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Report No: PAD1079

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR43.5 MILLION

(US$60 MILLION EQUIVALENT)

TO THE

KINGDOM OF CAMBODIA

FOR A

ROAD ASSET MANAGEMENT PROJECT II

April 28, 2016

Transport & IT Global Practice
East Asia and Pacific Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective January 31, 2016)

Currency Unit	=	Cambodian Riel (KHR)
KHR 4037	=	US$ 1
US$ 1.38050	=	SDR1

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AADT	Annual Average Daily Traffic
ADB	Asian Development Bank
AEC	Asean Economic Community
ARAP	Abbreviated Resettlement Action Plan
ASEAN	Association of Southeast Asian Nations
AWP	Annual Work Program
CBA	Cost Benefit Analysis
CEN	Country Engagement Note
CRPF	Compensation and Resettlement Policy Framework
DA	Designated Account
DAF	Department of Accounting and Finance, MPWT
DG	Director General
DoA	Department of Administration
DoP	Department of Planning
EDCF	Economic Development Cooperation Fund
EIRR	Economic Internal Rate of Return
EMP	Environmental Management Plan
ESO	Environment and Social Office
ESSF	Environment and Social Safeguard Framework
FA	Financing Agreement
FERP	Flood Emergency Rehabilitation Project
FM	Financial Management
FMM	Financial Management Manual
FMR	Financial Management Report
FTI/ESP	Fast Track Initiative/Education Support Project
FWD	Falling Weight Deflectometer
GDAP	General Department of Administration and Planning
GDP	Gross Domestic Product
GDPW	General Department of Public Works
GDT	General Department of Transport

GGF	Good Governance Framework
GHG	Greenhouse Gas
GMS	Greater Mekong Sub-region
HDM-4	Highway Design Model Version 4
IA	Implementing Agency
ICB	International Competitive Bidding
ICRRM	Inter-ministerial Committee for Repairs and Maintenance
IDA	International Development Association
IPDF	Indigenous Peoples Development Plan
IPDP	Indigenous Peoples Development Plan
IPPF	Indigenous People Policy Framework
IRC	Inter-ministerial Resettlement Committee
IRI	International Roughness Index
IRI-TWG	Infrastructure and Regional Integration Technical Working Group
IRM-CERC	Immediate Response Mechanism Contingent Emergency Response Component
ISC	Implementation and Supervision Consultant
ISN	Interim Strategy Note
JICA	Japan International Cooperation Agency
KP	Kilometer Point
LASED	Land Allocation for Social and Economic Development
M&E	Monitoring and Evaluation
MEF	Ministry of Economy and Finance
MOH	Ministry of Health
MOEYS	Ministry of Education, Youth and Sports
MPWT	Ministry of Public Works and Transport
NBC	National Bank of Cambodia
NCB	National Competitive Bidding
NCDM	National Committee for Disaster Management
NGO	Non-Governmental Organization
NPV	Net Present Value
NR	National Roads
NRSC	National Road Safety Committee
NSDP	National Strategic Development Plan
PAD	Project Appraisal Document
PAH	Project Affected Household
PBB	Performance Based Budgeting
PBC	Performance Based Contracting
PBMC	Performance Based Maintenance Contracts
PCR	Physical Cultural Resources
PD	Project Director
PDO	Project Development Objective
PDR	People’s Democratic Republic (Lao PDR)
PM	Project Manager
POM	Project Operation Manual
PRIP	Provincial Rural Infrastructure Project

PTC	Project Technical Committee
RAM	Road Asset Management
RAMO	Road Asset Management Office
RAMP	Road Asset Management Project
RAMP-II	Road Asset Management Project II
RAP	Resettlement Action Plan
RDCMU	Road Data Collection and Management Unit
RGC	Royal Government of Cambodia
RID	Road Infrastructure Department
RMDS	Road Management Decision Support
ROW	Right of Way
SDG	Sustainable Development Goal
SC	Steering Committee
SFMM	Supplementary Financial Management Model
SGESS	Standard Guidelines for Implementation of Environmental and Social Safeguards
SOP	Standard Operating Procedure
SOP/PM	Standard Operating Procedure and Procurement Manual
SSC	School Support Committee
TOR	Terms of Reference
TRC	Technical Research Center
VOC	Vehicle Operating Cost
WHO	World Health Organization

Regional Vice President:	Xiaoqing Yu (Acting)
Country Director:	Ulrich Zachau
Senior Global Practice Director:	Pierre Guislain
Practice Manager:	Michel Kerf
Task Team Leader:	Veasna Bun

KINGDOM OF CAMBODIA
ROAD ASSET MANAGEMENT PROJECT II

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PAD DATA SHEET

Cambodia

KH - Road Asset Management Project II (P150572)

PROJECT APPRAISAL DOCUMENT

EAST ASIA AND PACIFIC

Transport & ICT Global Practice

Report No.: PAD1079

Basic Information		
Project ID P150572	EA Category B - Partial Assessment	Team Leader(s) Veasna Bun
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints [ ] Financial Intermediaries [ ] Series of Projects [ ]	
Project Implementation Start Date 01-Oct-2016	Project Implementation End Date 30-Jun-2022	
Expected Effectiveness Date 01-Oct-2016	Expected Closing Date 31-Dec-2022	
Joint IFC No		

Practice Manager/Manager	Senior Global Practice Director	Country Director	Regional Vice President
Michel Kerf	Pierre Guislain	Ulrich Zachau	Xiaoqing Yu, Acting

Borrower: The Kingdom of Cambodia			
Responsible Agency: Ministry of Public Works and Transport			
Contact:	H.E. Tram Iv Tek	Title:	Minister
Telephone No.:	(855-23) 427-845	Email:	mpwt@online.com.kh

Project Financing Data(in USD Million)					
[ ] Loan	[ ] IDA Grant	[ ] Guarantee			
[X] Credit	[ ] Grant	[ ] Other			
Total Project Cost:	64.80		Total Bank Financing:	60.00	
Financing Gap:	0.00				

Financing Source	**Amount**

BORROWER/RECIPIENT	4.80
International Development Association (IDA)	60.00
Total	64.80

Expected Disbursements (in USD Million)

Fiscal Year	2017	2018	2019	2020	2021	2022	2023	0000	0000	0000
Annual	2	8.5	14.8	14.8	6.5	6.5	6.9	0.00	0.00	0.00
Cumulative	2	10.5	25.3	40.1	46.6	53.1	60	0.00	0.00	0.00

Institutional Data

Practice Area (Lead)

Transport & ICT

Contributing Practice Areas

Cross Cutting Topics

[X] Climate Change
[ ] Fragile, Conflict & Violence
[X] Gender
[ ] Jobs
[ ] Public Private Partnership

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Transportation	Rural and Inter-Urban Roads and Highways	97	50	
Public Administration, Law, and Justice	Central government administration	3		
Total		100		

☐ I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.

Themes

Theme (Maximum 5 and total % must equal 100)

Major theme	Theme	%
Public sector governance	Other public sector governance	40
Financial and private sector development	Infrastructure services for private sector	40

	development	
Public sector governance	Administrative and civil service reform	20
Total		100

Proposed Development Objective(s)

The PDO is to improve the condition, safety and climate resilience of selected national road corridors in Cambodia.

The project will achieve this objective through (i) the systematic introduction of designs that include climate proofing and road safety measures and the use of performance based contracts; and (ii) by enhancing MPWT's capacity to carry out road maintenance planning, contracting and management.

Components

Component Name	**Cost (USD Millions)**
Component A - Road Asset Management	61.27
Component B - System Upgrading and Capacity Development	3.53
Component C - Contingent Emergency Response	0.00

Systematic Operations Risk- Rating Tool (SORT)

Risk Category	**Rating**
1. Political and Governance	Substantial
2. Macroeconomic	Substantial
3. Sector Strategies and Policies	Substantial
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Substantial
7. Environment and Social	Moderate
8. Stakeholders	Moderate
9. Other	
OVERALL	Substantial

Compliance

Policy

Does the project depart from the CAS in content or in other significant respects?	Yes [ ]	No [X]
Does the project require any waivers of Bank policies?	Yes [ ]	No [X]
Have these been approved by Bank management?	Yes [ ]	No [ ]

Is approval for any policy waiver sought from the Board?	Yes [ ]	No [X]
Does the project meet the Regional criteria for readiness for implementation?	Yes [X]	No [ ]

Safeguard Policies Triggered by the Project	**Yes**	**No**
Environmental Assessment OP/BP 4.01	**X**	
Natural Habitats OP/BP 4.04		**X**
Forests OP/BP 4.36		**X**
Pest Management OP 4.09		**X**
Physical Cultural Resources OP/BP 4.11		**X**
Indigenous Peoples OP/BP 4.10	**X**	
Involuntary Resettlement OP/BP 4.12	**X**	
Safety of Dams OP/BP 4.37		**X**
Projects on International Waterways OP/BP 7.50		**X**
Projects in Disputed Areas OP/BP 7.60		**X**

Legal Covenants

Name	**Recurrent**	**Due Date**	**Frequency**
Institutional Arrangements Schedule 2, Section I.A.1-3	**X**		CONTINUOUS

Description of Covenant

Obligation of the Recipient to maintain, throughout the Project implementation period, the ICRRM, Technical Committee, GDPW, GDAP and MPWT Project management team, all with functions, staffing and resources satisfactory to the Association.

Name	**Recurrent**	**Due Date**	**Frequency**
Project Operation Manual Schedule 2, Section 1.B	**X**		CONTINUOUS

Description of Covenant

Obligation of the Recipient to carry out the Project in accordance with the Project Operation Plan, and not amend, waive or abrogate any provisions of the manual unless the Association agrees otherwise in writing.

Name	**Recurrent**	**Due Date**	**Frequency**
Environmental and Social Safeguards Schedule 2, Section C	**X**		CONTINUOUS

Description of Covenant

Obligation of the Recipient to ensure that the Project is carried out in accordance with the provisions of the Environmental and Social Safeguards Framework and the site-specific Safeguard Plans, not amend, abrogate or waive any of their provisions unless the Association agrees otherwise, and report on their status of implementation as part of the semi-annual progress reports.

Name	**Recurrent**	**Due Date**	**Frequency**

Contingent Emergency Response Schedule 2, Section E	**X**		CONTINUOUS

Description of Covenant

Obligation of the Recipient to adopt a satisfactory Emergency Response Manual for Component 4 of the Project and, in the event of an eligible crisis or emergency, ensure that the activities under said component are carried out in accordance with such plan and all relevant safeguard requirements.

Conditions

Source Of Fund	Name	Type
IDA	Withdrawal Conditions, Schedule 2, Section IV.B	Disbursement

Description of Condition

Disbursement conditions specifying that the Recipient may not withdraw the proceeds of the Financing as may be allocated to Component C unless an Eligible Crisis or Emergency has occurred, all related safeguards instruments and requirements have been completed, the emergency response implementing entities have adequate staff and resources, and the Recipient has adopted the Emergency Response Manual, acceptable to the Association.

Team Composition

Bank Staff

Name	Role	Title	Specialization	Unit
Veasna Bun	Team Leader (ADM Responsible)	Senior Infrastructure Specialist	Team Leader	GTI02
Latharo Lor	Procurement Specialist (ADM Responsible)	Procurement Specialist	Procurement Specialist	GGO08
Reaksmey Keo Sok	Financial Management Specialist	Consultant	Financial Management	GGODR
Caroline Mascarell	Team Member	Operations Adviser	Operations Adviser	EAPDE
Chanin Manopiniwes	Team Member	Infrastructure Economist	Transport Economist	GTI02
China Chhun	Team Member	Program Assistant	Program Assistant	EACSF
Enrique Aldaz-Carroll	Team Member	Senior Economist	Senior Economist	GMF03
Geoffrey John Kurgan	Team Member	E T Consultant	Road safety/Transport Engineer	GTI02
George Norman Collett	Team Member	Consultant	M&E	GSU02
Imogene B. Jensen	Team Member	Consultant	Transport Specialist	GTIDR
Juana Veronica Guillermi Mendizabal Joffre	Team Member	Consultant	Transport Specialist	GSURR

Makathy Tep	Safeguards Specialist	Consultant	Environmental Safeguards	GENDR
Manush Hristov	Counsel	Senior Counsel	Senior Counsel	LEGES
Samnang Hir	Team Member		Roads Engineer	GTIDR
Satoshi Ishihara	Safeguards Specialist	Senior Social Development Specialist	Safeguards Specialist	GSU02
Sombath Southivong	Team Member	Senior Infrastructure Specialist	Infrastructure Specialist	GTI02
Sybounheung Phandanouvong	Safeguards Specialist	Senior Social Development Specialist	Environmental Safeguards	GSU02
Waraporn Hirunwatsiri	Safeguards Specialist	Senior Environmental Specialist	Environmental Safeguards	GEN02

Extended Team

Name	Title	Office Phone	Location

Locations

Country	First Administrative Division	Location	Planned	Actual	Comments
Cambodia	Kratie	Kratie	**X**		
Cambodia	Kampot	Kampot	**X**		
Cambodia	Tbong Khmom	Tbong Khmom	**X**		
Cambodia	Preah Sihanouk	Sihanoukville	**X**		

I. STRATEGIC CONTEXT

A. Country Context

1. Cambodia has experienced remarkable economic growth and macroeconomic stability since the early 2000s. It grew by an average annual rate per capita of 7.8 percent during 2004–2014, ranking among the top 15 economies in the world in terms of economic growth. The gross domestic product per capita according to the Atlas Method increased by more than fourfold, from US$300 in 1995 to around US$1,020 in 2014. The main drivers of growth have been garment, manufacturing, agriculture, tourism and, more recently, construction and real estate. Economic growth eased in the aftermath of the 2009 global crisis while remaining strong at 7.2 percent during 2010–2014, on average. Growth eased slightly to 7.0 percent in 2015, in the context of a slowdown in China and appreciating U.S. dollar; stronger domestic demand, boosted by a construction boom, low oil prices, and fast credit growth, which partly offset the moderation in the garment, tourism, and agriculture sectors.

2. The sustained economic performance has lifted a large proportion of the population above the national poverty line, but Cambodia is still one of the poorest countries in the Southeast Asia region. Between 2004 and 2012, the poverty incidence under the national poverty line declined from 50.2 percent to 17.7 percent of the population, reaching the country's Millennium Development Goal before the 2015 deadline. Most of the poverty reduction occurred between 2007 and 2009, when the headcount rate declined by 20 percentage points, driven by a significant hike in the price of rice, the main agricultural product of Cambodia. Despite this progress, the vast majority of the families that rose above the poverty line did so by a small margin, leaving them at risk in the event of an adverse shock. Poverty reduction in Cambodia has been accompanied by shared prosperity—the real consumption growth of the bottom 40 percent of the distribution was larger than that of the top 60 percent—and a decrease in inequality, with the Gini coefficient going down from 0.351 to 0.308 between 2008 and 2012.

3. The overall welfare of households, described by non-monetary indicators, improved significantly throughout the period 2004 to 2014. Still, several challenges remain. Cambodia achieved most of the Millennium Development Goal targets, including those related to poverty reduction, child mortality, and maternal mortality. Targets have been nearly achieved in primary education, whereas areas such as gender equality and environmental sustainability have seen less progress. Moreover, the incidence rate and death by tuberculosis remains high. Cambodia's Human Development Index in 2013 was 0.58, well below the East Asia and Pacific average of 0.70 and also below the medium-income countries' average of 0.63.

4. The increasing prevalence of severe weather events is a key source of vulnerability, as rainy season floods in particular can cause recurrent damage to property and agricultural production and constrain access to markets due to temporary loss of road connectivity. Among the range of interventions required are improved drainage and weatherproofing of structures, and more fundamentally, the cost-effective maintenance and management of infrastructure assets, including roads. The Cambodia National Strategic Development Plan 2014-2018 identifies disaster risk as a major challenge to the country, and Strategic Action Plans for Disaster Risk Reduction have been developed for the period 2014-2018. A National Committee for Disaster

Management (NCDM) has been established to facilitate risk reduction, mitigation, preparedness response and recovery; however coordination with line ministries remains a key challenge.

5. In addition, while Cambodia has been showing greater commitment to improved maintenance and management of its infrastructure assets, the recent moderation of growth in government revenue has begun to put pressure on infrastructure expenditures. This underscores the need for Cambodia to enhance the efficiency and effectiveness of its efforts to preserve valuable infrastructure assets, thereby ensuring that recent gains are not lost while at the same time ensuring the availability of adequate resources to sustain social sector priorities.

