PROJECT INFORMATION DOCUMENT (PID)
CONCEPT STAGE

Report No.: PIDC966

Project Name	Yunnan Highway Asset Management Project (P132621)
Region	EAST ASIA AND PACIFIC
Country	China
Sector(s)	Rural and Inter-Urban Roads and Highways (75%), Sub-national government administration (25%)
Theme(s)	Infrastructure services for private sector development (65%), Managing for development results (25%), Natural disaster management (1 0%)
Lending Instrument	Specific Investment Loan
Project ID	P132621
Borrower(s)	International Department, Ministry of Finance
Implementing Agency	Yunnan Highway Bureau, Yunnan Highway Bureau
Environmental Category	B-Partial Assessment
Date PID Prepared/ Updated	11-Jul-2013
Date PID Approved/ Disclosed	01-Aug-2013
Estimated Date of Appraisal Completion	22-Apr-2014
Estimated Date of Board Approval	17-Sep-2014
Concept Review Decision	Track II - The review did authorize the preparation to continue

I. Introduction and Context

Country Context

1. China has achieved a remarkable economic progress since initiating market reforms in 1979. GDP growth, averaging about 10 percent a year for the last three decades, has lifted more than 600 million people out of poverty. However, despite this progress, China still faces development challenges in terms of achieving inclusive and sustainable development. Over 170 million people still live below $1.25 a day and there are regional disparities between the more prosperous east/coastal regions and the west and central provinces. Income per capita in the west and central provinces is less than half of those found in some coastal provinces.

2. China's 12th Five-Year Plan (FYP) (2011-2015) calls for a more balanced development and greater development assistance to less developed regions. The 12th FYP also emphasizes improving the quality of growth, environmental sustainability, and strengthening public accountability and

transparent financial management.

3. Yunnan Province is one of the least developed provinces in China. In 2011, its GDP per capita ranked 30 out of 31 mainland provinces. The Province, however, has rich natural resources, diversified culture and good potential for achieving sustained development. Its territory is about 394,000 km2 and one third of its 46 million populations are minorities. The Province is located in the southwest of China and borders with Lao, Vietnam and Myanmar. The State Council (China's Cabinet) considers Yunnan as a priority in its Western Region Development Strategy and a China's gateway to the Association of South East Asian Nations (ASEAN). Yet, Yunnan's development potential is constrained by transport difficulty, as 94 percent of its territory is mountainous and difficult to access.

Sectoral and Institutional Context

1. Over the last three decades, China has invested heavily in the development and expansion of its highway infrastructure. The total length increased from about 900,000 km in 1981 to over 4.1 million km in 2011, including about 85,000 km of expressways, 388,000 km of national and provincial highways, 3.6 million km of rural roads, and 69,000 km of dedicated highways and making it the largest road network in the world. The Ministry of Transport (MoT) projects that the total length of highways in China will reach about 4.5 million km by 2015 and the peak of new construction will be reached at this time.

2. China was able to achieve this rapid highway expansion, in part due to the decentralized institutional and financing framework it put in place to plan and develop the highway system. The MoT is in charge of developing strategic plans and setting country-wide sector policies and highway standards, while the provinces are responsible for developing and financing the highways in their jurisdictions. The Provincial Department of Transport (DoT) are responsible for the construction and maintenance of trunk highways (national and provincial) in their respective provinces. Other lower level governments are responsible for rural and urban roads in their jurisdictions. Similarly, China's expressway network is developed, operated and maintained by special purpose expressway companies that are established by each province to develop expressways and collect tolls to repay the capital costs and cover operation and maintenance expenditures.

3. Compared to the rapid network expansion, the Provincial DoTs have not paid enough attention to maintenance of the trunk highway system. As a result, trunk highway assets in China have been created without proper funding and institutional strategies to maintain and operate them. Recognizing the lack of maintenance is a major challenge for trunk highways, the MoT issued several directives to guide Provincial DoTs to reform their highway maintenance management practices . Many Provincial DoTs have responded by launching a variety of institutional and organizational reforms, mainly directed at separating road maintenance production function from administrative function whereby the planning and policy functions are separated from work execution. This included spinning off maintenance divisions into separate maintenance companies and keeping planning and policy functions within the Highway Bureaus of the Provincial DoTs. In addition, Highway Bureaus began contracting-out periodic and heavy maintenance works to the private sector and introducing performance-based salary system to their employees.

