



1. Project Data

Project ID P102398	Project Name LA-Road Sector Project		
Country Lao People's Democratic Republic	Practice Area(Lead) Transport & Digital Development	Additional Financing P129347,P129347	
L/C/TF Number(s) IDA-H5470,IDA-H7890,TF-93083	Closing Date (Original) 30-Sep-2014	Total Project Cost (USD) 43,180,000.00	
Bank Approval Date 25-Mar-2010	Closing Date (Actual) 30-Sep-2017		
		IBRD/IDA (USD)	Grants (USD)
Original Commitment		27,800,000.00	1,000,000.00
Revised Commitment		48,800,000.00	918,012.66
Actual		48,253,934.98	918,012.66
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2. Project Objectives and Components

a. Objectives

The objectives of the Project in the Financing Agreement (page 4) were: (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 objectives in the PAD (page 5) were identical. The key outcome indicators were:

- Reduced travel time on national roads
- Increased number of people served by paved national roads
- Increased share of provincial road network in good/fair condition



- Recovered condition of road damaged by Typhoon Ketsana
- Contingency fund established and operationalized to ensure the "passability" and safety of the affected national and provincial road links.

b. Were the project objectives/key associated outcome targets revised during implementation?

No

c. Will a split evaluation be undertaken?

No

d. Components

Component A: Road Network Improvement and Preservation (Appraisal estimate US\$31.93 million; of which the Lao PDR Road Maintenance Fund [RMF] accounted for US\$8.00 million, other Government of Lao PDR [GoL] contribution US\$6.38 million and International Development Association [IDA] grant of US\$17.55 million; at closure the final cost was US\$47.55 million). This component was to finance physical works for the upgrading of two priority national road links, the periodic maintenance of the provincial road network, and road safety improvements. The two national roads to be upgraded were: (a) NR 1B from Pak Nam Noy to Ban Yo, Phongsaly Province, 109 km; and (b) NR 6A from Sop Bao to Ban Dan, Houaphan Province, 62 km. The provincial roads to be included under the project were identified from the Ministry of of Public Works and Transport's (MPWT's) three year rolling plan and annual works programs.

Component B: Institutional Strengthening (Appraisal estimate US\$2.45 million; of which US\$1.00 million was sourced from the Policy and Human Resource Development [PHRD] Fund; at closure US\$6.03 million had been disbursed). The component utilized US\$1.45 million technical assistance for both MPWT and the Provincial Departments of Works and Transport in the areas of strategic planning and management, country systems for environmental safeguards, fiduciary management, and internal controls.

Component C: Disaster Recovery and Contingency (Appraisal estimate US\$8.80 million from IDA's Crisis Response Window resources; at closure \$10.60 had been disbursed). The component supported the speedy recovery of about 1,100 km of Typhoon Ketsana damaged roads in 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. According to the information provided by the project team, the emergency fund was to be part of the existing US\$80 million Road Fund. The Department of Roads (national roads) and the provincial department were to set aside about 30 percent of this fund to be used for emergency maintenance and repair.

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Cost: The estimated project cost at appraisal was US\$65.18 million. The final cost at closure was US\$76.74 million.



Financing: There were two IDA grants: H5470 was in the amount of US\$27.80 million, including US\$8.80 million from the Crisis Response Window following Typhoon Ketsana, and additional financing (H7890) of US\$21.00 million. In addition there was a Policy and Human Resource Development Fund trust fund grant of US\$1.00 million from the Japanese Ministry of Finance.

Borrower Contribution: At appraisal the estimated borrower contribution was US\$14.38 million of which US\$8.00 million was from the Road Maintenance Fund. The actual borrower contribution at closure was US\$26.65 million.

Dates: At additional financing in 2012, the project was extended by three years to September 30, 2017. This took into account additional storm damage from Typhoon Haima and Tropical Storm Nok-Ten and enabled an expansion in scope to include disaster resilience measures and greater institutional strengthening.