B. Sectoral and Institutional Context

6. Cambodia's road network was largely destroyed during the long period of unrest in the 1970s and 1980s. What followed was a phase of reconstruction of the primary and secondary road network, and later of critical provincial and rural linkages to the main network. During this phase, the emphasis was on building the maximum number of road kilometers in the shortest period of time, so as to provide the connectivity needed to support economic activity as fast as possible. It was not long, however, before these quickly restored roads began to age, requiring periodic maintenance and repair. As funds were scarce, it became increasingly apparent that an integrated asset management approach was needed to optimize expenditure, and thereby sustain the network in as good condition as possible.

7. The Royal Government of Cambodia (RGC), with assistance from the donor community, developed its road network from one with an estimated value of about US$800 million in 2008 to one with an estimated asset value approaching US$2.6 billion in 2014. This improvement has been due in part to the Government's strategic use of concessional external funding for reconstruction and upgrading, while allocating increasing amounts of domestic funding for road maintenance.

8. In 2004, the Government allocated a total of US$26 million for routine and periodic maintenance and spot rehabilitation. By 2015 this allocation had risen to approximately US$60 million, with good results as shown in Table 1 below.

Table 1: Extent of Network in Good to Fair Condition*, 2004-2014

Year Road Category	Length	2004	2011	2014**
	(km)	(percent)	(percent)	(percent)
National (1 digit)	2,243	57	89	83
National (2 digit)	8,664	30	62	73
Provincial	4,407	5	61	NA

*defined as IRI<5; **MPWT Annual Report, 2015

9. However this amount covers mainly routine maintenance leaving a critical financing gap for periodic maintenance. In order to address the financing gap and to achieve the national policy of 100 percent asphalt concrete of national roads by 2020, MPWT requested development

partner support through the framework of the Infrastructure and Regional Integration Technical Working Group (IRI-TWG). The IRI-TWG is the key coordination mechanism between the MPWT and the community of development partners active in Cambodia. The criteria for the prioritization of specific road sections under this policy includes: (i) Annual Average Daily Traffic (AADT) higher than 3,000 vehicles per day; (ii) high economic rate of return; and (iii) national roads that address poverty reduction, for example by facilitating agricultural produce access to markets. The master plan for development partner support for national road maintenance is presented in Table 2 below.

Table 2: Summary of National Road Improvement Program as of December 2015

National Road	Sections	Financiers	Scope	Status
NR1	Phnom Penh - Nak Leoung	JICA Grant	Improvement	On-going
	Neak Leoung – Bavet	For finance under ADB 2nd RAMP	Maintenance using PBC	Selection process
NR2	Phnom Penh – Takeo	Korea / EDCF	Improvement	On-going
	Takeo – Phnom Den	ADB / Australia	Completed in 2014	Periodic Maintenance
NR3	Phnom Penh – Kampot	Korea / EDCF	Improvement	Feasibility Study
	Kampot – Veal Rinh	IDA	Periodic Maintenance using PBC	Proposed project RAMP-II
NR5	Phnom Penh – Oudong	China / EDCF	Improvement	On-going
	Oudong – Poi Pet	JICA Loan	Improvement	On-going
NR6	Phnom Penh – Siem Reap	China /EDCF	Improvement	On-going
	Siem Reap – Kralanh	For finance under ADB 2nd RAMP	Maintenance using PBC	Selection process
NR7	Thnol Toteung – Before Kratie	IDA	Periodic Maintenance using PBC	Proposed project RAMP-II
	Kratie to Cambodia – Lao Border	China/EDCF	Rehabilitation	On-going
NR8	Phnom Penh – Cambodia/VN Border	China/EDCF	New road construction	Completed
NR9	Prea Vihear – Steung Treng	China/EDCF	Rehabilitation	Completed

Source: MPWT

Note: Maintenance contract of NR4 which was outsourced to a private company was revoked on January 8, 2016.

10. The national roads covered under RAMP-II were selected within the framework of the IRI-TWG and complement the work conducted in the sector by other donors as indicated in Table 2. The RAMP-II roads fit the criteria for prioritization under the national road improvement program and are key in terms of linking farmers with markets mainly by facilitating year-round accessibility and the reduction of flood-risk along project roads. A socio-economic survey conducted at the project preparation stage, confirmed that 70 percent of the households[1] living along or nearby the project roads are near-poor earning a combined annual household income of US$1,200 to US$4,800, with 40 percent of these households earning US$1,200 to US$2,400 annually, and with around 60 percent of the total households indebted. The road sections selected for RAMP-II are also important for their role in ensuring local and

[1] Average household size of five persons.

provincial level connectivity, and for Cambodia's integration into the region. NR7 is within ASEAN Highway Corridor 11, which connects Cambodian economic centers to Lao PDR. NR3 is situated within the Greater Mekong Sub-region (GMS) Southern Coastal Corridor, which links Cambodia to Vietnam and Thailand, as well as the three tourism centers of Kep, Bokor Resort Center, and Sihanouk Ville.

11. The principal mode for movement of goods and people in Cambodia is by road, and vehicular traffic is growing rapidly, putting increasing pressure on road assets. While the average daily traffic in "passenger car units" in 1993 ranged from a minimum of about 1,000 to a maximum of about 3,000 on the national and provincial network, by 2014 the minimum level recorded was 3,816 (on National Road NR73) and the maximum 12,835 (on NR5-1). Motorcycles have increased the most in absolute number of trips on the national road network by type of vehicle, with average annual growth of 22 percent from 2010 to 2012 (from 4,600 to 6,777, respectively). Motorcycle trailers also increased by about 20 percent, reflecting the relative accessibility of motorcycle transport for a broad segment of the population. In this same survey, cars were next in volume, followed by vans, 4-wheel-drives, and minibuses. During the period 2008-2013, the average annual growth in the number of registered vehicles was 14 percent, reaching approximately 2.5 million registered vehicles by 2013.

12. Some progress has been made to improve road asset management capacity. The IDA and ADB-financed Road Asset Management Project (RAMP, Cr. 4442-KH) helped establish a Road Asset Management Office (RAMO) within the Ministry of Public Works and Transport (MPWT) to conduct surveys, analyze data, and prepare prioritized three-year rolling maintenance plans. The Road Management Decision Support/Highway Design Model 4 (RMDS/HDM4) system, also supported under RAMP, has been instrumental in preparing road maintenance plans, as well as for more detailed assessments of specific proposals which can now be carried out in-house.

13. Nonetheless, the capacity of the General Department of Public Works (GDPW) remains limited. Road data collection and analysis protocols under the RMDS system need to be improved, as do the capacities for contract management, climate resilience and road safety engineering, social and environmental safeguards, monitoring and evaluation, financial and technical auditing. Progress has been made in the use of HDM4 for planning and prioritization of road works and preparation of three-year rolling maintenance plans. However, data collection continues to depend largely on external support and is often prompted by project preparation and reporting requirements. The HDM4 model itself is cumbersome to use, difficult to calibrate/recalibrate and data-intensive. As a result, while the HDM4 is useful for carrying out analyses at the network level, there has been some discussion within the ministry that a simplified model (HDM4 or other) would be a useful supplement, particularly for quick analyses of discrete proposals.

14. Cambodia's road sector is highly vulnerable to extreme weather events, with a substantial part of the network at risk including the primary road network. This vulnerability is growing with an increase in annual rainfall and flooding impacting infrastructure. However, the sector capacity to plan, design, construct and maintain resilient roads is limited. Since 2011 partners such as ADB and the Nordic Development Fund have piloted approaches for climate resilient provincial and rural road rehabilitation, and vulnerability maps have been produced. The proposed project will build on this initial work and integrate climate resilience elements in rehabilitation works on

the primary network. The proposed project will pave the way to develop sector technical capacities in this area.

15. Modest gains have been made in outsourcing of road maintenance. When RAMP was prepared in 2007-2008, road maintenance works were carried out by force account units of MPWT. Since then some private sector participation has been achieved. Over the next five years, the Government aims to maintain the level of maintenance outsourcing at around 8-10 percent of the fiscal national budget spent on public roads. Moving forward, the Government will use RAMP-II to assess the efficacy of performance based contracting (PBC) for road maintenance, along the lines of PBC pilots carried out under the IDA-financed Provincial Rural Infrastructure Project (PRIP, Cr.3822-KH) and the ADB-financed Second Road Asset Management Project. If the results of an expanded trial prove positive, the RGC intends to scale up the use of PBC for road maintenance to about 40 percent of all outsourced maintenance contracts. In doing so the Government expects not only to enhance the efficiency and effectiveness of network maintenance, but also to develop the capacity of the local contracting industry and expand domestic employment opportunities.

16. The rapid growth in traffic volumes represents an increase in economic activity and opportunity. But growth has been accompanied by significant increases in traffic-related injuries and death. Recent estimates for Cambodia show an increase of 200 percent in road traffic incidents and a near doubling of fatalities over the course of a five-year period.[2] The socio-economic cost of road deaths, serious injuries, and disabilities represents a severe deterrent to poverty alleviation, as the associated costs of crashes can send already struggling families deeper into poverty and undermine their paths to prosperity. In response to these alarming trends, Cambodia has passed a new Road Traffic Law that has come into force in January 2016. The new law includes more stringent requirements, higher fines, and stronger enforcement mechanisms. The Cambodian National Road Safety Committee (NRSC) and other government stakeholders are trying to improve coordination with domestic and international NGOs to support the road traffic law, raise awareness on road safety, improve data collection and reporting, and enhance the capacity for enforcement.

17. The proposed project would scale-up and consolidate the work started under RAMP to develop Cambodia's capacity to plan and manage the national road network while broadening participation of the private sector. RAMP-II would assist the Government (i) to apply global best practice to integrate a disaster risk resilience approach and (ii) road safety measures into the periodic maintenance works of selected roads and into the broader road maintenance decision-making and management systems. This approach, new to country, will help ensure the sustainability of the investment. The use of PBC's for road maintenance is a major innovation brought through the project with the potential of increasing the efficiency and effectiveness of the road maintenance regime while supporting a shift in sector policy to increase private sector participation.

[2] World Health Organization, Global Status Report on Road Safety, 2015.

C. Higher Level Objectives to which the Project Contributes

18. The project supports the achievement of the World Bank Group's twin goals to reduce extreme poverty and promote shared prosperity through its emphasis on cost-effective road asset management, with disaster resilience measures and enhanced road safety. The project will help to extend the benefits of improved transport options and lower transport costs, and reduce climate risk vulnerability, to a broader segment of the population in rural areas – where most of the poor are concentrated.

19. The project was designed based on broader consultation with relevant stakeholders and is one of the priority projects identified in the forthcoming World Bank Group's Cambodia Country Engagement Note (FY2016-2017) which is scheduled for Board discussion on May 19, 2016. RAMP-II also supports the RGC's National Strategic Development Plan (NSDP) 2014-2018, particularly the objectives of deepening regional integration, increasing private sector participation in the development of transportation infrastructure, and mainstreaming disaster risk reduction at all levels. The project supports the achievement of Sustainable Development Goal (SDG) 9 on building resilient infrastructure and SDG 13 on adapting to the impacts of climate change.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

20. The PDO is to improve the condition, safety and climate resilience of selected national road corridors in Cambodia. The project will achieve this objective through (i) the systematic introduction of designs that include climate proofing and road safety measures and the use of performance based contracts; and (ii) by enhancing MPWT's capacity to carry out road maintenance planning, contracting and management.

B. Project Beneficiaries

21. The project will benefit local residents in the four Cambodian provinces of Kampot, Preah Sihanouk, Tbong Khmom and Kratie. It will do so through shorter travel times, less arduous journeys, reduction of flood risk, and better connectivity along the national road network. Direct beneficiaries of the improvements to the selected NR3 and NR7 national corridors will include residents and their farms and businesses along the road. These residents and their local communities will benefit from improved serviceability of 218 km of roads along the selected national road corridors, as evidenced in fewer service disruptions in flood prone areas, safer and more reliable transport options, and lower transport costs. Residents and businesses along the roads will also avoid recurrent damage and loss of property due to flooding of road surfaces and adjacent areas during the rainy season. Indirect beneficiaries will include consumers and producers of freight hauled on the project's road sections due to more reliable delivery times and reduced operating costs. These benefits are likely to be large as NR3 connects farming areas with markets, three main touristic centers, as well as the main port in the country, Sihanouk ville Port, with the capital city, Phnom Penh; NR7 connects Cambodia to Vietnam and to Lao PDR, linking farmers and businesses to regional markets.

22. The project will benefit MPWT by further strengthening its capacity for road asset management, including in the areas of climate resilient and safety-oriented road engineering, and use of PBC contracting. The project will also benefit domestic contractors through greater private sector involvement in competitive bidding and performance quality. The outsourcing of road maintenance, including PBC, is expected to expand opportunities for local contractors and thereby increase domestic employment opportunities.

C. PDO Level Results Indicators

23. Achievement towards the PDO would be tracked through the following outcome level indicators:

- Roads in good and fair condition as a share of total classified roads (Percentage) - (Core)
- Roads rehabilitated, Non-rural (Km), with disaster resilience measures (Km)
- Length of road sections on which Road Safety Measures are implemented (Km)

III. PROJECT DESCRIPTION

A. Project Components

24. **Component A: Road Asset Management** (US$61.27 million, of which IDA finances US$56.97 million and the RGC US$4.3 million) to support the preservation of MPWT's road network and provide implementation support for the design and supervision of works.

A.1: Periodic maintenance and PBCs will be undertaken for 218 km of existing bitumen-sealed roads along the selected NR3 and NR7 roads with an overlay of asphalt concrete, replacement of current pavement with concrete pavement at flood prone areas, including strengthening and replacement, as necessary, of sub-base and road base-course, using unbound materials or stabilized materials for the road pavement. The civil works would include installation of about 90 km of installation of new drains on both sides of the road. Periodic maintenance would be followed by the application of performance-based road maintenance for a period of three years. Periodic maintenance works would be divided into four contract packages, one on NR3 and three on NR7.

A.2: Implementation support for the civil works under the project and related technical capacity building activities including: (a) advice to MPWT on technical options and solutions, cost estimation; contract management and safeguard activities for the civil works under Component A.1; (b) construction supervision of the civil works throughout the project; (c) supervision of PBCs for the civil works under the project and; (d) hands-on development of technical capacities of MPWT staff on good practices and internationally accepted procedures, systems and standards for road construction, road safety, project management, contract management, outsourcing, PBC, social and environmental management, monitoring and evaluation, and financial and technical auditing. Detailed activities are in Annex 2: Detailed Project Descriptions.

25. **Component B: System Upgrading and Capacity Development** (US$3.53 million, of which IDA finances US$3.03 million and the RGC US$0.5 million)B(1) System upgrading and technical capacity development for road asset management within the MPWT through support for (i) operation of the Road Data Collection and Management Unit (RDCMU) under RAMO and the effective implementation of the Road Management Decision Support (RMDS) system; (ii) strengthening of the data collection methodology, review of the current modeling system, and provision of simplified models for development of three-year rolling maintenance plans if required; and (iii) development of a useful reporting format for the results of model simulation, and training;

B(2) Road safety awareness raising of communities and road safety audits of project roads;

B(3) Enhancement of financial management and internal audit capacities of MPWT and the project team;

B(4) Carrying out of technical and financial audits of the Project;

B(5) Provision of technical assistance to enhance RAMO's procurement capacity; and

B(6) Provision of operational and technical support for the day-to-day management, monitoring and evaluation of Project activities.

26. **Component C Contingent Emergency Response** (US$0) to enable immediate response through the reallocation of project proceeds in the event of an eligible crisis or emergency. If Component C is triggered, then the Standard Immediate Response Mechanism - Contingent Emergency Response Component (IRM CERC)-specific objective of "provide immediate and effective response to an Eligible Crisis or Emergency" will be incorporated and the results framework revised through formal restructuring.

B. Project Financing

27. **Lending Instrument.** The project would be financed through an IDA Credit of US$60 million equivalent, with 38 years to maturity, including a grace period of 6 years.

