Ministry of Public Works and Transport
Lao Peoople's Democratic Republic (Lao PDR)

Preparatory Survey on Vientiane Logistics Park (VLP) Project (PPP Infrastructure Project) In Lao P.D.R.

Final Report

July 2015

Japan International Cooperation Agency (JICA)

Nippon Express Co., Ltd.
Nittsu Research Institute and Consulting, Inc.
Nittsu Real Estate Co., Ltd.
International Development Center of Japan Inc.

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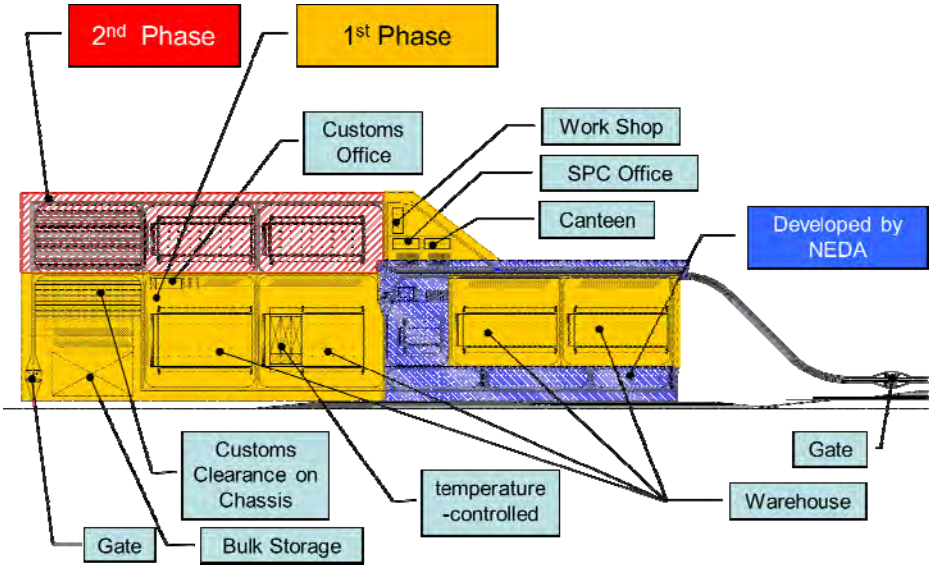
Final Report

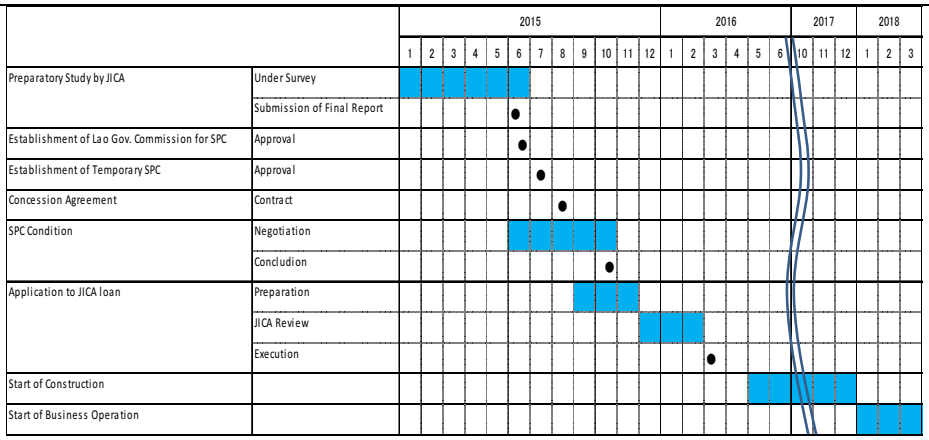
Summary

1. Project Name	Vientiane Logistics Park (VLP)
2. Project Site	(1) Project Site The Thanaleng area where the VLP is planned is located 15 km east-west from downtown Vientiane. It lies opposite Nong Khai Municipality of Thailand, so that Thanaleng has been traditionally a strategic place as a river-crossing point. In 1993, the first Friendship Bridge was completed at the Thanaleng area, which continues to hold its strategic position as an international cross border point. Dongphosy Forest is located approximately 3 km north from the bridge, which is under Vientiane Capital. The railway passes through the forest, and the Thanaleng station is located 3.5 km from the bridge. The Vientiane Logistics Park (VLP) is planned at north side of the station. (2) Container Yard Development Project at Thanaleng In parallel with the JICA feasibility study (2011) on which this survey is based, a survey on a planned railway extension to Vientiane Station was conducted with the support of the Thai Government. The survey included not only a new Vientiane Station plan but also a container yard (CY) plan for handling rail freight. For this reason, the JICA and Thai survey teams made adjustments and discussed the integration of the CY planned by Thailand into the VLP Project. After the JICA Study, the Railway Department of MPWT and the Lao National Railways Authority (LNRA) developed a railway extension project from Thanaleng station to Vientiane Central Station, and decided to use Thai financial assistance to realize the project. The project originally has three (3) components, namely: 1) railway construction between Thanaleng station to Vientiane Central station; 2) construction of Vientiane Central station; and 3) container yard (CY) at Thanaleng station. In 2013, MPWT agreed with the Neighboring Countries Economic Development Cooperation Agency (NEDA) of Thailand on financial assistance for the first phase of the project and started the construction. The CY is targeted to be completed in July 2015. It is possible to select another site for the VLP in this survey, but there is no need to construct two CYs for rail freight in the same area. Therefore, The VLP development should harmonize with the CY development and part of the access road developed by the CY project.
3. Current Logistics Situation in Vientiane	(1) Current Logistics Situation The volume of import and export cargo in Vientiane, similar to the Laos national logistics, is increasing because of an increase in commodity demand due to continued economic growth. About half of the import cargo in Laos passes through the First Friendship Bridge. On the other hand, with regard to export cargo, it has remained at about 4% of Laos' overall export volume. This means that the logistics in Vientiane capital mainly focuses on import cargo, and it is foreseen that the flow rate is gradually increased due to sustainable economic growth and urbanization in the future. Import cargo trucks that pass through the First Friendship Bridge can be roughly divided into two: the ones going directly to the factories and construction sites and the ones going through the Thanaleng warehouse after passing through immigration. If it does not pass through the Thanaleng warehouse, it undergoes customs clearance at the First Friendship Bridge or at arrival factories and construction sites. (2) Customs Clearance Procedure

<table>
<tr><td></td><td>According to the interview survey, the average transit time for the customs procedure is one hour for export and 3 hours for import, with no negative assessment by the exporters/importers interviewed.
According to Customs, ASYCUDA application results in a 36% reduction in transaction time. A similar positive assessment is reported from the local forwarders interview survey.
(3) Current Situation of Thanaleng Warehouse
The increase in cargo volume causes overcapacity at the Thanaleng Warehouse. Thus, while import cargo should stay at least one day in regulation, many cargoes actually go out from the warehouse just after the customs clearance procedure.</td></tr>
<tr><td>4. VLP Business Concept</td><td>Being called a "land-locked country" is usually used to represent Lao PDR's logistics backwardness, resulting from its geographical disadvantage (long distance from/to international market) as well as high logistics cost. For a long time, reducing this geographical disadvantage has been strongly sought after by improving logistics services.
Along with the promotion of accelerating regional integration, such as fulfillment of the ASEAN Economic Community (AEC) in 2015, smoother and more efficient logistics services will be demanded to realize a speedy physical distribution across the region.
The purpose of the VLP is to provide comprehensive and advanced logistics services that meet international standards while upgrading the current the Thanaleng Warehouse function as an international gateway of the Vientiane area.
The VLP aims to provide global standardized logistics services by installing a developed warehouse management system (WMS) as well as promoting information sharing among the various stakeholders. This strategy results in the following gains:
・ Government can achieve correct duty/tax collection, cargo management and trade statistics;
・ The VLP can provide accurate, speedy and low-cost logistics serviced by information linkage of cargo, vehicle and declaration; and
・ Users can enjoy quality services which, up to now, have not been provided not only in Lao PDR but also in neighboring countries.</td></tr>
<tr><td>5. VLP Service</td><td>The VLP plans to provide a set of comprehensive and sophisticated logistics services by improving the existing the Thanaleng Warehouse service. Additionally, providing new and future services is taken into account.as a medium/long-range target.
<table>
<tr><th>Existing Service Expansion</th><th>New Service</th><th>Future Service</th></tr>
<tr><td>1） Providing Land Area for On-chassis Customs Clearance
2） Public bonded warehouse
3） Imported automobile inventory</td><td>1） Low temperatures cold storage
2） Tenant service</td><td>1） Railway cargo
2） Inland container depot
3） Export consolidation</td></tr>
</table>
(1) Existing Service Expansion
1） Providing Land Area for On-chassis Customs Clearance
As a result of both the existing direct delivery and the Thanaleng Warehouse attachment practice, three types of transport are observed between the Friendship Bridge and the Thanaleng Warehouse, namely: (a) Customs clearance cargo; (b) Bonded transport cargo (cargo that should be stopped at the Thanaleng Warehouse); and (c) Domestic transport cargo. This makes it difficult for proper cargo management and accurate duty collection. To address this problem, it is recommended to adopt a principle that all vehicles should attach to the VLP and dispatch is allowed after confirming the completion of customs clearance. Therefore, the VLP should provide the space for on-chassis based customs clearance.
2） Public Bonded Warehouse
The VLP will install an advanced WMS technology and will provide inventory service which meets global standards. As a result, importers will be able to store their cargo under bonded status even if they import large volumes. Moreover, just-in-time (JIT) type shipment becomes possible immediately after receiving orders from customers. Bonded</td></tr>
</table>

<table>
<tr><td></td><td>storage will be beneficial for improving the importer's cash flow because now it is necessary to pay duty at one time of the importation.
3） Imported Automobile Inventory Service
The revenue from this service accounts for a large portion of the Thanaleng Warehouse's income. The open yard facility for automobiles is already full. Although the VLP will take over all services being provided by the Thanaleng Warehouse, it is proposed to continue using the current open yard facility for automobile inventory service.
(2) New Services
1） Low Temperature/Cold Storage
Currently, the Thanaleng Warehouse is not equipped with cold storage facilities. However, it is a universal trend that the demand for cold chain facilities grows in accordance with economic development. Even now, a large portion of such cargo is imported in the form of informal entry like passenger baggage. Considering this, the VLP should be equipped with cold storage facilities.
VLP will provide temperature controlled transport service for sensitive cargo in order to secure the cargo quality up to delivering customers.
2） Tenants
The leasing of warehouses and office space is welcomed for LIFFA (Lao International Freight Forwarders Association) members and private companies.
(3) Future Services
1） Railway Cargo
The big advantage of the VLP is that it is equipped with a railway facility. Prior to the VLP planning, the construction of railway facilities was already started with the support of the Neighbouring Countries Economic Development Cooperation Agency (NEDA), including CY. After development of the railway facility, the VLP can provide railway service practically.
2） Inland Container Depot
The container depot can cut import transport cost because an empty container can be received instead of returning it to a long-distance main port. In the case of export, picking up empty containers from a container depot results in lower logistics cost due to the shorter transport distance as compared to picking up empty containers from the main port. A railway service can certainly give a positive impact on the setting up of a container depot.
3） Export Consolidation
Many manufacturers try to export goods in return containers, it is difficult to fill containers with cargo because the export volume is smaller than imports. Enhancement of the consolidation function is very important for the VLP.</td></tr>
<tr><td>6. Demand Forecast</td><td>As for the result of future cargo projection considering the capacity of VLP, which is equivalent to the cargo volume at 10 years after the VLP starts operation. This study applies the cargo volume in the following table for future revenue calculation.
Unit :ton
<table>
<tr><th></th><th>2018</th><th>2022</th><th>2027</th><th>2032</th><th>2037</th><th>2042</th></tr>
<tr><td>Import</td><td>644,416</td><td>834,903</td><td>1,165,246</td><td>1,165,246</td><td>1,165,246</td><td>1,165,246</td></tr>
<tr><td>Export</td><td>7,480</td><td>9,969</td><td>14,285</td><td>20,482</td><td>29,378</td><td>42,150</td></tr>
</table></td></tr>
<tr><td>7. Operation Plan</td><td>(1) Import Cargo Flow
It is recommended that all import trucks should attach to and pass through the VLP Along with this, it is reasonable to shift from the current cargo movement practices of (a) direct delivery and (b) the Thanaleng Warehouse attachment pattern to (a) direct delivery pattern and (b) cargo transshipment pattern. The cargo transshipment pattern is further divided into (c) cargo transshipment/storage pattern and (d) container switching pattern.
(2) Export Cargo Flow
As for factory vanning containers, VLP will provide the document check service and container dispatch is not allowed until final document check finished. This operation</td></tr>
</table>

	results in mitigating other agencies' border operation at Friendship bride. Consolidation targets small lot cargo to some degree where full container load is unpractical. After customs clearance completed at VLP consolidation with other shippers is conducted.
8. Layout Concept	The preconditions of the VLP layout concept are as follows: • The VLP development should harmonize with the CY development and part of the access road developed by the CY project. • As a first phase, the cargo handling capacity of the VLP is assumed to be the cargo volume of the year 2027, which is 10 years after starting the business operation of the VLP. Furthermore, the cargo handling capacity of the VLP in the second phase will be the cargo volume of the year 2032, after 15 years of business operation. • The freezing and refrigeration storage for a cold-chain formulation will be installed as one of the VLP facilities. • All imported cargos will pass through the VLP; therefore, the VLP should have a customs clearance office in the area. • The VLP should include sufficient car parking lots to mitigate traffic congestion on the National Road No. 1, which is caused by roadside parking of the trucks from Thailand including on-board customs clearance.
9. Layout Plan	 The VLP facilities were laid out in two phases so that expansion will be possible to meet the cargo handling needs in the future. The first phase is designed for handling the cargo volume during the first 10 years from the operational start, while the second phase is designed for the first 15 years. The first phase includes a customs office, warehouses, bulk storage area, and an area for customs clearance on chassis, VLP-SPC office, canteen, maintenance workshop, and gates, which are required for the VLP operation. The customs office is placed next to the area for customs clearance on chassis to facilitate collaboration. Frozen/cold storage warehouses will be built on the assumption that the frozen/refrigerated cargo handling volume will increase in the future. The second phase is designed to meet the VLP's operational needs assumed in 10 or more years from the operational start. The operations will be adjusted to meet cargo demand. The present plan includes the construction of two warehouses in the expansion area.
10. Implementation Scheme	The Lao Government and Japanese logistics company will jointly establish the SPC who would be responsible for development and management of the VLP.
11. Implemantation Schedule	VLP development. Construction work will start in 2016 and the VLP business operation is expected to start in 2018.

<table>
<tr><td></td><td>


</td></tr>
<tr><td>12. Risk Evaluation</td><td>Before the execution of a formal contract on the establishment of the SPC, a rough consensus on the SPC contract between the committee and the Japanese logistics company is needed as follows; a) establishment of management body of the VLP, b) concession agreement, c) organizational structure of the SPC, d) dealing with NEDA development CY, e) accuracy of future cargo demand forecast, f) re-utilization plan of a vacant lot in the existing warehouse, g) invitation strategy of local companies as tenants of the VLP, h) tax exemptions, i) dealing with public cargo in the VLP, j) countermeasures of business competitors, k) one-stop service in Customs and l) fare system of public warehouse, etc.</td></tr>
<tr><td>13. Environmental and Social Safeguards</td><td>In order to apply for an ECC for the proposed VLP Project, either an EIA or an IEE shall be conducted, based on the EIA Decree of Lao PDR.
Based on the explanation of the entire project outline by MPWT and submitted material, MoNRE concluded that an IEE study shall be conducted in order to obtain an ECC for the project and DoNRE is the supervising governmental organization for this IEE study.
During this study on the proposed VLP Project, two stakeholder meetings were held, as follows:
• 1st Stakeholder Meeting: May 30, 2014; and
• 2nd Stakeholder Meeting: November 7, 2014.
In this study, the following two public reviews and information disclosure periods were established:
• 1st Public Review and Information Disclosure: July 18, 2014 – August 17, 2014.
• 2nd Public Review and Information Disclosure: November 6, 2014 – December 5, 2014.
Eventually, the ECC examination was initiated and the ECC was approved in early February 2015. After that, the final IEE report was delivered from MPWT to DoNRE.
The land-take negotiation of the area of first phase has been initiated already and relevant construction activities of the railway extension and CY were started. It is noted that the land-take negotiation of some areas therein is still in progress. It is found that the additional area, so-called “Extension Area (Zone D),” is required for the successful implementation of the proposed VLP Project. Thus, an additional land-take process shall be initiated to acquire the “Zone D land space” promptly.</td></tr>
<tr><td>14. Future Tasks</td><td>The dedicated committee and the Japanese Logistics Company, which would stake the VLP project, need the remaining examination as follows after the establishment of the dedicated committee.
• To elaborate the implementation scheme of the VLP development and management; and
• To elaborate the financial analysis.</td></tr>
</table>

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A List of Investment Projects subject to IEE and/or EIA

B List of Participants (1st Stakeholder Meeting, held on May 30, 2014)

C Minutes of the 1st Stakeholder Meeting on the Inception of VLP and IEE on May 30th 2014, at Thanaleng Railway Station

D List of Participants (2nd Stakeholder Meeting, held on November 07, 2014)

E Minutes of the 2nd Stakeholder Meeting on the Inception of VLP and IEE on November 07th 2014, at Vientiane Capital Administrative Office

F IEE-ToR

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Supplement

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REPORT ON SUB SOIL INVESTIGATION

Construction Specifications of VLP

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List of Abbreviation

	Abbreviation	Name
A	ACIA	ASEAN Comprehensive Investment Agreement
	AEC	ASEAN Economic Community
	AEC	ASEAN Economic Community Blueprint
	AFAS	ASEAN Framework Agreement on Service
	APSC	ASEAN Political-Security Community Blueprint
	ASC	ASEAN Socio-Cultural Community Blueprint
	ASYCUDA	Automated SYstem for CUstoms DAta
	ATIGA	ASEAN Trade in Goods Agreement
B	BOT	Build Oparate Transfer
C	C/A	Concession Agreement
	CBTA	Cross Border Transport Agreement
	CCA	Common Control Area
	CEPT	Common Effective Preferential Tariff
	CFS	Container Freight Station
	CIQ	Customs, Immigration and Quarantine
	CY	Container Yard
D	DCF	Discount Cash Flow
	DoNRE	Department of Natural Resources and Environment
	DSCR	Debt Service Coverage Ratio
E	ECC	Environmental Compliance Certificate
	EIA	Environmental Impact Assessment
	EIRR	Equity Internal Rate of Return
	EPC	Engineering, Procurement, Contract
	ESMMP	Environmental and Social Management and Monitoring Plan
F	FCL	Full Container Load
	FDI	Foreign Direct Investment
	FTL	Full Truck Load
G	GGU	Government Guarantee Undertaking
	GMS	Greater Mekong Sub-region
	GRDP	Gross regional domestic product
I	IAI	Initiative for ASEAN Integration
	ICD	Inland Container Depot
	IEE	Initial Environmental Examination
	IT	Information Technology
J	JICA	Japan International Cooperation Agency
	JIT	Just In Time
	JVC	Joint Venture Company
L	LCL	Less than Container Load
	LIFFA	Lao International Freight Forwarders Association
	LNRA	Lao National Railways Authority
M	MOAF	Ministry of Agriculture and Forestry
	MOF	Ministry of Finance
	MOIC	Ministry of Industry and Commerce
	MoNRE	Ministry of Natural Resources and Environment
M	MOPS	Ministry of Public Security

	Abbreviation	Name
M	MOU	Memorandum of Understanding
	MPI	Ministry of Planning and Investment
	MPWT	Ministry of Public Works and Transport
N	NACCS	Nippon Automated Cargo and Port Consolidated System
	NEDA	Neighboring Economic Development Agency
	NLMA	National land Management Authority
	NPV	Net Present Value
	NTB	Non-Tariff Barrier
O	O&M	Operation and Maintenance
	ODA	Official Development Assistance
P	PIRR	Project Internal Rate of Return
	PMO	Prime Minister Office
	PPP	Public–Private Partnership
	PSIF	Private Sector Investment Finance
R	RAP	Resettlement Action Plan
S	SCF	Standard Conversion Factor
	SEZ	Special Economic Zone
	SEZ	Specific Economic Zone
	SPC	Special Purpose Company
T	TWSE	Thanaleng Warehouse State Enterprise
V	VLP	Vientiane Logistics Park
	VOC	Vehicle Operation Cost
W	WMS	Warehouse Management System
	WREA	Water Resources & Environment Administration

Chapter 1 Introduction

1.1 Background

1.1.1 Importance of Logistics in Lao PDR

Lao People's Democratic Republic (PDR), also called Laos, is a landlocked country surrounded by five neighboring countries: Thailand, Cambodia, Vietnam, Myanmar and China (Yunnan). Being landlocked has traditionally been a large constraint in the economic development in Lao PDR for a long time.

However, favorable changes in international trade and logistics to facilitate the movement of people, goods and money within the countries comprising the Association of Southeast Asian Nations (ASEAN) and the Greater Mekong Sub-region (GMS) through the Cross Border Transport Agreement (CBTA) and bilateral agreements on cross border facilitation may further improve the efficiency and reliability of transport connecting Lao PDR with ASEAN/GMS markets and international ports in Indochina.

Moreover, industrial locations have been gradually increased with venturing into the international supply chain/international division of labor in production sector as well as the relatively lower production cost in Lao PDR compared to that of Thailand and Vietnam. To receive demand of those industrial locations, industrial estates are going to be developed around Vientiane.

Looking at current trends as indicated above, the volume of international logistics tends to increase in accordance with increase of industries in Vientiane. The potential of industrial location seems to continue to increase in the future. High quality logistics service with reasonable cost would be indispensable together with infrastructure development to allow this potential to emerge.

International cargo passes through the First Friendship Bridge. The customs procedure is done at 1) the Thanaleng warehouse and 2) designated factories. The Thanaleng warehouse is located near to the bridge and is a public warehouse, which offers not only customs clearance but also related logistics services like temporary storage and transshipment. However, the Thanaleng warehouse cannot perform as a core logistics facility because of its decreasing efficiency being an old facility and having insufficient capacity. Accordingly, the replacement/modernization of the Thanaleng station has become a big issue at present. On the other hand, there is no logistics center that can offer comprehensive warehouse management as a core of logistics system and network in Vientiane.

Currently, the railway service between Thanaleng station and Nong Khai station of Thailand is operating in a spirit of cooperation between the governments of Lao PDR and Thailand, in order to strengthen transportation capacity and offer an alternative mode. By using this railway with trucks, a strategic solution on transport service can be delivered at Thanaleng.

Under these circumstances, the Ministry of Public Works and Transport (MPWT) has decided to provide a new logistics facility with higher functions at Thanaleng area.

1.1.2 Vientiane Logistics Park (VLP)

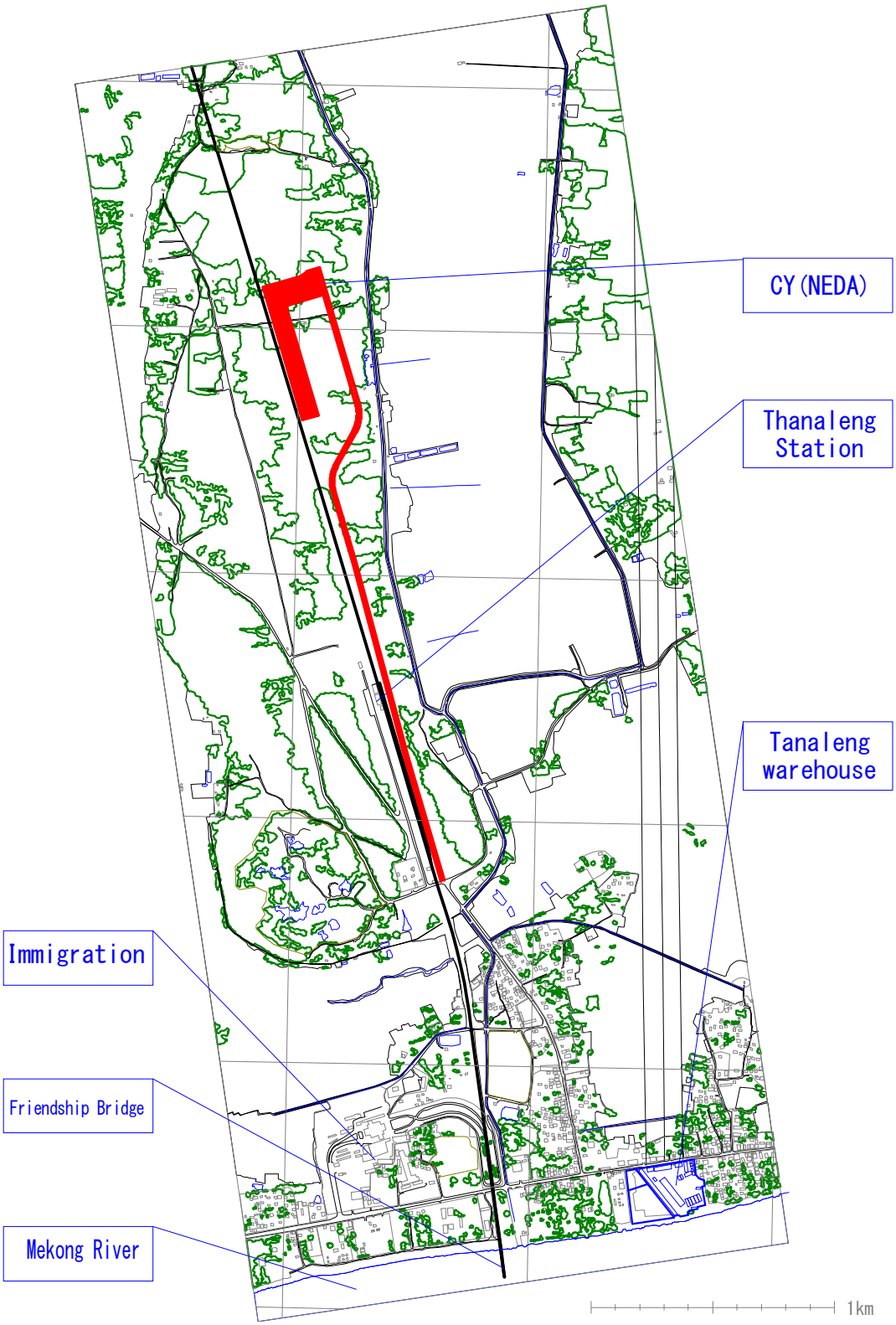
In response to the request from the Lao Government, the Government of Japan decided to carry out " The Study on National Logistics Master Plan in Lao PDR" (hereinafter referred to as "JICA F/S Study"), which was completed in 2011. The JICA F/S Study formulated an international logistics strategy to maximize benefits from strengthening of regional connectivity in Lao PDR to be transformed into a landlinked country by realizing a single market with borderless trade and transport through the ASEAN Economic Community (AEC) and the Cross Border Transport Agreement (CBTA). The JICA F/S Study proposed a logistics center with a distribution processing center in Lao PDR utilizing the regional connectivity between China (Yunnan) and Thailand and between Vietnam and Thailand. The Vientiane Logistics Park (VLP) is recognized as the highest priority project in the strategy.

The VLP is a comprehensive logistics center effectively offering customs clearance service and related logistics services instead of the existing Thanaleng warehouse. In addition, the VLP offers multi-modal transport service with truck and railway through the Container Yard (CY) currently being constructed under Thai assistance. Consequently, the VLP will be able to offer concrete solution to reduce logistics cost by a combination of railway and truck transport. The VLP will provide distribution processing service to the transit cargoes in addition to temporary storage and transshipment service.

1.1.3 Container Yard Development Project at Thanaleng

After the JICA Study, the Railway Department of MPWT and the Lao National Railways Authority (LNRA) developed a railway extension project from Thanaleng station to Vientiane Central Station, and decided to use Thai financial assistance to realize the project. The project originally has three (3) components, namely: 1) railway construction between Thanaleng station to Vientiane Central station; 2) construction of Vientiane Central station; and 3) container yard (CY) at Thanaleng station. In 2013, MPWT agreed with the Neighboring Countries Economic Development Cooperation Agency (NEDA) of Thailand on financial assistance for the first phase of the project and started the construction. The CY is targeted to be completed in the second half of 2015.

The CY is developed based on the basic design made by the JICA Study, but the project location is moved to the north by 300 m with the addition of a water retention pond between the CY and Thanaleng station (see Figure 1.1).



Source: JICA Study Team.

Figure 1.1 Layout of CY Supported by NEDA

1.1.4 450 Years Road

After the JICA Study, the 450 Years Road, which is located one kilometer east from the Friendship Bridge and rail line, was completed in 2012. The road is of high standard starting from the national route No.1, stretching to the north, then passing the east edge of Dongphosy Forest, and finally connecting to the national route No.13. The length of the road is 20 km with 4 lanes; it is possible to widen the road to 6 lanes. The road is recognized as an outer ring road of Vientiane in the urban structure plan and has bypass functions to directly connect northern and central Lao with Thailand. Accordingly, there emerged the potential of industrial location and logistics businesses in the areas along the road. In fact, Vita Park SEZ was established along the road in 2013.

1.2 Objectives of the Study

This study aimed at carrying out a feasibility study on the VLP project under public and private participation. The VLP is the facility to offer logistics services comprehensively as a core of international logistics system in Lao PDR including:

- Interface of import and export and domestic transport;
- Transit service and consolidation service;
- Delivery center targeting Vientiane, and the northern and central regions of Lao PDR;
- Inventory service and storage service targeting the Mekong area of Thailand; and
- Distribution processing targeting import products from Thailand in the short term, and the transit products between China and Thailand in the medium term, and inventory management service of parts and semi-products.

The service and management scheme that the VLP offers, i.e., public logistics services mentioned above with advanced “know-how” of private sector, were examined in the study.

1.3 Project Site

The Thanaleng area where the VLP is planned is located 15 km east-west from downtown Vientiane. It lies opposite Nong Khai Municipality of Thailand, so that Thanaleng has been traditionally a strategic place as a river-crossing point. In 1993, the first Mekong International Bridge (Friendship Bridge) was completed at the Thanaleng area, which continues to hold its strategic position as an international cross border point (see Figure 1.2).

1.3.1 Land

Thanaleng area belongs to Xaisettha District and Hadxaifong District as administrative boundary. Thanaleng area is a flat land along the bank of the Mekong River; lower flat land spreads over in the southern part of Thanaleng facing the Mekong River. In general, the land rises gradually forming a terrace in the north. Lower flat land is well cultivated as paddy field, which acts as retention area. Villages are scattered at terrace or highland areas to avoid inundation in the rainy season as well as to cultivate upland crops and tree crops. Dongphosy Forest, which is located near the Mekong River, is designated as a Reserve Forest.

1.3.2 Villages Around Dongphosy Forest Reserve

Many small settlements are scattered around Dongphosy Forest Reserve, which is described in detail in Chapter 9. Dongphosy Forest Reserve is located at Nakhay Tai Village of Xaisettha District and Dongphosy Village of Hadxaifong District. The population of these two villages is approximately 1,700 persons and 2,200 persons, respectively. The main livelihood of majority of the villagers is paddy farming, but currently non-farming workers commuting to Vientiane are gradually increasing in this area.

1.3.3 Transport

Major roads around Thanaleng area are national route No.1 (NR-1) and 450 Years Road. The NR-1 stretches in east-west direction along the Mekong River and the 450 Years Road stretches in north-south direction from the NR-1. The four-lane 450 Years Road plays a function as an outer ring road of Vientiane.

The Friendship Bridge connects Thanaleng with Nong Khai of Thailand by road and by railway. The bridge connects to the NR-1 via cross border point. Public bus connects between Thanaleng cross border point and Vientiane central bus terminal. On the other hand, the Thanaleng railway station is located at around 3.5 km north from the Mekong River and 2 trains are operated daily.

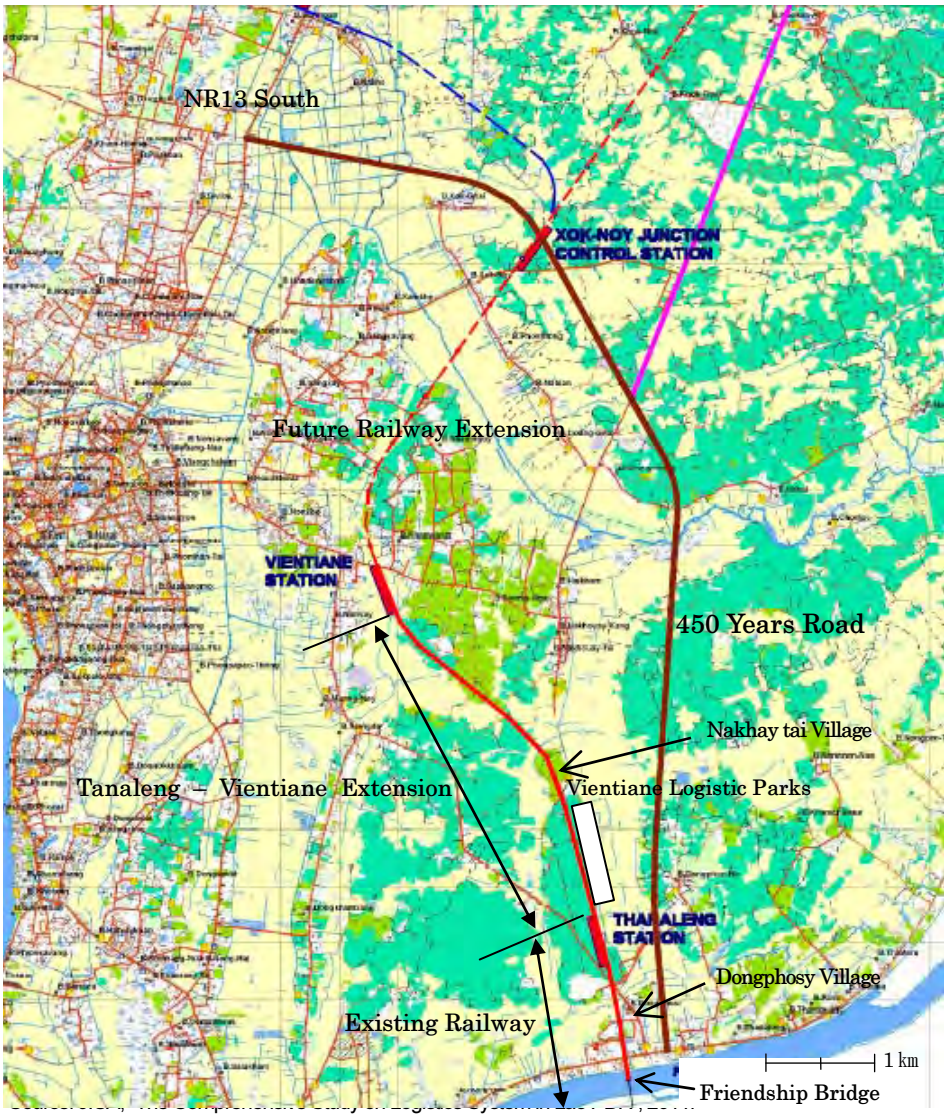


Figure 1.2 Thanaleng and Surrounding Areas

1.3.4 Development of Thanaleng Area

(1) Position in Vientiane Urban Plan

The urban plan of Vientiane City consists of land use plan, regional plan and urban facility plan including urban transport plan, and water supply and drainage plan. Vientiane's urban plan basically follows a multi-core urban system. The urban core is the existing downtown and surrounding area, which seems to be the urban planning area, and five satellite towns, namely, Naxaithong, Donnoune, Xangthon, Hadxaifong and Pakngeum, and four economic zones (Khokphang, Houaycheam, Thangon and Banphaonaxon). The urban core and satellite towns/economic zones are connected with regional highways. Thanaleng Area is designated as an industrial zone to take a part of the multi-core system of Vientiane Capital.

This area has Dongphosy Forest, which is a reserve forest under Vientiane Capital. Although development is prohibited at Dongphosy, there are currently many illegal settlers who engage in farming in the forest. Thus, no primary forest remains in the Dongphosy Forest.

(2) Building Control

Lao PDR has building control regulations to control capacity, height and use of building within urban planning areas. As the building control measure, maximum floor area ratio (FAR), maximum building area ratio and maximum height are indicated. Industrial areas and transport areas are categorized as special land use with adopting 30% of building area ratio and 14 m of maximum height of building. FAR is subject to detailed plan.

(3) Development Projects

There are many projects planned at Thanaleng area according to the JICA F/S period such as Vientiane Industrial Park (VIP) Project, Dongphosy Commercial Special Economic Zone Project, 450 Years Road Project and a railway extension project.

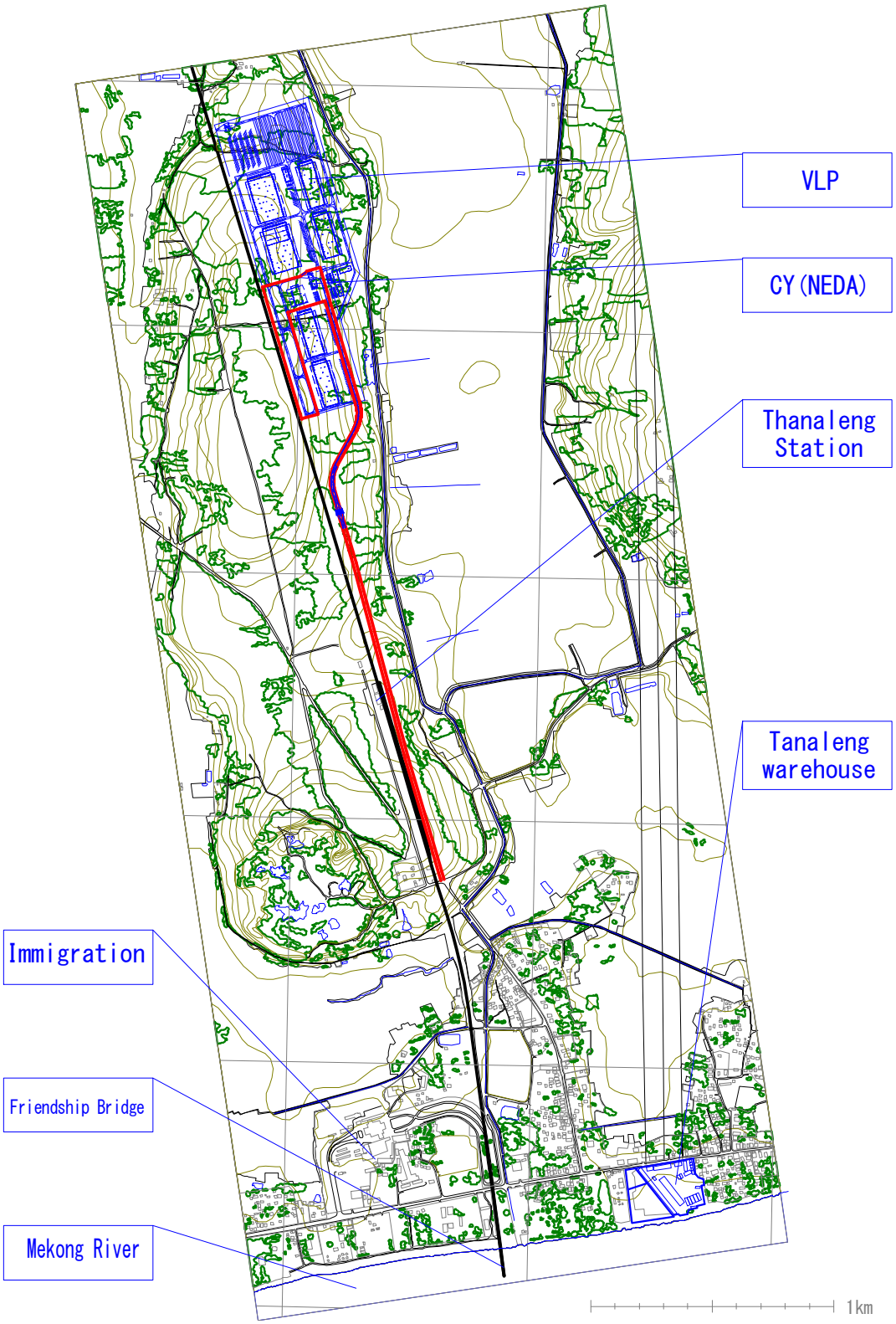
Among them, the 450 Years Road Project is completed as mentioned before, and the Container Yard and related facilities development are ongoing as the first phase of the railway extension project. The VIP project is delayed because VITA Park Industrial Zone was developed by the private investor. Dongphosy Commercial Special Economic Zone project has been started but the project is stopped at a land preparation stage.

1.3.5 Surroundings of Thanaleng Station

Figure 1.3 shows the location of the Friendship Bridge, railway station and rail line, immigration (cross border point) and Thanaleng Warehouse (TWSE: Thanaleng Warehouse State Enterprise).

The immigration and customs offices are located at the foot of the bridge. Truck parking lots are located at north side or behind the offices. The customs officer gives directions as to the location of customs clearance to trucks either at the TWSE or at the factory (also informs truck drivers if there is no customs).

Dongphosy Forest is located approximately 3 km north from the bridge, which is under Vientiane Capital. The railway passes through the forest, and the Thanaleng station is located 3.5 km from the bridge. The Vientiane Logistics Park (VLP) is planned at north side of the station.



Source: JICA Study Team.

Figure 1.3 Surroundings of Thanaleng Station

Chapter 2 Business Climate of VLP

2.1 Geopolitical Position of Lao PDR in GMS

Lao PDR is a landlocked country surrounded by Thailand, Cambodia, Vietnam, Myanmar (which together with mainland Malaysia are collectively known as Indochina), and China. As such, Laos has been depending on foreign ports for its export and import. It has been largely dependent on Indochina, especially Thailand, for international logistics. As a landlocked country, therefore, international logistics (export and import) has been a major constraining factor in Laos' economic development. Recently, however, unprecedented changes have been observed in the external environment of Laos' international logistics. Among these changes, the Cross-Border Transportation Agreement (CBTA) among the Greater Mekong Subregion (GMS) countries, including Laos, may have a big impact on logistics in Laos. GMS countries are addressing the following points in order to promote cross-border transportation in the area:

- Applying the single-stop window for Customs;
- Creating rules of border crossing, including exemption from customs and quarantine fees;
- Clarifying conditions for mutual entry of vehicles; and
- Designing infrastructure, including roads and bridges, and maintaining traffic signs and lights.