Additional Financing and Restructuring:

Additional Financing (AF) was approved in July 2012. The AF was necessary to address the unanticipated cost overruns that resulted from discrepancies in the original design of these two roads, underestimation of quantities, the need to accommodate the installation of electricity lines along both roads, deterioration of the provincial road network following typhoons Haima and Nok Ten in 2011, and overall price escalation for materials and fuel. The AF provided an additional US\$21 million, enabling the project to complete its original road improvement targets. It was also used to scale up project impact by: (a) enhancing the disaster resilience of two national roads and priority sections of the provincial network by measures such as slope protection, replacement of old bridges, strengthened drainage and some vulnerable sections of provincial roads to be paved; (b) further strengthening the institutional capacities of the MPWT; (c) topping up the emergency contingency fund, depleted following the rehabilitation work in 2011 and developing standard operating procedures for the fund; (d) construction of a bridge on National Road 6A to replace an inefficient ferry; and (e) road safety activities initiated under the original project would be complemented with institutional development activities for traffic management, road safety planning, accident prevention, and enforcement of safety rules. The institutional strengthening aspects were also expanded to include development of sector capacities for the management of Public Private Partnerships (PPP) as well as feasibility studies for PPP pilots.

The project was also restructured four times. A 2012 restructuring (level two) reallocated US\$2.50 million from various components to Component C – Disaster Recovery and Contingency – as an emergency response to Typhoon Haima and Nok-Ten. This involved National roads 1B, 6A and 13.

In a 2014 (level two) restructuring US\$1.8 million was reallocated from the emergency contingency fund to finance cost overruns for National Road 6A and to finance the repair of sections of National Road 1B that were damaged by flash floods during the previous rainy season.

In a 2015 restructuring (level one) the project's Environmental Assessment Category was revised from 'B' to 'A'. This change was required to ensure that the feasibility studies for the road sector PPP would comply with both World Bank environmental and social policies as well as the International Finance Corporation's (IFC) Performance Standard requirements.



The final restructuring in 2017 (level two) reallocated project proceeds to cover payment of retention money for emergency repairs on NR13 after typhoon Haima, and to cover costs incurred mainly for a supervision consultant for additional works related to upgrading NR 6A, seven bridges on NR 6A and NR 1B, and consultants for a Social and Environment Survey for NR 13.

3. Relevance of Objectives

Rationale

Road transport is the predominant mode of transportation in Lao PDR. In 2010, the road network carried 90 percent of passenger traffic and 86 percent of freight traffic. The national network was mostly in an acceptable condition and generally constructed to an appropriate standard for the volume and nature of the traffic carried. However, the provincial, district and rural roads were mostly gravel or earth roads and vulnerable to heavy rains and floods.

The economy of Lao PDR is primarily natural resources-based with more than half of the GDP derived from agriculture, forestry, livestock and fisheries. Agriculture employs about 80 percent of the country's labor force. Consequently, the Lao PDR Sixth National Socio-Economic Development Plan (2006-2010) aimed to ensure that an efficient transport system provided favorable conditions for sustainable growth and poverty reduction, as well as regional integration. The project was consistent with the World Bank's Country Assistance Strategy (CAS) for Lao PDR (2005-2011). It supported the first CAS pillar of sustained growth through enhanced regional integration and private sector development, as well as the CAS objective to improve alignment of donor resources with the Government's National Growth and Poverty Eradication Strategy, and to strengthen aid coordination. During implementation, the project remained relevant to the Country Partnership Strategy (CPS, 2012-2016) – first pillar: Competitiveness and Connectivity, as well as on cross-cutting areas of planning and budgeting. Towards completion, the project remained relevant in several areas when the Country Partnership Framework (CPF, 2017- 2021) was prepared. The project directly linked with CPF Objective 1.3 (investing in infrastructure for growth) and under Focus Area 1 (supporting inclusive growth). In addition, Under Focus Area 3: (protecting the environment), the project addressed enhanced disaster risk management as well as climate and disaster resilience in the transport sector.