28. **Project Cost and Financing.** The total project financing requirements are estimated at US$64.80 million, inclusive of price and physical contingencies. In addition to the IDA Credit of US$60.0 million equivalent, the Borrower would provide US$4.80 million. The Borrower's contribution would comprise in-kind support of staff costs, office space and utilities, plus eight percent of the performance based maintenance contracts for civil works. Information on project cost and financing sources is summarized in Table 3 below.

Table 3: Project Cost and Financing

Project Components	Project Cost	IDA		Counterpart Funds	
	US$ (mil.)	US$ (mil.)	(%)	US$ (mil.)	(%)
Component A: Road Asset Management	61.27	56.97	93.00	4.30	7.00
Component B: System Upgrading and Capacity Building	3.53	3.03	86.00	0.50	0.14

Component C: Contingent Emergency Response	0.00	0.00	0.00	0.00	0.00
Total Financing Required	**64.80**	**60.00**	**93.00**	**4.80**	**7.00**

C. Lessons Learned and Reflected in the Project Design

29. **Straightforward, targeted and focused projects are more likely to achieve good results.** The project has been designed to build on the successes of RAMP, particularly those aspects contributing to the serviceability, longevity and climate resilience of Cambodia's road network. As the foundation for key reforms was established through studies and technical assistance carried out under RAMP, the follow-on project will focus on testing and implementation.

30. **Institutional strengthening and reform require sustained commitment.** A key element of RAMP and road asset management projects elsewhere is the development and deepening of a country's capacity to manage its road assets efficiently and effectively. This has been shown to require institutional strengthening and reform, as well as the development of skills needed to fulfill new mandates and requirements. Such development takes time and RAMP-II provides an opportunity for Cambodia to reinforce gains initiated under RAMP.

31. **Capacity enhancement for Performance-Based Contracts (PBCs).** PBC for road improvement and maintenance is still a new contracting instrument in Cambodia. Its implementation depends on overall public sector management capacity, including of executing agencies that will need to acquire the necessary skills and knowledge to transition from the traditional input-based monitoring to the output-based monitoring. The skills development elements of RAMP-II will address contract management, including of PBCs.

32. **Strengthening Local Contractors' Capacity.** Although significant growth in the capacity of local contractors has been seen recently in Cambodia, the market for major projects with contract values more than US$10 million remains dominated by foreign contractors. Nevertheless, foreign contractors normally have to rely on local contractors to successfully carry out the works on the ground, particularly for maintenance. As most local contractors have limited experience in bidding for or carrying out contracted out maintenance works, there is a risk of project delays arising during implementation. To mitigate this risk, the project will divide the works into realistic packages and provide essential training for local contractors[3] together with the MPWT staff.

33. **Climate Resilient Designs.** Completed and ongoing road projects are experiencing premature damage of road surfaces and surrounding areas due to water ponding on some road sections. Flooding of road surfaces can occur throughout the network, but is often the result of inadequate drainage systems in populated areas. Inadequate drainage and consequential deterioration of road surfaces increased road maintenance and rehabilitation costs in RAMP. RAMP-II thus will assist the Government to incorporate appropriate drainage in standard designs and provide side drains along two key national roads.

[3] All cost of the private contractor attendance will be covered by the company

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

34. RAMP-II will use the same institutional arrangements and implementation structure as the original RAMP. The MPWT will be responsible for overall technical supervision, execution and management of the project. The GDPW is currently responsible for most aspects of road maintenance and will be responsible for the day to-day implementation, supervision and operation of the project, including contracting and oversight of all consultants, and will be the employer for all civil works contracts. The General Department of Administration and Planning (GDAP) is currently responsible for and will carry on the financial, safeguards, capacity development, training and public disclosure matters of the project. The Minister of MPWT will re-install a "Project Director" who will oversee project activities, provide strategic direction, and be accountable to the MPWT's management. The detailed institutional and implementation arrangement are further described in the Project Operation Manual (POM).

35. The **Project Director** (PD) will be responsible for: (i) overall guidance and policy advice; (ii) internal coordination, discussion and resolution of project matters with counterparts in other departments within the MPWT (particularly the GDAP) and other government agencies; (iii) donor alignment and harmonization; (iv) reporting on project progress to ICRRM and Minister of Public Works; and (v) public disclosure and civil society involvement.

36. The **Project Manager** (PM) will be re-appointed by MPWT with particular responsibility to ensure that: (i) the POM is followed; (ii) audits (technical and financial) are carried out, (iii) safeguards activities during design and construction are implemented; (iv) all consultants follow their terms of reference and delivery schedule; (v) project activities are carried out on schedule and within budget; and (vi) Financial Management Reports (FMR) are submitted on time. The PM will also provide day-to-day support to the PD.

37. The MPWT will retain the **Project Technical Committee (PTC)** to assist in the overall coordination of the various project activities implemented by various MPWT departments in the road (sub)-sector. The Director General of GDPW will serve as the chair of the PTC, with one of the Deputy Director General of GDAP as the Deputy Chair. The Project Director will be the Permanent Secretary and RAMO will act as the Secretariat. The responsibilities of the PTC in carrying out the project, and arrangements the PTC meetings will be detailed in the POM. The PTC is to meet at least monthly.

38. **The Inter-ministerial Committee for Road Repairs and Maintenance (ICRRM)** established by the joint Prakas number 1154 MEF/MPWT dated December 30, 2011 will, in addition to tasks assigned by the Prakas, act as the Steering Committee (SC) for the project for the purposes of achieving its development objectives, and mobilization of the required financial resources, including counterpart funding, and support for donor coordination. The ICRRM convenes every two months in the first week of the month or upon proposal from the two ministers and comprises representatives from Ministry of Economy and Finance (MEF) and MPWT. The ICRRM's present functions are to coordinate maintenance of roads, define road

maintenance principles and policies, prepare road maintenance plans, ensure consistency of MEF and MPWT compensation policies, resolve road maintenance problems and prepare policies and plans for monitoring road maintenance.

39. **The Road Asset Management Office (RAMO)** is responsible for providing advice on maintenance planning, strategy, policies, and road asset management capacity, including: (i) the condition and performance of road networks; (ii) priority of road sections for periodic maintenance and rehabilitation; (iii) asset preservation strategies for optimal investment returns; (iv) annual work programs and three year rolling plans; (v) overall monitoring and evaluation of road network performance; and (vi) capacity development for these activities. The RAMO served as the Secretariat to the PTC for RAMP and will now do so for RAMP-II.

B. Results Monitoring and Evaluation

40. *Monitoring and Evaluation (M&E) Design*. The M&E system will cover (a) implementation progress, including physical, social and financial status; (b) achievement of intermediate and PDO outcome indicators as specified in the results framework; and (c) impact evaluation. Baseline data of some indicators were established by RAMP and will continue to be monitored under RAMP-II. The mid-term review will be conducted three years after the Project's effectiveness to review and assess detailed progress and ensure that expected outputs are delivered as scheduled, in line with the project's overall development objective and planned six year duration.

41. *Institutional Arrangement and Utilization of M&E*. The RAMO will be responsible for planning and coordinating the project's M&E activities, with support and inputs from the supervision consultant. A semi-annual M&E report will be submitted to the Bank according to agreed dates, usually in time for the implementation support missions, and will cover implementation progress as well as progress towards the achievement of the PDO. In addition, monthly and quarterly reports will be prepared and will provide brief updates on implementation progress. In addition to the baseline, information on aspects such as travel time, transportation cost and road condition will be collected for assessment of impacts of the project at agreed intervals. MPWT and Inter-ministerial Resettlement Committee (IRC), where relevant, with support from the supervision consultant, will conduct benefit satisfaction survey and socio-economic impact assessments in preparation for the mid-term review and at project completion. The M&E reports will be used to inform management of the project performance, and guide budget allocation, planning and decision-making.

42. **Gender.** A household survey was conducted as part of the preparation of RAMP-II that identified specific concerns of women regarding vehicular speeding and traffic safety aspects. The survey overlapped with some sections of NR7 rehabilitated under RAMP, and for those sections indicated that rehabilitation works under RAMP have had positive impacts on household income generation and small-home business development. Households also reported reduced vulnerability to flooding.

These findings have played a role in shaping the design of RAMP-II, particularly traffic safety and traffic calming elements, and strengthening road resilience to natural disasters. The level of

beneficiary satisfaction with these measures will be assessed twice during the project (during the mid-term review and the final evaluation), when surveys will be conducted with people living along and in the vicinity of the sections targeted under the project. The data will be disaggregated, especially during the mid-term review, to identify if the project is addressing the differentiated needs of men and women, potential gaps to be addressed during the remainder of the project, and specific impacts on the most vulnerable and female-headed households. Gender aspects will also be reported during the regular implementation support missions, when the project will invite a gender expert to participate. The project will also collect data on the participation of women in the work force during construction of civil works, and the impact on economic opportunity as result of the project. The construction supervision consultant contract will include a gender specialist, who will be in charge of preparing a gender action plan for the project.

C. Sustainability

43. The focus of the previous RAMP was on helping Cambodia to develop a system of road asset management and thereby provide the information and skills necessary to ensure the sustainability of its road network. From the time RAMP was prepared to the present, Cambodia has shown commitment to both the physical and financial sustainability of its road network. This commitment has been articulated in a succession of National Strategic Development Plans and manifested in the continuous improvement in the overall condition of the national (including provincial) road network. The latter has been made possible by the predictable and timely allocation of sufficient resources for routine maintenance of the maintainable network and by greater focus on cost-effective planning and management of the network's recurrent/periodic maintenance needs.

44. RAMP-II has been designed to reinforce the gains from RAMP and develop them further in several key areas. These areas include improving the climate resilience of road designs, developing the skills to outsource and oversee road maintenance activities (including testing the utility of PBC for road maintenance), and strengthening MPWT's capacity to plan and manage the network through, among other aspects, the development of three-year rolling road maintenance plans. Sustainability is likely in view of the Government's demonstrated ongoing commitment to maintain its road assets and develop the necessary skills to do so efficiently and effectively.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

45. The overall risk to achieving the PDO is considered substantial. Risks at the national level include: (a) Insufficient national budget allocation for road maintenance; and (b) climate resilience measures applied are inadequate in the face of climate events. Risks at the MPWT/implementing agency level include: (c) road condition and other data necessary for developing and monitoring the three-year rolling maintenance plans are not collected on a regular basis; (d) participation of the private sector in PBC contracts under the project is lower

than expected; and (e) key aspects of the Road Traffic Law are not enforced, resulting in road safety lapses and overloading;

46. The following mitigation measures are incorporated into the project design. Institutional and technical support for the preparation of three-year rolling maintenance plans and better tracking of overall road network condition. Road asset management activities (maintenance, rehabilitation and reconstruction) will include implementation of both road safety interventions as per road safety audits and climate-related mitigation measures in flood-prone areas. At the MPWT/implementing agency level, RAMP-II will support the development of capacity to collect road condition and related data necessary for the preparation of three-year rolling maintenance plans and for monitoring the network overall. To mitigate potential low participation of the private sector in PBCs, training will also be provided for contractors on bid preparation and other aspects in conjunction with the roll out of the PBC maintenance pilots. The project will integrate road safety considerations in the design of the roads enhancing the overall safety of NR3 and NR7. Furthermore, the project will build capacity within the MPWT and among contractors on road safety engineering and will collaborate closely with the ADB's upcoming Second RAMP-II project on activities related to traffic safety, particularly rollout of the traffic safety manual to be developed with ADB support. The project will enhance the overall capacity of national human resources at the MPWT on road asset management, contract management, PBCs, technical and financial audits, and climate resilient road engineering.

VI. APPRAISAL SUMMARY

A. Economic Analysis

47. The economic evaluation of the project indicates that the project is economically viable with an economic internal rate of return (EIRR) of 33.6% and net present value (NPV) of US$205.5 million. In addition, the analysis of greenhouse gas (GHG) emissions estimates that the project will result in a reduction of about 150,000 tons of CO_2 over the life of the project, compared to without-project scenario.

48. The economic evaluation focuses on the overall project cost of US$64.8 million, comprising US$57 million of civil works and US$10.7 million of other costs. The analysis was performed based on the work plan for the upgrading, repair and maintenance of two routes: NR3 (54 km) and NR7 (164 km). A Cost-Benefit Analysis (CBA) was conducted to calculate the EIRR and NPV of the project. The major economic benefits of the project arise from reduced vehicle operating costs (VOCs) due to improved road surface condition, travel time saving benefits to passengers, and avoided maintenance costs in the case of without-project. To be conservative, no generated or diverted traffic was considered in the economic analysis.

49. The analysis used moving traffic counts collected by MPWT's survey team at nine locations along routes NR3 and NR7 for the years 2011-1014. The traffic counts represented in total annual average daily traffic (AADT) were collected by vehicle type: motorcycle, car, SUV, buses, and various sizes of truck. The national average traffic growth rate varies from 1.4 percent to 89.7 percent per annum depending on the vehicle type. Traffic growth is assumed to increase at a decreasing rate over time.

50. Over a period of 20 years (2014-2035), and with the standard conversion factor of 0.90, the economic analysis shows the EIRR to be 33.6% and NPV to be US$205.5 million based on a 5% discount rate. The base case and sensitivity analyses for three other scenarios are illustrated in Table 4 below.

Table 4	**IRR**	**NPV US$M**
Base Case	33.6%	205.5
Target IRI becomes 4.0 (from 3.0)	28.4%	130.9
Average wage reduced by 20%	31.6%	189.2
VOC reduced by 25%	30.4%	175.1
Value of Time Saving reduced by 25%	31.1%	185.2

51. **Greenhouse Gas Emissions**. An analysis of greenhouse gas emissions (GHG) was undertaken based on the 2015 World Bank GHG Analysis Transport methodology.[4] As in the cost-benefit analysis above, two development alternatives were compared for NR3 and NR7. In the without-project scenario, constant deterioration of the road and expected increases in traffic due to economic growth over the project period would increase CO_2 emissions, leading to a total of 4.4 million tons of CO_2 over the project lifetime. The decrease in road quality would lower driving speeds and lead to an increase of fuel consumption per vehicle-km, thus generating an increase in emissions. Using standard elasticity of traffic with respect to travel time, the estimated effect of road surface deterioration on demand for transport is negligible.

52. In the with-project scenario, rehabilitation of the road and expected increases in traffic due to economic growth, as well as low levels of induced traffic resulting from a decrease in travel time due to road rehabilitation works, would lead to 4.2 million tons of CO_2 over the lifetime of the project. Compared with the previous scenario, maintenance works would result in higher driving speeds and lead to a decrease in fuel consumption per vehicle-km (closer to the optimal level of fuel efficiency use), thus generating a decrease in emissions. The aggregate net project emissions along NR3 and NR7 over the lifetime of the project are thus estimated to be -157,711 tons of CO_2.[5]

B. Technical

53. The strengthening and periodic maintenance works to be undertaken were defined using the RMDS/HDM4 system, with specific focus on improving the safety, climate resilience and longevity of two key roads, NR3 and NR7. The proposed program includes not only periodic maintenance and strengthening of existing bitumen-sealed roads, but also replacement of current pavement with concrete pavement at flood prone areas and installation of new drains on both sides of the road. These two roads provide an opportunity for MPWT to introduce climate

[4] The transport methodology is described in ”GHG Analysis for Low-emission Transport”, World Bank, 2015. The detailed analysis is in the RAMP-II project file.

[5] The inclusion of the social cost of CO_2 emissions, at US$30 per ton of CO_2 in 2015 and reaching US$65 per ton of CO_2 in 2040, would yield US$7.1 million in savings.

resilient designs on high volume roads, as well as incorporate appropriate drainage features in standard designs.

54. Road safety audits of the two project roads will be carried out prior to implementation so that recommendations can be incorporated into the road designs. Physical improvements will be complemented by community based road safety awareness campaigns. The focus on road safety is timely with the implementation of a new Road Traffic Law that includes more stringent requirements, higher fines and stronger enforcement mechanisms. The inclusion of road safety in the project is expected to leverage grant financing that will help to build the foundation for road safety improvements, system-wide.

55. Project preparation included consultations with people, including women, living along the selected roads on their needs and views. Specific concerns voiced particularly by women were the dangers associated with traffic speeds and flooding of the road surfaces and adjacent property. These aspects are explicitly addressed in the project design, through speed and traffic calming options, and through technical options (side drainage).

