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Report No: 52140-LA

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT

IN THE AMOUNT OF SDR 17.9 MILLION
(US\$27.80 MILLION EQUIVALENT)

INCLUDING SDR 5.7 MILLION
(US\$8.8 MILLION EQUIVALENT) IN
PILOT CRISIS RESPONSE WINDOW RESOURCES

TO THE

LAO PEOPLE'S DEMOCRATIC REPUBLIC

FOR A

ROAD SECTOR PROJECT

February 23, 2010

Sustainable Development Department
East Asia and Pacific Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective January 31, 2010)

Currency Unit = Lao Kip
Lao Kip 8,491.85 = US\$1.00
US\$1.55 = SDR 1

FISCAL YEAR

October 1 – September 30

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
AusAID	Australian Agency for International Development
ASEAN	Association of South East Asian Nations
AWPB	Annual Work Plan and Budget
CO	Cabinet Office, MPWT
CRM	Community Road Model
FDI	Foreign Direct Investment
DBST	Double bituminous surface treatment
DD	Disbursement Division, DOR, MPWT
DOI	Department of Inspection, MPWT
DOP	Department of Personnel, MPWT
DOR	Department of Roads, MPWT
DOT	Department of Transport, MPWT
DPC	Department of Planning and Cooperation, MPWT
DPWT	Department of Public Works and Transport (at provincial level)
EA	Environmental Assessment
EGPF	Ethnic Group Policy Framework
EGDP	Ethnic Group Development Plan
EMP	Environmental Management Plan
ESD	Environment and Social Division, PTI, MPWT
ESOM	Environment and Social Operations Manual
ESSF	Environmental and Social Safeguard Framework
FM	Financial management
FMCBP	The Financial Management Capacity Building Project
FMS	Financial management system
GDP	Gross Domestic Product
GFDRR	Global Facility for Disaster Reduction and Recovery
GHG	Green House Gas
GMS	Greater Mekong Subregion
GNI	Gross National Income
GOL	Government of the Lao People's Democratic Republic
HDM4	Highway Development and Management Model, Version 4
ICB	International Competitive Bidding
ICD	Internal Control Division, DOP, MPWT
ICT	Information and communication technologies
IDA	International Development Association
IEE	Initial Environmental Examination
IFI	International financial institution
IFR	Interim financial report
IRI	International roughness index
IRR	Internal rate of return
ISWG	Infrastructure Sector Working Group
JBIC	Japan Bank for International Cooperation

Km	Kilometer
LRD	Local Road Division, DOR, MPWT
LRSP	Lao Road Sector Project
LSRSP-3	The Third Lao-Swedish Road Sector Project
MOF	Ministry of Finance
MPWT	Ministry of Public Works and Transport
MTEF	Medium-term Expenditure Framework, GOL
NCB	National Competitive Bidding
NR	National roads
NRSC	National Road Safety Committee
NSEDp	National Socio-Economic Development Plan
NT-2	Nam Theun 2 Hydropower Project
NTSP	National Transport Strategic Plan
ODA	Official Development Assistance
OPWT	Office of Public Works and Transport (at district level)
PBC	Performance-base contracts
PFU	Provincial Finance Units
PFM	Public finance management
PHRD	Japan Population and Human Resource Development Fund
PIP	Provincial Infrastructure Project, funded by IDA
ProMMS	Provincial Road Maintenance Management System
PRTP	Participatory Rural Transport Planning
PTI	Public Works and Transport Institute, MPWT
RAD	Road Administration Division, DOR, MPWT
RAP	Resettlement Action Plan
RMF	Road Maintenance Fund
RMFAB	Road Maintenance Fund Advisory Board
RMP	Road Maintenance Program
RMP-1	Road Maintenance Program, Phase 1
RMP-2	Road Maintenance Program, Phase 2
RMS	Road Management System
ROW	Rights of way
RPF	Resettlement Policy Framework
RTIP	Rural Transport Infrastructure Policy
SAO	State Audit Organization
SBD	Standard Bidding Document
SDR	Special Drawing Rights
SGDR	Safeguards Diagnostic Review
SEA	Strategic Environmental Assessment
SIDA	Swedish International Development Cooperation Agency
SOE	State owned enterprise
SWAp	Sector-wide approach
TA	Technical assistance
URMF	Unified Road Maintenance Framework
UCS	Use of country system
VMC	Village Maintenance Committee
VOC	Vehicle operating cost
VPD	Vehicles per day
WREA	Water Resource and Environment Administration, Lao PDR

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LAO PEOPLE’S DEMOCRATIC REPUBLIC
Road Sector Project

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LAO PEOPLE'S DEMOCRATIC REPUBLIC

LAO PDR ROAD SECTOR PROJECT

PROJECT APPRAISAL DOCUMENT

EAST ASIA AND PACIFIC

EASTE

Date: February 23, 2010 Country Director: Annette Dixon Sector Manager/Director: John Roome		Team Leader: Zhi Liu Sectors: Roads and Highways Themes: Infrastructure services for private sector development (P); Regional integration (S) Environmental screening category: Partial Assessment	
Project ID: P102398		Lending Instrument: Specific Investment Loan	
Project Financing Data			
<input type="checkbox"/> Loan <input type="checkbox"/> Credit <input checked="" type="checkbox"/> Grant <input type="checkbox"/> Guarantee <input type="checkbox"/> Other:			
For Loans/Credits/Others: Total Bank financing (US\$m.): 27.80 (SDR 17.9 million) including 8.8 (SDR 5.7 million in Crisis Response Window resources) Proposed terms: Standard IDA grant terms			
Financing Plan (US\$m)			
Source	Local	Foreign	Total
BORROWER/RECIPIENT	14.38	0.00	14.38
International Development Association (IDA)	15.72	12.08	27.80
JAPAN: Ministry of Finance - PHRD Grants	0.00	1.00	1.00
Total:	30.10	13.08	43.18
Borrower: Ministry of Finance, Lao People's Democratic Republic			
Responsible Agency: Ministry of Public Works and Transport Lanexang Ave., Vientiane, PO Box 4467 Lao People's Democratic Republic Tel: (856-21) 412-741 Fax: NA sommad@laotel.com			

Estimated disbursements (Bank FY/US\$m)									
FY	2010	2011	2012	2013	2014				
Annual	0.00	6.00	10.80	7.00	4.00				
Cumulative	0.00	6.00	16.80	23.80	27.80				
Project implementation period: Start April 1, 2010 End: March 31, 2014									
Expected effectiveness date: June 1, 2010									
Expected closing date: September 30, 2014									
Does the project depart from the CAS in content or other significant respects? [] Yes [X] No <i>Ref. PAD I.C.</i>									
Does the project require any exceptions from Bank policies? [] Yes [X] No <i>Ref. PAD IV.G.</i>									
Have these been approved by Bank management? [] Yes [] No									
Is approval for any policy exception sought from the Board? [] Yes [X] No									
Does the project include any critical risks rated "substantial" or "high"? [X] Yes [] No <i>Ref. PAD III.E.</i>									
Does the project meet the Regional criteria for readiness for implementation? [X] Yes [] No <i>Ref. PAD IV.G.</i>									
Project development objective <i>Ref. PAD II.C., Technical Annex 3</i> The project development objectives are (a) to improve road services on two main national corridors and the provincial road network, (b) to rehabilitate roads damaged by Typhoon Ketsana, and (c) to establish and operationalize a contingency fund for quick disaster response in the road sector.									
Project description [one-sentence summary of each component] <i>Ref. PAD II.D., Technical Annex 4</i> <p>Component A: Road Network Improvement and Preservation Component (Total US\$31.93 million; of which GOL's Road Maintenance Fund US\$8.00 million, GOL contribution of US\$ 6.38 million and IDA US\$17.55 million). This component will finance physical works for the upgrading of two critical national road links, the periodic maintenance of the provincial road network, and road safety improvements.</p> <p>Component B: Institutional strengthening. (Total US\$2.45 million; of which PHRD US\$1.00 million and IDA US\$1.45 million). The component will provide technical assistance to both the Ministry of Public Works and Transport and the Provincial Departments of Public Works and Transport in the areas of sector strategic management, local road management, country system for environmental safeguard, fiduciary management, and internal controls.</p> <p>Component C: Disaster Recovery and Contingency (Total US\$8.80 million from IDA Crisis Response Window pilot). The component would fund spot rehabilitation and periodic maintenance of roads damaged by Typhoon Ketsana in the five affected southern provinces, and support an emergency contingency fund that would disburse quickly for emergency civil works and construction materials needed to ensure the passability and safety of the affected national and provincial road links.</p>									

Which safeguard policies are triggered, if any? *Ref. PAD IV.F., Technical Annex 10*

- Pilot Use of Country System for Environmental Assessment (OP/BP 4.00)
- Involuntary Resettlement (OP/BP 4.12)
- Indigenous Peoples (OP/BP 4.10)

Significant, non-standard conditions, **if any**, for:

Ref. PAD III.F.

Board presentation: None

Loan/credit effectiveness:

- Finalize the Accounting Procedures/Financial Management (FM) Manual with proper accounting procedures for contract commitments, retention and liabilities as well as amount due from the Government; and incorporate into the FM Manual the FM arrangements for the US\$1.0 million emergency contingency fund component, including the circumstances when the funds under the component will become available (i.e. declaration of a natural disaster by a GOL decree and/or a provincial Governor decision, as the case may be, in accordance with the legislation of Lao PDR)

Covenants applicable to project implementation:

- Maintain until completion of the Project, the Road Maintenance Fund Advisory Board (RMFAB) and its secretariat, with sufficient resources, appropriately qualified and competent staff in adequate numbers with terms of reference satisfactory to IDA.
- Maintain until completion of the Project, competent staff including the Director General of the Department of Planning and Cooperation for carrying out the management, coordination and monitoring of all activities and implementing entities under the project.
- Carry out the measures defined under the Framework to Strengthen the Internal Controls and Accountability.
- Contract an external audit firm under TOR satisfactory to IDA and project internal audit consultants with TORs satisfactory to IDA within three months of IDA grant effectiveness.
- Not later than June 30, 2012, increase the RMF basis for revenues, including the fuel levy increase to a level of not less than 400Kip/liter.
- Not later than March 1 each year starting from 2011, the MPWT shall prepare and furnish an updated 3-year rolling preservation plan and an annual work program for road and bridge preservation works covering the national and provincial networks.
- Twice during the project implementation, first time no later than June 30, 2011, and the second time no later than June 30, 2013, update and expand the transport sector strategic plan including the medium-term expenditure program.

- In carrying out the periodic maintenance sub-components of the Project, MPWT shall cause the DPWTs and OPWTs to publicly disseminate to the local population the safeguard documents (ESOM, EGPF, and RPF) at least 60 days prior to the initiation of any works, and undertake the required environmental and social actions, including providing resettlement compensation to affected persons.

I. STRATEGIC CONTEXT AND RATIONALE

A. Country and sector issues

1. Lao People's Democratic Republic (Lao PDR) has a population of almost six million and a land area of 236,800 km², with a population density of 25 persons/km²—one of the lowest in the region—and 75 percent of the population living in the rural areas. While the country is mostly mountainous and does not have access to the sea, it is located centrally within the Greater Mekong Subregion (GMS)—which consists of Cambodia, Lao PDR, Myanmar, Thailand, Vietnam, and Yunnan and Guangxi Provinces of China—and thus is directly land-linked with the Subregion's population of almost 300 million. Lao PDR has achieved steady economic growth in recent years, but remains one of the world's poorest countries. Its per capita gross national income was US\$740 in 2008. The incidence of poverty varies by geographic areas, and rural poverty at 38 percent is far higher than urban poverty at 20 percent. Empirical evidence from recent studies indicates a strong correlation between the access to basic infrastructure services and the incidence of poverty.

2. Road is the pre-dominant mode of transportation in Lao PDR. The road network carries 90 percent of passenger traffic (passenger-km) and 86 percent of freight traffic (ton-km). The Mekong River and its tributaries carry the remaining share of freight (14 percent) along with an eight percent share of passenger traffic (representing a doubling of the share it had in 1990). Although the volume of airfreight is negligible (0.22 percent), domestic-passenger air transport has reached two percent of the demand, and plays a crucial role in linking urban areas and otherwise inaccessible parts of the country. A 3.5 km rail link, extending from the Thailand rail network to Vientiane, was open to traffic in 2009.

3. The road system extends over 35,500 km. The national road network comprises approximately 6,900 km of roads, most of which have either a sealed (56 percent) or gravel (30 percent) surface. The network is mostly in an acceptable condition (80 percent of paved roads are classified as good or fair) and is generally constructed to an appropriate standard for the volume and nature of the traffic carried. However, the provincial roads (totaling 5,500 km) and district and rural roads (almost 18,000 km) are mostly gravel or earth roads and vulnerable to heavy rains and floods.

4. The Government of Lao PDR (GOL)'s Sixth National Socio-Economic Development Plan (NSED) 2006-2010 defines priorities and key actions for Lao PDR to realize its economic and social development potential. The main objective for infrastructure development in the NSED is to ensure that an efficient transport system creates favorable conditions for sustainable growth and poverty reduction, as well as regional integration. Regarding the latter, the country's transport network is integral to the GMS transport network and associated economic corridors. In addition, the Government's commitment to eradicating poverty has resulted in rural roads being identified as a priority focus in order to provide year-round access to basic services, markets, and new opportunities for the poorest districts.

5. Guided by the NSEDP, the Ministry of Public Works and Transport (MPWT) developed a National Transport Strategic Plan (NTSP) for 2009-2015 with technical assistance from the World Bank, Swedish International Development Cooperation Agency (SIDA) and Australian Agency for International Development (AusAID), as a basis for aligning government and donor resources to support the identified sector priority investments. Importantly, it establishes procedures and methods for the prioritization of investments, as well as estimates of the indicative costs and available resources. As the road sector dominates the transport sector, the NTSP emphasizes the development of road infrastructure and focuses on measures for maintaining and preserving the existing road networks, and improving rural accessibility by completing provincial and district linkages with all-weather road access. The NTSP – which will be updated from time to time – provides a prioritized rolling investment and maintenance program for the road sector based on the application of a Unified Road Management Framework (URMF). The URMF extends the existing Road Management System (RMS) by applying the Provincial Roads Management Maintenance System (PRoMMS) data such that an optimized program can be developed from all road classifications. The combined use of these two systems facilitates the establishment of overall sector priorities and funding allocations. The NTSP serves as an effective planning foundation to ensure that the Government is able to lead the sector development and coordinate all available resources in an efficient manner for the benefit of the country.

6. Despite continued improvement, the road network is not yet adequate to connect all parts of the country and meet the growing demand. Only 53 percent of the national roads and 3 percent of the local roads are paved. The network is especially vulnerable to rainy seasons and floods. Landslides, embankment erosion, road flooding, and seasonal closures occur frequently. More than 10 percent of all district centers and over 40 percent of the villages do not have year-round road access. On September 29, 2009, Typhoon Ketsana swept across the southern part of Lao PDR, causing enormous damages and losses in five provinces (Attapeu, Sekong, Saravanh, Champasack, and Savannakhet). A Post-Disaster Damage, Loss, and Need Assessment estimates that about 1,842 km of roads and a number of small bridges were severely or partially damaged, and the damages amount to about US\$13 million. If not restored soon, the damages would continue to cause economic losses mainly in terms of higher vehicle operating costs and longer travel time, further hampering the recovery of the severely affected local economy.

7. The country's road network has other major deficiencies. Growing traffic and faster vehicle speeds on the main roads have caused road accidents to increase in recent years. The country's large land area, low population density, and mostly hilly and mountainous topography require extensive road network to connect the people and all parts of the country, resulting in a relatively heavy financial burden for road provision and maintenance. GOL aspires to continue the effort to develop the GMS transport links to neighboring countries and to improve the national road network through upgrading and paving, while making new effort to preserve and improve the provincial roads and to expand rural basic access to more villages.

8. Financing will continue to be a major constraint for the GOL to achieve its strategic objectives in the road sector. Road construction and maintenance are funded mainly from three sources: external assistance, central and provincial government budgets, and a dedicated Road Maintenance Fund (RMF). Since 1990, multilateral and bilateral donors together have contributed almost 80 percent of the public expenditures for roads, but in recent years funding from domestic sources – especially direct user charges – has been increasing steadily. The RMF was established in 2001 with revenues mainly from a fuel levy. As a result of a growing vehicle fleet and fuel levy increases (now at 300 kip per liter), the RMF revenues have grown to US\$23 million a year, and could meet 40 percent of the country's annual road maintenance needs. A new funding source to the sector is the revenues that the GOL will soon receive from electric power trade from the Nam Thuen 2 Hydropower Project, part of which will be spent for poverty reduction-focused basic rural access improvement activities. Despite growing domestic resources, donor financial support to both capital investment and maintenance remains crucial but also limited.

9. To more effectively achieve the Government's objectives, the MPWT is pioneering processes to harmonize aid and align available resources to support the sector priorities identified in the NTSP. Over the last three decades and with assistance from donors, the MPWT has made significant progress in strengthening its technical and managerial capacity, especially for the implementation of donor-funded investment projects. In 2000, the MPWT agreed with the donors to harmonize the standard bidding documents for road works, adopt a single financial management system, and shift the responsibilities for the implementation of donor-funded projects—including procurement, financial management, disbursement, and reporting—from the Project Implementation Units (PIU) to the relevant MPWT executing departments and divisions as well as the Provincial Departments of Public Works and Transport (DPWTs). This laid a solid foundation for the implementation of the Road Maintenance Program (RMP), which has been jointly funded by the RMF, IDA, SIDA, ADB and Japan (through a PHRD Grant).

10. The 2005 Paris Declaration for Aid Effectiveness and the 2008 Accra Agenda for Action have significantly influenced development cooperation in Lao PDR. The GOL and a number of development partners active in Lao PDR signed the Vientiane Declaration on Aid Effectiveness in December 2006.¹ Guided by the Vientiane Declaration and as an initial step to move toward a sector-wide approach in the transport sector, the MPWT and development partners have forged a partnership through the Government-Donor Infrastructure Sector Working Group (ISWG). The MPWT has also taken actions to strengthen its existing systems, such as environmental and social safeguards for the road sector through the preparation and adoption of an Environmental

¹ Through the Vientiane Declaration, the GOL and development partners agreed to adhere and commit to the following principles: (i) Government ownership—Government exercises effective leadership and the development policies, strategies, and coordinates development actions; (ii) Alignment—Partners align with the Government's strategies and use strengthened Government regulations and procedures; (iii) Harmonization and Simplification—Partners' actions are more harmonized, transparent and collectively effective; (iv) Managing for Results—Government and partners work together to manage resources and improve decision making for results; and (v) Mutual Accountability—Both government and partners are accountable for results.

and Social Operations Manual (ESOM). Moreover, the MPWT has adopted a rigorous planning and prioritization process in sector strategic planning (through the application of the URMF), and initiated actions to establish an internal control system and introduce the practice of internal audit. The MPWT is poised to strengthen its sector management capacity so that it will be able to take full ownership of the development and implementation of sector policies, strategies, and programs.

B. Rationale for Bank involvement

11. Lao PDR is a low-income country with enormous need for external financing of its development programs. The Bank has been one of the key donors in the transport sector for two decades. The Bank has also brought extensive global sector knowledge and experiences to the sector through lending operations and support to institutional capacity development. The project will capitalize on the institutional outcomes achieved from previous operations, especially the Bank-led, multi-donor funded RMP,² and add value through financing crucial physical investment, and supporting the strategic planning, design, preparation, implementation, and management of road infrastructure in an environmentally and socially responsible manner. Built on the MPWT's continuing effort in aid harmonization, the project will support the pilot use of country system for environmental assessment, the establishment of internal audit function, the strengthening of fiduciary management systems especially at the provincial level, and the establishment of an emergency contingency fund for rapid response to disasters. All these are designed as relevant supporting functions to improve the effectiveness of physical investments and delivery of road services to the people.

12. Due to the impact of the global economic crisis, GDP growth in Lao PDR is projected to slowdown from about 7 percent in 2008 to 5 percent in 2009. As a result, GOL's revenue collection drops from 14.2 percent of GDP in FY2008 to 13.2 percent in FY2009. Fiscal deficit increases sharply in FY2009 as expenditure pressures from committed on-going infrastructure projects mount against revenue shortfalls. While external public and publicly guaranteed debt stocks remain at about 53 percent of GDP, Lao PDR continues to face a high risk of debt distress due to the weakened GDP growth prospect.

13. The global economic crisis impacts have been exacerbated by Typhoon Ketsana which caused an estimated total damage and loss of US\$58 million, equivalent to eight percent of GOL revenue collection expected for FY2009. Without additional resources to support the disaster recovery, the GOL's core spending on health, education, infrastructure and agriculture would be affected, or the disaster-affected provinces and districts (which are among the poorest in the country) will continue to suffer from the impacts. This project will support the core spending on road infrastructure and the rehabilitation of roads damaged by Typhoon Ketsana. Funds from the IDA Crisis Response Window will be mobilized as the need for disaster recovery emerged at the same time of need for protecting core spending. The IDA support in the form of a grant would help the country maintain debt sustainability.

² Lao PDR Road Maintenance Program Phase 1 (Cr. 3481-LA) and Phase 2 (Cr. 3944-LA).

C. Higher level objectives to which the project contributes

14. The project is fully consistent with the World Bank's Country Assistance Strategy (CAS) for Lao PDR.³ It will support one of the main CAS pillars of sustained growth through enhanced regional integration and private sector development, and to a lesser extent, one of the supporting CAS objectives regarding better alignment of donor resources with the objectives of the Government's National Growth and Poverty Eradication Strategy and strengthened aid coordination.

15. In line with these objectives, the project will support the country's economic growth and poverty reduction through: (i) reducing road transport costs for goods and passengers; (ii) rehabilitating the roads damaged by Typhoon Ketsana; and (iii) developing an emergency contingency fund for rapid response to natural disasters in the road sector. Support to the second CAS objective is mainly through the strengthening of the MPWT's systems for strategic planning, fiduciary management, and environmental safeguards, which are required for achieving better aid harmonization and coordination.

II. PROJECT DESCRIPTION

A. Lending instrument

16. The lending instrument selected for the project is Specific Investment Loan, and the project will be financed through a US\$27.80 million equivalent IDA grant and a US\$1 million Japan PHRD Project Co-finance grant. IDA will assume fiduciary responsibility for the PHRD grant.

B. Project development objective and key indicators

17. The project development objectives are (a) to improve road services on two main national corridors and the provincial road network, (b) to rehabilitate roads damaged by Typhoon Ketsana, and (c) to establish and operationalize a contingency fund for quick disaster response in the road sector. The achievement of the objectives will be measured by the following key outcome indicators by the end of the project:

- Reduced travel time on upgraded roads;
- Increased number of people connected by paved roads;
- Increased percentage of provincial road network in good and/or fair condition;
- Recovered conditions of the roads damaged by Typhoon Ketsana; and
- An emergency contingency fund established for quick restoration of passability and safety of disaster affected national and provincial roads.

³ Country Assistance Strategy for Lao PDR dated March 10, 2005, Report No. 31758-LA.

C. Project components

18. **Component A: Road Network Improvement and Preservation** (Total US\$31.93 million; of which GOL's Road Maintenance Fund (RMF) US\$8.00 million, GOL contribution of US\$6.38 million and IDA US\$17.55 million). This component will finance physical works for the upgrading of two priority national road links, the periodic maintenance of the provincial road network, and road safety improvements. All these subcomponents are selected from the priority list of investments identified in the NTSP. The two national roads to be upgraded are: (a) NR 1B from Pak Nam Noy to Ban Yo, Phongsali Province, 109 km; and (b) NR 6A from Sop Bao to Ban Dan, Houaphan Province, 62 km. These are two of the several remaining primary national road sections without pavement. The provincial roads to be included under the project are identified from the MPWT's Annual Works Programs (AWP). The first year AWP to be financed under the project is provided in Annex 4.

19. **Component B: Institutional Strengthening.** (Total US\$2.45 million; of which PHRD US\$1.00 million and IDA US\$1.45 million). The component aims to provide technical assistance to both MPWT and the Provincial DPWTs in the areas of strategic planning and management, country system for environmental safeguards, fiduciary management and internal controls.

20. **Component C: Disaster Recovery and Contingency** (Total US\$8.80 million from IDA Crisis Response Window resources). The component aims to support quick recovery of about 1,100 km of Typhoon Ketsana damaged roads in the five southern provinces (Attapeu, Sekong, Saravanh, Champasack and Savannakhet) and establishment of an emergency contingency fund for quick response to the impacts of natural disasters on the road network. The contingency fund would be disbursed only after a national or provincial emergency has occurred, or is about to occur, for emergency civil works and construction materials needed to ensure the passability and safety of the affected national and provincial road links.⁴ It is anticipated that funds may be reallocated to this window from other components to meet emergency road repair needs following natural disaster, and if required, additional financing may be sought to restore funding to the other components.

D. Lessons learned and reflected in the project design

21. Past experiences of donor-funded road projects in Lao PDR indicate that these individual projects have brought real benefits to the people and economy. However, physical investments funded under these projects were not identified systematically through a rigorous planning and prioritization process. It was recognized in recent years that better aid effectiveness could be achieved by aligning donor and government

⁴ It is anticipated that the Global Facility for Disaster Reduction and Recovery (GFDRR) will provide an additional US\$1.5 million which would be used to improve the response capacity of MPWT in disaster mitigation and management and contribute to the contingency fund to be used for emergency civil works and construction materials.

resources to address the sector priorities identified and agreed through a rigorous sector strategic planning process. As part of the project preparation, the IDA team and other donors collaborated to assist the MPWT to formulate a NTSP using a planning and prioritization process supported by the URMF. The project components and subcomponents included in this project are identified and defined from the NTSP. It is expected that through the implementation of the physical investments and the supporting institutional functions, the project would help strengthen the MPWT's capacity for strategic planning, prioritization and management of road sector programs.

22. The MPWT has implemented donor-funded projects through its departments and divisions within the organizational internal structure instead of project implementation units (PIUs) for the past nine years. While the system has been working, the experiences from the Provincial Infrastructure Project (PIP), Road Maintenance Program Phase 1 (RMP-1) and Phase 2 (RMP-2), and other donor-funded projects indicate that the internal control functions are weak, leading to poor quality and poor accountability of civil works. Through a series of defined measure for strengthening internal controls and accountability, this project will support the development of internal control functions including an internal audit function by following international good practices.

23. The project will support a number of relatively small consultant services, instead of large ones, mainly because the IDA-funded RMP-1 and RMP-2 and other donor-funded projects in recent years have supported a range of major consultancies involving international consulting firms and covering almost all aspects of the sector management. It is time to fill the gaps and consolidate the institutional capacity with the Ministry staff taking the lead and ownership and the international consultants providing customized support. The experience of RMP-2 implementation over the last few years also proves that it is more effective to have highly focused individual consultants to assist the crucial areas of the sector management.

24. The road network in Lao PDR is vulnerable to heavy rains and floods during monsoon seasons, which frequently cause landslides, embankment erosion, and damages on and closure of road sections and bridges. The MPWT and the provincial DPWTs have established arrangements to mobilize private contractors and force account for emergency repairs to ensure passability and safety. For example, the mountainous provinces sign contracts with private contractors every year for expected emergency works with pre-negotiated unit prices on a specific road or road section, and the contractors would mobilize to carry emergency works under the technical supervision and monitoring of the DPWT. However, the MPWT and DPWTs always struggle to mobilize financing which results in unnecessary delays and consequent adverse effects on the people and communities. To address this need, the project will support an emergency contingent fund which would enable fast disbursement for emergency works and procurement of construction materials.

E. Alternatives considered and reasons for rejection

25. **A Third Phase Adaptable Program Loan for Road Maintenance.** A continuation of the previous two-phase APL for road maintenance would help fill the maintenance financing gaps and satisfy the GOL need for sustained medium-term assistance. However, given the fast growth of the RMF revenues and the MPWT's commitment to achieve a sustainable level of road maintenance financing through future increases in the fuel levy, it was considered that this new investment should achieve a balance between continuing support to road maintenance and a broad support to road upgrading and road safety as well as country systems strengthening.

26. **A Sector Wide Approach (SWAp) Project.** The project was originally proposed as a SWAp project to operationalize the Vientiane Declaration for Aid Effectiveness, which was signed by the government and donors in 2006. However, it was later recognized during project preparation that most of the essential country systems and functions (such as strategic planning, procurement, and financial management) necessary for a SWAp in Lao PDR are not yet in place, particularly those related to fiduciary and safeguard elements. Moreover, the timing of availability of donor resources varies, making it difficult to align donor resources at the same time to support a SWAp project. The project therefore supports an incremental approach by strengthening the country's existing systems and introducing needed functions while continuing to strengthen the technical and planning foundations for an eventual move to SWAp.

III. IMPLEMENTATION

A. Partnership arrangements (if applicable)

27. The project is designed to support the implementation of the NTSP, which was formulated by the MPWT with technical assistance from IDA, AusAID, and Sida, and will be updated with assistance from other donors. The physical investments of the project are identified from the NTSP, and will support slices of the road sector investment, maintenance, and safety programs. In addition to IDA allocation of US\$27.80 million equivalent and the government counterpart funds from budget and RMF, Japan has agreed to provide a PHRD project co-finance grant in an amount of US\$1.0 million to support the institutional strengthening activities under the project.

28. Other donors will finance priority works identified in the NTSP. ADB will finance the upgrading of NR 6B and part of NR 6A (from Hang Long to Sop Bao). Thailand will fund the upgrading of NR 11. China is considering the funding to the upgrading of NR 1A. The existing ISWG, supported by the Aid Harmonization Secretariat of the MPWT, will be the primary mechanism for government-donor partnership and coordination in the transport sector. The partnership arrangement will be functional at the strategic level, to ensure aid resources are aligned to support the GOL objectives and priorities identified from the NTSP and its successive refined versions.

B. Institutional and implementation arrangements

29. The MPWT is the Project Implementing Agency and will be responsible for overall technical supervision, execution and management of the project. Similar to the RMP-2, the project will be implemented using the existing MPWT organizational structure and institutional arrangements. The project will involve the Department of Planning and Cooperation (DPC) for strategic planning, planning capacity building and monitoring, Department of Roads (DOR) for road maintenance and improvement, the Department of Transport (DOT) for road safety improvement, Department of Personnel (DOP) for institutional development and training, Department of Inspection (DOI) for the internal control system, Public Work and Transport Institute (PTI) for safeguards monitoring and supervision of the implementation of ESOM, Cabinet Office (CO) for public disclosure and ICT development, and the provincial DPWTs for data collection, local road planning, civil works procurement and contract management. Strategic review and oversight of the Project will be provided by the MPWT Management led by the Minister or a designated high-ranking official. The Director General of DPC (who also heads the Secretariat for ISWG) or a designated Deputy Director General of DPC, will manage and coordinate the project implementation and monitoring at the working level.

30. **Financial management (FM) arrangements.** (i) **Organization and staffing:** The project will utilize the existing staff within the Ministry and the 17 Provincial Departments of Public Works and Transport (DPWT). The Disbursement Division (DD) within the Department of Roads (DOR), and the 17 Provincial Departments of Public Works and Transport (DPWT) will be responsible for the FM of the project whilst the counterpart funds will rest with 17 Provincial Finance Units (PFUs). The DD will take primary responsibility for FM at the Ministry level and supervise and coordinate the implementation process at all DPWTs and PFUs. The overall coordination of the project activities will be the responsibility of Office of the Director General, DPC. This office will produce the project progress reports which will also include the unaudited interim financial statements prepared by the DD; (ii) **Reporting arrangements:** The project will upgrade the accounting system to regularly generate annual financial statements and quarterly interim financial statements to be used for project monitoring; (iii) **Internal audit:** The project will support establishment of an internal audit unit within DOI to carry out the internal audit function and this unit will regularly review the project's FM systems of internal control. Considerable capacity building will be required to build the internal audit unit's capability, and consultancy services to assist this process will be financed by the project. In order to ensure adequate fiduciary assurance is provided during the capacity building period, it is planned to extend the scope of the external audit for the first year to include quarterly interim audit visits. DOI staff will work with the external auditors during these interim audits to gain hands on practical experience; and (iv) **External audit arrangements:** The annual financial statements will be audited by an independent auditor acceptable to the Bank on terms of reference acceptable to the Bank. As mentioned above the scope of the external audit will be extended for the first year to include quarterly interim audit visits (see Annex 7 for detailed arrangements).

31. **Disbursement arrangements.** The project will start with transaction-based disbursements, and graduate to report-based disbursement if this is desired, assuming that the systems in place are deemed adequate to support that form of disbursement arrangement.

32. **The Emergency Contingent Fund.** Once triggered, the contingent fund sub-component will be implemented following the rapid response procedures governed by OP/BP 8.00 to the extent that the normal arrangements are not suitable. This component will be used for emergency civil works and procurement of construction materials to restore passability and safety of roads affected by a natural disaster. MPWT will use pre-negotiated contracts for civil works in most instances, but may also use force account and/or direct contracting in areas where pre-negotiated contracts are not yet in place (see Annex 7 for more details).

33. **Project implementation support strategy.** Whilst MPWT will be responsible for the project implementation, IDA will monitor its progress and engage in dialogue with the MPWT to ensure that the project is on track and implemented in effective and efficient manner. IDA will be responsible for the implementation support of all activities defined under the project including the activities funded under the PHRD Project Co-financing Grant. The MPWT, through the DPC, will draw progress reports from the relevant MPWT departments and provincial DPWTs, and prepare a single report on the progress of all financed activities.