Furthermore, the ASEAN Economic Community (AEC) will be established in December 2015, which will presumably promote economic activities in GMS and restructure industries by liberating the international movement of goods, people, and capital.

It is expected that foreign markets will be more accessible and the domestic market will be more liberalized. This would lead to higher potential for movement of goods and people, and the construction of the road network will support it. Construction of the transportation network in the GMS has been promoted with the assistance of the Asian Development Bank (ADB) and Japan since GMS was founded in 1992. Three corridors in particular, namely, the East-West Economic Corridor, North-South Economic Corridor, and Southern Economic Corridor, have been constructed in order to invigorate economic integration, trade, and production activities in the GMS area. Also in Laos, international/domestic highways for international logistics are already in the process of formulation, as seen in the completion of construction of main highways including NR-13 (AH-12), NR-1 (AH-13, North-South Economic Corridor), NR-13 and NR-8 (AH-15), and NR-9 (AH-16), which are

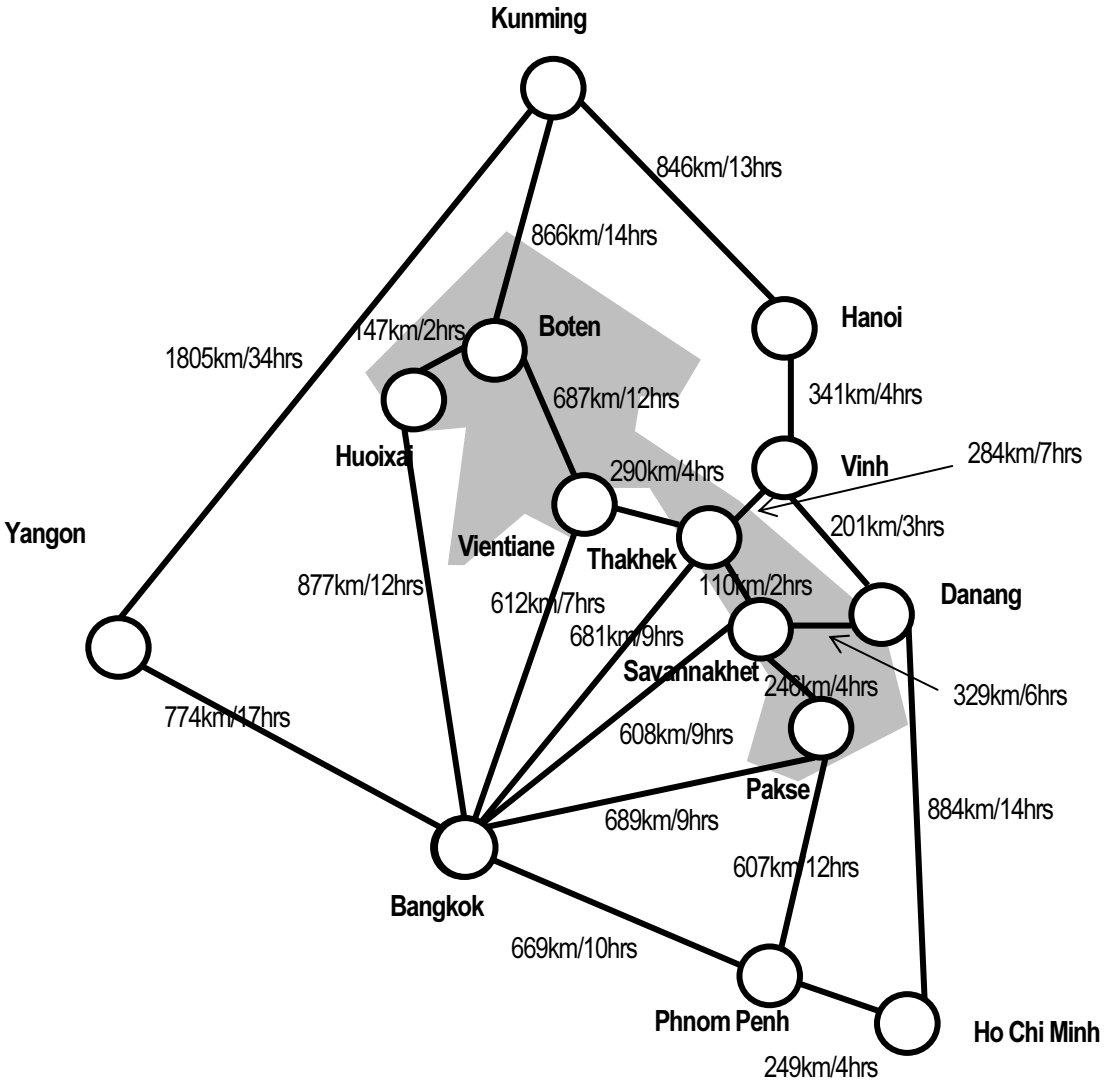
designated as Asian Highways (see Table 2.1).

Figure 2.1 shows the distance and required time between major cities in GMS. Laos is located nearly in the center of GMS countries and can provide multiple alternative routes for Thailand-Kunming (China) and Thailand-Vietnam, especially for Bangkok-Kunming and Bangkok-Hanoi.

Table 2.1 International Routes in Laos

Section	Shortest Route	Alternative Route
Bangkok-Hanoi	NR-12 (Bangkok-Thakhek-Vinh-Hanoi) 1,306 Km	NR-9 (Bangkok-Savannakhet-Vinh-Hanoi) 1,479 Km
Bangkok-Kunming	NR-3 (Bangkok-Huoixai-Boten-Kunming) 1,890 Km	NR-13 (Bangkok-Vientiane-Boten-Kunming) 2,165 Km

Source: JICA Study Team



Source: JICA Study Team.

Figure 2.1 Distance and Required Time Between Major Cities in GMS

As stated above, there is an increasing focus on liberalization of movement of goods, people, and capital in GMS and ASEAN. Laos is getting geographically important by shifting from a “Landlocked Country” to a "Land-Linked Country” because it is located in the middle of GMS and shares borders with five countries.

Given this background and scenario, this chapter will discuss an overview of the socioeconomic context of the VLP Project.

2.1.1 ASEAN Economic Community (AEC)

In 2003, ASEAN agreed to establish the AEC by December 31, 2015 as the final project to create a free trade area. In 2009, it announced the “Cha-am Hua Hin Declaration on the Roadmap for the ASEAN Community,” which presents the Roadmap and the timetable for establishing the AEC.

The Roadmap consists of four important components: ASEAN Political-Security Community Blueprint (APSC), ASEAN Economic Community Blueprint (AEC), ASEAN Socio-Cultural Community Blueprint (ASC), and Initiative for ASEAN Integration (IAI) Strategic Framework and IAI Work Plan 2 (2009-2015). The AEC is composed of the following four pillars:

- Single Market and Production Base;
- Competitive Economic Area;
- Equality in Economic Growth; and
- Integration with International Economy.

ASEAN nations made the following three agreements to realize the four pillars of AEC: (1) ASEAN Trade in Goods Agreement (ATIGA), (2) ASEAN Framework Agreement on Service (AFAS), and (3) ASEAN Comprehensive Investment Agreement (ACIA). ASEAN is trying to realize the three agreements for free movement of goods, people, and capital with some exceptions by 2015.

Among the four pillars, some positive results have been achieved in the first pillar on “Single Market and Production Base.” One of the notable achievements is the abolition of tariffs. The Common Effective Preferential Tariff (CEPT) Scheme was abolished among ASEAN-6 (Brunei, Indonesia, Malaysia, Philippines, Singapore, and Thailand) by the ASEAN Free Trade Area (AFTA), the former agreement of ATIGA. As a result, over 70% of trade tariffs in ASEAN became zero and 10% of trade tariffs were reduced to below 5%. Some progress was also made in terms of promotion of trade and liberalization of investment. The national single window (a prompt customs process with one-stop) has been introduced in ASEAN-6.

On the other hand, few achievements have been made in the second and third pillars. The fourth pillar on “Integration with International Economy” made a big advance by turning ASEAN into a production base as a China plus one.

ASEAN has come a long way for the realization of the AEC. Establishment of the AEC is planned in December 2015 and 77% of the target was achieved as of March 2013, according to the self-evaluation by the AEC secretariat. Unsolved challenging issues for establishing the AEC have made policy implementation slow, so the main focus is how much policy will be implemented for establishing the AEC by December 2015. For example, even in the formation of a single market, which is the most advanced pillar, there is difficulty in finding consensus on some issues such as elimination of non-tariff barriers (NTB), formation of national single windows and the ASEAN single window, unification of regulations on business and investment, and unification of interpretation of agreements made by AEC, because domestic laws in each nation need to be amended in many instances.

The timing of the establishment of the AEC may possibly change, and establishment of the AEC may have some effect on the VLP. The volume of international cargoes that go through Thanaleng is expected to be bigger as the volume of cargo transportation in ASEAN is predicted to be higher because of the abolition of most tariffs for many goods and the fixed rate of remaining tariffs. As a result, among the Customs, Immigration and Quarantine (CIQ) functions of the VLP, the main customs operation will change to checking goods at the border and imposition and collection of value-added tax (VAT). From another perspective, the significance of the CIQ functions of the VLP will be relatively enhanced because VAT becomes more important with the abolition of tariffs.

2.1.2 Cross-Border Transportation Agreement (CBTA)

The CBTA is a multilateral agreement among Cambodia, Myanmar, Thailand, Vietnam, Laos, and Yunnan Province of China, which aims to eliminate NTBs on cross-border transportation in GMS. The CBTA aims to achieve the following four targets:

- Simplification of cross-border procedures (single window/single stop, customs inspection, border open time, and exchange of prior information and customs clearance);
- Simplification of cross-border movement (multiple entry visa, authentication of driver’s license);
- Standardization of traffic rules (regional transit resume, animal and plant inspection); and
- Permission of vehicle entry.

The CBTA consists of 20 protocols and annexes describing actions to attain the above goals. It covers 17 international cross-border points in the area in the first stage of implementation. Among

these, 9 points are located in Laos, as shown in Figure 2.2.

The CBTA is applied to entry/exit points and routes mutually agreed upon by the signatory nations. In March 2005, Thailand, Vietnam, and Laos signed the Memorandum of Understanding (MoU) on Single Window Service and Mutual Vehicle Entry between Dansavanh in Laos and Lao Bao in Vietnam, and between Savannakhet in Laos and Mukdahan in Thailand. Based on the MoU, one-stop service was planned to be implemented between Dansavanh and Lao Bao on June 31, 2005, but it has not been implemented yet because maintenance of the Common Control Area (CCA) is delayed. It is expected that progress of the CBTA will accelerate liberalization of mutual vehicle entry, which leads to expansion of the market of transportation services and increased participation in market opportunities for the logistics industry.

Thanaleng is the largest cross-border point between Thailand and Laos, and it is anticipated that the CCA will be maintained in the future based on the CBTA. In the VLP facilities, therefore, working space for CIQ staff in Thailand (until Thailand and Laos start to jointly operate the CIQ facilities), and office space need to be secured.

Source: ADB.

Figure 2.2 Major Cross-Border Points in GMS

2.2 Transportation Network Surrounding Laos

2.2.1 Economic Corridors

The CBTA is meant to eliminate NTBs and to accelerate economic integration in GMS in terms of system. On the other hand, maintenance of the transportation network in GMS aims to accelerate economic integration in GMS in terms of the physical aspect. Economic corridors have been developed in GMS under the initiatives of ADB since the 1990s. Currently, there are 9 economic corridors in GMS, 4 of which pass through Laos, as follows (see Figure 2.3):

- East-West Corridor;
- North-South Corridor;
- Northeastern Corridor; and
- Central Corridor.

The Government of Laos focuses on the maintenance of highways such as NR-9 and NR-13, and 55% of national roads and 85% of Asian highways are paved (see Table 2.2). Recently, major international transportation routes such as NR-9 have been improved, so the highways in Laos were evaluated as "generally good" according to the survey on transportation infrastructure in Laos conducted in 2008.

Table 2.2 Road Pavement Condition in Laos by Road Category

Road Category	Total Length (km)	Pavement Condition				
		Asphalt Concrete	DBST Simple Pavement	Gravel	Dirt	Total
National Road	7,153	6.0%	48.9%	34.8%	10.3%	100.0%
Provincial Road	7,214	0.0%	6.4%	51.7%	41.9%	100.0%
County Road	4,986	0.0%	5.0%	47.7%	47.3%	100.0%
Urban Road	1,855	4.2%	23.7%	46.7%	25.4%	100.0%
Village Road	15,411	0.0%	0.3%	18.4%	81.2%	100.0%
Special Purpose Road	703	0.1%	13.0%	37.7%	49.2%	100.0%

Source: Report on Road Condition by Department of Road, edited by Suzuki, et al., "Industrial Base in Laos," JICA Laos Office.

Source: ADB.

Figure 2.3 GMS Economic Corridors

2.2.2 Railroad Plan

The Chinese government plans to construct a railroad from Kunming, Yunnan Province, to Vientiane via Boten on the border. The planned rail line, for which a feasibility study was completed in 2012, runs though many mountainous areas and requires tunnels extending approximately 200 km. This is a huge project with a total cost of approximately USD7 billion, a sum comparable to the GDP of Laos (which had a GDP of USD11.7 billion in 2014). The build-operate-transfer (BOT) scheme will be adopted to finance this project; 30% of the project cost might be staked by both the Lao government and the Chinese government, and the remaining 70% might be financed by joint venture company.

However, details including the actual investment amounts have yet to be decided.

In addition to this Lao railroad plan, the Chinese government is also cooperating with Thailand in a railroad construction project. In December 2014, the governments of the two countries signed a memorandum on a railroad construction plan for an 867-km line comprising a 734-km section connecting Nong Khai with the coastal area in the east and a 133-km section connecting Saraburi Province with Bangkok. The two countries will negotiate fully to realize the plan. China has presented attractive conditions, such as lower interest rate and a joint construction project with Thai enterprises, with consideration for Thailand.

China's two railroad plans mentioned above adopt a standard gauge and are ultimately designed to connect China with Bangkok. The plan in Laos is designed to connect Kunming with Vientiane, while the plan in Thailand is intended to link Bangkok with Nong Khai. A line between Thanaleng and Nong Khai is, so to speak, a "missing link" not covered by either plan. The current plan uses a narrow gauge for the railroad on the Friendship Bridge and requires transshipment. However, there is information that China also proposed to construct a new railroad bridge over the Mekong River.

2.3 Economic Growth in Lao PDR

2.3.1 Economic Growth

The economy of Laos has been growing continuously by 7%-8% every year since 2002, as shown in Table 2.3. This growth depended much on the significant growth of the industrial and service sectors. In 2002, Laos had a typical economic structure dominated by agriculture, but the government shifted its economic program over the years to restructure its economy to focus more on a modern service industry and a healthy industrial sector by 2012.

These two sectors have expanded rapidly in recent years. A main driving force for such economic growth and restructuring is the shift from mining, hydropower generation and water development to manufacturing. The expansion of exports to Europe plays an important role in the growth of the manufacturing sector because of cheap labor cost and preferential taxation for developing countries. In addition, the construction sector has also been expanding and contributing to the growth of the industrial sector. In particular, two kinds of construction have led to this growth: hydropower generation aiming to sell power to Thailand, and expansion of accommodation facilities supporting the growth of domestic and international tourism. Furthermore, the development of the tourism industry contributes to the growth of the service sector. Laos is popular for European tourists and the number of tourists has sharply increased since 2003. The country has abundant nature-based tourism resources such as the world heritage site in Luang Prabang, and prices are also lower. The growing tourism industry contributes to the expansion of the hotel and restaurant businesses,

transport and other ancillary service sectors.

Table 2.3 Economic Growth in Lao PDR

(Unit: LAK million, %)

Sector	2002	2007	2012
Agriculture	7,124,487	12,167,600	18,929,362
Industry	3,250,425	10,255,592	22,677,289
Service	6,312,934	15,155,847	26,992,379
Total	16,687,846	37,579,039	68,599,030
Agriculture	42.70%	32.38%	27.59%
Industry	19.50%	27.29%	33.06%
Service	37.80%	40.33%	39.35%
Total Share	100.00%	100.00%	100.00%
(Growth)		2002-2007	2007-2012
Agriculture		170.79%	155.57%
Industry		315.52%	221.12%
Service		240.08%	178.10%
Total		225.19%	182.55%

Source : NSC.

It is estimated that not only Vientiane but the whole country will receive an economic boost from the continuing development of the international specialization structure and supply chain under the GMS program. However, the country has some limitations, such as the size of the market and the labor force, which would be major hindering factors for industrial location and investment. Therefore, in the medium and short terms, the industry in Laos has an important role to play in the small-scale and labor-intensive production process for micro credit investment, as embodied in the “Thailand plus one” and “China plus one” strategies that aim at cheap labor force from Thailand and China.

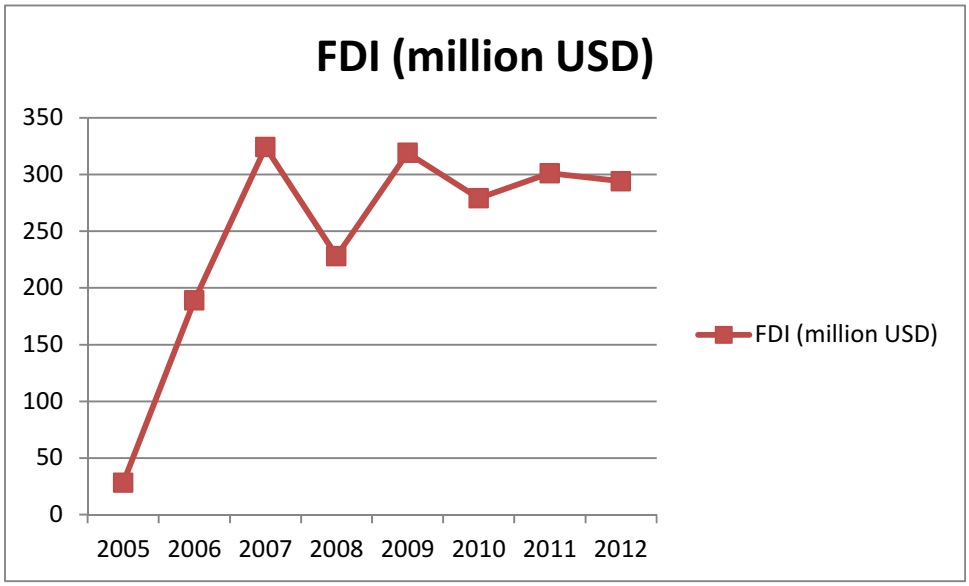
2.3.2 Foreign Direct Investment (FDI)

(1) Overview

The Lao Government envisions itself graduating from a less developed country status by 2020 and sustaining its economic development in future years. Promoting foreign direct investment (FDI) in the country is one of the important ways to achieve it. The government introduced relevant legal systems three times. In 2003, the Lao constitution was revised in order to introduce foreign currency (Article 15); in 2004, the “Revised Foreign Investment Promotion Act” was enacted; and in 2009, the “Investment Promotion Act” was enacted. The latest law aims to support Laos' entry in the World Trade Organization (WTO) so it does not distinguish between internal and foreign capitals. However, the law practically attracted foreign investment because Lao domestic capital was not enough to invest vigorously. The Act has the following characteristics: simplifying the investment procedures to establish a new organization offering one-stop service; offering preferential treatment in order to introduce investment and recognize the ownership, right and profit of investor; and ensuring their

protection. Moreover, the government simplified investment procedures by dividing regulating authorities and classifying the kinds of investment into three: general business, concession business, and Special Economic Zone (SEZ) development. Foreign investors can go into the real estate business because the investment period for general business is unlimited and even that of concession business is good for 99 years (and still extendable). The authorities allow foreign investors with registered capital of more than USD0.5 million to buy land-use rights.

The FDI in Laos is increasing because of the enactment of the series of investment acts. As Figure 2.4 shows, total FDI amounted to USD301 million in 2011 and USD294 million in 2012. The International Monetary Fund (IMF) estimates that the Lao authorities will allow investments of USD1,852 million in 2014 and USD1,685 million in 2015 taking into consideration the country's conditions and the investment level of USD1,847 million in 2013.



Source：ADB Key Indicator 2014 MPI.

Figure 2.4　FDI in Lao PDR, 2005-2012

The characteristics of FDI in Laos can be summarized as follows, referring to the report from the Japan Bank for International Cooperation (JBIC) on the investment environment in Lao PDR (JBIC, 2014):

- Looking at the FDI accepted partner countries of Laos, Vietnam is the largest investing country, followed by China and Thailand, with a combined total share of about 80% from these three countries.
- In recent years, FDI from new entry countries have increased, such as Norway and India.
- Looking at the breakdown of the cumulative amount of industry-classified FDI in Laos

(2000-2011 year-end), mining has attracted the largest investment. The second largest industry is the power generation business and these two industries combined for a 51% of total investments.

- Vietnam, the largest FDI contributor to Laos, focuses more on the agricultural sector. Actually, this neighboring country invests in rubber plantations and coffee cultivation in the southern part of Laos, such as Champasak Province.
- Investment in the industrial sector, although on an increasing trend, is still minor as a whole.

(2) Trend in Investment from Japan

So far, Japanese investment in Laos (see Table 2.4) has been limited, recorded at only about 2% of the total amount in 2012. This ranks Japan as the seventh highest FDI partner, which is not high compared to other countries. However, the interest of Japanese companies in Laos is growing because of programs such as "Thailand plus one." The Japanese Chamber of Commerce membership in Vientiane has increased from 52 companies in April 2013 to 77 companies in March 2015. In addition to the garment industry, the Japanese are investing in a wider range of advanced manufacturing industries such as cable harness, optical equipment, electronic components and automotive parts. Moreover, there are increasing cases where key factories of newly operating companies are being transferred from Thailand to Laos as part of "Thailand plus one." For example, Nikon with offices in Thailand and Toyota Boshoku have started operating in the Savan-Seno SEZ in Savannakhet Province in the first half of 2013. In addition, a variety of service subsectors have been expanding such as transportation, finance, dining and entertainment, trade, and IT. Mitsubishi Materials has established its manufacturing plant for thermistor sensors to be used in airconditioning, etc. at the VITA Park SEZ in Vientiane.

In Japan, the Japan External Trade Organization (JETRO) Vientiane office was inaugurated in July 2014 and started supporting investment companies. Since then, about 200 people or 100 companies come to visit Japanese companies and conduct studies every month. Japanese companies intend to continue their investments if they could only solve logistics cost problems. They assess the investment environment in Laos as favorable because labor cost is cheap, workers are serious, Laos is politically stable, electricity prices are stable and cheap, and the preferential policies of SEZ are better compared to other countries.

Table 2.4 Japanese Foreign Direct Investment (FDI) in Lao PDR

(Unit: USD million, %)

	2012	2013		
	Value (USD million)	Value (USD million)	Composition Ratio (%)	Growth Rate (%)
Total Export (FOB)	137.4	121.5	100.0	-11.6
Vehicle and parts	79.3	71.0	58.5	-10.5
Machinery	22.5	27.2	22.4	20.6
Meat	11.7	3.9	3.2	-66.9
Synthetic textile and short-fiber	1.2	3.4	2.8	154.8
Electric device and parts	3.8	2.9	2.4	-25.2
Others	18.7	13.1	10.8	-29.7
Total Import (CIF)	123.6	107.6	100.0	-12.9
Clothing (dishcloth)	18.9	25.8	24.0	36.1
Seasoning, coffee, etc.	33.5	20.8	19.3	-38.0
Lumber	12.0	17.6	16.3	46.2
Footwear	15.1	16.6	15.5	10.0
Inorganic chemicals, rare-earth metals, etc.	26.1	8.2	7.6	-68.7
Others	17.9	18.7	17.4	4.3

Source: 2014 Survey on the International Operations of Japanese Firms in Lao PDR, JETRO.

2.3.3 Special Economic Zone (SEZ)

Recently, Laos implemented a system of special economic zones. The government designated specific areas such as industrial zones, export processing zones, tourist city zones, duty-free zones, information technology zones, and border economic and trade zones, among others, and incentives are determined by the laws and regulations in each zone; thus, the incentives are different for each zone. There is a Special Economic Zone and a Specific Economic Zone, which are collectively referred to as "special economic zone (SEZ)."

Table 2.5 shows the current SEZs in Laos.

Table 2.5 List of Special Economic Zones (SEZs) in Lao PDR

Name		Establishment	Province	Target	Business Operator
1	Savan-Seno SEZ	2003	Savannakhet	Industry, Commerce, Service	Public and Private (Malaysian)
2	Boten SEZ	2003	Luangnamtha	Logistics, Commerce, Industry	Private (Chinese)
3	Golden Triangle SEZ	2007	Bokeo	Tourism, Commerce, Service	Public and Private (Chinese)
4	VITA Park SEZ	2011	Vientiane	Industry, Commerce, Service	Public and Private (Taiwanese)
5	Phoukyo SEZ	2011	Vientiane	Industry, Commerce, Service, Education, Airport, Logistics	Public and Private (Laotian, Chinese)
6	Saysetha SEZ	2010	Vientiane	Agricultural products, Wood processing, Light industry, Tourism, Electronics, Machinery, New energy	Public and Private (Chinese)
7	That Luang Lake SEZ	2011	Vientiane	Commerce, Tourism, Service (hospital, school, etc.), Housing	Private (Chinese)
8	Longthanh Vientiane SEZ	2012	Vientiane	Service, Tourism (golf, hotel)	Private (Vietnamese)
9	Dongphosy SEZ	2012	Vientiane	Commerce, Housing, College	Public and Private (Malaysian)
10	Thakhek SEZ	2012	Khammuane	Logistics, Service	Public

Source: JICA Study Team.

In Vientiane, six SEZs are designated, namely: VITA Park SEZ, Phoukyo SEZ, Saysetha SEZ, That Luang Lake SEZ, Longthanh Vientiane SEZ, and Dongphosy SEZ. The VITA Park SEZ has started operation.

2.3.4 Population Growth of Vientiane City

Vientiane City is a capital city and the center of administrative, cultural and economic activities in Laos. It is also where private sector businesses and their management functions are concentrated such as finance, investment, sales promotion and business management. As the center of Laos' economy, population and employment opportunities have been concentrated in Vientiane because of continued economic growth. Population data from 2002 to 2012 show that while Vientiane City's population has increased by 2.3% annually, the population growth of the country in the same period grew slower at 1.7% (see Table 2.6). It is estimated that a large portion of the population flows into Vientiane City.

Table 2.6 Population Trend in Lao PDR

		2002	2007	2012	Population Growth Rate (%)
Vientiane Capital	(thousands)	633	725	797	2.3%
		11.5%	12.3%	12.2%	
Lao PDR	(thousands)	5,526	5,873	6,514	1.7%

Source: NSC.

Logistics demand, therefore, is estimated to increase because of the continuing expansion of population, industrialization and urbanization in Vientiane in the future.

Table 2.7 Trend of GRDP per Capita in Vientiane Capital

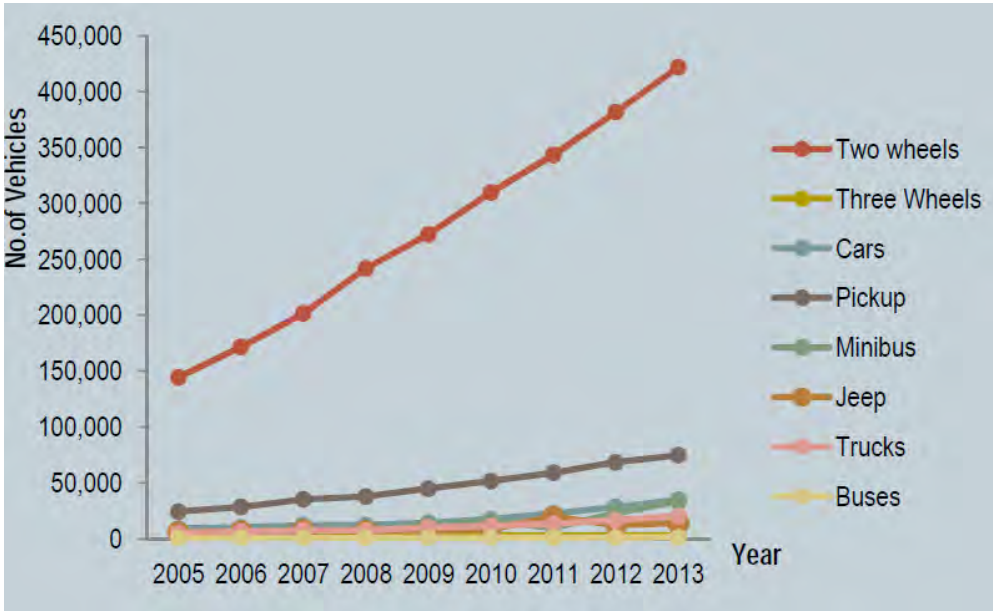
(Unit :LAK million)

	2005	2010	2015	2020	2025
GRDP per Capita	9.09	12.23	21.92	36.71	61.20

Note: GRDP (Gross regional domestic product) values after 2010 are projected.

Source: JICA, The Study of Master Plan on Comprehensive Urban Transport in Vientiane in Lao PDR, Final Report, 2008.

The total number of officially registered vehicles increased by about 15.03% from 2005 to 2013 (see Figure 2.5). Motorcycles (two-wheeled and three-wheeled) have the highest share of 70.34%, while the share of light vehicles (car, pickup, minibus and jeep) is 26.06%, and heavy vehicles (trucks and buses), 3.06%.



Source: MPWT, Department of Road-Bridge and Transport, "Current Status of Urban Transport System in Vientiane Capital," National Capacity Building Workshop on Sustainable and Inclusive Transport Development, 2014.

Figure 2.5 Traffic Growth in Vientiane Capital, 2005-2013

2.4 Relevant Legal System

2.4.1 Investment Promotion Law

The legal system in Lao PDR applies to both domestic and international investments under the "Investment Promotion Law." The law includes the regulations regarding the protection and obligation of investors.

Table 2.8 presents a comparison of major taxation rates in GMS as basic information.

Table 2.8 Comparison of Taxation Rate in GMS

	Corporate Tax	Value Added Tax	Tax Withdrawing: Dividend	Tax Withdrawing : Interest	Tax Withdrawing : Service	Tax Withdrawing : Royalty	Capital Gain
Thailand	20%	7%	10%/0%	15%	15%	15%	Non-resident, 15%
Vietnam	20%	10%	0%	10%	5%	10%	20%
Cambodia	20%	10%	14%	14%	14%	14%	Non-resident, 0%
Myanmar	25%(Branch35%)	5%(5-30%)	15%	15%	3.5%	20%	10-40%
Lao PDR	24%	10%	10%	10%	4.8%	5%	10%

Source: JICA Study Team based on JETRO materials.

The major stipulations in the "Investment Promotion Law" regarding investor protection and obligations for VLP development and management are summarized below.

- The law must protect foreign investor assets from attachment, impoundment and nationalization.
- The law could permit to lease out a land, to hand out a right of leased land use, to improve a land and construct a building on the leased land.
- The law could permit foreign remittance based on the relevant stipulations.
- The law requests the investor to avoid damaging national and public interests by undertaking its obligation of worker protection based on the legal regulation and environmental circumstances.

The investor might receive the privilege according to the investment location and sector. The target sectors include agriculture, manufacturing, and service sector, and the VLP management is targeted as a service sector.

The law includes the following fringe benefits:

- Exemption from business tax in the following year if the profit would be used for business expansion;
- Exemption from import tax on imported machine, parts, completed vehicles for production in Lao PDR if the imported goods could not be procured;
- Exemption from export tax on exported goods; and
- Compensation for loss of business profit for three years.

2.4.2 PPP Law

(1) Overview of PPP Law

The Lao Government is preparing the legal framework for a Public-Private Partnership (PPP) Law to

enhance cooperation between the public and private sectors in pursuing development projects.

The draft law consists of the following four sections: Definition of PPP, Coverage of PPP Projects, Implementation Scheme, and Involved Entities and Public Support from Lao Government. The salient features of the draft law are as follows:

- Projects, except those falling under projects in the negative list, would be appropriate projects for PPP implementation (Article No. 4).
- The National Investment Promotion Committee in the Ministry of Planning and Investment (MPI) as an involved agency must commit to the implementation of PPP projects (Article No. 5).
- In case a project would be given approval as a PPP project, the Government would budget for the approved project, and would give public support and guarantee (Article No. 9).
- MPI and the involved Ministry must take care of the initial project proposal, feasibility study, and bidding documentation package of the PPP project, and must secure the final approval of the National Investment Promotion Committee (Article Nos. 10, 11 and 14).
- The contract of the approved PPP project must be entered into by the Lao Government and the private entity (Article No. 15).
- The approved PPP project would get the right of the regulation of Direct Negotiation (Article No. 20) and Unsolicited Proposal (Article No. 21). Direct negotiation needs the approval of the National Investment Promotion Committee. The unsolicited proposal which would be proposed by the private sector needs formal competitive tender. Direct negotiation must only be applied strictly (1) to an urgent project, (2) to a safety and defense project, (3) if there is no organization to service provided except the approved project, and (4) to a project approved by the National Investment Promotion Committee. The appropriate project must be recommended by the PPP unit in MPI or implementation entities, and be approved by the National Investment Promotion Committee.
- On the other hand, the private entity would propose the unsolicited proposal, and the concerned Ministry would request the National Investment Promotion Committee to implement the proposed project. After the approval by the National Investment Promotion Committee, the committee would bid out the proposed project. The concerned Ministry for the project must pay the private entity the cost of project issuing and proposal making, and must give preferential treatment to the private entity in case the private entity would participate in the international competitive tender. However, the content would be modified as needed.

The PPP law has some issues that include, among others, the development of the detailed regulation and practice of the inspector, and it is not clear when the law would take effect. Thus far, the Lao Government is proceeding to develop the detailed regulation, and the law has been revised to its sixth version.

MPI indicated a policy to conduct the procedure, screening and approval, based on the PPP law even before the PPP law would become effective. When the concession agreement of the VLP Project would be applied, there is a need to take note of developments on the proposed law. This is especially so if the MPI would recognize the VLP Project as an unsolicited proposal, in which case the VLP Project would be subjected to an international tender. Currently, there is an informal understanding that MPI intends to exclude the VLP Project from the PPP law.

(2) Differences Between the Current Law and the PPP Law

In the past, foreign investors have been able to get a concession from MPI based on the Investment Promotion Law. Once the PPP law takes effect, the following differences between the current and new laws might surface if the foreign investor would get a concession in the field of public service:

- The PPP law defines in the Annex the approved businesses that the private investor could enter as PPP projects. Therefore, the businesses eligible as PPP projects would be clear for the private investor.
- The PPP law assigns MPI with the role and involvement in the selection of the private investor when MPI would select and approve the PPP project. Therefore, after the PPP law becomes effective, the private investor could not consult with the involved Ministry before the concession agreement would be completed.
- In principle, MPI seeks a competing bid in the selection process of the candidate PPP projects based on the PPP law. The competing bid must be applied for all candidate projects of PPP, not only solicited projects by the Lao Government but also unsolicited projects by private investors. The investor who would propose a PPP project also must submit for international bidding the PPP project.

2.4.3 Labor and Employment Regulations

The past labor law had been abolished in 2006 in Lao PDR and a new labor law has been passed and became effective on 24 October 2014. The major modifications in the new law are shown below.

(1) Major Provision of Labor Contract

1) Trial Period of Labor

The labor law stipulates that the period of physical work is less than 30 days, and brainwork is 60

days. The past law had permitted extension of the trial period to 30 days. On the other hand, the new law has prohibited the extension of the trial period and, furthermore, the trial period including the extension period of the terminable labor contract has been prohibited to go beyond 3 years. If the period would exceed 3 years, the labor contract would be seen as an indefinite labor contract.

2) Work Hours and Work Shift

The new law stipulates the night work hour period from 10:00 pm to 6:00 am. The definition of night work hour in all sectors was defined as more than 7 hours. The new law stipulates that the work shift period is limited to 8 hours in skilled and brainwork, and 6 hours in manual and dangerous work.

3) Overtime Work and Calculation Method of Extra Pay

The labor union/union labor representative has a right to approve the stipulation of overtime work and the calculation method of extra pay due to the new law. The new law stipulates that overtime work is limited to 45 hours per month, 3 hours per day and less than 3 days in a row. The law stipulates that the calculation method of extra pay must be 300% of basic salary between 4:00 pm and 10:00 pm and 350% between 10:00 pm and 6:00 am.

4) Holiday

The new law distinguishes the work holiday into four categories, namely, paid holiday, illness holiday, own convenience holiday, and sequencing holiday. The sequencing holiday is stipulated to be 105 days (120 days in case of twins), and the salary for the sequencing holiday must be paid. In addition, a rest of one hour must be given for childcare after childbirth, and the period is stipulated to be a maximum of one year after returning to work.

5) End of Contract and Retirement Allowance

The new law stipulates that the labor contract must be terminated in case of (a) employer's reason with no labor delinquency, (b) employer's reason with labor delinquency, and (c) employee's reason with own convenience. In case of (a), the employee can receive the retirement allowance.

(2) Foreign Labor

1) Ratio of Foreign Labor Against Lao Labor

The new law stipulates that the ratio of skilled foreign labor to Lao labor is a maximum of 25%, and that of manual foreign labor is a maximum of 15%.

2) Restriction of Duration of Stay in Laos

The new law stipulates that the foreign worker is able to stay for a maximum of 12 months in Laos, and could extend to another 12 months with the extension term of a maximum of 5 years in a row.

However, the duration and restriction for foreign managers and specialists are considered separately.

3) Displacement Day After the Finish of Contract

In case the displacement day would not be given approval, the entity must accept deportation.

2.4.4 Other Relevant Legal System

The involved legal systems for the VLP development and management, aside from the "Investment Promotion Law," are shown below.

(1) Fund Reserve for SPC

Article No. 151 of the business law revised in 2005 requests the company to restock 10% of annual profit as annual fund reserve. The upper limit should be 50% of registered capital fund.

(2) Foreign Exchange

Under the Presidential Decree Law (No. 1/OP) approved on 17 March 2008, the article on " Governing the Management of Foreign Exchange and Precious Metals" stipulates that domestic and international enterprises must purchase foreign exchange. The following contents of this law will affect the VLP development and management:

- Loan from foreign countries: the major source of finance for the VLP development is supposed to be a Private Sector Investment Finance (PSIF) loan from JICA.
- Offshore bank account: Under examination.
- Foreign currency: The main currency is supposed to be US dollar for the revenue of the VLP business.
- Foreign counterpart and hedge transaction: Under examination.
- Investment in foreign financial commodity: Out of scope of assumption.

(3) Land Ownership

The VLP Project is to be established as a Special Purpose Company (SPC) by the Lao Government and a Japanese logistics company. The matter of land ownership of the VLP is the subject of discussion between both.

In general, the Lao legal regulation prohibits a foreign person and entity from being a landowner. The regulation permits a foreign person and entity only to own the right of use and to lease land according to the Land Law (Article no. 64) revised in 2003.

Table 2.9 shows the lease term of a foreign person and entity. However, Article No. 65 could renew the lease term in case the Lao Government would give approval.

Table 2.9 Lease Term for Foreign Investor

(Unit: year)

Items	Term
Lease from individual in Lao to foreign Investor	30
Lease from individual in Lao to foreign person	20
Lease from Lao Government to foreign person and entity (in case of right form)	50
Lease to foreign embassy and international organization	99

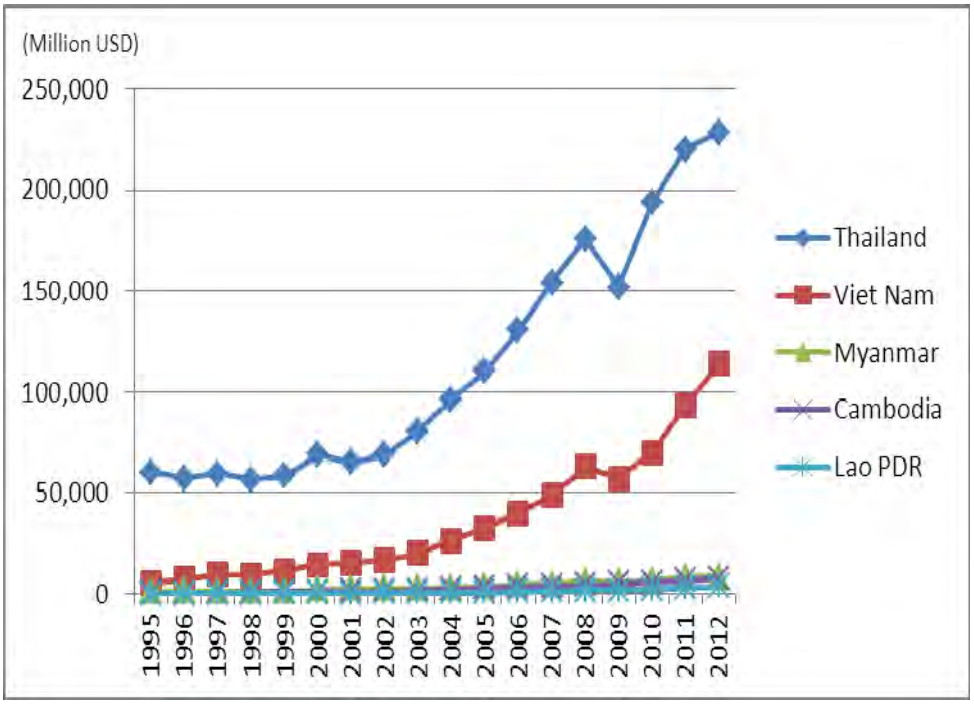
Source: DFDL from seminar materials on legal work and tax service in Cambodia and Lao, 23 February 2015.