56. Following RAMP, RAMP-II has been designed to provide continuity of approach in the planning and development of the road maintenance program, including the data collection, processing and analysis necessary for effective road asset management of the national and provincial road networks. As in RAMP, this support would be provided in key areas such as: (i) operation of the RDCMU within RAMO and effective implementation of the RDMS; (ii) development of complementary systems to enhance the user-friendly aspects and reduce complexity of the RDMS system, and hands-on capacity development; (iii) institutional (administrative) and technical capacity development for road asset management within the GDP on safeguards, monitoring and evaluation, financial and technical audits, and procurement. These activities are directed towards developing MPWT's capacity to the point where it can perform its road asset management functions with minimal external support.

57. The three-year PBC maintenance pilots both support a shift in government policy towards outsourcing objectives and provide an opportunity to test the efficacy of the PBC approach for road maintenance of national roads in the Cambodian context. These maintenance pilots will further help to develop the capacity of local contractors, through assistance in such areas as bid preparation and by actual experience with an output based approach.

58. **HIV/AIDS mitigation.** The World Bank has developed standard clauses in civil works contracts to mitigate the impact of HIV/AIDS caused by high-risk behavior from migrant workers. The clauses require the contractor to arrange for its employees, its sub-contractor's employees and others to attend an HIV awareness program. The contractor is also required to undertake the necessary actions to reduce the risk of the transfer of the HIV virus between and among the Contractor's Personnel and the local community, to promote early diagnosis and to assist affected individuals. The implementation agency RAMO/MPWT will coordinate with the Ministry of Health (National AIDS Authority), mandated with rolling out public awareness on HIV/AIDS program, to address outreach to communities along and near project-targeted roads. MPWT and MOH will coordinate for the campaign in the project areas; logistical costs of the campaign will be supported by the project.

C. Financial Management

59. The Implementing Agency (IA) has an existing financial management system that is considered acceptable. This system will be updated to reflect new aspects, including the Government's new chart of accounts in line with a newly revised Standard Operating Procedures/Financial Management Manual (SOP/FMM) issued by the Government in May 2012. This manual simplifies the content and format of interim financial reports, strengthens capacity of the IA's Internal Audit Department and updates job descriptions of the finance staff. The existing Supplementary Financial Management Manual (SFMM) should also be updated. Key identified FM risks are soft expenditure, and management of fixed assets. Mitigating measures proposed are tighter controls over soft expenditure and fixed assets management and are to be included in the updated SFMM.

60. Oversight from the IA's Internal Audit Department will be enhanced to provide the project's management with an assurance of effectiveness of the internal control system over accounting and financial reporting. Planned actions for FM improvements as reflected in the Financial Agreement and Operational Manual to reduce the risks are shown in table below. The residual FM risk under the project is considered to be substantial.

Action	Responsibility	Completed by
Develop and agree on the Terms of Reference of the local FM consultant to help update the FM manual and design system and provide training on FM to the project's FM and internal auditors	DAF	Before negotiation (done)
Organize first financial management training and disbursement for selected staff to manage the Project.	DAF/Bank	Before effectiveness
Engage a local FM consultant to build capacity in FM for FM staff and internal auditor	DAF	3 months after effectiveness (Project Operation Manual)
Prepare a financial management training plan built upon the training provided in the previous Bank project to further strengthen capacity of staff of DAF	DAF	9 months after effectiveness (Project Operation Manual)
Ensure SFMM is updated to include the government's new chart of accounts and other updates in line with revised SOP/FMM, and updated job description of the FM staff and accounting software customization for IFR reporting	DAF	6 months after effectiveness (Project Operation Manual)
Carry out internal audit on the project's operations annually and include results of the audit in the IFR	IAD	Annually (Financing Agreement)

D. Procurement

61. Procurement under the project will be governed by Bank Procurement Guidelines: Procurement of Goods, Works, Non-consulting Services under IBRD Loans and IDA Credits and

Grants by World Bank Borrowers and Consultant Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers dated January 2011, revised July 2014. The Government Standard Operating Procedures and Procurement Manual issued under Sub Decree 74 dated May 22, 2012 will apply for procurement under national competitive bidding (NCB) subject to the additional provisions included in the NCB annex to the project Financing Agreement. MPWT as executing agency of the Project will be responsible for the implementation of procurement plan.

62. Procurable items under the project will include maintenance and strengthening of sections for NR3 and NR7, survey equipment, vehicles, office equipment, the Implementation & Supervision Consultant (ISC) Firm, NGOs and individual advisory services for implementation of the other various components. There will be four civil work packages under the project, with each contract expected not to exceed US$15 million. The MPWT staff have some experience with procurement of goods, works under ICB, NCB and shopping procedures and employment of consultants from the previous Flood Emergency Rehabilitation Project (FERP), PRIP and RAMP. However, MPWT has a very limited experience in carrying out procurement of medium and large procurement packages, especially the PBC contracting method, which will be used under RAMP-II. Thus the procurement capacity of MPWT with using the World Bank Procurement and Consultants Guidelines needed to be strengthened.

63. The procurement risk is assessed as high. The key procurement risks emanate from (i) weak procurement oversight at central level and capacity of the MPWT, (ii) MPWT's lack of familiarity with PBC contracting methodology, (iii) weak technical supervision and contract management, (iv) weak interest from local contractors on PBC and long term maintenance as there is no precedent to PBC in Cambodia, (v) delays in procurement cycle management, and (vi) governance associated risks. Risk mitigation measures have been discussed and agreed with Government and are detailed in an action plan in Annex 3. The residual procurement risk under the project is considered to be substantial.

64. In the event that Component C may finance goods, works and/or consultant services required for an eligible crisis or emergency, the applicable procurement methods and procedures under the relevant provisions of the World Bank's procurement guidelines will be further detailed in the Emergency Response Manual.

E. Social (including Safeguards)

65. The MPWT carried out environmental and social screening along the two national roads in November 2013 and 2014, and again on December 16-17, 2015. During the field surveys, the ministry carried out free, prior and informed consultations with Project Affected Households (PAHs) and the local communities. The outcome of the field reassessment carried out in December 2015, indicates that no major environmental and social impacts are envisaged because the works will be carried out on the existing road alignments and rights of way (ROW). No major physical resettlement of households and villages would be required and no indigenous ethnic groups were found in the project areas during the survey. Nevertheless, minor relocations of temporary assets, including roof structures and concrete floors extended from small shops/stalls and houses and trees/branches along the ROW can be anticipated (see further

discussion in section below). Potential minor and temporary land acquisition may also be required due to the construction of side ditches and drainage within the ROW. Particularly in urban areas where side ditches will be installed, the impacts would include temporary disturbance, i.e. in the access/paths to shops and restaurants along the roads, and a possible increase of traffic pressure during construction.

66. The mitigation measures were revised and incorporated in the site specific Environmental Management Plans (EMPs). Out of 919 households visited by the safeguard screening team, 92 (14 along NR3 and 78 along NR7) were identified with their temporary small structures and assets to be potentially affected by the RAMP-II activities. Two Abbreviated Resettlement Action Plans (ARAPs), one for each road, were prepared with mitigation measures and implementation arrangements provided to address the social impacts on the 92 PAHs. The other 827 households could potentially experience dust, noise, construction debris and short term disturbance to their daily business activities during the civil works. These impacts can be mitigated by applying the EMPs, which outline good construction practices and supervision arrangements.

67. As RAMP-II is similar to RAMP and is also classified as Category B, two social safeguard policies remain triggered: Involuntary Resettlement (OP 4.12) and Indigenous Peoples (OP 4.10). The targeted road sections were rehabilitated with support from various donors (ADB, Korean Government and Australian Government) during the past 10 years, and no significant negative impacts due to resettlement or impacts on ethnic minorities were reported. No large scale or irreversible impacts under RAMP-II are anticipated, as the project focuses on the rehabilitation of existing road assets within the ROW. Similarly, no Physical Cultural Resources (PCR) are involved since all PCRs are located a considerable distance away from the ROW, thus OP 4.11 is not triggered. The original safeguard document, namely the Environmental and Social Safeguard Framework (ESSF), has been updated to reflect lessons learned from the RAMP project implementation, experience from the ongoing Lao Road Sector Project and the new 2010 Law on Expropriation.

68. The revised ESSF, including an updated Indigenous People Policy Framework (IPPF) and Compensation and Resettlement Policy Framework (CRPF), provides principles and procedures to address potential impacts on local people, their assets and ethnic minority groups, respectively. Since all four road packages are known in terms of locations and impacts, in November 2014, MPWT was advised to reassess the impacts along both NR3 and NR7, and prepare two separate ARAPs and site specific EMPs in line with the ESSF. The ARAPs provide information on 14 PAHs along NR3 and 78 along NR7 identified with their temporary small structures and assets to be potentially affected by the project activities, and measures to mitigate the impacts. Although no ethnic minority people were identified among the 919 PAHs visited during the safeguard screening, it was decided that the IPDF developed under the original project would, as a precaution, remain applicable under RAMP-II and that ethnic screening would be conducted for all road sections before civil works start. If ethnic minority groups are found to be present in or have collective attachment to project areas, an Indigenous Peoples Development Plan (IPDP) will be developed as per the updated IPPF. In December 2015, a final round of screening was carried out by MPWT and confirms that no major environmental concerns are anticipated. The final ESSF, ARAPs, and site specific EMPs have been translated into Khmer language. These documents and the Standard Guideline for Implementation of Environmental

and Social Safeguards (SGESS) were disclosed on MPWT's website on December 23, 2015, in project areas on the same date, and in the World Bank's External Website on January 15, 2016.

F. Environment (including Safeguards)

69. The project remains Category B for environmental assessment purposes since it will finance only rehabilitation of existing roads, and the impacts are known, site-specific and easily managed if EMP provisions are diligently implemented. The project triggers Environmental Assessment (OP 4.01). The ESSF, including the generic EMP used for RAMP, has been updated to reflect new project coverage as well as the lessons learned from the original project and other relevant projects. Public consultations were conducted in the project area as required, and disclosed as noted above.

70. The ESSF describes the relevant aspects related to the social and environmental impact management and public disclosure. The social and environmental screening results noted above in Section E determined that impacts on the local environment would be temporary and limited to construction activities. This is because the activities will be carried out on the existing road assets within the ROW. Temporary smoke, dust emission, noise and vibration impacts at work sites could occur, as could spills of fuel, bitumen, used oil at work sites, workshops and garages, etc. These impacts can be mitigated with good construction and management techniques, carried out under the close supervision of the field engineers, contractors and supervision consultants.

71. Since the four road packages are known in terms of locations and impacts (i.e., the construction of side drainage in urban areas) the MPWT has prepared site-specific EMPs, and these documents will be incorporated in the contract documents. The contractors will be made aware of their contractual obligations, and their safeguard performance during construction will be closely supervised and monitored by the Project Engineers and the Project Supervision Consultants. In addition, MPWT has developed its own SGESS to guide the planning and implementation of the mitigation measures for all road construction projects in the country (May, 2010). The SGESS's social safeguard related to resettlement will be reviewed and superseded by the guidelines to be issued by MEF (IRC). Application of the ESSF screening and SGESS for road works will ensure that appropriate measures are implemented by MPWT during the planning, construction, and post-construction of the roads.

72. During implementation of RAMP, MPWT's capacity on safeguards implementation was developed through training and engagement of consultants to support the Environmental and Social Office (ESO). The RAMP safeguards team considered that all safeguard-related activities were satisfactorily implemented and documented in progress and supervision reports. RAMP-II will continue support for strengthening the capacity of the ESO to implement safeguards not only for RAMP-II, but also for the rapidly increasing number of national road development projects in Cambodia. A more holistic capacity development program will be developed and implemented based on experience from the original RAMP and from Bank-financed road sector projects in neighboring countries. Safeguards training and technical assistance will be provided to the MPWT as an integral part of capacity building program under RAMP-II to strengthen implementation capacity for addressing environmental management aspects in the national road sector.

G. Other Safeguards Policies Triggered

73. There are no policy exceptions in this project.

H. World Bank Grievance Redress

74. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

Annex 1: Results Framework and Monitoring
CAMBODIA: Road Asset Management Project II

Project Development Objectives

PDO Statement

The PDO is to improve the condition, safety and climate resilience of selected national road corridors in Cambodia.

The project will achieve this objective through (i) the systematic introduction of designs that include climate proofing and road safety measures and the use of performance based contracts; and (ii) by enhancing MPWT's capacity to carry out road maintenance planning, contracting and management.

Project Level

Project Development Objective Indicators

Indicator Name	Baseline		Cumulative Target Values					
		YR1	YR2	YR3	YR4	YR5	YR6	End Target
Roads in good and fair condition as a share of total classified roads. (Percentage) - (Core)	76%	76%	76%	76%	76%	76%	76%	76
Roads rehabilitated, Non-rural (Km), with disaster resilience measures (Km)	0.0	0.0	0.0	0.0	218 (90)	218 (90)	218 (90)	218 (90)
Length of road sections (Km) on which Road Safety Measures are implemented	0.0	0.0	0.0	17	45	45	45	45

Intermediate Results Indicators

Indicator Name	Baseline		Cumulative Target Values					
		YR1	YR2	YR3	YR4	YR5	YR6	End Target

Timely preparation and submission of annual maintenance work plans and budgets using Road Management Decision Support (RMDS) (Text)	Maintenance budget in preparation	-	Annual work program and budget by June	Annual work program and budget by June	Annual work program and budget by June	Annual work program and budget by June	Annual work program and budget by June	Annual work program and budget by June
Length and share of roads maintained under performance-based maintenance contracts (Km and Percentage)	0.00	0	0	0	218 (3.8%)	218 (3.8%)	218 (3.8%)	218 (3.8%)
Beneficiaries satisfied with road condition, safety, and climate resilience of rehabilitated and maintained roads (percentage), disaggregated by sex	0%	0%	0%	0%	35%	50%	60%	60%

Indicator Description

Project Development Objective Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Roads in good and fair condition as a share of total classified roads	Classified roads are the roads that have been included in the roads legislation as public roads. This indicator will measure the share of roads in good and fair physical condition (surface roughness) as a result of the project. In a scenario without project, it is expected that the share of roads in good and fair condition would be reduced to 73%.	Annual	MPWT Records	MPWT
Roads rehabilitated, Non-rural, with disaster resilience measures	This indicator will measure kilometers of all non-rural roads reopened to motorized traffic, rehabilitated, or upgraded under the project. This double indicator will also measure the length of roads rehabilitated on which disaster resilience measures have been included.	Annual	Contractor reports and consultant supervision	MPWT and Consultant
Length of road sections (Km) on which Road Safety Measures are implemented	This indicator will measure integration of the road safety dimension into road designs.	Annual	Contractor reports and consultant supervision	MPWT and Consultant

Intermediate Results Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Timely preparation and submission of annual maintenance works plans and budgets using RMDS	Annual works plans and budget requests should be submitted to MEF by June. Annual plans to be based on a medium-term maintenance program. Program is for 'periodic' maintenance not 'emergency' and 'routine' maintenance.	Annual Y2-Y6	Program and budget documents	MPWT
Length and share of roads maintained under	This indicator will measure the application of PBCs to maintenance contracts in terms of km	Annual Y4-Y6	MPWT Records	MPWT

performance-based maintenance contracts (Km and Percentage)	covered as well as share of total maintenance contracts.			
Beneficiaries satisfied with road condition, safety, and climate resilience of rehabilitated and maintained roads (percentage), disaggregated by sex	This indicator will measure direct beneficiary satisfaction with the condition, safety, climate resilience of the road and the data will be disaggregated to identify if the project is addressing the differentiated needs of men and women, including potential gaps to be addressed during the remainder of the project.	Annual Y4-Y6	MPWT Records	MPWT

Annex 2: Detailed Project Description
CAMBODIA: ROAD ASSET MANAGEMENT PROJECT II

1. The PDO is to improve the condition, safety and climate resilience of selected national road corridors in Cambodia.

The project will achieve this objective through (i) the systematic introduction of designs that include climate proofing and road safety measures and the use of performance based contracts; and (ii) by enhancing MPWT's capacity to carry out road maintenance planning, contracting and management.