C. Monitoring and evaluation of outcomes/results

34. Annex 3 contains the results framework adopted for the project. The key performance indicators, which will serve as the basis for the project monitoring system, are designed to elicit information on the performance of all key facets of the project. The MPWT has overall responsibility for monitoring and evaluating the indicators at mid-term review and at implementation completion.

35. The DPC will collect and consolidate the necessary data and submit to the Bank semi-annual progress reports using guidelines and standards agreed with the Bank. The baseline data and target values will be included as part of the project's monitoring reports. These reports will include physical progress, as well as information on compliance with safeguards and institutional strengthening. Annual independent audits of the special accounts will be carried out, and an implementation completion report (ICR) will be prepared within six months of the closing date of the IDA Grant.

D. Sustainability

36. According to the experience of donor-funded projects in the Lao transport sector, the project outcomes in terms of improved road services and lower transport costs could be sustainable if the preservation and maintenance of the infrastructure assets are adequate. GOL has established a good track record in road maintenance through the implementation of RMP over the last eight years, and has implemented step-by-step

increases of the fuel levy for the RMF. The RMF has grown steadily to the revenue level of US\$23 million in 2009. With the continuing and improved performance of the RMP, which will continue to be supported under a component of the Project, and with the MPWT's commitment to further increase the fuel levy to a more sustainable level, there is a certain degree of assurance for the sustainability of road infrastructure services to be provided under the Project.

37. This Project also focuses on the sustainability of institutional capacity development. One effective way of achieving this is to help the government take full responsibilities for strategic planning, program formulation and project implementation. The GOL and MPWT's increased commitment to aid effectiveness provides assurance to a certain extent, but this must be supported by concrete actions that follow the principles of aid harmonization and effectiveness. This Project will provide technical assistance to such actions for the strengthening of the MPWT' relevant systems with respect to strategic planning, environmental safeguards and internal controls.

E. Critical risks and possible controversial aspects

Risk	Risk Level	Risk Mitigation Measures	Risk after Mitigation
<i>Strategic planning and technical aspect.</i> Sector strategic plan and the planning and prioritization process may not be followed.	M	The physical investments supported by the project are identified from the National Transport Strategic Plan. Technical assistance will be provided under the project to the MPWT to strengthen strategic planning capacity and to update the sector strategic plan.	L
<i>Implementation capacity at the provincial level.</i> The implementation capacity at the provincial and district level remains weak.	S	Capacity development activities currently supported by various donors in the sector have a strong focus on capacity development for the provincial and district levels. Local capacity has been improving over the years but will take years to fully develop. The project will provide assistance to the provincial level to strengthen fiduciary management capacity.	M
<i>Financial management.</i> Systemic weaknesses exist in the FM, including a weak control environment and limited financial management capacity, especially at provincial level.	H	A range of measures for strengthening the internal control and accountability system is developed and will be implemented and monitored under the project (see Annex 11).	S
<i>Procurement.</i> The broader fiduciary risks associated generally with the highway sector globally, and the overall weak procurement environment in Lao PDR in particular.	H	A range of measures for strengthening the internal control and accountability system is developed and will be implemented and monitored under the project (see Annex 11).	S

<i>Corruption.</i> While corruption has not been an obvious impediment to the success of Bank-supported operations in Lao PDR to date, it requires due care and attention.	M	<p>A range of measures for strengthening the internal control and accountability system is developed and will be implemented and monitored under the project (see Annex 11).</p> <p>In addition to external audit, technical audit will be required as part of the project.</p> <p>The Project will also be subject to WB's new Sanctions Regime.</p>	M
<i>Environmental and social safeguards.</i> The safeguard risk rating is expected to be low, as green-field road projects are not anticipated under the project. But the safeguard implementation capacity at the provincial level remains weak.	M	As part of the effort for aid harmonization, the MPWT has prepared and will implement the harmonized guidelines (i.e. ESOM). The project will continue the monitoring and supervision of safeguard works.	L
Overall Risk (including Reputational Risks)			M

Note: High Risk – H, Substantial Risk – S, Moderate Risk – M, Low or Negligible Risk – L.

F. Loan/credit conditions and covenants

38. There is one additional condition of effectiveness: the Financial Management Manual acceptable to the Bank to be adopted by the Recipient/MPWT.

39. As IDA grant covenants, the Recipient/MPWT shall:

- Maintain until completion of the Project, the Road Maintenance Fund Advisory Board and its secretariat, with sufficient resources, appropriately qualified and competent staff in adequate numbers with terms of reference satisfactory to IDA.
- Maintain until completion of the Project, competent staff including the Director General of the Department of Planning and Cooperation for carrying out the management, coordination and monitoring of all activities and implementing entities under the project.
- Carry out the defined Measures for Strengthening the Internal Controls and Accountability.
- Contract an external audit firm under TOR satisfactory to IDA and project internal audit consultants under TORs satisfactory to IDA within three months of IDA Grant effectiveness.
- Not later than June 30, 2012, increase the RMF basis for revenues, including the fuel levy increase to a level of not less than 400 Kip/liter.

- Not later than March 1 each year starting from 2011, the MPWT shall prepare and furnish an updated 3-year rolling preservation plan and an annual work program for road and bridge preservation works covering the national and provincial networks.
- Twice during the project implementation, first time no later than June 30, 2011, and the second time no later than June 30, 2013, update and expand the transport sector strategic plan including the medium-term expenditure program.
- In carrying out the periodic maintenance sub-components of the Project, MPWT shall cause the DPWTs and OPWTs to publicly disseminate to the local population the safeguard documents (ESOM, EGPF, and RPF) at least 60 days prior to the initiation of any works, and undertake the required environmental and social actions, including providing resettlement compensation to affected persons.

IV. APPRAISAL SUMMARY

A. Economic and financial analyses

40. Economic analysis was carried out for the periodic maintenance and network upgrading subcomponents. Both subcomponents together constitute 88 percent of the total project costs. For the periodic maintenance of the provincial roads, extensive experience from RMP-1 and RMP-2 confirms the high economic rates of return from maintenance interventions. Similar to the exercise made during the preparation of RMP-2, the Highway Development and Management Tool HDM-4, which was set up during RMP-1 and further developed and calibrated under RMP-2, was used to prioritize and select the provincial roads for periodic maintenance under the first Annual Works Program. The HDM-4 also produces the economic analysis results for each road. For the 20 provincial roads selected for the first year implementation, economic rate of return ranges from 14 to 70 percent. Sensitivity analysis also confirms the robustness of the economic viability of the periodic maintenance program.

41. For the network improvement subcomponent, economic evaluation was carried out on the two road improvement sub-projects (i.e. NR 1B and NR 6A). The analysis for NR 6A covers a 125 km stretch from Hang Long to Sop Bao and to Ban Dan. Due to IDA resource constraint, it was agreed that the section from Sop Bao to Ban Dan be financed by IDA under the LRSP and the section from Hang Long to Sop Bao be financed by a new ADB project with similar time frame as the LRSP. A conventional economic evaluation was undertaken which took into account initial capital and ongoing maintenance costs, and the potential benefit per vehicle (mainly savings in vehicle operating cost but also time) which were all incremental to the base case (i.e. what is expected to occur without the project). Annual cost and benefit streams were estimated over a 24 year period from 2009 to 2032, and discounted to 2008 present values using a discount rate of 12 percent per annum. Implementation of the project works was

assumed to begin in 2010 and to be completed by the end of 2012, with benefits beginning in 2013, giving a benefit period of 20 years. Both roads are being proposed to be constructed to the minimum Class V engineering standard. The Class V standard is appropriate and will provide safe and convenient travel for the low levels of traffic which are currently being experienced, and are forecast for the future. For NR 6A which connects to Vietnam, a “high” and a “low” traffic forecast was prepared to reflect the wide range of potential traffic growth which is possible after improvement. The internal rate of return (IRR) for 1B is estimated at 16.5 percent. IRR for 6A is 13.6 percent under the high traffic scenario, and 9.1 percent under the low traffic scenario where the likely cross-border traffic growth due to growing trade between Lao PDR and Vietnam is not considered 9.1 percent (see Annex 9 for further details).

42. **Financial analysis.** The financial need for the maintenance of country’s road network is estimated US\$60 million a year. The capital investment need is much greater, given the enormous needs for GMS connectivity, road upgrading (paving), rehabilitation, and rural basic access. Road construction and maintenance are funded by external assistance and the RMF, supplemented by limited domestic budget. Due to continued increases in fuel levy and motor vehicle ownership and use, the RMF revenues have increased rapidly over the last five years, averaging 29 percent a year, and reaching 201 billion kip (equivalent to US\$23.6 million) in 2008/09. If the increases in fuel levy continue as planned to 400 kip per litre by 2012, it is expected that the RMF would reach US\$60 million a year in just a few years. Given the rapidly growing RMF, the role of donors in filling the maintenance financing gap has also been declining, from roughly US\$6 million a year in 2004/05 to less than US\$2 million a year (2008/09). On the other hand, donors still provide over 80 percent of the capital investment for roads. During 2004/05 to 2008/09, road capital expenditures have declined from roughly US\$170 million to US\$112 million, due mainly to the declining assistance from the donors. In contrast, government capital expenditures have increased from US\$13.6 million to US\$19.5 million during the same period. The availability of NT-2 revenues for poverty targeted rural road program will provide a new domestic source of financing for rural roads. Overall, the available funds for the sector fall short of the total need considerably. The IDA financing of US\$27.8 million under the project for the next four years will be a small but much needed financial contribution to the sector. Of the counterpart funds, US\$8.0 million for the maintenance of provincial roads will be available from the RMF. The government will provide a total of US\$7.28 million counterpart fund over four years for road upgrading and provincial road maintenance. This is considered possible given the track record of growing government budget financing of the road sector in recent years.

B. Technical

43. **Road improvement.** NR 1B with total length of 109 km and a section of 6A with the length of 62 km from Sop Bao to Ban Dan will be upgraded under the project. Roads design, economic analysis, environmental and social safeguards were carried out during the project preparation. The roads were designed to meet the requirement of Lao PDR road standard class V with double surface treatment (DBST) paved carriageway of

5.5 meters wide and 0.5 meter gravel shoulder each sides. The FIDIC contract standards have been used for the bidding documents.

44. **Road maintenance techniques.** Periodic maintenance involves mainly resealing, and re-gravelling techniques which are well known in Lao PDR and has been widely used under the ongoing RMP-2. Consultant services will be provided under the project to assist DOR/LRD and DPWTs in selecting and designing the most suitable technical maintenance techniques and in training the staff and contractors on how to implement these techniques. Quality of road maintenance has been a matter of concern during the implementation of RMP-2. To address such concern, the project will continue support to strengthen supervision capacity of DOR and DPWTs through provision of consultant services and engaging a technical audit every two years starting in the second year of implementation to review the effectiveness of the road works.

45. **Rehabilitation of roads damaged by Typhoon Ketsana.** According to the damage and loss assessment, the damaged road network in the five provinces could be repaired and improved through spot rehabilitation, spot resealing and repairs, culvert repairs, and re-graveling. These are techniques typically used in periodic maintenance works and commonly known and used in Lao PDR. The design standards of the restoration works would follow the principle of Build Back Better, but would be only limited to the existing right of ways, so that the rehabilitated roads would have good conditions, which in many cases would be better than the pre-Ketsana conditions.

46. **Emergency civil works to be funded under the Emergency Contingency Fund.** The national road network consists of about 7,000 km roads, of which 3,600 km are now under performance-based contracts (PBCs) for maintenance. The PBCs typically cover routine and periodic maintenance works as well as emergency works during the recurring events such as landslides and floods that occur frequently during rainy seasons. For the rest of the national road network and critical provincial roads, the MPWT regulation requires the provincial departments to carry out emergency works to restore passability and safety of emergency-affected roads. The provincial departments normally divide the concerned roads into sections/packages, and invite contractors to quote unit prices on typical items including removing landslides, removing landslides with explosive, making a temporary bypass, filling the collapsed sections, removing trees with diameter over 30 cm, extending culverts and, in case of floods, laying sandbags. These are techniques commonly used in Lao PDR.

C. Fiduciary

47. Procurement capacity has been assessed and the procurement risk is rated substantial after mitigation measures are implemented. This rating is based on the broader fiduciary risks and the weak procurement environment in Lao PDR. GOL has enacted an improved Procurement Decree and Implementing Rules and Regulations and also developed new Standard Bidding Documents (SBDs), which are all closely in line with international public procurement practices including the World Bank Guidelines. The SBDs were issued officially by GOL in 2009, although they have already been used

over the past two years for NCB and Shopping procurement under IDA-financed projects with some minor improvements. The Project will also be required to use the national SBDs of the GOL acceptable to the IDA for non-ICB procurement. For ICB procurement under the Project, the Bank's SBDs for ICB will be used.

48. To address the broader fiduciary risks, measures for further enhancing competitiveness, transparency and accountability in the procurement process have been agreed and included in the Measures to Strengthen the Internal Controls and Accountability (see Annex 11). Such actions include: (a) rationalizing thresholds for encouraging more competitive methods; (b) increasing disclosure of procurement information; (c) establishing complaints mechanisms; (d) requiring integrity pledges for ethical conduct; and (e) establishing price data-bases. MPWT will employ a qualified International (Individual) Procurement Consultant to assist and guide the implementing agencies for implementing the project's procurement framework and action plan including their capacity to identify and take remedial measures in the event of collusion in the bidding process. The risks will be further mitigated by strengthening cost control in the design, procurement and implementation phases of contracts. The implementing agencies will be required during bid evaluation to also conduct bid analysis referenced to established data-bases on market prices of key pay items. This measure, when matched with upstream detailed verification of the cost estimates by the Technical Auditor in the design phase (using quantity surveying techniques) and downstream detailed validation of change orders and the imposition of strict discipline to rationalize contract change orders in the implementation phase, will help strengthen procurement and contract implementation under the Project. The detailed findings and provision of the procurement assessment are provided in Annex 8.

49. The overall FM risk rating for the project is "substantial" even though this is a follow-on project and the accounting/finance policies, procedures and staff have been used satisfactorily in the implementation of previous projects. The financial and accounting staff, especially at the provincial level, remains technically weak and operates in an environment with limited internal controls. In addition, since the project will be implemented at the provincial level, the dramatic increase in the quantity of work to be done further increases the risk as the capacity of the staff to implement projects is limited.

50. Implementation of the project is being mainstreamed into the MPWT which has successfully implemented many other projects financed by IDA and other development agencies. However, the institutional and human resource capacity is limited especially at the provincial level. Several mitigating measures were proposed including the updating of the FM manual, establishing and staffing of an internal audit unit, regular training and capacity building for the FM staff, and the hiring of internal, technical and external auditors (with an extended scope for the first year until capacity of internal audit is established) specifically for the project. Emphasis is being given to further strengthening the institutional and human resource capacity to manage the sector in a sustainable manner and thus reduce the overall FM risk associated with the project.

51. Governance systems are being strengthened through the use of value for money audits, the implementation of an internal audit function, and public awareness and communication campaigns.

52. The residual risk after the proposed measures is expected to remain initially at the substantial level, with potential to improve to moderate, as the institutional strengthening measures begin to take effect. The proposed FM arrangements for the proposed Road Sector Project, as reinforced by the FM Action Plan and arrangement as discussed in Annex 7, meet the minimum requirements for FM.

D. Social

53. Positive social outcomes have been reported from implementation of previous Bank projects in Lao including RMP-2. Improved accessibility is of value to villagers but alone is not sufficient to reduce poverty without livelihood opportunities created by, for example, access to good land for agriculture or livestock. However, improved roads facilitate improved access to education and health services and create employment opportunities during construction and for maintenance.

54. For the two national road subprojects to be implemented in the first year under the project, namely NR 1B and 6A, limited amount of land acquisition and resettlement will be involved since both of them will be based on existing alignments. According to a detailed impact survey, the upgrading of these two roads with 171 km will affect total of 72 households from 27 villages in both Phongsaly and Hoauphan Provinces by land acquisition and house demolition. They include permanent land acquisition of 1.36 hectares of farmland and 0.31 hectares of housing land. About 1,962 square meters of houses will be removed causing relocation of 49 households. Along with land acquisition, the project will also involve removal of a range of attachments, such as rice stores, fences, transmission lines and water pipes.

55. For such impacts, adequate compensation will be provided based on national laws and regulations. For acquired farmland or other lands, the compensation is set at \$3 per square meter, which is more than 20 times the annual output value of the farmland. For affected structures and attachments, compensations based on replacement values will be paid directly to the affected households. For relocated households, in addition to compensations, replacement housing land or compensation based on replacement value will be provided.

56. The proposed compensation policies and rehabilitation measures are based on extensive consultation with affected villagers; and a resettlement information booklet in the local language will be distributed to affected villages prior to implementation. A well defined grievance redress mechanism will be established through the project management office, and an external monitoring agency or a consulting firm would be appointed under Government budget to monitor the resettlement implementation process, including implementation of land acquisition for linkage project. More details of RAP are summarized in Annex 10.

57. According to social economic survey, a large portion of affected households and villages are ethnic groups. The development of these two subprojects will greatly improve the accessibility and will have positive impacts on the ethnic groups living in the project areas. Nevertheless, as some ethnic groups are culturally, socially and economically distinct from more dominant groups, they might be vulnerable to be disadvantaged in the development process. To address such concerns, two separate ethnic group development plans (EGDPs) have been prepared by the project sponsor for these two subprojects based on extensive free, prior and informed consultation with affected villages. The EGDP lays out the development strategy and program for the involvement of different ethnic groups in the project areas, which aim to ensure that development progress fosters full respect for their dignity, human rights and cultural uniqueness, and are in compliance with the GOL policies concerning ethnic groups, and the World Bank's policy on Indigenous Peoples (OP 4.10).

58. The remaining funds will be mainly used to finance periodic road maintenance. Although most such subprojects are not expected to involve any significant land acquisition and resettlement impacts, a Resettlement Policy Framework (RPF) has been developed for the Project in case any subprojects might involve with limited land acquisition or resettlement. Based on the Bank policy on involuntary resettlement and relevant laws and regulations in Lao PDR, the RPF specifies basic policies and procedures to be applied during project implementation for those subprojects that might involve with limited land acquisition and resettlement.

E. Environment

59. **Impact assessment.** A strategic environment assessment was carried out by AusAID funded consultant, to identify the potential impacts and mitigation measures during the formulation of the National Transport Strategic Plan (NTSP). Given the proposed civil works will be limited to mainly maintenance and paving within an existing alignment and within the existing right-of-ways, the assessment concluded that the potential adverse environmental (and social) impacts can be avoided and be mitigated through the application of appropriate design standards, application of the draft ESOM, and the World Bank's social safeguard policies. Effective implementation of road safety is critical and this has been included as a component in Project. The impacts during construction include dust, noise, borrow pit management, vegetation clearance, soil erosion, site drainage, and the impacts due to the workers and worker camps. Adequate training and supporting budget for monitoring will be necessary to ensure effective implementation of the mitigation measures.

60. An initial impact assessment (IEE) was carried out for the first two roads (NR6A and NR1B) which are located in mountainous areas. The mitigation measures proposed use the Alignment Sheet approach. The proposed mitigation measures are found to be satisfactory, and its implementation will be monitored during the implementation of the project. Given that the works will be limited to paving (DBST) within the existing alignment and limited stabilization for safety reason, main impacts identified include soil

erosion, loss of vegetation, borrow pits, dust, noise, waste, and road safety. Details are summarized in Annex 10.

61. **Road safety.** Upgrading of roads will increase speed and traffic volumes and also increase road safety risks. To reduce the potential for loss of life and increased injury due to crashes, the engineering designs included essential and proven traffic safety measures.

62. **ESOM.** Building on the knowledge and experience on the safeguard measures developed and applied during the implementation of RMP-2 and with technical assistance from SIDA and World Bank, a draft Environmental and Social Operational Manual (ESOM) was prepared and proposed to be used for the Project. The manual provides a practical framework for identification and mitigation of environmental and social impacts in the roads sector. It describes the safeguard screening criteria for road works; environmental and social guidelines for impacts assessment and mitigation measures; and monitoring aspects, including the technical guidelines for design and construction and road maintenance. The social aspects cover social assessment, ethnic group development plan, resettlement plan, gender, and HIV/AIDS.

63. **Pilot use of country system for Environmental Assessment (EA).** The Bank reviewed the draft ESOM and carried out an Equivalency and Acceptability Analysis (EAA) and concluded that after incorporation of specific requirements related to gap filling measures identified in the Safeguards Diagnostic Report (SGDR), the ESOM can be used as the basis for the Pilot Use of Country System (UCS) for the road sector with respect to the following Bank safeguard policies: Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP4.04), and Physical Cultural Resources (OP/BP 4.11). It is noted that since the SGDR was prepared with a broader view in order to cover the road sector and not just this specific project, it accepts OP 4.04 and 4.11 (Natural Habitats and Physical Cultural Resources, respectively) under Use of Country Systems, even though the proposed project will not trigger either of these two safeguard policies. In addition, it is noted that the Involuntary Resettlement and Indigenous Peoples safeguards would be triggered under the project and would be covered through the conventional Bank Operational Policies as there is uncertainty regarding the precise circumstances under which they could be triggered and differences in the approaches of the GOL and the Bank in dealing with these policies. Details are given in Annex 10.

64. **Safeguard strengthening plan.** To ensure effective implementation of the safeguard measures, training on the application of ESOM will be carried out during the implementation of the project. Adequate resources to support effective monitoring and capacity building for local field engineers and environmental units are necessary. A budget of US\$350,000 has been estimated in the SGDR for the safeguard management, monitoring, and capacity building, which are included in a component of the Project.

F. Safeguard policies

Safeguard Policies Triggered by the Project	Yes	No	Piloted under OP/BP 4.00
<u>Environmental Assessment</u> (OP/BP 4.01)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Natural Habitats (OP/BP 4.04)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Pest Management (OP 4.09)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Physical Cultural Resources (OP/BP 4.11)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Involuntary Resettlement (OP/BP 4.12)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Indigenous Peoples (OP/BP 4.10)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Forests (OP/BP 4.36)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Safety of Dams (OP/BP 4.37)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Projects in Disputed Areas (OP/BP 7.60)*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A ⁵
Projects on International Waterways (OP/BP 7.50)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

* By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas

G. Policy Exceptions and Readiness

65. There are no policy exceptions in this project. The project meets the readiness filters for the World Bank's East Asia and Pacific Region. The final Project Implementation Plan will be completed prior to effectiveness. The detailed engineering design and environmental management plan for the two national road upgrading subprojects (NR 1B and NR 6A) have been completed and disclosed locally in April 2009. The design consultant is completing the bid documents. The provincial roads for periodic maintenance in the first year of implementation have been identified based on the Annual Work Program. The goods for road safety will be identified under a technical assistance (TA) component of the on-going ADB-funded project and the consultant for the TA will be on board by mid-2010.

⁵ OP/BP 7.50 and OP/BP 7.60 are not eligible for piloting under OP 4.00

Annex 1: Country and Sector or Program Background
LAO PEOPLE'S DEMOCRATIC REPUBLIC: Road Sector Project

A. COUNTRY BACKGROUND

1. Lao PDR has a population of almost six million that is growing at 2.6% per year. With 236,800 km² of land area, it does not have access to the sea; has one of the lowest population densities in the region (25 people/sq km) with 75% of the population residing in rural areas; and a very low GNI per capita, estimated at US\$740 in 2008. Lao PDR is land-locked and mostly mountainous, with half the country under forest cover. There is a diversity of species that are found in few other countries in the region. The economy of Lao PDR is primarily natural resource-based with more than half of GDP from agriculture, forestry, livestock and fisheries. Agriculture remains the major sector of the economy (44% of GDP), employing about 80% of the labor force.

2. The country depends primarily on road transport and, to a lesser extent, on river and air transport, to connect the sparsely distributed settlements and markets. Although transport demand is growing, the transport of passengers and goods is constrained by an inadequate transport network that is further limited in coverage by its poor physical condition.

3. The main objective for infrastructure development in the Sixth National Socio-Economic Development Plan (NSED, 2006-2010) is to ensure that an efficient transport system creates favorable conditions for sustainable growth and poverty reduction, as well as regional integration. Centrally located within the Greater Mekong Sub-region (GMS), the country's transport network is integral to the GMS transport network and associated economic corridors. Furthermore, the Government's commitment to eradicating poverty means that the provision of year-round access to basic services, markets, and new opportunities for the poorest districts becomes a priority focus.

B. SECTOR BACKGROUND

4. Motor vehicles are the dominant mode of transport, carrying 86% of total freight ton-kilometers and 90% of total passenger-kilometers. The Mekong River and its tributaries carry 14% of freight ton-kilometer and 8% of passenger-km. Domestic airfreight is negligible while air transport constitutes 2% of passenger-km. During the period 1985-90, freight and passenger transport increased at an annual rate of between 8% and 14%.

5. **National Transport Strategic Plan (NTSP).** Guided by the current NSED, the Ministry of Public Works and Transport (MPWT) has developed a NTSP. The Plan sets forth national transport policy framework at the sub-sector level and refines and prioritizes the indicative investment lists taking account of available resources. In this way, the Plan establishes procedures and methods for the prioritization of investments, as well as estimates of the indicative costs and available resources.

6. As the roads sector dominates the transport sector, the strategic plan emphasizes the development of road infrastructure, and focuses on measures for maintaining and preserving the existing road networks, and improving rural accessibility by completing provincial and district linkages with all-weather road access.

7. Investments in other sub-sectors, i.e. waterways, railways and civil aviation will be limited, reflecting their smaller roles. Nevertheless, the government proposes that appropriate investment is provided to other modes, where it is warranted to enhance service provision and to facilitate growth in demand by provision of improved services. The plan also identifies priority issues in various policy areas including institutional strengthening, human resource and technological development.

8. **Road Network.** Lao PDR's road system extends over 35,500 km, with the network expanding 77 percent from 1997 to 2005 (a 7.4 percent per annum growth rate, or an average rate of almost 2,000 km a year). There has been a modest increase in length of paved road (from 3,400 km to 4,800 km, 4.4 percent per annum) but more substantial increases in the lengths of gravel and earth road (9.6% and 7.0% per annum, respectively).

9. The country's road classification system designates six categories defined by administrative purpose and traffic hierarchy, and indicates the progressive gradation in function - from long distance mobility to community accessibility. National and provincial roads each account for nearly 20 percent of the total network, with district roads and rural roads making up most of the balance - 13.7% and 40.2%, respectively. Urban roads and special roads comprise 5.2% and 2%, respectively.

10. The national road network comprises approximately 6,900 km of roads, most of which have either a sealed (56 percent) or gravel (30 percent) surface. The network is mostly in an acceptable condition (80% of paved roads are classed as good or fair) and is generally constructed to an appropriate standard for the volume and nature of the traffic carried. About 20% of provincial roads are currently classified as un-maintainable,⁶ along with around 11,300 km (60 percent) of all district roads and rural roads, which are mostly simple earth construction. Un-maintainable roads are being progressively upgraded to an engineered standard at a rate of around 1,000 km per year for provincial and district roads. Consequently, this road type could be eliminated in the near future for provincial roads and district roads, respectively. It will take longer to completely eliminate the backlog of un-maintainable rural roads.

11. While Lao's road network is extensive, it is vulnerable to rainy seasons as only 56% of the national roads and 3% of the local roads are paved. Only 13.6% of the total length is paved (bitumen, asphalt or concrete) and 33.7% is gravel as shown in Table 1. The remaining 52.7% is earth construction with many sections impassable during the rainy season. Seasonal closures are frequent due to poor pavement and deficient cross drainage. Nineteen out of 139 district centers and a third of all villages (3,500 out of a

⁶ Roads classified as un-maintainable are non engineered roads providing for movement and access and often are upgraded to an engineered standard.

total of 10,500) do not have year-round, all-weather road access. Provision of all-weather village road access will present an investment challenge for many years.

Table 1: Basic Road Statistics Lao PDR – Estimate at mid 2008 (km)

Road Class	Paved	Gravel	Earth	Total	Maintainable- as at mid 2008	Un-maintainable estimate at mid 2008	
						Gravel	Earth
National	3,896	2,078	930	6,904	6,904	-	-
Provincial	287	3,575	3,086	6,948	5,548	350	1,050
District	77	2,381	2,409	4,867	3,117	700	1,050
Urban	469	901	477	1,847	1,847	-	-
Rural	36	2,716	11,525	14,277	4,727	-	9,550
Special	81	329	304	714	714	-	-
Total	4,846	11,981	18,731	35,558	22,858	1,050	11,650
Lengths	(13.6%)	(33.7%)	(52.7%)	(100.0%)			

12. **Impact of Typhoon Ketsana.** On September 29, 2009, Typhoon Ketsana swept across the southern part of Lao PDR, causing enormous damages and loses in five provinces (Attapeu, Sekong, Saravanh, Champasack, and Savannakhet). A Post-Ketsana Damage and Loss Assessment estimates that about 25 percent of the 1,842 km of roads and a number of bridges were severely or partially damaged, and the damages amount to US\$12 million. If not restored soon, the damages would continue to cause economic loses mainly in terms of higher vehicle operating costs and longer travel time, further hampering the recovery of the severely affected local economy.

13. The total length of roads in the five affected provinces is shown in Table 2. The length of damaged roads and bridges for each province and the estimated damage costs are shown in Table 3.

Table 2: Total Length of Road Network in the Five Affected Provinces (km)

Province	National roads	Provincial roads	District roads	Rural roads	Urban roads	Total
Attapeu	359.9	189.1	60	388.1	89.4	1986.5
Sekong	201.6	188.4	281.2	237.2	53.86	962.2
Saravanh	428.8	189.3	345.9	1314.5	73.75	2352.2
Champasack	448	558	228	1523	142	2899
Savannakhet	604	693.5	242.2	2243	94.2	3876.9
Total	2042.3	1818.3	1339.3	5705.8	453.2	12076.8

Source: Provincial DPWTs of Attapeu, Sekong, Savannakhet, Saravan, and Champasack.

Table 3. Length of Damaged Roads and Estimated Damages

Roads	Attapeu		Sekong		Saravan		Savannakhet		Champasack		Total	
	Km	Million Kip	Km	Million Kip	Km	Million Kip	Km	Million Kip	Km	Million Kip	KM	Million Kip
National roads	178	9751	70	5774	138	8700	-	-	18	1360	404	25585
Provincial Roads	14	3757	150	7554	24	1550	151.5	4664	23	806	362.5	18331
District roads	18	2133	45	2511	152	6281	16	849	43	2243	274	14018
Rural roads	212	15518	87	6360	270	14591	148	6179	51	3572	768	46220
Urban roads	31	5068	-	-	2.3	180	-	-	1	82	34	5329
Bridges	0.24	1531	0.32	203	0.31	1799	0.22	458.5	0.04	810	1.12	4801
Total	453	37758	352	22403	586.3	33101	315	12152	136.1	8873	1844	114,287
% of provincial road network	22.8		36.6		24.9		8.1		4.7		15.2	
% of total Damage	33.0		19.6		29.0		10.6		7.8		100.0	

Source: Provincial DPWT in Attapeu, Sekong, Saravan, Champasack and Savannakhet.

14. **Traffic.** At the end of 2007, the national vehicle fleet was 641,031 vehicles, having grown at 18% per annum, with motorcycles accounting for almost 80% of the total. Motorcycles are used primarily for short-distance travel and their numbers have been increasing by over 20% per annum in recent years. The fleet of small (2-wheel) agricultural tractors, which have displaced bullock carts, has also grown rapidly.

15. Traffic volumes are low, but increasing at over 10% per annum in line with vehicle fleet growth. Away from the main towns, traffic volumes (4+ wheel vehicles) on the main north-south Road No 13 are typically between 500 and 1,000 vehicles per day (vpd), with motorcycles doubling these volumes near settlements. On approaches to Vientiane, 4-wheel traffic may be as high as 2,000-4,000 vpd, with a similar number of motorcycles. Elsewhere on the National Road network, 4-wheel traffic volumes range from 250-500 vpd with similar numbers of motorcycles close to populated areas. Traffic on Provincial Roads is generally lower (<300 vpd). Traffic levels on District and Rural Roads are generally less than 100 vpd and as low as 10-25 vpd for roads serving individual villages. Traffic on these roads is comprised mostly of motorcycles, with a few farm tractors and pick-ups.

16. Longer-distance traffic is comprised of a mix of trucks (around 30%), buses (10%) and light-vehicles (60%). The truck fleet includes 4-axle 12-wheel rigid vehicles, truck-trailer combinations, 10-wheel general-purpose trucks, and many mid-sized 2-axle 6-wheelers. There are a limited number of regular long-distance bus services using modern purpose-built vehicles. Local passenger services are operated by converted trucks, pick-ups or tuk-tuks.

17. **Road Funding Sources.** Funding for the road sector currently comes from national budget allocations, the Road Maintenance Fund (RMF), private developers, and foreign loans and grants from development partners. A portion of the NT-2 Hydropower Project revenue streams are also expected to provide a substantial new resource beginning in mid-2010. It is estimated that US\$846 million would be generated to the road sector development for the period from 2008 to 2015, which is about 60% of the total need.

18. **RMF.** In order to guarantee the level and availability of road funding, the government established the RMF and Road Fund Advisory Board in April 2001. The RMF provides sustained funding for maintaining the national and provincial road network, which receives revenues from three main sources: 87% from fuel levy, 12% from road tolls, and 1% from overload fines. At present the government provides its contribution to road funding through a special fuel levy per liter of fuel sold, which is currently set at Kip 300/liter. By decree, most RMF funding is spent on national roads, 10 percent is assigned to local roads and 5 percent to road safety. In the future, dedicated funds will also be set aside to cover project supervision and monitoring during and after construction. The revenue levels generated from the RMF are discussed in further detail in Annex 9.