4. While the institutional reforms for highway maintenance delivery follow good international practices, reforms related to planning, budgeting, and funding are lagging behind in China. Computerized maintenance management tools such as China Pavement Management System are

introduced in many provinces but do not function fully in part due to lack of institutional commitment and funding constraints. Maintenance funds for trunk highways mostly rely on central government transfers, whose revenues are derived from fuel taxes and vehicle purchase fees. However, these revenues are often diverted for new construction, and maintenance receives inadequate funding. In addition, after the cancellation of tolls on Class II Highways initiating in 2009, Provincial DoTs have used fuel tax transfers to repay bank loans for previously tolled highways. Consequently, maintenance funds are insufficient to preserve the highway assets from premature damages and loss of values in many provinces.

5. The losses of highway assets values cannot be clearly and timely recognized since highway assets are not required to be evaluated and reported in government financial report. Actually, China does not have highway assets evaluation and accounting systems.

Yunan Highway Sector Development and Challenges

6. As in the rest of China, Yunnan's highway sector experienced a rapid development in the past decades and the total length of its highway network increased from about 42,000 km in 1978 to over 209,000 km in 2010. By the end of the 12th Five-Year Plan (2011-2015), the length of its highways will be over 223,000 km.

7. Yunnan's highways are currently managed by different governmen t agencies. Yunnan Highway Bureau (HB) of the DoT is responsible for maintaining about 25,000 km of trunk highways; Yunnan Highway Development & Investment Co., LTD for about 2,600 km of expressways; and local governments for over 177,000 km of rural roads.

8. Yunnan HB is a large organization with over 16,000 incumbent staff. It has local highway bureaus at the prefecture/municipality levels and county/district levels to carry out routine and minor maintenance works of the trunk highways as well as emergency and rescue operations through 426 Emergency Response and Maintenance Centers and Stations. However, most of Maintenance Stations and Centers were built a long time ago and need to be updated or extended to maintain a fast growing network. In addition, existing maintenance equipment cannot meet maintenance requirements in terms of quantities, quality and types, and is particularly short of modern maintenance equipment such as asphalt pavement recycling equipment. Similarly, the staff knowledge and skills need to be updated with modern highway engineering and to match their new role as administrator of the trunk highway network rather than service providers. Most of the HB staff have received limited education and need more on-job training. Only 7% of the 16,000 staff have an undergraduate level or above education.

9. Yunnan HB manages the trunk highways assets in an "engineering" way, which follows a "worst-first" maintenance strategy. No assets management system is in place to help objectively analyze maintenance demands, optimize maintenance strategies and planning, and reduce life cycle costs. Yunan's highways have not been adequately maintained. According to the MoT's national road condition survey in 2011, the pavement conditions in Yunan were among the worst in China. Only 37% of trunk (national and provincial) highways have a good to excellent condition.

10. Shortage of maintenance funds is a serious issue in Yunnan. It has a heavy burden to complete its highway network plan and pay back about RMB117.7 billion unpaid debts due to the cancellation of tolls on Class II roads. Average annual maintenance funds only satisfy about 12% of

estimated demands. Furthermore, Yunnan highways are vulnerable to landslides, flooding and earthquakes, but emergency response capacities are weak due to lack of rescue equipment, managerial tools and professional skills.

Relationship to CAS

The project will help preserve trunk highways in a less developed province to support its social and economic development. It fits well with two specific outcomes sought by the CPS (2013-2016): 1) improving transport connectivity for more balanced regional development; and 2) increasing access to quality health services and social protection programs.

II. Proposed Development Objective(s)

Proposed Development Objective(s) (From PCN)

The Project Development Objective (PDO) is to improve Yunnan's trunk highway asset management capacity and provide a better level of service to trunk highway users.