Chapter 3 Current Logistics Situation in Vientiane

3.1 Overview on Logistics in Vientiane

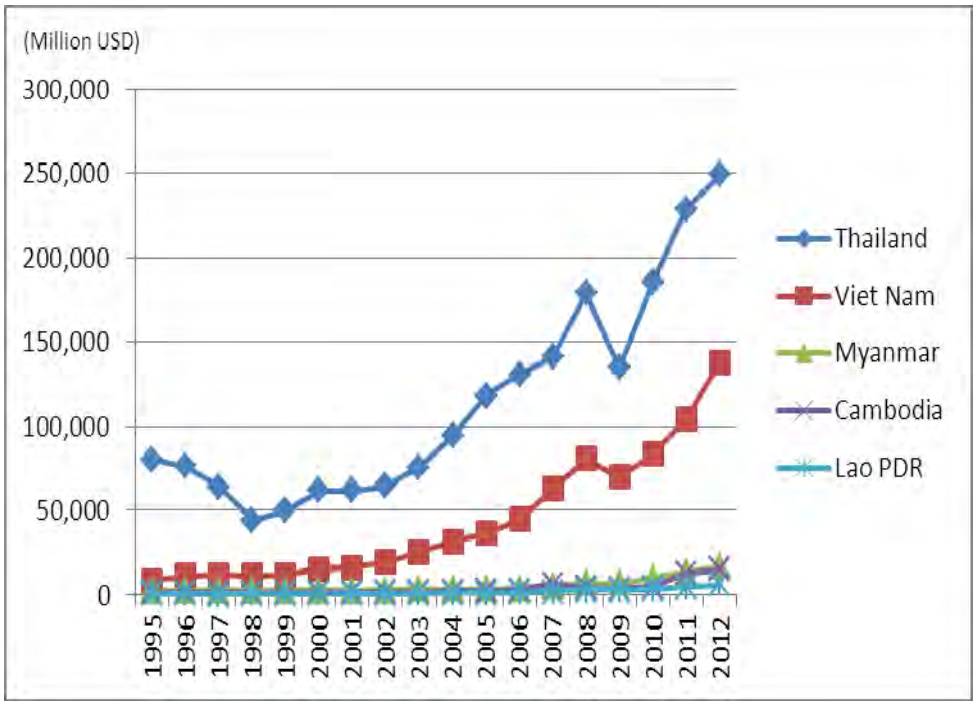
3.1.1 Positioning of Logistics in Lao PDR among GMS countries

The trade volume in GMS has been increasing in the last decade because of an increase in export of industrial products. The trade volume has increased at a pace of more than 10% per year from 1995 to 2012. Looking at the data by country, it can be seen that Thailand deals with the highest trade volume among the GMS countries, occupying about 60% of the GMS total; it is followed by Vietnam, accounting for 30% of the GMS total. The trade volume of Laos accounts only for about 1% of the GMS total, which is the smallest number in the GMS although it is on the increase.



Source: ADB, Key Indicators for Asia and the Pacific, 2013.

Figure 3.1 Changes in Export Volume of GMS Countries, 1995-2012



Source: ADB, Key Indicators for Asia and the Pacific, 2013.

Figure 3.2 Changes in Import Volume of GMS Countries, 1995-2012

This wide difference in economic status is largely attributed to the difference in population and economic scale of each GMS country. Comparing Laos with Thailand, for example, Thailand has about 9 times the population and about 60 times the economic scale of Laos.

Table 3.1 Socioeconomic Indicators in GMS Countries (2013)

Country	Population (million)	GDP at PPP (million USD)	GNI per capita (USD)	Land area (mil km^2)	Population density (per km^2)	Urban Pop. (% total)
Cambodia	15.0	46,039	950	176.5	85.0	21.4
Lao PDR	6.7	30,923	1,460	230.8	29.0	35.3 (2012)
Myanmar	61.6	215,992 (2012)	-	657.6	93.7	30.8
Thailand	66.8	1,036,003	5,370	510.9	130.7	45.1
Vietnam	89.7	474,840	1,730	310.1	289.3	32.2

Source: ADB, Key Indicators, 2014.

(1) Cargo Volume by Cross-border point in Laos

Laos has 26 cross-border points as shown in the table below. Among these, 11 points including airports are international cross-border points with Thailand and Vietnam, and others are local cross-border points.

Table 3.2 Cross-border Points in Laos

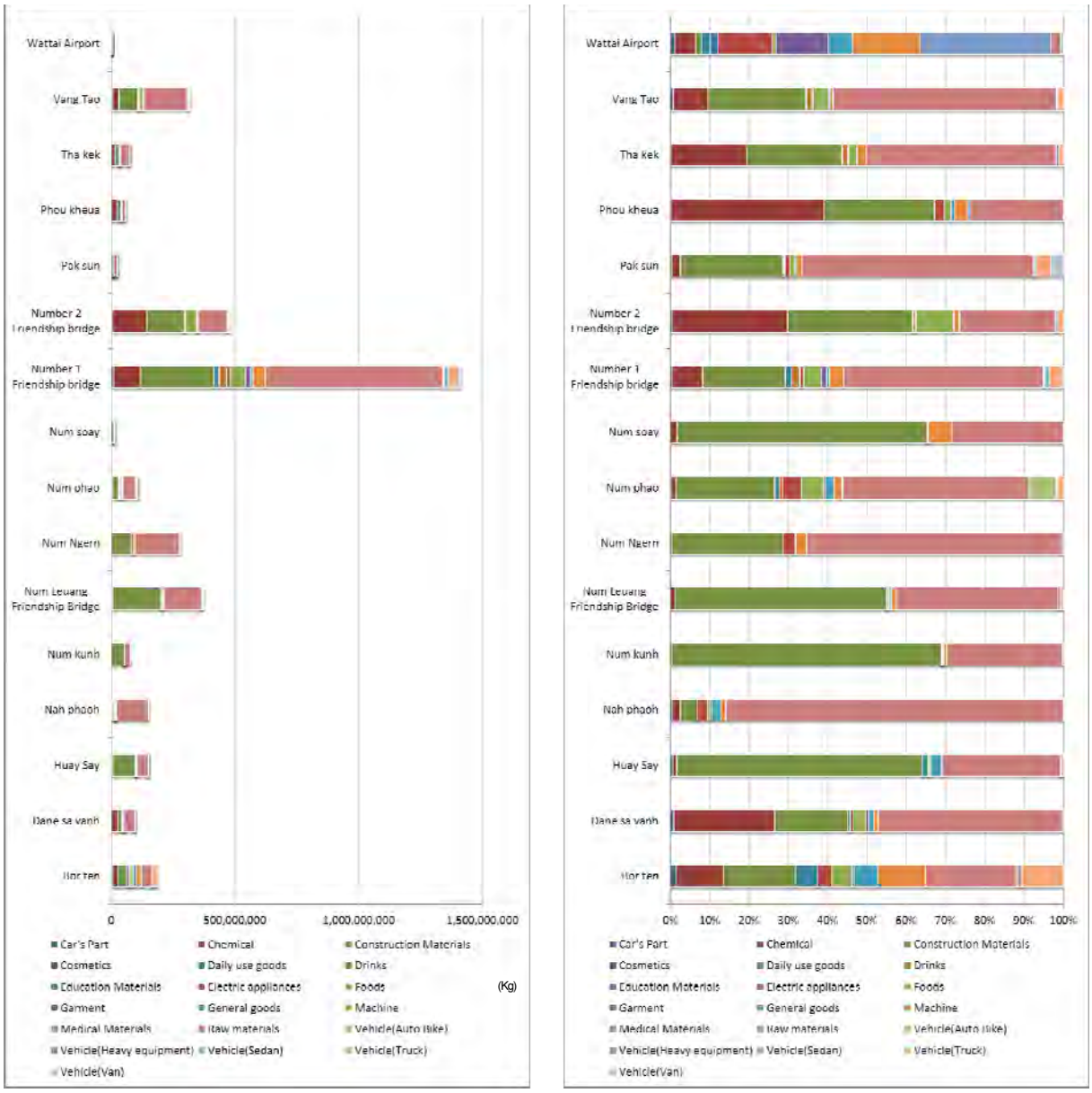
	International Cross-border Points	Local Cross-Border Points
Thailand	• Thanaleng (Friendship Bridge) • Hoisay • Thakhek • Savannakhet • Paxsan • Vang	
Cambodia		• Veunt Kham
Vietnam	• Van Tao • Densawan	• Nameo • Ban Dan • Namgeum • Kenmthao • Sanakham • Namkan • Kegrmua • Salayanh • Xekhong • Ban Ket
China	• Boten	• Phkha • Lantui • Xang Kek
Myanmar		• Oudomchai
Others	• Vientiane Airport • Luang Prabang Airport	

Source: Ministry of Finance.

Laos imported a total of 3.78 million tons of goods based on the customs data from October 2012 to September 2013. Of this total, 37% passed through Thanaleng.. Other cross-border points that dealt with high import volume were Savannakhet (13%), Num Leuang (10%), and Vang Tao (8%), and these four points including Thanaleng accounted for 68% of the total. Major import items were raw materials (46%), construction materials (29%), and chemical products (10%).

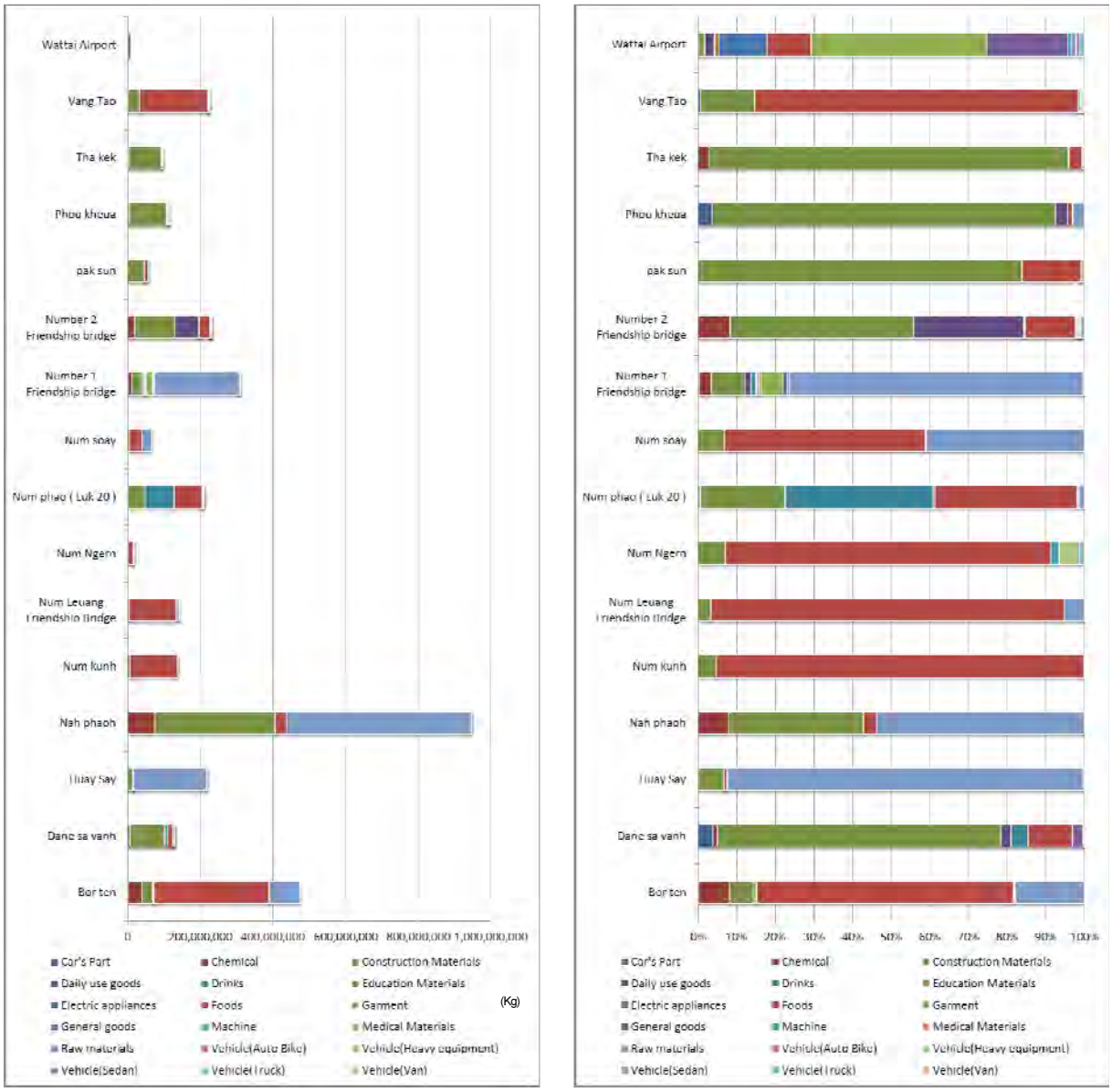
Laos had 1.4 million tons of exports, and breakdown of volume by cross-border point is as follows: Nah phaoh (23%), Bor ten (14%), First Friendship Bridge (9%), and Vang Tao (7%). Major export items were raw materials (32%), food (29%), and construction materials (28%).

Figures 3.3 and 3.4 give a breakdown by item and cross-border point of the import and export volume, respectively.



Source: JICA Study Team.

Figure 3.3 Import Volume by Item and Cross-border Point (2013)

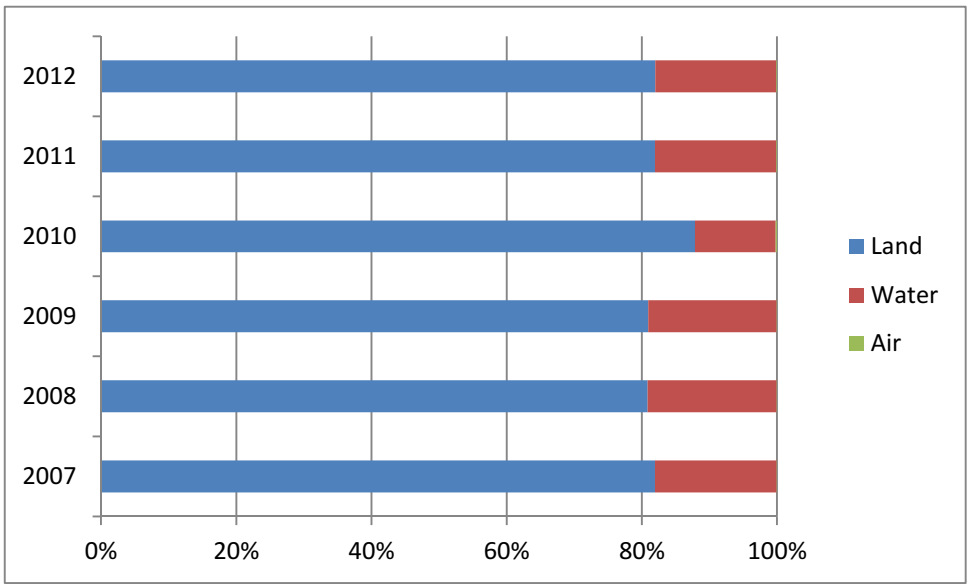


Source: JICA Study Team.

Figure 3.4 Export Volume by Item and Cross-border Point (2013)

(2) Cargo Transport Modal Share

Looking at the modal share of cargo transport in Laos, road transport accounts for about 82%, and inland water transport, about 18%. Although inland water transport plays an alternate role, it can be used only in limited areas. So it can be said that transport in Laos depends almost entirely on road transport. For export/import cargo, inland water transport had been used to cross the river before the First Friendship Bridge (Vientiane) and Second Friendship Bridge (Savannakhet) were built, but currently all transport depends on road transport (truck transport).



Source: MPI, Statistical Year Book, 2012.

Figure 3.5 Changes in Cargo Transport Modal Share (ton-km), 2007-2012

3.1.2 Current Status of Logistics in Vientiane

Until the previous section, the current state of the entire logistics in Laos was outlined with the focus on the movement of import and export cargo. The First Friendship Bridge is the most important cross-border point, which is responsible for about half of the import of the entire Laos. From here, more details of the import and export cargo at the First Friendship Bridge will be examined.

(1) Import and export amount for each category

The volume of import and export cargo in Vientiane, similar to the Laos national logistics, is increasing because of an increase in commodity demand due to continued economic growth. The following table shows the different import and export cargo volume categories that pass through the First Friendship Bridge. Import cargo volume passing through the First Friendship Bridge in the period from October 2011 to September 2012 is approximately 1.7 million tons, and in the following period from October 2012 to October 2013, it was 1.4 million tons. As a whole, the general consumer goods have an increasing trend; however, a decrease in raw materials which have large freight tonnage carried causes reduction of the overall transport volume. On the other hand, the export cargo volume has a decreasing trend, from 0.4 million tons from October 2011 to September 2012 to 0.3 million tons from October 2012 to September 2013. This trend is similar to the decrease of import cargo, with raw materials which carries a large freight tonnage posting a decrease, causing a decrease in the overall transport volume.

It should be noted that in the following table Refrigerator flag and Freezer flag means low temperature refrigeration and represents the refrigerated cargo, respectively. Currently, the cold chain has not

been established in Laos; however it is expected that cold chain will be promoted in the future because of the continued economic growth and improvement of cold chain maintenance.

In addition, the last column in the following table shows the proportion of cargo passing from the Lao side of the First Friendship Bridge against overall cargo volume. Referring to the table, about half of the import cargo in Laos passes through the First Friendship Bridge. On the other hand, with regard to export cargo, it has remained at about 4% of Laos' overall export volume. This means that the logistics in Vientiane capital mainly focuses on import cargo, and it is foreseen that the flow rate is gradually increased due to sustainable economic growth and urbanization in the future.

Table 3.3 Import Cargo Passing Through the First Friendship Bridge

Unit: kg

Category	Refrigerator flag	Freezer flag	10/2011 -09/2012	10/2012 -09/2013	Ratio of Import Cargo Crossing from Lao side of the First Friendship Bridge Against Total Volume (2012-2013)
Car Parts	0	0	6,567,416	7,367,054	44.40%
Chemicals	0	0	80,791,416	108,556,733	59.50%
Construction Materials	0	0	319,967,557	297,682,163	37.10%
Cosmetics	0	0	118,409	364,315	82.60%
Daily Use Goods	0	0	18,720,154	21,689,050	68.90%
Drinks	0	0	15,032,330	27,639,291	77.20%
	1	0	1,622,744	2,049,996	96.50%
Education Materials	0	0	896,612	1,185,044	39.30%
Electric Appliances	0	0	13,885,893	13,262,885	44.60%
Foods	0	0	75,570,401	62,445,593	61.10%
	0	1	822,961	686,768	24.20%
	1	0	991,378	541,204	9.40%
	1	1	7,461	2,448	7.50%
Garment	0	0	23,278,822	19,437,674	46.80%
General goods	0	0	8,846,534	9,815,251	34.50%
Machine	0	0	91,079,389	49,565,650	54.10%
Medical Materials	0	0	669,728	1,095,276	39.00%
Raw Materials	0	0	1,046,212,434	717,887,838	46.00%
	1	0	2,500	3,370	5.10%
	1	1	58	471	73.60%
Vehicle (Auto Bike)	0	0	1,308,462	2,370,342	21.30%
Vehicle(Heavy equipment)	0	0	5,627,219	2,472,685	40.40%
Vehicle (Sedan)	0	0	9,646,205	16,112,041	82.30%
Vehicle (Truck)	0	0	32,566,940	46,927,088	51.80%
Vehicle (Van)	0	0	9,534,224	5,071,848	70.90%
Total			1,763,767,244	1,414,232,078	46.30%

Source: Ministry of Finance.

Table 3.4 Export Cargo Passing Through the First Friendship Bridge

Unit: kg

Category	Refrigerator flag	Freezer flag	10/2011 -09/2012	10/2012 -09/2013	Ratio of Export Cargo Crossing from Lao side of the First Friendship Bridge Against Total Volume (2012-2013)
Car Parts	0	0	195,543	961,207	10.50%
Chemicals	0	0	251,597	9,647,943	0.00%
Construction Materials	0	0	81,349,566	26,974,658	2.20%
Daily Use Goods	0	0	2,723,447	1,700,942	5.40%
	0	1	1,136,227	3,112,170	100.00%
Drinks	0	0	1,249,274	4,044,276	100.00%
	1	0		48,501	100.00%
Education Materials	0	0	856,472	886,800	100.00%
Electric Appliances	0	0	923,620	1,427,370	14.90%
Foods	0	0	287,449	1,053,265	0.60%
	1	0	217,674	9,959	0.00%
	1	1	140,000	792,000	0.00%
Garment	0	0	18,252,017	17,481,526	70.20%
General Goods	0	0	1,843,962	3,618,968	19.60%
Machine	0	0	1,520,465	1,682,302	39.80%
Raw materials	0	0	281,379,692[1]	235,466,092	7.80%
	1	0	86,000	40,000	0.00%
Vehicle (Auto Bike)	0	0	150	141,172	99.80%
Vehicle (Heavy equipment)	0	0	131,357	179,090	0.00%
Vehicle (Sedan)	0	0	37,786	16,860	24.70%
Vehicle (Truck)	0	0	697,242	265,760	24.70%
Vehicle (Van)	0	0	60,274	26,000	24.70%
Total			393,339,814	309,576,861	4.00%

Source: Ministry of Finance.

(2) Import and export cargo trucks passing through the First Friendship Bridge and Thanaleng Warehouse

Import cargo trucks that pass through the First Friendship Bridge can be roughly divided into two: the ones going directly to the factories and construction sites and the ones going through the Thanaleng warehouse after passing through immigration. If it does not pass through the Thanaleng warehouse, it undergoes customs clearance at the First Friendship Bridge or at arrival factories and construction sites. The following table shows the international transport trucks passing through the First Friendship Bridge and Thanaleng warehouse. It represents a change in track number of import and export

[1] Expecting one export truck record, 7,700,599,250 kg of minerals to Australia in March 2012, as an error since it is not subjected to export also comparable to that in other trade statistics. It confirmed also to provide the original customs stations.

across the First Friendship Bridge and a little less than half go through the Thanaleng warehouse. Looking at the table, the number of vehicles according to type that passes through the First Friendship Bridge and Thanaleng warehouse is incongruous because there are two kinds of sources: the former is from Immigration and the latter is from Thanaleng Warehouse.

Table 3.5 Number of Import and Export Cargo Trucks Passing Through the First Friendship Bridge and Thanaleng Warehouse

Unit : number of vehicles, %

Truck type	10/2011-09/2012				10/2012-09/2013			
	Import through First Friendship Bridge	Export through First Friendship Bridge	Import through Thanaleng Warehouse	Ratio of via Thanaleng Warehouse	Import through First Friendship Bridge	Export through First Friendship Bridge	Import through Thanaleng Warehouse	Ratio of through Thanaleng Warehouse
Trailer	63,165	63,132	1,120	1.8%	62,552	62,489	920	1.5%
Truck 10 wheels	5,064	5,057	9,031	178.3%	5,165	5,157	9,905	191.8%
Truck 12 wheels	5,064	5,057	18,500	365.3%	5,165	5,157	19,508	377.7%
Truck 6 wheels	4,183	4,180	7,300	174.5%	3,987	3,974	7,087	177.8%
Total	77,476	77,426	36,451	47.0%	76,868	76,777	37,420	48.7%

Source: Immigration and TWSE.

3.2 Import/Export Customs Flow

Since Lao PDR is a land-locked country, its border points have customs clearance facilities. The Thanaleng Warehouse has been playing the role of a border facility between Vientiane and Nong Khai Province of northeastern Thailand since river crossing was the main mode of cross-border transport before the operation of the Friendship Bridge. However, due to the current limitation of its capacity, the function of the Thanaleng Warehouse has changed. It currently focuses only on duty payable import cargo. Export cargo is no longer required to pass through the Thanaleng Warehouse because the factory vanning system is now permitted. As for import, direct delivery after passing through the Friendship Bridge has become the norm for specific category of goods, duty exemption, project cargo, and so on.

To achieve smooth import/export logistics, facilitating the customs procedures is an important issue. Although Lao PDR has adopted a computerized customs clearance system, ASYCUDA, its operative range remains limited. As for the VLP, facilitating customs procedure is indispensable to provide efficient logistics services. The current customs procedure is discussed in the following sections.

3.2.1 Export Customs Flow

As earlier mentioned, factory vanning is permitted so export cargo does not have to attach to the Thanaleng Warehouse. The export flow is summarized in Figure 3.6 and listed below.

① Customs declaration (if export duty is necessary, the exporter has to pay to the customs

office at the Thanaleng Customs).

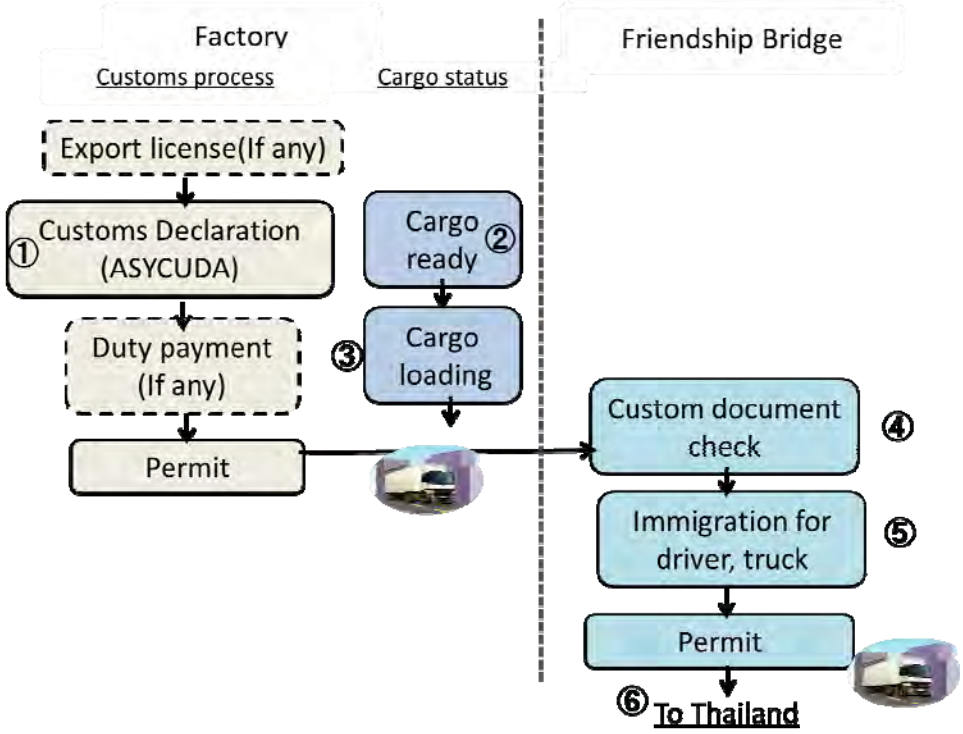
② Cargo is made ready and loaded on the truck at the factory.

③ After customs clearance and factory vanning, the vehicle can go to the Friendship Bridge to cross the border.

④ Customs check at the Friendship Bridge (document and seal check; X-ray check is implemented when necessary).

⑤ Immigration check for driver and trucks.

⑥ Cross the border and deliver to Thailand.



Source: JICA Study Team.

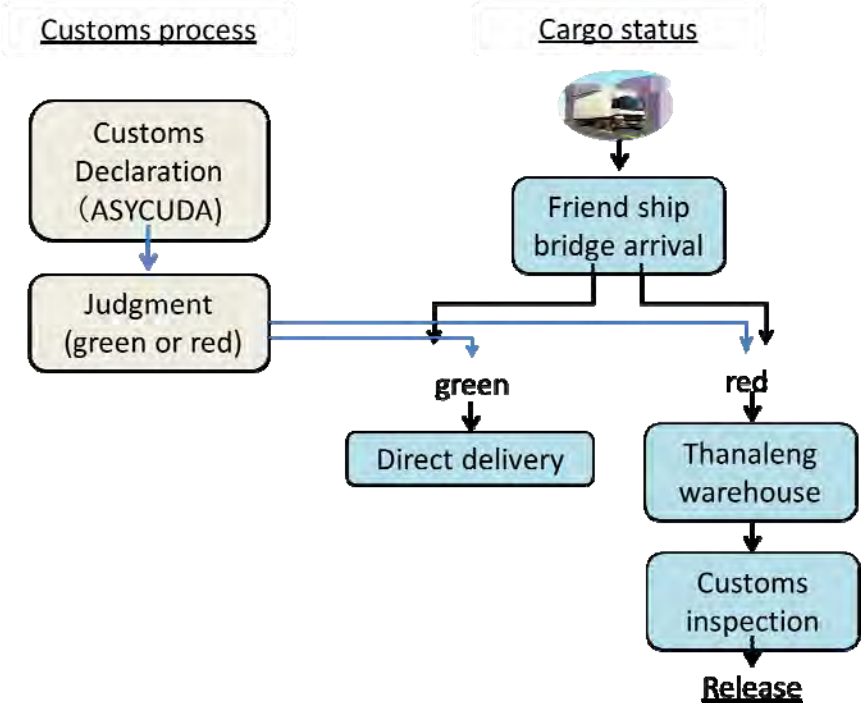
Figure 3.6 Export Flow

3.2.2 Import Customs Flow

The ASYCUDA system allows receiving a declaration data on the computer at any time and either during the cargo arrival or not. This makes it possible to get an import permission from the Customs prior to the cargo arrival at Lao PDR. Of course, the customs broker in Lao PDR must get the cargo information earlier enough than the cargo arrival. The ideal import procedure with ASYCUDA is illustrated in Figure 3.7. However, the actual process does not reach this ideal situation.

In reality, since the truck number is necessary for import declaration, it seems rather difficult for the Lao importers/ customs brokers to prepare the declaration in advance before cargo arrival.

In order to avoid waiting time during the customs procedure, customs brokers are likely to conduct pre-negotiation with the Customs. This two-step procedure (pre-negotiation and actual declaration) is not common in global standard practice and should be improved. The computerized customs declaration system is widely recognized as one of the most effective methods, but has not been realized yet in Lao PDR even with the installation of ASYCUDA.



Source: JICA Study Team.

Figure 3.7 Ideal Flow of Import

The actual import procedure can be classified into two patterns in terms of location of customs clearance, as follows: (1) direct delivery, and (2) clearance at the Thanaleng Warehouse. The former is mainly for duty exemption cargo and the latter for duty payment cargo. Pre-negotiation with Customs is indispensable for direct delivery.

(1) Direct Delivery (Duty Exemption Cargo; not Attaching TWSE Pattern)

Direct delivery is mainly allowed for duty exemption cargo. To get duty exemption status, pre-negotiation with Customs is required. In other words, pre-negotiation is more substantial than the actual import declaration process. Therefore, the transit time for the declaration process is not long. The import flow procedures for direct delivery are shown in Figure 3.8 and enumerated below.

① Pre-negotiation with Customs to get allowance for direct delivery.

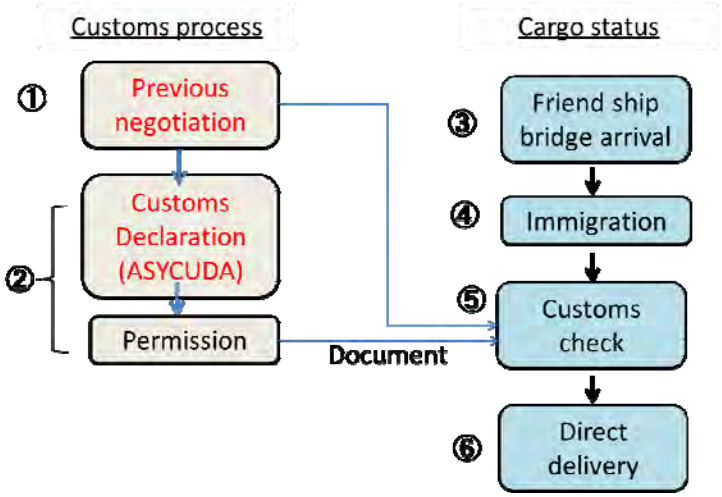
② Customs declaration/permission(ASYCUDA)

③ Cargo arrival at the Friendship Bridge.

④ Immigration control check of border pass, driver's license and vehicle entry. Customs permission is brought to the bridge where the truck waits.

⑤ Customs check at the Friendship Bridge (document check).

⑥ Cargo is released for direct delivery.



Source: JICA Study Team.

Figure 3.8 Import Flow for Direct Delivery

(2) Thanaleng Warehouse Attachment Pattern (Duty Payable Cargo)

In principle, duty payable cargo should attach to the Thanaleng Warehouse. If the cargo information can be obtained sufficiently before the cargo arrival, the following flow is applicable and pre-arrival permission is available. Similarly with the duty exemption import, the customs brokers are likely to prefer pre-negotiation with the Customs in order to minimize the time for customs procedure. In this context, the Thanaleng Warehouse attachment pattern has two categories, namely: pre-negotiation pattern and non-pre-negotiation pattern.

1) Pre-Negotiation Pattern

The pre-negotiation flow and procedures are summarized below and illustrated in Figure 3.9.

① Previous negotiation when necessary: submitting cargo information to Customs to show outline of import cargo. Customs orders to attach to the Thanaleng Warehouse.

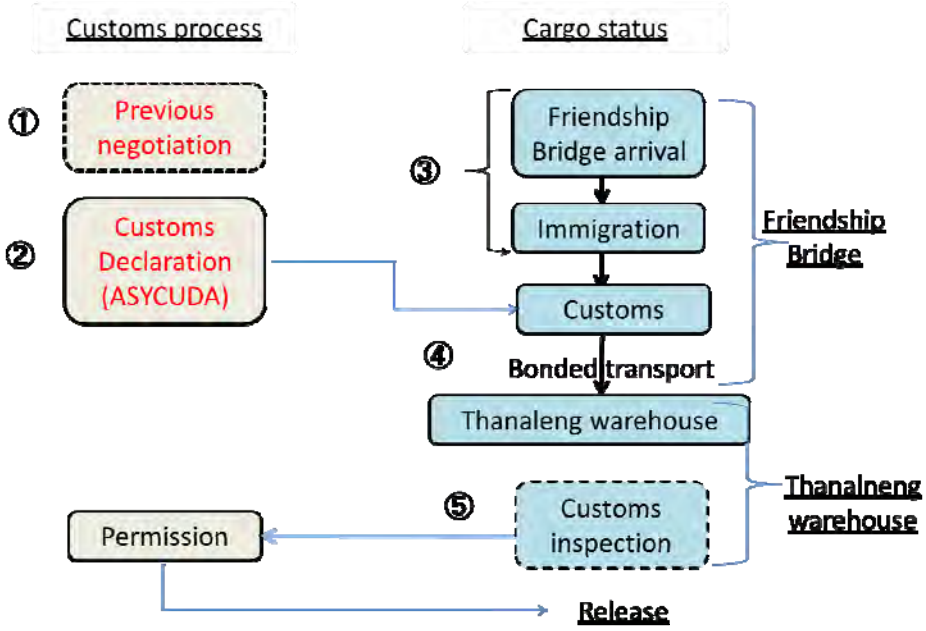
② Based on the result of previous negotiation, customs declaration start by ASYCUDA. Importer (customs broker) can get a reference number.

③ Truck arrival at the Friendship Bridge. Immigration control check of border pass, driver's license and vehicle entry.

④ Bring the reference number to the bridge with customs decision (red or green). Get the permit number of bonded transport to the Thanaleng Warehouse.

⑤ Remaining necessary customs examination continues after cargo arrival.

⑥ After duty payment and import permission, cargo is released and the importer can get the cargo.



Source: JICA Study Team.

Figure 3.9 Import Flow for Direct Thanaleng Warehouse Attachment Pattern (Pre-Negotiation Pattern)

2) Non Pre-Negotiation Pattern

In this pattern, the customs brokers need to get cargo information in advance. If getting previous information is impossible, an alternative way is available. The ASYCUDA entry is available even after cargo arrival at the Thanaleng Warehouse. But this requires getting a bonded transport permission apart from the customs declaration.

The flow of the non pre-negotiation procedures is shown in Figure 3.10 and summarized below.

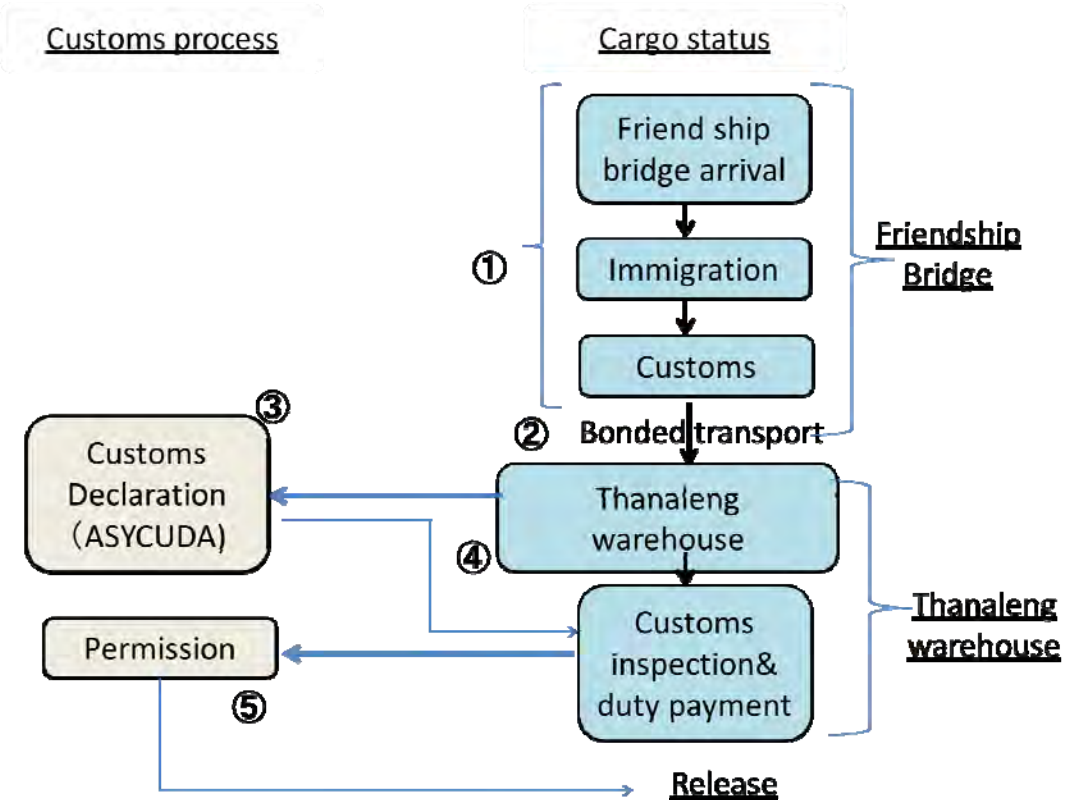
① Truck arrival at the Friendship Bridge. Immigration control check of border pass, driver's license and vehicle entry.

② Bonded transport permission to the Thanaleng Warehouse and arrival at the Thanaleng Warehouse.

③ Customs declaration starts by ASYCUDA.

④ Duty payment and customs inspection (if any).

⑤ Import permission and cargo is released.



Source: JICA Study Team.

Figure 3.10 Import Flow for Direct Thanaleng Warehouse Attachment (Non Pre-Negotiation Pattern)

3.2.3 Transit Time of Customs Declaration/Permit

According to the interview survey, the average transit time for the customs procedure is one hour for export and 3 hours for import, with no negative assessment by the exporters/importers interviewed (see Table 3.6). This transit time determines the vehicle parking time and size of the parking lot for the VLP.

Table 3.6 Typical Customs Clearance Time by Corporate Interviews

Corporate	Answer
Local Logistics Provider A	Customs import clearance time is minimum of 1 hour; 3-4 hours are enough if some kind of trouble happens.
Japanese Manufacturing Company A (located at Km14)	No complaint for transit time for customs clearance. Cargo is obtainable within the same day of cargo arrival as long as cargo arrives by 9:00 in the morning at the Friendship Bridge.
Japanese Manufacturing Company B	Transit time for customs clearance is 30 minutes for export, 3 hours for import.
Commerce and Industry Association	Transit time for import customs clearance at the Thanaleng Warehouse.

Source: JICA Study Team.

3.3 Facilitation of Border Crossing Procedures

3.3.1 Facilitation of Trade Procedures

Achieving trade procedure facilitation with speedy customs clearance is a global trend. Along with this trend, the ASEAN also advocates for trade/governmental procedure facilitation such as “one-stop shop service” targeting the realization of the ASEAN Economic Community (AEC) in 2015. Lao PDR is also exerting efforts towards realizing these measures.

(1) Deregulation of License System

Previously, Lao PDR had been adopting a strict export/import license system under a social economics scheme up to the mid-1980s. During this period, acquiring an export/import license was required prior to customs declaration. In this context, the license was the substantial import/export permit instead of the customs permit.

After the 1990s, with the change of economic system from social economic capitalism to economic system, the license system has been deregulated and the customs clearance has become the substantial export/import permit.

(2) Standardization and Harmonization of Customs Procedure

Customs has been making efforts to harmonize their procedures according to global standards. Lao Customs already adopted the ASEAN HS code system, the ASEAN declaration formality, and the ASEAN tariff system. Also, the commodity price for duty calculation is based on the importer's transaction value instead of the custom’s assessment value.

Now, it is planned to ratify the Revised Kyoto Protocol which determines the international standards for the current customs procedures. To do this, capacity building of Customs has already started.

(3) Facilitation of Customs Procedure

1) ASYCUDA

The ASYCUDA computerized customs clearance system has been in operation since 2011, ASYCUDA aims to facilitate customs procedure for developed countries[2] and being offered by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP).

According to Customs, ASYCUDA application results in a 36% reduction in transaction time. A similar positive assessment is reported from the local forwarders interview survey.

2 ASYCUDA is, so to speak, modularized (packaged) software and is easy to introduce in cost terms, but.. its functions are limited and it seems involving the difficulty for customize. On the other hand, NACCS is a Japanese customized custom system for which functions are easy to be developed/ added depending on one’s needs, although it is expensive to introduce.