19. **NT2 Revenues.** A significant share of revenue obtained from NT-2 Hydropower Project will be directly allocated to investments that contribute to the country's poverty reduction agenda. As such, improving rural accessibility in the country's poorest areas will be an initial priority. A dedicated financing scheme has been agreed upon that will provide an annual fixed amount equivalent to US\$10.0 million allocated to the provision of access roads to remote and poor communities. The NT2 funds will be allocated to maintaining the local roads network to an appropriate standard.

20. **Road Expenditures.** During the past decade, the Government has placed the largest share of its public investment on the development of Lao's road network. Annual public expenditures for roads during fiscal years 2000/1 to 2008/9 ranged from 20% to 35% of the national budget, including donor assistance.

21. The pattern of spending on road works over the last five years indicates the high priority given to the national roads, especially their construction. The total over the five-year period (2004/05 to 2008/09) amounted to roughly 5.7 trillion Kip (US\$673 million). However annual road expenditure declined steadily, in part because most of the funding came from donors and was declining.

C. SECTOR PRIORITIES

22. **Road Investment Priorities.** The government will continue to invest heavily to ensure that transportation demand, which reflects the continuing economic development of Laos, is well served by an efficient and well maintained road system. The first priority will be to preserve the existing operational road asset, through routine and periodic

maintenance, by providing sufficient funds to maintain satisfactory road conditions, particularly on the Core Network.

23. Furthermore, there is a need to rehabilitate and expand the road system in order to facilitate economic growth and development. The first priority for improvement of the core network, which should effectively be built to sealed all-weather standards (1-lane or 2-lane as appropriate, based on traffic demand), is to ensure that the three remaining provincial capitals (Phongsali, Xayaburi and Saravan) are connected directly by an all-weather paved road. International linkages with neighboring countries, for which the sector strategy identifies several key sub-regional corridors and a number of secondary international links, provide significant potential for the development of cross-border trade and increased regional cooperation, and are therefore also afforded a high priority for upgrading and expansion. Additionally, it is a long-standing Government commitment that all national roads shall be ultimately upgraded to all-weather sealed standards.

24. However, road upgrading and network expansion (through elimination of un-maintainable roads and rural accessibility improvements) must be economically warranted to ensure the optimal allocation of available funds. Such road improvements will be determined systematically from residual funding available after maintenance and road preservation works budget requirements have been met.

25. Priorities within the provinces for the management and upgrading of the local road network should be to bring all key elements of the district road network up to maintainable standards. Although preservation of the existing road asset is a paramount criterion, it is nonetheless recognized that provision of road access to remote communities cannot be ignored. As a consequence, it is proposed that a special funding allocation to construct (or upgrade to maintainable standards) up to 1,000 km of additional access road each year will be introduced. This will be the only permissible means of expanding the network of local community roads. The program will therefore focus on improving access to the larger groups or clusters of non-road served villages, firstly differentiating between the districts with no road access and then those with partial access only. First priority will be given to the poorest and most populated districts with high proportion of non road accessed villages. Nonetheless strict prioritization will be necessary as the backlog of candidate local roads will take several years to clear.

26. ***Rural Accessibility.*** With more than 10% of all district centers and over 40% of villages without year-round road access, serving remote and poor communities is an essential element to the transport strategy. The Government's Rural Road Program is designed to sustain and expand year-round motorable accessibility (for farm tractors and motorbikes) for rural villages to the main roads and markets. The program is designed to strike a balance between clearing the periodic maintenance backlog, upgrading of 'non maintainable roads' where justifiable, and construction of basic access to the rural poor villages, taking in consideration that there are needs to extend maintainable road network before basic access can be provided to the rural poor.

27. Rural road needs require a separate assessment, as investment priorities are to be based on access and its equitable distribution, rather than only efficiency of traffic movement. The government is finalizing the Rural Transport Infrastructure Policy (RTIP), which will provide a common framework for rural road development. The policy describes and defines the role of the ministry and the responsibilities expected of communities financing mechanisms, and implementation methods (community participation, contractor, other etc). Once finalized, the RTIP will become an integral component of the overall transport sector strategy.

28. A community road model (CRM) has been established and implemented on a pilot basis in 28 districts in the eight Northern provinces and two southern provinces. CRM comprises a Participatory Rural Transport Planning (PRTTP) approach with village maintenance committees (VMC) identifying and performing maintenance using a labor-based, equipment supported method for construction. A programmatic approach to 'scale up' the current piloted approach and methodologies for rural access road improvement will be adopted, with emphasis on: (a) prioritizing and procuring road works at the provincial level using ProMMS for road maintenance prioritization within the three-year rolling plan, taking into account the absorption capacity of LRD, DPWTs, OPWTs, and local contractors; (b) using the participatory Community Road Model for decisions on new basic access; (c) applying the current financial management system that is already working well; and (d) employing the proven maintenance and construction methods including provision of incentives for the community to contribute to construction and maintenance.

29. In addition, the Road Management System (RMS) is used as a tool at the central level to determine the allocation of annual budget to provinces in aggregate amount, and the Local Road Division of MPWT will manage the program (mainly technical support, quality control, M&E, and reporting). Special consideration is given to projects using a participatory approach to reduce the financial burden and allow a stronger ownership of the local users by involving them in the entire road development process (planning, construction and maintenance).

30. **Road Safety.** Road safety has been recognized as an issue of high national importance, particularly in view of an overall national vehicle fleet growth rate in excess of 18 percent per annum. Recent demonstration projects in road safety engineering, including selected road audits, highlighted significant differences in road design criteria adopted by different funding agencies resulting in significant variation in intrinsic road safety. Early interventions such as rear-vision mirrors on motorcycles and compulsory wearing of helmets represent a good introduction of road safety awareness campaigns and several low cost measures that can be successfully implemented. Through the introduction of road safety awareness campaigns and several low cost measures, the fatality rate of 17.8 persons per 10,000 vehicles in 2000 was reduced to 16.7 by 2003 and to 9.5 by 2007. A comprehensive and systematic application of proven road safety measures is now required to ensure that these achievements can be sustained.

31. The establishment of the National Traffic Safety Strategy and Action Plan in 2006, the National Road Traffic Safety Committee (NRSC) in April 2007, and the recent

establishment and staffing of the Secretariat to NRSC and the Road Safety Funds (RSF) in June 2008 are significant milestones that represent major advances in elevating the importance of road safety. Furthermore, drafting of new road safety legislation (awaiting enactment) and provision of secure domestic funding from guaranteed five percent share of the RMF has led to a sustainable paradigm for traffic safety management. These initiatives will ensure that the current and future program of road safety measures now in hand will be continued and supported by funding provided through the RSF.

32. Although much progress has been made, there is a large amount of work yet to be done. Several issues that remain to be addressed include a high proportion of unlicensed motorcyclists, low community safety awareness, and the absence of standardized road safety signs throughout the road network. The most important and immediate road safety program measures are (i) strengthening road accident data system; (ii) safe planning of roads; (iii) road safety education for children/young adults; (iv) driver training/vehicle testing; (v) training of traffic police/law enforcement; and (vi) equipment requirements for training and enforcement. These measures will be implemented by a comprehensive rolling program during the life of the Strategic Plan. The program will be supported by appropriate funding and amendments to the present road safety legislation. The government will continue its efforts to improve road safety for the indefinite future and further initiatives will be continually added to the program.

33. **Disaster Management.** The capability of the MPWT in disaster management is increasingly important for the economy and the population in an era of increasing risks of natural disasters due to global warming. The country suffered from a severe flooding in 2008, which damaged many road links and stopped traffic in the affected areas. In anticipating the occurrence of stronger rain storms and more severe floods in the future, the MPWT requires to develop disaster management capacity and financial resources in order to better respond to the emergency situations to prevent and repair road damages and ensure passability and safety.

34. **Capacity Development.** Steady improvements over the last decade have allowed the Ministry to assume a broadly appropriate institutional structure and an increasingly competent corps of staff within it and its Departments. In order to improve effectiveness and efficiency of the sector development, the government sees the need to further strengthen institutions dealing with road administration at both central and local levels through continued development of systems and procedures required for effective sector management, including preparation of strategic, corporate and annual business plans, in addition to establishing and introducing a quality assurance mechanism.

35. Improvement of mechanisms for coordination, particularly at planning stage, is important for enhanced synergy and sustainability of the sector development. Key to the successful process is clarifying the role and mandate of each agency concerned at both central and local levels, and the provision of sufficient capital and human resources to the authorities concerned to implement their mandate, supported by a 'checks and balances' mechanism. At the central level, attention should be paid to implementing the strategic role in establishing strategy, policy, and programs for sector development, in setting

standards and legislative framework, rules and regulations, and in monitoring results of the sector development, as well as supporting provincial capacity building for managing local roads in a more effective, efficient and transparent manner.

36. The Ministry is working with its departments and local offices to increase the clarity of sector strategy, improve decision making, and to further develop the staff capacity, particularly within local institutions. At the provincial level, focus should be on service delivery through hiring and managing contractors and consultants for road construction and maintenance, and mobilizing community contributions for rural road construction and maintenance. As additional new funding for the rural road network will entail greater absorption capacity at a local level, there is also a need for further strengthening of the ministry's provincial and district personnel in both technical and management knowledge, including public administration, strategic management and managing for results; and for technical staff with regard to continuous technical training on planning, budgeting, procurement, contract management, quality control, monitoring and evaluation, and financial management.

37. **Donor Coordination.** MPWT's focus on partnership has emerged as a central element towards meeting its strategic objectives and has approached its development partners in an effort to coordinate resources dedicated to improving and preserving the road network. A focus on the physical aspects and associated financing of the Strategic Plan, and agreement on its content by all donors, is needed for efficient and effective coordination of transport infrastructure investments. By providing a common basis for development, operation and maintenance of the transport network irrespective of funding source, the plan serves to support the alignment of Government priorities and all major donor contributions within the sector.

38. Based on the Vientiane Declaration on Aid Effectiveness (November 2006), a *Partnership Principles* agreement has been developed that seeks to harmonize the donor agenda and improve the effectiveness, efficiency and sustainability of external assistance through a coherent, consistent and coordinated effort in supporting the implementation of the National Transport Strategic Plan (NTSP). Although the Partnership Principles does not constitute a legally binding instrument, it represents a shared recognition among the donor partners by aligning the aid agenda with domestically identified development priorities.

39. To facilitate coordination among donor partners, MPWT has established an Infrastructure Sector Working Group (ISWG), with a secretariat chaired by the Director General of DPC and comprised of the Deputy Directors of DOR, DOT, DOP, DOI, CO, DUPH and PTI. The secretariat is tasked with overseeing the implementation and updating of the strategic plan such that donor funding is appropriately aligned with sectoral objectives.

D. USE OF COUNTRY SYSTEMS

40. ***Unified Road Management Framework (URMF).*** Applying a systematic and logical assessment and evaluation methodology in a consistent manner supports spending available funds optimally. The fundamental principles that guide strategic planning in the roads sub-sector are to maintain and preserve the existing asset value and to distribute funds among road categories to give first priority to mobility on the 'Core Network'.⁷ To this end, a URMF, which has been developed through two complementary and consistent methods, extends the Road Maintenance System (RMS) to apply Provincial Roads Management Maintenance System (PRoMMS) data such that an optimized program evaluates all road classifications.

41. The RMS methodology is based on the HDM-4 assessment model and is capable of evaluating alternative maintenance and upgrading strategies, based on an analysis of road conditions and traffic volumes, within a range of defined funding constraints. The RMS is applied directly to National Roads where road improvements aim to achieve mobility improvements, based primarily on vehicle operating cost and time savings. The same methodology may be applied to Provincial Roads, because their function is also primarily mobility, and the application has been extended to include district and rural roads based on an analysis of populations served and potential traffic demand.

42. PRoMMS is primarily a database of individual sections of the local road network, recording key parameters relating to road condition, traffic levels and physical characteristics. Initially the data were restricted to maintainable roads but in 2008 the database has been expanded to collect socio-economic data (e.g. population and distance to market) for all local roads. PRoMMS has been used at the provincial level to identify road maintenance needs on a systematic basis. This data will now be used at the central level agency (DOR/LRD/PTI) to assist in establishing overall sectoral priorities and funding allocations.

43. ***Pilot Use of Country Systems for Environmental Assessment.*** Due to the relatively advanced state of its laws and regulations corresponding to World Bank environmental and social safeguards, Lao PDR is one of the countries selected for participation in the pilot program for use of country systems for environmental and social safeguards. The advantages for use of country systems (UCS) are to scale up development impact, increase country ownership, build institutional capacity, facilitate harmonization and increase cost effectiveness.

44. Under Operational Policy/Bank Procedure 4.00 (OP/BP 4.00), the Bank considers a borrower's environmental and social safeguard system to be equivalent if the borrower's system is designed to achieve the objectives and adhere to the applicable operational principles, and when sufficient national capacity exists for proper implementation. Acknowledging the contribution of several donors in the road sector (including ADB, Sida and AusAID) through the introduction of environmentally sound

⁷ Within the NR network there is a 'Core Network' of key routes – including the links to provincial capitals and links in the GMS network – which are of highest strategic importance to the nation.

road design and construction practices and environmental capacity building, Lao PDR's system may be sufficiently sound to provide the basis for piloting in the roads sector, subject to implementing some gap-filling measures and providing additional capacity to ensure full coverage, supervision and monitoring of environmental aspects of the road investment program. As such, the proposed project provides a platform for piloting this initiative.

45. In an effort to formalize approaches on how best to guide, advice, and manage the environmental and social considerations in the road sector, an Environmental and Social Operation Manual (ESOM) has been developed, which will be piloted under the Lao Road Sector Project (LRSP). The ESOM provides a basis for consistency and compliance with national environmental and social decrees and regulations and outlines how these safeguards shall be taken into consideration during project planning, design, implementation, and post-construction activities (such as monitoring and evaluation, and maintenance). The Manual establishes a set of MPWT-owned environmental and social safeguards due diligence processes and procedures for transport investments that are acceptable to Government and several international donors including the World Bank. The ESOM takes into account commonly triggered safeguard policies in road projects, including Environmental Assessment; Natural Habitats; Forestry; Indigenous People;⁸ Involuntary Resettlement; and Cultural Property. However, under the LRSP, Natural Habitats, Forestry, and Cultural Property are not triggered.

46. To assist in the adoption of a country system in Lao PDR, a Safeguards Diagnostic Review (SGDR), which focused on environmental safeguards including environmental assessment, natural habitats, and physical cultural resources, has been completed.⁹ The SGDR considered (i) the acceptability of implementation of national law and regulation (with a particular focus on practices, track record, institutional capacity and compliance and monitoring); (ii) the equivalence of national law and regulation viz-a-viz World Bank policy; and, (iii) the measures that would be necessary to fill the gaps between national law and regulation and World Bank policy.

47. The SGDR concluded that in respect of the equivalence analysis there is a broad equivalence between the Lao PDR legal framework for EA, natural habitats and physical cultural resources and World Bank's objectives and operational principles (as set out in OP 4.00). However, a number of remedial measures are required to ensure that national law and regulation fully meets the World Bank policies, and the SGDR recommends the ways in which the gaps can be filled. Existence of such gaps does not necessarily require amendments to laws and/or regulations but instead can be dealt with through the provisions included in the ESOM.

48. ***Monitoring and Evaluation.*** Monitoring and evaluation is an integral part of good project management practice. An Annual Asset Report, which will be published

⁸ In the context of Lao PDR, "indigenous people" as defined by both World Bank and Asian Development Bank includes ethnic minority groups, which is the preferred term.

⁹ World Bank; *Draft Safeguards Diagnostic Review for Lao PDR*; Lao Road Sector Project (ID P102398, November 2008)

and made publicly available, would serve to consolidate critical information on the present condition of all levels of the network, ensure proper traffic counting and analysis of transport demand, and enable examination of accident rate data. Coordination among departments is essential for effective data management, including the need for information sharing between departmental divisions, as well as timely and systematic updating of facts and figures. Reporting outputs encourages transparency, both internally among the ministerial divisions and externally to concerned stakeholders. Development of an M&E system that addresses these goals and objectives and efficient and effective data collection requirements will thus facilitate the growth of an asset management culture in MPWT.

Annex 2: Major Related Projects Financed by the Bank and/or other Agencies
LAO PEOPLE'S DEMOCRATIC REPUBLIC: Road Sector Project

On-going Bank-Financed Projects

Ongoing	Sector Issue	Supervision Ratings	
		IP	DO
Second Road Maintenance Project (Cr. 3944-LA)	Highways construction and maintenance, planning	S	S

Completed Bank-Financed Projects

Completed	Sector Issue	IEG Evaluation	
		Out-come	Risk to Outcome
Provincial Infrastructure Project (Cr. 3131-LA)	Rural Development - Roads-Water Supply-Sanitation	MS	H

Completed	Sector Issue	IEG Evaluation		
		Out-come	Sustain -ability	ID Impact
Road Maintenance Project (Cr. 3481-LA)	Highways construction and maintenance, planning (completed in 2004)	S	HL	SB
Highway Improvement Project III (Cr. 2943-LA)	Highways construction and maintenance, planning (completed in 2003)	HS	L	SB
Luang Namtha Provincial Development Project (Cr. 2579-LA)	Rural Development -Roads-Water Supply-Sanitation (completed in 2002)	S	L	SB
Highway Improvement Project II (Cr. 2606-LA)	Highways construction and development of the local construction industry (completed in 2001)	S	L	SB
Highway Improvement Project I (Credit 2218-LA)	Highways rehabilitation and maintenance (completed in 1998)	S	L	SB
Southern Transport Project (Cr. 1846-LA)	Highways rehabilitation and maintenance (completed in 1994)	S	L	M

HS= Highly Satisfactory S = Satisfactory; MS = Moderately Satisfactory; H = High; L = Likely; HL – Highly Likely; SB = Substantial; M = Modest

Other Development Agencies

Agency	Project	Status	Duration
ADB	1. ADB 7- rehabilitation of road 13 South	Completed	1995-1999
	2. ADB 8- Rehabilitation of NR 7	Completed	1996-2001
	3. ADB9- Rural Access road	Completed	2002-2006
	4. ADB – rehabilitation of Road 9	Completed	2000-2004
	5. ADB10- Northern Rural road	Ongoing	2007-2010
	6. ADB 11- GMS Northern Corridor project	Ongoing	2009-2013
	7. ADB 12- GMS road improvement- NR 6A	Planned	

AusAID	1. Mekong river bridge in Vientiane	Completed	1995
	2. Construction of bridges on NR 13 South	Completed	1996
China	1. Improvement of a section of R3	Completed	2005-08
	2. Improvement of an urban road in Vientiane	Completed	2000-03
	3. Improvement of NR 13 North Louangnamtha-Oudomxay- Pakmong	Ongoing	
	4. Improvement of an Urban road- Phonthong	Ongoing	2008-10
	5. Improvement of R 1A	Planned	
Japan	1. Bridge construction on NR 13 South	Completed	1994-1997
	2. Mekong river bridge in Pakse	Completed	1997-2000
	3. Construction of Hinhuep bridge on NR 13 North	Ongoing	2007-2009
	4. Improvement of Road 1 in Vientiane	Completed	2005-2007
	5. Rehabilitation of Road 9	Completed	1999-2004
	6. Mekong bridge in Savannakhet	Completed	1999-2004
	7. Improvement of Road 16	Planned	
Korea	1. Rehabilitation of a section of Road 4	Ongoing	2009-2013
	2. Construction of Mekong Bridge in Xayabouly	Ongoing	2009-2013
	3. Improvement of NR 13 South	Ongoing	2008-2009
	4. Mekong Bank erosion Protection	Ongoing	
SIDA	1. Rehabilitation of Road 13 South and road Sector development	Completed	1990-1997
	2. Sida1- Local road development	Completed	1997-2001
	3. Sida2- Maintenance of Local roads	Completed	2001-2004
	4. Sida 3- Rural access and local road Maintenance	Ongoing	2005-2009
Thailand	1. Improvement of an Urban road in Vientiane	Completed	
	2. Improvement of a section of Road R 3	Completed	1998-2001
	3. Construction of Road: Pakbeng-Mounggnuen	Ongoing	2005-2008
	4. Mekong bridge in Thakek	Ongoing	2006-2010
	5. Mekong bridge in Bokeo	Planned	2009-2012
	6. Improvement of road R11	Planned	
Vietnam	1. Construction of Road 18B	Completed	2002-2008
	2. Improvement of Road 2 E	Ongoing	2009-2012

Annex 3: Results Framework and Monitoring
LAO PEOPLE'S DEMOCRATIC REPUBLIC: Road Sector Project

Results Framework

PDO	Project Outcome Indicators	Use of Project Outcome Information
The project development objectives are (a) to improve road services on two main national corridors and the provincial road network, (b) to rehabilitate roads damaged by Typhoon Ketsana, and (c) to establish and operationalize a contingency fund for quick disaster response in the road sector.	<p>Vehicle travel time on upgraded roads reduced by 40%</p> <p>At least 26,500 people (49% female), most of whom live by the roadside, served with paved roads along NR 1B and 6A</p> <p>Share of provincial road network in good and fair condition (by Lao standards) increased from 46% to 64%</p> <p>About 60% of the Typhoon Ketsana damaged roads (including small and wooden bridges) repaired and improved</p> <p>A contingency fund established for quick restoration of passability and safety of disaster affected national and provincial roads</p>	<p>For decision makers to gauge effectiveness of the Government's program for road sector management, and to make decisions for actions required to improve the effectiveness</p> <p>Assess impact of improved national and provincial road networks and effective transfer of benefits to road users</p>
Intermediate Outcomes	Intermediate Outcome Indicators	Use of Intermediate Outcome Monitoring
Road conditions on National Roads 1B and 6A substantially improved: Component A.1 Upgrading of the 109 km NR 1B and 62 km NR 6A	171 km of national roads (NR 1B and NR 6A) upgraded as per specifications	Monitor implementation progress and formulate action plan to address possible delays on NR 1B and 6A
Road conditions improved on selected provincial roads: Component A.2 Periodic maintenance on priority sections of the provincial road network	About 1,600 km of provincial roads preserved through periodic maintenance	Monitor implementation progress and formulate action plan to address possible delays for maintenance on priority sections of the provincial road network

Safety of pedestrian and road users improved on targeted roads: Component A.3 Support to national Road Safety Strategy	Road safety facilities acquired and installed as per specifications	Monitor implementation progress for road safety facilities acquisition and installation
MPWT capacity for sector strategic planning and management strengthened and streamlined: Component B.1. Strategic management of transport sector	Knowledge and practical experiences acquired on transport sector strategic planning and management National Transport Strategic Plan updated and expanded	Assess the completion status and impact of technical assistance. Use continued knowledge acquisition for sector strategic planning and management
Country system for environmental assessment adopted and enhanced: Component B.2. Strengthening of safeguard capacity	Enhanced knowledge and practical experiences on safeguard management Country system for EA used and staff trained	Assess the completion status and impact of technical assistance. Use continued knowledge acquisition for safeguard capacity development
Internal control system established and functional: Component B3. Strengthening Internal Controls	Acquired knowledge and practical experiences on internal control Internal audit function established and functional	Assess the completion status and impact of technical assistance. Use continued knowledge acquisition for internal controls
Provincial department capacity further strengthened: Component B4: Provincial Department Capacity Development	Knowledge enhanced and practical experiences gained on fiduciary management and contract management at the provincial level	Assess the completion status and impact of technical assistance. Use continued knowledge acquisition for provincial capacity development
The conditions of Typhoon Ketsana damaged roads restored and improved: Component C1. Spot Rehabilitation and Periodic Maintenance of Ketsana Damaged Roads	About 1,100 km of Ketsana damaged roads (including small and wooden bridges) repaired and improved as per specifications	Monitor implementation progress and formulate action plan to address possible delays on NR 1B and 6A
Disaster response capacity enhanced: Component C2. Emergency Contingency Fund	Length of time to process payment to contractors for emergency works shortened	Assess the time required for payments made to contractors who carried out the emergency works.

Arrangements for results monitoring

Project Outcome Indicators	Baseline	Target Values				Data Collection and Reporting		
		YR1	YR2	YR3	YR4	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
Travel time on upgraded roads reduced (%)	NR 1B (109 km): 5 hours; NR 6A (62 km): 3 hours	0% reduction (due to impact of road works)	0% reduction (due to impact of road works)	20% reduction	40% reduction	Annually after construction completion	Project progress report and National Road survey	DPC/DOR
Number of people directly served by paved roads along 1B and 6A	0	0	0	13,000	At least 26,500 (49% female)	Annually	Project progress report and sampling survey	DPC/DOR
% of provincial roads in good and fair conditions (by Lao standards) increased	46%	50%	55%	59%	64%	Annually	Project progress report and Annual Asset Report	DPC/DOR
About 60% of Ketsana damaged roads (including small and wooden bridges) repaired and improved	5%	40%	60%	60%	60%	Annually	Project progress report and Annual Asset Report	DPC/DOR

Emergency contingency fund established for quick restoration of passability and safety of disaster affected national and provincial roads restored	Contingency fund not established	Fund established and functional	Functional	Functional	Functional	YR1	YR2	YR3	YR4	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
Component A												
(i) Km upgraded on NR 1B and 6A	0	0	30	80	171					Bi-Annual	Project progress report	DPC/DOR
(ii) Km (periodically) maintained on priority sections of the provincial road network	0	400	800	1,200	1,600					Bi-Annual	Project progress report	DPC/DOR
(iii) Road safety facilities installed	0	Need identified	Goods procured	Installed	Fully installed					Annual	Project progress report	DPC/DOT
Component B												
(i) Knowledge and practical experiences acquired on strategic planning and management	First sector strategic plan produced		Strategic Plan updated and expanded		Strategic Plan updated and expanded					Annual	Project progress report	DPC/PTI

(ii) Country system for EA used and staff trained	Country system just piloted and only a few staff trained	At least 20 staff trained			Safeguard actions under the country system for EA undertaken by MPWT and DPWT	Annual	Project progress report	DPC/PTI
(iii) Knowledge and practical experiences acquired on internal controls ,	Internal control function not existed	Internal audit unit started	The first internal audit report produced	Second internal audit report produced	Third internal audit report produced	Annual	Project progress report	DOI
(iv) Fiduciary and supervisory capacity strengthened at provincial level	Capacity development program not yet started	Detailed program prepared	At least 34 provincial staff trained	At least 34 provincial staff trained	Capacity development program completed	Annual	Project progress report	DPC/DPWT's
Component C								
(i) km of Ketsana damaged roads repaired and improved	90 km	645 km	1,100 km	1,100 km	1,100 km	Annual	Project progress report	DPC/DOR/DPWT
Length of time between declaration of disaster and payment to contractor for emergency works shortened*	Time of payment delayed for up to 2 years	Time of payment shortened to less than 4 months	Time of payment shortened to less than 3 months	Time of payment shortened to less than 2 months	The fund established and time of payment shortened to less than 1 months	Annual	MPWT record	DPC/DOR

* Since it is impossible to predict in which years emergencies will be declared, the target values are indicative only. If no emergencies are declared in year 1, then the target value would apply to the first year in which an emergency is declared and so on.

Annex 4: Detailed Project Description

LAO PEOPLE'S DEMOCRATIC REPUBLIC: Road Sector Project

1. The project development objective is to improve road services on two main national corridors and the provincial road network, to recover the conditions of Typhoon Ketsana damaged roads, and to establish a contingency fund for quick disaster response in the road sector.
2. **Component A: Road Network Improvement and Preservation Component** (Total US\$31.93 million; of which GOL's RMF US\$8.00 million, GOL contribution of US\$6.38 million and IDA US\$17.55 million). This component will finance physical works for the upgrading of two priority national roads, periodic maintenance of the provincial road network, and road safety improvements.
3. **Component A.1: Network Upgrading** (Total US\$18.33 million; of which GOL US\$4.78 million, IDA US\$13.55 million). The subcomponent will finance the upgrading to sealed standards of two of the identified priority national roads under the strategic plan.
4. *A.1.a - National Road 1B* - Pak Nam Noy to Ban Yo, Phongsali Province (109 km). The civil works will be managed by the Department of Roads (DOR) and will be procured using International Competitive Bidding (ICB) procedures.
5. *A.1.b - National Road 6A* – Sop Bao to Ban Dan, Houaphan Province (62 km). The civil works will be managed by the Department of Roads (DOR) and will be procured using International Competitive Bidding (ICB) procedures.
6. *A.1.c Resettlement for NR 1B*. The identified road upgrading activities will require minor land acquisition and resettlement (about 46 households for NR1B). Relocation and compensation of these affected households will be conducted in accordance with the World Bank OP/BP 4.12, and will be financed by Government. It is likely that temporary relocation may be required during construction, although it would appear that households could move back immediately adjacent to their current location. According to the social impact assessment, these households represent three ethnic groups although, their lifestyles are similar and have already adjusted to living in close proximity to the road.
7. *A.1.d Resettlement for NR 6A*. The identified road upgrading activities will require minor land acquisition and resettlement (about 26 households for NR6A). Relocation and compensation of these affected households will be conducted in accordance with the World Bank OP/BP 4.12, and will be financed by Government. It is likely that temporary relocation may be required during construction, although it would appear that households could move back immediately adjacent to their current location. According to the social impact assessment, these households represent three ethnic groups although, their lifestyles are similar and have already adjusted to living in close proximity to the road.

8. *A.1.e Construction Supervision for 1B.* Consultant services, financed and monitored by IDA, will ensure the management and construction supervision of the contracts. Primary responsibilities include:

- Providing assistance to MPWT in the monitoring of all works, including contract management, quality control and verification and certification of bill of quantity before payment, which encompass materials testing, verification of construction schedules, verification of quantities, adherence to contractually stipulated standards and conformance with approved engineering designs;
- Reviewing contractors' claims, and assisting MPWT in the resolution of such claims;
- Assisting in preparation of progress reports to be submitted to MPWT management and IDA respectively;
- Assisting in the management of the safeguards (environmental and social) aspects of contract implementation, including on-the-job training for safeguards staff and assisting in the preparation of environment and social safeguard monitoring reports and all documentation that will ultimately be submitted to the PTI; and
- Augmenting the skills and knowledge of MPWT staff in construction practices and monitoring utilizing internationally accepted procedures, systems and standards.

9. *A.1.f Construction Supervision for 6A.* Consultant services, financed and monitored by IDA, will ensure the management and construction supervision of the contracts. Primary responsibilities are the same as defined above.

10. ***A.2. Provincial Road Maintenance Program*** (Total US\$12.60 million; of which RMF financing of US\$8.00 million, GOL of US\$1.60 million and IDA US\$3.00 million). This sub-component, implemented jointly by the DOR-LRD and the DPWTs, will finance periodic maintenance on priority sections of the provincial road network identified in three Annual Work Programs (AWPs) that will be prepared based on three years rolling plans. The results of the Unified Road Management Framework (URMF) will be used as a basis for the preparation of three years rolling plans and annual work plan accordingly. IDA funded advisory services (under component B.1.a) will assist MPWT to determine road maintenance and investment priorities and strengthen DPWT's capacity in contract management and monitoring to ensure that contractors are in compliance with the contract. Construction supervision will be managed by the MPWT and its provincial departments.

11. *A.2.a Annual Work Programs.* DPWTs will prepare an annual work plan and budget (AWPB) based on the result of ProMMS processed with inputs provided by OPWTs. LRD will compile and consolidate provincial AWPBs into one AWPB, and will prioritize the programs based on available resources and the results of the updated URMF (RMS and PROMMS) analysis and evaluations. The overall AWPBs developed by LRD will be subject to prior review by IDA. Under the leadership of the DOR-LRD, the DPWTs will prepare, procure and supervise three annual work programs. The first year program has been identified and will constitute the following civil works packages:

Package	Provinces	Road number	Length
<i>Periodic</i>			
AWP1-PR-PM1	Vientiane Capital	0126	20
AWP1-PR-PM2	Phongsaly	1202	19
AWP1-PR-PM3	Bokeo	2205	22
AWP1-PR-PM4	Lungnamtha	1503	20
AWP1-PR-PM5	Oudoxay	1803	17
AWP1-PR-PM6	Luangprabang	2504	20
AWP1-PR-PM7	Sayabury	3602	24
AWP1-PR-PM8	Sayabury	3610	30
AWP1-PR-PM9	Houaphan	3204	30
AWP1-PR-PM10	Xiengkhuang	3908	29
AWP1-PR-PM11	Xiengkhuang	3909	22
AWP1-PR-PM12	Vientiane	0125	20
AWP1-PR-PM13	Vientiane	4504	30
AWP1-PR-PM14	Borikhamxay	5504	20
AWP1-PR-PM15	Khammuan	5507	30
AWP1-PR-PM16	Savannakhet	5501	30
AWP1-PR-PM17	Saravan	5501	24
AWP1-PR-PM18	Champasak	14B	23
AWP1-PR-PM19	Sekong	7501	12
AWP1-PR-PM20	Attapue	9001	14
TOTAL			456

12. *A.2.b Construction Supervision.* Construction supervision and contract management of the provincial maintenance program will be the responsibility of the provincial DPWTs and financed through internal operating costs.

13. **A.3 Support to National Road Safety Strategy** (Total US\$1.00 million from IDA). The component supports identification of cost-effective approaches to improving road safety through the implementation of the National Road Safety Strategy and Action Plan.