Key Results (From PCN)

The achievement of the PDO will be measured through the following proposed project performance indicators, which are subject to revision during project preparation:

(a) Percentage of trunk highways with good/fair condition;
(b) Time to respond to emergency events;
(c) Satisfaction rate of trunk highways users.

III. Preliminary Description

Concept Description

1. The project is designed to help Yunnan address the sector challenges related to inadequate maintenance, lack of emergency response system and highway asset management. The project will put in place the improved planning and budgeting process for maintenance, and enhance capacity of the Highway Bureau to execute maintenance programs and respond to emergency in a timely and effective manner. The project will have will include three components:

Component A ─ Highway Asset Management Improvement

2. The aim of the component is to modernize the existing highway asset management system, optimize resource allocation strategies and decisions, reduce life-cycles costs of highway assets, and improve user service. There are two sub-components:

3. Sub-Component A1 – Establishing an Integrated Highway Assets Management System. The proposed project will finance the development of an Integrated Highway Assets Management System, which will include different management systems for pavement, bridge, tunnel, traffic monitoring, emergency response, asset accounting, and office automation. The Integrated Highway Asset Management system will allow the Yunan Highway Bureau to develop a complete inventory of its highway assets and collect condition and usage data. It will also provide the Highway Bureau with an analytical tool for budgeting and decision making and predicting the consequence of funding decisions. The main project activities will include the procurement of software, hardware, installation, integration, initial database setup, and consultant services for system installation and training.

4. Sub-Component A2 ─ Supporting data collection for the system operation. The proposed project will finance the procurement of automated data collection equipment, inspection equipment, monitoring equipment, installation works and consultant services. It will establish data collection facilities and mechanisms to systematically collect necessary data for the operation of the asset management system.

Component B -- Enhancing Operational Capacities

5. The aim of the component is to improve Yunnan Highway Bureau's capacity to use effectively the new asset management system, as well as to increase work quality and efficiency and improve the technical and managerial skills of the staff in their new role. Three sub-components are proposed as below:

6. Sub-Component B1 ─ Training staff. The aim of the sub-component is to develop a comprehensive training program to update HB's staff managerial knowledge and technical skills and help them adapt to the new asset management system, learn how to maintain and operate the new equipment, and master innovative maintenance technologies. It will support the preparation of training needs assessment, and implementation of multi-year Bureau-wide training program.

7. Sub-Component B2 ─ Improving the facilities of Maintenance Stations and Emergency Response Centers and Purchasing Maintenance Equipment. The aim of the sub-component is to procure specialized maintenance equipment, emergency rescue equipment, maintenance machinery and vehicles. It will also finance civil works to rehabilitate and/or build facilities for the local maintenance bureaus that will be responsible for carrying out recurrent maintenance and emergency response in their respective jurisdiction.

8. Sub-Component B3 ─ Promoting cost-effective and innovative maintenance materials and technologies. The aims of the sub-component are to promote cost-effective and environmentally friendly maintenance materials and technologies to reduce highway maintenance costs. The new materials and technologies will be piloted in highways maintenance.

Component C ─ Strengthening Institutional Capacities

9. The aim of the component is to enhance Yunnan Highway Bureau's institutional capacities to better manage the assets. It will fund study tours, thematic studies, and technical assistances on highway asset evaluation and accounting as well as highway maintenance manual.

IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	×		
Natural Habitats OP/BP 4.04		×	
Forests OP/BP 4.36		×	
Pest Management OP 4.09		×	
Physical Cultural Resources OP/BP 4.11		×	
Indigenous Peoples OP/BP 4.10	×		

Involuntary Resettlement OP/BP 4.12	×		
Safety of Dams OP/BP 4.37		×	
Projects on International Waterways OP/BP 7.50		×	
Projects in Disputed Areas OP/BP 7.60		×	

V. Financing (in USD Million)

Total Project Cost:	300.00	Total Bank Financing:	150.00
Total Cofinancing:		Financing Gap:	0.00

Financing Source	Amount
Borrower	150.00
International Bank for Reconstruction and Development	150.00
Total	300.00

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