



# Report and Recommendation of the President to the Board of Directors

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Project Number: 42334  
August 2010

## Proposed Loan Kingdom of Cambodia: Rural Roads Improvement Project

Asian Development Bank

## **CURRENCY EQUIVALENTS**

(as of 15 August 2010)

|               |   |             |
|---------------|---|-------------|
| Currency Unit | – | riel/s (KR) |
| KR1.00        | = | \$0.00023   |
| \$1.00        | = | KR4,239.00  |

## **ABBREVIATIONS**

|       |   |  |
|-------|---|--|
| ADB   | – | Asian Development Bank                     |
| COBP  | – | country operations business plan           |
| EMP   | – | environmental management plan              |
| GGF   | – | good governance framework                  |
| IEE   | – | initial environmental examination          |
| KEXIM | – | Korea Eximbank                             |
| km    | – | kilometer                                  |
| m     | – | meter                                      |
| MPWT  | – | Ministry of Public Works and Transport     |
| MRD   | – | Ministry of Rural Development              |
| PAM   | – | project administration manual              |
| PDRD  | – | provincial department of rural development |
| PMU   | – | project management unit                    |
| POC   | – | priority operating costs                   |
| TA    | – | technical assistance                       |

## **NOTE**

In this report, "\$" refers to US dollars unless otherwise stated.

|                         |   |
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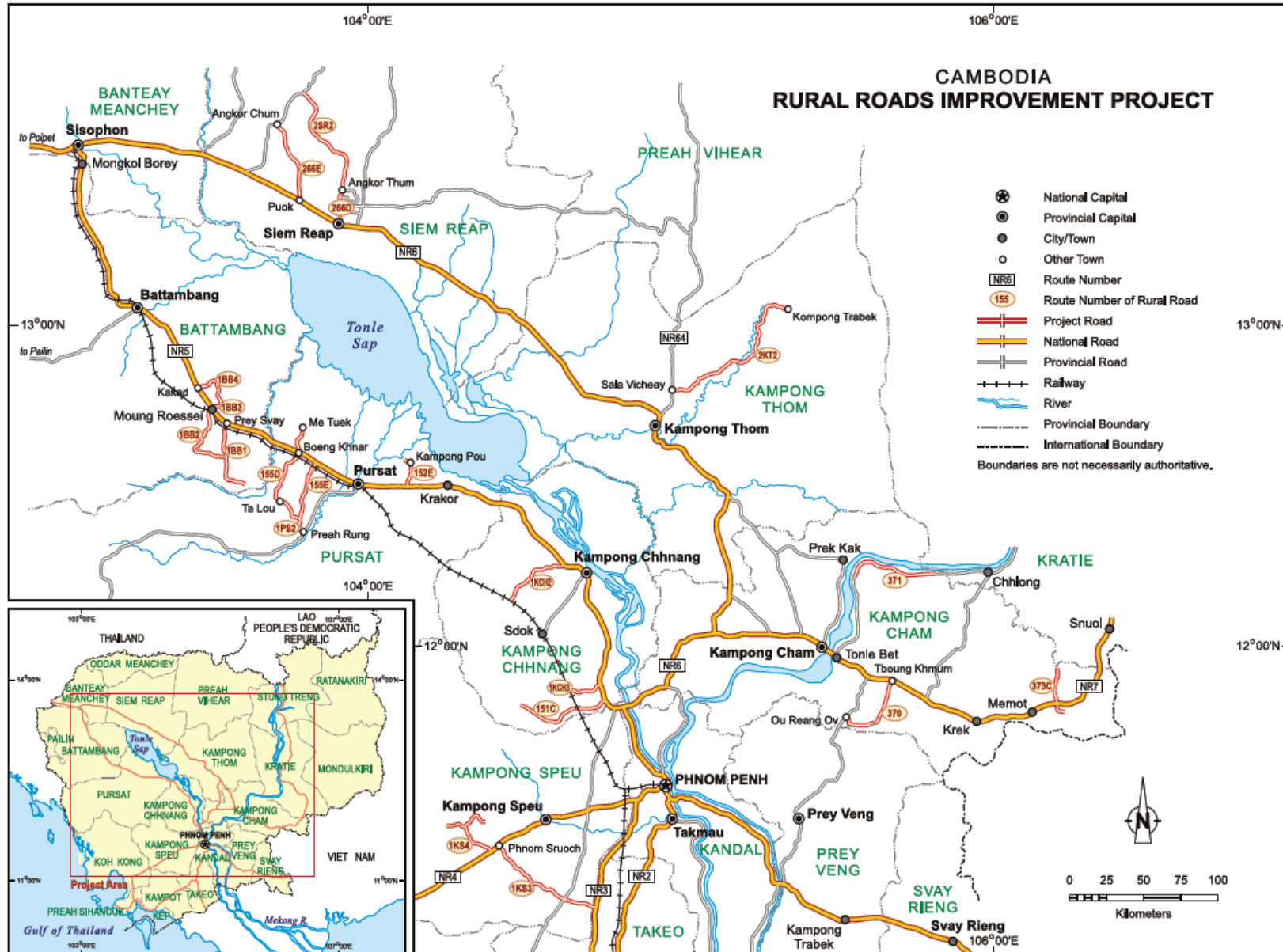
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## Project at a Glance

