



# Draft Design and Monitoring Framework

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Project Number: 35354  
January 2008

## PRC: Proposed Lanzhou–Chongqing Railway Development Project

A design and monitoring framework is an active document, progressively updated and revised as necessary, particularly following any changes in project design and implementation. In accordance with ADB's public communications policy (2005), it is disclosed before appraisal of the project or program. This draft framework may change during processing of the project or program, and the revised version will be disclosed as an appendix to the report and recommendation of the President.

**Asian Development Bank**

## DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p><b>Impact</b> Improved transport system in the region that supports socioeconomic development and the western development strategy</p>	<p>GDP is forecast to increase during 2015–2020 at 6% per annum for Gansu, Sichuan and Chongqing provinces and 7–8 % per annum for the project area</p> <p>Per capita rural income in the project area increased from CNY3,291 in 2006 to CNY4,680 in 2015 and CNY5,700 in 2020</p> <p>Poverty incidence in the project area reduced by 50% from 2006 to 2015</p> <p>All poverty villages along the alignment provided with road access (954), drinking water (1,873), and telephone access (696) by 2015</p> <p>By 2015, the number of shops, tourist centers, hotels, and small businesses established in the vicinity of station areas increased by 50%</p> <p>By 2015, the number of rural enterprises increased by 50%</p> <p>By 2015, the number of large enterprises increased by 40%</p>	<p>Provincial and county/city statistics offices</p> <p>Project performance management system at inception, completion, and 3 years after with emphasis on socioeconomic improvement impacts</p> <p>Annual reporting by the Project Company</p>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• Government investment projects are implemented as planned</li> <li>• Complementary activities are implemented</li> <li>• The Government is committed to reducing poverty in the western region, based on the Western Development Strategy.</li> <li>• Investment of MOR, GPG, SPG, CMG and local governments is implemented according to their plans</li> </ul>
<p><b>Outcomes</b> An efficient, safe, reliable, affordable, and environmentally friendly railway transport system is developed in the region</p>	<p>Passenger traffic volume increased from 18 million passengers in 2015 to 57 million passengers in 2034</p> <p>Freight traffic volume increased from 68 million tons in 2015 to 157 million tons in 2034</p> <p>Interprovincial and intra-provincial trade increases by 50% by 2015</p> <p>Travel time reduced from Lanzhou to Chongqing, from present 26 hours (by rail) and 42 hours (by road) to 10 hours in 2015.</p> <p>Cost of travel reduced from 35 fen/km in 2006 to 15 fen/km in 2015</p> <p>Number of accidents reduced by 10% in 2015</p> <p>Fuel saving of \$200 million in 2015, and \$480 million in 2034; and reduced CO<sub>2</sub> emissions by 810,000 tons in 2015, and 1.85 million tons in 2034</p>	<p>MOR statistics and operating data before and after the Project</p> <p>Progress reports</p> <p>Project administration missions and project completion report</p> <p>Post-evaluation surveys and reports from MOR</p> <p>Accident statistics from Public Security Bureau and hospitals</p> <p>Statistics from local Environmental Protection Bureaus, Communication Bureaus, and MOR</p>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• Traffic forecasts for the LCR are realized</li> <li>• Passengers and freight operators realize the benefit of using the railways</li> </ul>