On the other hand, the following defects of the system are not resolved:

- Unlike those in developed countries, most local forwarders do not connect to Customs by computer network, excluding a few forwarders. They visit the computer room in the Thanaleng Customs Office and manually input their declaration data there.
- Paperless customs operation is not realized. Forwarders/Customs brokers have to print out declaration formalities and to submit these to customs officers. The permit is also returned by paper-basis.
- ASYCUDA does not connect with other authorities yet. For example, duty payment still depends on cash/ bank check basis, not on electronic transaction.

According to customs statistics, the single HS code declaration is numerous. It seems normal that the number of plural HS codes declaration is larger than the number of single HS code declaration when taking into account commercial good import (see Table 3.7). Apart from Lao PDR, it is also likely in other ASEAN countries that combining the same HS code commodities is difficult so that data-input is a time-consuming operation for forwarders. On the other hand, there is a possibility that only one single HS code can cover various/different HS code commodities in Lao PDR, leading to the negative impact of incorrect declaration and under value declaration. Because of this it is pointed out that ASYCUDA could input only 10-lines of HS code but already can input up to 99 lines.

Table 3.7 Ratio of the Number of HS Codes Being Declared at Friendship Bridge Customs

	2010-2011					
Number of HS Code	Dutiable	Exemption	Re	Temp	Total	Share
1	38,722	4,520	114	3,541	46,897	83.2%
2	1,651	494	4	794	2,943	5.2%
3	912	334	1	422	1,669	3.0%
4	1,216	386		745	2,347	4.2%
5	163	52		232	447	0.8%
6	174	25		229	428	0.8%
7	329	22		236	587	1.0%
8	102	14		127	243	0.4%
9	97	16		151	264	0.5%
10	428	19		104	551	1.0%
10 over						0.0%
Total	43,794	5,882	119	6,581	56,376	100.0%

	2012-2013					
Number of HS Code	Dutiable	Exemption	Re	Temp	total	Share
1	46,454	7,526	58	3,760	57,798	85.5%
2	2,057	569	4	810	3,440	5.1%
3	934	314		382	1,630	2.4%
4	912	137		610	1,659	2.5%
5	301	54		197	552	0.8%
6	317	23		215	555	0.8%
7	301	14		170	485	0.7%
8	232	7		148	387	0.6%
9	188	5		180	373	0.6%
10	521	3		169	693	1.0%
10 over						0.0%
Total	52,217	8,652	62	6,641	67,572	100.0%

Source: JICA Study Team.

Aside from Japan, other donors provide support for Customs, as follows:

- The World Bank (WB) provides support for ASYCUDA and a single-window system.
- The World Customs Organization (WCO), much of whose contributions come from Japan, promotes international standards for customs procedures.
- The ASEAN Secretariat takes steps to facilitate the AEC.
- The Asian Development Bank (ADB) supports the Cross-Border Transport Agreement (CBTA) in the Greater Mekong Subregion (GMS) and the Single-Stop system.
- Bilateral customs cooperation (Thailand, Vietnam, Australia, etc.).

2) Situation of Neighboring Countries

ASEAN countries have been promoting the facilitation of customs procedures and the reduction of

customs examination time by installing electronic customs systems. Although paperless clearance has been achieved only in Singapore, measures towards paperless clearance continue to be promoted in the region.

In Thailand, the e-customs system has already started in 2008, aiming at facilitation of customs clearance and promoting paperless permission. Although declaration and duty payment are available through on-line basis, document submission remains necessary. Physical inspection is also necessary for document submission.[3]

In Vietnam, customs declaration is processed electronically but document submission is mandatory. A Japanese customs system, the Nippon Automated Cargo and Port Consolidated System (NACCS), is currently being installed. This is expected to result in the reduction of examination time and operation burden.

In Cambodia, the ASYCUDA system has already been installed but usage is currently limited to the Phnom Penh airport, Phnom Penh Special Economic Zone (SEZ), and Sihanoukville Port. In addition, forwarders are unlikely to have their own computers at their offices and data entry is likely to be implemented at the computer room in the Customs Offices. Data input is available in the ASYCUDA system, but document submission is still required.

Myanmar is lagging behind other ASEAN countries. The manual declaration system remains necessary in Myanmar. In 2014, installation of the NACCS has been initiated with JICA assistance[4]. The coverage area is only the Yangon area, not the whole country. The start of operation is scheduled within 2016.

As mentioned above, although installing electronic customs system is promoted all over the GMS region, paper inspection still required, like in Lao PDR. Taking a look at the computer systems being installed, Vietnam and Myanmar are adopting the NACCS system from Japan, while Lao PDR and Cambodia are adopting ASYCUDA.

3.3.2 One-Stop Service

Trade procedures in Lao PDR are currently not provided on a one-stop service basis. These services are provided at both the Friendship Bridge and the Thanaleng Warehouse at present.

For import, quarantine rules require vehicle wash and certification check for animal/plant products at the Friendship Bridge. Simultaneously, Immigration requires vehicle/driver entry/border crossing at the bridge. Customs at the Friendship Bridge issues a transport permit to the Thanaleng Warehouse

[3] JETRO, The Customs Procedure and Logistics Situation in ASEAN/Mekong Region," 2013.
[4] JICA website.

or direct delivery permit (after customs import permit issuance).

It is desirable for import cargo to integrate the Customs, Immigration and Quarantine (CIQ) functions in one place to achieve a one-stop operation. Taking a look at export, the factory vanning system makes it unnecessary for export cargo to attach to the Thanaleng Warehouse but the immigration/quarantine officials implement final check operation beside the bridge. That means integrated CIQ function is meaningless for export cargo. In addition, a government building for various agencies is constructed. In this context, integration of governmental agencies in the VLP will need to be considered its effectiveness.

3.4 Storage and Inventory Functions

In developed nations, it is observed that production/consumption activities have been gradually shifted from a product-push economy to a demand-pull economy. Thais have shifted to asking logistics providers to do frequent/small amounts of deliveries instead of large amount of delivery at one time. Needless to say, this change is likely to push logistics cost up and to increase the risk of excess inventory volume.

Logistics providers in developed countries have been exerting efforts to provide accurate and cost-effective inventory operation for handling large variety/small lot commodities as their differentiation strategy. To do this, it is essential for the total flow of inventory operation ranging from inbound, inventory, processing to dispatch to be under information technology (IT) control. According to the Thanaleng Warehouse data, it is concluded that the warehouse does not provide qualified storage service.

Private importers/exporters have already invested in their modern warehouse facilities which meet global standard rather than rely on the Thanaleng Warehouse. An example is the local importer who can handle foreign goods (see Figure 3.11). The following differences in performance are observed:

- Storage with rack system, which is not seen at the Thanaleng Warehouse;
- Piece unit control, not carton basis; and
- 2-ton van type truck usage.

Warehouse	Storage area by rack system
	
Ridged type delivery truck	
	

Source: JICA Study Team.

Figure 3.11 Example of Private Company's Modern Warehouse

3.5 Thanaleng Warehouse

3.5.1 Overview of Thanaleng Warehouse

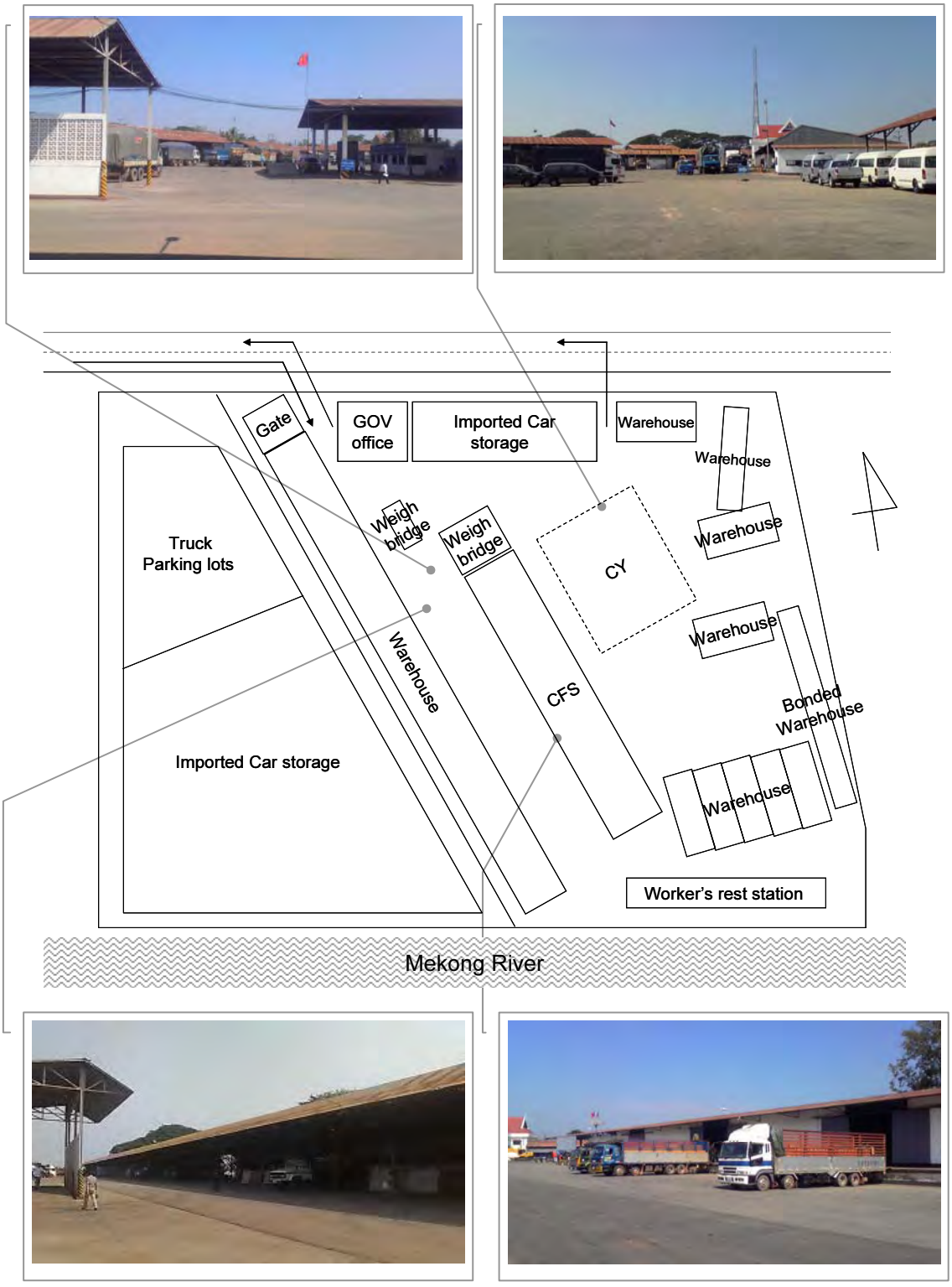
The Thanaleng Warehouse is located approximately 500 m east of the First Friendship Bridge on National Highway No. 1. Its total area is 6 ha, including 3.5 ha for the administration building, truck waiting area, and warehouses, and 2.5 ha for parking space for trucks and imported vehicles. The layout of the warehouse is shown in Figure 3.12. The warehouse has three cranes, 12 forklifts, and two truck weighing areas.

The Thanaleng Warehouse is used for storage and control of imported cargo, transshipment, creation of customs documents, and transportation using the warehouse's own trucks (two six-wheeler trucks and four 12-wheeler trucks). X-ray inspection is not performed in this warehouse because it is carried out at the Friendship Bridge.

In addition to import customs clearance, export customs clearance is also conducted. Of the total

export customs clearances carried out at the First Friendship Bridge, self-customs clearance accounts for approximately 90%, while customs clearance at the Thanaleng Warehouse accounts for remaining 10%. Import customs clearance procedures are completed in around two or three hours, but it takes two or three days if the declaration is incorrect.

The Thanaleng Warehouse is open from 8:30 to 16:30, which is the same as the Customs Office. The business hours are shorter than those of the Friendship Bridge, which is open from 6:00 to 22:00. The warehouse is closed on Saturdays, Sundays and holidays, but it is available on Saturdays and Sundays and during non-business hours on weekdays upon request from shippers and transporters. In such cases, overtime charges are incurred.



Source: JICA, "The Comprehensive Study on Logistics System in Lao PDR," 2011.

Figure 3.12 Layout of Thanaleng Warehouse

3.5.2 Company Structure

When it was built, the Thanaleng Warehouse was placed under the control of the Ministry of Commerce (MOC). Subsequently, it was operated by a private enterprise for 15 years. Currently, it is a state enterprise controlled by the Ministry of Finance (MOF), and two officers (President and Vice-President) are designated from the MOF.

The number of employees is 146, of whom 30% are white-collar workers (including officers) and 70% are warehouse workers. In addition, approximately 250 day workers are registered and the warehouse hires them depending on the work volume. These workers wait in the worker station behind the warehouse every day.

3.5.3 Cargo Volume

The types of trucks using the Thanaleng Warehouse are classified as 6-wheelers, 10-wheelers, 12-wheelers, and trailers. The customs clearance of a pick-up type van is conducted at the Friendship Bridge so it is not necessary to go to the Thanaleng Warehouse for such clearance. Table 3.8 and Table 3.9 show the number of commodity-based inbound and outbound cargo volume, respectively, by vehicle type through the Thanaleng Warehouse.

Frozen and refrigerated goods are included among the cargo categories, but they are mere cargo item categories. Goods are not actually carried in/out by freezer/refrigerated trucks.

Table 3.8 Inbound Trucks through Thanaleng Warehouse (2013)

(Unit: number of vehicle)

Category		Refrigerator Flag	Freezer Flag	Trailer	10-wheeler	12-wheeler	6-wheeler	Total
1	Car Parts	0	0	112	630	949	733	2,424
2	Chemicals	0	0	4	141	581	25	751
3	Construction Materials	0	0	124	2,972	5712	290	9,098
4	Cosmetics	0	0		17	2	14	33
5	Daily Use Goods	0	0	160	2,727	2037	297	5,221
6	Drinks	0	0	10	171	897	170	1,248
		1	0	9	100	270	10	389
7	Education Materials	0	0		1		3	4
8	Electric Appliances	0	0	128	78	481	106	793
9	Foods	0	0	31	1,116	1,890	1011	4,048
		0	1	1	126	5	58	190
		1	0	1	5	95	1	102
10	Garments	0	0	2	35	26	40	103
11	General Goods	0	0	11	120	144	81	356
12	Machinery	0	0	85	443	1,083	338	1,949
13	Medical Materials	0	0	1	74	30	53	158
14	Raw Materials	0	0	90	1,070	2,207	347	3,714
15	Vehicle (Auto Bike)	0	0	1	20	25	144	190
16	Vehicle (Heavy Equipment)	0	0	19	10	332	21	382
17	Vehicle (Sedan)	0	0	104	19	2,204	181	2,508
18	Vehicle (Truck)	0	0	21	30	389	3,164	3,604
19	Vehicle (Van)	0	0	6		149		155
Total				920	9,905	19,508	7,087	37,420

Source: Thanaleng Warehouse State Enterprise.

Table 3.9 Outbound Trucks through Thanaleng Warehouse (2013)

(Unit: number of vehicle)

Category		Refrigerator Flag	Freezer Flag	Trailer	10-wheeler	12-wheeler	6-wheeler	Total
1	Car Parts	0	0		1,016	47	547	1,610
2	Chemicals	0	0		410		79	489
3	Construction Materials	0	0		393	29	55	477
4	Cosmetics	0	0		36		5	41
5	Daily Use Goods	0	0		4,651	4	468	5,123
6	Drinks	0	0		1,754		14	1,768
		1	0		775		25	800
7	Education Materials	0	0		1		4	5
8	Electric Appliances	0	0		383	1	73	457
9	Foods	0	0		4,998		98	5,096
		0	1		8			8
		1	0		192		6	198
10	Garments	0	0		35		166	201
11	General Goods	0	0		128	5	79	212
12	Machinery	0	0		836	13	1,560	2,409
13	Medical Materials	0	0		105		111	216
14	Raw Materials	0	0		3,988	13	1,170	5,171
15	Vehicle(Auto Bike)	0	0		96		379	475
16	Vehicle (Heavy equipment)	0	0	115	161	164	132	572
17	Vehicle (Sedan)	0	0	4	14	126	8,896	9,040
18	Vehicle (Truck)	0	0	982	215	294	1,650	3,141
19	Vehicle (Van)	0	0		2	44	570	616
Total				1,101	20,197	740	16,087	38,125

Source: Thanaleng Warehouse State Enterprise.

3.5.4 Tariff System

The revenue of the Thanaleng Warehouse consists of inbound charges on import cargo and outbound charges on domestic cargo after import clearance (see Table 3.10). The charges of both inbound/outbound are determined by a tariff system. The inbound cargo charges are collected in US dollar (USD) and the outbound charges in Lao Kip (LAK).

The inbound charge is chargeable ranging from the truck arrival at the Thanaleng Warehouse to lift-off. On the other hand, the outbound charge is from cargo dispatch at the warehouse to loading onto trucks.

The tariff has been revised every 5 years and the latest one has been implemented since 2009. Since no amendment has taken place in 2014, there is a possibility of some kind of amendment in 2015.

Table 3.10 Thanaleng Warehouse Tariff

No.	Detail	Unit	~2008 ①	2009~ ②	②/①
1	*General goods and vehicle rental fee				
1.1	Storage (indoor) rental fee calculation for general goods				
	# 1day to 15days				
	- calculate by weight	T/day	188	230	1.22
	- calculate by cubic	m³/day	156	190	1.22
	- calculate by area	m²/day	250	300	1.20
	# 16days to 30days				
	- calculate by weight	T/day	234	280	1.20
	- calculate by cubic	m³/day	188	230	1.22
	- calculate by area	m²/day	313	380	1.21
	More than 1month				
	- calculate by weight	T/day	313	380	1.21
	- calculate by cubic	m³/day	234	280	1.20
	Storage (Outdoor) rental fee calculation for general goods				
	# 1day to 15days				
	- calculate by weight	T/day	156	220	1.41
	- calculate by cubic	m³/day	125	180	1.44
	- calculate by area	m²/day	188	270	1.44
	# 16days to 30days				
	- calculate by weight	T/day	188	270	1.44
	- calculate by cubic	m³/day	156	220	1.41
	- calculate by area	m²/day	219	310	1.42
	More than 1month				
	- calculate by weight	T/day	219	310	1.42
	- calculate by cubic	m³/day	188	270	1.44
	- calculate by area	m²/day	266	380	1.43
3	Cold storage fee calculation				
	- calculate by room	room/day	156,250	249,000	1.59
	- calculate by hour	Hour	6,563	16,000	2.44
4	Vehicle storage (outdoor) rental fee				
	In door plus 50%				
	# 1day to 15days				
	- Motor bike,3wheel,tractor	Car/day	938	1800	1.92
	- Sedan,pick up truck,mini van or weight under 2500Kg	car/day	3750	7500	2.00
	- 6wheels,10wheels car or vehicle weight from 2501kg to 10,000kg	car/day	4688	9000	1.92
	- 12 wheels, or vehicle weight from 10,001kg to 15,000kg	car/day		11,000	#DIV/0!
	- All vehicle weight from 15,001kg up	car/day	5625	13,000	2.31
	# 16days to 30days				
	- Motor bike,3wheel,	Car/day		2500	#DIV/0!
	- Sedan,pick up truck,mini van or weight under 2500Kg	car/day		9,000	#DIV/0!

No.	Detail	Unit	~2008 ①	2009~ ②	②/①
	- 6wheels,10wheels car or vehicle weight from 2501kg to 10,000kg	car/day		11,000	#DIV/0!
	- 12 wheels, or vehicle weight from 10,001kg to 15,000kg	car/day		13,500	#DIV/0!
	- All vehicle weight from 15,001kg up	car/day		16,000	#DIV/0!
	More than 1month				
	- Motor bike,3wheel,	Car/day		3500	#DIV/0!
	- Sedan, pickup truck, mini van or weight under 2500Kg	car/day		13,500	#DIV/0!
	- 6wheels,10wheels car or vehicle weight from 2501kg to 10,000kg	car/day		17,000	#DIV/0!
	- 12 wheels, or vehicle weight from 10,001kg to 15,000kg	car/day		20,000	#DIV/0!
	- All vehicle weight from 15,001kg up	car/day		24,000	#DIV/0!
1.5	Storage rental fee for vehicle's engine				
	# 1day to 15days				
	- under 4 pump engine	Unit/day		1,700	#DIV/0!
	- 4 pump engine up	Unit/day		2000	#DIV/0!
	# 16days to 30days				
	- under 4 pump engine	Unit/day		2000	#DIV/0!
	- 4 pump engine up	Unit/day		2300	#DIV/0!
	More than 1month				
	- under 4 pump engine	Unit/day		2200	#DIV/0!
	- 4 pump engine up	Unit/day		2700	#DIV/0!
2	* Transit weight measure				
2.1	- Transit rate				
	- Motor bike,3wheels,	round	469	600	1.28
	- Sedan, Pickup truck ,mini van	round	2,344	3000	1.28
	- Truck,6wheels,10 wheels	round	9,688	12,000	1.24
	- 12 wheels, cranes, ,forklifts or car weight from 10,001kg up	round	15,625	17,000	1.09
2.2	Weight measure fee				
	- Weight measure fee (Goods' weight and car's weight)	T	250	400	1.60
3	* Worker fee and Engine usage fee				
3.1	Worker fee rate				
	# By weight	T	8000	8500	1.06
	+ By weight of car				
	- General pick up car In car or out car	Car	20,500	22,000	1.07
	- Truck 6 wheels In car or out car	Car	45,000	48,000	1.07
	- Truck 10 wheels In car or out car	Car	60,000	64,000	1.07
	- Truck 12 wheels In car or out car	Car		85,000	#DIV/0!
	- Trailer car In car or out car	Car	112,500	120,000	1.07
3.2	By Engine usage fee				
	3.2.1 forklifts car 3t,5t				
	+ By weight	T	4785	5700	1.19
	+ By weight of car				
	- General pick up car In car or out car	Car	35,256	42,000	1.19
	- Truck 6 wheels In car or out car	Car	59,961	72,000	1.20

No.	Detail	Unit	~2008 ①	2009~ ②	②/①
	- Truck 10 wheels In car or out car	Car	69922	84,000	1.20
	- Truck 12 wheels In car or out car	Car		111,000	#DIV/0!
	- Trailer car In car or out car	Car	116,309	140,000	1.20
	3.2.2 forklifts car 10t				
	# By weight				
	3.2.3 Lift up engine by forklifts 3t,5t				
	- Car engine 4 pump and below	Unit		5,500	#DIV/0!
	- Car engine above 4 pump	Unit		7,600	#DIV/0!
	3.2.4 By crane usage fee				
	# Crane 20-25 T	T	7,910	9,500	1.20
	+ By weight				
	+ By weight of car				
	- Truck 6 wheels In car or out car	Car	63,086	76,000	1.20
	- Truck 10 wheels In car or out car	Car	76,855	93,000	1.21
	- Truck 12 wheels In car or out car	Car		123,000	#DIV/0!
	- Trailer car In car or out car	Car	164,941	198000	1.20
	3.2.5 By crane 50T				
	- By weight	T	23,828	24,000	1.01
4	* Import goods from international by foreign money (USD)	Unit	Old price	New price	#VALUE!
	By Worker's fee				
	Good's weight	T	2.28	2.28	1.00
	- Goods in car (4wheels)	Car	16.3	16.3	1.00
	- Goods in car (6wheels)	Car	21.73	21.73	1.00
	- Goods in car (10wheels)	Car	25.56	25.56	1.00
	- Goods in car (Trailer)	Car	38.32	38.32	1.00
4.2	Lift up by forklifts car				
	4.2.1 Lift up by forklifts car 3-5 t				
	- Goods' weight	T	2.28	2.28	1.00
	- Goods in car (4wheels)	Car	17.45	17.45	1.00
	- Goods in car (6wheels)	Car	23.27	23.27	1.00
	- Goods in car (10wheels)	Car	27.38	27.38	1.00
	- Goods in car (Trailer)	Car	41.07	41.07	1.00
	4.2.2 Lift up by forklifts car 10t				
	- Goods' weight	T	3.21	3.21	1.00
	- Goods in car (6wheels)	Car	28.4	28.4	1.00
	- Goods in car (10wheels)	Car	33.4	33.4	1.00
	- Goods in car (Trailer)	Car	51.34	51.34	1.00
4.3	Lift up by crane				
	4.3.1 Crane 20t,25t				
	- By weight	T	4.87	4.87	1.00
	- Goods in car (6wheels)	Car	49.13	49.13	1.00
	- Goods in car (10wheels)	Car	57.8	57.8	1.00

No.	Detail	Unit	~2008 ①	2009~ ②	②/①
	- Goods in car (Trailer)	Car	86.7	86.7	1.00
	4.3.2 Crane 50t				
	- By weight	T	6.39	6.39	1.00
4.4	- Empty car on the transit or lift up from transit car				
	- Pick up truck ,all kind of sedan	Car	13	13	1.00
	- 6 wheels car	Car	30.35	30.35	1.00
	- 10 wheels car	Car	47.7	47.7	1.00
	- 8.1T to 15T	Car		52	#DIV/0!
	15,1T up	Car	65	65	1.00
4.5	Warehouse transit fee				
	- All kind of Motor bike	Car	1.98	1.98	1.00
	- Pickup truck ,all kind of sedan	Round/car	3.04	3.04	1.00
	- 6wheels truck	Round/car	3.89	3.89	1.00
	- 10 wheels truck	Round/car	4.58	4.58	1.00
	- 12 wheels truck	Round/car		6.41	#DIV/0!
	- Trailer car	Round/car	7.6	7.6	1.00
5	* Weight measure fee (Good's weight and car's weight)				
	- By weight	T	0.17	0.17	1.00

Source: Ministry of Finance.

This tariff rate is so cheap that a 30% service charge is levied on inbound general cargo, such as (operation + 30% service charge) + (operation charge + 30% service charge) x 10% service charge for outbound. Such service charge scheme is common in the international transport industry as the risk hedge manner and can compensate for the low tariff rate.

Generally, the inland container depot/inland customs clearance point is not active in this region, and most of them are likely to focus on empty containers. However, advanced cases have appeared in Vietnam or Cambodia that focus on container switching operation or container-freight station (CFS) operation.

This is not similar to the VLP concept which focuses on cargo transshipment operation and storage operation.

In the ASEAN region, Lat Krabang in Bangkok, Thailand is regarded as the most successful case for inland container depot operation, the main activity of which is intermodal service connecting railway and trucks, not the truck/truck transshipment operation that the VLP would focus on. However, Lat Krabang can provide full container load/ less-than-container load (FCL/LCL) between container and truck transshipment as its additional service. Lat Krabang has six modules and their tariffs are determined by respectable modules, but their tariff rates are actually similar. Considering the deep Thai-Lao relation, it seems certain that the VLP is likely to be compared with Lat Krabang. The reference of Lat Krabang charge seems indispensable for the VLP.

Although there are three types of tariff in Lat Krabang (for shipping line, for importers, and for exporters), the tariff for shipping line is the cheapest. In addition, volume discount is acceptable so it is deemed that the tariff is a basic and nominal one..

Table 3.11 below shows the tariffs for importers at Lat Krabang which would seem most similar with the VLP operation.

Table 3.11 Lat Krabang Tariff (Part)

Unit : Thai Baht (THB)

Items		20 ft	40 ft
1.Handling charge	Import FCL: Lift on truck/chassis	1,550	2,650
	Import LCL: Cargo transfer to truck	1,850	3,150
	Import LCL: Cargo transfer to warehouse and deliver to truck	80 Baht /Revenue ton	
2.Additional handling charge	LCL cargo storage more than 30 days	26 Baht /Revenue ton	
	LCL facility fee	15 Baht /Revenue ton	
3.LCL storage fee (general cargo)	Day 1-7	5 Baht /Revenue ton	
	Day 8-14	10 Baht /Revenue ton	
	Day 15-	15 Baht /Revenue ton	
	Free time 3 days		
4.Garage charge	4-wheeler	25 Baht /Revenue ton	
	6-wheeler	25 Baht /Revenue ton	
	8-10 wheeler	35 Baht /Revenue ton	
	Tractor head	35 Baht /Revenue ton	
	Trailer 6-wheeler	35 Baht /Revenue ton	
	Trailer 8-10 wheeler	35 Baht /Revenue ton	
	Trailer more than18 wheels	110 Baht /Revenue ton	

Source: Lat Krabang Website.

Compared with the simple FCL transshipment operation, transshipment from container to trucks applies a higher tariff rate (from devanning, inbound/outbound warehouse, up to loading onto trucks).

The cost simulation is as follows:

- Assuming a 20 m3 LCL cargo, the total cost is estimated at THB3,850 (approximately USD113) = Import LCL charge of THB1,850 + Truck loading charge of THB1,600 (THB80 x 20m3) + LCL facilitation fee of THB300 (THB15 x 20m3. In comparison with FCL, a high tariff rate is applied.
- In the case of a 20 m3/trailer import into Thanaleng, inbound charge is assumed at USD50, and outbound is LAK250,000. Total cost is assumed to be approximately USD80, which is about 70% of the Lat Krabang charge.

3.5.5 Problems of Thanaleng Warehouse

The problems of the Thanaleng Warehouse are the limited cargo handling volume, limited expansion space, warehouse, security, and operation.

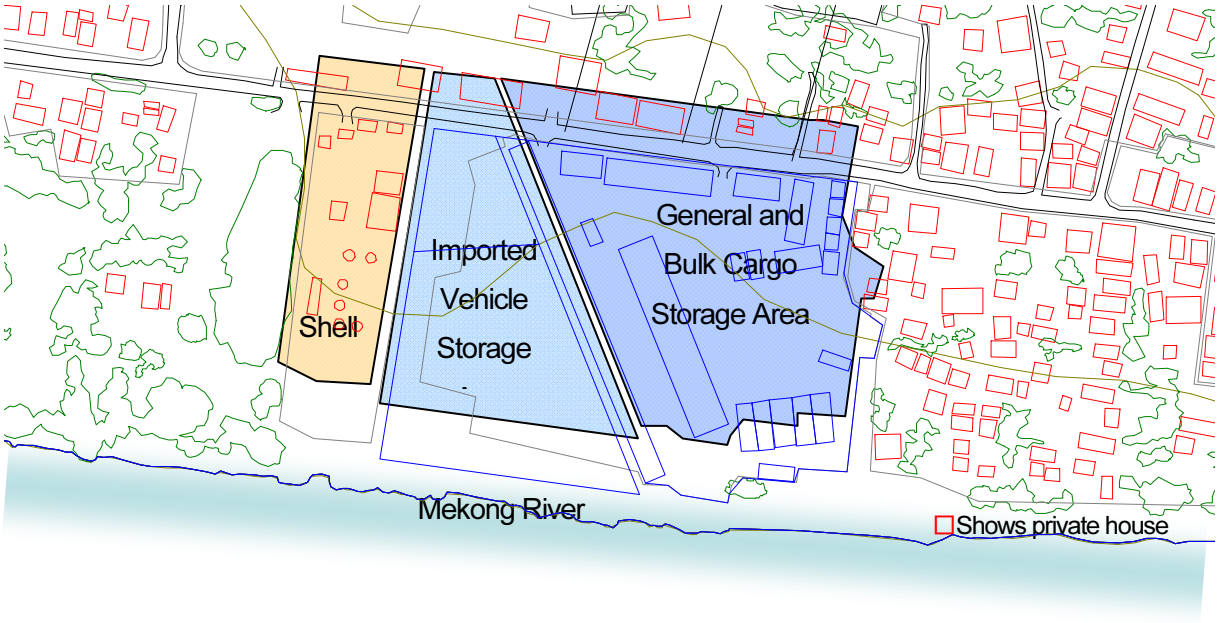
(1) Limited Cargo Handling Volume

According to the interview survey, the Thanaleng Warehouse is believed to be capable of handling up to 200-250 trucks per day. Based on a traffic survey conducted as part of the 2011 JICA survey, an average of 203 trucks per day used the warehouse. This indicates that the handling volume was already approaching the limit at the time of the survey.

(2) Limited Expansion Space

The increase in cargo volume causes overcapacity at the Thanaleng Warehouse. Thus, while import cargo should stay at least one day in regulation, many cargoes actually go out from the warehouse just after the customs clearance procedure.

In addition, importation of brand-new vehicles has increased due to the import ban on used cars since 2012, which requires an expansion of the imported car storage area. Unfortunately, facility expansion seems to be nearly impossible because the Thanaleng Warehouse currently has no vacant space in the surrounding areas that are enclosed by road (North), residential area (East), petroleum reserve facility (West), and the Mekong River (South), as shown in Figure 3.13.



Source: JICA Study Team.

Figure 3.13 Map of Thanaleng Warehouse and Surrounding Area

(3) Warehouse

Some warehouses where cargo is stored are very simple and only enough to prevent exposure to rain. The warehouse condition affects the deterioration in the quality of imported goods. Therefore, urgent improvement is needed. There are high-floored warehouses and low-floored warehouses (see

Figure 3.14). Cargo is loaded and unloaded manually by many workers at both types of warehouses. This manual loading/unloading takes time and is very likely to damage imported goods. The high-floored warehouses are only 1.2 m from the ground. The difference between the floor height and truck height is also increasing the workload.

Note: The photo on the left shows the low floor of the warehouse and the photo on the right shows the high floor.

Source: JICA, "The Comprehensive Study on Logistics System in Lao PDR," 2011.

Figure 3.14 Current Situation of Warehouses in Thanaleng

(4) Security

Currently, the cargo-in gate of the Thanaleng Warehouse is lax on security, and any passerby can enter the premises. In addition, the low-floored warehouses have no walls, posing a high risk of cargo theft.

(5) Operation

At present, most operations are performed manually at the Thanaleng Warehouse. Therefore, the warehouse employs a large number of workers. Workers need to wait until the cargo arrives because they work only when the cargo arrives. The waiting time causes a large gap between the business hours of the warehouse and the working hours of the workers, making their working hours and wages unstable.

Chapter 4 VLP Business Concept

4.1 Current Issue

The aging and deteriorating the Thanaleng Warehouse facility is a serious cause of the current insufficient logistics standard in the Vientiane area, which is likely to hinder the growth of foreign investment as well as economic development in the country.

Providing solutions to the current logistics problems is a critical issue for the VLP. The current logistics situation is discussed in the following sections.

4.1.1 Current Distribution System

Geographically, trade with Thailand is the main cargo traffic for the Vientiane area. Cargo from other countries also passes through Thailand. The Thanaleng Warehouse has been playing the role of a public customs bonded point in this area.

Cargo from Thailand is distributed domestically after customs clearance at the Thanaleng Warehouse. Before the construction of the Friendship Bridge in 1990, cargo from/to Thailand depended on river transport for which reason the Thanaleng Warehouse was constructed in its current location. Although the bridge construction made cross-border truck operation available, an inland customs depot has not been established up to now. In lieu of a depot, the Thanaleng Warehouse serves as the customs clearance point for truck delivery.

Although the Thanaleng Warehouse has been promoting capacity expansion in order to meet additional cargo demand, it has already reached its full capacity and future expansion is difficult. Recently, it has been active as an expanded open yard facility for imported vehicles. Vehicles are a strictly controlled commodity in Lao PDR and import licenses are required. Without accurate inventory control, illegal importation is likely to take place in order to avoid expensive import duty/tax payment.

4.1.2 Export

The factory vanning practice is allowed in Lao PDR. Stuffed export cargo does not need to attach to the Thanaleng Warehouse. Export from the Vientiane area observes the following basic procedures: (1) Customs declaration at the Thanaleng Customs Office; (2) Cargo stuffing and loading on trucks; and (3) Dispatch to Thailand, passing through Friendship Bridge. This process does not require export cargo to attach physically at the Thanaleng Warehouse although export paperwork is

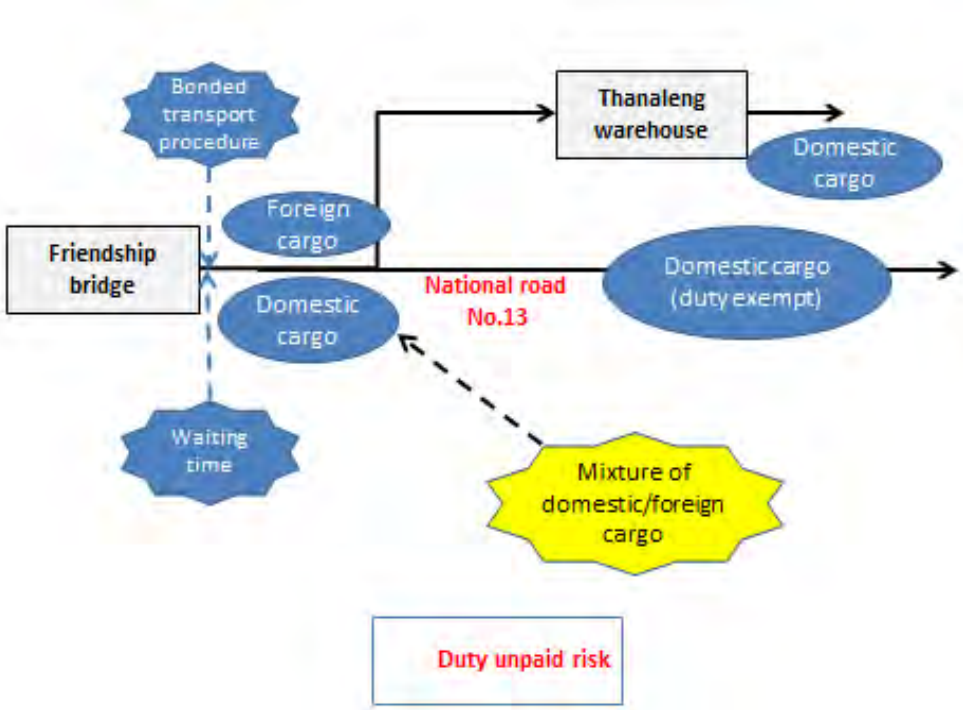
implemented by the Thanaleng Customs Office. Previously, a physical check manned by customs officers was set up at the vanning (factory) site where cargo loading was done, but this practice is already facilitated. Now, physical checking of cargo is done by X-ray inspection beside the Friendship Bridge. In this context, export cargo already does not need to attach to the Thanaleng Warehouse.

On the other hand, consolidated cargo still needs to attach to the Thanaleng Warehouse because temporary storage, customs clearance, and cargo stuffing operation are necessary. A small amount of export volume makes it difficult for consolidation, which is one of the main reasons for the high export cost in Lao PDR.

4.1.3 Import

It is important that domestic delivery of import cargo is available after customs clearance and transshipment from the Thai vehicle to a Lao vehicle at the Thanaleng Warehouse. However, direct delivery from the Friendship Bridge to the importer's site is also admitted. This is due to the Thanaleng Warehouse's incapacity to meet customs demand.

This situation is illustrated in Figure 4.1 and summarized in Table 4.1. Three types of cargo movement are observed, namely: (1) customs clearance cargo (direct delivery); (2) bonded cargo (to the Thanaleng Warehouse); and (3) domestic cargo. This situation carries a high risk of duty being unpaid by intentionally bypassing the Thanaleng Warehouse.



Source: JICA Study Team.

Figure 4.1 Import Cargo Flow

Table 4.1 Import Pattern

	Pattern	Target	Characteristic
Direct Delivery	Customs clearance at Friendship Bridge; After clearance, delivery to site	Duty exemption and materials for export cargo	No need for paying transshipment cost between Thai and Lao trucks
Thanaleng Warehouse Attached	After customs clearance at the Thanaleng Warehouse, delivery to importer's site	Taxable articles	Transshipment operation is mandatory, transshipment cost is inevitable

Source: JICA Study Team.

In the case of Japan, the customs law regulates that customs clearance has to be finished while the cargo stays at a bonded area at the sea port or airport. When customers want inland clearances, bonded transportation is necessary to move the cargo between ports (airport) to the inland customs clearance point (bonded area). Since the concept of bonded transport is uncommon in Lao PDR, customs clearance is likely to be done at the border area. As a result, bonded transport to an inland point is not a usual operation and customs clearance should be implemented at designated border points.

The volume of duty exempt imports in Lao PDR is large because duty exempt importation of materials is an incentive for export-oriented manufacturing enterprises. In addition, the country still depends on international aid both for economic and living activities.

Table 4.2 shows the number, weight and amount of imports and the percentage shares of imports with duty collected, duty exempted, for re-export and temporary import from 2010 to 2013. Imports with duty collected represent 77%–78% of the total number. The ratios of duty-imposed imports are lower by weight and amount, from 59%–70% and 52%–62%, respectively. During the last two years of this period, the share of duty collected importation has been increasing both in terms of weight and amount.

Table 4.2 Trend in Duty Collected/Exempt Imports, 2010-2013

		No.	Weight (kg)	Amount (USD)	Percentage		
					No.	Weight	Amount
2010-2011	Collected	43,794	1,232,447,283	655,319,249	78%	70%	53%
	Exempt	5,863	487,467,643	363,352,899	10%	28%	29%
	Re-export	119	411,943	3,612,679	0%	0%	0%
	Temporary	6,581	43,440,678	225,565,552	12%	2%	18%
2011-2012	Collected	40,620	1,561,081,832	744,615,404	78%	59%	52%
	Exempt	10,581	1,021,276,508	625,920,441	20%	39%	44%
	Re-export	17	37,171	432,784	0%	0%	0%
	Temporary	1,132	44,850,723	52,922,030	2%	2%	4%
2012-2013	Collected	52,217	954,074,019	947,602,448	77%	67%	62%
	Exempt	8,652	403,985,165	339,777,313	13%	29%	22%
	Re-export	62	915,471	2,327,162	0%	0%	0%
	Temporary	6,641	55,257,423	229,809,893	10%	4%	15%

Source: JICA Study Team.

The ongoing economic expansion in the country will contribute to a growth in duty collected goods importation, which will encourage increased activities in the Thanaleng Warehouse.

4.2 Business Concept

4.2.1 VLP Concept

The purpose of the VLP is to provide comprehensive and advanced logistics services that meet international standards while upgrading the current the Thanaleng Warehouse function as an international gateway of the Vientiane area.