|  |   |   |   |
|--|---|---|---|
| 1. Project Name: Rural Roads Improvement Project |   | 2. Project Number: 42334-01-3   |   |
| 3. Country: Cambodia                             |   | 4. Department/Division: Southeast Asia Department<br>Transport and Urban Development Division |   |
| 5. Sector Classification:                        | <b>Sectors</b>  | <b>Primary</b>  | <b>Subsectors</b>                                       |
|  | Transport, and information and communication technology | √   | Road transport  |
|  | Health and social protection                            |   | Health programs   |
| 6. Thematic Classification:                      | <b>Themes</b>   | <b>Primary</b>  | <b>Subthemes</b>  |
|  | Economic growth   | √   | Widening access to markets and economic opportunities   |
|  | Capacity development                                    |   | Organizational development<br>Institutional development |
|  | Social development                                      |   | Other vulnerable groups                                 |
| 6a. Climate Change Impact:                       |   | 6b. Gender Mainstreaming:   |   |
| Adaptation                                       |   | Gender equity theme   |   |
| Mitigation                                       |   | Effective gender mainstreaming  |   |
|  |   | Some gender benefits  |   |
|  |   | No gender elements  |   |
| 7. Targeting Classification:                     |   | 8. Location Impact:   |   |
| General Intervention                             | Targeted Intervention                                   |   |   |
|  | Geographic dimensions of inclusive growth               | Millennium Development Goals  | Income poverty at household level                       |
| √  |   |   |   |
|  |   | Rural   | High  |
|  |   | Urban   | Low   |
|  |   | National  | Medium  |
|  |   | Regional  |   |
| 9. Project Risk Categorization: Complex          |   |   |   |
| 10. Safeguard Categorization:                    |   |   |   |
|  |   | Environment   | B   |
|  |   | Involuntary resettlement  | B   |
|  |   | Indigenous peoples  | B   |
| 11. ADB Financing:                               |   |   |   |
|  |   | <b>Sovereign/Nonsovereign</b>   | <b>Modality</b>   |
|  |   | <b>Source</b>   | <b>Amount (\$ million)</b>                              |
|  |   | Sovereign   | Project loan  |
|  |   | Asian Development Fund  | 35.0  |
|  |   | Total   | 35.0  |
| 12. Cofinancing:                                 |   |   |   |
|  |   | <b>Financier</b>  | <b>Category</b>   |
|  |   | <b>Amount (\$ million)</b>  |   |
|  |   | Export-Import Bank of Korea   | Official, bilateral                                     |
|  |   | 19.4  |   |
|  |   | Nordic Development Fund   | Official, multilateral                                  |
|  |   | 5.4   |   |
|  |   | Total   | 24.8  |
| 13. Counterpart Financing:                       |   |   |   |
|  |   | <b>Source</b>   | <b>Amount (\$ million)</b>                              |
|  |   | Government  | 7.2   |
| 14. Aid Effectiveness:                           |   |   |   |
|  |   | Parallel project implementation unit  | Yes   |
|  |   | Program-based approach  | Yes   |

# CAMBODIA RURAL ROADS IMPROVEMENT PROJECT



## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to the Kingdom of Cambodia for the Rural Roads Improvement Project.

2. The project will improve Cambodia's rural road network by paving 505.4 kilometers (km) of rural roads in seven provinces, most of which are located around Tonle Sap Basin. The project also aims to strengthen the capacity of the Ministry of Rural Development (MRD) to plan, manage, and monitor road maintenance operations by improving the sustainability of funding for road maintenance, increasing the participation and capacity of the private contracting industry, and strengthening provincial departments of rural development (PDRDs) as a means to support greater decentralization of road maintenance responsibilities. Furthermore, the project will help MRD establish an axle load control program for rural roads, design and manage a rural road safety program for the project provinces, and establish better implementation capacity for social safeguards within MRD. The project also supports initial work on road design and planning for climate change, and on emergency preparedness, mitigation, and response. The feasibility study for the project was prepared through an Asian Development Bank (ADB) technical assistance (TA) to the government.<sup>1</sup>

## II. THE PROJECT

### A. Rationale

3. Roads are the principal mode of transportation in Cambodia. The road network of approximately 39,400 km includes: (i) national roads (primary national highways) with a total length of about 4,800 km; (ii) provincial roads (secondary national highways) with a total length of about 6,600 km; and (iii) about 28,000 km of rural roads. Management of national and provincial roads is the responsibility of the Ministry of Public Works and Transport (MPWT), whereas management of rural roads is the responsibility of MRD.

4. The country's road network had greatly deteriorated by the early 1990s, as a result of the civil war. However, since 1992, with assistance from ADB and other multilateral and bilateral development partners, the government has focused on rehabilitating the core national infrastructure that is required for the economy to develop in a sustainable manner. Development efforts have increased the length of the paved national road network to about 2,700 km, which is slightly less than 25% of the total national and provincial road network.