14. *A.3.a Road Safety Goods Acquisition and Installation.* This subcomponent will finance acquisition of road safety furniture, fixtures, signage and other goods in support of pedestrian and road user safety. This component will be supported by an international road safety advisor (to be funded and procured under an on-going ADB project and to be mobilized in early 2010) who will provide guidance, and ensure consistency and delivery in the management and implementation of National Road Safety Strategy and Action Plan. The expert will review and advise on annual work programs and budgets for the blackspot treatments programs.

15. **Component B: Institutional strengthening.** (Total US\$2.40 million; of which PHRD US\$1.00 million and IDA US\$1.40 million). The component aims to provide continued support and assistance to both central and local levels of the MPWT and the Provincial DPWTs in the areas of strategic planning and management, country system for environmental safeguards, internal controls and provincial capacity.

16. **Component B.1: Strategic Management of the Transport Sector** (Total US\$1.00 million; of which PHRD US\$0.40 million, IDA US\$0.60 million). This subcomponent supports strengthening MPWT capacity in the areas of strategic planning and management through formulating, implementing and evaluating sectoral decisions (that will enable the Ministry to achieve its transport objectives), including monitoring and evaluation, and reassessment and updating of the sector strategy to determine implementation effectiveness, and realignment of priorities and aid effectiveness, as necessary.

17. *B.1.a Strategic Management Advisory Services and Capacity Development.* Services are expected to provide advice on institutional strengthening at MPWT. The task will include provision of advice on strategic management of the transport sector, taking into account of immediate, medium term and long term needs for the sector development and balancing between needs to support the country's objective of regional integration, supporting and facilitating economic growth and poverty alleviation in sound economic, sustainable and equitable manner. In addition, the consultancy services will also help MPWT consolidate and implement the institutional strengthening framework developed over the past years including that under RMP-1, RMP-2 and LSRSP-3, particularly in the areas of strategic planning, prioritization and programming for road maintenance development, contract management, physical and financial performance monitoring to ensure compliance with requisite technical specification defined in the contract, time schedule and accounting and financial management practices. In collaboration with component B.1.b, the consultant will help MPWT manage component B.4 in delivery training workshops/courses on the matters related to strategic planning and management and contract management and others described above for central and provincial level staff.

18. An Annual Road Asset Report, which will be made publicly available, will serve to consolidate critical information on the present condition of all levels of the network, ensure proper traffic counting and analysis of transport demand, and enable examination of accident rate data. Reporting outputs encourages transparency, both internally among the ministerial divisions and externally to concerned stakeholders. Information would be collected from relevant departments and consolidated by the DPC.

19. *B.1.b Support for Strategic Management of the Provincial and Rural Road Network.* The subcomponent, financed by IDA, will provide consultant services to advise MPWT and DPWT on institutional strengthening at provincial and district level. The task will include provision of advice on strategic management for local roads development, taking into account of immediate, medium term and long term needs for the development and balancing between needs for preservation of local road asset and expansion of rural road network in order to connect the remaining segment of population living in the rural area to district and provincial

centers. The task will also include provision of advice to the MPWT/DPWT on all facets of the management of local roads maintenance program, including prioritization, program planning and implementation, technical advice on construction supervision, procurement, financial management, resettlement and environmental issues, monitoring and reporting, and general coordination and oversight, so as to ensure the efficient and effective completion of the civil works. The consultant will collaborate with consultant under component B.1.a and will assist MPWT and DPWT manage component B.4 in supporting institutional strengthening framework developed under RMP2 to further enhance capacity of DPWT and OPWT.

20. The consultant services would also advise the MPWT/LRD in the implementation of the Rural Road Program. The assignment, which will support mainstreaming of the URMF to a fully operational and sustainable status, will assist in preparing, supporting and monitoring the program's implementation and advising DPWTs and OPWTs on rural road maintenance and construction. Advice and support on identification of appropriate technical standard and guidance on quality control systems and updating of the technical guidelines will support the effective implementation of the provincial and rural transport plans in a decentralized environment.

21. The services are expected to augment the skills and knowledge of MPWT and DPWT staff in preparation of and updating provincial strategic plan for local roads development, prioritization, programming and planning construction practices and monitoring utilizing internationally accepted procedures, systems and standards. A portion of the PHRD funding will train staff in the entire process of planning, design, cost estimation, implementation, supervision and monitoring of data collection, development of reports for prioritization of candidates for different levels of budgets preparation, and reporting of annual and three year budget proposals.

22. *B.1.c ICT Development.* MPWT has in place business processes supporting its' key business functions, but their effectiveness is hindered by limited information and communication technologies (ICT). In order to improve the availability, reliability and sustainability of and access to ICT infrastructure, equipment and services, this subcomponent will finance upgrading of the quality and quantity of MPWT's ICT systems. In accordance with the MPWT ICT Action Plan, the subcomponent would upgrade the support capacity to cover MPWT and DPWTs, through ICT technical training of additional ICT support staff.

23. *B.1.d URMF Data Collection.* The subcomponent will finance consulting services to support PTI with the collection of road condition data for updating and managing the URMF.

24. *B.1.e Construction unit cost analysis.* The subcomponent will finance consulting services to analyze and update the construction unit costs used for engineering cost estimates, and propose appropriate methods to update the unit costs.

25. *B.1.f Fiduciary Support to Department of Planning and Coordination.* This activity would finance consultant services to support DPC with procurement and financial management through provision of two international consultants.

26. ***B.2 Advisory Services and Capacity Development for Environmental and Social Safeguards (IDA US\$0.35 million)*** Training and equipment will be provided to facilitate

effective implementation of Environmental and Social Operation Manual (ESOM), and the Compensation and Resettlement Decree (2005) including its technical guidelines, and Public Involvement procedure. An estimated budget identified in the Safeguard Diagnostic Review is provided in table below. (Provincial level safeguard training will be conducted under Component B.4)

Summary of the Environmental and Social Strengthening Plan

ACTIVITIES	Amount (US\$)
<u>Environmental and Social Management</u>	
a. Environmental and Social Operation Manual.	20,000
b. Implementation of the Proposed Organizational Restructuring.	100,000
c. External Environmental and Social Capacity.	30,000
d. International training for the ESD	30,000
<hr/>	
<u>Capacity Building</u>	
e. Environmental and Social Operation Manual	15,000
f. Specialized training by international consultants.	25,000
g. Safeguards Strengthening Program to ESOs and ESUs.	60,000
<hr/>	
<u>Equipment</u>	
h. Monitoring and Follow-Up Program.	60,000
i. Geographic Information System. Software and Hardware.	10,000
<hr/>	
Total	350,000

27. **B.3 Strengthening Internal Controls (IDA US\$0.50 million).** This sub-component is designed to enhance the quality and internal control mechanisms within the Ministry. Through consolidated and coordinated information management, it is expected to develop permanent capacity within MPWT to report on all road infrastructure investments, including those involving bi-lateral or donor contributions, as well as a reporting of technical assistance activities. Support would be provided for MPWT to implement its Measures to Strengthen the Internal Controls and Accountability (see Annex 11), monitor the implementation of the agreed actions and to focus specific efforts on priority elements of this framework.

28. **B.3.a. Advisory Services and Training for Internal Controls Division.** IDA financing to support review and revision (as necessary) of the Department of Inspection (DOI) mandate to extend to internal controls, develop an internal audit plan, and train staff on its implementation. The objective of this consultancy is to provide hands on technical assistance to strengthen the capacity of the DOI so that it is able to deliver its new internal controls mandate; as well as develop and implement a risk-based internal audit program for the transport sector to ensure that adequate fiduciary assurances are available during the capacity building period. The consultant services are expected to develop a risk-based internal audit methodology that is tailored to both DOI's needs and the transport sector, and should include recommendations on the audit support tools required. A training needs assessment for DOI staff will identify the current level of financial management/audit expertise and the key capacity gaps, from which a training program will be designed and delivered, including the provision of hands on coaching and mentoring of

DOI staff. The role of the divisions should also be expanded to cover further advice on implementing the proposed Framework for Strengthening Internal Controls and Accountability, which goes beyond internal audit and evaluates adherence to the measures identified to improve the governance environment in MPWT.

29. *B.3.b Technical Audits.* The sub-component will support independent review and/or inspection of works and services, including but not limited to: appropriateness of design, cost estimate, specifications and procurement of works, quality of supervision and finished works, selection of consultants and performance of consultant services, and contract variations and amendments would be conducted under the project. Reporting would be made to the Department of Inspectorate and the relevant department responsible for the works and services.

30. *B.3.c Financial Audits.* An independent external financial auditor financed by IDA will be contracted in a four-year scope and will audit the project's annual financial statements, as well as the Road Maintenance Fund, in accordance with International Standards on Auditing, based on terms of reference acceptable to IDA. The scope of the external audit will be extended for the first year to incorporate quarterly interim audit visits. The audited financial statements and audit reports will be submitted to IDA within six months after the end of each fiscal year, and the closing date of the project.

31. *B.3.d Internal Operating Costs.* The subcomponent would finance eligible expenditures associated with overall departmental operations and management activities of DOI.

32. *B.4 Provincial Department Capacity Development. (PHRD US\$0.60 million)* The sub-component will support a program of institutional capacity strengthening in contract management and technical skills development, financial management, procurement, and safeguard compliance monitoring for the Provincial Departments of Public Works and Transport (PDPWT) and their District Offices of Public Works and Transport (OPWT). With support from DOP, each province will be responsible for developing their own human resource development plan, which is to be modelled on the Human Resource Development plans and modules developed under an earlier PHRD co-financing grant that is supporting capacity development at the central ministerial level.

33. The MPWT will identify suitable educational/training institutions to conduct the workshops/courses. Provincial plans will be coordinated by the DOP and a program will be developed and administered based on the consolidated, identified needs. Training activities will focus on enhancing technical competencies, fiduciary aspects (procurement and financial management) of project management, and identification and monitoring of environmental and social safeguards during preparation and implementation of road programs. Delivery of training workshops/courses for provincial and district level staff, to support the decentralization of road transport sector functions to the provincial level.

34. **Component C: Disaster Recovery and Contingency** (Total US\$8.80 million from IDA Crisis Response Window pilot). This component will finance the repairs and improvements of the Ketsana-damaged roads in the five southern provinces and support an

emergency contingency fund for quick response to the impacts of natural disasters on the national and provincial road links.

35. ***C.1 Repairs and Improvement of Ketsana-Damaged Roads (IDA US\$7.80 million).*** This sub-component will finance civil works, engineering supervision services and incremental operating costs for the restoration and rehabilitation of the Ketsana-damaged roads and small bridges (< 10 meters).

36. ***C.1.a - Spot Rehabilitation and Periodic Maintenance of Ketsana-Damaged Roads.*** The civil works will be managed by the Department of Roads and the relevant Provincial Departments of Public Works and Transport.

37. ***C.1.b – Engineering Supervision.*** A number of qualified national consultants will be hired under this sub-component and with terms of reference prepared by the MPWT/DOR to supervise the civil works contracts.

38. ***C.1.c – Incremental Operating Costs for MPWT and the Five Ketsana Affected Provinces.*** This sub-component will fund the incremental operating costs incurred by the MPWT, DPWT and OPWT officials in carrying out the duties relating to the preparation and implementation of sub-components C.1.a and C.1.b.

39. ***C.2 Emergency Contingency Fund (IDA US\$1.00 million)*** This contingency component would disburse only after a national or provincial emergency has occurred, or is about to occur, for emergency civil works and construction materials needed to ensure the passability and safety of the affected national and provincial road links¹⁰. It is anticipated that funds may be reallocated to this window from other components to meet emergency road repair needs following natural disaster, and if required, additional financing may be sought to restore funding to the other components. In the event of a major natural disaster emergency that seriously affects the passability and safety of crucial national and provincial road links, the disaster contingency component can be implemented following the rapid response procedures governed by the World Bank's policy (OP/BP 8.00). Once triggered, OP/BP 8.00 facilitates rapid utilization of credit proceeds by minimizing the number of processing steps and modifying fiduciary and safeguard requirements so as to support rapid implementation. Stand-by arrangements allow for tendering and signing of pre-negotiated contracts, for which implementation is triggered when an emergency occurs. The mechanism allows for the financing of emergency civil works and construction materials made by the public and private sector and incurred within 6 months after the declaration of a provincial disaster emergency by a Provincial Governor's Office, to ensure the passability and safety of affected national and provincial road links. The MPWT will be responsible for the reporting and monitoring. Financial audit for the sub-component will be funded out of the sub-component budget of \$1 million to ensure the emergency civil works and construction materials are actually procured to handle the emergency situation. Physical evidence for the damages will be needed and will be provided by the MPWT.

¹⁰ It is anticipated that the Global Facility for Disaster Reduction and Recovery will provide an additional \$2 million which would be used to improve the response capacity of MPWT in disaster mitigation and management and contribute to the contingency fund to be used for emergency civil works and construction materials.

Annex 5: Project Costs
LAO PEOPLE'S DEMOCRATIC REPUBLIC: Road Sector Project

Project Cost By Component	Local US\$ m	Foreign US\$ m	Total US\$ m
Component A. Road Network Improvement and Preservation	18.96	8.97	27.93
<i>A.1 Network Upgrading</i>	10.57	5.34	15.91
<i>A.2 Provincial Network Maintenance</i>	7.89	3.12	11.02
<i>A.3 Road Safety</i>	0.50	0.50	1.00
Component B: Institutional Strengthening	1.73	0.72	2.45
<i>B.1 Strategic Management</i>	0.55	0.45	1.00
<i>B.2 Advisory Services for ESOM Implementation</i>	0.35	-	0.35
<i>B.3 Strengthening Internal Controls</i>	0.23	0.27	0.50
<i>B.4 Provincial Capacity Development</i>	0.60	-	0.60
Component C: Disaster Recovery and Contingency	6.14	1.99	8.13
<i>C.1 Rehabilitation of Typhoon Ketsana Damaged Roads</i>	5.14	1.99	7.13
<i>C.2 Emergency Contingency Fund</i>	1.00	-	1.00
Total Baseline Cost	26.83	11.68	38.51
Physical Contingencies	2.17	0.93	3.10
Price Contingencies	1.10	0.47	1.57
Total Project Costs¹	30.10	13.08	43.18
Interest during construction			
Front-end Fee			
Total Financing Required	30.10	13.08	43.18

¹Identifiable taxes and duties are US\$2.51 million, and the total project cost, net of taxes, is US\$40.67 million. Therefore, the share of IDA Grant of US\$27.80 million over the project cost net of taxes is 68.4%.

Project Cost by Funding Source

	IDA	GOL	RMF	PHRD	TOTAL
A. Road Network Improvement and Preservation	17.55	6.38	8.00	-	31.93
<i>A.1 Network Upgrading</i>	<i>13.55</i>	<i>4.78</i>	<i>-</i>	<i>-</i>	<i>18.33</i>
<i>A.2 Provincial Network Maintenance</i>	<i>3.00</i>	<i>1.60</i>	<i>8.00</i>	<i>-</i>	<i>12.60</i>
<i>A.3 Road Safety</i>	<i>1.00</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>1.00</i>
B. Institutional Strengthening	1.45	-	-	1.00	2.45
<i>B.1 Strategic Management</i>	<i>0.60</i>	<i>-</i>	<i>-</i>	<i>0.40</i>	<i>1.00</i>
<i>B.2 Advisory Services and equipment for ESOM Implementation</i>	<i>0.35</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>0.35</i>
<i>B.3 Internal Controls</i>	<i>0.50</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>0.50</i>
<i>B.4 Provincial Capacity Development</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>0.60</i>	<i>0.60</i>
C. Disaster Recovery and Contingency	8.80	-	-	-	8.80
<i>C.1 Rehabilitation of Ketsana-Damaged Roads</i>	<i>7.80</i>				<i>7.80</i>
<i>C.2 Emergency Contingency Fund</i>	<i>1.00</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>1.00</i>
TOTAL PROJECT COST	27.80	6.38	8.00	1.00	43.18

Annex 6: Implementation Arrangements

LAO PEOPLE'S DEMOCRATIC REPUBLIC: Road Sector Project

1. The Ministry of Public Works and Transport (MPWT) is the Project Implementing Agency and will be responsible for overall supervision, execution and management of the project. The project will be implemented through the existing MPWT organizational structure and its institutional arrangements, in which its concerned departments at central level are responsible for formulating policy and strategy, setting standard, allocating resources, monitoring, providing technical support including training to provincial authorities, playing a role in quality assurance systems, and carrying out impact evaluations, while its provincial branches—the Provincial Departments of Public Works and Transport (DPWT)—undertake the implementation roles including planning, budgeting, procurement, contract management, quality control, and reporting.

2. It is determined in the Prime Minister Decree on the organization and mandate of MPWT No. 373 /PM dated 22 October 2007 that MPWT plays a role as Secretariat to Government in managing, at the macro level, land transportation, waterway transportation, air transportation, train transportation, housing, town planning and water supply nationwide. It comprises six technical departments: Department of Roads (DOR), Department of Transport (DOT), Department of Inland Waterways (DIW), Department of Civil Aviation (DCA), Department of Railways (DRW), Department of Urban Planning and Housing (DUPH); and four supporting departments and an institute: Department of Planning and Cooperation (DPC), Department of Personnel (DOP), Department of Inspection (DOI), Cabinet Office (CO), and Public Works and Transport Institute (PTI). MPWT has a mandate to implement the National Social Economic Development Plan (NSED) in respect of transport and urban infrastructure. In doing so, MPWT deepens the NSED into its sector strategic plans, long term plans, annual plans, programs and detailed projects.

3. *Provincial Governor's Office.* The Provincial Governor's office is responsible for all works in the province and for the budgeting and allocation of provincial funds to the local road network. The Governor's office is responsible for securing adequate and agreed funds for provincial contribution to the routine and periodic maintenance, road network improvement and for the operational costs, as well as responsible for disbursement of project funds to the contractors through its provincial treasury.

4. *DPWT.* The provincial DPWTs are the counterparts at provincial level. The Directors of DPWT reports both to the MPWT and the provincial Governor. Normally the division of reporting follows the flow of funds, i.e. issues related to local roads remains a provincial matter while matters related to national roads involves the DOR and the MPWT. Technical issues as well as standards are always discussed with the departments concerned. The DPWT is responsible for preparation of a strategic plan for local road network development including annual work plans, three year rolling plans, and long-term plans. The DPWT implements all physical work related to the road infrastructure, including planning, budgeting, procurement, contract management, accounting, quality control, and reporting. LRSP will support the capacity building of the DPWT in technical capacity for their staff members and strategic management for the management level aiming at better overall management.

5. *District Office of PWT.* The District OPWTs report to the DPWT for road works. As per government policy the district will increasingly become the planning level in the administrative organization of Lao PDR. The district offices are today responsible for the input to the planning of the maintenance and construction of the local infrastructure and are handling the routine maintenance works, routine inspections, road condition surveys, basic access construction, etc. The district offices are in substantial need of capacity building, and many district offices are lacking sufficient number of staff, equipment and operating cost for carrying out their mandate in data collection, contract management and supervision. The project support to the OPWT will mainly be provided through the DPWT, who will then assist and train OPWT staff in their duties.

6. *Village Level.* As per government policy, the village will become the implementation level in the administrative organization and reports to District. The villages are today involved in routine maintenance of local roads and parts of the national roads. The village offices are however in need of capacity building and resources. District supervisors assisted by DPWT staff will train and support villages in routine maintenance of rural roads.

Management and Oversight of LRSP

7. Strategic review and oversight of the Project will be provided through the MPWT leadership structure, led by the Minister or a high-ranking designated official. The leadership would be responsible for results on the development objectives of (a) sustainability of the sector development; and (b) decentralization and capacity-building; financial resource mobilization including cost sharing arrangements, RMF revenues and allocations; and donor coordination. DPC plays a role as Secretariat of the Ministry in preparing and managing strategic plans for the development of all sectors under responsibility of MPWT. It is responsible for planning, budgeting, monitoring and evaluation (managing statistics and consolidating the progress reports from all executive departments within the Ministry). Furthermore, it has a mandate to be the focal point for cooperation with development partners, other government agencies, as well as private sector sectors. This same set-up will be responsible for the overall management of the LRSP.

8. Coordination between the MPWT and donors will be facilitated and guided by the existing Infrastructure Sector Working Group (ISWG), which is chaired by the MPWT Minister, comprises representatives of development partners, and is supported by the MPWT's Secretariat. The Secretariat is led by Director General of DPC, and will manage and coordinate the project implementation and monitoring at the working level. It comprises representatives of all ministerial departments and is responsible for primary management and coordination of the project implementation. The secretariat would be collectively responsible for successful implementation of the Project and will be responsible for the oversight of the strategic plan implementation progress and update the plan, donor coordination, and aid harmonization. Division of planning and cooperation of DPC will serve as a permanent office for the secretariat, tasked with overall coordination of the various project activities implemented by various MPWT departments and DPWTs and overall reporting requirements.

Implementation arrangement for each component

Network Upgrading (A.1)

9. DOR and DPWTs. DOR will plan, and monitoring project implementation, coordinating stakeholders including donors and local authorities, and to support the implementation process including ICB procurement. The concerned DPWTs in Phongsaly and Houaphan Provinces will be responsible for implementation. DOR will assign a project manager and provide assistance for each road project.

Provincial Network Maintenance (A.2)

10. These works will be implemented jointly by the LRD and the DPWTs. Under the leadership of the LRD, the DPWTs will prepare annual and three year rolling plans, based on the results of ProMMS processed with road condition data collected by DPWTs and OPWTs. DPWTs will procure and supervise the contracts. LRD will prepare the annual and three year work programs based on information submitted by the DPWTs, and will prioritize the programs based on available resources and the results of the updated URMF (RMS and ProMMS) analysis and evaluations. The overall AWP developed by LRD will be subject to prior review by IDA. In addition, LRD with technical assistance from consultants will also provide technical support to DPWTs, in particular quality control of civil works and monitor the implementation of the program. All contracts will be procured in accordance with NCB procedures acceptable to IDA, similar to RMP-2, but as modified to conform to recent changes to the country system for procurement. Consultants will be hired by the DOR to provide implementation support to the DPWTs carrying out road supervision.

Road safety (A.3)

11. DOT will be responsible for this sub-component. DOT will be assisted by an international road safety advisor to be funded under the ADB project.

Strategic Management (B.1)

12. DPC and PTI will be in charge of this sub-component.

Advisory Services for ESOM Implementation (B.2)

13. The primary responsibility for this sub-component is with the environment and social division (ESD) under the PTI. ESD will also coordinate with DOR for the environmental and social management activities under the sub-component and with DOP for training related capacity building activities.

Internal Controls (B.3)

14. DOI will be responsible for the sub-component.

Provincial Capacity Development (B.4)

15. The Department of Personnel will be responsible for (i) assessment of technical capacity of the DPWT staff; and (ii) preparation of the annual training plan and budgeting, based on the training needs assessment and in coordination and assistance with capacity development consultant. The Management and Manpower Development Division (MMDD) assesses the capacity building and capacity rating on an annual basis. Project training plan and annual work plan and budget will be established, focusing on the results. The training will be divided into two main categories: (i) strategic management training, the target group of which is officials at medium to high management level, (ii) technical training, aiming at improve skills and technical knowledge in managing road transport effectively, safely and environmental friendly.

Rehabilitation and Improvement of Ketsana-Damaged Roads

16. DOR and concerned DPWTs and OPWTs in Attapeu, Sekong, Saravanh, Champasack, and Savannakhet Provinces will be in charge of the civil works and engineering supervision consultant services.

The Emergency Contingency Fund

17. The fund would be made available to all provinces in case of emergencies arising from natural disasters. DOR and the concerned DPWTs will be in charge of the emergency civil works.

Supporting Services

18. *DOR-TED.* The Technical and Environmental Division (TED) will be responsible for the preparation of medium term road planning, roads design and preparation of bidding document, location referencing, and road data base management. The TED will be responsible for the preparation of IEE/EMP and will ensure that the EMP is integrated into the civil work contracts.

19. *DOR-DD.* The Disbursement Division (DD) will be responsible for the administrative and financial management of the project activities, including internal and external financial audit, and processing of payments to consultants, contractors and suppliers. The DD plays an important role in its department and within the ministry. Currently it manages and monitors finance and accounting for DOR, which represents 95% of the MPWT budget and it handles almost exclusively all foreign funded projects within MPWT. The division is the core of administration, finance and accounting in DOR. The LRSP will continue to support the DD in its work to build capacity in financial management within DOR and all seventeen DPWTs through the local FMS assistants. DD is the focal point for system internalization in the field of financial management at ministry level and acts as supervisor and coordinator in the implementation process at all seventeen DPWTs.

20. The Public Works and Transport Institute (PTI), is responsible for developing, operating and maintaining the RMS modeling, and will perform the relevant RMS tasks needed to

formulate the road maintenance and rehabilitation program. PTI and DPWTs will collect all the required data needed to evaluate all national roads and the local roads of 17 Provinces, including inventory surveys, periodic road condition surveys, traffic surveys, traffic management system, road database, and pavement management system. It will liaise with LRD for further development of ProMMS.

21. PTI-ESD: Environmental and Social Division (ESD) of PTI will be responsible for (i) monitoring the implementation of IEE/EMP, ESSF, RPF, EGPF, RAP and EGDP; (ii) ensuring DOR includes the safeguards requirements into the bidding documents; (iii) monitoring the supervision of the implementation of these requirements; (iv) monitoring safeguards mitigation measures are applied; and (v) liaising with the national Water Resources and Environment Agency (WREA). This will include ensuring that those affected by any sub-projects are compensated, resettled and/or rehabilitated in accordance with the Resettlement Compensation Guidelines. ESD will provide an annual report on the environmental and social impacts of the works carried out under the program and ensure all road maintenance works are at all times carried out in conformity with the Environmental Guidelines for Road Projects in a manner which ensures that any adverse environmental impact is effectively mitigated in a timely and satisfactory manner.

22. The Cabinet Office will be responsible for public disclosure of project information at the national and local levels, including planning, procurement information, safeguards, and MPWT web site management. It will also be responsible for ICT development.

23. *Implementation Schedule.* The project will be implemented over a four-year period commencing in April 1, 2010 and closing in September 30, 2014. Maintenance will be arranged according to three annual work plans. The four-year project period includes the lead-in times for initial procurement and the defects liability periods for the final contracts, as well as time for final disbursement of Grant funds.

Annex 7: Financial Management and Disbursement Arrangements
LAO PEOPLE'S DEMOCRATIC REPUBLIC: Road Sector Project

Financial Management Assessment

1. The FM assessment was carried out in accordance with the Financial Management Practices Manual issued by the Financial Management Board on November 3, 2005. The assessment is carried out because Bank policy requires the borrower and project implementing entities to “maintain financial management systems—including accounting, financial reporting, and auditing systems—adequate to ensure that they can provide the Bank with accurate and timely information regarding project resources and expenditures.”
2. The objective of the assessment was to determine whether the entity implementing the project has acceptable FM arrangements. The arrangements include the entity's system of accounting, reporting, auditing, and internal controls, and are deemed acceptable if:
 - a. they ensure that funds will be used only for the intended purposes in an efficient and economical way;
 - b. they are considered capable of recording correctly all transactions and balances, supporting the preparation of regular and reliable financial statements;
 - c. they are considered capable of safeguarding the entity's assets; and
 - d. they are subject to external audit arrangements acceptable to the Bank.
3. Bank policy requires that an acceptable FMS is in place when project implementation begins. In practice, it is desirable to ensure that acceptable arrangements are in place no later than the date of effectiveness of the relevant loan, credit, or grant agreement.

Summary of the Assessment

4. The Project will be implemented by the Ministry of Public Works and Transport (MPWT). The project will not make use of any project unit, but rather it will utilize the existing staff within the Ministry and the 17 Provincial Departments of Public Works and Transport (DPWT). The Disbursement Division (DD) within the Department of Roads (DOR), and the 17 provincial finance units (PFUs) will be responsible for the financial management arrangements. These arrangements were reviewed in accordance with the Financial Management Practices Manual issued by the Financial Management Board on November 3, 2005:
 - The overall financial management risk rating for the project is substantial even though this is a follow-on project and the accounting/finance policies, procedures and staff have been used satisfactorily in the implementation of previous projects. The financial and accounting staff members remain technically weak, especially at the provincial levels, and operate in an environment with limited internal controls. In addition, since the project will be implemented at the provincial level, the significant increase in the quantity of work to be done further increases the staff capacity risk exposure of the project;

- Implementation of the project is being mainstreamed into the MPWT, which has successfully implemented many other World Bank and development partner financed projects. However, the institutional and human resource capacity is limited especially at the provincial level;
- Several mitigating measures are proposed, including improving and upgrading financial management procedures to address the current internal control weaknesses, updating the FM manual to be aligned with Standard Financial Management Manual (SFMM), establishment and staffing of an internal audit unit (through extension of the Department of Inspection (DOI's) mandate and technical assistance to support internal audit capacity building), regular training and capacity building for the FM staff, and external auditors specifically for the project;
- Emphasis is being given to further strengthening the institutional and human resource capacity to manage the sector in a sustainable manner and thus reduce the overall risk associated with the project;
- Governance systems are being strengthened through the use of value for money (technical) audits, the implementation of an internal audit unit (as described above), and public awareness and communication campaigns; and
- Counterpart contributions will be made to the project through the payments made by the Roads Maintenance Fund and contributions from Government.

5. The residual risk after the proposed measures is expected to remain initially at the **substantial** level, with potential to improve to moderate, as the institutional strengthening and staff capacity building measures begin to take effect.

Implementation Arrangements

6. The organization for project management will be within Government structures. The Ministry of Public Works and Transport (MPWT) through the Department of Roads (DOR) and the Provincial Departments of Public Works and Transport (DPWT) will have the sole responsibility for the implementation of the project, including accounting for project funds and coordinating activities with other ministries and departments as needed. The activities of the project will be mainstreamed into the various offices in the MPWT and the Provincial DPWT using government staff. The financial management aspects of the project will be the responsibility of DD in DOR, and the provincial finance units.

7. The coordination of the project activities will be the responsibility of Office of the Director General, DPC. This office will produce the project progress reports which will also include the unaudited interim financial statements (IFRs) prepared by the DD.

8. The DD within the DOR will be responsible for the accounting and financial management aspects of the project. The DD has 14 full-time staff supported by one short-term consultant. The DD has been responsible for the accounting and financial management of several World Bank-funded projects, the most recent of which are – First and Second Road Maintenance Projects (RMP-1 and RMP-2) as well as many other externally funded projects. During those projects, the Division has performed well with limited external support. The technical capacity of the provincial disbursement divisions vary considerably with some

performing well and others not so well. Currently, the DD and the various provincial finance units are supporting the implementation of externally funded projects totaling about US\$60 million. The proposed project will substantially increase this amount which may strain implementation capacity particularly at the provincial level.

9. Given the decentralized nature of the project and the still limited capacity of the staff, it will be necessary to provide further capacity building and formal training to both the central and provincial disbursement divisions to continue to strengthen the institutional and staff capacity. In addition, the project will provide for some focused short-term technical assistance to address issues as they are identified during project implementation to ensure that the DD at the central and provincial levels and the Road Maintenance Fund will have sufficient capacity to perform adequately. Support will also be provided to strengthen the institutional capacity of the MPWT to include the establishment and staffing of an internal audit unit within DOI.

Country Issues

10. The Country Financial Accountability Assessment (CFAA) carried out in mid-2002 concluded that the overall fiduciary risk in Lao PDR is considered to be high despite having elaborate built-in control procedures and steps within the Government Public Financial Management system. The conclusion is due to insufficient transparency over the use of public finances with only limited public access to Government budget and financial information. Donor financed projects are financed off-budget. These weaknesses have been compounded by insufficient awareness of modern practices of internal control in the public sector and by the Government's ongoing decentralization initiative, which needs to be supported by a more robust institutional framework that clearly defines the new responsibilities at lower levels. Technical capacity of staff at these levels needs to be strengthened and the external audit oversight function by the State Audit Organization needs improvement. Capacity at provincial and district levels is extremely weak. A recently completed IDF grant to improve accountability in state-owned enterprises and the private sector has helped develop the environment for the accounting and auditing professions and initiated amendments to accounting and auditing laws. A Public Expenditure Review combined with an Integrated Fiduciary Assessment for 2004/2005 was completed in 2006 and disseminated in 2007. The findings from those reviews also identify the weak accounting environment as described above.

11. The recent Joint Portfolio Effectiveness Review (JPER) undertaken by GOL, ADB, SIDA and WB also identified similar issues and weaknesses. It was agreed that a series of remedial measures would be implemented in a time bound action plan including: (i) delegation of authority over the management of project designated accounts to executing agencies that have in place adequate quality and control systems; (ii) streamlining of approval processes; (iii) harmonization of FM manuals; (iv) utilization of uniform FM software; (v) consolidation of project FM functions; and (vi) implementation of a consolidated training program. A financial transactions review undertaken by the World Bank on selected projects and Trust Funds has also revealed a number of financial management weaknesses. For example, circular 2397 issued by Government in November 2002 does not stipulate the importance of submitting supporting auditable invoices for fuel, accommodation and allowances when donor funded project FM requirements do require such documentation. However, Government has updated

the above referenced circular to both reflect the inputs provided by the development partners and line agencies and to adjust the values of the various ceilings to reflect the increases in costs. These new regulations became effective for the fiscal year 2008.

12. The bulk of external assistance has been channeled off-budget both in the sense that resource allocations are not reflected in the Government's budget documents and the related funds are not disbursed through the national treasury. This lack of information and absence of effective instruments to guide the allocation of external financing seriously undermines the integrity, credibility and effectiveness of the budgetary system. There is insufficient transparency in public finances and the budget process. The Financial Management Capacity Building Project (FMCBP) and the formulation of Government's master plan for reform of public financial management through the Public Finance Management Support Project (PFMSP) aims to address the above weaknesses by mobilizing funds from a number of development partners to finance a comprehensive overhaul of the public financial management systems.