2. The project has three components: *Component A - Road Asset Management* (US$61.27 million; IDA US$56.97 million; RGC US$4.30 million); *Component B - System Upgrading* and *Capacity Development* (Total US$3.53 million; IDA US$3.03 million; RGC US$0.50 million); and *Component C - Contingent Emergency Response* (US$0). Component A will support the preservation of MPWT's road network and provide the necessary implementation support for the design and supervision of works. The strengthening and periodic maintenance works to be undertaken have been defined using the RMDS/HDM4 system upgraded by the previous RAMP. Component B will support road asset management system upgrading and related capacity development for MPWT to perform its road asset management functions effectively and efficiently. Component C will enable immediate response to an eligible crises or emergency, as needed.

3. A summary of project cost per component and activity is as follows:

Component/Sub-component/activity	Estimated Cost (US$ million)				
	IDA	%	RGC	%	Total
Component A - Road Asset Management	**56.97**	**93%**	**4.300**	**7%**	**61.27**
A1. *Periodic maintenance and strengthening*	*52.67*	*92%*	*4.300*	*8%*	*57.00*
Package 1: Periodic maintenance of 54 km of NR3, installation of 17 km of side drains and PBC of routine maintenance	13.09	93%	1.064	7%	14.15
Package 2: Periodic maintenance of 50 km of NR7, installation of 28.7 km of side drains and PBC of routine maintenance	13.82	92%	1.128	8%	14.95
Package 3: Periodic maintenance of 57 km of NR7, installation of 37.7km of side drains and PBC of routine maintenance	13.82	92%	1.128	8%	14.95
Package 4: Periodic maintenance of 57 km of NR7, installation of 11.8 km of side drains and PBC of routine maintenance	11.94	92%	1.008	8%	12.95
A2: Implementation support	*4.300*	*100%*	*0.000*	*0%*	*4.300*
• Advise MPWT on technical options and solutions, cost estimation, contract management and safeguard implementation of civil works; • construction supervision of civil works; • supervision of performance based	4.300	100%	0.000	0%	4.300

maintenance contracts of civil works; and • capacity building on road sector procedures, systems and standards					
Component B - System Upgrading and Capacity Development	**3.03**	**86%**	**0.500**	**14%**	**3.530**
B(1) Institutional and technical capacity development of RAMO	1.350	100%	0.000	0%	1.350
B(1a) RAMO hardware (Survey equipment: FWDs, GPS, IRI laser, video recorder, TPL) and software; survey vehicles and pick ups	*0.850*	*100%*	*0.000*	*0%*	0.850
B(1b) Data collection methodology improvement; simplified model for 3-year rolling maintenance plan preparation	*0.300*	*100%*	*0.000*	*0%*	0.300
B(1c) Reporting format of model simulation and training	*0.200*	*100%*	*0.000*	*0%*	0.200
B(2) Community-based road safety campaigns and road safety audits on project roads	0.300	100%	0.000	0%	0.300
B(3) FM and internal audit	0.100	100%	0.000	0%	0.100
B(4) Technical and financial audit	0.080	100%	0.000	0%	0.080
B(5) Procurement support	0.200	100%	0.000	0%	0.200
B(6) Incremental operating cost	1.000	67%	0.500	33%	1.500
Component C - Contingent Emergency Response	**0.000**	**0%**	**0.000**	**0%**	**0.000**
TOTAL (Project cost)	**60.000**	**93%**	**4.800**	**7%**	**64.800**

4. **Component A - Road Asset Management** (US$61.27 million; IDA US$56.97 million; RGC US$4.30 million) has two subcomponents: Sub-component A1- Periodic maintenance and strengthening of national roads, and Sub-component A2 - Implementation support.

1. *Sub-component A1: Periodic maintenance and strengthening* (US$57.00 million; IDA US$52.67million, RGC US$4.3 million) of about 218 km of existing bitumen-sealed roads with an overlay of asphalt concrete, replacement of current pavement with concrete pavement at flood prone areas, including strengthening and replacement, as necessary, of sub-base and road base-course, using unbound materials or stabilized materials for the road pavement. The civil works would include about 90 km of repair, replacement and installation of new drains, as well as repair and replacement of existing cross-drainage and the placement of some new culverts. The works would be followed by an application of performance-based road maintenance for a period of three years. The works would be divided into four contract packages, one on NR3 and three on NR7 as follows and summarized in the table below.

(i) Package 1: Periodic maintenance of 54 km of NR3 from KP147.1 to KP201.4 from Kampot provincial town to Veal Rinh intersection of NR3 and NR4, with performance based contract covering routine maintenance for three

years. It also supports the construction of side drains of 17 km along the NR3 road. The estimated cost of Package 1 is US$14.15 million (IDA US$13.09 million; RGC US$1.06 million).

(ii) Package 2: Periodic maintenance of 50 km of NR7 from KP136 to KP186, with performance based contract covering routine maintenance for three years. It also supports the construction of both side drains along 28.7 km of the NR7 road. The estimated cost of Package 2 is US$14.95 million (IDA US$13.82 million; RGC US$1.128 million).

(iii) Package 3: Periodic maintenance of 57 km of NR7 from KP186 to KP243, with performance based contract covering routine maintenance for three years. It also supports the construction of both side drains along 37.7 km of the NR7 road. The estimated cost of the Package 3 is US$14.95 million (IDA US$13.82 million; RGC US$1.128 million).

(iv) Package 4: Periodic maintenance of 57 km of NR7 from KP243 to KP300, with performance based contract covering routine maintenance for three years. It also supports the construction of both side drains along 11.8 km along of the NR7 road. The estimated cost of Package 4 is US$12.95 million (IDA US$11.94 million; RGC US$1.008 million).

Nº	Contract Package	Road Length Km	Side Drains (Km)	Cost Estimate (US$ Million)
Pkg 1	RAMP-II-CW-ICB-1 Maintenance and strengthening of NR3 (KP147+100 to KP201+400) In Kampot & Sihanouk ville Province	54.3	17.1	14.15
Pkg 2	RAMP-II-CW-ICB-2, Maintenance and Strengthening of NR7 (KP136+000 to KP186+000) In Tboung Khmum Province	50.0	28.7	14.95
Pkg 3	RAMP-II-CW-ICB-3, Maintenance and Strengthening of NR7 (KP186+000 to KP243+000) In Tboung Khmum and Kratie Province	57.0	37.7	14.95
Pkg 4	RAMP-II-CW-ICB-4, Maintenance and Strengthening of NR7 (KP243+000 to KP300+000) In Kratie province	57.0	11.8	12.95

2. *Sub-component A2: Implementation support* for supervision of works (US$4.30 million; IDA US$4.3 million; RGC US$0.0 million) and related technical capacity building activities. It supports: (a) advice to MPWT on technical options and solutions, cost estimation; contract management and safeguard activities for the

civil works under Component A.1 (b) construction supervision of the civil works under the project; (c) supervision of performance based contracts for the civil works under the project; and (d) hands-on development of technical capacities of MPWT staff on good practices and internationally accepted procedures, systems and standards for road construction, road safety, project management, contract management, outsourcing, PBC, social and environmental management, monitoring and evaluation, and financial and technical auditing. The detailed activities under this subcomponent include:

(i) Support road works implementation management, including supervision of periodic maintenance works and supervision of performance-based contract of routine maintenance;

(ii) Augment skills of MPWT staff in periodic maintenance treatments, design, budget preparation and works planning; and prepare guidelines on these topics;

(iii) Assist RAMO in the monitoring of all works, including materials testing, verification of construction schedules, verification of quantities, adherence to contractually stipulated standards and conformance with approved engineering designs;

(iv) Prepare monthly and quarterly physical and financial progress reports on contracts and contract management that will ultimately be submitted to the ICRRM and IDA;

(v) Assist in the management, monitoring and reporting of the safeguards (environmental and social) aspects of contract implementation, and provide on-the-job training for safeguards staff; prepare gender action plan for implementation during periodic maintenance works;

(vi) Prepare Beneficiary Welfare Impacts and Satisfaction Reports which update a key performance indicator defined in the M&E framework;

(vii) Augment skills and knowledge (hands-on) of MPWT staff on construction practices and monitor utilization of internationally accepted procedures, systems and standards in road construction, road safety, project management, contract management, outsourcing, maintenance using the PBC, social and environmental safeguards implementation, monitoring and evaluation, and financial and technical auditing.

5. **Component B - Capacity Development and System Upgrading** (US$3.53 million; IDA US$3.03 million; RGC US$0.50 million) would provide support for road asset management system upgrading and related capacity development for MPWT to perform its road asset management functions effectively and efficiently. It would include:

1. <u>System upgrading and technical capacity development</u> for road asset management within the MPWT (US$1.35 million; IDA US$1.35 million; RGC US$0.00 million), including:

i. Support for operation of Road Data Collection and Management under RAMO and for the effective implementation of the Road Management Decision Support (RMDS) system. This would include the purchase of two survey vehicles including survey equipment, two sets of Falling Weight Deflectometers (FWD) and four pickup trucks. The estimated cost is US$0.85 million (IDA US$0.85 million; RGC US$0.00 million).

ii. Strengthen the data collection methodology, review and provide simplified models for development of three-year rolling maintenance plans. The estimated cost is US$0.3 million (IDA US$0.3 million; RGC US$0.00 million).

iii. Develop reporting format on results of model simulation and provide training on the use of updated reporting format. The estimated cost is US$0.2 million (IDA US$0.2 million; RGC US$0.00 million).

2. Road safety awareness and audits covers audits of project roads and community-based awareness on road safety (awareness raising in communities along project roads). The estimated cost is US$0.30 million (IDA US$0.30 million; RGC US$0.00 million).

3. Financial management (FM) and internal audits. A local FM consultant will be appointed to work closely with the Project Manager as a core project member, and with the Internal Audit Department (IAD) to enhance capacity of MPWT finance staff in the areas of FM systems, financial management of projects, and in carrying out internal audit work of the project and MPWT. The estimated cost is US$0.10 million; (IDA - US$0.10 million; RGC – US$0.00 million).

4. Technical and financial audits. An independent Technical Auditor will be appointed to carry out a technical implementation/performance audit annually throughout the life of the project. Emphasis will be placed on assessment of proper use and accountability of funds in terms of quality and quantity of the works, physical implementation of the project, social and environmental monitoring. An independent external auditing firm will be engaged to carry out an audit of the financial statements annually. The external auditor will express an audit opinion on the financial statements and issue a management letter detailing control weaknesses/non-compliance and recommendations for improving the system and performance in financial management. The management of MPWT will be responsible for developing time bound action plans, acceptable to IDA, to address weaknesses documented in the audits. The estimated cost is US$0.08 million; (IDA US$0.08 million; RGC US$0.00 million).

5. Procurement support. One international and one local procurement specialist will be engaged to provide direct assistance to MPWT. The consultants will work closely with the project and provide regular on the job training and hands-on procurement training for RAMP II project staff. The objective is to enhance capacity of the procurement staff of MPWT, and to ensure that the procurement of the project will be carried out smoothly with fiduciary compliance. The estimated cost is US$0.20 million; (IDA - US$0.20 million; RGC – US$0.00 million).

6. Incremental operating costs of eligible expenses associated with the project implementation and management, monitoring and evaluation of the RAMP-II/RAMO staff. The estimated cost is US$1.50 million; (IDA US$1.00 million; RGC US$0.50 million).

6. **Component C: Contingent Emergency Response** (US$0.00 million). The objective of this component would be to improve the response capacity of the Government in case of an emergency. This component would facilitate rapid utilization of Credit proceeds in accordance with the rapid response procedures. If Component 3 is triggered, then the Standard Immediate Response Mechanism - Contingent Emergency Response Component (IRM CERC)-specific objective of "provide immediate and effective response to an Eligible Crisis or Emergency" will be incorporated and the results framework revised through formal restructuring.

Annex 3: Implementation Arrangements
CAMBODIA: ROAD ASSET MANAGEMENT PROJECT II

Project Institutional and Implementation Arrangements

1. **Overview:** The project will be implemented using the existing RGC organizational structure and institutional arrangements, particularly within MPWT. As in RAMP, a separate Project Implementation Unit will not be used. The Ministry of Economy and Finance (MEF) is the formal point of contact between RGC and IDA on all financial and legal matters for the Credit for the Project, and represents RGC in discussions on these matters. The MPWT is responsible for overall technical supervision, execution and management of the project. The General Department of Public Works (GDPW) will be responsible for the day-to-day implementation, supervision and operation of the project, including contracting and direction of all consultants, and will be the employer for all civil works contracts. The General Department of Administration and Planning (GDAP) will carry out the financial, safeguards, capacity development, training and public disclosure matters of the project. The General Department of Transport (GDT) will be responsible for Road Safety aspects.

2. **Project Oversight:** ***The Inter-ministerial Committee for Road Repairs and Maintenance (ICRRM)*** will act as the Steering Committee (SC) for the Project. The ICRRM was established through Prakas number 1154 MEF dated December 30, 2011. It comprises representatives from MEF and MPWT. As defined in the Prakas, the ICRRM functions include: (i) Coordination of maintenance of roads; (ii) definition of road maintenance principles and policies; (iii) preparation of road maintenance plans; (iv) ensuring consistency of MEF and MPWT policies; (v) solving road maintenance problems; and (vi) preparing policies and plans for monitoring and controlling road maintenance.

3. For this Project, in addition to tasks assigned by the Prakas, the ICRRM will be responsible for: (i) Oversight of overall project implementation and policy issues, (ii) advising on the required financial resources for road maintenance, including counterpart funding allocations; and (iii) ensuring achievement of the project development objectives. The ICRRM convenes every three months in the first week of the month or upon a proposal from the Chair and co-chair. Notices of meetings and draft agenda should be circulated two weeks in advance, and reports/inputs to the meeting circulated one week in advance. The IDA Financing Agreement (FA) requires that the ICCRM shall meet on a regular basis at least once every six months during the term of the project.

4. ***Ministry of Economy and Finance (MEF*)**. MEF will: (i) Provide project funding for Component A- *Road Asset Management and implementation support* in an amount of no less than US$4.8 million, (ii) approve withdrawal applications from donor funding sources; (iii) approve withdrawal applications of RAMP-II Counterpart Fund Accounts on request of MPWT; (iv) review Quarterly Financial Management Reports; and (v) procure financial auditors and review audit reports prepared under Sub-component B.

5. **Project Management:** ***Project Director (PD)*** - The Project Director (PD) is accountable to MPWT. The PD will be responsible for: (i) overall guidance and policy advice; (ii) internal

coordination, discussion and resolution of project matters with counterparts in other departments within the MPWT (particularly the GDAP) and other government agencies; (iii) donor alignment and harmonization; (iv) reporting on project progress to ICRRM and Minister of Public works; and (v) public disclosure and civil society involvement.

6. As the Chair or a member of a Procurement Review Committee, participates in the review and approval of bid/proposal evaluation reports for goods, works and consultant services, within the thresholds specified in the Standard Operating Procedure (SOP); as the chair or a member of Consultant Evaluation Committee, carries out the evaluation of proposals for consultant services, within the thresholds specified in the SOP; has overall responsibility for ensuring that the Government and IDA's procurement guidelines are followed and the correct procurement documents are used; and ensures full compliance with IDA resettlement, environment, and other safeguard policies.

7. The PD will receive support from DGPW staff and advice from the implementation support consultants, appointed under *Subcomponent A2*. The PD, assisted by the Project Manager (PM), will be responsible for project implementation support (including construction supervision and performance-based maintenance contracts) under Component A2 of the Project.

8. ***Project Manager (PM)*** **-** The PM will work on a full-time basis for RAMP-II. The PM will ensure that: (i) the Project Operation Manual (POM) is followed; (ii) audits (technical and financial) are carried out, (iii) safeguard activities are implemented; (iv) all consultants follow their terms of reference and delivery schedule; (v) project activities are carried out on schedule and within budget; and (vi) interim Unaudited Financial Reports are submitted on time. The PM will also provide day-to-day support to the PD.

9. The PM will act as Chair or a member of a Procurement Review Committee, participating in the review and approval of bid/proposal evaluation reports for goods, works and consultant services, within the thresholds specified in the SOP. As the Chair or a member of Consultant Evaluation Committee, the PM will carry out the evaluation of proposals for consultant services, within the thresholds specified in the SOP.