The World Bank has been one of the key donors in Lao PDR's transport sector for two decades, and during this time has assisted the GoL to put in place a road asset management system, a financial management system, and has strengthened the capacity of both the public and private sectors involved in road sector development. World Bank's involvement in this project was planned to enable further development and implementation of the building blocks of integrated road asset management and sector governance. The project was intended to build the necessary capacity to manage and utilize the road asset database, which would be the foundation for future road sector planning and prioritization. Project objectives were consistent with MPWT's National Transport Strategic Plan (NTSP) for 2009-2015, which prioritized a rolling investment and maintenance program for the road sector based on a Unified Road Management Framework. In addition, the project has been influential in helping steer the direction of the NTSP, which was updated from time to



time during implementation.

Lao PDR is one of the region's most vulnerable countries to natural hazards with the highest percentage ranking of 100-year Probable Maximum Loss relative to GDP (11.7 percent). Five major storms or tropical cyclones have affected the country over the past two decades. In 2009, Typhoon Ketsana resulted in estimated damages and losses of US\$58 million. In 2011, Typhoon Haima and Tropical Storm Nok-Ten caused damages of US\$66 million and US\$72 million respectively. Further, in 2013, a series of storms caused extensive flooding affecting 350,000 people in 12 provinces. Global and regional climate change projections suggest that natural disasters in Lao PDR are likely to intensify and become more frequent. The project supported quick recovery of 1,100 km of Typhoon Ketsana damaged roads in the five southern provinces and the establishment of an emergency contingency fund for quick response to future impacts of natural disasters on the road network.

Rating

High

4. Achievement of Objectives (Efficacy)

Objective 1

Objective

Improvement of road services on two main national corridors and the provincial road network

Rationale

According to the Theory of Change, road upgrading, maintenance and disaster recovery contributed directly to transport service outcomes; while the institutional strengthening component played a supporting role to project implementation (at output level) as well as contributing to the longer-term sector-level strategy and capacity strengthening. Long-term outcomes were seen as enhanced economic growth and poverty reduction as well as better integration and more private sector development.

This PDO, supported by the largest component, refers to the improvement of road services on the two national corridors –NR 6A and NR 1B– as well as to sections of the provincial road network maintained under the project.

Outputs

1. The target of upgrading 171 km of national roads was met. This indicator was fully achieved.
2. Some 456.4 km of Ketsana damaged roads were to be rehabilitated and this amount was achieved at project closure.
3. Similarly 731 km of rural roads were to be rehabilitated and this target was exceeded as 813 km received rehabilitation.
4. A further target was to preserve 1,600 km of provincial roads through periodic maintenance. By closure



2,500 km was achieved, exceeding the target by 900 km.

5. Road safety facilities were acquired and installed as per specifications. No numerical figure was attached to this descriptive indicator, but the ICR says it was achieved as described.

6. Strategic Plan updated to be the basis for the transport sector vision, strategy and five-year plans. This was done.

7. Safeguard training given to enable country systems to be implemented for safeguard activities on a pilot basis. Some 260 provincial and district engineers received training in using the Environmental and Social Operations Manual. Achieved.

8. The baseline showed no internal control function. The target was to produce an internal audit report. Internal control sections were established in 17 provinces under the project as well as internal control divisions in eight departments, two institutes and two state owned enterprises. Capacity building was ongoing and an unqualified internal audit report was produced. Achieved.

9. Fiduciary and supervisory capacity was strengthened at provincial level. A capacity development program was completed, but there are few details as to what this entailed.

Outcomes

1. Vehicle travel time on upgraded national roads was to be reduced by 40 percent on the Bank-financed project sections. This meant a target of three hours for the NR 1B and 108 minutes for the NR 6A. Both times were reduced further than anticipated: 2.5 hours for NR 1B and 50 minutes for NR 6A. The target was thus exceeded.

2. At least 26,500 persons (49 percent female) to be served by the two national road sections. The assessment at project closure was that 116,581 people were served of whom 44 percent were female. Since this total far exceeded the initial estimate (by over four times), the veracity of the original estimate must be questioned.

3. For all roads, the share in good condition (as a share of total classified roads) was to increase from 42 to 55 percent. This was exceeded, but included roads upgraded from own resources and other donors. The share in good condition at closure was 65 percent.