With economic development in recent years, demand for logistics services should be growing. This is because Lao PDR still depends on the international market to procure materials and consumer goods, especially high-end commodities.

Being called a "land-locked country" is usually used to represent Lao PDR's logistics backwardness, resulting from its geographical disadvantage (long distance from/to international market) as well as high logistics cost. For a long time, reducing this geographical disadvantage has been strongly sought after by improving logistics services. Along with the promotion of accelerating regional integration, such as fulfillment of the ASEAN Economic Community (AEC) in 2015, smoother and more efficient logistics services will be demanded to realize a speedy physical distribution across the region.

Since Lao PDR largely depends on foreign countries for its material and consumer goods, facilitation of government procedures is essential not only for customs but also for other agencies. The ASEAN Secretariat advocates for an ASEAN Single Stop/Single Window concept which enables plural

government procedures to be conducted in “one click” by connecting government agencies. However, reality lags far behind this concept, except for Singapore. In the case of Lao PDR, although customs procedures have installed an IT system (ASYCUDA), other government procedures still depend on manual systems such as in export/import licensing, quarantine, and vehicle/driver border crossing procedures. With this situation, it seems difficult to provide a single stop service. Although adoption of the ASYCUDA system has succeeded in cutting transaction time for customs procedures, the data linkage among stakeholders is insufficient. Such data linkage is necessary for the VLP operation.

The VLP aims to provide global standardized logistics services by installing a developed warehouse management system (WMS) as well as promoting information sharing among the various stakeholders. This strategy results in the following gains:

- Government can achieve correct duty/tax collection, cargo management and trade statistics;
- The VLP can provide accurate, speedy and low-cost logistics serviced by information linkage of cargo, vehicle and declaration; and
- Users can enjoy quality services which, up to now, have not been provided not only in Lao PDR but also in neighboring countries.

4.2.2 VLP Services

The VLP plans to provide a set of comprehensive and sophisticated logistics services by improving the existing the Thanaleng Warehouse service. Additionally, providing new and future services is taken into account.as a medium/long-range target (see Table 4.3).

Table 4.3 VLP Services

Existing Service Expansion	New Service	Future Service
1) Customs clearance Service (Providing Land Area for On-chassis Customs Clearance) 2) Public bonded warehouse 3) Imported automobile inventory	1) Low temperatures cold storage 2) Tenant service	1) Railway cargo 2) Inland container depot 3) Export consolidation

Source: JICA Study Team.

(1) Existing Service Expansion

The major services currently provided by the Thanaleng Warehouse are as follows: (1) Customs clearance service, (2) Public bonded warehouse service, and (3) Imported automobile inventory service.

1) Customs Clearance Service (Providing Land Area for On-chassis Customs Clearance)

As a result of both the existing direct delivery and the Thanaleng Warehouse attachment practice,

three types of transport are observed between the Friendship Bridge and the Thanaleng Warehouse, namely: (a) Customs clearance cargo; (b) Bonded transport cargo (cargo that should be stopped at the Thanaleng Warehouse); and (c) Domestic transport cargo. This makes it difficult for proper cargo management and accurate duty collection. To address this problem, it is recommended to adopt a principle that all vehicles should attach to the VLP and dispatch is allowed after confirming the completion of customs clearance. Therefore, the VLP should provide the space for on-chassis based customs clearance.

Since this recommendation involves the risk of having time-consuming activities at both the Friendship Bridge and the VLP, it is necessary to clarify and facilitate the Friendship Bridge and the VLP procedures. Additionally, customs procedure facilitation is also critically necessary in order to avoid having a wider parking space at the VLP, which all vehicles attaching to the VLP are likely to ask for.

2) Public Bonded Warehouse

According to the interview survey, there is an observed demand for sophisticated warehouse operation, as follows:

- Warehouse service that meets global standards is now and will be significantly demanded. Security and barcode-based inventory control is inevitable as well as qualified bonded cargo handling. Unfortunately, the Thanaleng Warehouse does not meet such standards.
- Importers who deal with high-end products (e.g., electronic equipment) are likely to demand a bonded warehouse which can implement customs clearance service.

The VLP will install an advanced WMS technology and will provide inventory service which meets global standards. As a result, importers will be able to store their cargo under bonded status even if they import large volumes. Moreover, just-in-time (JIT) type shipment becomes possible immediately after receiving orders from customers. Bonded storage will be beneficial for improving the importer's cash flow because now it is necessary to pay duty at one time of the importation.

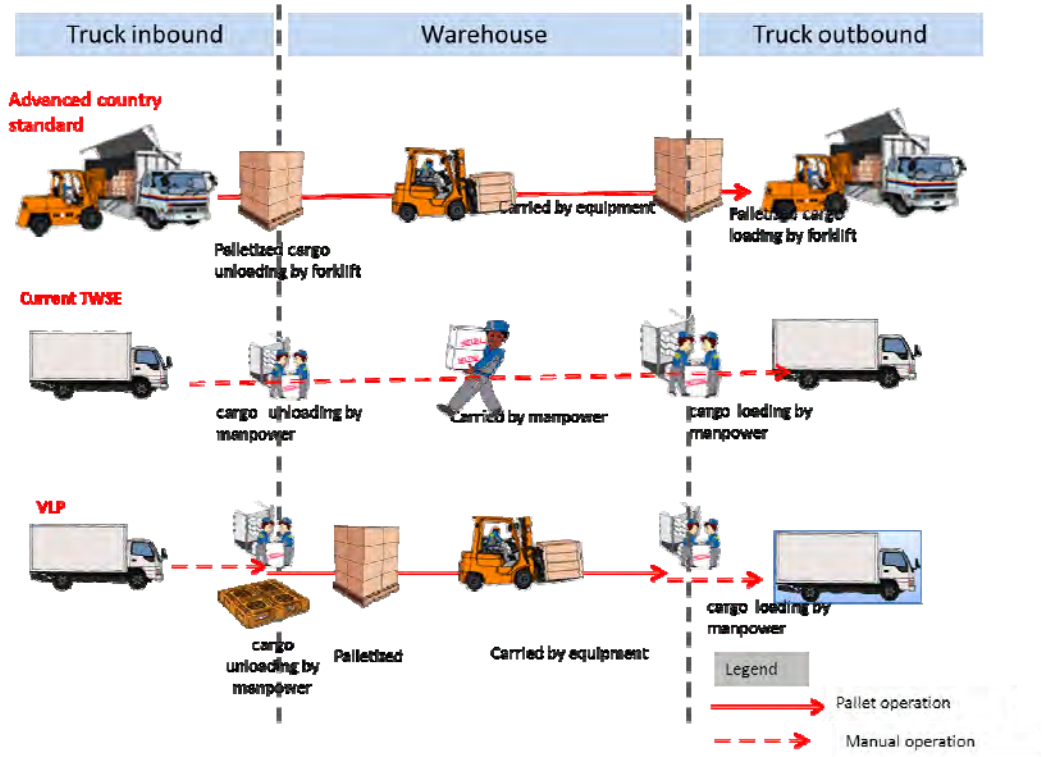
In addition, the VLP plans to provide a more upgraded transshipment service than the Thanaleng Warehouse. According to the site and interview surveys, the typical assessment of the current transshipment service of the Thanaleng Warehouse is summarized as follows:

- Loading/Unloading operation from/to the truck depends on manual operation. Low labor cost is a constraint against promoting mechanization.
- Palletization is not promoted. Since loading/unloading operation is manual, the number of labor force is 250, including part-time workers.
- A forklift is provided, but its usage is only for heavy cargo, not for general cargo. There is a height gap between the warehouse floor level and the truck height. Even if a forklift is used,

the operational productivity remains low.

The above factors result in rough handling/low standard service so that users prefer direct delivery instead of the Thanaleng Warehouse operation.

Although palletized transportation is currently unrealistic in Lao PDR, the VLP plans to promote pallet operation just on an in-warehouse basis to achieve operational efficiency (see Figure 4.2). Promoting mechanical operation has a serious impact on employment. Considering this, it is desirable to limit pallet operation on an in-house basis for a certain period.



Source: JICA Study Team.

Figure 4.2 Image of Pallet Operation

3) Imported Automobile Inventory Service

The revenue from this service accounts for a large portion of the Thanaleng Warehouse's income. The open yard facility for automobiles is already full. Although the VLP will take over all services being provided by the Thanaleng Warehouse, it is proposed to continue using the current open yard facility for automobile inventory service. This is the result of a simulation calculating land development cost and revenue. The terms and conditions need to be further discussed.

(2) New Services

1) Low Temperature/Cold Storage

Currently, the Thanaleng Warehouse is not equipped with cold storage facilities. However, it is a universal trend that the demand for cold chain facilities grows in accordance with economic development. Even now, a large portion of such cargo is imported in the form of informal entry like passenger baggage. Considering this, the VLP should be equipped with cold storage facilities.

VLP will provide temperature controlled transport service for sensitive cargo in order to secure the cargo quality up to delivering customers.

2) Tenants

Although the scale of the VLP is based on cargo demand forecast, it is inevitable that empty space will be generated at the initial stage. In order to utilize such empty space, the leasing of warehouses and office space is welcomed for LIFFA (Lao International Freight Forwarders Association) members and private companies. Based on the interview survey, the demand for contemporary warehouse facility/operations is strong for the Lao locals rather than Japanese customers (see Table 4.4). This is one reason why tenant service is targeted in the VLP.

Table 4.4 Summary of Demand for Warehouse Service

Japanese Customers	Lao Locals
• Japanese export-oriented manufacturers are likely to store their materials at their factory. Long procurement lead time is a precondition for their deployment at Laos so that a large amount of inventory is acceptable to some degree at present. • The need for outsourcing of inventory operation is small as long as they keep current production volume. More expansion volume is necessary for outsourcing. • Manufacturers that focus on the domestic market and are likely to consider the needs for inventory service are increasing in accordance with production expansion. • They have enough empty space in the factory site.	• The demand for retail business or convenience store joined with Thai investors is so strong that the low warehouse management standard is regarded as the bottleneck of business deployment. • The wholesaler/consolidation function remains weak so that direct delivery or transshipment operation is inevitable. • Insufficient storage space forces them to store imported cargo in the Bangkok area, which generates unnecessary storage fee. • Lao transporters are unlikely to be equipped with warehouse facilities even if they have their trucks.

Source: JICA Study Team.

A total of 19 companies (14 Japanese companies, 5 Lao companies) provided information on their inventory volumes and terms in the interview survey. The inventory volumes of Japanese enterprises are larger than those of Lao companies. The reasons for this are as follows: (a) a large inventory volume is regarded as a precondition; (b) the risk of inventory shortage is so big that a large amount of inventory is demanded; and (c) procurement frequency is low. These factors cause a small

demand for qualified inventory service up to now. As for Lao customers, inventory terms are shorter than those of the Japanese (see Table 4.5).

Table 4.5 Inventory Quantity Based on Corporate Interviews

		1 month or less	1-2 months	2-3 months	3-4 months	Over 4 months	Total
Japanese	Number of companies	1	3	6	1	3	14
	%	7%	21%	43%	7%	21%	100%
Local	Number of companies	1	2	2			5
	%	20%	40%	40%			100%

Source: JICA Study Team.

Two companies, one is Japanese and the other is Lao, have achieved a short inventory period not exceeding one month. The Japanese company is a bike parts supplier and conducts JIT delivery to the assembler. The Lao company imports food and conducts cross dock operation at its own warehouse for delivery to customers. Both succeed in minimizing inventory volume/period, which is a good example for realizing developed logistics operations even in Lao PDR.

(3) Future Services

1) Railway Cargo

The big advantage of the VLP is that it is equipped with a railway facility. Prior to the VLP planning, the construction of railway facilities was already started with the support of the Neighbouring Countries Economic Development Cooperation Agency (NEDA), including CY.

After development of the railway facility, the VLP can provide railway service practically. However, the railway service depends on the State Railways of Thailand (SRT) and its capacity remains poor. Even in Thailand, SRT does not have enough capacity (wagons and locomotives) to cater to the demand. Instead of the SRT, cargo owners are likely to acquire wagons themselves in order to realize railway service. Considering such situation, it is unrealistic to realize railway cargo transportation within a short period.

According to the interview survey:

- Both Japanese and Lao companies think the high logistics cost is the most serious issue for logistics. Cheaper railway transport is highly expected.
- In contrast, it is difficult to find base cargo for railway.
- Besides the difficulty of stuffed container delivery by railway, even empty container haulage is beneficial for transport cost reduction.
- Local companies are likely to emphasize high standard of service: scheduled delivery or daily

transportation.

- There is a local fuel company that already finished the simulation of railway, concluding that investment for railway facility (for example, a pipeline from the rail terminal) cannot recover the investment cost even if railway achieves a transport cost reduction.

Even if it is difficult to find the base cargo at present, the potential of railways will be high as an alternative transport mode. It is said that China plans to develop a railway construction plans for both Laos and Thailand, former is connecting Kunming/Vientiane and the latter is for connecting Nonkg Khai and East coast region of Thailand. The part of Nong Khai/Thanaleng is neither covered so that Transshipment is inevitable unless the standard gauged rail bridge is constructed.

2) Inland Container Depot

The long distance from major ports causes high logistics cost, which is a main constraint for logistics service in the Vientiane area. Additionally, trade imbalance makes it difficult to find back haulage, which aggravates the difficulty of transport cost reduction. These two points keep Lao PDR as a "land-locked country."

For a long period, establishment of a container depot seems to be an effective and strongly desired solution. The container depot can cut import transport cost because an empty container can be received instead of returning it to a long-distance main port. In the case of export, picking up empty containers from a container depot results in lower logistics cost due to the shorter transport distance as compared to picking up empty containers from the main port.

On the other hand, from the perspective of a shipping company that owns ocean containers, Lao PDR is regarded as a high risk country for container demurrage because of its inland location, long distance from ports, and cargo imbalance. Container demurrage makes the container turnaround ratio worse, which gives a negative impact on the shipping line's management. Thus, the establishment of a container depot is not attractive for a shipping company. As a result, shipping lines are likely to set up a short free time for container return and to impose high demurrage charges.

A railway service can certainly give a positive impact on the setting up of a container depot. As discussed above, it is ideal but unrealistic to carry stuffed containers by railway at present, based on the customers' demand and the railway capacity. On the contrary, an empty container does not require a high service standard as long as low transport cost is kept. Apart from stuffed cargo demanding timely delivery, retuning empty containers to the main port is available only when the number of containers is collected to the degree where train service can be merited. This will be an effective method for reducing transport cost. Needless to say, wagon arrangement is necessary. However, the difficulty for establishing a container depot becomes lighter than before if railway transport becomes available.

3) Export Consolidation

Export promotion is a critical issue for Lao PDR's economic development. From a logistics point of view, an increase in export cargo is beneficial to increasing back haulage.

As previously mentioned, Lao customs law allows the practice of factory vanning so that it is unnecessary for full truckload (FTL) cargo to attach to the VLP. On the other hand, promoting consolidation service is a critical issue for export volume increase. According to the interview survey, while many manufacturers try to export goods in return containers, it is difficult to fill containers with cargo because the export volume is smaller than imports. In this context, enhancement of the consolidation function is very important for the VLP.

4.3 Demand Forecast

4.3.1 Existing Cargo Demand

The existing Thanleang Warehouse mostly handles imported cargo from Thailand. No exported cargo from domestic is basically handled in the warehouse.

The following table shows current cargo weight by category with temperature level in recent years. Main imported cargos in weight basis are ‘construction material’, ’raw material’, ‘daily use goods’, and ‘foods (ordinary temperature)’, 29.7%, 12.7%, 12.7%, and 11.3% respectively.

Table 4.6 Current Inbound Cargo Volume (Unit: Ton, %)

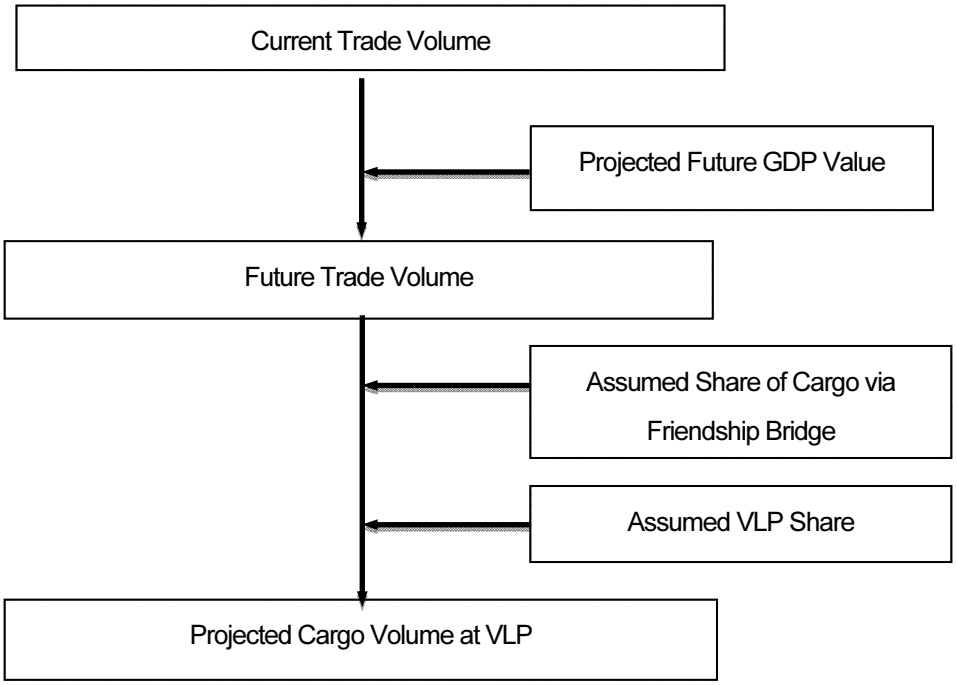
	Ordinary	Low	Freezing	2011	Composition	2013	Composition
Car's Part	1			25,946	6.43%	21,071	4.66%
Chemical	1			9,295	2.30%	13,724	3.03%
Construction Materials	1			113,392	28.10%	134,423	29.72%
Cosmetics	1			311	0.08%	244	0.05%
Daily use goods	1			30,597	7.58%	55,498	12.27%
Drink	1			21,553	5.34%	27,326	6.04%
		1		6,573	1.63%	7,371	1.63%
Education Materials	1			221	0.05%	8	0.00%
Electric appliances	1			4,878	1.21%	6,341	1.40%
Foods	1			32,139	7.96%	50,880	11.25%
			1	1,046	0.26%	1,816	0.40%
		1		4,209	1.04%	2,803	0.62%
Garment	1			4,007	0.99%	512	0.11%
General goods	1			9,441	2.34%	2,970	0.66%
Machine	1			33,721	8.36%	16,181	3.58%
Medical Materials	1			855	0.21%	1,186	0.26%
Raw materials	1			57,248	14.19%	57,241	12.65%
Vehicle (Auto Bike)	1			2,328	0.58%	557	0.12%
Vehicle (Heavy equipment)	1			3,873	0.96%	3,345	0.74%
Vehicle (Sedan)	1			18,443	4.57%	20,098	4.44%
Vehicle (Truck)	1			19,849	4.92%	26,855	5.94%
Vehicle (Van)	1			3,597	0.89%	1,886	0.42%
Total				403,520	100.00%	452,333	100.00%

Source: JICA Study Team.

4.3.2 Future Cargo Projection

(1) Method of Future Cargo Projection

The JICA Study Team estimates future cargo demand at the VLP based on customs data, future GDP growth, and the assumption on the share of cargo passing through Friendship Bridge against total cargo. The following figure shows the sequence of cargo demand projection at the VLP.



Source: JICA Study Team.

Figure 4.3 Flow of Future Cargo Projection

(2) Result of Projection

The JICA Study Team forecasts trade volume in national level, then estimates the volume through the Friendship Bridge, and subsequently estimates the cargo volume of the VLP based on the share of cargo via the existing Thanaleang Warehouse.

The Study Team assumes the GDP growth rate of Laos and then calculates elasticity between growth rate of GDP and increase rate of import value, as a method of forecasting future import volume. It is supposed that business operations at VLP would start in 2018. The VLP layout plan would be drawn up based on the capacity to handle cargo volume in 2026.

The following tables show the growth rate of future cargo projection based on the existing volume of the year 2013 in national level.

Table 4.7 Growth Rate of Future Cargo (National Level, Imports)

Classification		Chilled flag	Frozen flag	1 2018	2 2019	3 2020	4 2021	5 2022	10 2027	15 2032	20 2037	25 2042
1	Car Parts	0	0	1.40	1.51	1.62	1.74	1.87	2.69	3.86	5.54	7.96
2	Chemicals	0	0	2.73	2.94	3.16	3.40	3.65	5.24	7.53	10.80	15.51
3	Construction Materials	0	0	2.03	2.18	2.34	2.52	2.71	3.89	5.58	8.01	11.50
5	Cosmetics	0	0	2.76	2.97	3.19	3.43	3.69	5.30	7.60	10.92	15.67
6	Daily Use Goods	0	0	1.68	1.80	1.94	2.08	2.24	3.21	4.61	6.62	9.51
7	Drinks	0	0	2.02	2.17	2.33	2.51	2.70	3.87	5.56	7.98	11.46
		1	0	1.43	1.53	1.65	1.77	1.91	2.74	3.93	5.64	8.10
8	Education Materials	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
9	Electric Appliances	0	0	1.71	1.84	1.97	2.12	2.28	3.27	4.70	6.75	9.68
10	Foods	0	0	1.28	1.38	1.48	1.59	1.71	2.46	3.53	5.06	7.27
		0	1	2.13	2.29	2.46	2.64	2.84	4.08	5.86	8.41	12.07
		1	0	1.99	2.14	2.30	2.47	2.66	3.82	5.48	7.87	11.30
		1	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
11	Garment	0	0	1.84	1.98	2.12	2.28	2.45	3.52	5.06	7.26	10.42
12	General Goods	0	0	1.55	1.67	1.79	1.93	2.07	2.97	4.27	6.13	8.80
14	Machine	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
15	Medical Materials	0	0	1.51	1.62	1.74	1.87	2.02	2.89	4.15	5.96	8.56
17	Raw Materials	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		1	0	3.50	3.76	4.04	4.35	4.67	6.71	9.63	13.83	19.85
		1	1	3.78	4.06	4.37	4.70	5.05	7.25	10.40	14.94	21.44
18	Vehicles (Auto Bikes)	0	0	3.29	3.54	3.80	4.09	4.39	6.31	9.06	13.00	18.66
19	Vehicles (Heavy Equipment)	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
20	Vehicles (Sedans)	0	0	2.05	2.21	2.37	2.55	2.74	3.94	5.65	8.12	11.65
21	Vehicles (Trucks)	0	0	1.66	1.79	1.92	2.06	2.22	3.19	4.58	6.57	9.43
22	Vehicles (Vans)	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total				1.48	1.55	1.63	1.71	1.80	2.35	3.15	4.29	5.94

Source: JICA Study Team.

Table 4.8 Growth Rate of Future Cargo (National Level, Exports)

Classification		Chilled flag	Frozen flag	1 2018	2 2019	3 2020	4 2021	5 2022	10 2027	15 2032	20 2037	25 2042
1	Car Parts	0	0	2.41	2.59	2.78	2.99	3.22	4.62	6.63	9.52	13.66
2	Chemicals	0	0	2.87	3.09	3.32	3.57	3.84	5.51	7.90	11.35	16.29
3	Construction Materials	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
6	Daily Use Goods	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		0	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
7	Drinks	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
8	Education Materials	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
9	Electric Appliances	0	0	6.38	6.85	7.37	7.92	8.52	12.22	17.55	25.20	36.17
10	Foods	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		0	1	139.85	150.34	161.62	173.74	186.77	268.13	384.94	552.63	793.38
		1	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		1	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
11	Garment	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
12	General Goods	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
14	Machine	0	0	102.98	110.70	119.00	127.93	137.52	197.43	283.43	406.91	584.17
17	Raw materials	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		1	0	5.59	6.01	6.46	6.94	7.46	10.72	15.38	22.09	31.71
18	Vehicles (Auto Bikes)	0	0	2.41	2.59	2.78	2.99	3.22	4.62	6.63	9.52	13.67
19	Vehicles (Heavy equipment)	0	0	1.44	1.54	1.66	1.78	1.92	2.75	3.95	5.67	8.14
21	Vehicles (Trucks)	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total				1.21	1.23	1.25	1.28	1.30	1.45	1.67	1.98	2.42

Source: JICA Study Team.

The following tables show the result of future cargo projection. The export volume excludes construction materials and raw materials as the VLP would cover only general cargo and might cover only the customs procedure for construction materials and raw materials.

Table 4.9 Result of Future Cargo Demand at VLP

(Unit: Ton)

Year after VLP Opening		1	5	10	15	20	25
		2018	2022	2027	2032	2037	2042
General Cargo	Ordinary	558,808	721,637	1,004,015	1,409,405	1,991,396	2,826,918
	Low	3,980	5,315	7,630	10,954	15,726	22,577
	Freezing	1,461	1,952	2,802	4,022	5,774	8,290
Vehicle	Car	1,832	2,446	3,512	5,042	7,238	10,392
	Truck	32,421	42,664	60,429	85,931	122,544	175,106
	Bike	45,914	60,889	86,858	124,141	177,664	254,504
Total		644,416	834,903	1,165,246	1,639,496	2,320,343	3,297,787

Source: JICA Study Team.

The following tables show the result of future cargo projection considering the capacity of VLP, which is equivalent to the cargo volume at 10 years after the VLP starts operation. The Study Team applies the cargo volume in the following table for future revenue calculation.

In addition, the outbound (exported) cargo demand which excludes 'raw materials' and 'construction materials' is estimated using the same method as with inbound (imported) cargo demand. However, no consideration is made of the VLP capacity limitation because of the relatively low level of cargo weight.

Table 4.10 VLP Cargo Demand Projection Under Capacity Constraint (Inbound)

(Unit: Ton)

Year after VLP Opening		1 2017	5 2021	10 2026	15 2031	20 2036	25 2041
General Cargo	Ordinary	558,808	721,637	1,004,015	1,004,015	1,004,015	1,004,015
	Low	3,980	5,315	7,630	7,630	7,630	7,630
	Freezing	1,461	1,952	2,802	2,802	2,802	2,802
Vehicle	Car	1,832	2,446	3,512	3,512	3,512	3,512
	Truck	32,421	42,664	60,429	60,429	60,429	60,429
	Bike	45,914	60,889	86,858	86,858	86,858	86,858
Total			834,903	1,165,246	1,165,246	1,165,246	1,165,246

Source: JICA Study Team.

Table 4.11 VLP Cargo Demand Projection Under Capacity Constraint (Outbound)

(Unit: Ton)

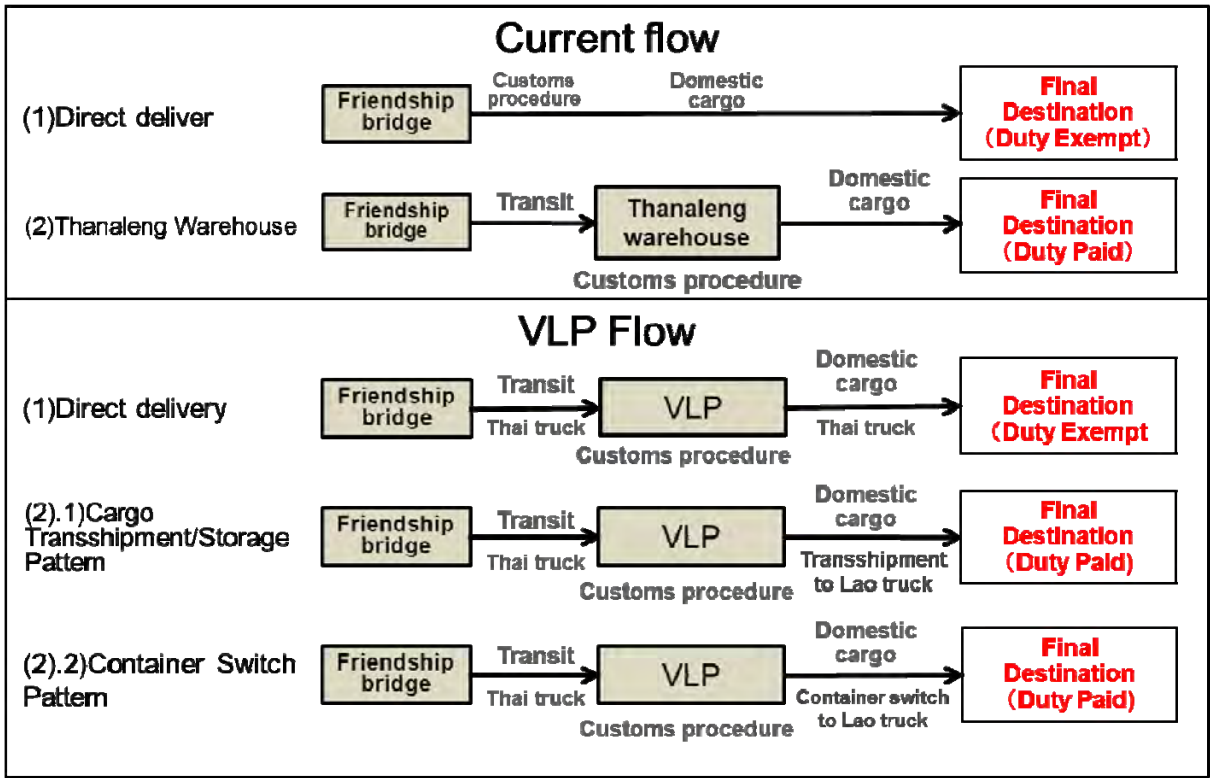
Year after VLP Opening		1 2017	5 2021	10 2026	15 2031	20 2036	25 2041
General Cargo	Ordinary	7,480	9,969	14,285	20,482	29,378	42,150
Ratio for inbound weight			1.19%	1.23%	1.25%	1.27%	1.28%

Source: JICA Study Team.

4.4 VLP Operations Plan

4.4.1 Import Cargo Flow

Data sharing among the stakeholders involved in the import/export activities is vital to realizing smooth/quality logistics services. As previously discussed, it is recommended that all import trucks should attach to and pass through the VLP Along with this, it is reasonable to shift from the current cargo movement practices of (a) direct delivery and (b) the Thanaleng Warehouse attachment pattern to (a) direct delivery pattern and (b) cargo transshipment pattern. The cargo transshipment pattern is further divided into (c) cargo transshipment/storage pattern and (d) container switching pattern (see Figure 4.4).

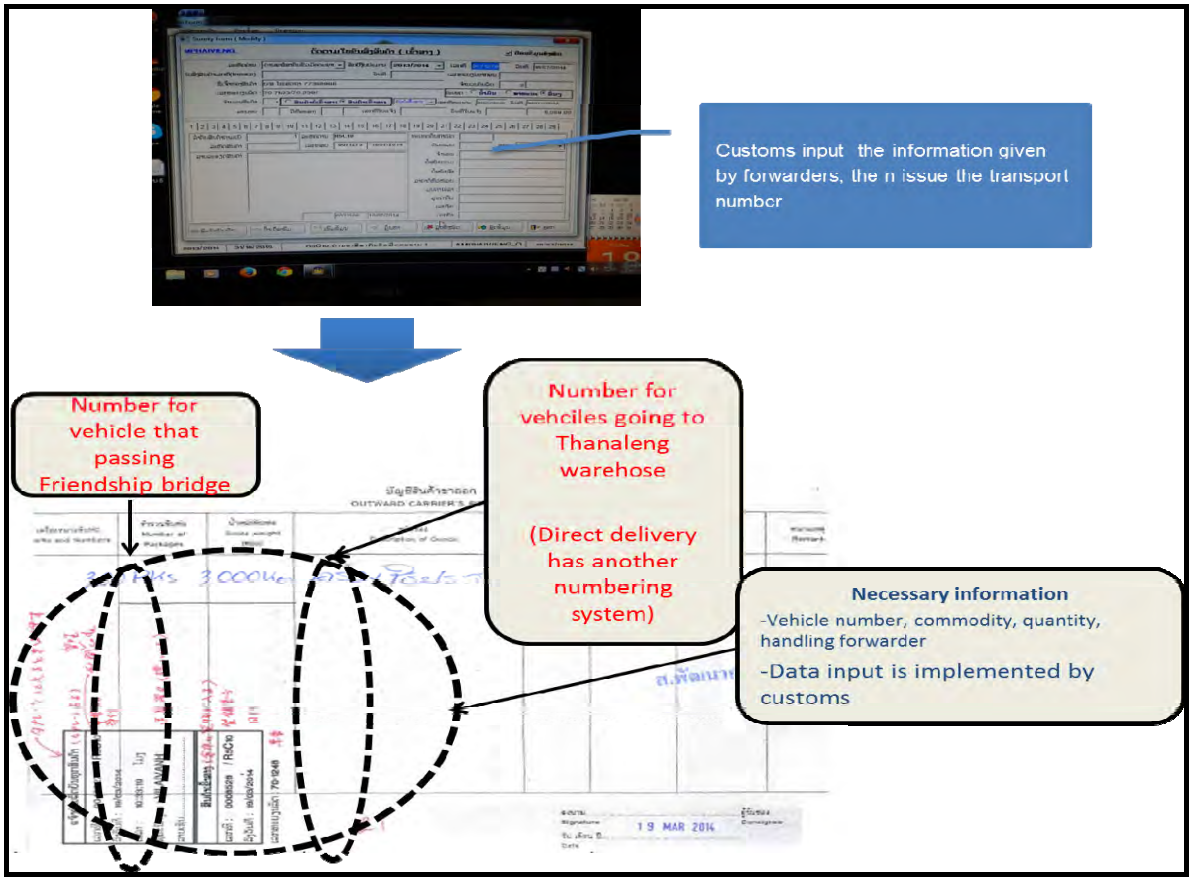


Source: JICA Study Team.

Figure 4.4 Current Flow and Recommended VLP Flow

The concept of attaching and passing through the VLP can abolish the transport permission issuance operation by the Customs at the Friendship Bridge. However, it is desirable for the VLP to know the transport status before cargo arrival so it is recommended that the forwarder should indicate the transport pattern and the Friendship Bridge Customs can issue transport permission automatically based on the forwarder's information. This new procedure requires data for the transport pattern only, thus transit time at the bridge will be minimized and the burden on the forwarder's workforce is small

(see Figure 4.5).

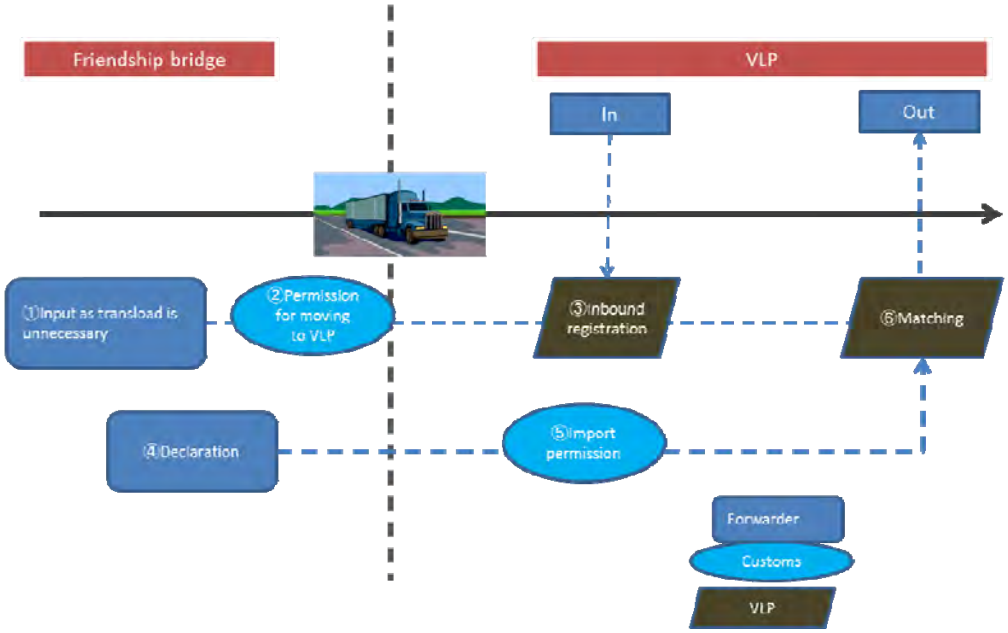


Source: JICA Study Team.

Figure 4.5 Current Flow of Data Input at Customs

(1) Direct Delivery

Direct delivery does not need a transshipment operation, so the inbound truck and outbound truck has the same vehicle number. The VLP's role is to check the vehicle or transport permit number (see ② in Figure 4.6) and whether the customs permit is obtained or not.



Source: JICA Study Team.

Figure 4.6 Flow of Direct Delivery

The procedures for direct delivery are as follows:

① Immigration entry procedure for driver and truck.

② The forwarder indicates the truck status as direct delivery (transshipment operation is unnecessary).

③ Customs at the Friendship Bridge automatically accepts the truck movement based on ② and issues the acceptance number to the VLP. The truck runs on a dedicated road and moves to the VLP.

④ The truck arrives at the VLP and registers.

⑤ Import declaration by ASYCUDA (parallel operation with ③ is available).

⑥ Customs issues the import permission.

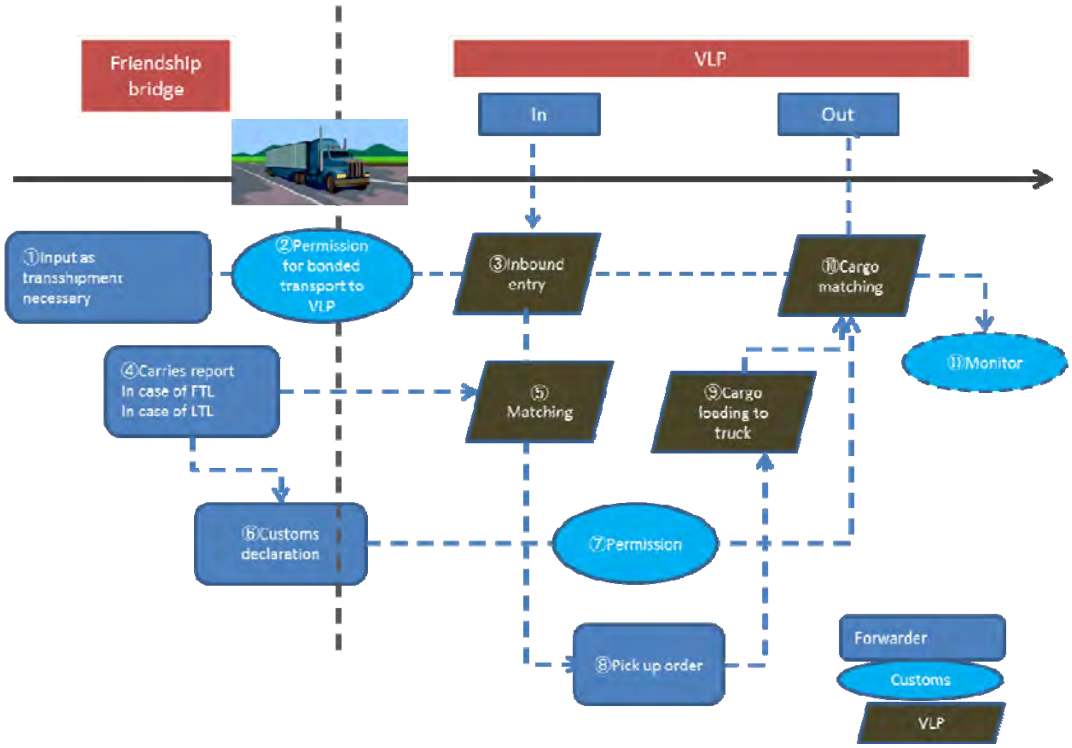
⑦ The truck is dispatched from the VLP after matching the truck information and customs declaration data.

(2) Cargo Transshipment Pattern

1) Cargo Transshipment/Storage Pattern

This pattern requires cargo transshipment and cargo storage operations (even on a temporary basis). Unloaded cargo is registered at the VLP and linked and matched with the customs declaration/permission information. Cargo dispatch is available only when the cargo is finished with the customs declaration/permission process. If the cargo registration information is used for a pick up

order, it is beneficial to the forwarder. However, the forwarder is forced to modify cargo information (carrier's report) into actual importer's basis (⑤ in Figure 4.7, parallel operation with ② is hopeful but post operation is available). In addition, identifying the FTL cargo or consolidation truck is necessary. If forwarders can identify the FTL (case F) and consolidation cargo (Case C), procedure ⑤ is only necessary for case C. In order to do this, a technical study is also necessary.



Source: JICA Study Team.

Figure 4.7 Flow of Cargo Transshipment/Storage Pattern

The following are the procedures for the cargo transshipment/ storage pattern:

① Immigration entry procedure for driver and truck.

② The forwarder indicates the truck status as transshipment/storage operation is necessary.

③ Customs at the Friendship Bridge automatically accepts the truck movement and issues the acceptance number to the VLP. The truck runs on a dedicated road and moves to the VLP.

④ Cargo inbounds at VLP.

⑤ Modifying cargo information (carrier's report) on actual importer's basis to clarify the FTL or consolidation cargo.

⑥ Matching data ③ and ④ by the VLP. Issue the cargo inbound/registration number.

⑦ Customs declaration by ASYCUDA.

⑧ Customs permission.