13. While the implementation of the recommended actions from the above review have started to improve specific fiduciary issues, the country financial management environment for externally funded projects and public resources more generally remains weak. Some of the measures will take time to have a significant impact.

14. The financial transactions review undertaken in 2007 identified a number of project portfolio wide financial management weaknesses. A review of management letters issued on previous projects implemented in the provinces funded by the Bank, UNDP and other development partners point to a number of financial management and internal control weaknesses at the provincial level.

15. The 2007 Transparency International Corruption Perception Index ranks Lao PDR at 163 from 152 (2006) from a pool of 173 worldwide. This indicates that the level of corruption in Lao PDR is perceived to be increasing and therefore there is a consequent increase in the degree of perceived risk for the project.

16. A financial management action plan has been prepared as part of this document which focuses on the technical assistance that will need to be included in the project to mitigate some of the weaknesses noted above. The action plan is designed to address the financial management issues, strengthen the FM capacity, and improve in the project's governance environment.

Summary Risk Analysis

17. The overall Country level fiduciary risk is substantial. Most of the key actions aimed at mitigating these risks are still under implementation; therefore, they have not yet progressed sufficiently to impact on our risk assessment. The risks primarily arise from systemic weaknesses, the high level of cash transactions at the provincial level, a weak control environment and limited financial management capacity. To address these risks, an action plan has been developed to strengthen the project's financial management systems and the technical

capacity of the financial staff. The action plan will be reviewed during the implementation of the project after each supervision mission to ensure appropriate mitigation measures are implemented for any additional specific issues that are identified.

18. **Risks and risk mitigation measures.** The table below lists the key risks identified for the proposed project. A risk management plan has been identified for each risk, to ensure appropriate mitigation actions are put in place:

Table 1: Summary Risk Table

<i>Risk</i>	<i>Risk Rating</i>	<i>Risk Mitigation Measures incorporated in Project Design</i>	<i>Residual Risk</i>	<i>Condition of Effectiveness, Board or Negotiation (Yes or No)</i>	<i>Remarks</i>
Inherent Risks					
Country Level					
Governance issues have previously been identified (high country corruption index on the Transparency International index) and hence there is a risk that funds may not be used in an efficient and economical way and exclusively for purposes intended.	H	<p>Appropriately qualified and experienced Ministry staff will be managing the fiduciary aspects of the project. Internal control procedures will be documented in a procedures manual and staff will ensure that these guidelines are followed.</p> <p>Training and capacity building programs will be used to continue to strengthen the implementation capacity.</p> <p>The Treasury weaknesses and the generic PFM inadequacies are being addressed through the FMCBP. Some of the core aspects in PFM reform such as establishing provincial internal audit and bi-annual systems audits will be implemented. These will include budgeting, accounting, application of MTEF principles, internal audit and external audit of district and provincial operations.</p> <p>Government wide, staff will be trained in MTEF principles, Treasury management, commitment control and debt management.</p>	H		
There is weak control environment with serious weaknesses in National Treasury operations, especially in cash management, inadequacies in PFM accounting system, and	H	<p>Annual public expenditure reviews will be undertaken at provincial level.</p> <p>The FMCBP has clear achievement indicators in</p>	H		

<i>Risk</i>	<i>Risk Rating</i>	<i>Risk Mitigation Measures incorporated in Project Design</i>	<i>Residual Risk</i>	<i>Condition of Effectiveness, Board or Negotiation (Yes or No)</i>	<i>Remarks</i>
weak internal and external auditing capacity. Owing to low salary levels within Public service, fuel, training and workshop allowances are a means of livelihood and are likely subject of abuse. Since the control environment at the provincial level is weakest, the decentralized nature of the project increases the risk.		reforming and addressing the weaknesses noted.			
Implementing Entity					
The project may be unable to find and engage appropriately qualified staff to manage implementation.	S	The staff in MPWT/DOR has experience in managing externally funded projects and programs will be in place to strengthen and improve systems through capacity building, and focused short-term consultancies. However, the increased size of this project may put a strain on capacity and this will need to be monitored closely..	S		
Government may be unable to meet its funding obligations due to budgetary constraints.	M	The fact that counterpart funding will be provided via the RMF limits this risk. Support will be provided to the RMF to strengthen its financial management capacity.	M		
Government may be unable to finance the current program of works unless all proposed development partners participate	S	The size of the program and level of IDA funding has been adjusted to reflect the level of funding available from development partners. ICB shall apply for all contracts above a certain threshold and WB rules shall apply.	M		
Potential corruption arising from procurement	H	A review of indicative red flags for collusion will be periodically conducted. Advertisement of the phone number of the State Inspection Authority shall be put in the paper every quarter in the first eighteen months for people to call the unit for any suspected cases of corruption and collusion so that the unit can investigate and bring	S		

<i>Risk</i>	<i>Risk Rating</i>	<i>Risk Mitigation Measures incorporated in Project Design</i>	<i>Residual Risk</i>	<i>Condition of Effectiveness, Board or Negotiation (Yes or No)</i>	<i>Remarks</i>
Potential corruption arising from other sources	S	<p>offenders to book upon obtaining evidence of malfeasance.</p> <p>Further, community accountability mechanisms will be established and active communication programs implemented so that communities are well aware of the works to be done in their areas.</p> <p>An I/C system is being developed and documented, and an internal audit unit, within DOI, will be established and supported by independent consultants.</p> <p>Programs to improve formal communication with communities will be implemented.</p> <p>Annual programs for management to prepare/review and update Risk Management Plans to address issues identified from IA and external audit will be put in place.</p>	S		
Overall Inherent Risk	S		S		
Control Risk					
1. Funds Flow Funds may not reach intended beneficiaries in a timely manner.	M	Disbursement mechanisms and procedures have been tested in RMP-2 and proven successful.	M		
2. Staffing The capacity of finance staff at central and provincial levels are limited and could be adversely affected by the transfer of one or two key personnel	S	Existing training and capacity building programs will be continued, focused short-term consultants will be available to address issues, and peer-to-peer programs will be developed to provide practical support. However, the decentralized nature and size of the project place additional pressure on the staff.	S		
3. Internal Audit There is currently no internal	H	A consultancy is on the ground to design the internal control system, prepare	S		Hiring of the firm will be made a dated covenant to

<i>Risk</i>	<i>Risk Rating</i>	<i>Risk Mitigation Measures incorporated in Project Design</i>	<i>Residual Risk</i>	<i>Condition of Effectiveness, Board or Negotiation (Yes or No)</i>	<i>Remarks</i>
audit except for an inspection department within the Ministry. Considerable capacity development will be required to establish and get the internal audit function working effectively. Risk during the capacity building period will accordingly be high.		manual which will support a newly created internal audit unit. Also, an internationally recruited firm will be hired to support the start-up of the internal audit unit and support development of the staff.			ensure the firm is in place within 3 months of effectiveness.
4. External Audit The State Audit Office is still developing, and does not yet possess the necessary human capacity to discharge its statutory duties satisfactorily. Risk is that the annual audit may not meet IDA requirements.	S	The audit of the project activities will be covered by an independent external audit firm recruited for the purpose under a TOR satisfactory to IDA.	M		Appointment of the auditors will be made a dated covenant to ensure that they are in place within 3 months of effectiveness.
5. Reporting and Monitoring- Risk that progress reports will not be able to link payments with physical works and thus not provide improved control for management.	S	Reporting requirements will be set out within FM manual to be approved by the Bank. These will include quarterly un-audited IFRs, as well as annual financial reports. Formats for progress reports will specify the necessary linkages between physical and financial – and M&E systems will be established to capture needed information.	M	Yes	Agreement on formats for IFR s must be reached by negotiation.
6. Information Systems- Accounting software is in use, but not being utilized to its full capacity.	S	Training and capacity building will be continued to strengthen the technical capacity of the staff and to increase their knowledge and utilization of the software.	S		
<i>Overall Control Risk</i>	<i>S</i>		<i>S</i>		
<i>Overall Risk Rating for the Project</i>	<i>S</i>		<i>S</i>		
<i>Risk Rating – H (High Risk), S (Substantial Risk), M (Modest Risk), L (Low Risk) N (Negligible Risk)</i>					

Strengths and Weaknesses

19. **Weaknesses:** Past experience has shown that the capacity for planning and executing budgets is weak. The budgets are consolidated and approved without ensuring there will be sufficient funds available. Expenditures have been executed without adequate financial disciplines to ensure that there was sufficient budget available. This area will need to be strengthened to enhance project management capacity.

20. **Strengths:** The project staff are keen and understand the Bank's requirements very well. The current team consists of experienced and skilled staff that will help ensure smooth operations.

Staffing

21. As indicated above, the DD has 14 full-time staff with experience in working with projects funded by various development partners. Of these staff, one has a university degree and nine others have diplomas in accounting. Four of the staff members have administrative positions. At the provincial level, the finance units normally have three staff and their qualifications vary considerably. Efforts have been made to enroll the staff, at both headquarters and provincial levels, in formal education programs and to provide them with short-term training to upgrade their accounting knowledge and skills. As a result of these programs, five staff in headquarters have increased their professional qualifications from a middle to higher level diploma, 34 of the 51 staff in the provincial finance units are currently enrolled in education programs. While these programs have been effective, shortages of qualified staff in the provincial finance units remain a problem as staff members are frequently moved to other positions by the Provincial Governor once the training has been completed. The current shortage of qualified staff will be more serious as the number and size of road contracts increase and as more of the activities are decentralized. Ongoing programs to strengthen the capacity of the staff are therefore key requirement. Furthermore recruitment of more, better qualified staff for both the headquarters and the provincial finance units should be a priority.

22. Due to the small number of staff at the provincial level, it is not always practical to achieve full segregation duties. This increases the internal control risks accordingly.

Accounting System

23. The accounting system currently in use is the ACCPAC, module Corporate Series Version 4.0 and updated in 2005 to SAGE ACCPAC-ADVANTAGE SERIES Version 5.3. The system operates on a stand-alone basis at the central level and in all 17 provincial disbursement divisions. Data is transmitted to the central level via the internet. The intention to operate the system on-line with direct connection of the central and provincial systems is pending the final design of the Financial Management System (FMS) being developed for the Government by the Ministry of Finance. ACCPAC is also used in other projects in Lao and is satisfactory. The DD also makes use of Excel for some reports and analysis. Training programs must be continued and enhanced to increase the capacity of the staff to make more effective use of the ACCPAC at all levels. In addition, wherever possible all new recruits should have at least a higher diploma in accounting so that they are better able to provide technical leadership and further strengthen the internal control environment.

Accounting Policies and Procedures

24. The project's key accounting policies and procedures have been articulated in a Financial Guidelines Manual prepared for the RMP-2. The manual will be updated to reflect the new institutional arrangements and procedures to be used in the proposed Road Sector

Project. The updated draft manual will be available for review and comment by the Bank no later than grant negotiations and the manual will be finalized prior to any disbursements being made. The manual documents the major transaction cycles of the project: funds flow processes, accounting records, supporting documents and chart of accounts. It also summarizes authorization procedures, the financial reporting process, financial and accounting policies for the project, budgeting procedures, financial forecasting procedures, procurement and contract administration and management, as well as replenishment procedures for the Designated Accounts and the external audit arrangements. The PFUs and the RMF also use the same financial manual. The manual will be aligned to be consistent with the new SFMM to be used for all externally financed projects in Lao PDR.

25. The budgets are prepared at the provincial level and submitted to headquarters for review. Since the DD is the accounting unit responsible for all externally funded projects, budgets for projects to be funded from these sources are submitted to DD for review. These submissions are reviewed by DD to determine the adequacy of funding and also for the capacity of the province to effectively implement the work. Budgeting is output and work plan driven based on the estimated physical and financial requirements for specific roads, bridges and other transport projects. The budget authorizations are also done on a project basis; however, the level of costing detail is compressed to two categories - civil works and operating costs – and this lack of detail makes the monitoring of the budget more difficult. The difficulty is increased by poor internal coordination between the provinces and headquarters. The provinces have the authority to approve variation orders up to 15% of the contract value, so unless they advise/inform headquarters of these decisions it may result in budget over-runs and delayed payments to contractors. In addition, delays in the approval and posting of disbursements make the comparison of physical and financial progress difficult and this weakens the ability to monitor and control the contracts. Budget releases are provided on a quarterly basis, and any funds not fully committed at the end of the fiscal year are returned to Treasury. For multi-year projects, priority is given in the subsequent year to ensuring that adequate funds are available to complete the agreed work.

26. The DD has been implementing, through the on-going RMP 2, training and capacity building programs for the finance and accounting staff in the Ministry and in each of the 17 provinces. Local consultants are used to provide hands-on training at the provincial level, and local accounting professionals have been contracted to provide formal training to upgrade the technical capacity of the staff. The staff members are also encouraged to attend local schools in the evenings. These programs have been well received by the staff and are producing some tangible results. One indirect benefit has been to strengthen the capacity of the local professionals and universities to provide professional training programs.

27. The financial management systems in the Roads Maintenance Fund (RMF) are generally weak and under-staffed. With only four personnel including two accountants, the RMF does not have enough staff to function effectively. The volume of receipts has now grown to about US\$15 million per year and the volume of work will therefore also increase, which means the RMF will need additional qualified personnel. The financial management problems are compounded by the fact that the provinces frequently do not remit the fuel levies collected on behalf of the RMF and therefore more active management of this process is required. The

limited capacity of the staff at RMF has also meant that reconciliations between the funds remitted by the provinces with the customs documentation have not always been done. Since the RMF is intended to contribute the counterpart funds for the RMP 2 and for the Road Sector Project, it is important that this weakness is addressed to ensure adequate funding is available.

28. A consultant is working with the Ministry and the RMF to review the organization of the RMF to properly define its role, responsibilities, and the staffing level required. The results of this review will provide a solid basis to implement needed reforms in the RMF.

Internal Controls and Audit

29. A consultant is currently working with the Ministry to address areas where the financial management capacity of the staff needs to be improved and to identify actions that need to be taken to strengthen the existing internal control environment. This consultancy is using and will build on a recently completed study/fact finding report indicating how to organize and operate an internal audit unit. Once agreements have been reached on the changes needed in the internal control system, the consultants will support efforts by the Ministry to prepare an internal control manual. A draft internal control manual, supported by SIDA funded consultant, has been completed.

30. While there is currently no internal audit unit within the MPWT, the Minister has indicated that the implementation of an effective internal control system and with that the staffing of an internal audit unit is among his highest priorities. The MPWT does have a Department of Inspection and its mandate has been extended to cover internal audit. However, considerable capacity development will be required to develop internal audit capacity. This department is not fully staffed and currently only able to address identified problems rather than review processes and transactions on a routine basis to identify problems and areas of internal control weaknesses. The department has only a couple of people with a background in accounting which means that training and development will need to build capacity from a very low base of understanding. It is intended that a locally based Chartered Accounting firm with international affiliations be contracted to assist the newly established unit to perform effectively and to support its capacity building program. The consultants will be hired under TORs acceptable to the Bank, and will include specific capacity building requirements to ensure both technical knowledge and practical experience is gained by Internal Control Division (ICD) staff. To ensure the consultants are hired in a timely manner, it will be made a dated covenant in the legal agreement. The costs will be financed from project proceeds.

31. In the interim period while the DOI (ICD) internal audit capacity is being built the scope of the external audit will be extended to include interim audit visits during the first year. Discussions with the selected external auditor will explore the possibility of having ICD staff participate in the interim audit visits as a further capacity building opportunity and a means of providing practical hands on audit experience.

External Audit

32. All Government ministries and departments are supposed to be audited by the State Audit Organization (SAO). The SAO has limited capacity and therefore the project's annual financial statements will be audited in accordance with International Standards on Auditing by an independent external auditor based on terms of reference acceptable to the Bank. The audited financial statements and the audit reports will be submitted to the World Bank six months after the end of each fiscal year, and the closing date of the grant.

33. There will be one audit report and one set of financial statements on which the auditors will issue a single opinion covering project accounts, the sources and uses of funds, and the management of designated accounts. In addition, a management letter outlining any internal control weaknesses in the implementing office and other agencies at various implementation points will be issued by the external auditor together (refer above to the extended scope arrangements for the first year) with the audit report. The cost of the audit will be financed from project proceeds.

34. The project external audit may also be required to audit the expenditure incurred under the emergency contingent component should the use of these funds be triggered by the declaration of a natural disaster. The external audit costs for this will be financed from the contingency component.

Reporting and Monitoring

35. The project financial statements will be prepared by the Disbursement Division in accordance with applicable international public sector accounting standards and be prepared on a cash basis. Contract commitments will be reported separately. The current system does not keep adequate records of accrued expenses and liabilities such as retentions and amounts due from GOL, and this will be addressed as part of this project. The project will produce interim un-audited financial reports on a quarterly basis, using formats to be agreed with the Bank. These formats for the IFRs and the Annual Financial Statements will be agreed by the time of negotiations. The agreed reporting formats will be attached to the minutes of negotiations.

Proposed Project Components to address FM issues

36. The following consultancies are proposed for funding in component B, Institutional Strengthening to address issues identified during this FM Assessment:

- Internal Audit Unit (ICD within DOI) will be established and the staffing costs for the first two years will be financed from the project to provide a bridge until the MTWP can finance the unit from its own budget.
- Internal Audit consultancy – a firm will be contracted to support the operations of the internal procedures in the MPWT and to provide practical training and support. It is proposed that the support will be provided by a fulltime local consultant for 12 to 18 months over the first year of the project to ensure that international best practice is implemented. This support will include the design of value for money audits to

supplement the normal technical and financial evaluations of the completed works and provide input to management regarding the performance of the sector and whether or not the various provinces are getting good value from the contracts being managed by them;

- The scope of external audit will be extended for the first year of the project (while internal audit capacity is being built) to include quarterly interim audit visits. ICD staff will be involved in these visits to provide them with hands on practical experience.
- Formal training in accounting and ICT for the staff in the MPWT and the provincial DPWT – to be provided on a regular basis during the life of the project and making use of local universities and professionals;
- Capacity building for the accounting and financial management staff to provide practical application of the materials covered in the formal training – a small portion of this activity may also be used to “retool” or upgrade the office equipment including file cabinets, storage facilities, computers and ICT equipment. This activity will also include focused study tours to other countries in the region to observe their practices and experiences. Operating costs will be provided to fund regular provincial meetings for financial staff to review the financial and technical issues and to fund support/capacity building from stronger provincial units to weaker ones in order to upgrade the technical capacity of the provincial financial offices;
- Community awareness and communication programs will be used to ensure that the respective communities are informed about road maintenance/construction contracts, including the names of the successful bidders and the cost of the contract. These programs will also be developed to ensure that the respective communities are given the opportunity to provide input into the planning process and to provide information regarding the performance of the contractors and general governance issues; and
- Risk Management and Internal Control Training Programs will be provided as part of annual workshops for central and provincial management to strengthen their capacity to manage and control the transport programs, to update the risk management plans, to review the implementation and findings of the internal audit unit, and the status of the actions to the management letter from the external auditors.

FM Action Plan

37. The FM action plan designed to address the identified issues is set forth below:

- Agree on the formats of financial management reports and annual project financial statements by negotiations
- Finalize the Accounting Procedures/FM manual as a condition of disbursement.
- Finalize the schedule for hiring the external auditors by negotiations
- Contract project external auditors (with an extended scope for the first year) within 3 months of effectiveness
- Contract project internal audit consultants within 3 months of effectiveness

38. The conditionalities proposed are:

Conditions for Board Presentation

None

Effectiveness Conditions

- Finalize the Accounting Procedures/FM Manual with proper accounting procedures for contract commitments, retention and liabilities as well as amount due from the Government; and incorporate into the FM Manual the FM arrangements for the US\$1.0 million Emergency Contingency Fund component, including the circumstances when the funds under the component will become available (i.e. declaration of a natural disaster by a GOL decree or a Provincial Governor decision, as the case may be, in accordance with the legislation of Lao PDR).

Disbursement Conditions

- There is one disbursement condition for the Emergency Contingency Fund component: IDA to receive evidence that a national and/or provincial state of emergency exists in the territory of Lao PDR as a result of a natural disaster which has been declared by a GOL decree and/or provincial Governor decision, as the case may be, in accordance with the legislation of Lao PDR.

The proposed financial and dated covenants are:

Financial

- Quarterly progress reports recording financial performance for the quarter will be prepared and sent to the Bank no later than 45 days from the end of the quarter.
- Annual audit reports will be prepared and submitted to the Bank within 6 months of the end of the financial year audited, which is June 30 of each year.

Dated covenants

- Contract project external auditors within 3 months of effectiveness
- Contract project internal audit consultants within 3 months of effectiveness

Supervision plan

39. The project risk rating after implementation of the proposed risk mitigation measures is 'substantial'. In the first year of implementation, supervision will include two onsite visits, close liaison with the external auditors and quarterly desk reviews of the unaudited quarterly IFRs. Subsequently, the number of onsite visits will depend on the FM risk rating for the project.

Funds flow

40. A Designated Account (DA), denominated in US dollars, will be opened and maintained at the Bank of Lao to receive all proceeds from grant and to be used for the IDA portion of all project-related expenditures. This DA will be held and managed by MOF, with project account managed by the MPWT. The ceiling for the DA will be determined separately, and advised through the Disbursement Letter.

41. A project account will be opened in Kip to receive transfers from the Designated Account for the eligible portion of expenditures and counterpart funds to be paid in full for eligible project expenses. A single check payment will be made from the Project Account, with regular reimbursements made from the DA for the eligible portion of disbursements. The reimbursed amounts from DA shall be converted into US dollars based on exchange rates on the date of transfers. Payments of emergency civil works and construction materials will also be made from this account against appropriate supporting documents to ensure that works and materials are procured and used for disaster mitigation and emergency preparedness purpose. The FM manual shall define eligible expenses and supporting documents required for this disaster component.

42. Counterpart contributions will be provided to the project via the RMF and GOL. In the past there has been a concern about the completeness and timeliness of provincial contributions to the RMF and this aspect will be monitored during supervision.

43. The funds flow arrangements are illustrated below.

LAO PDR ROAD SECTOR PROJECT

DONERS

GOVERNMENT

IDA

IDA
US\$ 27.8 M

PHRD
US\$ 1 M

GOL

RMF
managed by RMF

WA

prepared by MPWT issued by MOF

GOL CONTRIBUTION

MPWT

BANK OF LAOS
Ceiling US\$ 2 M

Managed by MPWT

CONTRACTORS/
CONSULTANTS SUPPLIERS

Eligible Portion:
• Civil Work 70% • Maintenance 25%
• Consultant 100% • OPC* 100%
• Force Account 100% • Good 100%

3 months projected
expenditures minus

remaining balance

* OPC – Operating Cost

DPWT

COMMERCIAL BANK
Managed by DPWT

(SUB-ACCOUNT ≈ 3 MONTHS)

GOL
Managed by
Provincial Treasury

100%

Suppliers OPC*

Eligible Portion

CONTRACTORS

GOL CONTRIBUTION

Disbursement Arrangements

44. The project will start with transaction-based disbursements, and graduate to report-based disbursement if this is desired, assuming the systems in place are deemed adequate to support that form of disbursement.

Direct Payments

45. This method will be used when there is need to pay a third party for goods and services supplied, but the amount to be paid is higher than can be reasonably sustained by the Designated Account.

Special Commitments

46. Provision for Special Commitments, will be made allowed and indicated in the Disbursement Letter in case they may be needed as implementation progresses.

Emergency Contingent Component

47. The following procedures will be adopted to ensure quick disbursement and liquidity. A positive list of goods, works and services (both local and imported) that are eligible for financing under the emergency contingent component in the event of a natural disaster will be drawn up and agreed with MPWT. Rapid disbursement procedures in accordance with OP/BP 8-00 'Rapid Response to Crises and Emergencies' will be adopted including:

- The acceptance of expenditure on items purchased in the period of 12 months prior to the declaration of the natural disaster. The supporting documentation required with the withdrawal application will be a copy of the suppliers invoice and evidence of receipt.
- The acceptance of expenditure on items on the positive list that was incurred after the declaration of the natural disaster. The supporting documentation required with the withdrawal application will be the goods received note and a supplier certification.
- Initial advance shall be made based on total estimated cost and supporting invoices providing details of suppliers' names, goods/works, and relevant unit costs. Next reimbursements will be against supporting documents of eligible expenditures incurred in the last 12 months minus the advance. The remaining fund from the advance, if any, shall be deposited intact upon advance settlement.

48. Withdrawal applications will also be processed in accordance with OP/BP 8.00 'Procedural Guidelines for Disbursements' which provides for priority processing by the World Bank's Loan Department (LOA) within one working day of the receipt of a faxed or scanned copy of the withdrawal application and supporting documentation. The World Bank's Country Management Unit (CMU) staff will be available to provide assistance with the preparation and submission of withdrawal applications if required.

49. All disbursements made under the emergency contingent component will be subject to a technical and financial audit to ensure the expenditure claimed was on the positive list, it was incurred for the purposes intended, the prices paid were reasonable relative to market prices and that the work completed met satisfactory standards.

Use of Statement of Expenditures (SOEs)

50. The use of SOEs applies to: (i) list of payments against contracts, together with records evidencing eligible expenditures (e.g. copies of receipts, supplier invoices) for the contracts subject to the Bank's prior review as required in the Grant Agreement; and (ii) SOE for all other expenditures / contracts not subject to the Bank prior review.

Retroactive Financing

51. Retroactive financing up to an equivalent amount of SDR 1.95 million (US\$3.00 million) will be available under the project for financing eligible activities procured under the agreed Association's guidelines for the project in respect of payments made by the Recipient on or after December 17, 2009 and before grant signing.

Allocation of Grant Proceeds

52. Disbursement of the proceeds of the grant would be made against expenditure categories as shown in the table below:

	Expenditure Category	Amount in US\$ million			Financing Percentage
		IDA	PHRD	Total	
1.1	Civil Works for NR 1B and 6A	12.25		12.25	70%
1.2	Civil Works for periodic maintenance	3.00		3.00	25%
1.3	Civil Works for rehabilitation of roads damaged by Typhoon Katsana	7.30		7.30	100%
2	Consultant Services (including external audits), Goods, and Operating Costs	4.25	1.00	5.25	100%
3	Disaster Contingency	1.00		1.00	100%
	Total Project Cost	27.80	1.00	28.80	

Conclusions of the FM Assessment

53. The proposed FM arrangements for the Project, as reinforced by the FM Action Plan and project components above, meet the minimum requirements for financial management under OP/BP 10.02.

Annex 8: Procurement Arrangements

LAO PEOPLE'S DEMOCRATIC REPUBLIC: Road Sector Project

A. General

1. Procurement for the proposed Project will be carried out in accordance with the World Bank's "Guidelines: Procurement under IBRD Loans and IDA Credits" dated May 2004, revised October 2006; and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated May 2004, revised October 2006, and the provisions stipulated in the Legal Agreements. For National Competitive Bidding (NCB), the provisions of Paragraphs 3.3 and 3.4 of IDA's Procurement Guidelines, and additionally the Government's procurement procedures as provided in Decree 03/PM dated January 9, 2004, and in the Implementing Rules and Regulations (IRR) dated March 12, 2004, will be followed subject to the improvements listed in the NCB-Annex to the legal agreement. The appropriate Standard Bidding Documents developed by the Procurement Monitoring Office, Ministry of Finance, will be used for procurement of goods and works under NCB and Shopping, subject to IDA's prior concurrence. For International Competitive Bidding (ICB), IDA's Standard Bidding Documents shall be used. The complaints handling mechanism specified in the Government's IRR will be followed and also incorporated in the bidding documents. Contract award information shall be made publicly available in accordance with IDA's Procurement Guidelines in a format agreed with IDA. The general descriptions of various items under different expenditure category are described below.

2. For each contract to be financed by the IDA, the different procurement methods or consultant selection methods, estimated costs, prior review requirements, and time frame are agreed between the Recipient and the Bank's Task Team in the Procurement Plan. The Procurement Plan will be updated at least annually or as required to reflect the actual Project implementation needs and improvements in institutional capacity.

3. **Procurement of Works.** Contracts for these works costing US\$300,000 or more each shall be procured through International Competitive Bidding (ICB). Works estimated to cost less than US\$300,000 per contract may be procured through National Competitive Bidding (NCB) method in accordance with Paragraphs 3.3 and 3.4 of IDA's Procurement Guidelines and additionally the procedures, including standard bidding documents, set forth in the Decree 03/PM dated January 9, 2004, and in the Implementing Rules and Regulations dated March 12, 2004, including national standard bidding document with IDA's prior concurrence, will be followed subject to the improvements listed in the NCB-Annex to the Legal Agreement. Works estimated to cost less than US\$30,000 per contract may be procured through Shopping method in accordance to Paragraph 3.5 of IDA's Procurement Guidelines and additionally the procedures, including standard bidding documents, set forth in the aforesaid Decree and Implementing Rules and Regulations. Emergency civil works under the emergency contingency sub-component (C-2) that are required under emergency in response to natural disasters and that meet the circumstances described in paragraphs 3.6(e) and 3.8(e) of the Procurement Guidelines may be procured through Direct Contracting or Force Account.

4. **Procurement of Goods:** Contract for goods costing US\$100,000 or more each shall be procured through International Competitive Bidding (ICB). Goods estimated to cost less than US\$100,000 per contract may be procured through NCB method in accordance with Paragraphs 3.3 and 3.4 of IDA's Procurement Guidelines and additionally the procedures, including standard bidding documents, set forth in the Decree 03/PM dated January 9, 2004, and in the Implementing Rules and Regulations (IRR) dated March 12, 2004, including national standard bidding document with IDA's prior concurrence, will be followed subject to the improvements listed in the NCB-Annex to the Legal Agreement. Goods estimated to cost less than US\$30,000 per contract may be procured through Shopping method in accordance with Paragraph 3.5 of IDA's Procurement Guidelines and additionally the procedures, including standard bidding documents, set forth in the aforesaid Decree and IRR. With the prior concurrence of the Bank, goods that meet the circumstances specified in paragraph 3.6 of the Procurement Guidelines may be procured through Direct Contracting. Construction materials under the disaster contingency sub-component (C-2) that are required under emergency in response to natural disasters and that meet the circumstances described in paragraphs 3.6(e) of the Procurement Guidelines may be procured through Direct Contracting.

5. **Selection of Consultants.** Depending on the nature and size of the assignment, methods of selection of firms may include Quality and Cost Based Selection, Quality Based Selection, Least Cost Selection, and Selection Based on Consultants' Qualifications. The Least Cost Selection method would be widely used where appropriate including for the two expected construction supervision contracts and also the Financial Audit contract with firms. Contracts with firms estimated to cost equal or less than US\$100,000 may be procured through the method Selection Based on Consultants' Qualifications. Specific assignments that meet the criterion under paragraph 3.10 of the Consultant Guidelines may be awarded, with prior concurrence of the Bank, through Single-Source Selection method.

6. Individual Consultants may be selected in accordance with the provisions of paragraphs 5.1 to 5.4 of the Consultants Guidelines. Under the circumstances described in paragraph 5.4 of the Consultant Guidelines, such contract may be awarded to individual consultant on a sole-source basis, subject to the prior approval of the Bank

B. Assessment of the agency's capacity to implement procurement

7. An IDA procurement accredited staff carried out a procurement capacity assessment of the main project implementing agency, the Ministry of Public Works and Transport (MPWT), during the project preparation. The assessment has focused on the following key line departments within MPWT that will be responsible for most of the procurement under the proposed Project:

- (i) Department of Roads (DOR)
- (ii) Department of Planning & Cooperation (DPC)
- (iii) Departments of Public Works & Transport (DPWT) in Xiengkhaung and Houaphan Provinces.

8. The main findings and course of actions are as follows:

- The MPWT has benefited from the experience in procurement and contract management under the on-going Road Maintenance Project 2 (RMP2) financed by IDA. For instance, procurement of all consultants services, office equipment, field equipment and consumables in the central office financed by IDA have been undertaken by the Project Monitoring Division (PMD) under DOR, on behalf of the respective line departments of MPWT, including preparation of procurement plans, bidding documents, RFPs, and evaluation reports with technical inputs provided by the line agencies. Procurement of civil works for road maintenance under RMP2 has been carried out by DPWTs in the provinces, with technical support and monitoring by DOR.
- Under the LRSP, procurement of consultant services and goods for office use will be carried out by DPC which will be the secretariat of MPWT (instead of by PMD under DOR) on behalf of the various line departments of MPWT which under the proposed project will include DOR, DPWT, Department of Transport, and Department of Inspection. However, DPC will also include members of the respective line departments, as member of the procurement committees, in carrying out the entire procurement process including preparation of procurement plans, bidding documents, RFPs and evaluation reports. It has been agreed that all the procurement staff of PMD who have acquired the experience of carrying out procurement under RMP-2 will be transferred to DPC for the full duration of the Project.
- Under the proposed LRSP the DOR will be responsible for carrying out procurement and contract management/supervision of civil works for roads network improvement. Procurement and contract management/supervision of civil works for periodic maintenance of national and provincial roads will continue be undertaken by DPWT, the provincial arm of MPWT, in 16 provinces, with monitoring by DOR
- Thus, all procurement of civil works under the proposed project will be carried either by DPWT (for the road maintenance works) or by DOR (for the road network improvement works). All consulting services expected under the project, specifically two construction supervision contracts for DOR and one consulting services package each for DOT and DOI will be procured by DPC on behalf of the respective line departments but with staff of the line departments also directly involved in the procurement process including as members of the procurement committees.

