

**Terms of Reference**  
**Consulting Services for Overloading Control and Truck Terminal Strategy and Action**  
**Plan Development**  
**Under Lao Road Sector Project II**

**1. Background**

The transport sector in Lao PDR is dominated by the road sub-sector, which represents 98 percent of total passenger-km traveled, and 86 percent of freight moved in the country. Road transport remains at the core of the country's policy "from land-locked to land-linked".

The Ministry of Public Works and Transport (MPWT) has received financing support from World Bank (WB) and the Nordic Development Fund (NDF) to implement Lao Road Sector Project 2 (LRSP2) (implemented from March 2017 to February 2022), which will support MPWT to strengthen its capacity at both central and local levels to manage local road improvement and maintenance. The European Investment Bank (EIB) has also expressed interest to provide financing support to the implementation of the road local road development program designed under LRSP2.

The WB has approved a credit of approximately USD 25 million, and NDF has approved a grant for a Technical Assistance (TA) program amounting to EUR 5 million and a loan not exceeding EUR 6 million to finance the LRSP2. EIB may provide a loan of approximately EUR 20 million and a grant of EUR 5 million for civil works. In addition, the Road Maintenance Funds (RMF) will contribute approximately USD 7 million, and the 6 participating provinces also will contribute around USD 3 million to the Project.

The MPWT will be the Executing Agency (EA) for LRSP2. A project management team formed under the Department of Planning and Cooperation (DPC), MPWT will provide overall project coordination and monitoring. The Project includes support to strengthen the capacity of the departments concerned in MPWT and the provinces. Department of Finance will be responsible for providing procurement support to the concerned departments. Department of Road, with support from a design and supervision consultant, is responsible for managing the road works and road asset management systems development. At provincial level the six provincial Departments of Public Works and Transport (DPWT) covered by the Project (Phongsaly, Houaphan, Oudomxay, Xiengkhouang, Xayabouly and Bolikhamxay) will be responsible for the implementation.

The Project has been designed as a program to support the strengthening of maintenance systems that will result in improved connectivity. It will support institutional development through the preparation of financing and policy frameworks, improved planning and prioritization, and governance systems. The project will further contribute to improved technical capacity for the road sector as a whole so as to maximize the effectiveness of public expenditure and enable continual increases in the length of provincial roads in good and fair condition, and steady improvement in climate resilience and safety. The Project will also finance periodic maintenance and routine maintenance works in the six provinces mentioned above.

The Project Development Objective ("PDO") of LRSP2 is to strengthen maintenance systems to improve reliable road connectivity in Lao PDR, and to provide immediate and effective response in case of an Eligible Crisis or Emergency. LRSP2 consists of four components: (1) Climate Resilient Road Maintenance, (2) Institutional Strengthening, (3) Project Management Support, and (4) Emergency Response. Under sub-component 2.1, World Bank provide a financing to: (a) strengthen the capacity to update and operationalize MPWT's national sector strategy and action plan; (b) strengthen the capacity to improve

transport sector policy and financing frameworks; and (c) strengthen the capacity for strategic management at both MPWT and DPWT.

A large segment of Lao road network was not built with the regional standards. Most of the national road network was built with the standard axle load of 8.1 ton, while ASEAN standards say the minimum axle load is 9.1 ton. Only some sections of national roads recently improved designed with 9.1 ton. As for the local road network, a large part of which is unpaved and not in the conditions to take heavy trucks. Overloading control regulation issued by MPWT 20 years ago was not effectively enforced. Due to inefficiency in the overloading control, the government of Lao PDR (GoL) paused overloading control operations in many provinces. Recently the GoL decided to pilot three permanent weight stations aiming at improving efficiency and transparency of the overloading control regime.

According to the road law, MPWT is responsible for administration of national road and setting sector policies, regulations and standards of entire road network. The local road network is managed by provincial road authorities. The provincial authorities have difficulty to manage overloading control with limited capacity. There have been many efforts on controlling overloading vehicles, which has not been successful. Recent study supported by Asian Development Bank (ADB) recommends in the near term various institutional and regulation updates, equipment replacement for weight stations, axel load surveys and relevant data collection.

Besides the Overloading Control Study, logistics is also a factor determining the success of imports - exports of Association of Southeast Asian Nations (ASEAN) countries. Currently, the cost of logistics is very high and complicated, which results in higher cost of exports. Logistics services for a majority of ASEAN countries are still weak and small, not systematic, independent and lack networks, which causes uncompetitive low capacity and delayed implementation of AEC economic integration targets.

As written under the Lao Logistics Strategy, it is said that logistics is directly significant to social – economic development. International indicators set out the level of logistics development relating to the cost of freight from source manufacture to market destinations. Such indicators are factors to encourage production, investment and trade. In developed countries the cost of logistic services is estimated at 4-9% of products value, for least developed countries it is estimated at 15-20%. Therefore, if there is good management system of logistics, it can also help a country's products compete with foreign countries.