5. The remote rural economy is becoming increasingly dependent on the improved national road network, yet the rural road network continues to deteriorate because of the steady growth in traffic, combined with a lack of maintenance financing, poor road maintenance standards, inadequate institutional capacity in road maintenance and management, lack of private contractor capacity, and design and construction deficiencies. The project will address these issues and provide reliable all-year road access from provincial towns and agricultural rural areas to markets, employment centers, and social services in seven provinces, serving about 560,000 beneficiaries. These provinces are Battambang, Kampong Cham, Kampong Chhnang, Kampong Speu, Kampong Thom, Pursat, and Siem Reap, most of which are located around Tonle Sap Basin where a large proportion of Cambodia's rural poor live. Some of the current gravel roads, which are 5–6 meters (m) in width, are susceptible to flooding in the rainy season. Motorcycles constitute nearly 80% of the traffic on these roads, which have low to moderate

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<sup>1</sup> ADB. 2008. *Technical Assistance to the Kingdom of Cambodia for the Provincial/Rural Road Asset Management Project*. Manila (TA 7199-CAM).

levels of traffic; the average daily traffic volume ranges from 200 to 2,000 passenger car units, depending on the road section. The current annual growth rate of traffic varies between 3.6% and 6% based on the type of vehicle. These growth rates are forecast to increase by 7.2%–12% per annum, thus requiring a more sustainable paved rural road network to accommodate future traffic.

6. As a consequence of relatively rapid economic development, overloading of cargo vehicles has become a severe cause of road damage in Cambodia in the past 5 years. This is also an issue on rural roads as a result of overloaded trucks that haul agricultural products and carry quarry materials for construction. While ADB is currently supporting axle load control programs for the national road network, the project aims to provide a wider coverage of control to curtail overloading in certain locations within the project provinces.

7. Cambodia has one of the highest incidences of road accidents in the world with 18 fatalities per 10,000 vehicles in 2007. This is a 50% increase from 2000 and nearly three times higher than that in neighboring Thailand. Thus, deteriorating road safety is a major sector concern, especially with the increasing growth of traffic in rural areas. Increased traffic speeds resulting from improved paved road surfaces can also impose tremendous safety risks to rural communities. In line with the national umbrella programs for road safety and ADB's ongoing support through MPWT, the project will assist the MRD in designing and managing a rural road safety program for the project provinces. Additionally, given the natural disasters that Cambodia has faced in recent years, particularly the frequent flooding during the wet season, the need to address climate change considerations is essential. The project therefore includes a number of innovative climate change adaptation activities relating, for example, to road design and planning for emergency preparedness, mitigation, and response.

8. Supported by past and ongoing ADB projects and TAs, the draft transport policy has been approved by MPWT and is currently being reviewed by Cambodia's Council of Ministers for final approval. MRD's policy for rural roads is currently being finalized and will supplement this transport policy. The rural roads policy needs to be approved and adopted within the project period to ensure effective implementation of all project outputs. MRD's sub-decree on the right-of-way for rural roads also needs to be formulated, finalized, and approved during the early stages of project implementation. This sub-decree will then be integrated with MPWT's sub-decree for national and provincial roads to form the road right-of-way law for Cambodia. The project includes assurances for timely approvals of both the rural roads policy and the sub-decree on the right-of-way for rural roads. The project is therefore in line with the draft transport policy of Cambodia; this transport policy is one recommendation of ADB's sector assistance program evaluation<sup>2</sup> for Cambodia's transport sector.

9. ADB's country operations business plan (COBP) 2009–2012 for Cambodia aims to foster pro-poor and socially inclusive growth by enhancing environmentally sustainable agriculture and rural development. In light of the indirect impacts of the global economic crisis, the COBP seeks to do this by diversifying the sources of rural growth and bolstering poverty reduction efforts.<sup>3</sup> The geographic focus of rural livelihood efforts will continue to be the Tonle Sap Basin, which has a large proportion of Cambodia's rural poor. The COBP includes four road sector projects in the program, all of which are in line with another recommendation of the sector assistance program evaluation, which requires ADB to shift its focus to the rehabilitation of provincial and rural roads.

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<sup>2</sup> ADB. 2009. *Transport Sector in Cambodia — Focusing on Results*. Manila. (SAP: CAM2009-34).

<sup>3</sup> ADB. 2008. *Country Operations Business Plan: Cambodia, 2009–2012*. Manila.



- (i) The Greater Mekong Subregion Cambodia Northwest Provincial Road Improvement Project will improve connectivity internally within the region and externally around the border areas with Thailand.<sup>4</sup>
- (ii) Two rural roads improvement projects,<sup>5</sup> programmed for 2010 and 2012, will complement the above project. These two projects will rehabilitate and maintain connecting rural roads to improve the rural poor's access to markets and social services. The phased approach for the two projects is intended to resolve the current issues in the rural roads subsector (see paras. 5 and 6) in a systematic way.
- (iii) The Provincial Roads Asset Management Project is programmed for 2011 to support MPWT in the rehabilitation of provincial roads.

10. The government's poverty reduction strategy for 2009–2013 (the Rectangular Strategy for Growth, Employment, Equity and Efficiency, Phase II) emphasizes generating economic growth through the private sector, with rehabilitation and development of the country's physical infrastructure as a necessary precondition.<sup>6</sup> The project supports this strategy, particularly as it enhances connectivity, economic exchange, and access to social services in remote areas of Cambodia. Thus, it is included in the COBP 2009–2012 as a core project in the transport sector.

## B. Impact and Outcome

11. The impact of the project is improved access to markets, jobs, and social services in seven project provinces, mainly surrounding Tonle Sap Basin. These are Battambang, Kampong Cham, Kampong Chhnang, Kampong Speu, Kampong Thom, Pursat, and Siem Reap.

12. The expected outcome of the project is the provision of safe, cost effective, all-year road access in remote agricultural areas of the seven provinces, where a large proportion of Cambodia's rural poor lives.