10. ***Project Technical Committee (PTC)*** The MPWT will maintain a Project Technical Committee which will be responsible for the overall coordination of the various project activities implemented by various MPWT departments. The DG of GDPW will serve as the chair of the PTC, with the RAMP-II PM as Deputy Chair. The PD will be the Permanent Secretary and RAMO will act as the Secretariat. The other members of the PTC will comprise the PM and departmental heads of TRC, HEC, RID, RDCMU, DoP/SEO, DAF, DHR, MRC, DLT, SNEID, and DoA. The PTC is to meet at least once a month, with notice of agenda and relevant documents circulated in advance. The TOR of the PTC in carrying out the project are as follows:

a. Overall guidance for RAMP-II implementation:

   (i) review work progress, expenditure, forward commitments and need for funds;
   (ii) review and update implementation schedule for all project activities to manage monthly and weekly work assignments;
   (iii) draft and review RAMP-II monthly progress reports, quarterly progress reports, and yearly reports; and
   (iv) review and clear MPWT training plans (based on assessment of current capacity, required capacity and capacity gaps) prior to implementation.

b. Guidance and action for strengthening internal control:

(i) review procurement timetables
(ii) consolidate financial accounts

c. Identification and resolution of issues related to implementation constraints or delays.

11. **Ministry of Public Works and Transport - Departmental Responsibilities.** As noted above, the project will be implemented using the existing MPWT organizational structure and institutional arrangements. The GDPW, GDAP, and the General Department of Transport (GDT) are the MPWT Departments with responsibilities for project implementation. The roles and responsibilities of the various MPWT Departments, Units and Offices in relation to the Project are outlined below.

12. **General Department of Public Works**

(a) **The Road Asset Management Office (RAMO)** is responsible for providing advice to the DG of GDPW and the PD. It will provide:

(i) Advice on preparation of asset preservation investment strategies based on the condition and performance of road networks and optimal investment returns; and
(ii) recommendations on prioritizing road sections for periodic maintenance and rehabilitation in the identification of annual work programs and three year rolling plans.

(b) RAMO's functions will include:

(i) Collection of road condition data, traffic counts, and vehicle operating costs;
(ii) data processing using the RMDS to prepare the annual maintenance works program, perform project evaluation, and assess overall network performance;
(iii) reporting on the condition of the MPWT roads, the effectiveness of road maintenance and the recommended annual works programs; and
(iv) Supervision of the Road Data Collection and Management Unit (RDCMU) within RAMO which, among other things, maintains the Local Referencing Condition Support and Road Decision Management System (LRCS/RDMS), collects the data required for these systems, and produces the maintenance programs and reports.

The RAMO and RDMCU will receive support for the implementation and operation of RDMS under *Subcomponent B.*

(c) **The Technical Research Centre** (TRC) maintains the technical design standards and specifications of materials and maintenance contracts, and designs works. TRC is responsible for:

(i) Technical designs (in line with MPWT standards);
(ii) Required safeguard documents;
(iii) Technical specifications;
(iv) Bill of quantities (BOQ) and cost estimates;
(v) Bidding documents and procurement; and
(vi) Annual technical audit of the maintenance works.

(d) The Road Infrastructure Department (RID) takes designs produced by the TRC and implements the works. RID will**:**

(i) Carry out routine maintenance through force account and performance based contracts;
(ii) manage periodic maintenance contracts after contract award;
(iii) oversee all construction supervision outsourced to supervision consultant firms under *Subcomponent A2* or through the Provincial Departments of Public Works, who will in turn report to RID;
(iv) recommend GDPW and DAF authorization of payments to contractors;
(v) ensure compliance by contractors of each contract's safeguard conditions, with inputs from the Department of Planning (DoP)/ESO; and
(vi) report on progress and propose measures for improvement, if any.

The RID will receive advice from the implementation support consultants, appointed under *Subcomponent A2*.

13. **General Department of Administration and Planning (GDAP)**

(a) Department of Administration (DoA) will:

(i) Ensure public disclosure at the national and local levels of project information, including planning, procurement information, safeguards (IEE/EMP, Environment and Social Safeguard Screening Framework (ESSF), Compensation and Resettlement Policy Framework (CRPF), and Indigenous Peoples Development Framework (IPDF)), and MPWT website management;
(ii) ensure inclusion of program activities in construction contracts; and
(iii) coordinate with MOH to carry out the HIV/AIDS field awareness campaign.

(b) **Department of Accounts and Finance (DAF)** is responsible for the financial management aspects of the project, and will liaise with GDPW and the PD on these aspects. DAF will:

(i) Handle withdrawal applications for replenishment of the Special Account;
(ii) consolidate budgets for submission to the ICCRRM, PTC and MEF;
(iii) provide budget estimates for RDCMU and RAMO;
(iv) provide updated cost data to TRC;
(v) ensure timely completion of Quarterly Financial Management Reports and internal/external financial audit reports, and payments to consultants, contractors and suppliers; and
(vi) record, control and report all RGC funding for roads under RAMP-II.

(c) **Department of Human Resources (DHR).** In liaison with GDPW and the PD, DHR will:

(i) Assess the technical capacity of the staff and MPWT (at individual and organizational levels);
(ii) prepare a Strategic Training Plan for the road maintenance program, including the annual training plan and budget, based on the training needs assessment and in coordination and assistance with capacity development consultant; and
(iii) supervise training course delivery.

(d) **Department of Planning (DoP) through the Environmental and Social Office (ESO)** is responsible for:

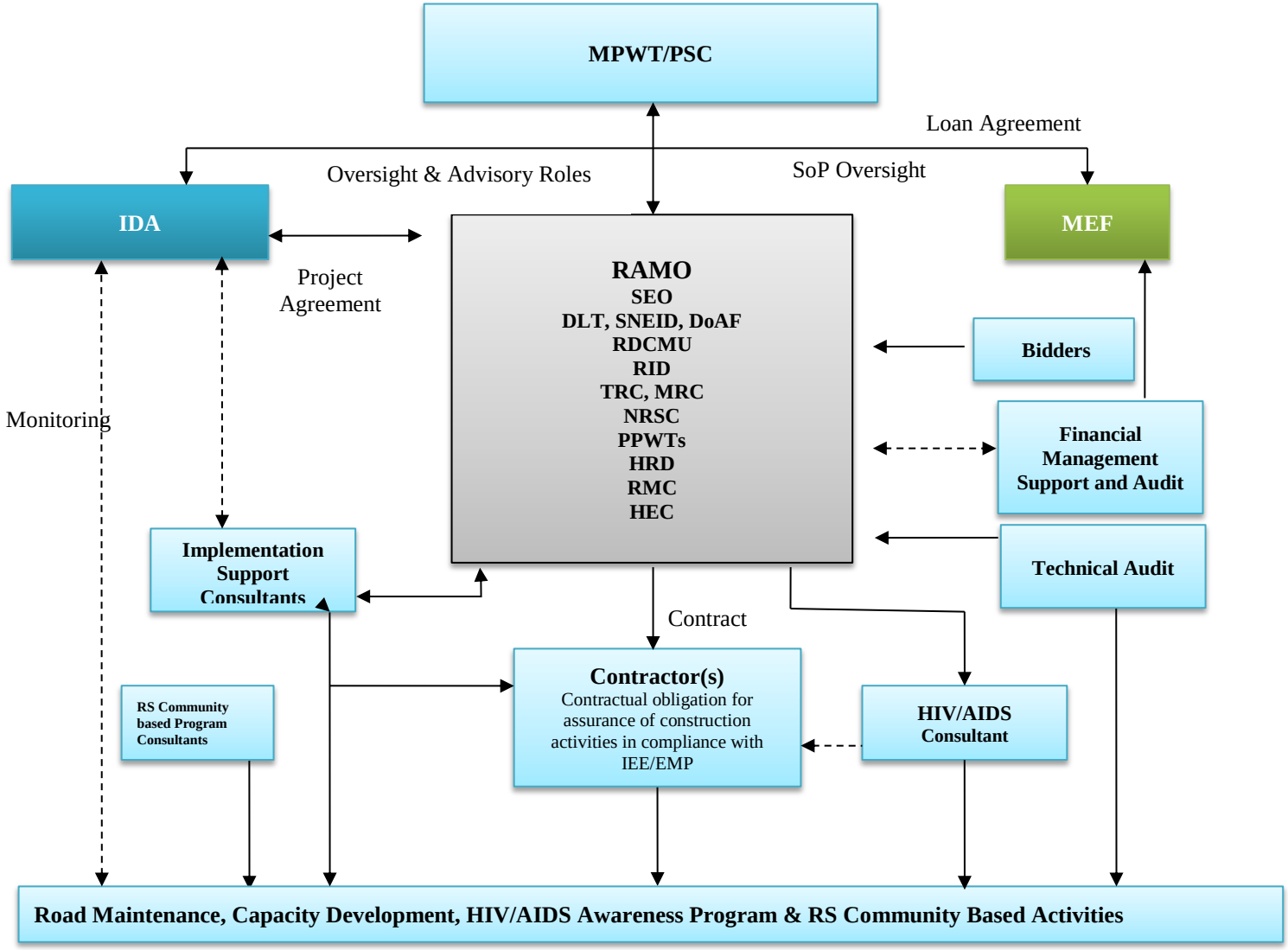
(i) Monitoring and recording preparation of the EMP, ARAP, ESSF, CRPF and IPDF by TRC;

(ii) ensuring TRC incorporates the safeguards requirements into the bidding documents;
(iii) monitoring and supervision of mitigation measures during implementation;
(iv) ensuring that public disclosure is carried out by DoA;
(v) ensuring EMP provisions included in contracts are applied;
(vi) monitoring and reporting on EMP implementation; and
(vii) liaising with the inter-ministerial resettlement committee, Ministry of Environment and all concerned agencies.

14. **The General Department of Transport (GDT)** will implement *Subcomponent B(b)* on road safety. GDT will:

(a) Oversee the road safety audits of project roads;
(b) develop and implement road safety education and awareness campaigns; and
(c) monitor and report implementation progress to the PD and NRSC secretariat.

15. **Provincial Departments of Public Works and Transport (PDPWT)** will assist with dissemination campaigns, safeguard requirements monitoring, and construction supervision.


MPWT/PSC
Loan Agreement
Oversight & Advisory Roles
SoP Oversight
IDA
MEF
Project Agreement
RAMO
SEO
DLT, SNEID, DoAF
RDCMU
RID
TRC, MRC
NRSC
PPWTs
HRD
RMC
HEC
Bidders
Financial Management Support and Audit
Technical Audit
Monitoring
Implementation Support Consultants
Contract
Contractor(s)
Contractual obligation for assurance of construction activities in compliance with IEE/EMP
RS Community based Program Consultants
HIV/AIDS Consultant
Road Maintenance, Capacity Development, HIV/AIDS Awareness Program & RS Community Based Activities

Financial Management, Disbursements and Procurement

Financial Management

16. The implementing agency has an acceptable financial management system for the project. However, a number of risk mitigating measures to enhance the system will be implemented. The project will be implemented in a high-risk environment with the financial management risk specific to the project assessed as high. The following measures have been incorporated into the financial management arrangements under the Financing Agreement and POM to reduce the specific risks of the project to substantial level.

Action	Responsibility	Completed by
Develop and agree on the Terms of Reference of the local FM consultant to help update the FM manual and design system and provide training on FM to the project's FM and internal auditors	DAF	Before negotiation (done)
Organize first financial management training and disbursement for selected staff to manage the Project.	DAF/Bank	Before effectiveness
Engage a local FM consultant to build capacity in FM for FM staff and internal auditor	DAF	3 months after effectiveness (Project Operations Manual)
Prepare a financial management training plan built upon the training provided in the previous Bank project to further strengthen capacity of staff of DAF	DAF	9 months after effectiveness (Project Operations Manual)
Ensure SFMM is updated to include the government's new chart of accounts and other updates in line with revised SOP/FMM, and updated job description of the FM staff and accounting software customization for IFR reporting	DAF	6 months after effectiveness (Project Operations Manual)
Carry out internal audit on the project's operations annually and include results of the audit in the IFR	IAD	Annually (Financing Agreement)

17. *Budgeting and counterpart funding*: MPWT is implementing program based budgeting (PBB) under PFMRP in 2015. The project will follow government principles for budgeting as outlined in the SOP/FMM. The Government will finance 8 percent of the civil works costs and 100 percent for other necessary administrative costs for smooth operations, except for goods, consultants' services, training and workshops, and incremental operating costs, which are 100 percent financed by IDA. The total government share is US$4.8 million (or 7.41 percent of the total project cost of US$64.8 million, or 8 percent of the total IDA Credit of US$60 million).

18. *Flow of funds*: The funds from IDA will be channeled directly to a DA maintained at the National Bank of Cambodia (NBC). The RGC's counterpart funds will be transferred from the General Department of National Treasury to a project bank account at NBC managed by the DAF of MPWT. MPWT will be responsible for certifying and verifying expenditures incurred during project implementation. The DA for IDA and DA for counterpart funds are denominated in US$.

19. *Staffing*: The IA's DAF will be responsible for financial management of the project. The to-be-appointed finance officer of the project has extensive experience in financial management of ADB funded projects and in using Peachtree accounting software. The project management of RAMP-II will ensure that an Accountant and a Cashier with experience in managing externally funded projects will be selected internally from IA's staff.

20. *Accounting and maintenance of accounting records*: The project will adopt a cash basis of accounting, which is in line with the Government's reform agenda of applying IPSAS-based cash accounting. An accounting software on network environment will be used as the financial management tool to manage financial transactions and producing financial reports. The original supporting documents shall be retained by IA during the life of the project and until at least the later of: (i) one year after IDA has received the audited financial statements covering the period during which the last withdrawal from the Credit was made, or (ii) two years after the Closing Date.

21. *Internal controls and internal audit*: Sound internal controls over financial management are built into the government's SOP/FMM. More controls will be established to address the project's specific risks, such as soft expenditure and management of fixed assets. IAD of MPWT is sufficiently staffed, but its capacity needs to be strengthened before it can provide services to the project. When MEF's internal audit department holds internal audit training, MPWT's IAD is invited to join. MEF also issues an internal audit manual for other internal audit departments to follow. MPWT's IAD is encouraged to participate in the internal audit of the project's activities in order to apply knowledge gained from trainings. Further support to MPWT's IAD is provided from MEF's internal audit department, which has an international audit advisor from the Public Financial Management program. The local FM consultant will also provide training to MPWT's IAD on project financial management to enable IAD to carry out internal audit of FM related activities.

22. *Periodic financial reporting*: IFRs will be prepared semi-annually and submitted to IDA within 45 days after the end of each semester, starting from the first semester following the project's first disbursement. The format and contents of the IFR will be modified and agreed with the Bank.

23. *Arrangements for external audit*: The independent external auditor should be appointed within six months after the effectiveness. The appointed auditor and terms of reference shall be acceptable to IDA. The audited financial statements and management letter will be submitted to IDA within six months after the end of each fiscal year. The project is required to disclose to the public its annual audited financial statements on its website. Following the Bank's formal receipt of these statements, the Bank will make them available to the public in accordance with The World Bank Policy on Access to Information.