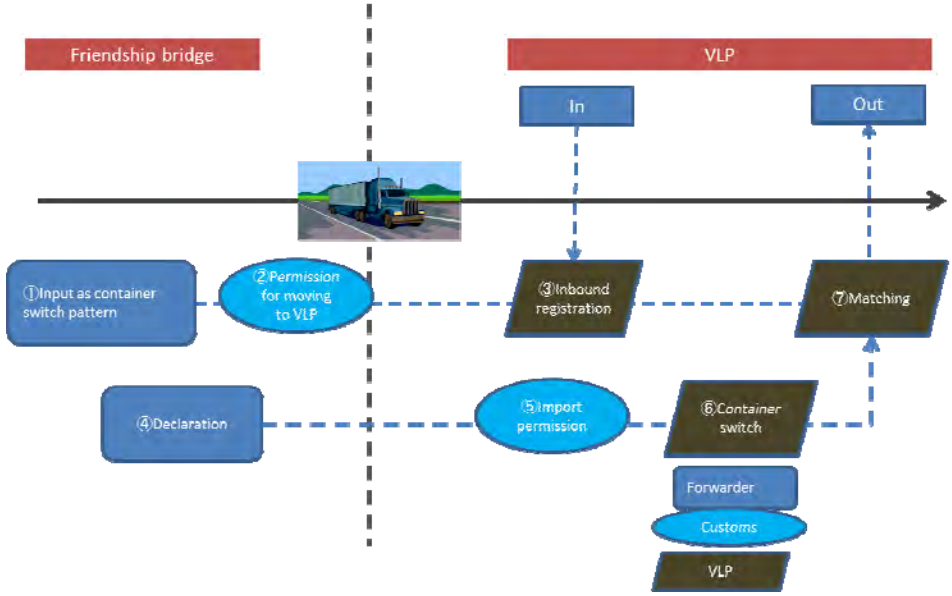
⑨ Pick-up order from forwarder based on the data ③ and ⑤.

⑩ Cargo loading based on cargo pick-up order ⑧.

⑪ Dispatch after matching cargo inbound/registration data and customs permit data.

⑫ Customs can monitor the cargo/ declaration data.

2) Container Switching Pattern



Source: JICA Study Team.

Figure 4.8 Flow of Container Switching Pattern

The procedures for the container switching pattern are as follows:

① Immigration entry procedure for driver and truck.

② The forwarder indicates the truck status as container switching is necessary.

③ Customs at the Friendship Bridge automatically accepts the truck movement and issues the acceptance number to the VLP. The truck runs on a dedicated road and moves to the VLP.

④ Truck arrival at the VLP and registration.

⑤ Customs declaration by ASYCUDA.

⑥ Customs permission.

⑦ Container switching operation.

⑧ Data matching container information (container number) and customs permission data. After that, the container is dispatched.

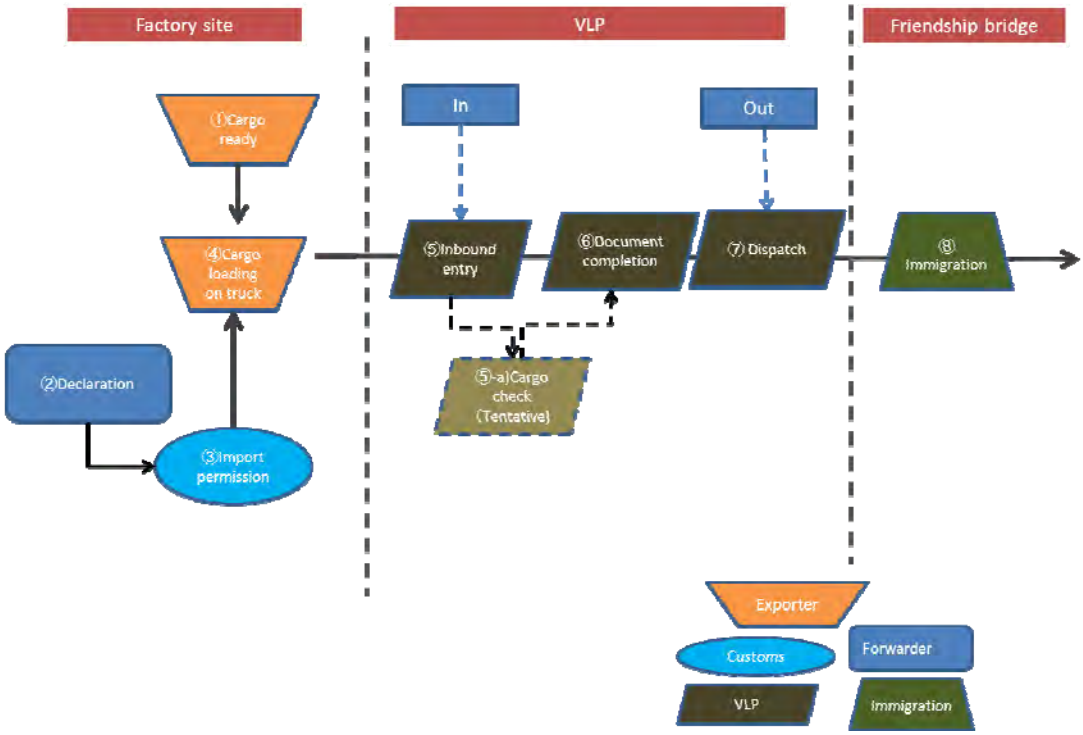
4.4.2 Export Cargo Flow

VLP plans to handle both factory vanning containers and export consolidation cargo. Currently, since factory vanning practice is allowed in Laos, it is unnecessary for export stuffed containers to attach

VLP for the purpose of customs clearance and container stuffing operation. As far as VLP cannot provide something value added service, export stuffed containers are unnecessary to attach VLP. VLP will provide the document check service and container dispatch is not allowed until final document check finished. This operation results in mitigating other agencies' border operation at Friendship bride.

(1) Factory Vanning Containers

VLP will provide the document check function, mitigating congestion/waiting for vehicle at road side or border points by avoiding improper documentation. In addition, it is available to convoy plural trucks under single declaration for simultaneous dispatch



Source: JICA Study Team.

Figure 4.9 Flow of Factory Vanning Containers

① Cargo ready.

② Customs declaration(parallel operation with ① is available）.

③ Customs permission.

④ Cargo stuffing into container and delivery to VLP.

⑤ VLP inbound （current X-ray inspection equipment is favorable to move to VLP from the point of "one-stop service" aspect）.

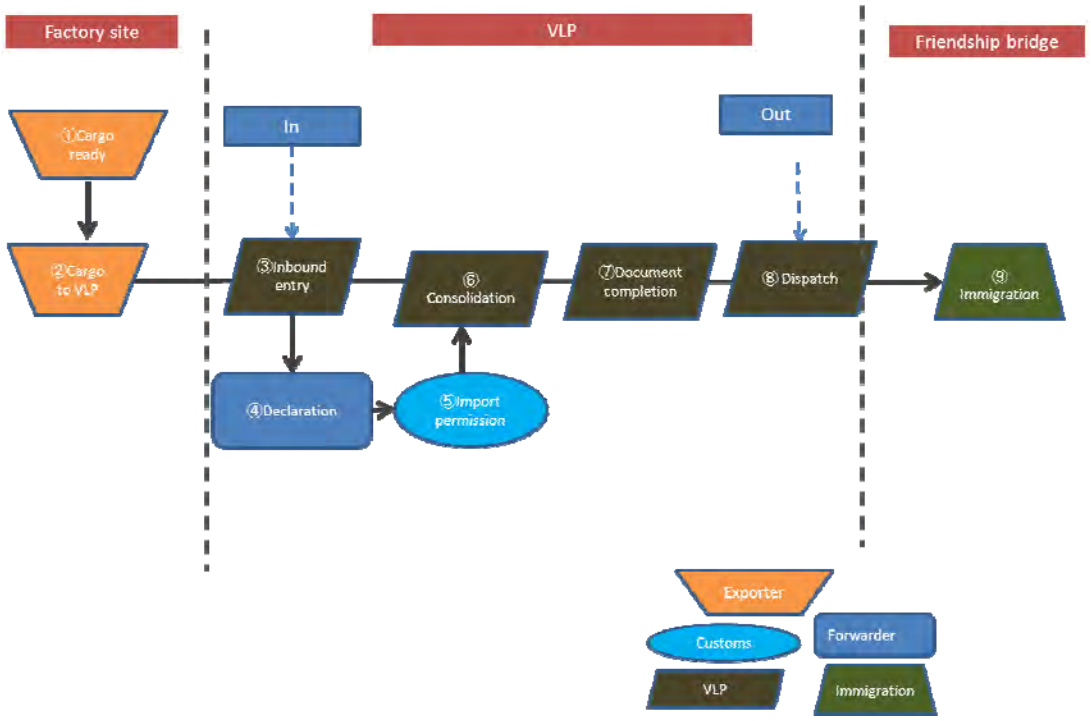
⑥ Document check (custom permission, vehicle permit, truck report etc).

⑦ Container dispatch.

⑧ Immigration final check at Friendship bridge.

(2) Export Consolidation

Consolidation targets small lot cargo to some degree where full container load is unpractical. After customs clearance completed at VLP consolidation with other shippers is conducted.



Source: JICA Study Team.

Figure 4.10 Flow of Export Consolidation

① Cargo ready.

② Delivery to VLP.

③ VLP inbound.

④ Customs declaration.

⑤ Customs permit.

⑥ Consolidation.

⑦ Document preparation (custom permission, vehicle permit, truck report etc).

⑧ Container dispatch.

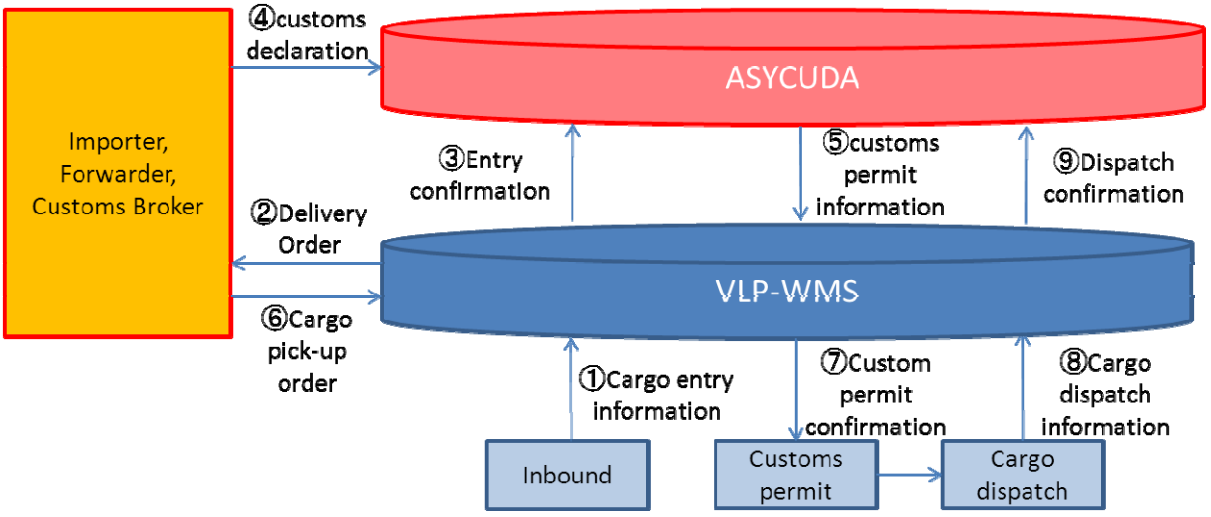
⑨ Immigration final check at Friendship Bridge.

4.4.3 Warehouse Management System (WMS)

Neither the direct delivery nor the container switching patterns is necessary for transshipment

operation. On the other hand, the cargo transshipment/storage pattern requires warehouse operation.

Considering the current low service standard of the Thanaleng Warehouse, providing qualified warehouse operation is a core competence for the VLP to achieve speedy, accurate and low-cost bonded cargo inventory service. Installing advanced WMS is indispensable for achieving this quality service while avoiding manual, time-consuming and useless operation. WMS is also effective for promoting data sharing among stakeholders (forwarders, customers, Customs and the VLP), and data linkage declaration information and cargo information (see Figure 4.11).



Source: JICA Study Team.

Figure 4.11 Date Linkage of ASYCUDA and WMS

4.4.4 Tariff

The VLP revenue simulation adopts the current Thanaleng tariff system which is authorized by the government. A review of the tariff rates is scheduled every five years; the latest one was implemented in 2009, with no revision done in 2014. In addition to the basic tariff rate, collecting additional charges and service charge are admitted. This is an important practice for the VLP because revenue is adjustable by changing service charges when the inflation/deflation rate fluctuates.

In addition, making the tariff system user-friendly is also desirable because the current system is so detailed but large parts remain unused.

4.5 Operational Issues

Considering the feasibility of the VLP operation, the following issues should be taken into account.

4.5.1 Data Linkage Intra-Customs

The transport permit number issued by the Friendship Bridge Customs Office is not linked with the actual declaration number. This makes it difficult to link declaration data and vehicle/cargo information.

4.5.2 Cooperation with ASYCUDA

A technical review is necessary for data sharing with ASYCUDA. In particular, the linkage of truck information, customs information and cargo information is critical. Based on global standards, it is normal to break loaded cargo information down to actual importer basis. Lao PDR should consider adopting such practice. For instance, customs declaration data can link to cargo information being linked with branch number of truck number.

4.5.3 Collaboration with Forwarders

Ideally, inputting cargo/truck information should be implemented by forwarders because they know the details of cargo and importer characteristics. However, it is different in reality. Data is inputted by Customs based on verbal information from forwarders. This is a primitive method. Additionally, inputted information is not shared with the Thanaleng Warehouse.

Information technology (IT) development is insufficient in the forwarding industry, making information sharing by IT network not feasible. Thus, more appropriate methods and tools should be considered to achieve data sharing. As an alternative, there may be a possibility that the VLP becomes the one that enters and stores the data on behalf of forwarders. Data sharing is so critical that identifying the bottleneck and considering solutions are important tasks. To do this, a support project by JICA is desired. A roadmap for data sharing implementation should be prepared before the VLP opening.

4.5.4 Promoting data sharing project

It is desirable to formulate data sharing protocol before VLP opening. If not, the service standard remains current level. In order to do that, following steps are taken it into account.

① Agreement for operation flow of VLP among stakeholders.

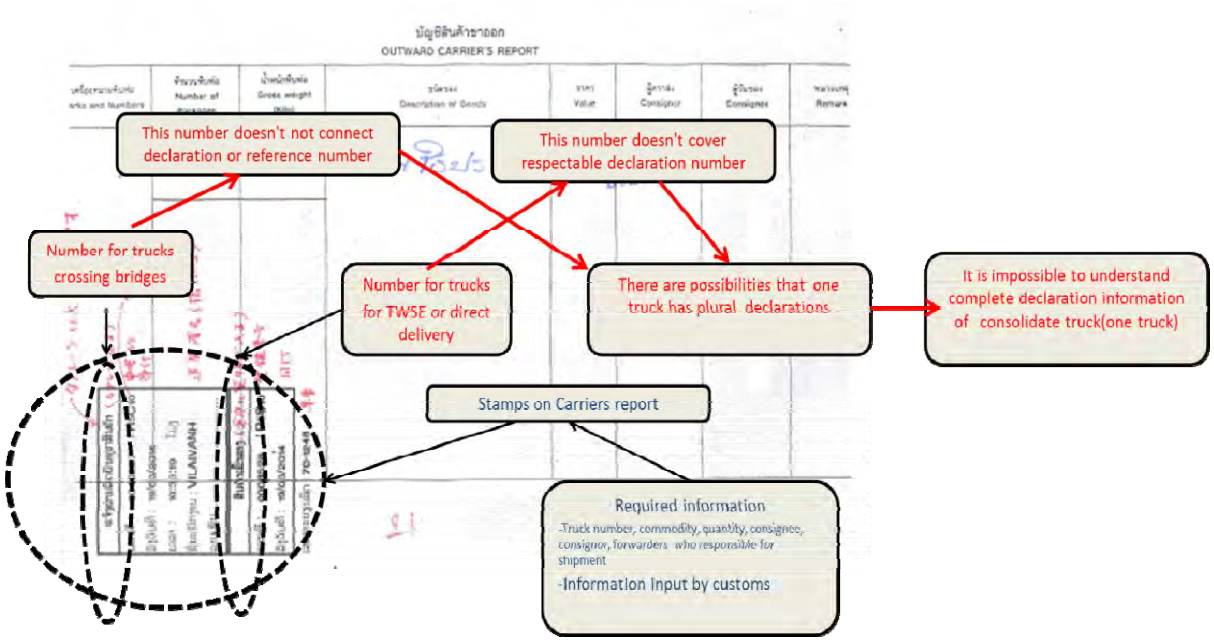
② Designation what information should be shared, who is responsible for data input, and what device is utilized for data transmission.

③ Formulating legal background.

④ Technical assistant for connecting ASYUCDA and VLP system.

⑤ Human resource development and training.

An examination of the truck document (Carrier's Report in Lao PDR) reveals the current status that data sharing is not achieved (see Figure 4.12).



Source: JICA Study Team.

Figure 4.12 Information in Carrier's Report and Comments

Chapter 5 Physical Development Plan

5.1 Location and Physical Conditions

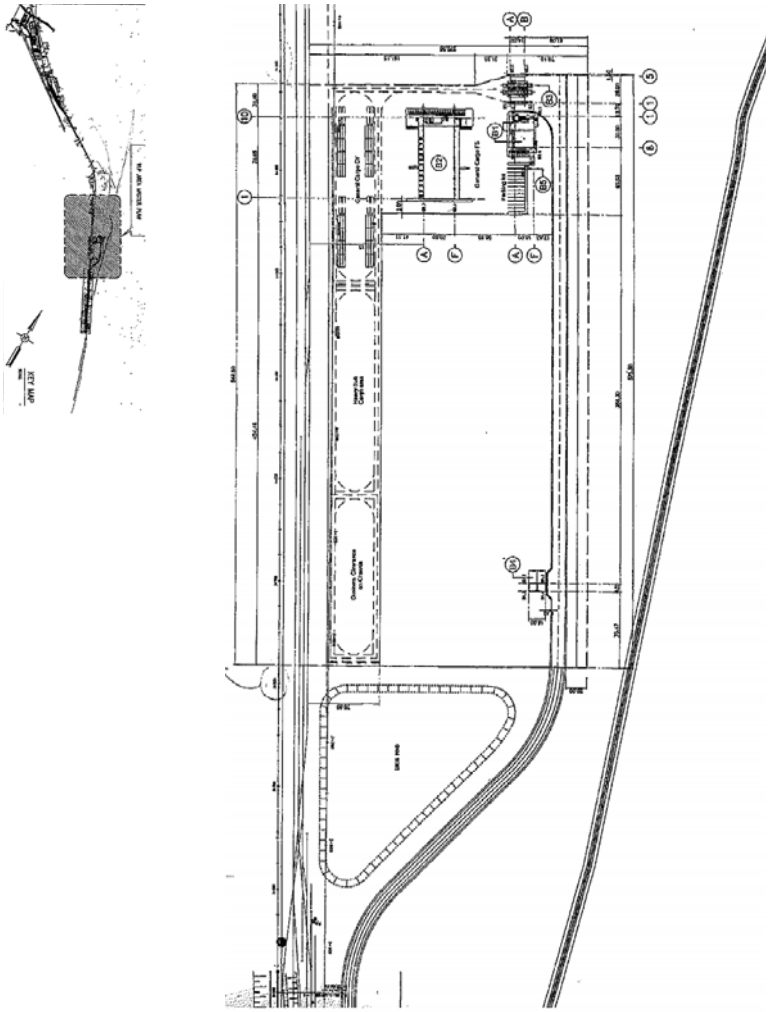
5.1.1 Selection of the Project Site

In parallel with the JICA feasibility study (2011) on which this survey is based, a survey on a planned railway extension to Vientiane Station was conducted with the support of the Thai Government. The survey included not only a new Vientiane Station plan but also a container yard (CY) plan for handling rail freight (see Figure 5.1). For this reason, the JICA and Thai survey teams made adjustments and discussed the integration of the CY planned by Thailand into the VLP Project.

The VLP was planned to be developed with the assistance of the Japanese Government, but the plan was not realized for various reasons. As a result, the Lao Government decided to construct a part of the VLP with the assistance of the Thai Government and NEDA. This is NEDA's ongoing CY project.

The development consists of the CY (including warehouses), railroad siding, an access road to the CY, renovation of the signal and communication systems of Thanaleng Station, an office building for the Railroad Bureau, and a retention basin. Construction started in October 2013 and was to be completed in March 2015. However, the completion was extended to July 2015 due to a moratorium on external assistance caused by a coup in Thailand.

It is possible to select another site for the VLP in this survey, but there is no need to construct two CYs for rail freight in the same area. Under normal circumstances, an appropriate site should have been re-selected in this survey, but it is impossible to do so because the CY is already under construction. The 2011 JICA study proposed that Alternative B (this survey's project site) was deemed to be more suitable as the location of the VLP since it was more advantageous in terms of accessibility, flexibility for future expansion, and project cost. Thus, Alternative B was selected as the most suitable location of the VLP (see Figure 5.2 and Table 5.1).



Source: JICA Study Team.

Figure 5.1 CY Layout by NEDA

Source: JICA, "The Comprehensive Study on Logistics System in Lao PDR," 2011.

Figure 5.2 Alternative Sites for Development of the VLP

Table 5.1 Comparison of Proposed VLP Sites in the Vientiane Capital

Items	A: Southwest Side of the Thanaleng Station	B: Around the Thanaleng Station (Xaysetha)	C: Vientiane Station Present Status: Planned (Xaysetha)	D: Inside the Planned Industrial Park (Xaysetha)
Overall Evaluation and Major Constraints	3rd Priority	1st Priority	4th Priority	2nd Priority
Technical Constraints	Less flexibility for future expansion.	Least constraints.	Implementation schedule is dependent on the railway project.	Implementation schedule is dependent on the industrial park project Inconvenience of railway connection.
Environmental Constraints	• Large-scale landfill of swamp and/or lowland areas. • Impacts on Dongphosy Forest Reserve (VLP). • Water quality degradation of nearby surface /sub-surface water. • Ground subsidence at the VLP. • Land acquisition for feeder railway line.	• Impacts on Dongphosy Forest Reserve (VLP). • Treatment of construction waste during construction period. • Water quality degradation of nearby surface/ sub-surface water. • Land acquisition for the VLP.	• Ground subsidence at the VLP. • Land acquisition for the VLP and access road. • Worsened regional drainage due to construction of the VLP foundation and long-distance embankment for access roads and/or railway extension.	• Land acquisition for feeder railway line extension. • Worsened regional drainage due to construction of long-distance embankment for feeder railway line extension. • Soil erosion due to railway extension. • Large-scale landfill of swamp and/or lowland areas.
Cost	Higher cost	Least cost	Higher cost	Higher cost

Source: JICA, The Comprehensive Study on Logistics System in Lao PDR, 2011.

5.1.2 Topography and Geography

The VLP is proposed along the railway line near the Thanaleng Station. The project site of the VLP is located at Hadxaifong District in the eastern part of the Vientiane Capital and a part of the Dongphosy Forest Reserve. Regarding the topographic survey, it is proposed to be located in the hilly place with the highest elevation of 178 m and lowest elevation of 165 m. The benchmark elevation of the VLP is 171 m. The CY development area by NEDA rises by 300 mm in comparison with the main line. This benchmark is the same level as the CY.

Boring and geography survey was undertaken at three points of 20 m in length at the project site. The results of the survey show that the ground is in good condition, the base rock layer exists up to 16 m deep, and the clayey sand layer exists from 6-16 m deep. There are no problems in constructing the VLP. Meanwhile, the physical construction will need another boring and geography survey again.

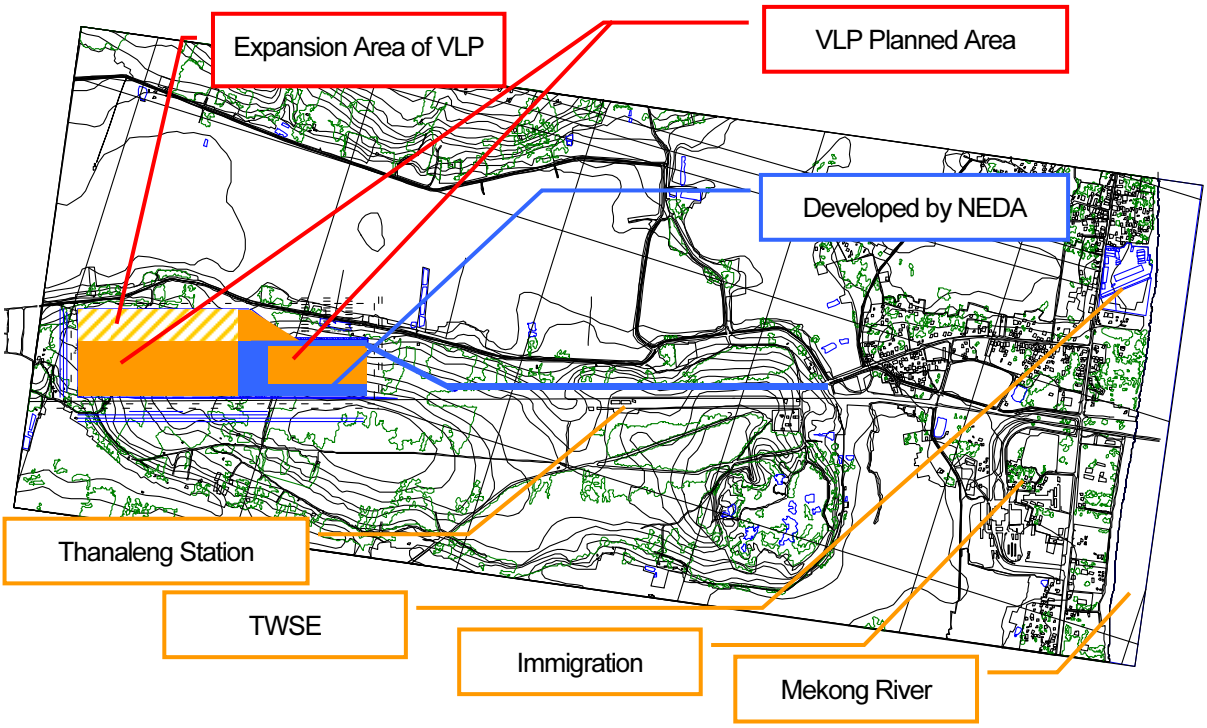
5.1.3 Surrounding Area

The VLP project site is just at the northern area of the existing Thanaleng Station (see Figure 5.3). The area is currently undergoing the CY development project by NEDA. There are cross-border facilities such as the Friendship Bridge, Immigration and the Thanaleng Warehouse State Enterprise (TWSE) along the Mekong River and National Road No. 1. The Lao Government plans industrial

development along the 450 Year Road on the north side of the Thanaleng Warehouse.

The existing major access road to the VLP is the access road to the Thanaleng Station and the tentative road for the CY construction work, which connects to the National Road No. 1.

There are small local roads to connect the area with the northern villages, but these roads are not suitable alignment for operation of the VLP.



Source: JICA Study Team.

Figure 5.3 Location of VLP Project

5.2 Layout Concept

The preconditions of the VLP layout concept are as follows:

- The VLP development should harmonize with the CY development and part of the access road developed by the CY project.
- As a first phase, the cargo handling capacity of the VLP is assumed to be the cargo volume of the year 2027, which is 10 years after starting the business operation of the VLP. Furthermore, the cargo handling capacity of the VLP in the second phase will be the cargo volume of the year 2032, after 15 years of business operation.
- The freezing and refrigeration storage for a cold-chain formulation will be installed as one of the VLP facilities.
- In regard to imported vehicles handling, the existing bounded area operated by TWSE will be

used due to the limited area of the VLP.

- Two gates of the VLP with vehicle registration system will be built along with dedicated access roads; one is specialized for international transport vehicles, and the other is specialized for domestic distribution vehicles.
- All imported cargos will pass through the VLP; therefore, the VLP should have a customs clearance office in the area.
- The VLP should include a parking lot space for on-board customs clearance.
- The VLP should include sufficient car parking lots to mitigate traffic congestion on the National Road No. 1, which is caused by roadside parking of the trucks from Thailand including on-board customs clearance.
- The apron in front of the warehouse will be developed with the aim of banning driver's incursion into the public warehouse.
- The turning radius of the trailer would be considered for the area way in front of the warehouse apron.

5.3 Land Preparation Plan

The VLP will be developed in two phases. The 2nd Phase of the VLP will be developed 10 years after the 1st Phase operation. However, the entire land covering the 1st and 2nd phases of development shall be prepared during the 1st phase construction even though there will be no building in this phase. Land preparation of the VLP harmonizes with the CY area of NEDA. Therefore, it is necessary to adjust the construction level.

The elevation of the VLP site is 170.8 m. To arrange the land with this elevation, earthwork (cut and fill) has to be done. Table 5.2 shows the projected volume of earthwork required.

Table 5.2 Volume of Earth Work

Unit: m^3

Items	Volume
Cut Soil and Moved Soil	470,000
Backfill Soil	140,000
Stock Soil	130,000
Disposal Soil	200,000

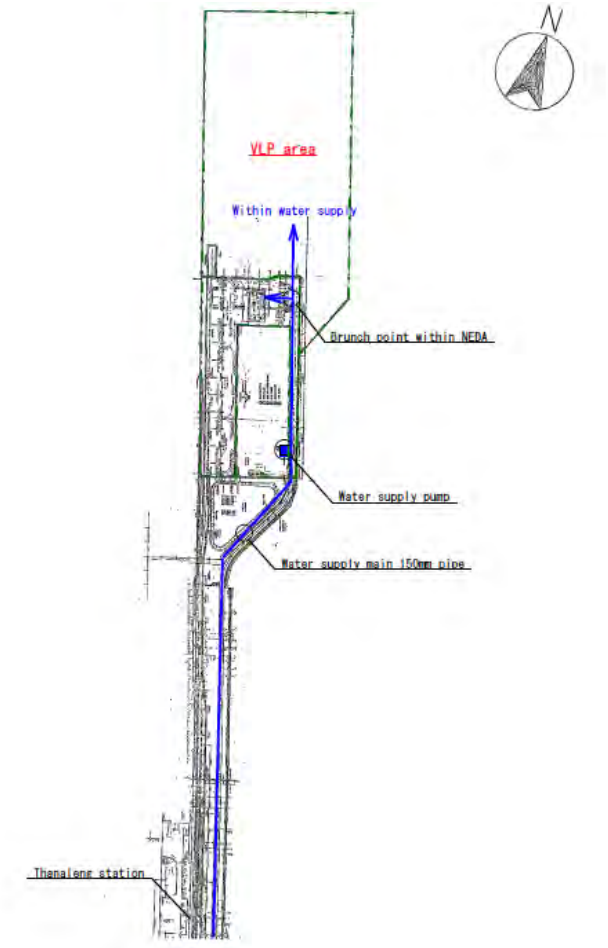
Source: JICA Study Team.

5.4 Utility Plan

5.4.1 Water Supply

As a state-owned water supply company, Nam Papa Nakholuang (NPN) has five water treatment plants and supplies water to the whole Vientiane area. The Chinaimo plant is located at the neighboring the Thanaleng Warehouse with 80,000/day treatment capacity and a 150 mm branch is laid along the eastern road of the Thanaleng Station and reaches the NEDA development area through the Salakham reservoir pond and the Thanaleng Station (see Figure 5.4). Distribution is from the main 300 mm pipe laid along the National Road No. 1. The daily supply capacity to the VLP area is estimated 800 m3, which can satisfy demand for the VLP.

The current water supply is planned within the NEDA development area, and a distribution plan is necessary for supplying the VLP area.



Source: JICA Study Team.

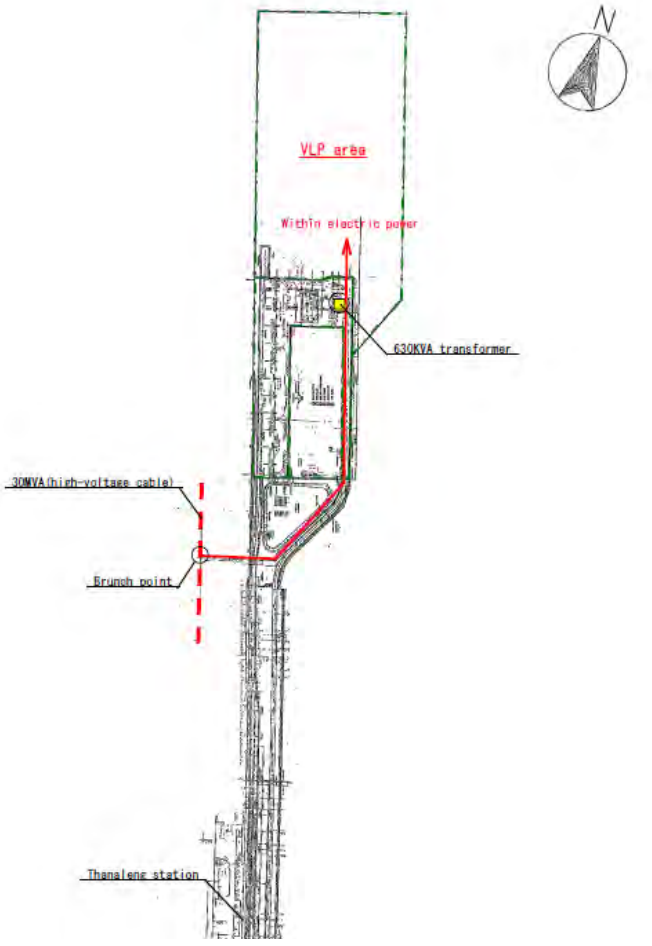
Figure 5.4 Water Supply for the VLP

5.4.2 Electricity

EDL built a 30 MKKVA high voltage line along with North-South Mountain Road across the Dongphosy Forest Reserve. The line branches out at the southeast point of the reserved pond and directly extends to Thanaleng Station. The transformer from 22kv to 400/200V is installed at the Thanaleng Station.

Currently, electricity is planned to be supplied to buildings within the development area by NEDA from a 630kva transformer. Electricity to the area is supplied from this transformer.

As for the VLP, a branch line from the high voltage line is necessary for the electricity demand of cold storage warehouses (see Figure 5.5). Considering the electricity supply to the VLP facilities, branching from a high voltage line seems adequate to meet the needs of the cold storage facilities in the VLP.



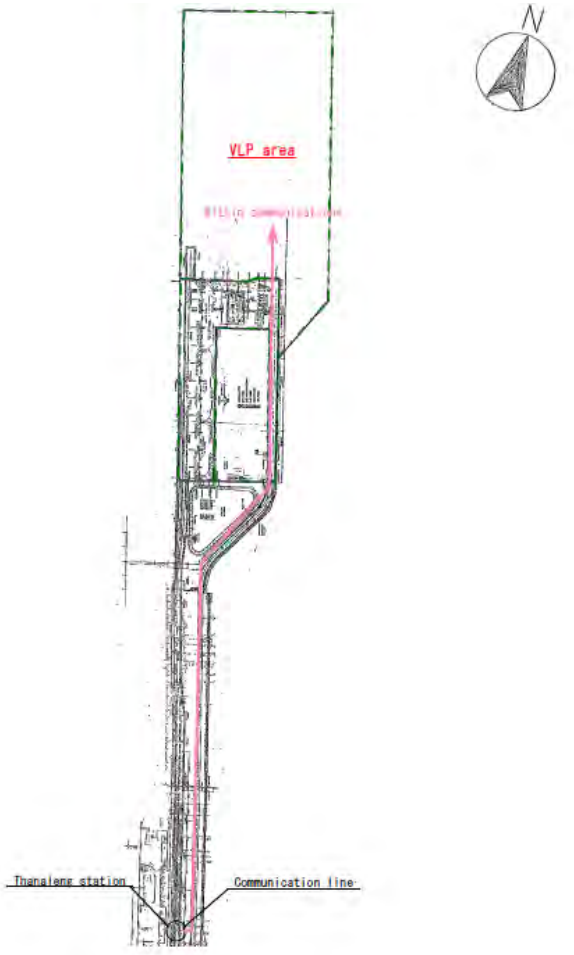
Source: JICA Study Team.

Figure 5.5 Distribution of Electricity for the VLP

5.4.3 Telecommunications

The telephone and internet lines are already constructed up to the Thanaleng Warehouse and the Thanaleng Station by Enterprise Telecommunication Lao (ETL). It is practical for the VLP to use the existing communication line to the Thanaleng Station.

The development area by NEDA plans to extend the telecommunication lines to their area so that the VLP has two ways to connect: one is branching from the development area by NEDA, and the other is branching from the Thanaleng Station (see Figure 5.6).



Source: JICA Study Team.

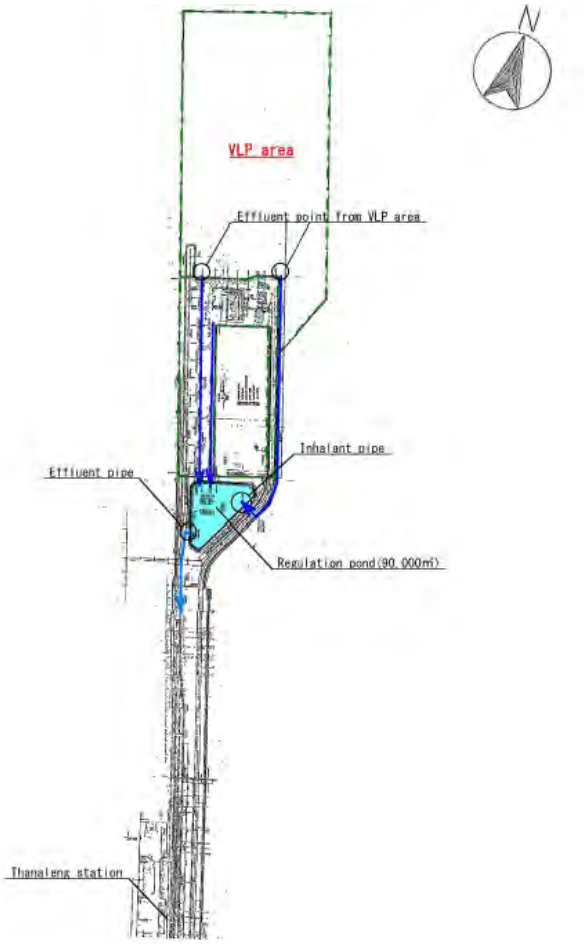
Figure 5.6 Distribution of Telecommunications for the VLP

5.4.4 Drainage

All rainwater, miscellaneous water and wastewater are eligible for discharging to a reserved pond which is constructed at the southern part of the VLP, with a capacity of 90,000 m3 (see Figure 5.7). Miscellaneous/ Waste water is not industrial drainage, so it is recommended to store them in septic tanks and to discharge to the rainwater drainage system after the drainage level falls below the

reference level.

Since all drainage systems in the development area by NEDA are planned to be constructed up to July 2015, the VLP drainage will be eligible for accessing this system. As a result, the VLP becomes eligible to discharge its drainage water to the reserved pond.



Source: JICA Study Team.

Figure 5.7 Drainage from the VLP

The capacity of the reserved pond can be confirmed with the Rational Method for calculating water volume, as follows:

Rational method for: Q=1/3.6.frA

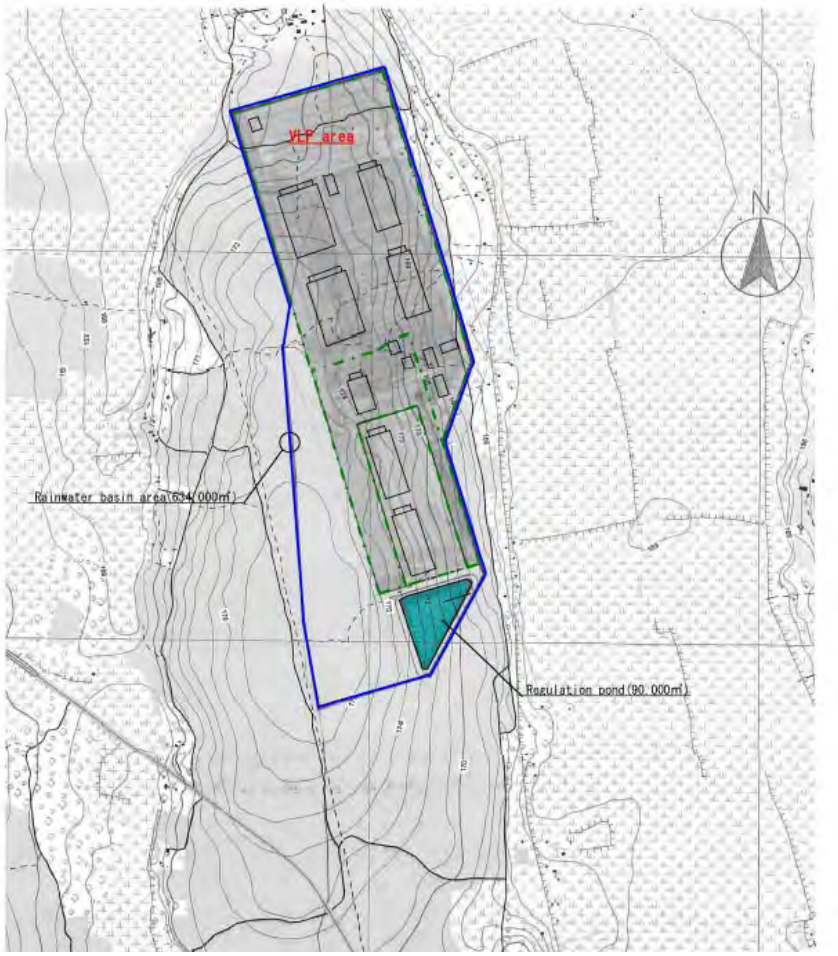
where r: peak rain amount,
f: discharge coefficient,
A: size of catchment area, and
Q: peak discharge volume.

The peak rain amount (r) is assumed to be 50 mm/h, taking into account showers in the rainy season

in the Vientiane area. The discharge coefficient (f) is assumed 0.9, taking into account the pavement and surface conditions. The size of the catchment area is 0.634 km2 , as shown in Figure 5.8.

As a result, Q is calculated as 28,530 m3/h (Q＝1/3.6*0.9*50*0.634*60*60＝28,530 m3/h).

In the case of a two-hour rain, Q is calculated as 570,060 m3/2h. Thus, it is concluded that the current 90,000 m3 capacity is enough.



Source: JICA Study Team.