## C. Outputs

13. There are five key outputs of the project that address the above issues pertaining to rural roads.

- (i) **Road rehabilitation.** The project will pave 505.4 km of rural roads using a double bituminous seal treatment. The project roads are located in seven provinces, mainly around Tonle Sap Basin (para. 11) and were selected based on screening criteria that included: (a) the rural roads must link with the already paved primary national road network and provincial road network to provide smooth all-weather access; (b) the roads must support ADB's past, ongoing, and future projects, not only in the road sector, but also in other sectors; and (c) the roads must be consistent with MRD's priorities for rural development and decentralization.

<sup>4</sup> ADB. 2009. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Kingdom of Cambodia for the Greater Mekong Subregion Cambodia Northwest Provincial Road Improvement Project*. Manila (Loan 2539-CAM).

<sup>5</sup> The first project is this proposed one, for approval in 2010. It will be supplemented by a proposed *Second Rural Roads Improvement Project*, for approval in 2012. The first project will use the loan proceeds to design the second one, thus ensuring stronger ownership by the government, more systematic capacity building for the MRD in project preparation, and a smooth transition between the two projects.

<sup>6</sup> Samdech Akka Moha Sena Padei Techo Hun Sen, Prime Minister of the Kingdom of Cambodia. 2008. *Rectangular Strategy for Growth, Employment, Equity and Efficiency, Phase II*. Phnom Penh.

- (ii) **Improved road asset management.** The project will improve road asset management in a sustainable manner through a strong capacity-building program. This program will: (a) implement training programs for MRD and PDRDs to strengthen human resource capacity in technical and project management issues concerning road asset planning and management; (b) help MRD to prepare road asset management budgets and identify potential revenue sources to ensure sustainable financing; (c) implement an overloading prevention program for rural roads, starting with the project provinces; and (d) implement a contracting industry support program (program outline web-linked) that will help establish professional engineering and contracting institutes in Cambodia to increase the capacity of local private sector contractors.
- (iii) **Increased road safety and safeguards.** The awareness and application of road safety and safeguards will be increased by: (a) implementing a community-based road safety awareness program, including an education program for schools, drivers, road users, and the community, in line with the national program that also incorporates road safety provisions in various project designs; (b) establishing a new social and environment office in MRD; (c) implementing an HIV/AIDS and human trafficking prevention program; and (d) conducting a sex-disaggregated baseline socioeconomic survey of beneficiaries.
- (iv) **Climate change adaptation.** Vulnerability to climate change in the project area will be reduced under a pilot initiative in Southeast Asian countries. The activities contributing to this output are: (a) vulnerability mapping for rural roads to improve planning for climate changes; (b) introducing ecosystem-based adaptation strategies focusing on environmental and green planning for project roads to improve flood and drought management (i.e., increasing ground cover and infiltration of flood water during floods, and water retention during droughts, which have the added benefit of enhancing rural livelihoods by improving the soil structure for agriculture); (c) piloting the use of climate monitoring systems to improve road management and maintenance, since certain maintenance works can only take place during the dry season but, as seasons are shifting each year, planning is becoming more difficult; (d) developing pilot programs for an early warning system and emergency management planning for rural roads; and (e) planning water capture and storage systems to manage the increased intensity of floods and droughts together with the ecosystem measures.
- (v) **Efficient project management.** The project also includes project management support for MRD, the executing agency.

14. The project will have substantial positive employment and gender impacts in the rural communities. The labor and gender mainstreaming action plan (web-linked) describes the labor and gender-mainstreaming aspects associated with the project outputs.

#### **D. Investment and Financing Plans**

15. The project is estimated to cost \$67.0 million including taxes, duties, and priority operating cost (POC) of \$7.25 million. The total cost includes physical and price contingencies, and interest and other charges during implementation. The investment plan is summarized in Table 1. Detailed cost estimates by expenditure category and detailed cost estimates by

financier are in the project administration manual (PAM)<sup>7</sup>.

**Table 1: Project Investment Plan**  
(\$ million)

| Item  | Amount <sup>a</sup> |
|---|---------------------|
| <b>A. Base Cost<sup>b</sup></b>                               |                     |
| 1. Road rehabilitation  | 44.36               |
| a. Road improvement of 505.4 kilometers                       | 39.38               |
| b. Consulting services for design and supervision             | 4.98                |
| 2. Road asset management                                      | 2.00                |
| 3. Road safety and safeguards                                 | 1.20                |
| 4. Climate change adaptation                                  | 5.40                |
| 5. Efficient project management                               | 2.01                |
| <b>Subtotal (A)</b>   | <b>54.97</b>        |
| <b>B. Contingencies<sup>c</sup></b>                           | <b>11.07</b>        |
| <b>C. Financing Charges During Implementation<sup>d</sup></b> | <b>0.96</b>         |
| <b>Total (A+B+C)</b>  | <b>67.00</b>        |

<sup>a</sup> Includes taxes, duties, and POC of \$7.25 million to be financed from government resources.

<sup>b</sup> In 2010 prices.

<sup>c</sup> Physical contingencies computed at 10% for base costs. Price contingencies computed at 1% in 2010, 0% in 2011, 0.3% in 2011, and 0.5% in 2012 on foreign exchange costs and 5% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

<sup>d</sup> Includes interest charges computed at 1% for ADB and Korea Eximbank.

Source: Asian Development Bank estimates.