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	<p>In the 5 years after construction starts, the employment generated in the project area is 50% higher than in 2007</p> <p>By 2015, the average income per farmer increased by 40%</p> <p>Number of tourists visiting the project area increased by 30% in 2015</p>		<ul style="list-style-type: none"> <li>Local governments undertake the planned tourism and local area development</li> </ul> <p><b>Risk</b></p> <ul style="list-style-type: none"> <li>Local governments may not have sufficient budget to implement the tourism and local area development plan</li> </ul>
<p><b>Outputs</b></p> <p>1. Railway infrastructure and associated facilities improved along the Chongqing railway corridor</p> <p>2. Employment opportunities generated for poor and vulnerable groups to raise incomes and living standards, and reduce poverty</p> <p>3. Corporate governance promoted</p> <p>4. Institutional capacity strengthened</p>	<p>Transport capacity expanded in the LCR corridor by 40 billion ton-km for freight and 10 billion passenger-km for passengers in 2015</p> <p>833 km of railway line and 31 stations are constructed; equipment procured and installed for train operations</p> <p>468,000 person-years of construction-related employment are generated, of which the poor, including women, capture 50% of unskilled labor</p> <p>Project Company established by 30 September 2008</p> <p>Private sector participation increased in provision of services and development of associated infrastructure by 2015</p> <p>An effective marketing program is developed to attract passengers and tourists along the LCR by 2015</p> <p>A debt-to-equity ratio of not more than 50:50, an operating ratio of not more than 70%, and a debt-service coverage ratio of not less than 1.2</p> <p>10 person-months of international consulting services is provided for capacity development, business development and marketing, and institutional strengthening by 2012</p>	<p>PAMs and PCR</p> <p>PAMs, progress reports, and PCR</p> <p>Progress reports</p> <p>Monitoring by the Project Company and external monitoring agency</p> <p>PAMs, progress reports, and PCR</p> <p>PAMs, progress reports, and PCR</p> <p>Financial statements of the Project Company, midterm review, and PCR</p> <p>Consultant's reports</p> <p>Progress reports</p>	<p><b>Risk</b></p> <ul style="list-style-type: none"> <li>Construction may be delayed because of its complexity</li> </ul> <p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>Funds are provided in a timely manner by CCB and ICBC</li> <li>Completion of equipment procurement and installation at project opening</li> </ul> <p><b>Assumption</b></p> <ul style="list-style-type: none"> <li>The poor are qualified to capture these job opportunities</li> </ul> <p><b>Risks</b></p> <ul style="list-style-type: none"> <li>Adequate funds are not invested in marketing</li> <li>MOR may interfere in the Project Company's operations</li> </ul> <p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>Revenue forecast materializes as originally envisaged and Project implemented without cost overrun or implementation delays, including approval of project tariff rates</li> </ul> <ul style="list-style-type: none"> <li>Consultant recruitment is timely and the performance of consultants is good in providing consulting services to Project Company</li> </ul>

<b>Activities with Milestones</b>	<b>Inputs</b>
<p>1.1 Civil works and buildings: contracts awarded by October 2009 and completed by August 2012.</p> <p>2.1 Materials and equipment: procured by June 2013.</p> <p>3.1 Land acquisition and resettlement: completed by July 2011.</p> <p>4.1 Consulting: consultants recruited by March 2008; work completed by August 2013.</p> <p>5.1 Track laying: started by June 2010 and completed by December 2012</p> <p>6.1 Telecommunications: telecommunications completed by December 2013.</p> <p>7.1 Trial operations: completed by December 2014.</p>	<ul style="list-style-type: none"> <li>● ADB: \$300 million: <ul style="list-style-type: none"> <li>\$123.6 million (track work)</li> <li>\$155 million (materials)</li> <li>\$3 million for safety</li> <li>\$3 million for environment</li> <li>\$0.4 million (consultants)</li> <li>\$15 million (contingencies)</li> </ul> </li> <li>● MOR, GPG, SPG and CMG: \$4.23 billion</li> <li>● CCB: \$2.37 billion</li> <li>● ICBC: \$1.33 billion</li> </ul>

CO<sub>2</sub> = carbon dioxide, EIA = environmental impact assessment, EIRR = economic internal rate of return, EPB = Environmental Protection Bureau, GDP = gross domestic product, MOR = Ministry of Railways, mtoe = million ton oil equivalent, GPG = Gansu provincial government, SPG = Sichuan provincial government, CMG = Chongqing municipal government LCR = Lanzhou Chongqing railway, PAM = project administration mission, PCR = project completion report, SDAP = social development action plan, SEIA = summary environmental impact assessment.