Figure 5.8　Catchment Area of the VLP

5.4.5 Fire Protection Equipment Plan

It is possible to connect firefighting water pipes with the existing underground pipes (150φ), but additional pumps will need to be installed if the water pressure is insufficient.

The buildings (both warehouses and office buildings) being constructed by NEDA are equipped with sprinklers. Currently, however, Lao PDR has no construction standards (such as the Building Standard Law and Fire Service Act of Japan) and the installation of sprinklers depends on the

decision of the developers. At present, the plan includes firewalls in accordance with the Building Standard Law of Japan but sprinklers are not included.

Only the height limit and the setback are confirmed in the application for building permission. There is no particular problem in this regard in the current plan.

5.5 Layout Plan

5.5.1 Warehouse

Table 5.3 shows the warehouse development area by cargo type based on the data analysis of inbound and outbound cargo at the Thanaleng Warehouse.

In regard to cargo handling, the JICA Study Team proposes that one-day cargo would be put on the ground, and the other cargoes would be put on the pallet rack.

Currently, frozen/cold storage warehouses are rarely used at the Thanaleng Warehouse. It is uncertain if all cargo that would pass through the VLP would use these facilities, although there will be demand in the future. In particular, frozen/cold storage warehouses entail high construction, running, and maintenance costs including electricity. The initial construction plan was designed so that the VLP would have enough cargo storage area for approximately five years from its operational start. The plan intended to expand the area to meet demand. In the VLP layout, therefore, some of the normal temperature warehouses are designed for possible expansion in the future.

Table 5.3 Future Demand of Warehouse Scale

Unit: m^2

	2018	2019	2020	2021	2022	2027	2032	2037	2042
Total	26,468	28,230	30,119	32,149	34,334	44,842	67,561	89,207	126,756
Dry Area	23,918	25,488	27,173	28,982	30,930	40,297	60,550	79,850	113,321
Refrigerator Area	2,031	2,184	2,346	2,522	2,712	3,620	5,586	7,457	10,706
Freezer Area	519	559	600	645	693	924	1,424	1,899	2,729

Source: JICA Study Team.

Table 5.4 below shows the anticipated use of warehouse space in the future by fiscal year. Two warehouses will be used in the first fiscal year, while the third warehouse will be used in the fourth year. However, it will take seven years until the three warehouses become full. The fourth warehouse will be left unused if four warehouses are constructed in the initial stage of construction. Rental of warehouse space is also included in the scope of the VLP services, so the plan is designed to use the fourth warehouse for tenants to increase income.

Table 5.4 Future Demand for Floor Space of Warehouses

Year		倉庫別使用率					
		Warehouse-3	Warehouse-4	Warehouse-5	Warehouse-6	Warehouse-1	Warehouse-2
1	2018	100%	59%				
2	2019	100%	73%				
3	2020	100%	89%				
4	2021	100%	100%	34%			
5	2022	100%	100%	57%			
6	2023	100%	100%	82%			
7	2024	100%	100%	100%	8%		
8	2025	100%	100%	100%	37%		
9	2026	100%	100%	100%	68%		
10	2027	100%	100%	100%	100%	1%	
11	2028	100%	100%	100%	100%	36%	
12	2029	100%	100%	100%	100%	74%	
13	2030	100%	100%	100%	100%	100%	15%
14	2031	100%	100%	100%	100%	100%	59%
15	2032	100%	100%	100%	100%	100%	106%

Source: JICA Study Team.

5.5.2 Equipment Plan

Table 5.5 shows the estimated number of required cargo handling machines based on the future cargo volume and the productivity index by cargo handling machine.

Currently, forklifts are rarely used for loading/unloading at the Thanaleng Warehouse, except for loading/unloading of heavy articles. For the VLP, loading/unloading by forklifts is planned, and training will be provided to forklift operators before the VLP starts its operation. Therefore, productivity is likely to be higher than that obtained in trial calculations. In the actual VLP operation, the increased productivity will be taken into consideration in the loading/unloading equipment layout.

Table 5.5 Future Demand for Cargo Handling Machines

Unit: number of forklift trucks

	2018	2019	2020	2021	2022	2027	2032	2037	2042
Forklift (Counterbalanced)	6	6	7	7	8	11	11	11	11
Forklift (2.5 t Reach Type)	8	8	9	10	10	15	15	15	15
Forklift (2.0 t Reach Type)	9	9	10	10	11	16	16	16	16
Total	23	23	26	27	29	42	42	42	42

Source: JICA Study Team.

5.5.3 Imported Vehicle Parking Lot

The required parking area for imported vehicles is estimated based on the difference between the daily average of inbound and outbound vehicles (see Table 5.6).

It is planned that imported vehicles will be stored at the existing Thanaleng Warehouse parking lot.

Table 5.6 Future Demand of Imported Vehicle Parking Lot

Unit: m^2

	2018	2019	2020	2021	2022	2027	2032	2037	2042
Total Storage Area	47,462	49,973	52,686	55,571	58,650	78,044	105,923	145,893	203,324
Vehicle (Auto Bike) area	1,568	1,686	1,811	1,947	2,094	3,005	4,314	6,192	8,889
Vehicle (Heavy equipment) area	562	562	562	562	562	562	562	562	562
Vehicle (Sedan) area	25,521	27,440	29,487	31,697	34,088	48,922	70,222	100,814	144,737
Vehicle (Truck) area	6,284	6,757	7,297	7,838	8,378	12,027	17,297	24,797	35,608
Vehicle (Van) area	13,528	13,528	13,528	13,528	13,528	13,528	13,528	13,528	13,528

Source: JICA Study Team.

5.5.4 Truck Parking Lot Plan

Table 5.7 shows the demand for the truck parking lot at the VLP, which is estimated based on the future cargo volume.

Unloaded trucks returning to Thailand will directly go to the Immigration office at the Friendship Bridge.

Table 5.7 Future Demand of Truck Parking Lot

Unit: number of trucks/day

			2018	2019	2020	2021	2022	2027	2032	2037	2042
In bound	Customs Clearance on Chassis(Tax exemption)	Operating time	8	8	8	8	8	8	8	8	8
		Processing time	1	1	1	1	1	1	1	1	1
		No. of Parking lots	38	40	41	42	44	53	66	86	106
	Customs Clearance on Chassis(Taxation)	Operating time	8	8	8	8	8	8	8	8	8
		Processing time	3	3	3	3	3	2	2	2	2
		No. of Parking lots	59	61	65	71	75	69	97	137	181
	Inbound for Warehouse	Operating time	8	8	8	8	8	8	8	8	8
		Processing time	1	1	1	1	1	1	1	1	1
		No. of Parking lots	17	19	20	21	22	31	44	62	83
Out bound	Customs Clearance on Chassis	Operating time	8	8	8	8	8	8	8	8	8
		Processing time	1	1	1	1	1	1	1	1	1
		No. of Parking lots	24	24	24	25	25	28	33	39	46
	Outbound Truck for Warehouse	Operating time	8	8	8	8	8	8	8	8	8
		Processing time	1	1	1	1	1	1	1	1	1
		No. of Parking lots	34	36	38	41	44	60	83	117	154
Total			134	140	147	158	166	188	257	355	464

Source: JICA Study Team.

5.6 Overall Layout of the VLP

5.6.1 Development Area

Based on the above discussion, the total area required for development of the VLP is summarized in Table 5.8.

Table 5.8 Development Area of the VLP

Items		Area		Remarks
Total Development Area		440,991	m^2	
・Development Area for VLP		359,962	m^2	
・Development Area for NEDA		81,029	m^2	
Before 2026 1st Phase (35 ha)	Total area	259,122	m^2	
	Building Area	78,120	m^2	Except warehouse's canopy and NEDA's warehouse.
	・Warehouse-1	18,000	m^2	Single story.
	・Warehouse-2	18,000	m^2	Warehouse-2 includes refrigerator and freezer area of 4,500m^2, and scalable area is 1,500m^2 after 2026.
	・Warehouse-3	10,800	m^2	Single story.
	・Warehouse-4	10,800	m^2	Single story.
	・Warehouse's canopy	11,520	m^2	
	・SPC office	2,000	m^2	Double-story, gloss floor area.
	・Customs office	2,000	m^2	Double-story, gloss floor area.
	・Warehouse office	1,600	m^2	Single story.
	・Workshop	1,000	m^2	Single story.
	・Canteen	1,000	m^2	Single story.
	・Gate	1,200	m^2	Gate has two locations (each 600 m^2): one is in the VLP, and another one is near the north of Thanaleng.
	・Rest house	200	m^2	For truck driver, only roof.
	Exterior of Buildings	181,002	m^2	
After 2026 2nd Phase (10 ha)	Total Expansion Area	103,440	m^2	
	Building Area	27,960	m^2	
	・Warehouse-5	10,800	m^2	Single story.
	・Warehouse-6	10,800	m^2	Single story.
	・Warehouse's canopy	5,760	m^2	
	・Warehouse office	600	m^2	Single story.
	Exterior of Buildings	75,480	m^2	

Source: JICA Study Team.

5.6.2 Overall Layout

An overall layout of the VLP is also illustrated in Figure 5.9.

The Thanaleng Warehouse cannot increase its handling volume due to old facilities and limited space. At the VLP, therefore, facilities were laid out in two phases so that expansion will be possible to meet the cargo handling needs in the future. The first phase is designed for handling the cargo volume during the first 10 years from the operational start, while the second phase is designed for the

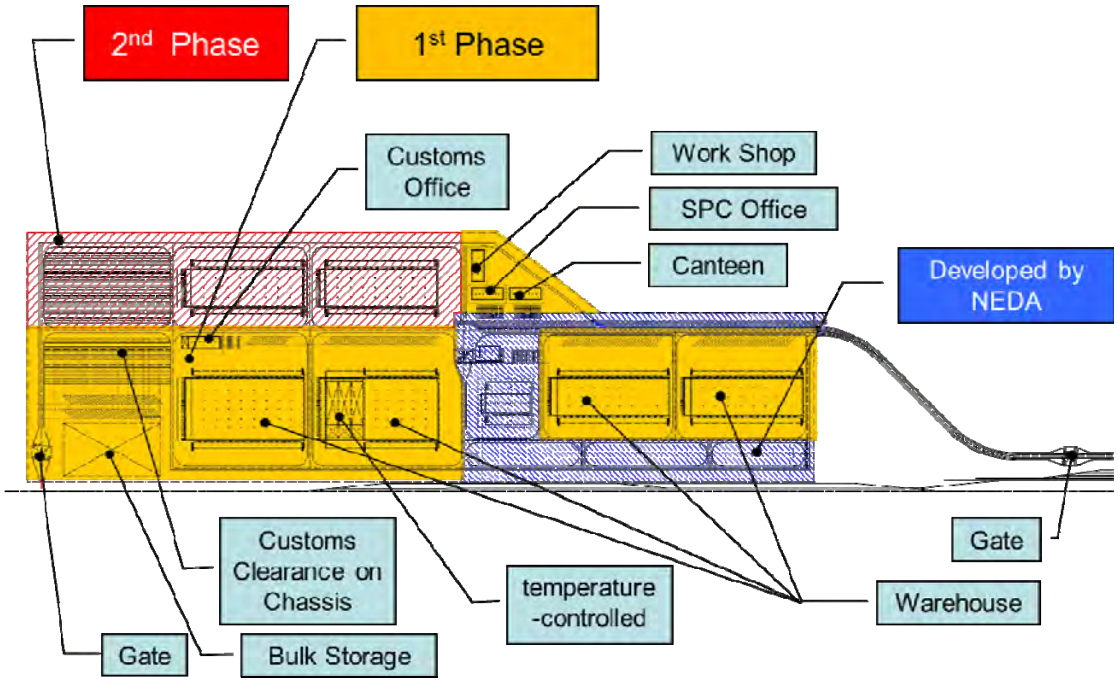
first 15 years.

The first phase includes a customs office, warehouses, bulk storage area, an area for customs clearance on chassis, VLP-SPC office, canteen, maintenance workshop, and gates, which are required for the VLP operation. The customs office is placed next to the area for customs clearance on chassis to facilitate collaboration. Frozen/cold storage warehouses will be built on the assumption that the frozen/refrigerated cargo handling volume will increase in the future.

Currently, trucks run on public roads from the First Friendship Bridge to the Thanaleng Warehouse, as described earlier. All import trucks will be able to reach the VLP without using public roads once the VLP is connected with the Friendship Bridge via an exclusive road. Accordingly, import trucks are supposed to run on the exclusive road leading to the VLP after passing through the immigration checkpoint on the First Friendship Bridge, pass through the gate shown at the bottom left of the overall layout, and move to the area for customs clearance on chassis or a warehouse. Import trucks which have completed customs clearance on chassis pass through the gate on the right without storing cargo in a warehouse, run on the exclusive road leading to 450 Year Road, and deliver cargo to domestic destinations. Import trucks which go to a warehouse to store cargo go to the warehouse designated in advance and unload cargo there. Then, the empty trucks leave the VLP from the same gate where they entered and go to the immigration checkpoint beside the First Friendship Bridge if they return to Thailand.

Trucks that come to warehouses to pick up cargo travel on 450 Year Road and the exclusive road to the VLP, pass through the gate on the right, and go to the warehouse. After loading cargo, they pass through the same gate and deliver cargo to domestic destinations. Export trucks pass through the same gate as pickup trucks, complete export customs clearance, pass through the left gate, and go to the immigration checkpoint beside the First Friendship Bridge.

The second phase is designed to meet the VLP's operational needs assumed in 10 or more years from the operational start. The operations will be adjusted to meet cargo demand. The present plan includes the construction of two warehouses in the expansion area.



Source: JICA Study Team.

Figure 5.9 Overall Layout of VLP Development Area

5.7 Construction Cost

The Project cost consists of the construction cost, survey cost, application cost, utilities cost, administration cost, consultants cost and contingency cost (see Table 5.9). The VLP Project will entail a total project cost of USD51.7 million.

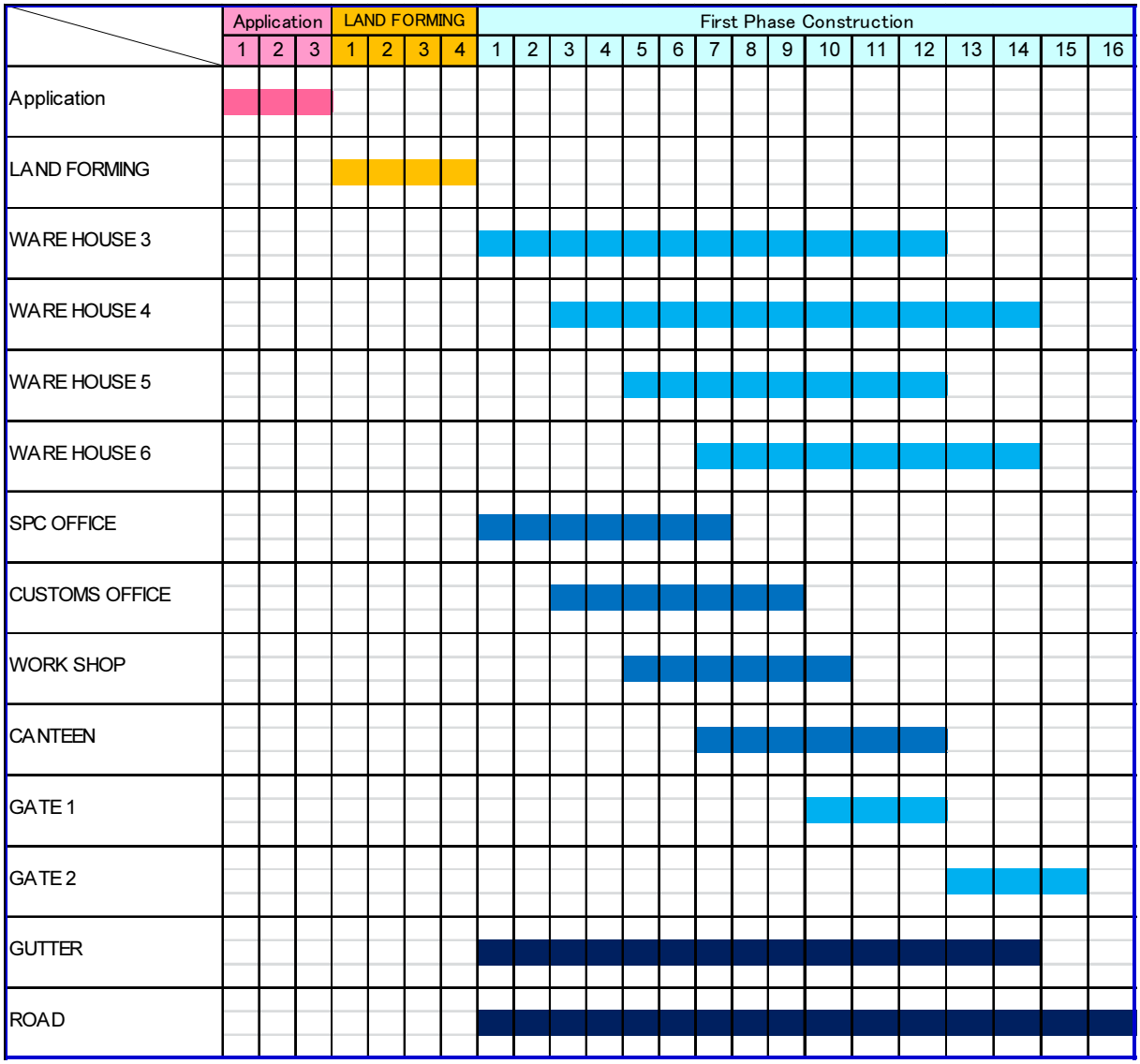
Table 5.9 VLP Project Cost

Items			Amount		Remarks
Construction Cost			45,027,415	USD	
	Building Works		28,944,533	USD	
		Warehouse	23,952,015	USD	
		Office	3,129,836	USD	
		Canteen	654,662	USD	
		Workshop	899,177	USD	
		Gate	308,843	USD	
	Road Works		10,154,952.00	USD	Including general facilities such as fences, outdoor lamps and rainwater drainage.
	Expense		5,927,930	USD	
		Field expense	1,794,000	USD	
		Temporary construction cost	727,272	USD	
		Common cost	3,406,658	USD	
Land Preparation Works			3,407,000	USD	
Others			3,287,384	USD	
	Survey Cost		74,000	USD	
	Application Cost		428,000	USD	
	Utilities Cost		1,043,389	USD	
		Electricity	504,189	USD	
		Water supply/Drainage	500,000	USD	
		Telecommunication	39,200	USD	
	Consultant Cost		435,499	USD	
	Contingency		1,306,496	USD	
Total			51,721,799	USD	

Source: JICA Study Team.

5.8 Construction Schedule

The Project will take three months for construction application, four months for land preparation, and 16 months for physical construction (see Table 5.10).



Source: JICA Study Team.

Figure 5.10 VLP Construction Schedule

Chapter 6 Implementation Plan

6.1 Business Scope

The business concept of the VLP will be basically the transfer of the business functions from the existing Thanaleng Warehouse. The VLP will provide more effective international logistics functions corresponding to the business needs of cargo owners, forwarders, customs brokers, etc., and whose functions will meet the requirements of a bilateral agreement between Lao PDR and Thailand in line with the realization of the ASEAN Economic Community (AEC).

The development scheme for the VLP will be undertaken through consultations between the Lao Government and the Japanese logistics company as premise for their joint establishment of a Special Purpose Company (SPC). Initially, the Lao Government would set up a dedicated committee consisting of the Ministry of Public Works and Transport (MPWT), Ministry of Finance (MOF), Ministry of Planning and Investment (MPI), Ministry of Public Security (MPS), Ministry of Industry and Commerce (MIC), and related stakeholder organizations. Then, the committee and the Japanese logistics company would cooperate to decide the terms and conditions of the VLP development and management scheme.

This Study will provide the basic information for realization of the VLP development and management under a Public-Private Initiative.

6.2 Implementation Scheme

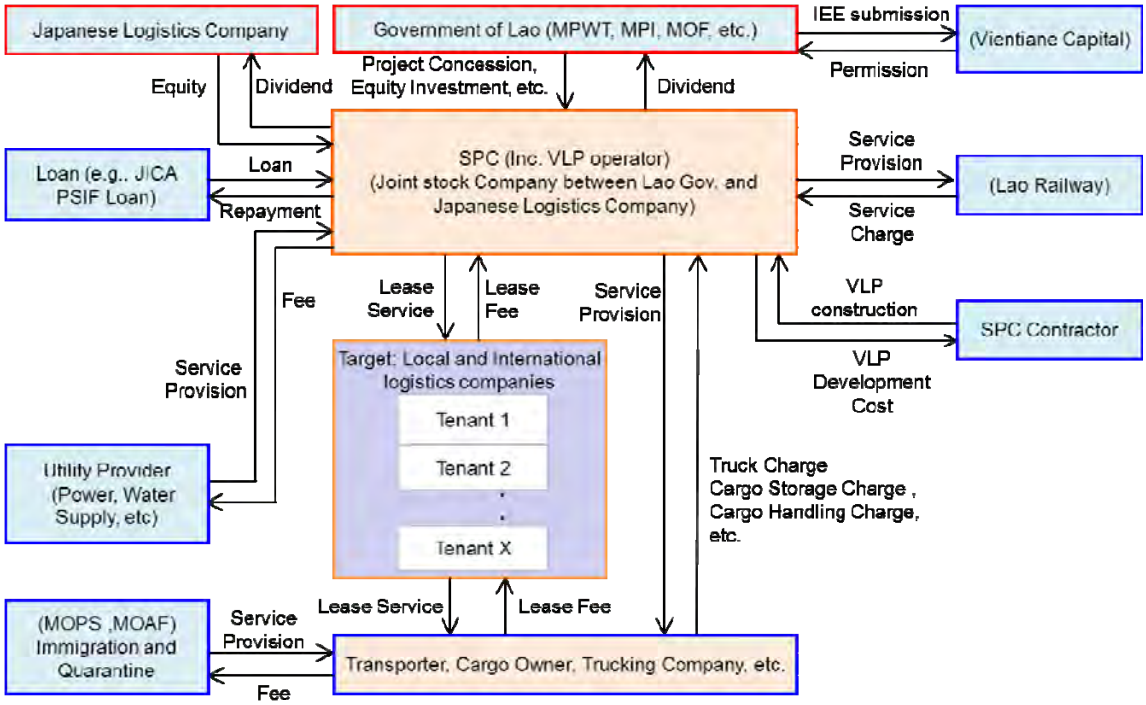
The VLP will serve several functions, including warehousing, Customs, Immigration and Quarantine (CIQ), transshipment, warehouse management system, etc. It will be a multi-modal logistics facility. Therefore, several stakeholders will be participating in the implementation of the VLP business (see Table 6.1).

Figure 6.1 shows an implementation structure of the VLP in terms of its development and its management based on the discussion among the concerned stakeholders. The SPC will be established as the entity responsible for development and management of this logistics facility.

Table 6.1 Role of Relevant Stakeholders

Stakeholder	Role
Japanese Logistics Company	The Japanese logistics company might be one of the promising candidates to establish the SPC for the VLP development and management in cooperation with the Lao Government.
Lao Government	The Lao Government might be one of the promising candidates to establish the SPC for the VLP development and management in cooperation with the Japanese logistics company.
JICA	JICA might be one of the promising candidates as a loan lending entity for the VLP development and management.
Vientiane Capital City	The Vientiane Capital City Government is the landowner of the VLP project site and is the provider of the IEE certificate.
Special Purpose Company	The SPC might be the VLP development and management entity founded by the Lao Government and the Japanese logistics company.
Lao State Railway	Lao State Railway is a state-owned company and is responsible for railway business management. The SPC would cooperate with Lao State Railway regarding railway cargo handling.
Tenants	Tenants, which would lease the space at the VLP from the SPC, might be some private companies.
Transporter (Inc. Cargo Owner)	The transporter might be a logistics company who uses the space as a VLP tenant.
CIQ Providers	CIQ providers are public service providers of CIQ services.
Utility Providers	Utility providers are service providers of power, water supply, sewage, telecommunication, etc.

Source: JICA Study Team.

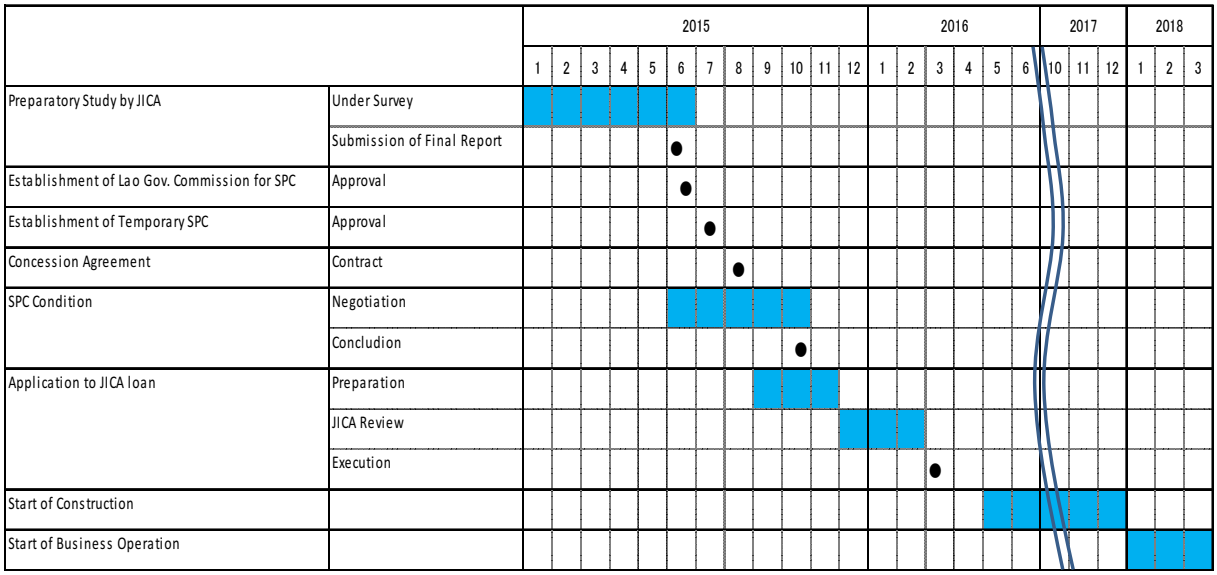


Source: JICA Study Team.

Figure 6.1 Implementation Structure

6.3 Implementation Schedule

Figure 6.2 shows an implementation schedule of the VLP development. Construction work will start in 2016 and the VLP business operation is expected to start in 2018.



Source: JICA Study Team.

Figure 6.2 Implementation Schedule for VLP Development

Chapter 7 Economic and Financial Analysis

This chapter is non-disclosure.

Chapter 8 Risk Evaluation

8.1 Risk Evaluation

The development and management of the VLP will be undertaken by the SPC that will be established based on an agreement between the Lao Government and the Japanese logistics company. The SPC will need to receive a business concession for the VLP business provided by the Ministry of Planning and Investment (MPI).

Risk allocation between the Lao Government and the Japanese logistics company should be examined appropriately before the start of the VLP business. Risk items in regard to the VLP development and management were identified and examined as to risk allocation from a public-private initiative viewpoint.

The Lao Government has recently developed the framework for a PPP law in Lao PDR, with support from the Asian Development Bank (ADB). The PPP law will include measures on risk allocation between public and private stakeholders in PPP projects. However, it remains unclear if the PPP law will cover the VLP project or not.

In the case of the Wattay Airport, the international airport was established by an SPC consisting of the Lao Government and Japanese affiliated companies (JALUX and TOYOTA TUSHO), and the SPC has been managing the airport. There are some differences between the airport project in the past and the VLP project in the future. For example, the airport had been developed by Japanese ODA as a grant project, and the Lao Government holds a major stake in the SPC.

The risk allocation regarding the organizational structure, capital contribution ratio, management scheme, etc. between the Lao Government and the Japanese logistics company would be discussed through a roundtable among the concerned parties. The Lao Government plans to establish a dedicated committee for the establishment of the VLP SPC within 2015.

This chapter discusses the concept of risk allocation from the viewpoint of public-private initiative, and presumes that the private company would hold a major stake of the SPC at the same time.

Seven items were selected as business risk of the VLP, namely: (1) sponsor's risk, (2) construction risk, (3) revenue risk, (4) O&M risk, (5) social and environmental risk, (6) related infrastructure risk, and (7) others including interest rate, exchange rate, inflation, etc.

8.1.1 Sponsor's Risk

(1) Concession Agreement

The Ministry of Planning and Investment (MPI) holds the right to review and approve a concession agreement based on the Investment Promotion Law in consultation with the Ministry of Public Works and Transport (MPWT) as the supervisory agency for the VLP development and management. Therefore, the risk of concession acquisition might be little because MPWT would be one of the stakeholders and a driving force of the VLP development.

In December 2014, the PPP law was approved by the National Congress and has been passed by the Office of the Prime Minister. If the PPP law would be activated right now and the VLP development concession would become a target project under the PPP law, it would be possible to tender the project for international bidding. Table 8.1 shows the current condition, action and compensation, and involved agencies in the concession agreement of the VLP.

Table 8.1 Risk of Concession Agreement

Item	Content
Current Condition	• MPI, who has the right to review and approve the submission of concession of the VLP, and MPWT, who is main stakeholder of the VLP, will hold a negotiation discussion about the VLP development and management. • In 2015, there is a possibility to activate the new PPP law in Lao PDR, but the accurate timing of the law's activation could not be fixed yet. If the law takes effect within 2015, the international tender for the project would be held.
Action and Compensation	• Early establishment of the SPC between the Lao Government and the Japanese logistics company as development entities of the VLP. • To launch consultations regarding the Concession Agreement between MPI and MPWT. • To exclude the VLP project as target of the PPP law.
Involved Agency	MPI, MPWT

Source: JICA Study Team.

(2) Establishment of SPC as VLP Management Entity

There has not been any prior example of a public warehouse with foreign capital or a Joint Venture between foreign investors and the Lao Government. In the case of Wattay Airport, the Lao Government has played a major role in airport management because it has held a major stake in the SPC as a management body. In addition, Japanese ODA had developed the airport under a grant project.

The VLP development and management will be conducted by the SPC among involved stakeholders, and the Japanese logistics company will have a major role in this as a major stakeholder of the SPC. Business risk of the VLP will decrease, in comparison to a purely private investment, if the VLP business would receive public support from the Lao Government.

However, there would be obstacles to be hurdled in establishing the development and management

body of the VLP because there has been no prior experience of this kind. The establishment of the SPC under a PPP scheme can be pointed out as a first major obstacle. The first step of the SPC establishment is the organization of a dedicated committee by the Lao Government, who has the right to negotiate with a private company as a business partner. The chairperson and members of the committee will be selected through a roundtable negotiation among the involved ministries. The prospectus regarding the SPC establishment will be submitted to the Office of the Prime Minister, and the dedicated committee will be established through the Prime Minister's endorsement. If the consultation between both entities could not arrive at a consensus, the SPC could not be established. There are many steps to establish the SPC.

In a meeting with the Vice Minister of MPWT, the JICA Study Team had a common understanding about the challenges that must be resolved for the establishment of the SPC. MPWT intends to further discuss issues after the establishment of the committee by the Lao Government.

Table 8.2 shows the current condition, action and compensation, and involved agencies in the establishment of the SPC.

Table 8.2 Risk of SPC Establishment

Item	Content
Current Condition	・ If Lao Government would support the VLP business, the business risk might decrease. ・ There are many steps to establish the SPC as a development and management body of the VLP.
Action and Compensation	・ To ask the Government for early establishment of the SPC. ・ To draw up an MOU in regard to public support, advantageous incentive, related compensation for business risk mitigation with the committee. ・ To secure a commitment for joint financing for the SPC. ・ To make clear the evaluation method of land value provided by the Lao Government as an investment in kind. ・ To reach a consensus in regard to dealing with a railway container yard by NEDA.
Involved Agency	PMO, MPWT

Source: JICA Study Team.

(3) Collaboration with Stakeholders

The Japanese logistics company had individual meetings with stakeholders, including the Customs Department of the Ministry of Finance (MOF) and the Lao International Freight Forwarders Association (LIFFA), regarding the functions and cargo handling flow of the VLP as well as the shared recognition of the advantage of and need for the VLP.

The stakeholders also agreed that as a facility responsible for Lao PDR's logistics, it is essential to construct the VLP as a highly functional facility to expand the logistics functions that are at par with international standards considering Lao PDR's membership to the AEC.

In particular, it is important to consult and work towards the future establishment and implementation of a reliable tax collection system by data link between the VLP and ASYCUDA.

(4) Evaluation Method of Railway Container Yard

Consultations are needed for dealing with the ongoing development of the railway container yard and administration building supported by NEDA. These might be completed within 2015. The Lao Government hopes for the integrated management of the facility whereby the SPC would manage NEDA's development components as well. Two realistic alternatives are examined, as follows:

a) The SPC would own the development facilities as assets; or

b) The SPC would borrow the development facilities from the Lao Government (as Lao State Railway).

The SPC might be apprehensive that the Lao Government would request it to repay the discharge of the development facilities to NEDA (as Thai Government) because the Lao Government might put the development facilities as the stake of the SPC in case of alternative (a) above. In this case, it is necessary to discuss whether paying back from CY revenue is available. In addition, NEDA has done a combination support of 30% grant and 70% loan, so the 70% loan might be added in as a stake of the SPC. Meanwhile, in the beginning of the VLP business the development facilities might not generate income in case of alternative (b).

Table 8.3 shows the current condition, action and compensation, and involved agencies in regard to the railway container yard.

Table 8.3 Risk of Railway Container Yard

Item	Content
Current Condition	• There is no evaluation method for the assets of the development facilities by NEDA.
Action and Compensation	• SPC would manage the railway container yard integrally. • To agree with Lao Government about dealing with the development facilities by NEDA.
Involved Agency	PMO, MPWT

Source: JICA Study Team.

8.1.2 Construction Risk

The Study Team has had several quotations based on the specifications corresponding to the basic plan of the VLP from four Japanese contractors with much experience in logistics warehouse development in Asia. The Japanese contractor may benefit from the experience of the development facilities (e.g., railway container yard, sliding railway, administration building, and leveling) constructed with NEDA support and scheduled for completion in July 2015.

The Japanese contractor is presumed to be an engineering, procurement and construction (EPC) contractor of the VLP development. Being typically large enterprises, the financial capability of EPC contractors should be of no consequence. However, the VLP development cost of Japanese contractors is more expensive (about 1.5 to 2 times as much) than Thai contractors in general.

Therefore, the high development cost might become a negative influence to business revenue.

This following section discusses the construction cost, construction term, connectivity of NEDA's development part, and financial capability of the EPC contractor.

(1) Construction Cost

The development cost of the VLP must be fixed when the SPC would contract with the selected EPC contractor after the regular procedure of contractor selection because the SPC must stipulate the amount and terms of payment in US dollar. Table 8.4 presents the risk in construction.

Table 8.4 Construction Risk

Item	Content
Current Condition	• Construction risk for fluctuation of exchange rate, increase in raw material and labor cost, etc.
Action and Compensation	• To confirm several contractors beforehand. • To stipulate the dollar-denominated expense for VLP development cost. • To transfer all risks in regard to the VLP construction to the selected contractor.
Involved Agency	–

Source: JICA Study Team.

(2) Construction Term

If the SPC would select a Japanese company as EPC contractor of the VLP, the risk of construction term would be reduced but construction cost would be more expensive than a Thai contractor.

On the other hand, if the SPC would have a Thai company as EPC contractor of the VLP, the risk of construction cost would be reduced especially in the beginning of the business, but the construction term would increase the instability risk. Allocating an additional construction control technician might be effective in decreasing the risk of construction term.

Table 8.5 shows the risk in the construction term.

Table 8.5 Risk of Construction Term

Item	Content
Current Condition	• Risk of construction term for increased cost stemming from construction delay.
Action and Compensation	• To confirm several contractors beforehand. • To stipulate the dollar-denominated expense for the VLP development cost. • To transfer all risk in regard to the VLP construction to the selected contractor.
Involved Agency	–

Source: JICA Study Team.

(3) Financial Capability of EPC Contractor

It could be judged that the financial capability to perform of the EPC contractor would be positive because the Japanese contractors whom the SPC will identify as a VLP contractor would be a richly-experienced company of large business scale. On the other hand, several reliable contractors

in Thailand are also being requested for preliminary cost estimation of the VLP construction. The risk of financial capability of the EPC contractor to perform might be low because the contractors in Thailand also have much experience in constructing logistics facilities in Asia.

Table 8.6 shows the risk involved in the financial capability of the EPC contractor.

Table 8.6 Risk of Financial Capability to Perform of EPC Contractor

Item	Content
Current Condition	・ Low risk for financial capability to perform of EPC contractor.
Action and Compensation	・ To select richly-experienced contractor. ・ To stipulate the defect liability in regard to financial capability to perform.
Involved Agency	MPWT, Lao Railway

Source: JICA Study Team.

(4) Coordination with Development Components by NEDA

The development area of the VLP covers the Thanaleng Railway Station, which has already been in operation, hence the utilities (e.g., water supply, power supply, and sewerage.) are also developed. In addition, the other facilities (e.g., railway container yard, administration building, sliding railway and access road) are under construction with the support of NEDA and would be completed in July 2015.

The VLP is planned to develop additional facilities (e.g., freezing and refrigerating equipment, and power plug of reefer containers) so more electric power would be needed. Therefore, the development of a power transmission cable between the neighboring substation and the VLP would also be needed. The construction cost in this study includes costs for these additional facilities.

The development plan of the VLP includes the area being currently developed by NEDA. The connectivity in regard to the utilities (e.g., power supply, water supply, sewerage, communication, fence, and truck gate) will need to be harmonized.

Table 8.7 shows the connectivity risk of the development components by NEDA.

Table 8.7 Connectivity Risk of the Development Components by NEDA

Item	Content
Current Condition	・ To confirm several aspects, e.g., the location of public warehouse, truck gate, fence, and traffic line of trucks in case of connection between the development components by NEDA and the VLP.
Action and Compensation	・ To consider additional alternatives of future expansion plan of the VLP according to future cargo demand by rail. ・ To draw up a basic consensus document.
Involved Agency	–

Source: JICA Study Team.

8.1.3 Revenue Risk

(1) Accuracy of Cargo Demand Forecast

The Study Team can use the current data acquired from the Customs Department and the TWSE under MOF for predicting cargo demand of the VLP. Both data, however, cannot be checked because the data sharing system between Customs and TWSE has not been installed yet. There is a need to reduce the risk of revenue volatility by improving the accuracy of cargo demand forecast.

With the ongoing construction of a railway container yard, the VLP would deal with railway cargo in the future. It is not clear, however, when the timing of the railway cargo would occur. Therefore, the revenue from railway cargo cannot be predicted. There is also the possibility of having idle facilities in the future.

Even if the accuracy of the cargo demand forecast could not be improved, there remains a possibility of revenue risk and the balance of cash flow would become unstable. If so, the development area of the VLP might be downsized.

Table 8.8 presents the risk involved in the accuracy of cargo demand forecast.

Table 8.8 Risk of Accuracy of Cargo Demand Forecast

Item	Content
Current Condition	• There might be a need to analyze more detailed cargo handling data to make a realistic business plan for the VLP. However, it is of no use due to the absence of a data-sharing system between Customs and TWSE. • It is not known when the railway cargo would occur in the future.
Action and Compensation	• To improve demand forecasting by installing a data-sharing system between Customs and the VLP. • To draw up a consent document regarding the installation of the data-sharing system. • To make a railway cargo development plan. • To reduce the development area of the VLP unless the accuracy of cargo demand forecast would be improved.
Involved Agency	MOF, MPWT, MOPS

Source: JICA Study Team.

(2) Fare System

A new fare system different from that of the existing warehouse managed by TWSE should be considered because the VLP also has a different service and revenue system. However, only a Presidential Decree can control the fare system because the public warehouse is equivalent to a public utility. Based on its survey, the JICA Study Team has confirmed that it might be possible to revise the fare system of the VLP because of its business peculiarities under a PPP scheme.

There should be an agreement between the Lao Government and the Japanese logistics company on the revision of the fare system through a roundtable between both entities. To make it more binding, it would be better to draw up a consensus document between both entities by way of risk

compensation.

Table 8.9 shows the risk involving the fare system.

Table 8.9 Risk of Fare System

Item	Content
Current Condition	• Revision of the fare system of public warehouse might have a huge effect on the revenue structure of the VLP. • The revision of the public warehouse fare system involves public authorization. • The appropriate revision of the fare system of the public warehouse due to wage price inflation is needed.
Action and Compensation	• To examine the formula of the fare system revision and the revision schedule. • To draw up a more binding consensus document between the Lao Government and the SPC of the VLP.
Involved Agency	MOF, MPWT

Source: JICA Study Team .

(3) Public Support from Lao Government

Appropriate public support from the Lao Government will play an important role in improving the business continuity of the VLP because the business scheme will be a PPP and the VLP business will be quasi-public work.

Table 8.10 shows the risk of presence of public support for the VLP.

Table 8.10 Risk of Public Support Presence

Item	Content
Current Condition	• Only the “Law on Investment Promotion” in Lao PDR has an effect on the development and management of the VLP. • New regulation and legal system for public support by Lao Government might be needed for sound management of the VLP.
Action and Compensation	• All public import cargo through the Friendship Bridge will be transacted as VLP handling cargo. • To establish a legal system for one-stop shop service in the VLP. • The Government can encourage logistics companies in Lao PDR to move to the VLP as tenants. • The Government can provide business tax exemption to the VLP business as a PPP project. • The Government can recognize the revision of the fare system of public warehouse of the VLP appropriately. • To draw up a consensus document between Lao Government and the SPC of the VLP.
Involved Agency	MPI, PMO, MPWT, MOF

Source: JICA Study Team.

(4) Competitors

1) Chinese Government and State Enterprises

In December 2014, the Chinese Government indicated its interest in logistics facilities development in Lao PDR, such as nine major border posts including the VLP development and management,

international bridges, and special economic zones. The Chinese Government also has a plan to develop an international railway in the Greater Mekong Sub region (GMS) including a leg between Kunming and Vientiane. According to a hearing investigation to the Lao Government officer by the JICA Study Team, the development site of a new railway station in Vientiane Capital City will be identified, although the Lao Government may not authorize a commitment yet.