16. **Tentative financing plan.** The borrower, who will be the Kingdom of Cambodia, has requested a loan in various currencies equivalent to SDR23,134,000 from ADB's Special Funds resources to help finance the project. For the ADB loan, the repayment period of the proposed loan will be 32 years, including a grace period of 8 years, with an interest charge of 1.0% during the grace period and 1.5% thereafter. The interest during construction will be financed by the ADB loan. The proceeds of the loan will be made available by the borrower to the MRD through budgetary allocations. The ADB loan will fund civil works, related consulting services, equipment, and project management totaling \$35 million equivalent. Korea Eximbank (KEXIM) of the Government of Korea will finance civil works and related consulting services through a \$19.35 million loan, while the Nordic Development Fund (NDF) will finance climate change adaptation through a \$5.4 million grant. Both will be parallel cofinancing, administered by each agency, but the KEXIM loan will be on tied-basis. The government will finance the local taxes, duties, and POC amounting to \$7.25 million. Financing arrangements with KEXIM and the NDF are being finalized now. The financing plan is in Table 2.

**Table 2: Financing Plan**

| Source                 | Amount<br>(\$ million) | Share of<br>Total (%) |
|------------------------|------------------------|-----------------------|
| Asian Development Bank | 35.00                  | 52.2                  |
| Cofinanciers: KEXIM    | 19.35                  | 28.9                  |
| NDF                    | 5.40                   | 8.1                   |
| Government of Cambodia | 7.25                   | 10.8                  |
| <b>Total</b>           | <b>67.00</b>           | <b>100.0</b>          |

KEXIM = Korea Eximbank of the Government of Korea; NDF = Nordic Development Fund.

Source: Asian Development Bank estimates.

<sup>7</sup> Project Administration Manual (Appendix 2).

## E. Implementation Arrangements

17. The proposed arrangements for project implementation, management, and coordination will be through a project management unit (PMU) established within the MRD. The PDRDs of the seven provinces will be the implementing agencies to execute civil works in the respective province. Through a project coordinator, the PMU will initiate and coordinate effective communication among all stakeholders of the project, including the MRD, Ministry of Economy and Finance, and other agencies of the government, beneficiary stakeholders, and donor agencies. The project coordinator, at secretary of state level, will coordinate all project activities within and outside MRD. The technical head of the PMU will be the project director, at director general level, who will manage detailed project activities and report to the coordinator. The project manager, at deputy director general level, in managing daily activities, will assist the project director. MRD management has already identified suitable persons for these three positions. The remaining PMU personnel, to be identified and appointed, will require well-developed technical and management skills to implement the project. This process will also include consultations with ADB, the consultants, and other experienced PMUs, like in MPWT.

18. **Implementation period.** The project will be implemented within a period of 5 years, from 2011 to 2015. To expedite implementation, MRD requested and ADB approved advance procurement action and retroactive financing for initial project administration activities. ADB advised the government that approval of advance action and retroactive financing does not commit ADB to finance the project. The implementation arrangements are summarized in Table 3 and described in detail in the PAM.

**Table 3: Implementation Arrangements**

| Aspects                                       | Arrangements  |   |                |
|---|---|---|----------------|
| Implementation period                         | January 2011–December 2015  |   |                |
| Estimated project completion date             | 31 December 2015  |   |                |
| Loan closing date                             | 30 June 2016  |   |                |
| Project management                            |   |   |                |
| (i) Oversight body                            | Ministry of Economy and Finance   | Interministerial Resettlement Committee |                |
| (ii) Executing agency                         | Ministry of Rural Development   |   |                |
| (iii) Key implementing agencies               | Provincial Departments of Rural Development   |   |                |
| (iv) Project management unit                  | Phnom Penh  | 25 staff                                |                |
| Procurement                                   | International competitive bidding   | 2 contracts                             | \$27.6 million |
|   | National competitive bidding or limited international bidding   | 1 contract                              | \$0.34 million |
| Consulting services                           | Quality- and cost-based selection   | 789 person-months                       | \$8.17 million |
| Retroactive financing and advance contracting | Retroactive financing for consulting services for detailed design and implementation supervision and project management vehicles and PMU office equipment | 3 contracts                             | \$0.13 million |

| Aspects      | Arrangements   |
|--------------|--|
| Disbursement | The loan proceeds will be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2007, as amended from time to time) and the detailed arrangement agreed upon between the government and ADB. |

ADB = Asian Development Bank, MRM = management review meeting, PMU = project management unit.  
Source: Asian Development Bank.

### III. DUE DILIGENCE

#### A. Economic and Financial

19. The improvement of rural roads under the project will serve about 560,000 project beneficiaries, the vast majority of whom are the rural poor living within the Tonle Sap Basin. The approach used to evaluate the project follows the standard practice of comparing the life-cycle costs of the road agency and road users, with and without the project. The economic internal rate of return of the proposed project is 32%, well above the 12% threshold, and the economic internal rates of return for individual roads are also above 12%.

#### B. Governance

20. ADB's *Anticorruption Policy* (1998, as amended to date) was explained to, and discussed with the Government of Cambodia and MRD. This will be applied throughout project implementation. Apart from this, a good-governance framework (GGF)<sup>8</sup> was developed, in coordination with the government and another ongoing ADB project.<sup>9</sup> The specific policy requirements and supplementary measures to ensure good governance are described in the PAM. The GGF will be posted on the websites of MRD and ADB. Review missions will closely monitor the PAM and GGF. In addition, mitigation measures to address potential risks associated with procurement and financial management are summarized in Table 4.