Thus, transport logistics development of Lao PDR plays a significant role in fulfilling social – economic development in general, and specifically provides facilities for efficient and effective transport services, and can increase the potential of business competitiveness. Currently, we have only transport infrastructure but development of logistics such as: distribution centers have not yet been developed, including lack of business entrepreneurs in logistics, which are important factors to serve as a gateway.

Policies and scope on foreign investments in the Public Work and Transport Sector have not been clearly defined and internal understanding regarding this issue is not unanimous. In practice, there have been conflicts between foreign and domestic entrepreneurs which led to a cycle of problems in logistics. Economic inequality of Great Mekong Subregion (GMS) countries causes returning trucks to be empty which causes higher logistic costs. This is one limitation in increasing volume of transport. Limited volume of land transport may affect trucks returning empty while limiting business opportunities for private companies especially in transport logistics activities.

## **2. Objectives of the Consulting Services**

From sector strategy perspective, understanding overloading issues is very important to good management and reduced impact on road maintenance requirement and identify potential location of Domestic and International Truck Terminals to support the return haulage and avoid heavy truck entering urban areas for efficiency in Transport.

The overall objectives of the assignment are to contract a firm, building on the recent ADB study to:

- a) review traffic flow on Lao road network comprising national, provincial, district and rural roads and group them in each category including transits, national, local and border crossings
- b) assess the tendency of overloading for each group and the reason why overloaded;
- c) review international experience on using logistic management to help manage the overloading;
- d) Review and revise the exiting regulation on overloading control, load permission and appropriate overloading fines;
- e) Assess and Develop mandates and mechanism for the Land Transport inspector and roles and responsibility of Heavy Transport Control Unit;
- f) Study the feasible/appropriate location of weigh station and prioritize with proposed design standard for weighing system for the overloading control along main corridors of Lao road network;
- g) Study on feasible/appropriate location and prioritize domestic and international truck terminals (specifically along the ASEAN Highways<sup>1</sup> in order to manage foreign trucks entering prohibited areas /routes and to support the overloading control and reduction of cargo return haulage);
- h) Institutional strengthening and capacity building for policy makers and implementation levels;
- i) Make recommendations for overloading control on national, provincial and district road networks; and
- j) Make policy recommendation, strategy, action plan and investment plan for policy implementation.

### **3. Scope of Work and Description of Tasks**

There are two parts in the scope of work. The first part is data collection where the survey and review of traffic flows in Lao PDR will be carried out, which aims to identify traffic type and reasons for overloading and efficiency in transport in terms of truck terminal development. The second part is the review of international experience on overloading and efficiency in transport and existing regulations related to overloading control and management in Lao PDR, aiming to draw examples that can be applicable in Lao context, update/improve the regulations, and make policy recommendation and action plan. The main tasks to be undertaken are as follows:

#### **3.1 Inception Report (Weeks 1-4)**

- a) Collate and review background documents, laws, regulations and literatures related overloading control and efficiency in transport in terms of truck terminal development in Lao PDR to understand the context of the assignment and assess the data needs.
- b) Consult with MPWT and prepare the Inception Report and detailed work plan. The Inception Report should set out the Consultant's understanding of the TORs and main deliverables and how they may be achieved, any variations to the TORs noted as being required to meet the objectives, adjustments to the schedule of deliverables (Section 4 below), confirm the process for submission of all deliverables, and identify any matters requiring the Client's attention or decision. The inception report is considered as further development of technical proposals, so this must be agreed with MPWT prior to actual implementation.

#### **3.2 Traffic flow survey and reviews (Weeks 5-20)**

- a) Conduct traffic flow survey, which should as a minimum include the following surveys:
  - i. **Classified Traffic Volume Count**

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<sup>1</sup><https://www.unescap.org/our-work/transport/asian-highway>

Manual traffic counts, classified by vehicle category shall be performed at selected roads representing each type of road network (National, provincial and district) and geographical condition. The Consultant shall develop appropriate expansion factors to obtain Annual Average Daily Traffic (AADT) by applying daily and seasonal factors which would be calculated from past traffic volume data of count stations. Data available at MPWT should also be considered. All results shall be presented in tabular form.

**ii. Origin and Destination (O-D) and Commodity Movement Survey**

The Consultant shall identify traffic and commodity movement through O-D and commodity movement surveys. Trip matrices for each category of vehicle and for each commodity giving information on total weight, average weight per truck and sample size shall be prepared for ready reference and to compare such data with information on load derived from axle load studies.

**iii. Axle Load Survey**

The Consultants shall review the past survey data on axle loads and summarize its findings. Additional axle load surveys will also be conducted at some key volume count location(s) in order to capture the axle load spectrum for trucks moving to and from different directions on different type of road networks.