Disbursements

24. The project is authorized to operate a Designated Account (DA) under acceptable terms and conditions. The ceiling of the DA is estimated at US$800,000 to settle payments via DA, and this is subject to review to ensure efficient and effective use of funds over the project implementation. The IDA Credit proceeds will be disbursed against eligible expenditures as follows:

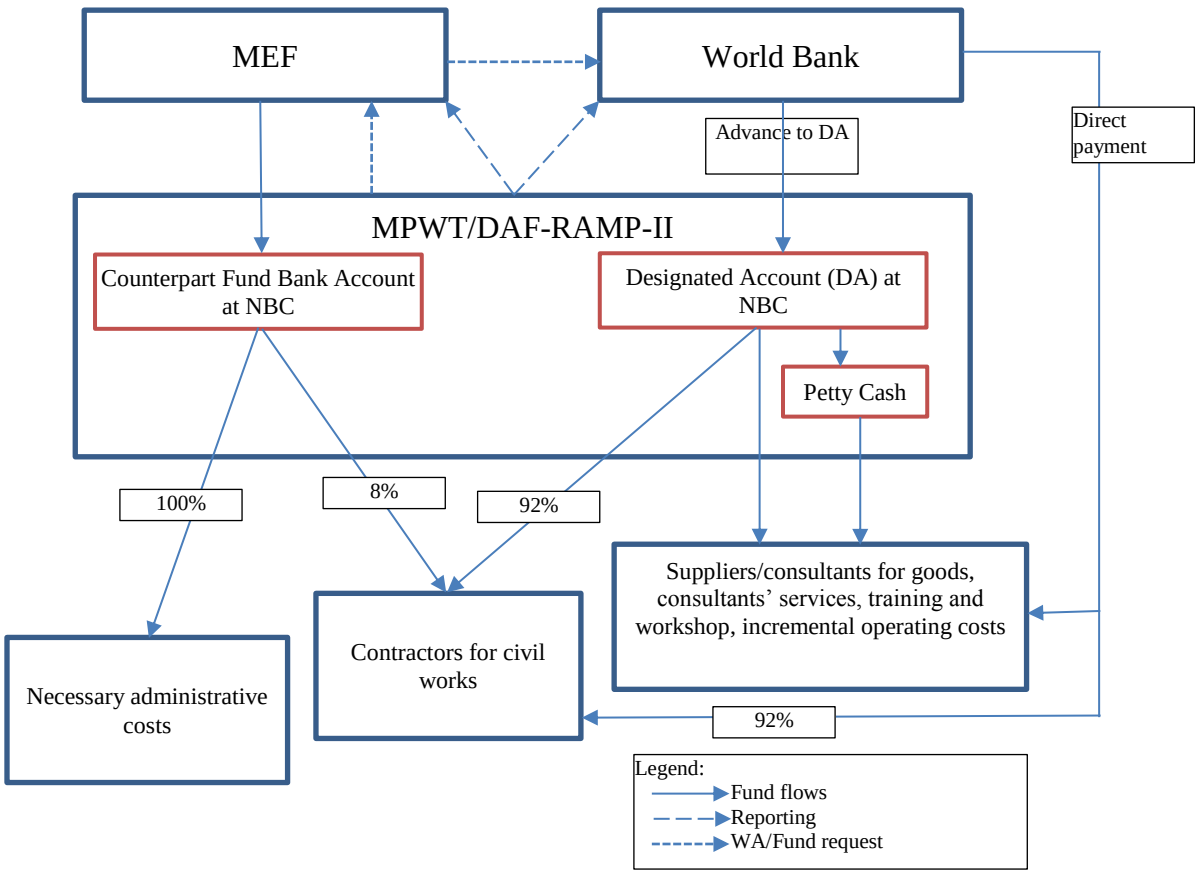
Category	Amount of the	Percentage of

	Financing Allocated (expressed in SDR)	Expenditures to be financed by IDA (inclusive of Taxes)
(1) Works under Part A.1 of the Project	36,100,000	92%
(2) Goods, non-consulting services, consultants' services, Training and Operating Costs under Parts A.2 and B of the Project	7,400,000	100%
(3) Emergency Expenditures under Part C of the Project	0	100%
TOTAL	43,500,000	

25. In reporting eligible expenditures paid from the designated accounts and requesting for reimbursement, the following would be required: (a) Statements of Expenditures (SOEs) for post review expenses and procurement contracts; and (b) Summary Sheet (SS) for prior review contracts expenses. For direct payments, records evidencing eligible expenditures such as copies of contracts, purchase orders, supplier's invoice and receipt, etc., would be submitted. The minimum value of applications for direct payment, reimbursement and special commitment is US$100,000 equivalent. The project continues to use e-disbursement under the following disbursement methods:

- *Reimbursement:* The Bank may reimburse the RGC for expenditures eligible for

Fund Flows and Reporting Diagram for RAMP-II



financing pursuant to the Financing Agreement (eligible expenditures) that the Borrower has pre-financed from its own resources.

- *Advance:* The Bank may advance the Credit proceeds into a designated account to finance eligible expenditures as they are incurred and for which supporting documents will be provided at a later date.
- *Direct Payment:* The Bank may make payments at the Borrower's request, directly to a third party e.g., supplier, contractor and consultant for eligible expenditures.
- *Special commitment:* The Bank may pay amounts to a third party for eligible expenditures under special commitments entered into on basis of irrevocable Letters of Credit (LC) being opened with a reputable commercial bank by the Borrower, in writing, at the Borrower's request and on terms and conditions agreed between the Bank and the Borrower.

26. A four month grace period is provided to document eligible expenditures for activities completed by the project closing date.

Procurement

27. Public procurement in Cambodia is governed by the Public Procurement Law enacted in January 2012. Article 3 of the law provides an exception to follow procurement guidelines and procedures agreed between the RGC and a development partner for a project financed by the development partner. Accordingly the updated SOP and Updated Procurement Manual for all Externally Financed Projects and Programs issued under Sub Decree 74 dated May 22, 2012 has been agreed and is applicable for the World Bank financed/administered projects/programs. The Updated Standard Operating Procedures and Procurement Manual (SOP/PM) contains principles, rules and guidelines for planning, supervision, and procurement procedures for all externally financed projects/programs. The SOP/PM includes a comprehensive complaints, disclosure and transparency regime to be followed. SOP/PM applies at central level. The Public Procurement Law enacted in January 2012 also provides policy and procedures for procurement under government financed projects/programs. The Law establishes the General Department for Public Procurement (GDPP) within MEF as the responsible body for regulatory responsibilities. The Law also provides for disclosure and complaints rules to be followed by both bidders and public officials. Both documents are publicly available on the MEF website.

28. The enabling legal frameworks are comprehensive and incorporate fundamentals of a modern procurement legislation. The key challenge lies with the capacity to implement the legal framework and to provide oversight for its implementation. Staff capacities are weak and procurement is yet to be a profession developed within the public service.

29. Procurement under the project will be governed by the Bank's Procurement Guidelines dated January 2011, revised July 2014 and Consultant Guidelines dated January 2011, revised July 2014. Bank Anti-Corruption Guidelines dated October 2006 and revised January 2011 will also apply. Government Updated Standard Operating Procedures issued under Sub Decree 74 dated May 22, 2012 will apply for procurement under NCB and low value contracts subject to the improvement included in the NCB annex to the project loan agreement.

30. Capacity Assessment. The MPWT will be the executing agency and will be responsible for overall technical supervision and execution of the project. The MPWT was assessed to have very limited experience on carried out procurement of medium and large procurement packages,

especially the PBC contracting methodology that will be used under the RAMP-II. Thus the procurement capacity of MPWT needed to be strengthened.

31. Risks and Mitigation Measures. The following risk mitigation measures have been agreed with the government.

Risk/Risk Area	Mitigation measure	Period of implementation of the measure
Weak procurement oversight at central level and capacity of MPWT	High level of prior review by the Bank and lower prior review thresholds; post review by the Bank annually of 20% of contracts. Hire international procurement consultant to assist with the procurement of the four civil works packages and selection of the Implementation & Supervision Consultant Firm; engage one local procurement consultant with World Bank procurement experience on a full time basis to assist MPWT; and the World Bank procurement specialist assigned to the project will provide regular hands-on procurement training for RAMP-II project staff.	During implementation and annually
MPWT not familiar with PBC contracting methodology	Familiarize MPWT and RAMP-II staff on PBC through short term training.	During implementation
Weak technical supervision and contract management	Hire Implementation & Supervision Consultant Firm to support MPWT	During implementation
Delays in procurement cycle management	Keep tracking form of procurement actions and monitor progress. Appoint focal person to provide technical inputs for each package and provide training to evaluation committees for each package.	During implementation
Weak interest from local contractors in PBC and long-term maintenance as there is no precedent to PBC in Cambodia	Conduct training of local contractors on PBC, bidding, procurement process, cost forecasting and contract management.	During implementation, before the bidding process for civil works
Governance associated risks	The project design includes a communication strategy to inform and update stakeholders about the project. The SOP and Procurement Law provides grounds for enhanced mitigation of governance risks and each bidding document/RFP will provide channels and	During implementation

	contacts, for both the Government and Bank, through which interested parties may lodge their procurement complaints. The Technical Audit Consultant will also carry out inspections of the construction work done by the project every two years.	
Misrepresentation of staffing/documents in the bids/proposals of bidders	The project implementing agencies (National Level and Sub-national levels) shall carry out due diligence in verifying the proposed staffing and document submitted directly with the proposed staff/consultants, former clients of bidders, and other associated entities/manufacturers. Fraud and corruption policies in the Bank's guidelines as well as in the bidding documents/RFP and contracts shall be applied in case of misrepresentation.	During the bid/proposals evaluation process and contract execution.

32. Based on the current governance and procurement environment, and weak capacity of the project implementing agencies, the overall procurement risk is high. However, the identified risks would be managed and mitigated through the above agreed action plan, and the residual procurement risk of the RAMP-II is considered substantial.

33. Procurement Plan. A procurement plan for the project has been prepared, dated February 10, 2016 and the summary is presented below.

A. Goods, Works, and non-consulting services. Prior Review Threshold: Procurement Decisions subject to Prior Review by the Bank, as stated in Appendix 1 to the Bank's Guidelines for Procurement, are as follows:

Overview of Prior Review Thresholds for Goods, Works and Non-Consulting Services

#	Procurement Method	Contract Value Threshold ($'000)	Prior Review Threshold ($'000)	Comments
1.	ICB (Goods)	>=600	All	All ICB contracts
2.	NCB (Goods)	100 – 600	All> 300 and First NCB < 300	
3.	Shopping (Goods)	<100	None	
4.	Direct Contracting (Goods & Works)	-	> 5	
5.	ICB (Works)	>= 2,000	All	All ICB contracts
6.	NCB (Works)	200-2,000	All >1,000 and First NCB < 1,000	
7.	Shopping (Works)	<200	None	

Summary of Planned Procurement Packages for Works and Goods

Description	Estimated Cost (US$) Millions	Procurement Method	Domestic Preference	Review by the Bank	Comments
Procurement of Works					
RAMP-II- Maintenance and strengthening of NR3 (KP147+100 to KP201+400) in Kampot & Sihanouk ville Province; Maintenance and Strengthening of NR7 (KP136+000 to KP186+000) in Tboung Khmum Province; Maintenance and Strengthening of NR7 (KP186+000 to KP243+000) in Tboung Khmum and Kratie Province and Maintenance and Strengthening of NR7 (KP243+000 to KP300+000) in Kratie province	54.1	ICB	Yes	Prior	4 packages
Procurement of Goods					
Procurement of two survey vehicles, four pick-ups and survey equipment (two FWDs, two sets of survey equipment (GPS, IRI laser, Video record, TPL)	0.73	NCB	No	Prior	2 packages
Procurement of office equipment, furniture, accounting software and RDCMU Software and Hardware Upgrade	0.205	Shopping	No	Post	4 packages
Total	**55.035**				

B. Selection of Consultants. For selection decisions subject to Prior Review by the Bank, as stated in Appendix 1 to the Guidelines Selection and Employment of Consultants, the prior review thresholds are as follows:

Overview of Prior Review Thresholds for Selection of Consultants

	Selection Method	Procurement Method Threshold US$	Prior Review Threshold US$	Comment
1.	QCBS, QBS (Firms)	= >300,000	>=100,000	
2.	CQS, LCS (Firms)	< 300,000	>=100,000	
3.	Single Source Selection		Where justified and subject to IDA's prior agreement >10,000	
4.	Individual Consultants		All long-term positions and fiduciary/legal positions	

The short list of consultants for services estimated to cost less than US$200,000 equivalent per contract may comprise entirely national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines. In the case where an insufficient number of national firms is available, international advertisement (REOI on UNDB) can be applied.

Consultancy Assignments

Description of Assignment	Estimated Cost (US$) Millions	Selection Method	Review by the Bank	Comments
Implementation & Supervision Consultant Firm (ISC)	4.3	QCBS	Prior	
Community Based Road Safety program (NGO)	0.3	QCBS	Prior	
Financial Audit	0.03	CQS	Prior	
International and national procurement consultant, national financial management consultant and Technical Audit	0.31	Selection of Individual Consultants	Post	All post contract except fiduciary positions
Total	**4.99**			

34. *Environment and Social (including safeguards):* The existing implementing mechanism applied for the original RAMP is relevant for RAMP-II. MPWT will be responsible for implementation and compliance with all safeguard requirements. The GDPW will continue to work closely with GDAP to achieve this objective.

35. The GDPW will ensure that the: (i) safeguard performance is included in the project progress report; (ii) TRC will ensure contractor compliance with the agreed EMP; (iii) Road Infrastructure Department (RID) will supervise and monitor field engineers' compliance and reporting; and (iv) RID and the Provincial Departments of Public Works and Transport will ensure adequate public consultation with local agencies and communities throughout project implementation and assist with carrying out periodic training for field engineers and contractors, as appropriate. GDAP will be responsible for periodic monitoring of the safeguard compliance for RAMP-II and provide safeguard training and technical inputs, as needed.

36. *Screening procedures*. The screening process prepared for and used in RAMP will be applicable for RAMP-II.

37. *Monitoring and Reporting.* DoP/ESO will carry out site monitoring on at least a quarterly basis and prepare quarterly and semi-annual reports. The reports will evaluate the application of and compliance with relevant safeguard policies during all project stages, and will be submitted to Bank for review and comment.

38. *Public disclosure.* GDPW and GDAP will be responsible for public consultation and disclosure of relevant safeguard documents before the commencement of construction activities. All pertinent safeguard information for selected project roads, including ESSF, site specific EMPs, SGESS, abbreviated RAPs and IPDF (where applicable) will be made available for public access both at MPWT and its local offices. One copy will also be made available at the World Bank office in Phnom Penh.

39. **Institutional Capacity Development for Safeguards.** Given its extensive experience in road construction and rehabilitation with various donors supported projects, and especially with the original RAMP, MPWT recognizes the importance of environmental protection and has demonstrated commitment to mitigating potential environmental and social impacts. During the project design of RAMP-II, MPWT (i) conducted environmental and social screening throughout the proposed road sections and a free, prior and informed consultation was carried out with relevant stakeholders; (ii) prepared and disclosed abbreviated RAPs; and (iii) updated the ESSF describing the screening criteria, the site specific EMPs and IPDF for the project and SGESS (approved on June 11 2010). The SGESS comprises: (i) generic environmental specification for contractors; (ii) specific requirements for activities carried out in the protected and/or naturally/cultural sensitive areas; (iii) environmental guidelines for design and construction works; and (iv) guidelines for monitoring and reporting.

40. In response to a request from MPWT, RAMP-II will continue support for strengthening capacity of ESO under MPWT to ensure effective implementation of safeguards and to mitigate potential negative impacts at all stages (planning and pre-construction, construction, operations). The ESO will also be enabled to handle safeguard compliance not only for RAMP-II but also for the rapidly increasing number of national road development projects in Cambodia. With the limited number and frequent turnover of staff within ESO, a more holistic capacity development program will be developed by ESO/MPWT, with the support from the World Bank and project consultants, and implemented based on practical experience from the original program and similar road maintenance projects in neighboring countries.

41. **Safeguard Experience Related to Road Maintenance:**

(a) *Safeguards screening and risks*. Under the original RAMP, adequate attention was given to safeguards screening and requirements, including preparation of the safeguards instruments, training and monitoring. Similarly, safeguards screenings for RAMP-II have been carried out in a satisfactory manner. Risks due to UXO in the project areas were mitigated through the previous road projects. Overall risk for safeguards is perceived to be low under the new project because it will focus on repair and maintenance of the existing road assets and will follow the same road alignments.

(b) *Potential impacts due to civil works.* No major adverse impacts were observed on the local environment or local people during RAMP as the investments merely focused on repair and maintenance of the roads and their existing alignments. Given the similar nature of the activities to be carried out under RAMP-II, the environmental and social impacts are expected to be minor and effectively mitigated through the mitigation measures in the updated ESSF (and abbreviated RAPs and site specific EMPs). Some inconveniences may occur during construction, such as dust, emissions, noise, vibration and construction debris, but these can be mitigated by applying good construction practices and close supervision. For individual contracts for project road rehabilitation and maintenance, the site specific EMP and updated ESSF will be applied by the contractors and monitored by MPWT through its ESO.

(c) *Land acquisition and resettlement.* No major adverse social impacts and resettlement were observed under RAMP. The road sections in RAMP-II are located in flat areas connecting a number of provincial and district towns, in which rapid economic development and increasing demand for improved transport infrastructure are observed. Potential minor and temporary land acquisition may be required due to the construction of side ditches and drainage within the ROW. Minor relocation of temporary buildings

including roof structures and concrete floors extended from small shops and houses and crops or trees found along the ROWs are anticipated. Given that locations and potential impacts of the four road sections were identified, MPWT has prepared and disclosed two abbreviated RAPs to be applied to the roads under RAMP-II.