#### C. Poverty and Social

21. The project will significantly benefit the rural poor, including women, living within the Tonle Sap Basin. Local economic development depends on improved connectivity, and paved rural roads will reduce travel times, increase convenience, and make it safer for women and girls to travel further from home. Better accessibility will improve rural health and educational attainment. Girls will have a better chance of attending secondary school, markets will be easier to reach, and "buy and sell" job opportunities for women will increase. Road construction and maintenance will generate jobs for local men and women, and provide much-needed cash income. The project's labor and gender mainstreaming action plan will ensure that contractors give priority to local residents for construction and road maintenance jobs, and ensure that men and women benefit equally, with equal pay for equal work. From a health perspective rural villages will benefit from a significant reduction in dust, which is linked to respiratory disease, a major cause of child mortality in Cambodia. Potentially negative social impacts of increased connectivity will be monitored and mitigated through HIV/AIDS and human trafficking prevention

<sup>8</sup> Good Governance Framework (Appendix 2).

<sup>9</sup> ADB. 2008. *Report and Recommendation of the President to the Board of Directors: Proposed Grant to the Kingdom of Cambodia for Public Finance Management for Rural Development Project*. Manila (Grant 0133-CAM).

programs. The project includes a community-based road safety program to increase road user safety.

#### **D. Safeguards**

22. The project has been classified at category B for both resettlement and indigenous peoples under ADB's Safeguard Policy Statement (2009). While none of the project roads will require widening, a private contractor has already widened a 350 m segment of Road 1KS3 near NR 3 without prior notification to MRD and ADB. Due diligence findings show that the road widening affected secondary structures and trees, but without any compensation and assistance being provided to the affected households. The government has agreed to address the noncompliance issues by providing compensation and assistance to the affected households before the loan effectiveness date. MRD has assured ADB that there will be no land acquisition and resettlement activities along the remainder of the road or any other road section within the project scope, under any circumstance. However, there may be temporary impacts during construction. A resettlement framework, prepared by MRD and agreed by ADB and Ministry of Economy and Finance on 5 March 2010, addresses all such potential issues. It is envisaged that there will be no or limited impacts on indigenous groups, and indigenous peoples specific actions are included in the resettlement framework.<sup>10</sup>

23. The project has been classified as category B for environment. Results of the initial environmental examination (IEE) showed that only minor environmental impacts are anticipated. Such impacts will be experienced during site works mainly due to dust and noise emissions as well as potential occupational and community health and safety risks, but can be mitigated. While the road widening that has already been completed along a 350 m section of 1KS3 has affected some permanent structures through the partial demolition of a number of shops and uprooting of several fruit trees, no associated environmental impacts were identified that would warrant the conduct of an environmental due diligence study.

24. None of the project roads traverses the buffer or core zones of ecologically protected areas. With regard to culturally protected sites, the road improvements in Kampong Thom will include the buffer and core zones of the Prasat Sambour temple, which is proposed for classification as a United Nations Educational, Scientific and Cultural Organization World Heritage Site. While the road proposed for improvement in Siem Reap connects to the paved road network of the Angkor Wat temple complex, it does not pass through the complex itself where archaeological structures are found. Certifications of no objection to the project have also been obtained from the management authorities of Prasat Sambour and Angkor Wat. To avoid or mitigate negative impacts arising from the project, an environmental management plan (EMP) detailing mitigation measures and monitoring activities has been prepared as part of the IEE. Public consultations involving affected people and local officials have been conducted during the preparation of the IEE in compliance with ADB information disclosure and consultation requirements through focus group discussions and individual interviews in all seven provinces. To ensure that the project is carried out in accordance with the EMP requirements, MRD will specify details of the implementation of the EMP in the tender documents and civil works contracts. MRD will be assisted by the detailed design and implementation supervision consultant in monitoring the environmental performance of contractors. The detailed design and implementation supervision consultant will also provide on-the-job training to the field personnel of MRD to build their capacity in environmental management and monitoring.

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<sup>10</sup> Resettlement Framework (Appendix 2).

## E. Risks and Mitigating Measures

25. Given the procurement management problems that other development partners have had with MRD in the past, there is a need to establish risk mitigation measures as ADB embarks on this rural road project. The preliminary assessment during the TA identified MRD's public financial management, procurement, corruption, and due diligence as the greatest risks during project implementation. Major risks and mitigating measures are summarized in Table 4.

**Table 4: Summary Risks and Mitigating Measures**

| <b>Risks</b>  | <b>Mitigating Measures</b>   |
|---|--|
| Sector policies (lack of an effective policy for rural roads) | The government to expedite approval of the rural road policy and a sub-decree on right of way of rural roads   |
| Public financial management                                   | Close coordination with the ongoing and proposed programs for MRD; coordination with the Ministry of Economy and Finance   |
| Procurement   | Close project monitoring through the GGF and review missions   |
| Technical capability (low quality of road works)              | Consultants to assist with pavement design and construction supervision and provide on-the-job training to strengthen the capacity of the executing agency staff |
| Corruption  | Close project monitoring through the GGF and review missions   |
| Due diligence   | Close project monitoring through the GGF and review missions   |

GGF = good governance framework, MRD = Ministry of Rural Development.  
Source: Asian Development Bank.