4. The share of provincial roads in good and fair condition (funded from all sources) was to improve from 46 to 64 percent by end of project. The final figure was 65 percent so this indicator was fully achieved.

5. The share of rural population with access to an all-season road was also exceeded. The target was 60.4 percent and the percentage actually achieved was 64.0.

The civil works on NR 1B were completed ahead of schedule, while the construction work on NR 6A was completed by the end of 2016. The distance of provincial roads maintained under the project exceeded the planned targets in every year of implementation. Overall, implementation of project components that contributed to this objective were completed on time, above target, and within revised budget with additional financing. The outcomes given in the results framework were implicitly aimed at the broader objective of economic growth and shared prosperity – better connectivity for people in the districts and improved quality of national road's services. Improvements to the road asset management system and to support the sector's strategy formulation were carried out and pilot safeguards training using country systems was undertaken.



However, there were minor shortcomings: Information to assess road safety measures, and measures taken to improve fiduciary management and internal controls were not provided.

Although it has been recognized that Lao PDR is vulnerable to cyclones and storms, there has in the past been insufficient funding for climate resilience measures such as protection of embankments and stronger drainage structures. The original design should have taken this into account and if there was insufficient funding the scope of works should have been reduced. In future climate resilience measures will, we understand, be mainstreamed into normal design practice.

The performance against this objective is significant, but given the minor shortcomings detailed above the overall achievement is rated Substantial.

Rating
Substantial

Objective 2

Objective

Rehabilitation of roads damaged by Typhoon Ketsana

Rationale

Output

1. The target to repair and improve 1,100 km of roads damaged by the typhoon was achieved.
2. The length of time to process payments to contractors for emergency works was over-ambitious in that it stipulated that payments should be made in under a month. In practice this was found to be not possible because of inaccessibility in the rainy season. When the AF was approved this indicator was changed to within six months. In the event payments were made within four months, which was much better than the baseline situation, where payments could be delayed for up to two years.

Outcome

Repairs and improvements to 60 percent of damaged roads (including small and wooden bridges) damaged by Typhoon Ketsana. The target was met and indicator fully achieved.

The rehabilitation of roads damaged by Typhoon Ketsana was implemented rapidly, through advance contracting arrangements in 12 provinces. Against a target of 60 percent, 55 percent of roads damaged by Typhoon Ketsana were rehabilitated by the end of 2011, while the remaining 45 percent (of repair works) were completed by the Recipient using other sources of funds. This component demonstrated the outcome of alignment of donor resources, with the Government taking the lead toward a commonly accepted development objective. Overall, this objective was achieved in a timely manner and within budget.



Rating
High

Objective 3

Objective

Establishing and operationalizing a contingency fund for disaster response in the road sector

Rationale

Outcome

The contingency fund mechanism for quick disaster response under the project was established in 2011. The fund was triggered following Typhoon Haima and Nock Ten in July 2011 for urgent road repair works and US\$ 3.63 million was utilized for emergency repair of 28.6 km of National Road 13 North soon after the natural disaster event. The mechanism implemented under the project has been institutionalized and is now included in the GoL budget under the Road Maintenance Fund (RMF). Some US\$80 million a year is allocated to the RMF mainly from a fuel levy and 30 percent of this is now earmarked for emergency maintenance and repair. This can be used when there are landslides and flooding during the rainy season and to assist recovery after typhoons. The procedure for requesting emergency funding from the RMF is incorporated in the Ministry of Public Work's financial management guidelines and was worked out in agreement with both the national and provincial Departments of Roads, who issue instructions to the contractors to carry out emergency works using pre-determined unit prices in framework agreements. The indicator to establish and operationalize the contingency fund was achieved, but in the ICR there was no explanation of the actual role played by the Bank in its establishment other than the Bank contributed US\$1 million to its set up. Interactions between IEG and the project team elicited the information that the project mobilized an international expert to review the road maintenance fund decree and help with the revision of this decree. This made possible the utilization of the fund for contingency spending. Accordingly this objective is rated High..