- b) Review and analyze the survey results through quantitative and qualitative analysis to determine the potential impact of overloading vehicles on various parts of the network. This will help identifying the sections within the road network that is vulnerable to overloading vehicles.

**3.3 Reviews of international experience on overloading management and existing regulation on overloading control and management (Weeks 5-20)**

- a) Review literatures on overloading issues in Lao PDR, which may include but not limited to:
- ADB-supported “Axle Load Control” Study under ROAD SECTOR GOVERNANCE AND MAINTENANCE PROJECT (RSGMP), ADB LOAN NO. 3368-LAO
  - JICA-supported studies
  - World Bank studies related to trade and logistics
- b) Review international experience on overloading control that can be applicable to Lao PDR’s situation.
- c) Review existing regulation that is currently used to manage and control overloading trucks in Lao PDR and cross-border.
- d) Integrate international experience and make recommendation in improving the existing regulation to be more effective.
- e) Prepare and submit draft of recommended improvement to MPWT and prepare a presentation on such improvement with MPWT.

**3.4 Identification the potential location of Domestic and International Truck Terminals (Weeks 21-24)**

- a) The Consultant will conduct survey and analyze data volume of trucks and cargo flow on the national roads.
- b) Review existing regulation that is currently used to manage truck terminal in Lao PDR.
- c) Determine the potential location of truck terminal along main corridors of national roads network.
- d) Integrate international experience and develop master plan and strategy for the development of truck terminal in Lao PDR.
- e) Prepare and submit a draft report setting out the identification of location for truck terminal, provide a presentation of the draft findings and analysis to MPWT.

### 3.5 Identification of the potential of weigh control station and its standard design (weeks 21-24)

- (a) Determine the potential location of the weigh control station along the main corridor of the Lao road network.
- (b) Make recommendation on effective design of weigh control system.
- (c) Prepare and submit a draft report including the information on c.5.a and c.5.b and prepare a presentation on the finding and discuss with MPWT.

### 3.6 Draft and Final Reports (Weeks 21-24)

- (a) The Consultant will prepare and submit a draft report setting out the methodologies used and analyzed findings of the traffic flow survey and reviews by the end of Week 20, and in the same Week 20, provide a presentation of the draft findings and analysis to MPWT.
- (b) Based on the analysis of traffic flow survey and on the international experience, the Consultant will make policy recommendations and prepare action plans.
- (c) The Consultant will conduct public consultation workshop on the finding and policy recommendation.
- (d) Following written feedback on the draft report and presentation, the Consultant will incorporate all changes and submit the Final Report by the end of Week 24.

## 4. Levels of Input, Timing and Deliverables

The assignment is anticipated to commence on [1 September 2019] and to be carried out over a six-month period with final delivery of all outputs no later than [31 March 2020].

The deliverables of the assignment are:

Deliverables	Submission date after contract signing and no later than:
Inception Report	Week 4
(i) Traffic flow survey and reviews, assess the tendency of overloading for each group and the reason why overload;	Week 10
(i) Reviews of international experience on overloading management (ii) review international experience on using logistic management to help manage the overloading; (iii) Review and revise the exiting regulation on overloading control, load permission and appropriate overloading fines; (iv) Assess and Develop mandates and mechanism for the Land Transport inspector and Roles and responsibility of Heavy Transport Control Unit; (v) Study on the feasible/appropriate location of weigh station and prioritize with proposed design standard for weighing system for the overloading control along main corridors of Lao road network; (vi) Study on feasible/appropriate location and prioritize Domestic and international Truck terminals (specifically along the ASEAN Highways in order to manage foreign trucks entering prohibited areas /routes and to support the overloading control and reduction of cargo return haulage); (vii) Institutional strengthening and capacity building for policy makers and implementation levels;	Week 16
Draft Final Report	Week 20
(i) Make policy recommendations, strategy, action plan and	

investment plan for overloading control on national, provincial and district road networks; (ii) Make policy recommendation, strategy, action plan and investment plan on truck terminal management for policy implementation.	
Final Reports and Dissemination Activities	Week 24

All deliverables must be transmitted to the MPWT in electronic format, and if requested, in hard copy as well. The recipients of the deliverables will be Dr. Bounta Onnavong, Director General, Department of Transport, Ministry of Public Works and Transport.

### Team composition:

It is the Consultant's responsibility to provide all required inputs including Key Professionals for the assignment; provide necessary logistic arrangements to render these services efficiently and diligently. It's estimated that **11.0 person months** will be required to implement this assignment timely and orderly. However, the Consultants are allowed to propose alternative to the proposed key professionals, but only those indicated below will be considered and their CVs evaluated in the proposal evaluation. The Consultants shall deploy the designed and adequately suitable qualified and experienced junior professional and technical support staff to assist the key professionals to render these services in a time bound manner. CVs of those technical additional staff are not required, however, their inclusion and function will be considered when reviewing strength and/or weaknesses of a proposal.