## IV. ASSURANCES

26. Implementation of the project will conform to ADB's mandatory policies on anticorruption, procurement, consulting services, due diligence, safeguards, and disbursement as described in detail in the PAM. The government and MRD have given the following assurances, in addition to the standard assurances that are incorporated in the legal documents:

- (i) MRD will complete the ongoing draft MRD policy for rural roads; it will be acceptable to ADB, approved by the minister within 9 months after loan effectiveness, and disclosed in a public address by the minister and in the media. MRD will also ensure that implementation of this policy is supported by an appropriate institutional arrangement that is acceptable to ADB.
- (ii) MRD will complete the draft sub-decree on the right-of-way for rural roads; it will be acceptable to ADB, and approved by the minister within 12 months after loan effectiveness, and submitted for the approval of the Council of Ministers.
- (iii) MRD will complete the draft sub-decree on axle load control for MRD roads; it will be acceptable to ADB, approved by the minister, and implemented effectively within 12 months after loan effectiveness.

- (iv) The GGF prepared during project processing will be acceptable to ADB and implemented effectively by MRD during the entire project period.
- (v) In addition to the standard requirements of ADB's public disclosure policy, MRD will publicly disclose on its website activities such as (i) to (iv) above and local procurement activities, in order to increase public awareness on its good governance practices.

## **V. RECOMMENDATION**

27. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loan in various currencies equivalent to SDR23,134,000 to the Kingdom of Cambodia for the Rural Roads Improvement Project from ADB's Special Funds resources with an interest charge at the rate of 1.0% per annum during the grace period and 1.5% per annum thereafter; for a term of 32 years, including a grace period of 8 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan agreement presented to the Board.

Haruhiko Kuroda  
President

31 August 2010



### DESIGN AND MONITORING FRAMEWORK

| Design Summary   | Performance Targets and Indicators   | Data Sources and Reporting Mechanisms   | Assumptions and Risks   |
|--|--|---|---|
| <p><b>Impact</b><br/>Improved access to markets, jobs, and social services in seven project provinces</p>  | <p>Volume of agricultural products transported on project roads increases by 100% from 2011 to 2018.</p> <p>By 2018, in the project provinces:</p> <ul style="list-style-type: none"> <li>(i) economic activity rate of 80% (ages 15–64, both sexes) increases to 85%;</li> <li>(ii) child mortality rate of 83 deaths per 1,000 live births decreases to 50;</li> <li>(iii) maternity mortality rate of 461 deaths per 100,000 live births decreases to 230; and</li> <li>(iv) rural girls' lower secondary net enrollment rate increases from 30.8% in school year 2009/10 to 40%</li> </ul> | <p>National and regional statistics</p> <p>Field surveys</p> <p>Population census</p> <p>Health information system and Cambodia Demographic and Health Survey</p> <p>Education management information system</p>  | <p><b>Assumptions</b><br/>Increased availability and quality of transport services following the rehabilitation of project roads</p> <p>Roads are adequately maintained after rehabilitation.</p> <p><b>Risks</b><br/>Project roads suffer severe damage from natural disasters.</p> <p>Unexpected long-term new epidemic hits Cambodia</p> |
| <p><b>Outcome</b><br/>Safe, cost effective, all-year road access provided in remote agricultural areas in seven provinces of the Tonle Sap Basin</p> | <p>Road accidents in the project area decrease by 20% from 2009 (5,610 accidents) to 2015</p> <p>Average travel times on project roads decrease by 25% from 2011 to 2015</p> <p>Average trip lengths on project roads increase by 40% from 2011 to 2015</p> <p>Share of the rural road network in average or good condition increases from 17% in 2011 to 20% in 2014</p> <p>Average number of days per year that the project roads are accessible increases from 180–200 days in 2011 to 365 days in 2014.</p>  | <p>National road safety action plan annual report</p> <p>Field traffic surveys</p> <p>Field traffic surveys</p> <p>Provincial and national trade statistics; MRD's annual reports</p> <p>MRD's annual reports</p> | <p><b>Assumption</b><br/>The government sustains its commitment to rural infrastructure development.</p> <p><b>Risk</b><br/>The project roads deteriorate because of insufficient funds for road maintenance programs.</p>  |
| <p><b>Outputs</b><br/>1. Project roads rehabilitated</p>   | <p>505.4 km of rural roads rehabilitated by 2014</p> <p>At least 1 million person days of local unskilled wage labor created for road rehabilitation and maintenance (with at least 40% for women workers) by 2014</p>   | <p>Monthly and quarterly project progress reports</p> <p>Monitoring reports</p> <p>Project accounts</p> <p>Project review missions</p>  | <p><b>Assumptions</b><br/>PDRDs continuously commit to manage environment and social action plans</p> <p>Continued government commitment to overloading control</p> <p>Targeted communities apply road safety principles</p>  |