Rating
High

Rationale

Road upgrading, maintenance and disaster recovery contributed directly to transport service outcomes in accordance with the Theory of Change.; the institutional strengthening component played a supporting role to project implementation and contributed to the longer-term sector-level strategy and capacities. However, the lack of evidence for some institutional strengthening measures and the failure to build-in climate resilience measures in the original design suggests an overall Substantial efficacy rating.



Overall Efficacy Rating

Substantial

5. Efficiency

The project achieved the expected efficiency for the national road improvements and exceeded expectations for the provincial road maintenance activities. Construction works on national roads were completed well before project completion. Based on the estimated benefits from vehicle operating costs and values of time savings, the economic internal rate of return (EIRR) at completion was 28.1 percent with a net present value (NPV) of approximately US\$24.7 million. The EIRR at completion was higher than that at appraisal (18.0 percent), because the additional financing added climate resilience design to the project scope. Extra benefits were also derived from avoided emergency maintenance as well as additional benefits from better provincial road connectivity. There is no explanation, however, as to how this additional amount was actually calculated. The provincial road maintenance program functioned much better than expected - 2,500 km of provincial roads maintained (compared to the target of 1,600 km at appraisal). The EIRR at completion for provincial road maintenance is 47.5 percent with a NPV of US\$14 million. This excluded benefits from enhanced climate resilience and avoided emergency maintenance that were likely substantial. There has been no detailed study to quantify evidence of the enhanced resilience impact, but the emergency maintenance budget, especially for national roads, has been reduced.

Although the project duration was extended by three years this was primarily to address damage by further typhoons and storms and to expand the project scope to include disaster resilience measures and more institutional strengthening. It is difficult to assess the extent of the cost overrun portion of the AF from the limited information given in the ICR, thus the rating for efficiency is Substantial.

Efficiency Rating

Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	18.00	74.00 <input type="checkbox"/> Not Applicable
ICR Estimate	✓	28.10	62.00 <input type="checkbox"/> Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.



6. Outcome

With high relevance of objectives, substantial overall efficacy and substantial efficiency, the overall outcome is considered satisfactory. Several of the targets were exceeded, but most were outputs rather than outcomes. The project served as a case for a sector-wide approach, which set the path toward better alignment of donor resources. However, some technical assistance details were sketchy and the original design did not take into account climate resilience measures, which were only added at restructuring with the availability of additional finance.

a. Outcome Rating

Satisfactory

7. Risk to Development Outcome

There are three key risks to development outcome: overloaded trucks causing the road to deteriorate faster than expected; the Government failing to allocate adequate budgets for road maintenance; and/or the Government neglecting the climate resilience and emergency response initiative.

It is unlikely that the GoL will not continue to maintain the roads because it has set up (and continues to develop) a viable road asset management system, the RMF, to address road maintenance matters, and the capacity of agencies concerned has been strengthened throughout project implementation. The RMF is the key mechanism to ensure predictable and sustained allocations of funds for road maintenance. Its main source of funds is a fuel levy and the annual revenue generated by the RMF which has been increasing steadily from US\$2 million in 2002 (when the fund first became operational) to US\$80 million in 2017. It is expected that the fund will continue to grow by more than 10 percent annually over the next five years. In accordance with the Prime Minister's Decree (130/PM of 2016), national roads are to receive 80 percent of the RMF allocation, and local roads, the remaining 20 percent. The follow-on project, LRSP2, which became effective in February 2017, directly supports these initiatives.

It is also unlikely that the Government will neglect the climate resilience and emergency response initiative because MPWT has started to mainstream climate resilience aspects into its planning and design processes under LRSP2. This includes measures now normalized such as slope protection with geogrid and planting of vetiver grass, replacement of old bridges, and stronger approach roads and bank protection, replacement of small culverts with bigger ones, including box culverts, strengthening inlets and outlets, and side drains to allow better drainage from road embankments. In addition, some vulnerable spots on provincial roads have been paved. Steps are also being undertaken for the road asset management system to include climate resilience aspects in its database module, which in turn will incorporate climate resilience into the maintenance prioritization and the decision-making process. The introduction of climate resilience road maintenance procedures was also included as a policy action in the recently approved Green Growth Development Policy Operation.