9. DPWT has past experience of carrying out procurement of civil works for road maintenance contracts under RMP-2 using NCB procedures. DOR has also under RMP-2 assisted DPWT in preparation of bidding documents which were in English language and also assisting DPWT in reviewing and translating bid evaluation reports prepared by DPWT. DPC will include all the procurement staff of PMD who had acquired procurement experience of goods and consulting services under RMP-2. Notwithstanding the past experience of MPWT's line departments and staff in carrying out procurement under World Bank procedures, the

procurement and contract management systems are not well established and applied properly, resulting in weak quality assurance, internal controls and monitoring processes. Modified versions of MPWT's standard bidding/contract documents for NCB, adapted for meeting the specific requirements of each donor, have been used for projects financed from different sources, including RMP2. The bidding/contract documents were in English with only some selected pages translated into Lao language, resulting in difficulty for bidders and DPWT staff, with their limited English proficiency, in fully following the provisions. These bidding documents were originally developed about ten years ago based on the pre-qualification approach and also do not incorporate key provisions of the Bank's new Procurement Guidelines (May 2004, revised October 2006) for enhanced transparency, including the Fraud and Corruption provisions and disclosure requirements.

10. Meanwhile, the Ministry of Finance, Procurement Monitoring Office, has developed national standard bidding documents and bid evaluation forms for procurement of goods and works under NCB and these standard documents have been accepted by the Bank with minor improvements for use in NCB procurement under Bank-financed projects for more than two years. These documents have already been approved by MOF for use by all procuring agencies in the country and some agencies have already started to use them, whereas MOF is expected to issue an official notification in the next few months to disseminate and mandate their use by all agencies in the country. For the proposed Project, MOF's national standard procurement documents for NCB as well as for Shopping will be used with minor improvements acceptable to the Bank. Training on the use of these national documents will be provided to MPWT by the Bank and MOF/PrMO before project effectiveness and during the implementation phase of the project. This will also promote use of country systems.

11. Due to the decentralized implementation, lack of fully functional procurement and contract management systems for quality assurance, internal controls and monitoring processes, and a weak general fiduciary procurement environment in the country including some concerns on the limited number of road construction companies in the local market which raises the risk of collusion and external interference in the procurement and contract management processes, the overall procurement risk in this project is considered to be "High".

12. However, the risk will be managed and mitigated through a wide range of strengthening measures that are being incorporated in the Project design and legal agreements, as listed in the Action Plan below. With the incorporation of the capacity strengthening measures and the extensive requirements for improving governance, including transparency and accountability in the procurement process, the residual procurement risk under the Project is determined to be Substantial.

13. The Action Plan to improve procurement capacity and strengthening transparency and accountability in the procurement process includes:

- i. Setting rationalized thresholds to promote use of more competitive methods of procurement; maximizing use of ICB to the extent feasible.

- ii. Setting low prior review thresholds which will capture the bulk of the procurement by value and numbers. Higher percentage of ex-post reviews to cover at least 30% of the contracts subject to post review.
- iii. Using National Competitive Bidding (NCB) and Shopping, model procurement documents acceptable to the Bank based on the national standard bidding documents, request for quotations and evaluation report issued by Procurement Monitoring Office (PrMO), Ministry of Finance (MOF), including provisions for complaints and debriefings, publication of contract awards, fraud and corruption clauses and remedies, integrity pacts by bidders/contractors, etc.
- iv. Instead of MPWT's prevailing practice of requiring prequalification or pre-registration in the procurement of works or goods, all prospective bidders will be allowed to bid and post-qualification assessment will be carried out during the evaluation process in accordance with the criteria specified in the bidding documents.
- v. Further enhancing publication and disclosure of procurement information including, annual procurement plans and updates; bid opening records, quarterly summaries of contract award information for all procurement packages;
- vi. Strengthening cost control in the design, procurement and implementation phases of contracts, the MPWT will be required during bid evaluation to conduct analysis of bid prices against an established data-base of market prices of key pay items. This measure will match with upstream detailed verification of the cost estimates in the design phase (using quantity surveying techniques) and downstream detailed validation of change orders and the imposition of strict discipline to rationalize contract change orders in the implementation phase.
- vii. The composition and size of the Bid Evaluation Committee (which needs to be rationalized to a reasonable number of qualified members, say not more than 5), the criteria for selection and the term/period of appointment of BEC members will be discussed and agreed with MPWT so as to ensure that only members with strong integrity and appropriate technical qualifications and experience in the field of the particular procurement are selected, and also the role and accountability of each member are clearly defined. All BEC members (as well as bidders, suppliers, contractors and consultants) will be required to sign integrity pledges and also declare any potential conflict of interests upfront, using a form to be agreed with the Bank, and the signed integrity pledges will subsequently be posted on the MPWT website.
- viii. Engaging a qualified international individual procurement consultant by MPWT on full-time basis for at least the first one year of project implementation for strengthening the transparency and accountability in the procurement process including procurement capacity building of relevant government staff in MPWT and its line departments including DPWT in the provinces, and also assisting with and enabling procurement under the Project to be carried out effectively in compliance

with the agreed procurement procedures including verifying compliance of the bid evaluation committee's outputs with the agreed procedures.

- ix. Assigning qualified government staff by MPWT to serve as the focal point for coordination, consultation and follow-up of procurement activities with the line departments, with support of the international procurement consultant. Each line department of MPWT including the DPWT provincial departments will also assign at least one relevant staff for purposes of serving as procurement focal points for their respective department and receiving procurement training.
- x. Procurement training, including on the use of the national standard procurement documents will be provided to MPWT and its departments by the Bank and MOF/PrMO before project effectiveness and periodically during the implementation phase of the project.
- xi. Adopting a project procurement record and filing system acceptable to IDA, and further improvements in procurement management systems as recommended by the international procurement consultant will be adopted as appropriate.
- xii. Engaging construction supervisory consultants through international competition to assist MPWT in strengthening contract management during the implementation phase. Independent technical audits will be separately conducted, and the Bank will also review the effectiveness of contract implementation including quality of deliverables during regular supervision and through special thematic reviews.

C. Procurement Plan

14. A detailed Procurement Plan for the first eighteen months has been prepared and agreed, and is available in the Project Office and will be published on IDA's external website. The Procurement Plan will be updated in agreement with the Task Team annually as required to reflect the actual project implementation needs and improvement.

D. The Bank's Procurement Review Requirements

15. The following contracts shall be subject to IDA's prior review in accordance with the Procurement Guidelines or Consultant Guidelines:

- i. All contracts for goods and works procured through ICB.
- ii. The first NCB and first Shopping contract for procurement of goods and works by each implementing agency at national and provincial levels in each year and all subsequent contracts exceeding US\$100,000 equivalent per contract for goods and US\$300,000 equivalent per contract for works respectively.
- iii. All contracts for goods and works procured through direct contracting.

- iv. The first contract for hiring of consulting firms and the first contract for hiring of individuals regardless of value, and all subsequent consulting services contracts exceeding US\$100,000 equivalent for firms and US\$50,000 equivalent for individuals per contract respectively.
- v. All contracts for hiring of consulting firms procured through single source selection, and all contracts for the recruitment of individual consultants through sole-source selection.

16. All other contracts shall be subject to ex-post review by IDA, and will also include checks for transparency in the procurement process and verification of end-use deliveries, in addition to verification of compliance with the agreed procurement procedures. IDA's procurement and financial management staff will also jointly carry out ex-post procurement reviews and FM reviews.

17. **Frequency of Supervision.** In addition to the prior review, the assessment of the capacity of the Project Implementing Agency recommended, that procurement supervision mission including post review will be conducted at least twice per year.

E. Advance Contracting and Retroactive Financing

18. The provisions of Advance Contracting and Retroactive Financing described in Paragraph 1.9 of the World Bank's Procurement Guidelines, and Paragraph 1.12 of the World Bank's Consultant Guidelines would apply in particular to the Disaster Recovery and Contingency Component of this Project.

19. For each contract that has already been awarded by the Recipient without the Bank's prior review and is being proposed for retroactive financing under the Project, the procurement procedures followed by the Recipient would be reviewed by the Bank to verify consistency with the Bank's Procurement Guidelines or Consultant Guidelines, as applicable, and the methods of procurement specified in the legal agreement. The Bank's review of the procurement process and its no objection to each such awarded contract shall be required and be obtained prior to any expenditures under the contract being reimbursed by the Bank through Retroactive Financing. For purpose of the Bank's review, at a minimum the following background information and documentation on the procurement and contracting process followed by the Recipient should be sent to the Bank for each such contract:

- (i) For contracts already awarded through a competitive procurement process, this should include:
 - A narrative summary of the steps undertaken in the procurement process, from the invitation for bids to signing of contract.
 - Pre-bid cost estimate.
 - Summary of the bid/proposal evaluation process, including for goods and works information on how many bidders purchased the bidding documents, how many bids

- were received, names of bidders, read-out bid prices, evaluated bid prices, contract award price, and reasons for rejection of any lower price bidder.
- Supporting documentation including copies of the invitation for bids/expression of interest, bidding/request for proposal documents, bid/proposal evaluation report, and signed contract.
 - Copies of approvals of the concerned government authorities.
- (ii) For contracts, if any, already awarded through Direct Contracting or Single Source Selection, this should include:
- Pre-bid cost estimate
 - Justification for Direct Contracting or Single Source Selection, respectively in accordance with paragraph 3.6 of the Procurement Guidelines and paragraph 3.10 of the Consultant Guidelines.
 - Summary of the evaluation process of the single bid/proposal received, including information on the bid/proposal price, contract price.
 - Supporting documentation including copies of the evaluation report/minutes of negotiations, and signed contract.
 - Copies of approvals of the concerned government authorities.
- (iii) For any new contracts that are yet to be competitively procured and awarded before effectiveness of the Grant Agreement, the Bank's prior review shall be required at different stages of the procurement process before award of the contract, in accordance with Appendix-1 of the Bank's Procurement and Consultant Guidelines, as applicable. Similarly, for any future contracts to be awarded through Direct Contracting or Single Source Selection, the estimated cost of the contract, justification for Direct Contracting or Single Source Selection, and subsequently the draft negotiated contract shall be sent for the Bank's Prior review and no objection before award of the contract.

National Competitive Bidding Procedures

- (i) Bidding documents and contract under national competitive bidding procedures financed by the Association shall include a provision requiring suppliers, contractors and their subcontractors to permit the Association to inspect their accounts and records relating to the bid submission and the performance of the supplier and/or contractor, as the case may be, and to have them audited by auditors appointed by the Association, if so required by the Association. The deliberate and material violation by the supplier, contractor or subcontractor of such provision may amount to obstructive practice.
- (ii) Immediately after completion of the bid opening proceedings, a copy of the bid opening record shall be posted at a prominent location, accessible to the public, outside the office of the concerned procuring entity and shall be retained at the same location until the award of contract has been notified. A copy of the bid opening record shall be provided to all bidders who submitted bids.

- (iii) The Recipient shall publish the following information on contract award on a free or open access website when it becomes operational or on another means of publication acceptable to the Association: (a) name of each bidder who submitted a bid; (b) bid prices as read out a bid opening; (c) name and evaluated price of each bid that was evaluated; (d) name of bidders whose bid were rejected and the reasons for rejection; (e) name of the winning bidder, contract price, explanation if it is different that bid price as well as the duration and summary scope of the contract awarded; and (f) contract variation orders. The publication shall be updated quarterly.
- (iv) The eligibility of bidders shall be as defined under section I of the Bank's Guidelines for Procurement under IBRD Loans and IDA Credits, published by the Bank in October 2006 accordingly, a firm or individual previously declared ineligible by the Association based on determination by the Association that this firm or individual has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices shall be declared ineligible to be awarded a contract financed by Association.
- (v) The Association shall declare a firm and individual eligible, either indefinitely or for a stated period, to be awarded a contract financed by the Association and the Recipient, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for, or in executing, an Association-financed contract.

Annex 9: Economic and Financial Analysis

LAO PEOPLE'S DEMOCRATIC REPUBLIC: Road Sector Project

FINANCIAL ANALYSIS

1. The financial need for the maintenance of the country's current road network was estimated using the HDM-4 model and based on the current road condition data. According to model results, the total financial need for the network would be US\$57 million a year, of which US\$16 million is needed for the core national roads, US\$6.4 million for the remaining national roads, US\$12.4 million for provincial roads, and US\$22 million for district and rural roads.

2. The financial need for capital investment is much greater. The GOL aspires to develop the GMS links with neighboring countries, strengthen the domestic integration by improving the national and provincial road networks linking the provincial capitals and district centers, and provide basic access roads to the remaining 20% of the villages without basic, all-weather accessibility. Without resource constraint, the financial need would be in the order of US\$200 million a year.

3. Road construction, rehabilitation, and maintenance in Lao PDR are funded from three sources: external assistance, national and provincial budgets, and the RMF. Since 1990 multilateral and bilateral donors together have contributed over 80% of the public expenditures for roads, but in recent years funding from domestic sources especially direct user charges has been increasing steadily.

4. Since its creation in 2001, the RMF has been functional and contributed significantly to the improvement of the road network. Due to continued increases in fuel levy and motor vehicle ownership and use, the RMF revenues have increased rapidly over the last five years, averaging 29 percent a year, and increasing from 56 million kips (equivalent to US\$6.6 million) in 2004/05 to 201 billion kip (equivalent to US\$23.6 million) in 2008/09. Given the rapidly growing RMF, the role of donors in filling the maintenance financing gap has also been declining, from roughly US\$6 million a year in 2004/05 to less than US\$2 million a year (2008/09). Currently, the RMF itself meets over 50 percent of the country's road maintenance needs. It funds 80% of the road maintenance needs for the national roads, but only 10% for the provincial roads, district and rural roads.

5. The current fuel levy for the RMF is at 300 kips per liter (or 3.5 US cents). There is room for further increase. The MPWT plans to increase the fuel levy in two steps, first to 350 kip per liter by end of 2010 and 400 kips per liter by end of 2011. If these increases materialize, accompanied by the growth in motor vehicle ownership and use, it is expected that the RMF revenues would reach US\$60 million in just a few years.

6. External assistance covers over 80 percent of the capital investment for roads. During 2004/05 to 2008/09, road capital expenditures have declined from roughly US\$170 million to US\$112 million, due mainly to the declining assistance from the donors. Historically, the availability of donor resources has not been stable, and is often seriously affected during global financial downturns. In contrast, government capital expenditures have increased steadily from

US\$13.6 million to US\$19.5 million during the same period, averaging 8 percent a year. With continuing steady growth of the economy, it is expected that the government capital expenditures for roads would continue to increase, albeit at a limited scale (less than 10 percent a year).

7. The availability of revenues from the Nam Thuen-2 Hydropower Project (NT-2) for poverty targeted programs including the rural road program will provide a new domestic source of financing for rural roads. The NT-2 is expected to be commissioned in mid-2010, and the revenues to the government would amount to some US\$20 million a year in a few years. A rural road program is currently being prepared by the MPWT to absorb some NT-2 revenues to improve basic access for villages in the poverty districts and to cover a portion of the rural road maintenance.

8. Overall, the available funds for the road sector, both external and domestic, will continue to fall short of the total need considerably. The IDA financing of US\$20 million under the project for the next four years will be a small financial contribution to the sector, but will be much needed. Of the counterpart funds, US\$8 million for the maintenance of provincial roads will be available from the RMF. The government will provide a total of US\$7.3 million counterpart fund over four years for road upgrading and provincial road maintenance. This is considered possible given the track record of growing government budget financing of the road sector in recent years.

ECONOMIC EVALUATION

9. The following provides a description of the economic evaluation of periodic maintenance of provincial roads, and of the proposed upgrading of NR 1B and NR 6A.

HDM-4 Model

10. The principal source of economic inputs to the evaluations were derived from the Highway Development and Management Tool HDM-4 (Version 2.04 of HDM-4) which was set up during RMP-1 and further developed and calibrated under RMP-2.

11. The HDM-4 model is based on the concept of pavement life-cycle analysis and uses three sets of models: (a) road deterioration - which predicts pavement deterioration; (b) works effects - which simulate the effects of road works on pavement condition and determines the corresponding costs; and (c) road user effects - which determine costs of vehicle operation and travel time.

12. These models work on data relating to the characteristics of the roads and the vehicle fleet, and defined road maintenance and improvement standards, together with their unit costs. In the case of unsealed roads the modelling of road deterioration involves the type and thickness of surface material, gradient, climate and traffic loading. Maintenance effects are modelled in terms of spot re-gravelling, gravel resurfacing and grading. In the case of sealed roads, pavement deterioration is modelled in terms of a number of defects including; pavement cracking, rutting, ravelling, and potholes. The rate of deterioration is a function of the initial

pavement construction standard, traffic loading, maintenance standards, and the effects of the environment. The amount of maintenance carried out in a given year depends on user-specified maintenance standards and the predicted road condition. The key indicator of road condition is surface roughness, measured in terms of the International Roughness Index (IRI)¹¹, which has a major impact on vehicle speeds and operating costs.

13. The HDM-4 model predicts the consumption of resources for each component of vehicle operating cost, such as the number of litres of fuel consumed and amount of tire wear per kilometer, for each category of vehicles. When multiplied by the appropriate unit prices, such as US\$ per litre of fuel and US\$ per tire, this consumption is converted to a cost per kilometer. The total of costs for all components is the vehicle operating cost (VOC). Time costs are calculated from the predicted speeds. Average speeds are determined as part of the VOC calculation from the characteristics of vehicles, and road conditions, such as roughness, gradient and curvature. HDM-4 takes traffic levels into account and congestion modelling, although not generally important in the Lao context because of low traffic levels, is incorporated in the calculation of vehicle speeds and costs.

14. In this way the model simulates for each road section, year-by-year, the road condition and resources used for maintenance under a specified strategy, as well as the vehicle speeds and physical resources consumed by vehicle operation. Then user-specified prices and unit costs are applied to the physical quantities involved to determine the costs involved in monetary terms. Benefits are calculated for different options by comparing the costs in the “project case” options with the costs in the “base case”. Finally present value and rate of return computations are carried out to indicate the economic viability of project options. Thus, the economic returns from road investment are determined from the level of the construction and road maintenance costs, and savings in road user costs due to the provision of a better road facility.

15. Road accident savings can also be incorporated in the HDM-4 analysis, but were not in this exercise due to a lack of reliable data.

Evaluation of Periodic Maintenance Interventions

16. The economic evaluation of the periodic interventions was made using the Road Management System (RMS), supplemented by the HDM-4 model applying conventional cost-benefit methodology. Data for the analysis was collected in June-August 2008 through surveys of the provincial road network. The data comprised: visual road condition and traffic volumes. With the updated data, the RMS was used to prepare a long-list of candidate roads for routine and periodic maintenance that supported the selection of the roads that are part of the program. Twenty roads were selected totaling 455.5 km of road works that were then analyzed with HDM-4 to confirm their economic feasibility. The average unit costs for the different works activities used by RMS are given in Table 1.

¹¹ The International Road Roughness Index (IRI) is measured in meters per kilometer.

Table 1: Unit Costs for Maintenance

Work Item	Financial		Economic	
	US\$/km	US\$/m2	US\$/km	US\$/m2
Single Surface Treatment		3.44		2.92
Double Surface Treatment		5.16		4.39
Overlay 30mm		7.96		6.76
Reconstruction		18.60		15.81
Construction of sealed road	139,785		118,817	
Construction of gravel road	75,269		63,978	
Upgrading gravel to seal	75,269		63,978	
Regravelling of gravel road		2.47		2.10
Rehabilitation of gravel road		5.91		5.03
Pothole patching		9.30		7.91
Routine maintenance sealed	684		581	
Routine maintenance unsealed	228		194	

Costs for National Roads

17. The road user costs were calculated using the default vehicle characteristics as used in the RMS. These characteristics are given in Table 2. The corresponding unit road user costs sensitivity to roughness is given in Table 3.

Table 2: Vehicle Characteristics

Vehicle Type	km Driven per Year	Hours Driven per Year	Service Life (years)	ESA Loading	GVW (tons)	Private Use (%)	Passengers (No)	Work Trips (%)
Hand-Tractor	6,000	200	10	0.00	1.5	20	3.0	75
Motorcycle	8,000	300	8	0.00	0.2	75	0.5	0
Tuk-Tuk	33,000	1,100	15	0.00	0.6	10	6.0	25
Car	15,000	375	12	0.00	1.4	100	3.0	25
Pick-up	25,000	625	10	0.01	2.3	20	1.0	0
Small Bus	75,000	1,900	10	0.01	2.1	0	9.0	25
Medium Bus	35,000	875	10	0.20	7.6	0	20.0	25
Heavy Bus	50,000	1,150	10	0.80	10.6	0	40.0	25
Light truck	30,000	800	10	0.20	6.2	0	2.0	0
Medium truck	40,000	1,000	12	2.00	14.0	0	2.0	0
Heavy truck	45,000	1,200	10	3.50	20.0	0	2.0	0
Truck/Trailer	50,000	1,300	10	4.50	27.0	0	2.0	0
Vehicle Type	Vehicle (USD)	Tire (USD)	Fuel (USD/ltr)	Crew (USD/hr)	Labor (USD/hr)	Work Time (USD/hr)	Leisure Time (USD/hr)	Interest (%)
Hand-Tractor	1,320	37	0.61	0.00	6.00	1.00	0.30	6
Motorcycle	684	8	0.61	0.00	6.00	1.00	0.30	6
Tuk-Tuk	1,727	53	0.61	0.98	6.00	1.00	0.30	6
Car	21,872	41	0.63	0.00	6.00	1.00	0.30	6
Pick-up	33,615	96	0.63	0.91	6.00	1.00	0.30	6
Small Bus	23,970	60	0.63	1.47	6.00	1.00	0.30	6
Medium Bus	54,777	86	0.63	1.54	6.00	1.00	0.30	6
Heavy Bus	69,112	160	0.63	2.42	6.00	1.00	0.30	6
Light truck	17,954	60	0.63	1.19	6.00	1.00	0.30	6

Medium truck	20,048	165	0.63	1.54	6.00	1.00	0.30	6
Heavy truck	65,724	181	0.63	1.54	6.00	1.00	0.30	6
Truck/Trailer	86,502	240	0.63	2.03	6.00	1.00	0.30	6

Table 3: Unit Road User Costs Sensitivity to Roughness (\$/vehicle-km)

Roughness (IRI, m/km)	Motor_ cycle	Car	Pickup	Light Truck	Medium Truck	Heavy Truck	Articulated Truck	Small Bus	Medium Bus	Large Bus
2	0.06	0.28	0.31	0.27	0.34	0.68	0.92	0.28	0.46	0.61
4	0.06	0.28	0.32	0.28	0.35	0.72	0.96	0.29	0.48	0.64
6	0.06	0.29	0.35	0.30	0.37	0.77	0.98	0.30	0.52	0.69
8	0.06	0.31	0.38	0.31	0.38	0.80	1.02	0.32	0.57	0.75
10	0.06	0.34	0.42	0.34	0.40	0.86	1.10	0.34	0.63	0.85
12	0.07	0.37	0.46	0.36	0.42	0.93	1.19	0.36	0.69	0.95
14	0.07	0.40	0.50	0.39	0.45	1.00	1.28	0.39	0.75	1.05
16	0.08	0.43	0.54	0.41	0.48	1.07	1.38	0.42	0.82	1.15
18	0.08	0.46	0.58	0.44	0.51	1.15	1.48	0.45	0.88	1.25
20	0.09	0.49	0.61	0.46	0.54	1.22	1.57	0.48	0.94	1.35

18. Table 4 presents the basic road characteristics and proposed road works. All roads are unpaved roads in poor condition in need of regravelling or regravelling and spot rehabilitation. The average traffic of the roads is 131 vehicles per day comprised of 45% motorcycles, 10% tractors, 11% pickups, 19% buses and 11% trucks. The adopted traffic growth rate from 2010 to 202 is 11% for motorcycles, 9% for pickups and 7% for bus and trucks. The average cost of the regravelling works is US\$7,123 per km and the average cost of the regravelling and spot rehabilitation works is US\$8,836 per km.

Table 4: Road Section Characteristics

Road No.	Road Number	Province	Length (km)	Traffic AADT	Road Work	Cost (M US\$)
1	0126	Vientiane Cap	20.0	100	Regravelling/Spot Rehabilitation	0.19
2	1202	Phongsaly	19.0	35	Regravelling	0.17
3	2205	Bokeo	22.0	75	Regravelling	0.13
4	1503	Lungnamtha	20.0	35	Regravelling	0.13
5	1803	Oudomxay	17.0	100	Regravelling	0.10
6	2504	Luangprabang	20.0	320	Regravelling	0.13
7	3602	Sayaboury	24.0	100	Regravelling	0.16
8	3610	Sayaboury	30.0	100	Regravelling	0.20
9	3204	Houaphanh	30.0	100	Regravelling	0.23
10	3908	Xiengkhuang	29.0	100	Regravelling/Spot Rehabilitation	0.27
11	3909	Xiengkhuang	21.5	35	Regravelling	0.15
12	0125	Vientiane Pro	20.0	100	Regravelling/Spot Rehabilitation	0.17
13	4504	Vientiane Pro	30.0	100	Regravelling	0.27
14	5504	Borikhamxay	20.0	320	Regravelling	0.10
15	5507	Khammuan	30.0	320	Regravelling	0.14
16	5501	Savannakhet	30.0	100	Regravelling	0.30
17	5501	Saravan	24.0	100	Regravelling	0.17
18	14B	Champasack	23.0	320	Regravelling	0.16
19	7501	Sekong	12.0	35	Regravelling	0.11
20	9001	Attapue	14.0	100	Regravelling	0.10
Total			455.5	131		3.39

19. The analysis was run for a 20 year analysis period with a 12% discount rate. The base alternative considered routine maintenance and one grading per year. The project alternative considered routine maintenance, periodic regravellings and one grading per year. Table 5 shows the economic evaluation results including the Net Present Value (NPV), Internal Rate of Return (IRR) and IRR sensitivity analysis. The program has a high return (IRR =23%), which is typical of periodic maintenance projects such as these, and the NPV is US\$ 1.87 million. The sensitivity analysis shows that if costs increase by 15% and benefits decrease by 15% the overall IRR of the program will be 13% which confirms the economic justification of the periodic maintenance program.

Table 5: Economic Evaluation Results

No.	Road Number	NPV (M US\$)	ERR (%)	ERR Sensitivity		
				A:Cost+15%	B:Ben-15%	A & B
1	0126	0.03	15%	12%	12%	9%
2	1202	0.06	16%	14%	14%	11%
3	2205	0.18	44%	33%	33%	25%
4	1503	0.09	21%	18%	18%	15%
5	1803	0.11	37%	28%	28%	21%
6	2504	0.05	17%	13%	13%	11%
7	3602	0.12	28%	21%	21%	16%
8	3610	0.15	28%	21%	21%	16%
9	3204	0.16	27%	20%	20%	16%
10	3908	0.09	19%	14%	14%	11%
11	3909	0.12	24%	20%	20%	16%
12	0125	0.02	14%	11%	11%	8%
13	4504	0.01	13%	9%	9%	7%
14	5504	0.16	70%	37%	37%	23%
15	5507	0.24	70%	37%	37%	23%
16	5501	0.05	16%	12%	12%	9%
17	5501	0.06	21%	15%	15%	11%
18	14B	0.14	39%	23%	23%	16%
19	7501	0.02	15%	12%	12%	10%
20	9001	0.04	19%	15%	15%	12%
Total		1.87	23%	17%	17%	13%

Road Improvement Sub-projects (NR1B and NR6A)

20. This section describes the economic evaluation of the two sections of the National Road (NR) Network proposed for upgrading in the first year of LRSP. The two roads are:

- NR 1B Pak Nam Noy - Ban Yo, Phongsali Province 109 km
- NR 6A Hang Long - Ban Dan, Houaphan Province 125 km

21. Funded by a Japan PHRD Project Preparation Grant, a Lao technical consultancy firm, Lao Technical Engineering Consultant (LTEC), was appointed to undertake the detailed engineering design studies. An international Transport Economist was appointed to undertake the economic evaluation of the two roads. This section summarizes the economic evaluation work undertaken.

Description of Conditions

22. **Road 1B.** NR 1B is located in the southern part of Phongsali Province. It provides the only road access between the province and the rest of the Lao road network. The start point is the southern end of the road at Pak Nam Noi and the northern end point is Ban Yo, a junction with National Road 19, which provides a connection to the town of Phongsali, the capital of the Province, approximately 40 km away, and also to the border with China. Both NR 2E and NR 19 are sealed roads. The direct distance between Pak Nam Noi Yo and Ban Yo is approximately 60 km, but because of the mountainous terrain the length of NR 1B between these two points is 109 km.

23. It is an unsealed road constructed in the mid-1990s, officially classified as gravel but the surface is a mixture of gravel, stone and earth. It is regarded as an all-weather road, open for 12 months of the year and the overall condition is considered to be fair to good for an unsealed road. Typical driving speeds are 25-30 km/h. The road width varies, but is generally about 5m. The first 75 km is in mountainous terrain during which the road rises from 400m to over 1300m, before falling back about 600m. Gradients are not steep, especially for the first 20 km, but there is a high degree of curvature. The remainder of the road beyond km 75 is mostly close to a valley floor, where the terrain is flat to rolling at about 650m altitude. There are a number of minor bridges, the longest having a length of approximately 60m, all of which were constructed in the mid 1990s. A number of minor roads connect with NR 1B, all of which have earth surfaces.

24. The traffic level is low. On the southern half the traffic level is about 50 vehicles per day, plus a similar number of motorcycles, and on the northern half it is about 70 vehicles per day, again with a similar number of motorcycles.

25. **Road 6A.** NR 6A starts just east of the village of Hang Long, which is on NR 6 about 20km east of Xam Nuea, the capital of Houaphan Province. The end point is a border crossing into Vietnam just beyond the village of Ban Dan. The direct distance between these two points is 54 km, but because of the circuitous route following river valleys the road distance is 125km.

26. The first 9.3 km from the start of the road has a 3.6m DBST pavement. The rest of the road is unsealed; part is classified as earth and part as gravel, but there is no clear distinction between these. The general condition is similar to that of NR 1B, and it is also regarded as an all-weather road, open for 12 months of the year. Typical driving speeds are 30-35 km/h. The width on the unsealed sections varies, but is generally about 5.5m. The first 40km is in mountainous terrain, with the road falling from 800m to about 200m in altitude. For most of this section the road is in the valley of the Nam Hao River. For the remaining 85 km the road follows the valley of the Nam Ma River in mostly flat to rolling terrain, gradually rising to about 300m.

27. There are several minor bridges and some floodways across tributaries to Nam Ma River. Most of the bridges are Bailey bridges, and one is a timber bridge. They are in fair to poor condition. At Meuang Et, where the alignment crosses the Nam Ma River, there is a simple cable ferry (a non-motorised pontoon powered by the river flow). When the river flow is

very strong the ferry cannot operate. The river is approximately 150m wide at this point. Beyond the ferry the road continues to follow the Nam Ma River for a further 12 km to the Vietnamese border just beyond the village of Ban Ban. At that point it connects with the Vietnamese road system.

28. At Sop Bao, approximately 63 km from the start of the road, there is a junction, via a ferry, with National Road 6B. This is a gravel road that provides a connection to the Vietnamese border at Pakhang, 25 km east of Sop Bao, where there is an unofficial border crossing. In addition a number of minor roads connect with NR 6A, all of which have earth surfaces.

29. For most of its length the road passes through densely populated rural areas, with some 54 villages along the alignment. In addition it passes through the district towns of Sop Bao, Xieng Khor, and Et Districts. Most of the land in the area is intensively farmed, with rice and maize the main crops. An electricity transmission line follows the road form most of its length and serves all the villages along it.

30. The traffic level is low and is estimated at about 40 vehicles per day plus 200 motorcycles on the southern part from Hang Long to Sop Bao, and about 20 vehicles per day plus up to 250 motorcycles on the northern part as far as Meuang Et, with very low traffic on the final 12 km to the Vietnamese border.

Evaluation Method

31. The basic approach used for the evaluation of the roads takes into account factors that can be quantified, such as the capital cost of the proposed improvement projects, road maintenance costs, the potential level of benefit per vehicle, and forecast volumes of traffic. These items are considered over an evaluation period, with costs and benefits discounted and expressed in present value terms. Developing appropriate scenarios for the “base case” is a critical part of the analysis. The “base case” assumes that sufficient maintenance is applied to preserve the roads at a standard similar to the current condition.

32. For the evaluation, the subproject roads have been divided into sections that are broadly homogeneous in terms of the main parameters affecting the evaluation results: (a) pavement type and condition; (b) terrain; and (c) traffic level.

33. The evaluation is carried out in economic cost terms, rather than with financial costs. The main difference between financial and economic costs is that taxes are not included in economic costs. Where specific information is not available a factor of 0.9 has been applied to convert financial to economic prices.

34. The unit prices used for costing purposes and for assessing benefits have been based on prices in Lao PDR in 2008. The evaluation has been conducted using the US dollar (\$) as the unit of currency, and in constant prices.

35. Annual cost and benefit streams have been considered over a 24 year period from 2009 to 2032, and discounted to 2008 present values using a discount rate of 12 per cent. Implementation of the project works was assumed to begin in 2010 and to be completed by the end of 2012, with benefits beginning in 2013, giving a benefit period of 20 years. No allowance has been made for any benefits that may be obtained before the opening year, as a result of some sections of the project being completed before the end of the overall construction period. Similarly, no costs to road users caused by disruptions to traffic during the construction period have been included.