| Design Summary  | Performance Targets and Indicators  | Data Sources and Reporting Mechanisms   | Assumptions and Risks   |
|---|---|---|---|
| <p>2. Improved MRD road asset management</p> <p>3. Increased road safety and awareness of potential social problems</p> <p>4. Reduced vulnerability of project roads to climate change</p> <p>5. Efficient project management</p> | <p>Violations of overloaded trucks in the project provinces are reduced by 40% from 2011 to 2015.</p> <p>Average roughness of project roads in 2011 decreases from 6–14 to 2–3 in 2015.</p> <p>Annual operation and maintenance budget for project roads increases from \$275 per km in 2010 to \$300 per km in 2015.</p> <p>The number of small-scale contractors in the project provinces accredited by MRD increases from 0 in 2010 to 10 in 2015.</p> <p>40% of project beneficiaries in the seven provinces and all contractors' personnel participate in an HIV/AIDS awareness and human trafficking prevention program before and during civil works construction, by 2014.</p> <p>Sex-disaggregated baseline socioeconomic data established by 2011</p> <p>All residents at risk are evacuated within 72 hours after a typhoon occurs in the pilot province for emergency management, 2015 onwards.</p> <p>PMU personnel increased from 12 in 2010 to 22 in 2013</p> <p>All PMU and MRD social and environmental unit staff participate in training on social and gender issues, by 2012.</p> <p>At least 25% of the newly established MRD social and environmental unit staff are female, by 2012.</p> | <p>MRD annual reports</p> <p>JICA Axle Load Control Program reports</p> <p>Quarterly progress reports and project completion report</p> <p>MRD annual reports</p> <p>MRD annual reports</p> <p>National health statistics</p> <p>Quarterly progress reports and project completion report</p> <p>Quarterly progress reports and project completion report</p> <p>Quarterly progress reports</p> | <p>Targeted communities apply HIV/AIDS awareness and prevention education</p> <p><b>Risks</b><br/>Recruitment of consultants and contractors is delayed by external factors.</p> <p>Increased construction costs reduce the scope of works</p> <p>The number of natural disasters exceeds predictions</p> <p>Trained personnel in the PMU leave MRD or are replaced</p> |

| Activities with Milestones   | Inputs  |
|--|---|
| <ol style="list-style-type: none"> <li>1. Road rehabilitation               <ol style="list-style-type: none"> <li>1.1 MRD selects detailed design and construction supervision consultants: by March 2011</li> <li>1.2 MRD prepares tender documents and selects contractors: by January 2012</li> <li>1.3 MRD completes the future project design: by 2012</li> <li>1.4 MRD completes 505.4 km of road rehabilitation: by 2014</li> </ol> </li> <li>2. Road asset management               <ol style="list-style-type: none"> <li>2.1 MRD completes training programs for MRD on technical and budget management: by 2013</li> <li>2.2. MRD completes training programs on technical, and project management for PDRDs: by 2013</li> <li>2.3 MRD implements the overloading control program: by 2013</li> <li>2.4 MRD completes the contracting industry support program: by 2014</li> </ol> </li> <li>3. Road safety and safeguards               <ol style="list-style-type: none"> <li>3.1. MRD establishes a new social and environment office: by 2012</li> <li>3.2. MRD implements the road safety program: by 2014</li> <li>3.3 MRD implements the HIV/AIDS awareness and human trafficking prevention program: by 2014</li> <li>3.4 MRD completes the baseline socioeconomic survey with sex-disaggregated data: by 2012</li> </ol> </li> <li>4. Climate change adaptation               <ol style="list-style-type: none"> <li>4.1 MRD completes the detailed vulnerability map for climate change for project provinces: by 2014.</li> <li>4.2 MRD completes the ecosystem based climate change adaptation strategies: by 2014</li> <li>4.3 MRD completes a pilot climate monitoring system-based road maintenance and management program: by 2014</li> <li>4.4 MRD establishes a pilot emergency management system for one project province, and operates it: by 2014</li> <li>4.5 MRD installs the pilot early warning system for one project province (of 4.4): by 2014</li> <li>4.6 Completion of the plan for water capture and storage systems for the project provinces: by 2014</li> </ol> </li> <li>5. MRD manages the project and implements and monitors the labor and gender action plan: by 2014</li> </ol> | <ol style="list-style-type: none"> <li>1. Road rehabilitation:               <ol style="list-style-type: none"> <li>1.1 Improving 505.4 km of rural roads – \$39.38 million</li> <li>1.2 Consulting services for design and construction supervision – \$4.98 million</li> </ol> </li> <li>2. Road asset management – \$2.00 million</li> <li>3. Road safety and safeguards – \$1.20 million</li> <li>4. Climate change adaptation – \$5.40 million</li> <li>5. Project management – \$2.01 million</li> <li>6. Contingencies – \$11.07 million</li> <li>7. Financial charges during implementation – \$0.96 million</li> </ol> <p>ADB: \$35.0 million</p> <p>Government: \$7.25 million</p> <p>Cofinancing:<br/>           – KEXIM: \$19.35 million<br/>           – NDF: \$5.40 million</p> <p>Beneficiaries: 560,000 persons</p> |

ADB = Asian Development Bank, JICA = Japan International Cooperation Agency, KEXIM = Korea Eximbank, km = kilometer, MRD = Ministry of Rural Development, NDF = Nordic Development Fund, PDRD = provincial department of rural development, PMU = project management unit.

Source: Asian Development Bank.

### **LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/?id=42334-01-3>

1. Loan Agreement
2. Sector Assessment (Summary): Road Transport
3. Project Administration Manual
4. Contribution to the ADB Results Framework
5. Development Coordination
6. Economic Analysis
7. Country Economic Indicators
8. Summary Poverty Reduction and Social Strategy
9. Gender Action Plan: Labor and Gender Mainstreaming Action Plan
10. Resettlement Framework
11. Risk Assessment and Risk Management Plan
12. Good Governance Framework
13. Outline of Contracting Industry Support Program
14. Output: Climate Change Adaptation