

43. The PCR showed a clear understanding of the project implementation conditions. However, the discussion on the ratings for the different evaluation criteria did not give adequate explanation and supporting data on the ratings. This validation notes the difficulty encountered in the preparation of the PCR, especially on the need to revise the traffic forecast as a result of the significant differences between appraisal and actual freight, passenger, and tourism traffic. The socioeconomic impact evaluation lacked references to baseline data for appropriate comparisons. The PCR presented the financial evaluation under the efficiency section, but this should have been discussed under the sustainability section. On this basis, this validation rates the PCR quality *less than satisfactory*.

# C. Data Sources for Validation

44. Data sources for this validation included the project's RRP; the PCR; reports of the ADB missions to the PRC; ADB Country Strategy and Program for the PRC, 2005–2007, and ADB Country Partnership Strategies, 2008–2010 and 2011–2015; the PRC 11th Guidelines, 2005–2010; the PRC 12th Guidelines, 2011–2015; and the Western Development Strategy and Railway Development Plan up to 2020.

# D. Recommendation for Independent Evaluation Department Follow-Up

45. This validation holds a similar view as that of the PCR that a project performance evaluation report could be prepared by 2015 or later.