(d) *Ethnic Minority.* Indigenous minorities (locally known as Highland Peoples) are found mostly in the northeast (Ratanakiri and Mondolkiri provinces), which are not covered by RAMP-II. These groups, among them the Tampuan, Kuy, Jarai, Phnong, Kreung, Kavaet, Brou, Stieng, Lun and others, are estimated to total about 120,000 people, or about one percent of the national population. Under the original RAMP, no issue with or impact on ethnic minorities was reported. Although no ethnic minority people were identified among the 919 potential PAHs visited during the screening for RAMP-II, the existing IPDF will remain applicable as a precaution.

(e) *Physical cultural properties and sensitive areas*. Local hospitals, schools, temples and markets were identified along the road sections to be repaired during the screening process. These public facilities and physical cultural properties are located outside the ROW and at least 50 meters from the center of the roads. Hence, the civil works would not cause major impacts on the properties and sensitive areas. The updated ESSF and site specific EMP include chance finds clauses, and these will be applied for RAMP-II.

(f) *Capacity building on safeguards implementation:* Based on the outcome of the brief capacity assessment of the ESO, a program will be designed to strengthen its capacity to carry out Environmental and Social Impact Assessment (ESIA) review, monitoring and reporting. A Training Needs Assessment will be carried out and a sequence of training sessions designed including in-class-training and field practice. The potential beneficiaries of the training program would be staff of ESO, of DoP and relevant departments, supervision consultants, and site engineers of the successful bidders.

42. A Generic EMP for Construction Phase is shown below.

Generic Environmental Management Plan (EMP) for Construction Phase

ACTIVITY	POTENTIAL IMPACTS	MITIGATION MEASURES
Resurfacing of pavements and associated pavement works and repair and surfacing of shoulders	- Possible pollution of waterways or groundwater by bituminous products or solvents	- Strict control to avoid spills and contractor to have adequate clean up procedures
	- Works can have temporary effects on irrigation or washing/drinking water supplies	- Control of contractor to take into account local water uses
	- Dust noise and vibrations	- Specification to include for watering of road sections while repairs are on-going in the contract - Control of contractors equipment noise and vibrations, especially close to residential areas - Construction activities will be avoided at night, close to residential areas
	- Effect on traffic and pedestrian safety	- Contractor to employ safe traffic control measures and limit possible disruption to non-construction traffic
Transport of Materials	- Air and noise pollution to any nearby residential areas and damage to existing roads	- Control contractor's vehicle speeds, noise and weight of loads and control dust and flying debris by covering loads or wetting material if necessary - Use locally available construction material wherever possible to minimize transport distances
Materials stockpiling on shoulders	- Possible pollution of waterways by solids - Possible impacts on road users safety	- Choose appropriate location for materials stockpiling well away from any waterways, irrigation or washing/drinking water supplies - Avoid encroachment on carriageway - Preserve trees during material stockpiling
Borrow areas	- Quarries and borrow pits can have impacts on soils, water and the natural environment	- Locate borrow areas away from any residential or other environmentally sensitive areas such as hospitals, intensive livestock production areas or wildlife breeding areas - Also avoid farmlands or forests as much as possible. Restrict work to daylight hours and limit the size and frequency of any blasting - Borrow areas will be restored and re-vegetated.
Worksite installation (if needed)	- Degradation of plant cover - Soil and water pollution (trash dumping, oil spills)	- Choose location of work site installations in order to reduce impacts on the environment of these sites and the people living in the immediate vicinity - Fuel and oil, and bitumen storage areas will be located well away from any watercourses - These storage areas will be provided with interceptor traps so that accidental spills do not contaminate the environment - All waste oil will be stored and disposed of to acceptable oil industry standards - Wherever possible, refueling will be carried out at a fuel storage area and not permitted within or adjacent to watercourses - On completion of the work, contractor shall restore the sites to their original state
Road safety and traffic management	Road accidents due to inadequate control of vehicle speeds and signs/signals	- Prepare/finalize an action plan for each project road in close consultation with local agencies and communities, the implementation results should be reported periodically

Annex 4: Implementation Support Plan

CAMBODIA: ROAD ASSET MANAGEMENT PROJECT II

Strategy and Approach for Implementation Support

1. The implementation support strategy addresses the design and implementation requirements of the project, including the implementation of the risk mitigation measures defined in the new Framework for Management of Risk in Operations. It also builds on the experiences and lessons learned in the implementation and management of the RAMP.

2. In light of the above, and the considerable experience acquired by the Bank in supervising RAMP over the past six years, a number of steps were taken during and as part of project preparation to facilitate implementation. These include:

a. Stakeholder consultations and briefings, conducted as part of a pre-identification of approaches.

b. Establishment of project on-site management teams under the guidance of RAMO;

c. Procurement and Financial Management assessments of the implementing agencies/units to determine the soundness of the financial management and procurement systems (post IPA arrangement); and

d. A road survey mission looked into the new area of climate resilience measures. Findings of this work helped shape the designs of the civil works to be carried out under the project.

3. The strategy takes into account the strong and experienced teams at national level where the RAMP operated and which RAMP-II will also cover. Nevertheless, the implementation support strategy would provide focused implementation assistance to the client, especially given: (a) the project's new approach of PBC; (b) application of climate resilience measures; (c) behavioral change of road users aiming at reducing losses to road accidents; and (d) enhancement of MPWT's capacity for better management of the road network.

4. The project has built in implementation support through the employment of national advisors and short- and long-term consultants. Review of the performance of the experts hired under the project will be part of the implementation support missions.

5. Important areas include: regular road condition surveys, road maintenance planning; performance based contract management, monitoring and reporting; and supervision.

Implementation Support Plan

6. The strategy would be operationalized through the conduct of standard semi-annual implementation support missions, which would be complemented with follow-up meetings, field visits and fiduciary reviews. The Bank team members would undertake these, the majority of whom are based in the Cambodia Country Office and other country offices in the region. This arrangement is expected to ensure timely, efficient and effective implementation support to the client. Detailed inputs from the Bank team are outlined below:

a. Procurement. The implementation support would include: (i) prior review of procurement documents; (ii) at least twice a year conduct of ex-post reviews; (iii) coaching procurement staff and providing detailed guidance on the Bank's procurement guidelines; and (iv) monitoring of procurement progress against the detailed procurement plan.

b. Financial Management. Implementation support missions would be conducted twice a year focusing on the adequacy of the FM system to ensure that funds are used for the intended purpose, with due regard to economy and efficiency. Based on the level of FM risks at time of FM supervision, the reviews may include any or all of the following: (i) review and verification of specific transactions; (ii) review of internal controls of financial management; (iii) analysis of the financial statements in relation to the funds disbursed by the Bank; and (iv) physical verification of structures and others as to existence. Desk reviews will also be conducted on a regular basis and upon submission of the annual external audit of the project and the bi-annual Interim Financial Reports (IFRs). Issues arising from these reports will be used to revise and adjust the scope of the planned FM implementation support.

c. Environmental and Social Safeguards. The implementation support will include supervision and provision of technical inputs in the implementation of the social and environmental management plan in accordance with Bank safeguard policies. Coaching will also be provided to relevant project staff for the preparation, implementation and monitoring of environmental and social safeguard tools.

d. Technical Implementation Advice. The implementation support will include the provision of on-demand technical advice to the project, especially on: (a) the project's new approach of PBC; (b) climate resilience measures; (c) behavioral change of road users aiming at reducing losses to road accidents; (d) the MPWT's capacity building for better management of the road asset networks; and (e) gender elements in the project.

e. Project Management. Advice on the overall management and supervision of the project would also be provided to ensure technical soundness and consistency; transparency and good governance; inclusiveness; and compliance with relevant guidelines and procedures. Implementation support missions will in particular review and help improving the projects PBC approach. Detailed assistance will also be provided to review the selection and management of national and international advisers and consultants to the project, ensuring the adequacy of expertise and experts employed under the project.

f. Mid-Term Review. The mid-term review will review and assess detailed progress and ensure that an adequate phasing out strategy is proposed, in line with the project's overall development objective and planned six year duration.

7. Implementation support will be more intense during the first half of the project. As capacity develops and matures, technical support will be able to be reduced. The main focus of implementation support is summarized below:

Table 1: Skills Needed for Implementation Support

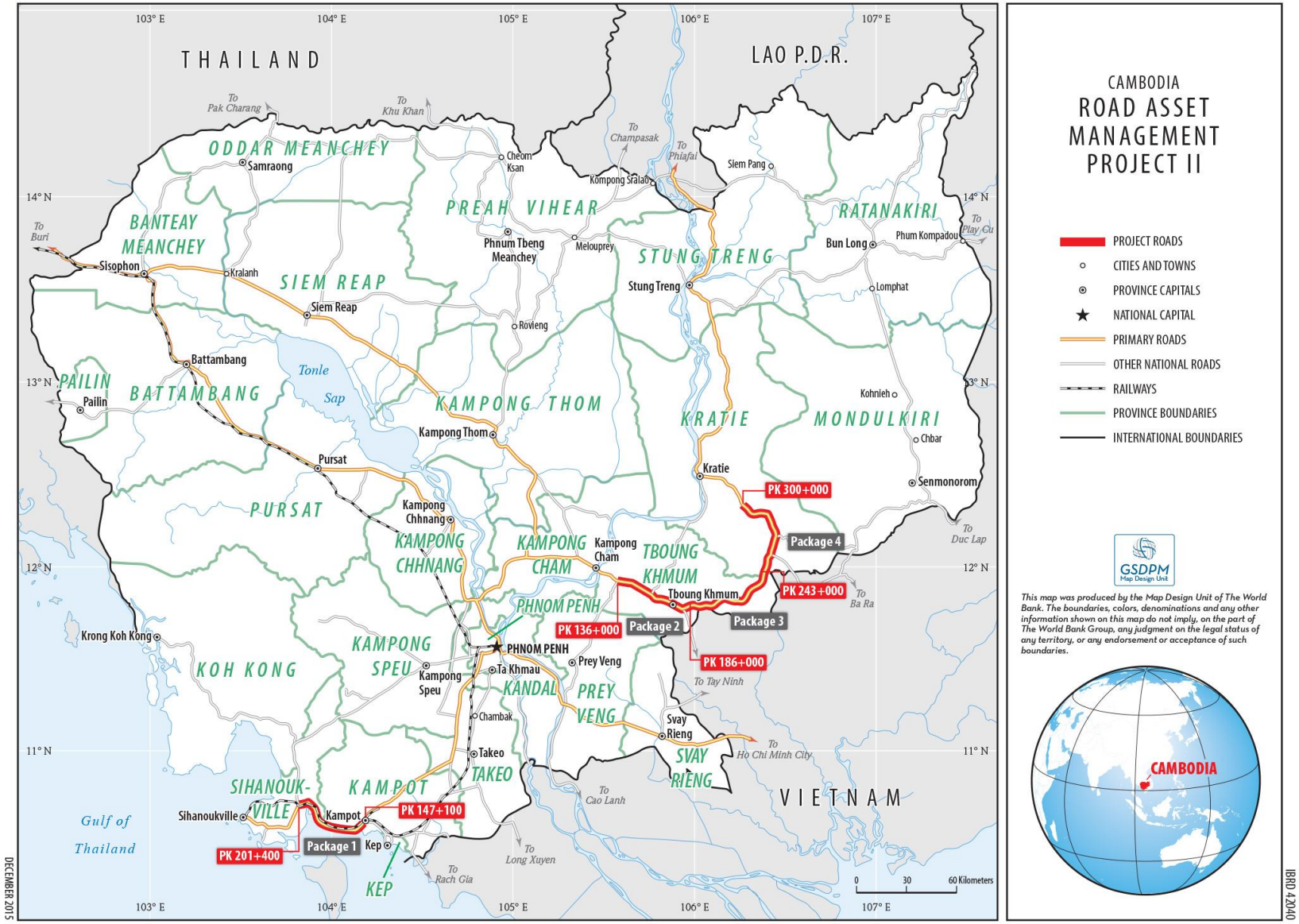
Time	Focus	Skills Needed
First twelve months	Road asset management/ condition survey	Road survey, date collection and processing; PBC of routine maintenance
	Project Supervision	Supervision/Operations
	Road designs/Technical Audit	Technical auditing
	Pavement designs and supervision	Design and supervision
	Road safety	Awareness raising and enforcement
	Monitoring and Evaluation (M&E)	M&E
	Procurement	Procurement process/hands-on training
	Financial Management	Financial management/Review new system set up
	Safeguards	Environment and social safeguards
	Gender	Social and Gender Analysis
Annual from Year 2 to Year 6	Road asset management/ condition survey	Road survey, date collection and processing; PBC of routine maintenance
	Project supervision	Supervision/operations
	Road designs/Technical Audit	Technical auditing
	Pavement designs and supervision	Design and supervision
	Road safety	Awareness raising and enforcement
	Monitoring and Evaluation (M&E)	M&E
	Procurement	Procurement process/hands-on training
	Financial Management	Financial management/Review new system set up
	Safeguards	Environment and social safeguards
	Gender	Social and Gender Analysis

Skill Needed	Number of Staff week	Number of trips	Estimated Resource (US$)	Comments
Task Team Leader (Infrastructure Specialist)	8*	8**	20k	Country based
Road Transport Specialist	6	4	20k	Staff or Consultant
Road Safety Specialist	3	2	10k	Region based staff
DRM Specialist	2	2	8k	Staff or Consultant
Infrastructure Economist/HDM4	2	2	10k	Country based staff
Highway Engineer	8	6**	12k	Country based Consultant (local)
Procurement Specialist	4	4**	Financed by GGO08	Country based staff
FM Specialist	4	2**	Financed by GGODR	Country based staff
Monitoring and Evaluation Specialist	2	2	5k	Consultant

Environmental Safeguards Specialist	4	6	Financed by GSU02	Consultant
Social Development/Gender Specialist	4	4	5k	Staff or Consultant
TOTAL	45	42	80k	

Note:
(*) – For the year 1 is estimated about 12SW
(**) – Local trips

MAP


THAILAND
LAO P.D.R.
VIETNAM
Gulf of Thailand
ODDAR MEANCHEY
BANTEAY MEANCHEY
SIEM REAP
PREAH VIHEAR
STUNG TRENG
RATANAKIRI
MONDULKIRI
KRATIE
KAMPONG THOM
BATTAMBANG
PAILIN
PURSAT
KAMPONG CHHNANG
KAMPONG CHAM
TBOUNG KHMUM
PHNOM PENH
KANDAL
PREY VENG
SVAY RIENG
TAKEO
KAMPOT
KAMPONG SPEU
KOH KONG
SIHANOUK-VILLE
Samraong
Sisophon
Kralanh
Siem Reap
Battambang
Pailin
Tonle Sap
Cheom Ksan
Kompong Sralao
Phnum Tbeng Meanchey
Melouprey
Roviveng
Kampong Thom
Pursat
Kampong Chhnang
Kampong Cham
Tboung Khmum
Krong Koh Kong
PHNOM PENH
Ta Khmau
Prey Veng
Kampong Speu
Chambak
Takeo
Svay Rieng
Sihanoukville
Kampot
Kep
Stung Treng
Bun Long
Phum Kompadou
Lomphat
Siem Pang
Kohnieh
Chbar
Senmonorom
Kratie
PK 300+000
PK 243+000
PK 186+000
PK 136+000
PK 147+100
PK 201+400
Package 1
Package 2
Package 3
Package 4
To Pak Charang
To Khu Khan
To Champasak
To Phiafai
To Buri
To Play Gu
To Ba Ra
To Duc Lap
To Tay Ninh
To Ho Chi Minh City
To Cao Lanh
To Long Xuyen
To Rach Gia
103° E
104° E
105° E
106° E
107° E
14° N
13° N
12° N
11° N
0 30 60 Kilometers
DECEMBER 2015
CAMBODIA
ROAD ASSET MANAGEMENT PROJECT II
PROJECT ROADS
CITIES AND TOWNS
PROVINCE CAPITALS
NATIONAL CAPITAL
PRIMARY ROADS
OTHER NATIONAL ROADS
RAILWAYS
PROVINCE BOUNDARIES
INTERNATIONAL BOUNDARIES
GSDPM
Map Design Unit
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