When proposing the team members, the Consultants should make sure that the proposed staff is available and aware of the intensity of the required work. Any change in key personnel shall be permitted only under exceptional circumstances and if evidenced as good or better of the initially approved.

**Table: Key Professional Input**

No.	Staff description/Position/ specialty	Estimated total person months
1	Team Leader	5.0
2	Traffic Engineer	1.0
3	Traffic Survey Engineers	2.0
4	Legal advisor	0.5
5	Logistics specialist	1.0
6	Transport Economist	1.5
	<b>Total Estimated person months</b>	<b>11.0</b>

### 5. Key Partners

In undertaking this assignment, the Consultant shall work in close collaboration with the Department of Transport of MPWT, selected provincial authorities and other relevant authorities and the World Bank team.

### 6. Qualification Requirements for the Assignment

#### 6.1 The following requirements shall apply to the firms to qualify for the assignment:

- Be a legal entity acceptable to Department of Transport;
- At least ten years of experience implementing road transport development projects; experience in the region is an advantage;
- At least ten years of experience in providing similar services in developing countries, under road improvement projects;

- Proven record on successful completion of at least two similar assignments over the last five years;

## 6.2 Required Characteristics of Proposed Staff Members

### a) **Team Leader:**

- Post-graduate qualifications in Transport, Economics, Statistics, Social Sciences or a relevant field and a minimum of 10 years relevant professional experience in the design and implementation of large-scale transport sector connectivity programs.
- The team leader is required to demonstrate prior experience in designing and implementing project impact evaluations in the transport sector and demonstrate experience in having successfully led multi-disciplinary teams to deliver on time and within budget on at least two similar, recent assignments.
- The team leader should demonstrate knowledge of the transport sector and issues in the region or in countries with similar context.
- Excellence in written and speaking English.

### b) A group of qualified **Traffic Survey Engineers**

- At least Bachelor's degree in civil engineering or relevant fields
- At least five years of experience in traffic survey.
- Excellence in written and speaking Lao and English.
- Priority will be given to the specialists able to demonstrate experience and knowledge in feasibility study for road improvement projects .  
The exact number of surveyors will be agreed with the consultants based on the scope of the assessments.

### c) A qualified **Traffic Engineer**

- Master's degree in civil engineering, economics or relevant fields
- At least five years demonstrated experience in designing and implementing traffic survey study.
- Priority will be given to the specialists able to demonstrate experience and knowledge in feasibility study for road improvement projects.
- Excellence in written and speaking English.

### d) A **logistics specialist**

- Master degree in economics, logistics, or relevant fields
- At least five years of international experience in logistics, particularly in trucking industry.
- Excellence in written and speaking English.
- Experience in the region will be a plus.

### e) A **Legal advisor**:: An advisor specialized on Law and Legal affairs works

- Master's degree in social science or relevant field
- At least five years of international experience in Law.
- Priority will be given to the specialists able to demonstrate experience and knowledge in transport sector.
- Excellence in written and speaking English.
- Experience in the region will be a plus.

### f) A **Transport Economist**:: An economic specialized and experience in transport works

- Master's in economics, transport, logistics, or relevant fields

- At least five years of international experience in transport and logistics, particularly in trucking industry.
- Excellence in written and speaking English.
- Experience in the region will be a plus.

## 7. Responsibilities of the Client

The Client will provide:

- Reports and data from the project and documentation as required to facilitate the assignment; and,
- Facilitation and assistance with setting up meetings with relevant stakeholders.

## 8. Responsibilities of the Consultant

In carrying out this assignment, the Consultant will be responsible for:

- Reports and data as referred to in Section 4 – Deliverables and other documentation as required to facilitate the assignment; and,
- Professional indemnity, travel and health insurances for all personnel engaged on the assignment.

## 9. Payment

The contract is lump-sum based. The payments will be made after receipt the Deliverables to the satisfaction of the Client, based on the following payment schedule. The contract cost agreed shall be inclusive of all costs to be borne by the Consultant, including fees, international and domestic travel costs, equipment costs, document production, etc.

<b>Deliverables</b>	<b>Payment schedule</b>
Contract signing	10%
Inception Report	10%
Traffic flow survey and reviews	30%
Reviews of international experience on overloading management	15%
Draft Final Report	15%
Final Report	20%

## 10. Reporting and Accountability

The consultancy services are expected to commence in [September 2019].

The Consultant will work closely with [Mr. Phanthaphap PHOUNSAVATH, Director of Division of Freight and Logistics, Department of Transport].