8. Assessment of Bank Performance

a. Quality-at-Entry

The project design was simple and straightforward, with PDO's of relevance to the country's National Socio-economic Development Plan and National Transport Strategic Plan. Environmental and social safeguards were prepared diligently, with a focus on strengthening country systems through the Environmental and Social Operation Manual along with other required safeguard instruments. Risks were mostly adequately assessed. The fiduciary team assessed the procurement and financial management capacity of the implementation units and incorporated assistance in the project design as required. However, a minor shortcoming was that the procurement assessment and actions did not fully account for the procurement staff turnover that occurred in MPWT. This turnover caused procurement implementation delays, which had to be resolved later on through implementation support. The Bank team dedicated efforts into ensuring that the institutions and implementation arrangements were ready for implementation. The monitoring and evaluation (M&E) arrangement took advantage of the existing monitoring system, but the definition of the indicators could have been given more thought (see section 9 on M&E design, implementation and utilization). There could also have been climate resilience measures included in the project design from the outset. The strong trust relationship built up over the years between GoL and the World Bank on the other hand was a crucial factor in making effective preparations for the project.

Quality-at-Entry Rating

Satisfactory

b. Quality of supervision

The Bank's supervision was effective in supporting MPWT's implementation of the project. With good understanding of the weaknesses and strengths of the implementing agency, the Bank's team was able to address the issues identified in a collaborative fashion, with the Bank and the client working together to find solutions. This collaborative approach was strengthened by capacity building support and training. Capacity enhancement included knowledge exchange. For example, the financial arrangements established under the project have become a part of the Ministry's standard practice. The Bank also facilitated knowledge exchange activities with neighboring countries, such as Vietnam to share and exchange experiences with the Provincial Road Maintenance Management System, resulting in its adaptation for the local road maintenance management system in Vietnam. Later, knowledge exchange also took place with South Africa on road sector reform, PPP establishment and implementation as well as public works, transport research, and overloading control.

An MTR was carried out towards the end of 2014, which confirmed that the project design was still relevant and practicable, risks identified during appraisal were being effectively managed, and implementation was on track towards attainment of the PDO. The MTR team identified some areas in need of further support and was proactive in identifying resources and approaches to provide assistance.

Given that the Bank's team was largely based in the region (with the TTL stationed in Vientiane), responses to issues were generally swift and problems handled expeditiously. Technical assistance and training was



made available as needed, as opposed to waiting for the next mission. Local implementation support was especially helpful in facilitating coordination and dialog between MPWT and the provinces during project implementation.

The Bank's team was well placed to provide technical support to help MPWT cope with unexpected changes, (i.e. cost overruns and financing gap). The team supported the client in adjusting the project design within the original scope to consider climate resilience. However, since the country was known to be at risk to weather and climate related events, this should have been built into the technical design in the first place. Technical assistance was mobilized to support the client, such as transport sector strategic advisory services, internal control system and tools development, a PPP feasibility study, Integrated Road Asset Management System, and Financial Management System support.

Quality of Supervision Rating

Satisfactory

Overall Bank Performance Rating

Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The Theory of Change was not articulated in the PAD, but was retrofitted in the ICR in a clear and straightforward manner. The intermediate outcome indicators include: those that directly linked with the performance toward PDO (such as km of national roads upgraded as per specification, km of Typhoon Ketsana affected roads repaired, and km of provincial roads preserved through periodic maintenance), and those that contributed as project implementation enablers and toward policy/sector level development. Examples of the latter include: acquiring knowledge and capacity on sector strategic planning and internal control, MPWT's staff trained to use country systems for environmental assessment, fiduciary, and supervisory capacity strengthened at provincial level. At design stage, the result framework was more related to outputs than higher-level outcome objectives because the project was designed at post-disaster stage, where the priority was to quickly respond to the natural disaster's impact at hand. More thought should have been given to potential outcome indicators for transport service.