36. In the evaluation procedure the costs and benefits in each year of the analysis period are discounted to their value in the base year. This is carried out to reflect the time value of money, represented by the opportunity cost of the capital invested in a project, or the required rate of return on capital. A discount rate of 12 percent was used which represents the minimum rate of return desired. Two main indicators of economic viability have been calculated from the annual cost and benefit streams using the concept of discounting to present values: the Net Present Value (NPV) and the Internal Rate of Return (IRR).

37. NR 1B was divided into two sections:

- Section 1 - km 0.0 (Pak Nam Noy/NR 2E) to km 75
- Section 2 - km 75 to km 109 (Ban Yo/NR 19)

38. The whole of NR 1B is classified as a gravel road. The split at km 75 is an arbitrary point reflecting the more mountainous terrain on the southern part of the road up to that point. Traffic is slightly lower on this section than on the northern section. Road conditions are similar on both sections.

39. It would not be logical to implement either section without the other, given that the road is a connecting through route, and the subdivision into two sections was made only for analysis purposes.

40. NR 6A was divided into four sections:

- Section 1 - km 0.0 (Hang Long/NR 6) to km 9.3
- Section 2 - km 9.3 to km 62 (Sop Bao/NR 6B)
- Section 3 - km 62 (Sop Bao/NR 6B) to km 112 (Meuang Et/Ferry)
- Section 4 - km 112 (Meuang Et/Ferry) to km 124 (Ban Dan/Vietnamese Border)

41. Section 1 has a DBST surface, which is currently in good to fair condition. The remainder of the road has a gravel or earth surface, which is similar in condition throughout. The end point of Section 2 is the district town of Sop Bao, where there is a junction with NR 6B. The end point of Section 3 is the district town of Meuang Et and the location of the ferry across the Nam Ma River. Section 4 completes the road to the Vietnamese border at Ban Dan. Section 1 and the majority of Section 2 are in mountainous terrain. Sections 3 and 4 are in flat or rolling terrain. The same traffic data was used for Sections 1 and 2. Traffic is lower on Section 3, and lower again on Section 4.

42. Sections 1 and 2 should be implemented together, as the break between them is arbitrary in road network terms, but could be implemented without Sections 3 and 4. Sections 3 and 4 could be considered as separate, additional projects for implementation purposes.

Evaluation Options Versus Base Case

43. The two section on NR 1B has been evaluated using two alternative design standards; Class IV (6-7m carriageway) and Class V (5.5m carriageway)

44. The four sections on NR 6A have been evaluated at only Class V standard, but with two traffic levels. The Low Traffic option uses traffic estimates based directly on the results of the seven-day counts carried out for the project, the High Traffic Option uses traffic estimates taking into account other estimates of traffic on the road.

45. The base case assumed that sufficient maintenance was applied to maintain the roads on average at close to the current conditions. Conditions vary along the road lengths and according to the seasons, with some sections having very bad surface conditions at times during the rainy season. This was simulated in the analysis by specifying maintenance interventions that caused the road surface to vary in roughness over time, but with an average of about IRI 16. In the base case the roughness predicted by HDM fluctuates between IRI 10 and IRI 20, while with the project roughness is expected to be consistently around IRI 4.

46. **Capital Costs.** The costs for the selected design standards to be evaluated are summarized in Table 5. These capital costs were estimated after detailed engineering review by the Bank preparation mission to ensure the appropriateness of the design for the required traffic function but also to ensure the cost was optimized.

Table 5: Cost Estimates (\$)

Table 3: Cost Estimates (\$)								
Road Section	Civil Works*		Land & Resettle-ment	Environ-ment	Economic Costs			
	Road	Bridges			Total		Excl. Bridges	
					Total	per km	Total	per km
NR 1B (Class V)	11,400,000		59,409	100,000	11,559,409	106,050		
NR 6A (Class V):								
km 62-125	6,230,000	2,079,000	50,014	50,000	8,409,014	133,476	6,230,014	100,484

* Financial costs including physical contingencies, design and supervision costs.

Source: LTEC

47. A residual value of the Project roads at the end of the evaluation period, estimated at 25 percent of the cost of construction, was included as a benefit.

48. **Road Maintenance Costs.** Appropriate maintenance activities and routine and periodic maintenance unit costs were derived from the RMS study. The unit costs of the maintenance operations that have been applied in the model to produce estimates of annual maintenance costs are shown in Table 6.

Table 6: Road Maintenance Rates

Operation	Unit	Cost (\$)
Routine	per year per km	353
Grading	per year per km	100
Regravelling	150mm per m ³	6
Patching	per year per m ²	4.9
Crack Sealing	per m ²	1.5
Overlay	per m ²	6.8

Source: RMS Project

49. **Benefits.** Both of the Project roads are open to traffic and provide virtually unrestricted access for all vehicle types throughout the year. Benefits from improvement will therefore be predominantly from road user cost savings.

50. The 2008 base year traffic levels used for the evaluation are shown in Table 7 in terms of annual average daily traffic (AADT) and composition.

Table 7: Base Year Traffic Estimate (AADT)

Road No.	Section	Bicycle	Mini-Tractor	Motor-cycle	4-wheel Vehicles			
					Lt. Vehicle	Bus	Truck	Total
1B	km 0-75	10	5	50	23	6	17	46
1B	km 75-109	10	20	75	32	6	300	68
6A	km 62.5-km 113	15	6	250	18	2	9	29
6A	km 113-km 125	10	4	150	10	0	5	15

Source: Consultants' estimates

51. Traffic levels have been projected from the survey year of 2008 for a period of 25 years to 2032, to provide forecasts over a 20-year benefit period for the projects. The benefits due to two classes of future traffic were considered: (a) normal traffic - an extension of existing traffic that will use the road with or without the proposed improvement; and (b) generated Traffic - additional traffic that occurs in response to the lower vehicle operating costs (VOCs) and reduced travel times associated with the project improvements. This can also include induced traffic; that is traffic associated with increased agricultural production, or other economic development, that is assumed to occur as a result of the road improvement. Due a lack of alternative routes no diverted traffic was assumed.

52. The growth rates applied to normal traffic are shown in Table 8. No growth was assumed for the small amount of bicycle traffic. It is probable that levels may fall as bicycles are replaced by motorcycles.

Table 8: Traffic Growth Rates (% per year)

Vehicle Type	2008-2017	2017-2032
Mini Tractor	8	7
Motorcycle	11	10
Car	9	8
Pickup	9	8
Small Bus	9	8
Medium and Heavy Bus	7	6
Truck and Jeep	7	6

Source: RMS Project and Consultants

53. Generated traffic arises because road improvement makes a journey more attractive as a result of travel cost and/or time reduction. Benefits to generated traffic are valued at half those accruing to normal traffic in the evaluation. A general traffic increase of 30 percent has been assumed for all types of traffic, as in the RMS Project. This is assumed to occur progressively during the first three years after completion of the upgrading, with an additional 10 percent in each of these years, and generated traffic then growing at the same rate as normal traffic.

54. The main benefit resulting from the improved road standard is in the form of VOC savings, a direct result of the high average roughness level assumed in the base case. Current speeds are very low and the increase in speed from these low levels is also a major contributor to the VOC savings. Time savings are not so significant, mainly because the relatively low unit value of time applied. Although speeds would increase significantly, the terrain through which the roads pass for much of their length restricts the predicted speeds following upgraded to below the levels normally associated with such road improvements.

55. Unit prices for valuing VOCs and time savings were derived largely from a report on road user costs prepared for the ongoing Road Management System (RMS) in early 2008.¹² This report was based on prices in late 2007. Most prices were little changed in the second half of 2008 and so were used in the analysis. International fuel prices, on which economic prices are based, increased significantly during the first half of 2008, but by September were back to late 2007 levels. Fuel prices are more volatile than prices of other VOC components, and could change significantly in real terms over the evaluation period. The current economic prices of about US\$0.65 per litre for diesel fuel and US\$0.60 for petrol were used, which are consistent with an assumed long-term average crude oil price of about US\$100/ barrel in constant price terms. Given the uncertainty about future oil prices these fuel prices are only indicative. However, it should be noted that although fuel is an important component of total VOC, it is not dominant, even with current high fuel prices, and particularly since the evaluation quantifies changes between the base and project cases.

¹² Road Maintenance Program - Phase II, Component B1.1: Road Management Capacity, Updating RMS Unit Costs and System Parameters, Working Paper, January 2008, Ramboll and others.

56. Typical VOCs for each vehicle type as predicted by HDM-4 are shown in Table for the base case and the “with project” case in an area of mountainous terrain. The surface roughness predicted in the base case varies from year to year according to assumed maintenance interventions. The costs shown are for an average roughness of about international roughness index (IRI) 16. In the “with project” case the roughness is much more consistent, and averages about IRI 4 over the evaluation period. As can be seen the overall differences in VOCs are large, a reflection of the major improvement in roughness and higher operating speeds.

Table 9: Typical Vehicle Operating Costs (US\$/km)

Vehicle Type	Base Case	Project Case
Mini Tractor	0.08	0.06
Motorcycle	0.06	0.04
Car	0.36	0.24
Jeep	0.50	0.27
Pickup	0.56	0.32
Small Bus	0.42	0.25
Medium Bus	0.73	0.42
Heavy Bus	0.93	0.54
Light Truck	0.47	0.29
Medium Truck	0.61	0.42
Heavy Truck	1.25	0.80

Source: Consultants

57. The inputs to determine passenger time per hour for different vehicle types are shown in Table 10. Where drivers are assumed to be paid crew their time is included as a component of VOCs. In Lao PDR passengers other than crew frequently travel on freight vehicles and a small number have been included on these types.

Table 10: Value of Passenger Time

Vehicle Type	Work Time (US\$/hour)	Non-work Time (US\$/hour)	Percentage of Work Time	Passengers per Vehicle
Mini Tractor	1.00	0.30	75	3
Motorcycle	1.00	0.30	0	1
Car	1.00	0.30	25	3
Jeep	1.00	0.30	25	3
Pickup	1.00	0.30	90	1
Small Bus	1.00	0.30	25	9
Medium Bus	1.00	0.30	25	20
Heavy Bus	1.00	0.30	25	40
Light Truck	1.00	0.30	0	2
Medium Truck	1.00	0.30	0	2
Heavy Truck	1.00	0.30	0	2

Source: RMS Project

Evaluation Results

58. The evaluation results are summarised in Table 11 where the NPV and IRR of each section and option is shown.

Table 11: Evaluation Results				
Road and Option	Section	Length (km)	NPV (\$m)	IRR
1B Class V	I	75.0	0.3	15.2%
1B Class V	II	34.0	1.2	19.1%
Total		109.0	1.6	16.5%
6A High Traffic	III	50.5	0.6	15.3%
6A High Traffic	IV	12.0	-0.4	9.8%
Total		124.3	1.9	13.6%
6A Low Traffic	III	50.5	-1.4	10.3%
6A Low Traffic	IV	12.0	-0.6	6.1%
Total		124.3	-2.1	9.1%

Source: Consultants

59. NR 1B is viable at Class V standard, with an IRR of 16.5%. NR 6A is viable as a whole when evaluated at Class V standard with the higher of the two traffic levels tested. The IRR in this case is 13.6 percent. If the lower traffic estimates are used the project is not viable, with an IRR of 9.1 percent. However, in the lower traffic case, the potential traffic growth due to growing cross-border trade between Lao PDR and Vietnam is not included in the benefit estimates.

Annex 10: Safeguard Policy Issues

LAO PEOPLE'S DEMOCRATIC REPUBLIC: Road Sector Project

A. Scope of works

1. The scope of the LRSP differs from RMP-2 as there will be a substantial program of road improvement on the existing road platform with in some cases minor, localized changes in alignment within the existing right of way. On national highways and on provincial roads, the improvements will usually include sealing; and on rural roads, will include graveling. None of the proposed subprojects go through critical natural habitats or will have significant adverse impacts on the natural habitats.
2. Sections of two national highways, identified as priority investments in the National Transport Strategic Plan, will be upgraded to sealed standards: (i) 109 km long of the national road 1B (NR 1B) from Pak Nam Noy to Ban Yo, Phongsali Province and (ii) 62 km long of the national road 6A (NR 6A) from Sop Bao to Ban Dan, Houaphan Province. In addition, the project will finance periodic maintenance of the provincial road network which will be identified from the MPWT's Annual Works Program.

B. Strategic assessment and recommendations

3. A strategic assessment was carried out by an independent international consultant with funding support from AusAID to identify potential impacts and mitigation measures of the transport sector master plan proposed for LRSP. The study also reviewed the safeguard implementation experience carried out under the Road Maintenance Project (RMP-2) and other projects, including the draft Environmental and Social Operational Manual (ESOM) which was prepared by DOR (assisted by SIDA technical assistance) as part of the harmonization of safeguard process. The study concluded that at sector level, implementation of the road maintenance projects along the principal GMS corridor, secondary corridor and other areas will have small direct and indirect impacts on forest, illegal logging, and wildlife trade, erosion, water pollution, and negative social impacts; however indirect social impacts due to vehicle emission, human trafficking, HIV/AIDS could be medium. For road widening, these impacts could be higher but manageable with good engineering practices following the ESOM and if resettlement, or land acquisition, and/or indigenous people are involved, effective implementation of the Resettlement and Compensation Policy Framework and Ethnic Group Policy Framework in line with the Bank Operation policy. Specific concerns are the need to review and revise the road design standard when it passes through protected area, right of way (ROW) management, traffic management, and technical and safeguard capacity and monitoring. New road projects in rural area will attract new settlements while those in urban will generate air pollution, but this is considered lower priority give the Lao context. Impact of air transport, water and rail are not included in the assessment. Extensive training on the Environment and Social Safeguard Framework (ESSF) developed and applied for the RMP-2 is a good basis for mainstreaming the safeguard into project development process, and this effort should be continued however with some modification in line with the increasing scope of civil works to be carried out under the LRSP.

4. The study recommended that actions should be undertaken to address the following issues: (a) inappropriate engineering standard and road safety treatment due to different application of different technical standards for donor's projects and inadequate consideration on road safety environmental impacts is given during the detailed design; (b) weak capacity of road traffic administration and heavy vehicle management; and (c) limited capacity for implement the harmonized ESOM. Priority actions include: (i) develop a new harmonized design standards and road safety standards covering drainage, slope stability, rest areas, pedestrian treatments, road safety (signs and markings), and vehicle types considering how roads will be used and under future higher flows; (ii) develop associated policies and plans for more major highway centers and associated facilities (e.g. education, health) in association with other sector agencies; and (iii) training support at central and local level, including on the principles and procedure for implementation of the Compensation and Resettlement Decree. A consulting service will be needed. The study noted that the designs for NR1B and NR6A have been made to limit the need for resettlement and land acquisition.

C. Initial assessment and mitigation measures for the first two priority roads

5. *Background.* An initial impact assessment was conducted for NR6A and NR1B and an Environmental Management Plan was prepared, including the use of the Alignment Sheet approach. Key findings on the background are summarized below:

- *NR 1B (Phongsali Province):* This is a mountainous road (109 km and 4.5 m wide) connecting Pak Nam Noy to Bo Yo in Phongsali Province. The road will be upgraded, paved (DBST), and widened to 6 m carriageway plus unpaved shoulder of 1.5 m in mountainous area, paved shoulder (SBST) of 1.5 m for village areas, and a paved shoulder as required for urban area. The road passes through 29 villages in 3 districts and encompassing about 11,000 people of which majority of them are Lao Loum, Lao Theung, and Lassoing. Existing right of ways (ROW) is about 25 m each side. Within the ROW, there are 38 houses, 85 rice store, 10 small shops, 1 small gas station, 1,387 m² residential land, 5 fish ponds, 100 m² of tree plantation, 1,130 of rice field, trees (teaks, rubber, etc), 2 irrigation systems, 2 transformers, and wildlife hunting in the area is for subsistence purpose. Unexploded ordnance (UXO) is not the issue and this was confirmed by the UXO office and the District Public Works and Transport (DPWT). The area is under the influence of two monsoons and the wet season start in May-October. The road passes one river (Nam Noy) and its streams and 24 schools and 4 hospitals. There is no protected area nearby.
- *NR 6A (Houaphan Province):* This is a mountainous road (124 km and 4.5 m wide) connecting Hang Long to Da Village in Houaphan province. IDA will finance the upgrading of the 62 km section from Sop Bao to Ban Dan, but the engineering design and safeguard works were done for the entire 124 km. The road will be upgraded, paved (DBST), and widened to 5.5 m carriageway plus 1.0 m unpaved shoulder in mountainous area, paved shoulder (SBST) of 1.0 m for flat area, paved shoulder (SBST) of 2.0 m for village areas, and paved of 5 m shoulder for town section. The road passes through 56 villages, including those located about 5 km from the road) in 4 districts and encompassing about 27 thousand people of which majority of them are Lao Loum and Thaidum. Existing right of ways (ROW) is about 25 m each side and is located between

gullies and cliffs. Within the ROW, there are 81 houses, 6 small huts, 9 rice barns, 1 small shop, 2 small gas stations, 810 m2 residential land, 1 fish ponds, 400 m2 of cash crop, 750 m2 of fruit tree, 800 m2 trees, 23,100 m2 rice field, 159 big trees, 1 irrigation, 12 electric pole, 1 cemetery, 1 solid waste disposal site. Wildlife hunting in the area is for subsistence purpose. UXO is an issue in some portion of Vieng Xay District. The area is under the influence of two monsoons and the wet season start in May-October. The road passes 1 river (Nam Ma) and its streams and 59 schools and 6 hospitals. There is no protected area nearby.

6. *Potential impacts.* Due to its mountainous nature, the potential impacts and mitigation of these two roads are more or less the same. Loss of vegetation will increase erosion and effect slope stability while extraction of borrow pits if not properly manage will exacerbate the issue. Collection of sand and gravel from the nearby river and stream is anticipated but the amount is likely to be small and would not adversely affect riverbed ecology. The environmental impacts during construction would be small and manageable. The impacts during operation will be mainly on road safety and wildlife trade, and other indirect social impacts (human trafficking, etc). There are no known physical cultural resources in the subproject areas.

7. *Proposed mitigation measures.* To minimize the impacts on land uses in the ROW, the designs have been modified in consultation with the DPWT and the World Bank. Resettlement Action Plan for these two roads has been prepared in close consultation with the affected peoples. During construction, the contractors will be required to take actions to control dust, noise, wastes, etc., and these specific requirements will be included in the bid documents. The contractor will also be required to (a) submit a monthly monitoring report to DOR, (b) hire project environmental officer responsible for supervision of the mitigation measures and he/she will be part of the Owner Site Engineer. DOR will periodically supervise and monitor. During operation, the mitigation measures will include the implementation of a road safety program/activities (driver training) and the road safety program has been included in the Road Safety component. Establishment of an Environmental and Social Unit (ESU) for each road with a monitoring budget for each road were proposed.

8. Locations of the hot spots and mitigation measures have been identified for these two roads using the Alignment Sheet approach.

D. RAPs and EGDs for NR 1B and NR 6A

9. Under LRSP, National Road 1B and 6A are selected for upgrading. They are located in Phongsaly and Houaphan Provinces respectively with a total of 171 kilometers. Based on the existing alignment, the upgrading of Road 1B and 6A would involve limited amount of land acquisition and house demolition. Most of the affected villages and affected people in the project areas are ethnic groups. To address such limited impacts, two sets of RAPs and EGDs have been prepared by the MPWT.

Scope of land acquisition and resettlement

10. According to a detailed impact survey, the proposed two road subprojects will affect 27 villages in 7 districts of Phongsaly and Houaphan Provinces. A total of 72 households will be

affected by land acquisition and house demolition. They include permanent land acquisition of 1.67 hectares of land areas, with 1.36 hectares of farmland and 0.31 ha of housing land; and a total 1,242 square meters of houses and 720 square meters of shops to be demolished. Along with land acquisition and house demolition, the project will also involve removal of a range of attachments, such as rice stores, fence, water pipes, and so on.

Resettlement Policy and Compensation Standards

11. The resettlement policy is based on the World Bank Policy on Involuntary Resettlement (OP4.12), the Constitution of Lao PDR (1991), the Decree 192/PM on Compensation and Resettlement, (Government of the Lao PDR, 2005), and related Lao policies. The key principle of the RAP is to ensure that affected persons or groups by land acquisition or resettlement will be compensated based on replacement value so that their income and livelihoods are the same or better than before the project.

12. According to national laws and regulations and based on consultation with affected people a set of compensation rates has been adopted for the Project. For house demolition, the compensation will be set at \$30 to \$40 per square meter for different types of structures, and \$3 per square meter for all acquired land areas. Along with compensation for structures, replacement housing plots and moving allowance will be provided. For various attachments, the compensations at replacement value will be provided, so that affected individual and village facilities could be restored into original conditions. For temporarily occupied land, if productive land is involved, the affected villages or individuals will be provided compensation for the lost yield, plus compensation for restoring them into original conditions.

Resettlement and Rehabilitation

13. As for the people inevitably affected by the project, adequate compensation and rehabilitation measures will be provided so that the affected people could restore their income and livelihood to their previous levels. For 49 households losing their houses, housing land and shops, the basic strategy is to provide compensation for lost structures based on replacement value and compensation for lost housing land so that they could rebuild their houses or shops in the same villages and along the road in order to restore or improve their current livelihood. For the households affected by lost attachments, compensation at replacement value will be provided so that affected assets and properties could be restored in nearby locations. For 10 villages losing limited paddy land (13,290 m²) and 2 households losing fishing pond (200 m²), compensation based on replacement value will be provided, which will enable the affected villages or households to develop more farmland, improve irrigation conditions, and increase yield of existing farmland.

14. For the impacts of removal of 102 roadside trees and 22 transmission line poles of (35kV), compensations will be paid to relevant local government departments so that the affected facilities could be restored and rehabilitated and basic function could be maintained. For potential temporary land occupation, adequate compensations will be paid to affected villages and individuals for their lost yields and the project owner will be responsible to restore the land areas into their original condition after construction. Overall, the impacts of land acquisition and resettlement are limited for the construction of the subproject, and most of such

impacts could be mitigated by provided compensation at replacement cost and relevant rehabilitation measures.

Project Mitigation and Enhance Measures

15. In addition, the implementation of Project will bring a range of positive benefits to local villages, which include temporary employment, easy access, lower transport cost and more development opportunities. For any potential negative impacts other than land acquisition and resettlement, such as potential environment impacts and road safety concerns, various mitigation measures will be taken by the Project. They include detailed environment measures to be included in both civil contracts and environment management plans, and road safety education programs to be implemented in local languages by provincial DPWT including local ethnic affairs officials.

Public Information, Consultation and Participation

16. In the process of identifying resettlement impacts, formulating compensation policies, and preparing the RAPs and EGDs, extensive consultation and community participation have been organized by consultants and staff from provincial and district government agencies in the project affected areas. Survey results show that all of local residents support this project; and most of them believe that the project will benefit them. For those affected by house demolition and relocation, based on consultation among affected villages, adequate compensation will be paid and alternative housing plots of same quality will be provided within their existing villages. More efforts will be made during the resettlement implementation to encourage further participation by the affected people, such as increase fairness in allocating alternative housing plots, and improve transparency in delivering and using compensation funds.

17. Following both laws in Lao PDR and the World Bank policy, the project sponsors have disclosed the content of RAPs and EGDs, and inform the affected people about resettlement impacts, compensation policies, and rehabilitation options. More concrete disclosure will be made prior to implementation of land acquisition, which included distributing resettlement information booklet to affected people, and making RAPs and EGDs available in the concerned districts and villages.

18. To effectively address any complains by affected persons, a grievance procedure will be set up by the project. If one person does not satisfy the compensation amount or rehabilitation measure, he or she could first voice his or her complain to the village or concerned district department, which should document such complain and resolve the matter within two weeks. If the affected person is not satisfied with the decision, he or she could bring his or her case to project resettlement office, which will provide a formal resolution within two weeks. If the affected person does not agree with the resolution, he or she could bring his or her case to Provincial Resettlement Compensation Committee, which will make a decision within 10 days. If the affected person still does not satisfy the resolution from Provincial Resettlement Compensation Committee (PRCC), he or she could go to the civil court to appeal. The affected people will be informed about these grievance procedures by meetings, information booklet and public notice.

Social Economic Profile and Vulnerable Groups

19. In the project areas of these two roads including both villages along the road and within 5 km from the road, there are a total of 134 villages, 9,451 households and 53,249 persons from 7 districts in two provinces. Among them, only 17% households and 15% of population are Laos, and remaining 83% and 85% of them are ethnic groups. Among ethnic groups, Lao-Tai group account for 67% of total households, followed by Sino-Tibetan group with 16%, Mon-khmer group with 12% and Hmong-mien group with 5%. They include Taideng, Tai dam, and Lue from Lao-Tai group, Khmou from Mon-khmer group, Akha and Singsili from Sino-Tibetan Group and Hmong and Yao from Hmong-mien group. About 21% of households are under the poverty line or \$120 per capita per year. Detailed survey indicates that among total affected people, 69% are ethnic groups, which include Taideng, Khmou, Taisang, Akah, Hmong and Yao. As for the vulnerable people, including poor households, households with disabled people, households with only older people, and households headed by women, the project will provide extra economic supports.

20. According to the survey, there is only five vulnerable household affected by the project with three women headed households and three poverty households with income below \$120 per capita per year. According to the RAP, these vulnerable households will be given extra financial support in addition to physical assistance during relocation and house reconstruction, which is set at \$150 per household. In order to provide such support, MPWT has set aside 1% of land acquisition compensation as assistance fund for vulnerable groups.

Institutional Arrangement

21. The resettlement implementation responsibilities belong to the project sponsor and local governments. To ensure successful resettlement implementation, a Provincial Resettlement Compensation Committee (PRCC) will be established in two provinces. The officials from provincial public works and transport department, Lao National Front, Lao Women Union, and other key agencies, as well as relevant district officials will be the members of PRCC. Its main responsibility is to strengthen the leadership of the project, formulate resettlement policies, smooth the resettlement implementation, and coordinate among departments. A resettlement office will be set up within Provincial Public Works and Transport Department for the Project, which is responsible for coordinating overall resettlement planning and implementation activities for the proposed project. Their responsibilities include (1) conducting inventory and social economic surveys, and providing assistance in preparing RAP; (2) signing compensation agreement with affected households and villages, and allocating compensation funds to concerned parties; and (3) coordinating and supervising resettlement implementation.

22. They will work closely with local district governments and concerned villages in conducting site survey, keeping records, organizing consultation, developing and implementing RAP, managing and allocating the resettlement funds, training resettlement staff, signing compensation agreements with affected households and villages, and being a main channel of grievance for the resettlers. In the affected villages, compensation committees will be established, which will work closely with provincial and district resettlement offices for carrying out resettlement implementation for the project.

Monitoring and Evaluation

23. In order to ensure that resettlement will be implemented smoothly and the livelihood of the resettlers will be restored, both internal monitoring and external monitoring and evaluation will be carried out during the resettlement implementation. For the Project, the internal monitoring will be in responsible by resettlement office of the Project. The concerned provincial and district resettlement working teams will participate in the internal monitoring efforts. The main purpose of internal monitoring is to monitor the implementation of resettlement program to ensure that agreed RAPs will be fully implemented, and the interests of resettlers are protected. The monitoring will cover all aspects of resettlement operation, such as delivery of compensation fund, land allocation for relocated households, and house reconstruction in accordance to the RAPs. Such information will be incorporated into project progress report to be submitted by the project owner to the World Bank.

24. In terms of external resettlement monitoring and evaluation, a qualified independent agency will be hired by Project Management Office of MPWT to regularly monitor the resettlement implementation for the proposed project and to evaluate whether the main objective of resettlement program is achieved. The independent monitoring and evaluation, guided by ESD of MPWT, will provide assessment on whether the livelihood of resettlers have been restored, which will become early warning system for the project management, and channels for voicing comments and opinions from affected people. The external resettlement monitoring and evaluation survey will be carried out in the end of every year once the resettlement implementation begins; and will submit a resettlement monitoring and evaluation report to ESD of MPWT as well as the World Bank by the end of each year. The resettlement and relocation work will begin in the end of 2009 and the land acquisition will be completed in early 2011. The resettlement monitoring and evaluation work will proceed at least 3 times between 2010 and 2012.

Costs and Implementation Plan

25. The costs of land acquisition are included in the overall budget of the Project. The total costs of land acquisition and resettlement are estimated to be \$167,774, of which \$49,127 for land acquisition, \$72,576 for house and shop compensation and relocation, \$14,699 for attachments. The land acquisition and resettlement will be implemented in 3 years. The cost estimate for land acquisition includes provision of contingency set at 14% of total amount of compensation budget.

26. In terms of resettlement implementation schedule, it will be closely related with construction progress. Land acquisition for both of the gas exploration and transmission components will be completed one month before the start of the civil work construction. The proposed schedule is expected to ensure that all affected persons, prior to their actual losses: i) will have been adequately consulted about the Project, its impacts and compensation entitlements; ii) will have received compensations in a timely manner; and iii) have been provided with means to establishing livelihood.

E. Environment and Social Operation Manual (ESOM)

27. During the implementation of RMP2, MPWT took an initiative to harmonize the donor's safeguard requirements with those of the government, and made an effort to draft an Environmental and Social Operations Manual (ESOM) with assistance from SIDA's technical assistance. MPWT proposed to apply the ESOM during the implementation of donor-financed projects and sent the first draft ESOM to various donors (ADB, SIDA, and World Bank) for comment in mid 2008. The World Bank carried out a safeguard review mission and provided additional technical support to improve comprehensiveness of the ESOM, and consultations were held on the second draft during a December 2008 workshop. A revised draft, incorporating comments received, was finalized with technical assistance from SIDA and was sent to the World Bank and other donors for comment in mid January 2009. Institutional aspect of this draft was updated in line with the new organization structure of MPWT and this draft was formally sent to the Bank for consideration and disclosure in the InfoShop. The ESOM is considered a living document and can be modified and/or updated as needed in close consultation with the World Bank and other donors.

28. The ESOM is considered acceptable to the World Bank providing that the following conditions are met:

- The use of the Alignment Sheet is included in the ESOM and is applied to all the subprojects to be implemented under LRSP.
- The gaps identified in the Safeguards Diagnostic Report (SGDR) (see below) are included in the ESOM, including monitoring system.
- Although the World Bank will finance only road upgrading, the ESOM will be applied to all road activities (rehabilitation, maintenance, and new construction) regardless of sources of financing.
- As part of the screening or subproject selection process, the ESOM should clearly indicate that the World Bank will not finance new road or any subproject which is likely to result in potential significant conversion or degradation of ecologically sensitive areas or natural habitats or any subproject which is likely to result in potential significant adverse impacts on the physical cultural resources (PCR). An appropriate clause is to be included in all construction contracts regarding the procedure to be followed in the event of chance find of PCR.
- MPWT will ensure consistency between ESOM, the impact assessment, and proposed mitigation measures and or Environmental Management Plan (EMP) of the two roads.
- MPWT will establish a clear institutional responsibility for monitoring the implementation of the safeguard measure of the subprojects and include the monitoring results in the project progress report.
- Additional consultation should be conducted to ensure that the Government takes ownership of the document.

F. Use of the Country System (UCS)

29. In response to MPWT's proposal to use the ESOM for LRSP, the Bank safeguard team reviewed the draft ESOM and considered that the ESOM could be the basis for the pilot test of the Use of Country System (UCS) for the transport sector. With agreement from MPWT, the Bank undertook an Equivalence and Acceptability Assessment (EAA) and found that the UCS could be applied to the EA policy (OP/BP 4.01), Natural Habitats (OP/BP4.04), and Physical Cultural Resources (OP/BP 4.11) providing that the following gaps are included in the ESOM:

(1) With respect to EA:

- (A) The ESOM shall provide for assessment of alternatives to be required to compare relative feasibility under local conditions for each sub-project, including comparative capital and recurrent costs, and institutional, training and monitoring requirements and to justify alternatives considered on the basis of all of the feasibility criteria cited in OP 4.00 Table A1;
- (B) The ESOM shall provide a full description of the institutional capacity of the selected sub-project including the additional capacity needed and training for environmental management;
- (C) The ESOM shall provide for analysis of all alternatives to a proposed sub-project including the no-project alternative;
- (D) The ESOM shall include guidelines on public participation and consultation including timeline, documentation and follow up; and
- (E) The ESOM shall provide for the respective roles and responsibilities of executing agencies in charge of road construction, rehabilitation or management and WREA for monitoring implementation and enforcement of EMPs and mitigation measures for sub-projects.

(2) With respect to the Natural Habitats:

- (A) The ESOM shall provide for inclusion of a provision stating that road sub-project should be sited on previously converted lands, and if no alternative is found the ESOM must include a compensation offset provision for conversion of non-critical habitat;
- (B) The ESOM to provide that no road sub-project shall be undertaken on critical natural areas.

(3) With respect to the Physical Cultural Property (PCR):

- (A) The ESOM to provide for roles and responsibilities of local communities in the process of identifying, assessing, surveying and protecting PCR; and

(B) The ESOM to Specify guidelines for the management of “chance finds” and management of PCR discovered during road sub-project implementation.

30. In addition, and beyond the scope of the above-mentioned gap-filling measures, the GOL is undertaking steps to further enhance its legal and regulatory framework for environmental protection and natural resources conservation and update it in view of addressing various development challenges including in the hydropower and mining sectors.¹³ In doing so, it is being assisted by the Bank and other donors including SIDA and ADB. Such enhancement shall certainly benefit the road sector. Bank supervision of the Road Sector Project shall monitor such enhancement and assist the GOL as appropriate.