There was also a lack of indicators related to the road safety activities, while the time allowed for payment to contractors on emergency works was unrealistic and had to be amended.

b. M&E Implementation

MPWT managed M&E implementation with its own resources plus the support of consulting services. A consultant was contracted for the Unified Road Management Framework (URMF) data collection and ICT



development that serves the Ministry's strategic planning of the sector. MPWT's related department performed M&E through its utilization of Road Management System and Provincial Road Maintenance Management System. Data analysis was performed by the Public Works and Transport Institute, which helped to inform the Bank team on time about progress with implementation. Data were initially collected as needed, but not very systematically according to the ICR (page 16). However, this aspect did make progress as implementation proceeded further. At restructuring there was an opportunity to revisit the results framework, which had been hastily prepared at the design stage, but changes focused on the expansion of scope rather than reviewing the framework as a whole.

c. M&E Utilization

Given that MPWT carried out most of the M&E implementation in-house, data and results from analyses were embedded in the decision-making process. The URMF and ICT infrastructure developed will be utilized for all of MPWT's projects in the future.

M&E Quality Rating

Substantial

10. Other Issues

a. Safeguards

The project was initially classified as a Category B Project, and thus triggered Environmental Assessment (OP/BP 4.01). Lao PDR was one of the countries selected for participation in the pilot program for use of country systems for environmental and social safeguards. The Environment and Social Operations Manual (ESOM) was also applied satisfactorily to all civil works financed under the project – (i.e. when there was a gap between government regulations and World Bank's safeguard policy, ESOM gave guidance on how to proceed).

During early implementation, the Government issued a new Environmental Impact Assessment (EIA) decree. The World Bank and MPWT jointly conducted a consistency analysis and based on the results of the assessment, the ESOM was updated in line with the decree; it was also consistent with the Bank's safeguards requirements. Both the Initial Environmental Examination and Environmental Management Plan for the two national road improvements were developed by the Technical and Environmental Division of the Roads Department in MPWT, and implemented on the ground through the supervision consultant and Provincial Department of Public Works and Transport (DPWT) to ensure effective supervision of contractor performance and provide the required safeguards monitoring reports. The implementation of ESOM worked well throughout implementation, with no major negative impact on the local environment or people.

In 2015, the Environmental Assessment category was changed to Category 'A' through a full project restructuring. The resulting feasibility study for the potential PPP restoration after Typhoon Haima proposed widening of two national road sections (NR13 North and NR13 South), for which land acquisition would be



required. Although the project only financed the study, the change in EA category ensured that the feasibility study's scope and outputs would comply with the World Bank Group's safeguard policies. The Terms of Reference for the Environmental and Social Impact Assessment Report, Resettlement Action Plan, and Ethnic Group Development Plan were prepared as part of the study report. However, the Environmental and Social sections on review were found to be insufficient for the level of a World Bank Group (WBG) Category 'A' project and thus had to be revised to meet category 'A' project requirements to complete NR13 project preparation. Since the project has not financed these potential road sections there has been no resettlement and no social impacts.

The project also triggered the Involuntary Resettlement (OP/BP 4.12), and the Indigenous People (OP/BP 4.10) social safeguards policies. Project implementation was in compliance with the social safeguards frameworks and plans, and there were no reports of major social safeguards issues in the progress reports (except for minor issues about traffic control during construction, which were addressed by the contractors and project manager). The ICR author advised there were no persons affected by the project.

b. Fiduciary Compliance

Financial Management performance lagged behind at the beginning of the project, due to poor quality and delayed submission of the Interim Financial Reports (IFRs) and project audit reports. The quality of the IFRs and timing of submission of both IFRs and audit reports improved after the second year of implementation. The audit opinions were unqualified (clean) throughout project implementation. Despite the complex structure of disbursement arrangements (i.e. with MPWT and DPWT), FM staffing, accounting and internal control systems, and maintenance of supporting documents were adequate. As all of the staff working on the financial management of the project were staff of MPWT and DPWT, the project was instrumental in improving the overall capacity of Ministry staff thus enabling them to manage the finances of donor projects. Work on strengthening internal controls, internal audit and accounting within MPWT commenced in this project and is planned to continue in follow-on projects.