G. Action to be carried out for LRSP

31. For the first two roads (NR 6A and NR 1B), specific safeguard requirements, including the assignment of the Environment and Social Division (ESD), will be included in the bidding document and the potential contractors will be informed to this obligation. Responsibility to monitor and report safeguard performance of the contractors will be included in the TOR of the field engineer and the supervision consultant.

32. For the new subprojects (i.e. the periodic maintenance works of provincial roads to be selected for implementation in Year 2, 3 and 4), the following will be carried out:

- *Selection of the subprojects:* All the proposed subprojects to be financed under LRSP will undergo the subproject screening procedure identified in the ESOM and the results will be properly recorded for possible review by the World Bank. The World Bank will not finance the new road or any subproject which is likely to result in potential significant conversion or degradation of ecologically sensitive areas or natural habitats or any subproject which is likely to result in potential significant adverse impacts on the physical cultural resources (PCR). An appropriate clause is to be included in all construction contracts regarding the procedure to be followed in the event of chance find of PCR.
- *Preparation of impact assessment and application of the mitigation measures:* According to the scope of the civil works and results of the subproject screening, preparation of appropriate assessment and mitigation measures will be prepared in line with the procedure outlined in the ESOM. Public consultation will be conducted as part of the assessment process and the Alignment Sheet approach will be applied during the preparation of the mitigation measures. Appropriate design standard will be used to ensure that (a) minimum forest clearance is achieved for the road located in or near sensitive forest/protected area (b) appropriate road safety road safety treatment and management is achieved when the road pass through local communities. Appropriate signing and road safety measures will be applied.

¹³ Beyond these gap-filling measures described above and to be applied for the purpose of the proposed Project, the GOL has for some years recognized the need for a more holistic approach to environmental law and regulation. Such recognition was expressed through proposals to review and amend the EPL, EIA regulations, especially to conform to the establishment of WREA which has replaced STEA, and other environmental and natural resources related laws to keep up with best international practices and better address environmental challenges.

- *Land acquisition and ethnic groups:* If the subproject involves land acquisition and ethnic groups, the policy frameworks described in Sections H and I will be followed.
 - *Information disclosure:* The safeguard documents such as the RAPs, IEE, EMP, and/or Alignment Sheet will be translated to local language and disclosed in the project area accessible to the public and affected people.
 - *Emergency works to be financed by the emergency contingency fund:* For emergency works, DPWT will carry out the activities with due diligence in line with good engineering practices, especially in the areas of road safety and safety of workers and local residents during the emergency period. Proper closure of borrow pits (if any) will be carried out soon after the event. If a contractor is acquired, specific conditions on emergency requirement will be included in the contract and monitoring and reporting results will be included in the subproject progress report. After the event, ESD will conduct an assessment on the DPWT/DOR safeguard emergency performance and make recommendations for improvement as needed. DPWT, DOR, and ESD will keep proper records on safeguard performance of each event.
33. ***Institutional support:*** Under LRSP, training will be provided to facilitate effective implementation of ESOM, the Compensation and Resettlement Decree (2005), including its technical guidelines, and Public Involvement procedure. An estimated budget identified in the SGDR is provided in table below.

Summary of the Environmental and Social Strengthening Plan

ACTIVITIES	Amount (US\$)
<u>Environmental and Social Management</u>	
a. Environmental and Social Operation Manual.	20,000
b. Implementation of the Proposed Organizational Restructuring.	100,000
c. External Environmental and Social Capacity.	30,000
d. International training for the ESD	30,000
<hr/>	
<u>Capacity Building</u>	
e. Environmental and Social Operation Manual	15,000
f. Specialized training by international consultants.	25,000
g. Safeguards Strengthening Program to ESOs and ESUs.	60,000
<hr/>	
<u>Equipment</u>	
h. Monitoring and Follow-Up Program.	60,000
i. Geographic Information System. Software and Hardware.	10,000
<hr/>	
Total	350,000

34. **Revision of ESOM:** Recognizing that GOL has been updating the regulatory measures to increase effective application and management of the EIA process, the draft ESOM will be updated and/or revised in line with the new regulation in close consultation with the World Bank. MPWT will inform the Bank on the progress of the EIA regulation status and progress of the safeguard measures in the project progress report ensure is revising the EIA regulation and possible revision
35. **Monitoring and Reporting.** MPWT will submit a six month progress report on safeguard implementation of the LRSP and submit to the Bank.

H. Resettlement Policy Framework (RPF)

36. For the periodic maintenance subprojects to be funded under LRSP a resettlement policy framework (RPF) has been developed since design and scheduling considerations make it impossible to determine the extent of resettlement planning requirements at appraisal. The RPF establishes principles and procedures to be followed if subsequent stages of project design or implementation are to cause land acquisition or other involuntary restrictions on access to land or other resources. In such instances, the RPF requires that a Resettlement Action Plan (RAP) is prepared for World Bank review and approval. The RAP ensures that any such potential impacts are minimized, and that any persons affected by such impacts are provided ample opportunity, through provision of compensation or other forms of assistance, to improve or at least restore their incomes and living standards.

37. The RPF specifies basic objectives and principles that are applicable in projects generating land acquisition and resettlement-related impacts by following OP4.12. Every reasonable effort will be made to avoid or minimize the need for land acquisition, and to minimize all resettlement-related adverse impacts. If land acquisition and associated adverse impacts cannot be avoided, the principle objective of the RPF is to ensure that all persons subjected to adverse impacts are compensated at replacement cost for lost land and other assets and otherwise provided with any rehabilitation measures or other forms of assistance necessary to provide them with sufficient opportunity to improve, or at least restore, their incomes and living standards.

38. It also lists key principles as in World Bank's OP 4.12 to be followed in resettlement planning and implementation, and basic legal context in Lao PDR for carrying out land acquisition and resettlement. More importantly, it identifies basic institutional arrangement for implementing RPF for this project. Overall responsibility for preparation and implementation of any necessary RAPs rests with Ministry of Public Works and Transport. Other agencies or jurisdictional units with direct responsibility for acquiring land or implementing resettlement measures including PWTD in relevant provinces and other key provincial and district agencies will coordinate activities as necessary to ensure effective resettlement planning and implementation in a timely manner.

39. Once it is determined that land acquisition or any associated impacts is essential to complete any project activities, and once siting criteria establish the land area to be acquired, resettlement planning should begin. The project owner will carry out, or cause to be carried out, a census survey to identify and enumerate all displaced persons, and a socioeconomic survey to

determine the range and scope of adverse impacts in the affected area. The census survey must cover 100% of the persons to be displaced; the socioeconomic survey may be undertaken on a sample basis. The surveys, which may be undertaken separately or simultaneously, determine whether a full RAP or an “abbreviated” RAP (as defined in OP 4.12, Annex A) is necessary. When the number of persons affected exceeds 200, a full RAP is necessary. Where impacts on all displaced persons are relatively minor, or fewer than 200 people are affected, an abbreviated RAP may be prepared. Impacts are considered “minor” if the affected people are not physically displaced and less than 10% of their productive assets are lost.

40. If a RAP is necessary, it will be prepared in accordance with the policy principles and planning and implementation arrangements set forth in this RPF. The RAP is based on accurate baseline census and socioeconomic survey information, and establishes appropriate mitigation measures (e.g., compensation for assets, transitional assistance, and economic rehabilitation assistance) as appropriate for all categories of adverse impacts. In addition, issues like consultation and disclosure, grievance procedures, implementation arrangement, cost estimate, and monitoring and evaluation should also be adequately covered in the RAPs. Any RAPs prepared in accordance with this RPF must be reviewed and approved by the Bank prior to awarding of contracts for the civil works that would result in the displacement.

Ethnic Groups Policy Framework (EGPF)

41. For the proposed LRSP, the periodic maintenance of provincial roads might include subprojects involved with potential resettlement impacts. Although the exact list of such subprojects except for the first year has not yet been defined, given fact that some of the roads may be located in remote provinces, it is very likely they would be located in areas with ethnic groups population. To ensure that affected ethnic group populations will derive benefits under the project, an ethnic group development framework has been developed, under which, a policy framework and consultation procedure has been set up for those subprojects.

42. Lao PDR is a cultural diverse country with 49 ethnic categories under four linguistic groups. Different ethnic groups account for over 40% of total population. The Bank has determined that OP 4.10 will apply to at least three linguistic groups except for Lao-Tai, who still maintain cultural and socioeconomic practices different from the Lao national majority.

43. The project design recognizes that ‘meaningful’ participation by poor and disadvantaged sections of society requires special focus that goes beyond routine project implementation management. In the operation manual for MPWT, detailed guidelines on social assessment and resettlement aspects are included, under which the preparation of each subproject will carry out preliminary social assessment. Such effort is designed to understand the basic social economic needs of the communities and support key activities aimed at empowering beneficiary populations to exercise their voices and choices.

44. The project sponsor will ensure that full consultation, in a language spoken by the ethnic groups, and invite participation of ethnic groups are fully taken into account during preparation and implementation of subprojects, while respecting their current practices, beliefs and cultural preferences.

45. The proposed screening, social assessment and consultation process will provide comprehensive baseline data on social, economic and technical aspects of each subproject. If the social assessment confirms that no ethnic minority populations exist in the project areas, no further action is necessary. If the social assessment indicates that there are potential social issues because of ethnic group populations in such subproject, it will be ensured that the responsible project sponsor will undertake specific measures to consult with, and give opportunity for ethnic group populations in participating decision making related to the subproject, should they so desire.

46. Besides specific attention to ethnic group issues in supervision and monitoring, the PMO in MPWT will include these matters in their progress reporting. The IDA supervision missions will periodically pay special attention to ensure that that the subproject affords benefits to vulnerable groups and ethnic minorities.

Annex 11: Measures to Strengthen the Internal Controls and Accountability

LAO PEOPLE'S DEMOCRATIC REPUBLIC: Road Sector Project

	Area to be Strengthened	Action to Strengthen	Prime Responsibility	Target/Monitoring
1	Procurement			
1a	Use of standard procedures.	<p>In carrying out all procurement and to supplement the Bank's Procurement and Consultants Guidelines, MPWT will comply with: (1) Procurement Decree No. 03/PM of January 9, 2004, (ii) Implementing Rules & Regulations for Public Procurement (IRRRPP) of MOF, dated March 12, 2004, (iii) the Standard Bidding Documents (SBD) for National Competitive Bidding (NCB) and Shopping dated —, and (iv) the Procurement Manual of the Procurement Monitoring Office (PrMO) when completed and acceptable to the Bank. These documents will be subject to the provisions of the NCB Annex in the Financing Agreement and provide standard procedures for the whole procurement cycle from procurement planning to contract administration, including:</p> <ul style="list-style-type: none"> • A template for bid advertisements, including paragraphs on fraud and corruption and complaints procedure if a bidder is prevented from buying bid documents. • Standard bid opening report format. • Standard bid evaluation report format. • Standard procurement plan format. • Standard procurement tracking forms. • Declarations of ethical conduct by bidders and members of procurement committees. • Keeping and management of procurement records, including supplying copies of awarded contracts to PrMO. 	MPWT (Department of Roads) and provincial Departments of Public Works and Transport (DPWT). Training on the use of these documents will be provided to MPWT/DPWT procurement staff by IDA specialists between appraisal and effectiveness. Further training by consultants during project implementation will be supported by the Project.	Internal Control Division (ICD) to monitor adoption.
1b	Limiting the level of excessive bid pricing, which has resulted from	MPWT will include in the training component to be financed by the PHRD grant a qualified individual consultant under Terms of Reference (TOR) acceptable to	MPWT to prepare TOR for IDA no objection and recruit consultant.	Agree TOR at Negotiations and sign contract with consultant prior to the first bids being called. ICD

Area to be Strengthened	Action to Strengthen	Prime Responsibility	Target/Monitoring
collusion and bid-rigging.	IDA to assist and guide the implementation of the procurement framework and action plan and continue training of MPWT/DPWT procurement staff. The TOR will include conducting analysis of bids referenced to data on market prices of key items in order to detect bid-rigging and provide a basis for possible rejection of over-priced bids.		to monitor performance of consultant.
2 Financial Management 2a Standard procedures.	<p>In carrying out all financial management actions for the Project, MPWT will ensure that its Planning and Disbursement Division (PDD) within the Department of Roads (DOR), the Road Maintenance Fund (RMF) and the 17 provincial finance units (PFUs) adopt the MOF Standard Financial Management Manual (SFMM) when completed and acceptable to the IDA.</p> <p>The SFMM procedures will be supplemented by the MPWT's own Financial Management Procedures Manual (FMPM) which has been updated by MPWT and is now under consideration by MOF. The FMPM will set out FM reporting requirements for the Project.</p> <p>MPWT and IDA to agree the formats of quarterly un-audited interim financial reports (IFR) and audited annual financial statements for the Project. Formats may be in accordance with the SFMM.</p>	<p>MPWT.</p> <p>MPWT with updated FMPM satisfactory to the IDA.</p> <p>MPWT and IDA.</p>	<p>ICD to monitor use of SFMM by concerned divisions and units of MPWT.</p> <p>Updated FMPM to be agreed prior to any disbursements being made. ICD to monitor use of FMPM by concerned divisions and units of MPWT.</p> <p>Agree by Negotiations. ICD to monitor use of agreed formats.</p>
2b Internal controls and accountability.	MPWT has established the Internal Control Division (ICD) of the Department of Inspection with an initial staff of two to be progressively increased, the scope of work of which will include internal audit of MPWT activities in general and the Project in particular. Financing will be provided under the Project to support incremental operating costs (except salaries) of the ICD in respect of the Project, details of which will be agreed between MPWT and IDA.	MPWT has prepared the scope of work for the ICD, including work on the Project and will submit, with costs, to IDA for its consideration.	MPWT-IDA to agree scope of work for the project and amount of support for operating costs by negotiations.

	Area to be Strengthened	Action to Strengthen	Prime Responsibility	Target/Monitoring
2c	Capacity of ICD.	MPWT will recruit a qualified national consultant under TOR satisfactory to the IDA, financed by the Project, to support the start-up of the ICD and provide training for capacity development of its staff during the first two years of the Project. The recruited consultants will support the ICD staff undertaking internal audit of the Project.	MPWT to prepare TOR with IDA no objection and commence recruitment immediately thereafter.	TOR agreed by Negotiations. Recruitment to be completed and contract signed by three months after effectiveness.
2d	External audit.	From GOL's financial year ending October 2010, all IDA-financed projects will be bundled for audit by an external audit firm to be recruited by MOF, under TOR satisfactory to the IDA. The costs related to audit of the Project will be financed under the IDA grant.	MOF/IDA to agree TOR.	MOF to recruit external audit firm by October 2010.
2e	Updating FM Risk Management Plan	MPWT's Department of Inspection (DOI) will update the Project's FM Risk Management Plan annually, based on the findings and reports of the internal audit unit and the external audit report, and submit to the IDA in the Semi-Annual Progress Report for the Project.	DOI to lead and coordinate with line departments.	Annually after receipt of internal and external audit reports.
2f	Minimize cash transactions.	All progress payments to contractors, suppliers and consultants – firms, individuals, national and international – to be made by check or transfer to bank accounts, for amounts exceeding US\$500 or equivalent.	MPWT regulations currently limit cash transaction to not more than LAK 1 million (about US\$120).	ICD to monitor compliance.
2g	Training, workshops and study tours in Lao PDR and abroad.	Establish Annual Training and Workshop Plan and ensure that IDA NOL received. The Plan should include details of cost estimates with reference to project budget, and type of training, workshops, and study tours in line with project aims and objectives. Adopt daily subsistence rates and allowances in Ministerial Decision No 2348. For international travel, some of these rates are position-based and higher than UN norms, the IDA will set ceilings on the amounts it will reimburse not to exceed the hotel and per diem rates paid to its own staff.	MPWT's DOP incorporates training assessment and proposed training programs in its Annual Work Plan. MPWT.	ICD to monitor compliance. ICD to monitor compliance
2h	Reconciliation of advances for operating	Advances to staff and to provincial and district offices for operating expenses to be reconciled within 15 days after	MPWT's regulations require liquidation of advances 15 days after	ICD to monitor compliance.

	Area to be Strengthened	Action to Strengthen	Prime Responsibility	Target/Monitoring
	costs and expenses	the end of each month. No further advances to be paid to a provincial or district office or individual, until previous advance to that office or individual is reconciled and cleared with documentary evidence.	the completion of the activity.	
3	Disclosure			
3a	Increase transparency through greater public disclosure of project information	<p>Information from the following to be disclosed on IA website (if available) or in the media. PrMO website may serve as a central source of disclosure if so agreed by MOF.</p> <ul style="list-style-type: none">• project name, objectives, original and revised amount, sources of funding, effectiveness date, original closing date, revised closing date, number of extensions, name and address of implementing agency, name of Project Director with contact information, name of World Bank Task Team Leader and contact information in implementing agency and World Bank Office in Vientiane• details of project components, percentage completion, data on performance indicators• annual Work Program and Procurement Plan, identifying contracts to be procured in next 12 months, nature of each contract, location, method of procurement, means of advertisement, bidding period, location where bidding documents and RFPs can be inspected, expected date of availability, and cost of bidding documents• consultant long and short lists• hard copies of bidding documents and RFP's to be available for inspection at MPWT's office upon request• bid closing dates, names of bidders and their bid prices at opening• quarterly list and details of contracts awarded, names of losing bidders and, if their bid prices were lower than the winning bidder, the reason for their rejection• newspaper advertisement advising that the above details are available for inspection at the MPWT or DPWT offices• project six month progress reports	MPWT. The Project will support upgrading of the capacity of the MPWT website.	Website to be updated quarterly. Media insertions to be placed quarterly. Notifications to local communities of upcoming Project work in their areas to be made two months before work commences.

	Area to be Strengthened	Action to Strengthen	Prime Responsibility	Target/Monitoring
		<ul style="list-style-type: none"> planned and actual disbursements by sub component annual financial statements and audit opinion other specific reports prepared by the project complaints and remedies mechanism phone number of the State Inspection Authority code of ethical conduct <p>Agree method of disclosure at central, provincial and district levels, taking account of literacy levels and poor access to the internet in provinces and districts. Also, upon request, disclose information by hard copy to civil society organizations to improve dissemination to the public. Organizations or individuals requesting hard copy information may be charged for the cost of reproduction.</p>		
4	Receiving and Dealing with Complaints			
4a	Adopt a formalized complaints and remedies system for any complaints about any aspect of a project, which is easily understood by the public.	GOL introduced a Complaints Law in 2006, which describes a mechanism for receiving and handling complaints against all line ministries and agencies.	MPWT complies with the Law and will make an English translation available to the IDA. MPWT will disclose on its website the procedures laid down in the Law.	ICD to monitor and keep records of the receipt of complaints and their resolution.
5	Code of Ethical Conduct (or Integrity Pact)			
5a	In common with all line agencies, MPWT to adopt a Code of Conduct for civil servants when approved by GOL.	When finalized by the Public Administration & Civil Service Authority and approved by GOL, MPWT will adopt the Code of Conduct for Civil Servants and mandate for adoption. The Code will define sanctions that may be applied to fraudulent and corrupt activity by any civil servant.	MPWT to adopt the Code when finalized and ICD to disseminate to all Project staff.	ICD to monitor staff compliance with Code.
		IDA can apply sanctions available in its general and project-specific legal agreements, including the World Bank Group's Procurement Guidelines, Anti-Corruption Guidelines (ACG), and Sanctions Regime, issued in October 2006 and as may be subsequently updated.	IDA to provide MPWT with a copy of the World Bank Group's ACG and Sanctions Regime during appraisal.	WB may carry out a detailed implementation review of a project if indications of corrupt or fraudulent activities are found.

	Area to be Strengthened	Action to Strengthen	Prime Responsibility	Target/Monitoring
6	Measures to Reduce Project-Specific Fiduciary Risks			
6a	Quality and quantity of civil works financed by the Project.	Physical verification that civil works forming parts of the Project have been constructed in correct quantities to specified standards, and are being used for the purposes intended. The verification duties of the Provincial Committees of DPWT will be supported by the hiring of a part-time technical auditor, amongst whose duties will be random checking of completed civil works for acceptable construction standards and proper use.	DPC/ICD will recruit a part-time technical auditor under TOR satisfactory to the IDA.	ICD to monitor technical auditor's periodic reports and prepare action plans for correction of any civil works found to be below acceptable standards.

Annex 12: Project Preparation and Supervision
LAO PEOPLE'S DEMOCRATIC REPUBLIC: Road Sector Project

	Planned	Actual
PCN review		12/18/2007
Initial PID to PIC		7/31/2008
Initial ISDS to PIC		7/31/2008
Appraisal	12/17/2009	12/14/2009
Negotiations	12/21/2009	02/08/2009
Board/RVP approval	03/25/2010	
Planned date of effectiveness	06/01/2010	
Planned date of mid-term review	10/15/2012	
Planned closing date	09/30/2014	

Key institutions responsible for preparation of the project:

• Ministry of Public Works and Transport	MPWT
• MPWT- Department of Planning and Cooperation	MPWT-DPC
• MPWT- Department of Roads	MPWT-DOR
• MPWT- Department of Transport	MPWT-DOT
• MPWT- Department of Personnel	MPWT-DOP
• MPWT- Department of Inspection	MPWT-DOI
• MPWT- Institute of Public Works and Transport	MPWT-PTI
• Provincial Branches of MPWT	DCTPC
• District offices of MPWT	CTPC
• Road Maintenance Fund Advisory Board	RMFAB

Name	Title	Unit
Zhi Liu	Task Team Leader/Lead Infrastructure Specialist	EASTS
Julia M. Fraser	Co-Task Team Leader/Sr. Financial Analyst	EASTS
Sombath Southivong	Sr. Infrastructure Specialist	EASIN
Roch Levesque	Sr. Counsel	LEGES
Fei Deng	Transport Specialist	EASIN
Christopher De Serio	Operations Analyst	EASIN
Rodrigo Archondo-Callao	Sr. Highway Engineer	ETWTR
Chinnakorn Chandra	Procurement Specialist	EAPCO
Souphanthachak Sisaleumsak	Procurement Analyst	EAPCO
Manida Unkulvasapaul	Sr. Environmental Specialist	EASTS
Daniel Gibson	Sr. Social Development Specialist	EASTS
Christopher Fabling	Sr. Financial Management Specialist	EAPCO
Nipa Siribuddhamas	Financial Management Specialist	EAPCO
Binyam Reja	Sr. Transport Economist, Peer Reviewer	AFTTR
Aymeric-Albin Meyer	Sr. Transport Specialist, Peer Reviewer	LCSTR
Supee Teravaninthorn	Program Coordinator, Peer Reviewer	AFTTR

Juan D. Quintero	Sr. Environment Engineer	EASRE
Mohammed A. Bekhechi	Lead Counsel	LEGEN
Thalavanh Vongsonephet	Program Assistant	EACLF
Rod Stickland	Transport Planner	Consultant
Phil Sayeg	Transport Planning Consultant	AusAID
Peter Symons	Transport Engineering Consultant	AusAID
Koji Tsunokawa	Transport Engineer	Consultant

Bank funds expended to date on project preparation:

1. Bank budget: US\$532,300

Estimated Approval and Supervision costs:

1. Remaining costs to approval: \$10,000
2. Estimated annual supervision cost: US\$70,000

Annex 13: Documents in the Project File
LAO PEOPLE'S DEMOCRATIC REPUBLIC: Road Sector Project

Lao PDR Country Assistance Strategy Update. May 4, 2007.

Lao PDR Public Expenditure Review and Integrated Fiduciary Assessment. May 2007.
Report No. 39791-LA

Lao PDR Environment Monitor 2007. Report No. 40065

Strategic Plan for Transport Sector Development. Ministry of Public Works and Transport. December 2008 (draft)

Lao PDR: Road Maintenance Program (Phase 2). Project Appraisal Document. World Bank.

Safeguard Diagnostic Review, World Bank. December 2009

World Bank Financial Management Assessment. September 2008.

Economic Evaluation of National Roads 1B and 6A. Prepared by PHRD funded consultant for the Ministry of Public Works and Transport, October 2008

The Ketsana Typhoon in the Lao PDR (September 29, 2009): Damage, Loss and Needs Assessment. A Report prepared by the Government of Lao PDR, with support from the World Bank, ADB, ASEAN, FAO, AusAID, GFDRR and ADPC, Vientiane, November 2009.

Annex 14: Statement of Loans and Credits
LAO PEOPLE'S DEMOCRATIC REPUBLIC: Road Sector Project

Project ID	FY	Purpose	Original Amount in US\$ Millions				Cancel.	Undisb.	Difference between expected and actual disbursements	
			IBRD	IDA	SF	GEF			Orig.	Frm. Rev'd
P110109	2010	Lao PDR PRSO 5	0.00	20.00	0.00	0.00	0.00	20.17	0.00	0.00
P101750	2008	Lao PDR Customs & Trade Facilitation	0.00	6.00	0.00	0.00	0.00	5.57	-0.03	0.00
P087716	2008	LA-Khammouane Development Project	0.00	9.00	0.00	0.00	0.00	7.72	0.29	0.00
P105331	2007	LA - GMS Power Trade Project	0.00	15.00	0.00	0.00	0.00	13.65	2.76	0.00
P100081	2006	LA-Avian and Human Influenza Control	0.00	4.00	0.00	0.00	0.00	2.50	2.13	0.00
P075531	2006	LA-Rural Electrification Phase I	0.00	10.00	0.00	0.00	0.00	1.45	-0.27	-7.87
P074027	2006	LA-Health Services Improvement Project	0.00	15.00	0.00	0.00	0.00	7.56	2.87	0.00
P090693	2005	Lao Environment and Social Project	0.00	4.00	0.00	0.00	0.00	1.52	0.34	0.00
P083543	2004	LA-ROAD MAINT APL2	0.00	22.65	0.00	0.00	0.00	0.14	-0.49	0.00
P078113	2004	LA-Second Education Development	0.00	13.00	0.00	0.00	0.00	2.03	-0.38	0.00
P064886	2003	LA-SUSTAINABLE FORESTRY FOR RURAL DEV.	0.00	19.90	0.00	0.00	0.00	9.72	-1.82	1.26
P077620	2002	LA-Fin. Management Capacity Building Cr.	0.00	11.50	0.00	0.00	0.00	4.58	-0.53	-2.53
P077326	2002	LA-Poverty Reduction Fund Project	0.00	34.34	0.00	0.00	0.00	9.32	-8.72	-3.87
Total:			0.00	184.39	0.00	0.00	0.00	85.93	- 3.85	- 13.01

LAO PEOPLE'S DEMOCRATIC REPUBLIC
STATEMENT OF IFC's
Held and Disbursed Portfolio
In Millions of US Dollars

FY Approval	Company	Committed				Disbursed			
		IFC				IFC			
		Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
2005	Millicom Lao	4.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00
1998	SEF Endeavor	0.15	0.00	0.00	0.00	0.15	0.00	0.00	0.00
1998	SEF Settha	0.47	0.00	0.00	0.00	0.47	0.00	0.00	0.00
2000	SEF Settha	0.09	0.00	0.00	0.00	0.09	0.00	0.00	0.00
2001	SEF Villa Santi	1.06	0.00	0.00	0.00	1.06	0.00	0.00	0.00
Total portfolio:		5.77	0.00	0.00	0.00	3.77	0.00	0.00	0.00

Approvals Pending Commitment					
FY Approval	Company	Loan	Equity	Quasi	Partic.
Total pending commitment:		0.00	0.00	0.00	0.00

Annex 15: Country at a Glance

LAO PEOPLE'S DEMOCRATIC REPUBLIC: Road Sector Project

Lao PDR at a glance

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POVERTY and SOCIAL

	Lao PDR	East Asia & Pacific	Low- income
2007			
Population, mid-year (millions)	5.9	1914	1296
GNI per capita (Atlas method, US\$)	580	2,180	578
GNI (Atlas method, US\$ billions)	3.4	4,174	749

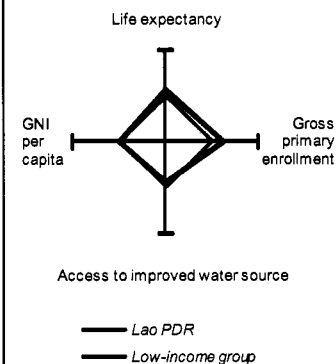
Average annual growth, 2001-07

Population (%)	16	0.8	2.2
Labor force (%)	2.9	12	2.7

Most recent estimate (latest year available, 2001-07)

Poverty (% of population below national poverty line)	33	..	..
Urban population (% of total population)	30	43	32
Life expectancy at birth (years)	64	71	57
Infant mortality (per 1000 live births)	59	24	85
Child malnutrition (% of children under 5)	..	13	29
Access to an improved water source (% of population)	60	87	68
Literacy (% of population age 15+)	69	91	61
Gross primary enrollment (% of school-age population)	116	110	94
Male	123	111	100
Female	109	109	89

Development diamond*

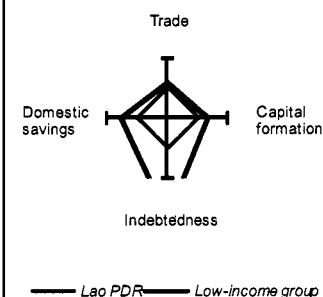


KEY ECONOMIC RATIOS and LONG-TERM TRENDS

	1987	1997	2006	2007
GDP (US\$ billions)	11	17	3.4	4.0
Gross capital formation/GDP	10.2	..	32.5	..
Exports of goods and services/GDP	6.1	23.9	36.0	..
Gross domestic savings/GDP	2.3	..	26.2	..
Gross national savings/GDP	2.6	15.4	19.3	..
Current account balance/GDP	-8.6	-10.6	-13.4	..
Interest payments/GDP	0.2	0.4	2.2	..
Total debt/GDP	106.8	132.8	87.7	..
Total debt service/exports	16.1	6.5	13.4	..
Present value of debt/GDP	..	..	68.4	..
Present value of debt/exports	..	..	183.9	..

	1987-97	1997-07	2006	2007	2007-11
(average annual growth)					
GDP	6.7	6.3	7.6	7.1	..
GDP per capita	3.7	4.5	5.8	5.3	..
Exports of goods and services	..	10.9	28.6	..	..

Economic ratios*



STRUCTURE of the ECONOMY

	1987	1997	2006	2007
(% of GDP)				
Agriculture	..	52.8	42.0	..
Industry	..	21.0	32.5	..
Manufacturing	..	15.9	20.9	..
Services	..	26.1	25.5	..
Household final consumption expenditure	89.4	..	64.5	..
General gov't final consumption expenditure	8.3	..	9.3	..
Imports of goods and services	14.0	41.3	42.3	..

	1987-97	1997-07	2006	2007
(average annual growth)				
Agriculture	4.8	3.6	2.0	..
Industry	13.8	11.3	16.5	..
Manufacturing	15.0	9.7	9.2	..
Services	5.7	6.4	6.8	..
Household final consumption expenditure	..	2.9	-4.6	..
General gov't final consumption expenditure	..	9.7	17.9	..
Gross capital formation	..	13.8	7.3	..
Imports of goods and services	..	9.8	3.6	..

Note: 2007 data are preliminary estimates.

This table was produced from the Development Economics LDB database.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

PRICES and GOVERNMENT FINANCE

	1987	1997	2006	2007
Domestic prices				
(% change)				
Consumer prices	..	27.5	6.8	..
Implicit GDP deflator	14.5	19.4	4.7	4.1
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	13.5	14.3	..
Current budget balance	..	3.4	5.3	..
Overall surplus/deficit	-4.3	-6.6	-3.6	..

TRADE

	1987	1997	2006	2007
(US\$ millions)				
Total exports (fob)	43	317	996	..
Electricity	..	21	107	..
Mining	..	..	525	..
Manufactures	..	45	18	..
Total imports (cif)	144	648	1384	..
Food	..	75	..	..
Fuel and energy	..	76	226	..
Capital goods	..	281	728	..
Export price index (2000=100)	..	..	..	..
Import price index (2000=100)	..	..	..	..
Terms of trade (2000=100)	..	..	..	..

BALANCE of PAYMENTS

	1987	1997	2006	2007
(US\$ millions)				
Exports of goods and services	65	417	1236	..
Imports of goods and services	147	721	1453	..
Resource balance	-83	-304	-217	..
Net income	-14	-21	-409	..
Net current transfers	..	140	170	..
Current account balance	-93	-185	-456	..
Financing items (net)	82	155	358	..
Changes in net reserves	11	30	98	..
Memo:				
Reserves including gold (US\$ millions)	..	136	336	..
Conversion rate (DEC, local/US\$)	175.1	1,260.0	10,159.9	9,622.1

EXTERNAL DEBT and RESOURCE FLOWS

	1987	1997	2006	2007
(US\$ millions)				
Total debt outstanding and disbursed	1,161	2,320	2,985	..
IBRD	0	0	0	0
IDA	48	358	643	686
Total debt service	10	28	169	..
IBRD	0	0	0	0
IDA	0	3	14	16
Composition of net resource flows				
Official grants	32	132	158	..
Official creditors	163	120	57	..
Private creditors	0	0	15	..
Foreign direct investment (net inflows)	..	86	187	..
Portfolio equity (net inflows)	0	0	0	..
World Bank program				
Commitments	15	48	0	0
Disbursements	5	42	26	27
Principal repayments	0	1	9	11
Net flows	5	41	17	16
Interest payments	0	2	5	5
Net transfers	5	38	12	11

Note: This table was produced from the Development Economics LDB database.

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MAP SECTION