Procurement delays contributed to the slow startup of the project during the first two years of implementation, but the progress accelerated in year three and caught up with planned targets thereafter. The procurement delays affected the national road improvement sub-component in the early years, as well as procurement of road safety equipment and recruitment of various consultants (e.g. quality assurance and supervision advisors for provincial roads). The main causes of delay included (i) limited human resources and staff turnover, and (ii) a lengthy internal approval process within MPWT. MPWT had put more focus on the typhoon-affected roads, which with limited human resource, caused delays in other parts. The long internal approval process associated with how the procurement committee functioned – i.e. availability to meet and discuss – was another factor.

The Bank's Integrity Department (INT) found that a consortium between an international and a local firm had engaged in corrupt practices to influence the award of a consultancy contract in the project. The consortium also used fraudulent practices during the procurement process of a contract and during contract implementation. In order to mitigate and address the risks identified in the investigation, MPWT agreed the



following actions: i) declaration of interest by all evaluation committee members involved in procurement activities, bidding documents/RFPs to include a Statement of Undertaking requiring bidders and consultants to observe the highest ethical behavior in participation and implementation of procurement activities, iii) instituting a project complaints system that will be disclosed in all tender documents and a quarterly grievance/complaints report submitted to the Bank. iv) strengthening the capacity of the MPWT through employment of an international procurement consultant to provide procurement support and procurement training to the implementing agency throughout project implementation, v) procurement information disclosure regime including posting bidding documents, bid opening records, and awards on the MPWT's website, and vi) a procurement audit as an integral part of the annual technical audit.

c. Unintended impacts (Positive or Negative)

None.

d. Other

Although the project did not originally address private sector financing, the AF included a feasibility study for NR13 to assess the potential for use of a PPP in the Lao road sector. While portions of NR13N and NR13S were identified as potential PPP projects, issues pertaining to country readiness suggested that a full-fledged PPP with toll collection would face a road users' affordability issue, which introduced greater political risk to the potential project. However, based on the findings of the study, MPWT endorsed the use of an Output and Performance Based Road Contract (OPBRC) for improvement of the NR13 sections. Private sector elements inherent in OPBRC included: (i) design and construction risk transferred to the private sector based on a longer term contract; (ii) contractor accorded more responsibility, not only for construction of the road, but also for road asset management throughout the period of contract; and (iii) payment from GoL spanning a longer time period, thereby mobilizing more resources from the private sector to address urgent needs for road improvement and maintenance.

11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Highly Satisfactory	Satisfactory	Lack of evidence of some technical assistance measures, while original design did not include climate resilience measures.
Bank Performance	Satisfactory	Satisfactory	---
Quality of M&E	High	Substantial	Outcomes needed more work, while the results framework could have been improved during implementation



Quality of ICR	Substantial	---
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12. Lessons

These lessons have been adapted from the ICR;

Institutional leadership can be pivotal to the success of a project. Under MPWT's leadership, improvements in road sector planning and management have been carried forward into the sector's strategic planning and prioritization system for road improvement and maintenance. This includes learning from the way the Government handled the fiduciary case investigated by the World Bank Integrity Department. The Government has subsequently enhanced its transparency of procurement information disclosure and supported additional training of all staff involved in procurement decisions to contain and lower the level of risk.

Disasters are setbacks, but can also be opportunities to try new approaches. The project was able to introduce a south-south knowledge exchange program, explore PPP possibilities, and introduce performance based contracting and a sector wide approach.

13. Assessment Recommended?

Yes

Please explain

This project is a good example of flexibility in responding to disasters in real time. It would be useful to see how well the emergency contingency arrangements work out in practice.

14. Comments on Quality of ICR

The ICR was admirably concise and clearly brought out the need for better disaster response. On the whole, the text was candid and the lessons useful. The narrative supporting the ratings could have been stronger in respect of institutional strengthening aspects, climate change, and the emergency contingency fund. There could also have been more information about the extent of the cost overruns and the logic upon which the indicator targets were based. There was also no indicator to reflect progress on road safety issues.

a. Quality of ICR Rating

Substantial