The JICA Study Team has recommended that the new railway station in Vientiane Capital City should be required to specialize in passenger use and the VLP should focus on cargo handling functions because this functional differentiation can improve user-friendliness and investment efficiency by avoiding the overlapping of investment. The Lao Government officer has agreed to this proposal.

The Lao Government officer also expressed an opinion that “in the short term, the intention of the Chinese Government may be very attractive because of the short-term development; on the contrary, in the long term, the intention may be negative from the viewpoint of logistics management.”

The consultation between the dedicated committee to be organized by the Lao Government and the Japanese logistics company will be done before the establishment of the SPC of the VLP, and the issues including the Chinese Government's intentions would be dealt with through the roundtable. In addition, information management regarding the abovementioned issues (e.g., cargo demand forecast, result of cash flow analysis, and basic plan of relevant infrastructures) will also be undertaken.

Recent years have seen the aggressive investment activities of many Chinese enterprises in Lao PDR. At the same time, the influence of the Chinese Government has reached the Lao Government gradually.

2) Government of Thailand and Private Operators

In 2014, the Thai and Lao Governments closed a loan agreement for a railway extension project from the Thanaleng station to a new planned Vientiane station located at a point far north of the Thanaleng station. If the planned Vientiane station would install a public warehouse facility like the VLP in Vientiane Capital City, a competitive relationship between the two stations could occur in the future. However, it has not yet been decided what kind of functions the new station will have. If two public warehouse facilities in a narrow area would be developed at once, many unfavorable things (e.g., user-unfriendliness and overlapping investment) could result.

The Thai Government also has a plan to develop a cargo terminal near its border with Lao PDR. As this would directly compete with the VLP, it may be recommended for the Lao Government to raise this issue with the Thai Government in intergovernmental talks of the AEC.

Table 8.11 presents the risk of competition facing the VLP.

Table 8.11 Competitor's Risk

Item	Content
Current Condition	• Both the Chinese and Thai Governments have indicated their intentions to develop the VLP. • There remains a possibility to develop another public warehouse near the VLP location.
Action and Compensation	• To reach a deal with the Lao Government to prohibit providing another license for a public warehouse near the VLP. • To concentrate all international cargo by rail in the VLP. • To develop a legal system regarding the abovementioned actions. • To draw up a consensus document between the Lao Government and the SPC.
Involved Agency	MPI, PMO, MOIC, MPWT

Source: JICA Study Team.

8.1.4 O&M Risk

(1) Operator of Railway Container Yard

Two realistic alternatives in regard to operation of the railway container yard can be considered. One is to entrust it to a Thai private operator who has asked the Lao Government to manage the railway container yard through NEDA. The other is to have it managed by the SPC of the VLP. If the railway container yard would be entrusted to the Thai private operator, a consignment contract between the SPC and Thai private operator would be needed.

MPWT has indicated its intention to get a realistic solution through consultations between the dedicated committee organized by the Lao Government and the Japanese logistics company.

Table 8.12 shows the risk of the railway cargo.

Table 8.12 Risk of Railway Cargo

Item	Content
Current Condition	• A railway container yard is being developed near Thanaleng station and will be completed in July 2015. • The railway container yard has less potential of railway cargo demand in the short and medium terms.
Action and Compensation	• To draw up a consensus document between Lao Government and the SPC. • To promote major shipping lines in Leam Chabang port in Thailand to move to the VLP as tenants.
Involved Agency	MPWT, Lao Railway

Source: JICA Study Team.

(2) One-Stop Service of Customs

Following the international standard procedure of customs, all international cargo are first carried to a public warehouse in a bonded area, then the cargo must be registered with customs, and lastly the taxes on the cargo must be imposed there. There is a high possibility of tax leakage cargo through

the Friendship Bridge because the cargo without customs clearance procedure could be carried from the bridge not only to the Thanaleng Warehouse but also to its final destination.

There is a need to monitor all international cargo from the bottom up through the establishment of a data sharing system among Immigration, Customs and the VLP. The data sharing system should be promoted integrally with the policy of border post improvement as part of realizing the AEC among the GMS countries.

Table 8.13 presents the risk involving the one-stop customs service.

Table 8.13 Risk of One-Stop Service of Customs

Item	Content
Current Condition	• There are so many human errors in the process of customs clearance by ASYCUDA because the declarant does the typing of information directly. • No checking between truck number and goods in imported cargo. • There exists a high possibility of tax leakage without monitoring of cargo tracking from cargo entry to final destination.
Action and Compensation	• To install the data sharing system between the VLP, Customs at Friendship Bridge and freight forwarders. • To install an advanced warehouse management system by the Japanese logistics company as a business partner. • To identify the data entry operator and the data entry machine. • To move the government office complex near the Friendship Bridge to the VLP site.
Involved Agency	MPWT, MOF, MOPS, MOAF, LIFFA

Source: JICA Study Team.

(3) Technical Operation Ability

The Japanese logistics company is a global logistics company that has a network all over the world and is an excellent company in all operations. Its overseas warehouses have over 200 million square meters of total area and it has developed a sophisticated operation in many countries.

In addition, the company has received an Authorized Economic Operator (AEO) certification as its operator's system of security management and compliance of the cargo has been developed in international logistics. It holds a Customs Trade Partner Against Terrorism (C-TPAT) for Warehouse certification in many countries and is doing warehouse management.

The business operations of the VLP will take advantage of the experience and international standard service capability of the company and will benefit from the planned institutionalization of an efficient warehouse management system (WMS) with the introduction of their own IT systems.

To efficiently implement the Japanese logistics proprietary WMS, it is important to accord the SPC administrative responsibilities and privileges in the Japanese logistics company.

The SPC may provide re-employment opportunities to the entire staff and workers in the existing warehouse under the MOF who would want to continue working in the VLP under the SPC. There

are several reasons justifying the installation of IT systems in the VLP instead of using the existing manual procedure, such as avoiding living anxiety of the existing staff and workers, trouble-free business transfer from the existing warehouse to the VLP, and cost economy of education investment.

On the other hand, the provision of re-employment opportunities would become a chargeable cost at the beginning of the VLP business from the viewpoint of VLP management. The SPC should examine the implementation approach for the installation of the IT system for inventory control, the establishment of the education program, etc., in the transaction period from the existing warehouse to the VLP based on a detailed analysis of the existing in-house procedures and management method.

A training course on the installation of the advanced inventory control system may be needed. The training course may be customized for the VLP usage and it might be better to conduct the evaluation of the training program, implementation, and monitoring. The entire cost of the training program development, implementation and evaluation would be estimated separately.

Table 8.14 shows the risk pertaining to the technical operation capability of the SPC.

Table 8.14 Risk of Technical Operation Capability

Item	Content
Current Condition	• The identified Japanese logistics company has a global network of international logistics in the whole world and provides logistics service at international standard level. • Provision of technical training to officers and workers in the VLP will be needed.
Action and Compensation	• To conduct technical transfer from the Japanese logistics company to staff and workers in the VLP. • To develop a workforce training program. • To set aside an implementation budget for workforce training.
Involved Agency	MPWT

Source: JICA Study Team.

(4) Financial Capability

The Japanese logistics company is one of the major logistics companies in Japan and the risk of financial capability might be little (see Table 8.15).

Table 8.15 Risk of Financial Ability

Item	Content
Current Condition	• Japanese logistics company has a sound financial capability as a partner in the SPC.
Action and Compensation	• To set up appropriate capital contribution ratio based on the technical and management responsibilities.
Involved Agency	MPWT

Source: JICA Study Team.

8.1.5 Social and Environmental Risk

(1) IEE Procedure of VLP

MPWT, as a counterpart of this study, has submitted the Initial Environmental Examination (IEE) report to DoNRE in December 2014. After DoNRE had finalized and approved the IEE report, it issued to MPWT the Environmental Compliance Certificate (ECC) in February 2015.

The next step is for the dedicated steering committee organized by the MPWT and DoNRE to undertake the environment-related process which includes the conduct of several meetings to explain to local residents, field survey, compensation survey, negotiation of land acquisition, etc. The IEE report includes the cost estimation of land compensation based on a pre-survey.

Table 8.16 summarizes the risks involved in the IEE procedure of the VLP.

Table 8.16 Risk of IEE Procedure of VLP

Item	Content
Current Condition	・ MPWT has already obtained the ECC from DoNRE in February 2015. ・ The first meeting to explain the project including the cost estimation of land compensation to local residents has already been done.
Action and Compensation	・ To continue monitoring the post-IEE procedure.
Involved Agency	MPWT, DONRE (Vientiane Capital)

Source: JICA Study Team.

(2) IEE Procedure of NEDA Development Area

In regard to the IEE procedure of the NEDA development area, the IEE report covering both the NEDA development area and the VLP development area has already been submitted and the ECC has been received in February 2015 (see Table 8.17).

Table 8.17 Risk of IEE Procedure of NEDA Development Area

Item	Content
Current Condition	・ MPWT has already gotten the ECC from DoNRE in February 2015.
Action and Compensation	・ To continue monitoring the post-IEE procedure.
Involved Agency	MPWT, DoNRE（Vientiane Capital）

Source: JICA Study Team.

(3) Land Acquisition

Vientiane Capital City owns the land in the VLP development area, while the Lao Railway State Company under MPWT has the right of its use. The NEDA development assets, including the railway container yard, administration building, etc., belong to MPWT. In regard to the land acquisition for the VLP development, the risk of land acquisition may be low because the compensation procedure for local residents is already planned (see Table 8.18).

Meanwhile, an agenda regarding the expansion area due to increasing cargo demand in the future was under discussion in February 2015. Acquisition of the land for the expansion area should be completed early because the land leveling of the expansion area has to be done during the first phase development.

Table 8.18 Risk of Land Acquisition

Item	Content
Current Condition	• Vientiane Capital City is landowner of the first development area of the VLP. • The assets of railway facilities belong to MPWT. • The agenda of land acquisition for the expansion area is under discussion between MPWT and Vientiane Capital City.
Action and Compensation	• Lao Government should provide a right to use the land of the VLP development area as an investment in-kind in the SPC. • Lao Government should set up the dedicated committee, and then the committee should conduct a field survey, a cost estimation of land compensation, and should start negotiating with local residents in the expansion area as soon as possible.
Involved Agency	MPWT, Vientiane Capital City

Source: JICA Study Team.

8.1.6 Related Infrastructure

(1) Access Road

Trucks and goods loaded as imported cargo, which is carried to Vientiane, are first checked by the customs officer at the gate of the Friendship Bridge. Then the cargo is supposed to be sorted and divided into two categories: one is for the Thanaleng Warehouse and the other is for its final destination in Vientiane. However, tracking of imported cargo through the Friendship Bridge cannot be done because the data sharing system between Immigration and Customs at the gate and the Thanaleng Warehouse has not yet been installed. Therefore, it cannot be checked which imported cargo goes to the Thanaleng Warehouse or to its final Vientiane destination. This results in the possibility of import tax leakage (see Table 8.19) which has negative implications on the national budget of Lao PDR.

It will be useful to develop a dedicated access road between the national borders to the VLP. This will have spillover effects such as the mitigation of traffic congestion in Vientiane Capital City and promotion of manufacturing activity in the neighboring areas of the VLP. The Government of Vientiane Capital City has banned cargo trucks on some specific roads in the city. Inducing the access of imported cargo into the VLP by means of a dedicated access road may contribute to the mitigation of the heavy traffic congestion in Vientiane. In addition, the VLP with a dedicated access road would become more efficient and cost-effective than the VLP without such access, and the access road development is expected to contribute to the promotion of manufacturing activity in the neighboring area of the VLP, especially along the 450 Year Road.

Table 8.19 Risk of Dedicated Access Road Development

Item	Content
Current Condition	• Because the current access road to the VLP is a local road, it might be dangerous for local residents along the local road. • Traffic congestion has been worsening over the years. • There might be a possibility of import tax leakage. • The access road development might contribute to industry accumulation in the neighboring areas of the VLP, especially along 450 Year Road.
Action and Compensation	• To develop a dedicated access road to the VLP for the prevention of import tax leakage, mitigation of traffic congestion, stimulation of industries, etc.
Involved Agency	MPWT, MOF, Vientiane Capital City

Source: JICA Study Team.

(2) Utilization of Existing Facilities in Thanaleng

The logistics function of the existing public warehouse in Thanaleng is planned to be transferred to the VLP after completion of the VLP construction. It has not been decided yet how to use the empty lot in Thanaleng after the VLP development (see Table 8.20).

Table 8.20 Risk of Utilization of the Existing Facilities in Thanaleng

Item	Content
Current Condition	• Utilization plan of the empty lot in Thanaleng is yet to be determined.
Action and Compensation	• To utilize the empty lot as an interim storage of imported cars after the VLP development.
Involved Agency	MOF

Source: JICA Study Team.

(3) Business Relocation Plan

It is necessary to make a detailed and concrete plan of business relocation from the existing warehouse to the VLP to effect a smooth change without disrupting daily business operation.

Based on experience, the business relocation would be better undertaken within an appropriate time (from three months to half a year) gradually without any trouble in the daily business operation.

Table 8.21 shows the risk involved in business relocation of the VLP.

Table 8.21 Risk of Business Relocation Plan

Item	Content
Current Condition	• Ex-Minister of MPWT has approved the business relocation plan from the existing warehouse to the VLP after the VLP development. • There is no concrete plan for business relocation.
Action and Compensation	• To make a relocation plan and an implementation plan. • To draw up a consensus document for the business relocation plan.
Involved Agency	MOF

Source: JICA Study Team.

8.1.7 Other Risks

(1) Interest Rate Fluctuation

No risk of interest rate fluctuation is expected to occur because a loan principal of the VLP development is supposed to be the Private Sector Investment Finance (PSIF) provided by JICA, which carries a fixed lending rate of interest.

If the SPC of the VLP would get a short bridge financing from a local commercial bank, the interest rate might be more than 10% in the short term.

Table 8.22 presents the risk on interest rate fluctuation of the VLP development financing.

Table 8.22 Risk of Interest Rate Fluctuation

Item	Content
Current Condition	• Assuming the SPC would get finance for VLP development. • The loan interest rate of the PSIF is a fixed rate. • Getting a short bridge financing from a local commercial bank, the short-term rate might be high.
Action and Compensation	• Lao PDR has no market of interest rate swap transition. If the SPC would get a short bridge financing on a local currency basis from a local bank, a risk of interest rate fluctuation might occur. Therefore, the Japanese logistics company should draw up a consensus document regarding a risk of interest rate fluctuation with the committee organized by the Lao Government during the SPC establishment.
Involved Agency	MOF

Source: JICA Study Team.

(2) Exchange Rate Fluctuation

The exchange rate of the Lao Kip (LAK) to the US dollar (USD) has trended in the same way as the exchange rate of the LAK to the Thai Baht (THB) over the long term. When the value of the THB to USD greatly fell in 1997, the LAK exchange rate also decreased. In 1998, the Lao Government had a fund for public works spending on loan from the Lao Central Bank and, consequently, the LAK to USD exchange rate has slumped to one out of nine in two years. After 2005, the LAK to USD exchange rate in tandem with the THB has increased to around LAK8,000 to USD1 and has transitioned stably. The SPC should monitor the condition of the national budget annually to avoid the risk of exchange rate fluctuation.

In recent years, the exchange rate of the Japanese Yen (JPY) to USD substantially fell by more than 15% specifically from December 2013 to December 2014. Therefore, the construction cost on a yen basis had increased to 15% and over. Because the fluctuation of the exchange rate will impact on the cost on yen basis, the exchange rate fluctuation is one of major risk factors for the construction cost of the VLP (see Table 8.23).

A major part of the revenue would be in USD, and the remaining small portion would be in LAK and

THB. Considering the recent trend in JPY to USD exchange rate, it might be better to get a loan on a dollar basis from JICA instead of a yen loan to avoid the risk of exchange rate fluctuation. If salary and benefit of staff and workers in the VLP would be on a dollar basis, the risk of exchange rate fluctuation would be avoided from the viewpoint of VLP management.

Table 8.23 Risk of Exchange Rate Fluctuation

Item	Content
Current Condition	・ Major currency of revenue of the VLP is supposed to be US dollar. ・ The exchange rate of Lao Kip to US dollar had a great fall because the Lao Government has borrowed a huge fund for public works spending from the Central Bank.
Action and Compensation	・ To get a PSIF loan on a dollar basis from JICA. ・ To stipulate a warranty clause in Government Guarantee Undertaking for provision of public support in case of loss stemming from exchange rate fluctuation. ・ To continue monitoring the financial condition of the central government budget.
Involved Agency	MOF

Source: JICA Study Team.

(3) Price Escalation

Price escalation might have an adverse impact on the balance of payment due to an increase of costs, e.g., workers' wages, staff wages, utilities and daily procurement. (see Table 8.24). After 2000, the Lao economy has maintained a low level of inflation rate, especially after 2010, with the rate averaging 5.4% annually.

Table 8.24 Risk of Price Escalation

Item	Content
Current Condition	・ Lao economy has maintained a low level of interest rate after year 2000. ・ Especially after 2010, the rate is kept at an average of 5.4% annually.
Action and Compensation	・ To draw up a consensus document in regard to revision of public warehouse rate according to price escalation in Lao PDR.
Involved Agency	MOF

Source: JICA Study Team.

(4) Natural Disaster

The risk of natural disasters would decrease due to the progress of urban and industrial infrastructures development in Lao PDR. There have been little symptoms of natural disaster risk in the area (see Table 8.25).

Table 8.25 Risk of Natural Disaster

Item	Content
Current Condition	• There is little symptom in regard to natural disaster.
Action and Compensation	• To consider natural disaster insurance. • To make compensation for public purchasing of the VLP assets in case of being hard-hit by natural disasters.
Involved Agency	MOF

Source: JICA Study Team.

(5) Political Risk

The Lao economy is currently maintaining a sound economic growth, at 8% annually, despite several unstable factors such as lean foreign currency stock and increasing external debt. The driving force of the Lao economy is its resource sector including natural resource development, hydropower development, etc. In addition, the service sector (e.g., hotel service, catering, and transportation.) has been expanding mainly due to the increase in foreign tourists. There is less risk from the political viewpoint (see Table 8.26). However, it is necessary to continue monitoring the handling of the national economy, especially the national budget.

Table 8.26 Political Risk

Item	Content
Current Condition	• There is less risk in regard to the political aspect.
Action and Compensation	• To add a contract clause in the MOU and concession agreement on the VLP development and management if disadvantage will occur corresponding to the change of legal system and the national policy, etc.
Involved Agency	MPI, MPWT, PMO

Source: JICA Study Team.

(6) PPP Law

The Office of the Prime Minister has authorized the PPP law after its approval by the Congress in December 2014. If the PPP law without detailed rules would be activated, there might be a possibility of enforcement of international bidding in the case of PPP projects covered by the law. According to some government officials, the Chinese and Thai Governments have an intention to participate in the VLP development and management. If the international bidding would take place, the Chinese and Thai Government might participate in the bidding. Therefore, it is not certain if the Japanese logistics company would get the concession of VLP development and management (see Table 8.27).

Table 8.27 Risk of PPP Law

Item	Content
Current Condition	• PPP law, which development was supported by ADB, might be activated in 2015. • The PPP law has not covered any project as of January 2015.
Action and Compensation	• Lao Government to declare that the VLP development and management would be excluded from the PPP law.
Involved Agency	MPI, MPWT, PMO

Source: JICA Study Team.

8.2 Security Package

8.2.1 Overview

A security package is defined as a mechanism of surety accession. In general, surety accession includes: (1) a securement of successive business by taking a leading position with the surety accession, and (2) a rejection of execution of right by a disinterested party. The security package is also defined as the prior establishment of business structure by means of the surety rights accession (e.g., contractual status and major stake) for a successive business in addition to acquisition of cash flow from the business.

The security package of the VLP business is defined as the following: (1) To strengthen business continuity of the SPC of the VLP by means of appropriate risk allocation among the stakeholders, and (2) To set up all surety rights in regard to the asset owned by the SPC for the loan lender. The security package is divided into two phases in this report.

(1) First Phase: Common Consent for Securing of Business Continuity

The common consent for securing of business continuity includes several undertakings such as public support, subsidy, and investor's securement, and several contracts (e.g., EPC contract, O&M contract, contract of fare collection, contract of currency exchange, and insurance contract) (see Table 8.28). Based on these undertakings and contracts, the SPC can run a business and create cash flow, which can become a countermeasure to secure the repayment of principal and interest to a loan lender. In general, the basic contents of sponsor support and subsidy by the Lao Government should be cleared and reach a common consensus before the SPC establishment.

The contents of each of the items mentioned below are stipulated in a related project contract, and should be discussed and agreed during the SPC establishment pledge of loan agreement as due diligence items.

The contents of sponsor support come in varied forms, such as shareholder's loan and capital contribution and may be agreed in the preliminary phase before the SPC establishment as a common consensus among the stakeholders. The loan lender has a right to demand the securities in

regard to capital contribution, competition of construction, etc., as recourse to the shareholder.

The forms and contents of common consensus for securing business continuity have the flexibility in a specific range. It should be desirable to reach a common consensus regarding the sponsor's support by the Government before the pledge of capital contribution. The consultations between the dedicated committee organized by the Lao Government and the Japanese logistics company may proceed from this time forward.

(2) Second Phase: Agreement of Asset Management of SPC by Loan Lender

Posing problems for the business operation and facing a debt default, a loan lender should be able to manage the assets of the SPC. The consultation contents of asset management by the loan lender includes securities of project contract, securities of on- and off-shore bank account, surety of the assets, etc. The agreement on asset management contains not only the surety of the assets but also the loan agreement including the contents of the fund of exchange operation by the Central Bank, the commitment of the Central Bank, the related bank account management method, the compliance of the SPC, and others (see Table 8.29).

In general, the agreement should be drawn up before the fund raising, and the roundtable between the dedicated committee and the Japanese logistics company could be discussed from this time forward.

Table 8.28 First Phase: Common Consent for Securing of Business Continuity

Item	Name of Contract	Description	Issue to Remember
Government Guarantee			
Currency Exchange	GGU	SPC has a right to exchange local currency to foreign currency.	The Central Bank of Lao PDR has had no sufficient level of foreign currency reserve in recent years as it has decreased to a level of less than a month to handle the trade balance in Lao at the end of 2013. If the Government would execute an emergency operation such as import restriction, the VLP business would take a big damage. The expansion of power export to Thailand due to the completion of large hydropower development projects might decrease the risk of currency exchange.
Foreign Remittance	GGU/ Establishment Contract of SPC	SPC has a right to make remittance to foreign countries.	"Foreign Investment Promotion Law," "Regulation of Noble Metal Management" and "Clause 46 of Prime Minister Law (2001)" recognize the remittance from Lao PDR to third countries by the foreigners. There is no technical problem in regard to the remittance because several Japanese commercial banks have already made correspondent contracts with local banks.
Denationalization	GGU/	SPC has a right to avoid	The assets and resources owned by a

Item	Name of Contract	Description	Issue to Remember
	Establishment Contract of SPC	denationalization of VLP assets. The Government compensates the SPC for all assets if nationalization would be happen.	foreign investor in Lao PDR have rights to protection by means of Clause 4 in the "Foreign Investment Promotion Law" against denationalization.
No Additional Tax	GGU/ Establishment Contract of SPC	SPC can avoid a disadvantage and receive an advantage from the change of tax system.	The topic is in the agenda of consultations between the Government committee and the Japanese logistics company.
Regulation Change	GGU/ Establishment Contract of SPC	SPC can be compensated by the Government and receive a benefit in case of the change of legal system.	The topics, e.g., business tax exception, public cargo handling obligation in VLP, etc., are in the agenda of consultations between the Government committee and the Japanese logistics company.
Utility Infrastructure Development	GGU/ Establishment Contract of SPC	SPC has a right to use basic utilities infrastructure developed by the Government in the project site.	The basic utilities developed by NEDA may be installed in the VLP development site. The additional power generation for freezing and refrigeration should be considered.
Contractual Performance Obligation by State-Owned Entity	GGU/ Establishment Contract of SPC	SPC may receive benefits from state-owned entities based on contracts. SPC can receive compensation from the Government in case the state-owned entities could not complete the commitments.	The development of the VLP needs to move the existing public warehouse from Thanaleng to the VLP site. The SPC needs to agree with the Government that the existing facility must be moved to the VLP.
Minimum Income Guarantee	GGU/ Establishment Contract of SPC	The Government warrants the SPC for minimum income guarantee. The guarantee should be as level as keeping on a sustainable normal business without additional capital inputs.	It might be thought that the Government has less possibility to guarantee the minimum income to the SPC. The Government has a right to bring public cargo to the VLP instead of minimum income guarantee by the Government. The topic is a consultation agenda item between the Government and the SPC.
Buying Guarantee	GGU/ Establishment Contract of SPC	The Government guarantees to take over the VLP business from the SPC in case the Government could not sort out the deficits from non-compliance by the Government, force majeure, etc.	The topic is a consultation agenda item between the Government committee and the Japanese logistics company.
Supplemental Public Support	GGU/ Establishment Contract of SPC	The SPC assumes supplemental public support for decreasing risks, e.g., exchange rate fluctuation, soaring inflation, etc.	The topic is a consultation agenda item between the Government committee and the Japanese logistics company.
Sponsor Support			
Provision of Operating Capital	Sponsor and Bank Guarantee	In case a loan lender could not provide additional capital input, a sponsor would provide short-term finance to the VLP business.	The topic is a consultation agenda item between JICA as a loan lender and SPC, and is likewise an internal coordination agenda item of the Japanese logistics company.
Supplemental Sponsor Support	Sponsor and Bank Guarantee	The SPC should consider supplemental sponsor support for business risk mitigation against inflation, exchange rate, currency exchange, etc.	The topic is a consultation agenda item between the Government committee and the Japanese logistics company.

Note: GGU: Governmental Guarantee and Undertaking
Source: JICA Study Team.

Table 8.29 Second Phase: Agreement of Asset Management of SPC by Loan Lender

Item	Contract	Description	Issue to remember
Cash Control Mechanism			
Currency Exchange	Contract of Currency Exchange	To stipulate currency exchange mechanism in a bank account in Lao PDR from local to foreign currency.	The 10 Clause of the Presidential Law 01/OP, " Regulation of Foreign Exchange and Noble Metal Management," stipulates that a "Non-resident in Lao PDR can open a cash account of commercial bank, money exchange counter, keep local money and transfer the balance to be changed from local to foreign currency."
On-Shore Security Agent	Contract of Agent	An agent on behalf of a loan lender should conduct the security setting in regard to the asset to be financed in Lao PDR.	The consultation between the loan lender and the Japanese logistics company should be executed first. Then the consultation between the Government committee and the Japanese logistics company should be conducted, if necessary.
Cash Waterfall	Loan Agreement	To stipulate the rule of cash waterfall, which contains the priority of bank account to be repaid in detail in a loan agreement.	The consultation between the loan lender and the Japanese logistics company should be executed first. Then the consultation between the Government committee and the Japanese logistics company should be conducted, if necessary.
Reserve Account of Loan Repayment	Loan Agreement	To open an off-shore bank account for receiving loan repayment from the SPC. The cash flow should be transferred to the account rather than to other inferior accounts.	The consultation between the loan lender and the Japanese logistics company should be executed first. Then the consultation between the Government committee and the Japanese logistics company should be conducted, if necessary.
Financial Covenant	Loan Agreement	To stipulate a target value of index criteria, e.g., Debt Service Coverage Ratio, Debt Equity Ratio, etc. If the SPC could accomplish the target value, loan lender could stop paying dividends to shareholders and give out information of debt default to the public.	The consultation between the loan lender and the Japanese logistics company should be executed first. Then the consultation between the Government committee and the Japanese logistics company should be conducted, if necessary.
Guaranty			
Guaranty of Share Collateral	Collateral Agreement between Loan Lenders and Shareholders	To set up a lender right to hold in the share of stock in case of debt default of the SPC.	The consultation between the loan lender and the Japanese logistics company should be executed first. Then the consultation between the Government committee and the Japanese logistics company should be conducted, if necessary.
Guaranty of Facilities and Equipment	Loan Agreement	To set up a lender right to hold the facilities and equipment in case of debt default of the SPC.	The consultation between the loan lender and the Japanese logistics company should be executed first. Then the consultation between the Government committee and the Japanese Logistics Company should be conducted, if

Item	Contract	Description	Issue to remember
			necessary.
Guaranty of Land Use Right	Loan Agreement	To set up a lender right to hold land use right in case of debt default of the SPC.	The consultation between the loan lender and the Japanese logistics company should be executed first. Then the consultation between the Government committee and the Japanese logistics company should be conducted, if necessary.
Guaranty of Major Contracts	Loan Agreement	To stipulate a security clause in the project contract.	The consultation between the loan lender and the Japanese logistics company should be executed first. Then the consultation between the Government committee and the Japanese logistics company should be conducted, if necessary.
Step-In	Loan Agreement	To set up a lender right to conduct "step-in" in case of appearance of sign of performance deterioration or of debt default of the SPC.	The consultation between the loan lender and the Japanese logistics company should be executed first. Then the consultation between the Government committee and the Japanese logistics company should be conducted, if necessary.

Source: JICA Study Team.

8.2.2 Term Sheet

The term sheet is a table that contains the contents of major issues regarding the business operation of the SPC of the VLP financed by the Lao Government and the Japanese logistics company. Before the execution of a formal contract on the establishment of the SPC, a rough consensus on the SPC contract between the committee and the Japanese logistics company is needed. Table 8.30 shows the summary of the term sheet.

Table 8.30 Summary of Term Sheet

	Item	Content
1	Establishment of management body of the VLP	The VLP will be managed by the SPC sponsored by the Lao Government and the Japanese logistics company. The SPC will get a business concession for the VLP development and management from the Ministry of Planning and Investment.
2	Minimum term of the concession	The SPC will set 20 years as a minimum term of the concession because the term of loan repayment of JICA will be 20 years.
3	Concession agreement	SPC should get the concession agreement from MPI before the completion of review and approval of JICA loan.
4	Staff and workers in the existing state company in Thanaleng	All functions of the existing public warehouse in Thanaleng must be taken over by the VLP. It might be necessary that the staff and workers in the existing public warehouse will be smoothly transferred to the VLP with the same status as the existing facility to avoid confusion in the transition period.
5	Organizational structure of the SPC	The organizational structure, including the wage structure, is a consultation agenda item between the Government committee and the Japanese logistics company.
6	Capital contribution ratio	The Japanese logistics company has requested to retain a major stake of the SPC with technical transfer of international standard know-how from Japan to

	Item	Content
		Lao PDR.
7	Cancellation of contract	The right of contract cancelation should be included in the concession agreement provided by MPI.
8	Governing law	The laws of Lao PDR should govern the SPC of the VLP.
9	Dealing with NEDA development container yard	The Lao Government may have an intention to manage the VLP with the railway container yard development by NEDA. The railway container yard might make no profit in the short term. The SPC should prepare several alternatives as management options, e.g., management by a Thai private company, management by the SPC, separation of the container yard from the VLP assets, etc.
10	Accuracy of future cargo demand forecast	The accuracy of future demand forecast would contribute to an appropriate decision of future investment in order to avoid wasteful cost. The installation of a data sharing system of international cargo between Customs and the VLP will be needed for improvement of grasp of current condition cargo and cargo prediction. The SPC needs to agree with the installation of data sharing system among the involved agencies, and then to develop the railway cargo development plan, implementation plan, etc.
11	Relocation plan	The smooth transfer of the public warehouse function from the existing facility in Thanaleng to the VLP is needed to avoid disrupting daily operation. However, there is no transfer and implementation plan. The development plan including concrete steps, schedule, implementation and monitoring will be needed.
12	Re-utilization plan of a vacant lot in the existing warehouse	The idea to utilize as temporary storage for completed imported cars should be recommended for improving the financial condition of the VLP. There are two realistic options: one is to lease out the vacant space; another is to incorporate the vacant lot as a VLP asset.
13	Invitation strategy of local companies as tenants of the VLP	The SPC has a business risk in regard to cargo demand fluctuation in the initial stage. Avoiding the risk, it could be good option that part of the VLP space would be leased out to logistics companies as tenants by the SPC from the viewpoint of improving the financial condition of the VLP.
14	Tax exemptions	The VLP development as a public project could absolutely contribute to the national policy of "Land-locked country to Land-linked Country." Meanwhile, in the initial stage the SPC might remain a business risk from the standpoint of profitability. It is thought that the Government support aside from those provided under the "Foreign Investment Promotion Law" (e.g., business tax exemption, import tax exemption, profit tax exemption, etc.) will be useful.
15	Dealing with public cargo in the VLP	If the public cargo could be concentrated in the VLP, its financial condition would improve.
16	Countermeasures of business competitors	The Chinese Government including the state-owned companies and Thai private companies have an intention to develop and manage similar public warehouse businesses such as the VLP business. If the additional public warehouses would be developed near the VLP location, the financial condition of the VLP might worsen. The SPC should ask the Government not to permit the additional development of public warehouses near the VLP location.
17	One-stop service in Customs	The Japanese logistics company as a major partner of the SPC has considered installing an advanced inventory control system in the VLP. It must be very useful to integrate the VLP with the customs system for realization of a one-stop service. Before the installation of the system, the SPC should ask the document of commitment in regard to the data sharing system installation for the Government.
18	Technical operation	When the existing warehouse will move to the VLP, the facility and its cargo handling function should be upgraded to international standard level. The SPC should get the consensus document in regard to the relocation plan including the implementation and action plan from the existing facility to the VLP to avoid

	Item	Content
		disruptions in its daily operation.
19	Dedicated access road	There are disadvantages, e.g., possibility of traffic accident, traffic congestion not only near the VLP but also in Vientiane Capital City, possibility of tax leakage, etc. without a dedicated access road to the VLP because the route from the border to the VLP is the local community road. To address these disadvantages, the dedicated access road between the borders to the VLP is needed. The SPC should ask the action plan for the dedicated access road development from the Government.
20	Fare system of public warehouse	A Presidential Decree set up the fare system of public warehouses as public charges. However, the VLP must change the service level and contents for the improvement of international cargo handling facility by means of the installation of advanced technology (e.g., IT system, charge collection system, inventory control system, etc.) different from the existing public warehouse. The fare system should be changed according to the service level and contents. Common consensus in regard to the change of fare structure and scenario in the future between the SPC and the Government is needed before the submission of the concession agreement of the SPC.

Source: JICA Study Team.

Chapter 9 Environmental and Social Safeguards

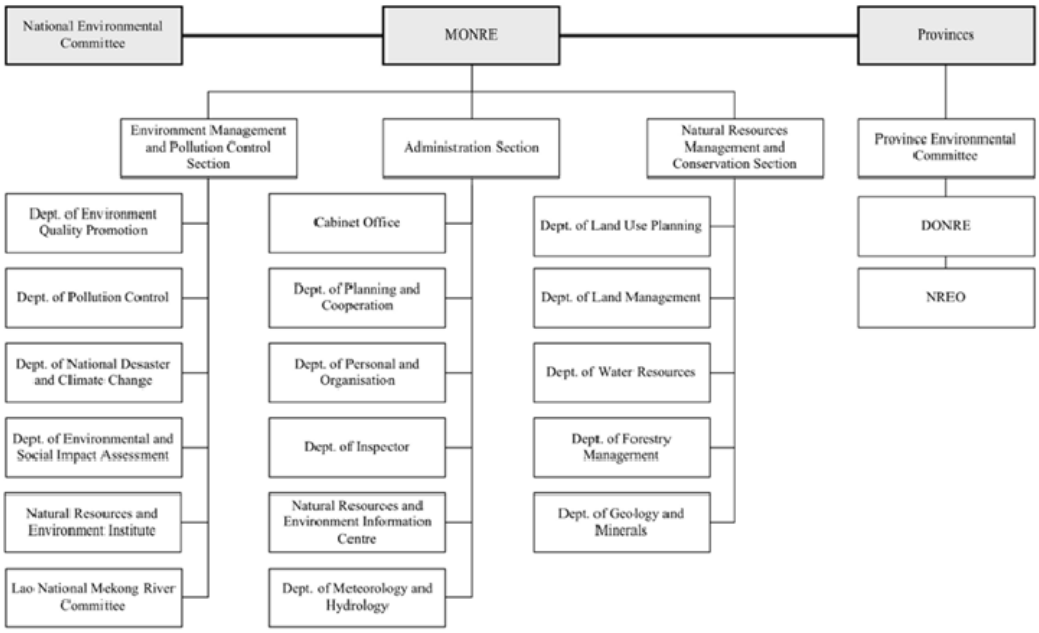
9.1 Environmental Administration and Legal Framework

9.1.1 Administration Framework

MoNRE was created in 2011 by merging the Water Resource and Environment Administration (WREA) with the departments of the National Land Management Authority (NLMA) and related portfolios of other ministries including the Geology Department and the Forest Conservation Division within the Ministry of Agriculture and Forestry (MAF). The major departments operated within MoNRE[5] are as follows:

1) Human Resources;
2) Department of Environment Quality Promotion;
3) Department of Environmental and Social Impact Assessment;
4) Department of Pollution Control;
5) Department of Water Resource;
6) Natural Resource and Environment Institute;
7) Department of Meteorology and Hydrology;
8) Department of Land Administration;
9) Department of Land Planning and Development;
10) Department of Inspection;
11) Natural Resource and Environment Information Center;
12) Department of Geology and Minerals;
13) Department of Forest Resource Management;
14) Department of Planning and Cooperation;
15) Department of National Disaster Management and Climate Change; and
16) Lao National Mekong Committee Secretary.

[5] Source: http://theredddesk.org/countries/actors/ministry-natural-resources-and-environment-lao-pdr (accessed in May 2015).

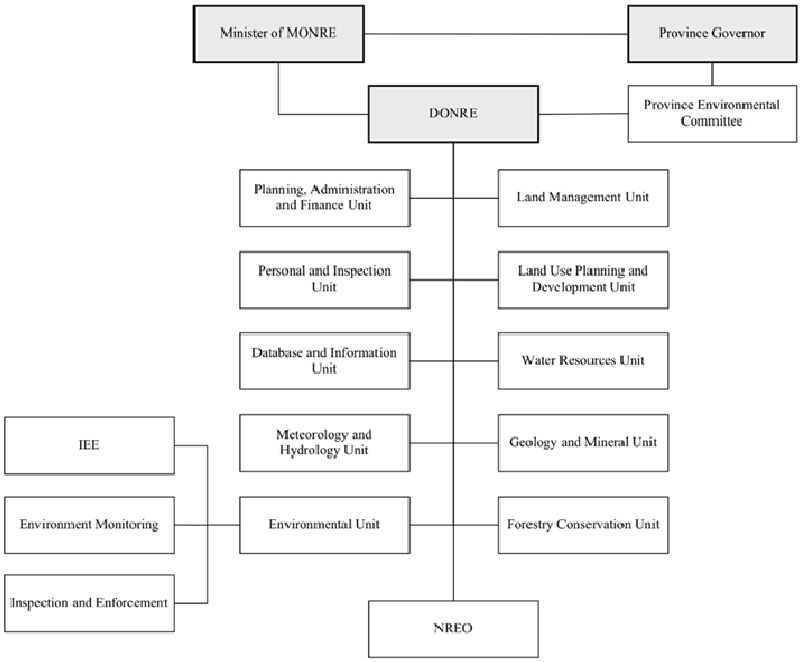


Note: NREO - Natural Resources and Environment Offices

Source: JICA Study Team.

Figure 9.1 Organizational Chart of MoNRE

Basically, all applications for the ECC that is required for development projects are examined by either the Department of Environmental and Social Impact Assessment of MoNRE or the Department of Natural Resources and Environment (DoNRE) of the province. Figure 9.2 shows the organization chart of DoNRE.



Source: JICA Study Team.

Figure 9.2 Organizational Chart of DoNRE

9.1.2 Major Environmental Legal Codes

Table 9.1 summarizes the relevant legal environmental codes for the proposed VLP Project.

Table 9.1 List of Relevant Legal Instruments in the Environmental Sector for VLP Development in Lao PDR

Category	Title	Year Enacted
General Laws on Environment	Environment Protection Law	1999
	Environmental Protection Law (Revised Version, 29/NA)	2012
	Forestry Law	2008
	Law on Aquatic Life and Wild Animals	2008
Environmental Standards	Industrial Waste Discharge Regulation	1994
	Regulation on Monitoring and Control of Wastewater Discharge	1998
	Decision on the Management of Quality Standards for Drinking and Household Water Supply	2005
	Provision on Discharge of Domestic Sewerage and Wastewater from Industrial Factories	2005
Environmental Impact Assessment	Regulation on Environmental Assessment in Lao PDR	2002
	Decree on Environmental Impact Assessment (112/PM)	2010
	Environmental Impact Assessment Guidelines	2012
Land Management (protection areas, land acquisition and compensation)	Regulation on Management of Protected Areas and Animals	2003
	Land Law	2003 Amended in 2008
	Decree on the Compensation and Resettlement of the Development Project	2005
	Regulations for Implementing Decree on Compensation and Resettlement of People Affected by Development Projects	2006
	Technical Guidelines on Compensation and Resettlement in Development Projects	2005

Source: JICA Study Team.

9.1.3 Procedure of Environmental Approvals for Development Projects

(1) Projects Subject to EIA/IEE

The EIA and/or IEE Process in Lao PDR are determined by the Decree on Environmental Impact Assessments (No. 112/PM, 16 February 2010, see Table 9.1). The EIA Decree addresses the following two categories of investment projects requiring environmental and social assessments[6]

Category 1: Investment projects that are small or create few impacts on the environment and society require IEEs; and

Category 2: Large investment projects that are complicated or create substantial impacts on the environment and society require EIAs.

Basically, Category 2 projects should conduct EIAs while Category 1 projects should conduct IEEs in order to obtain the ECC. A more detailed project list of Category 1 and Category 2 projects is attached in Appendix A.

[6] Source: PMO, 2010.

(2) EIA/IEE Process

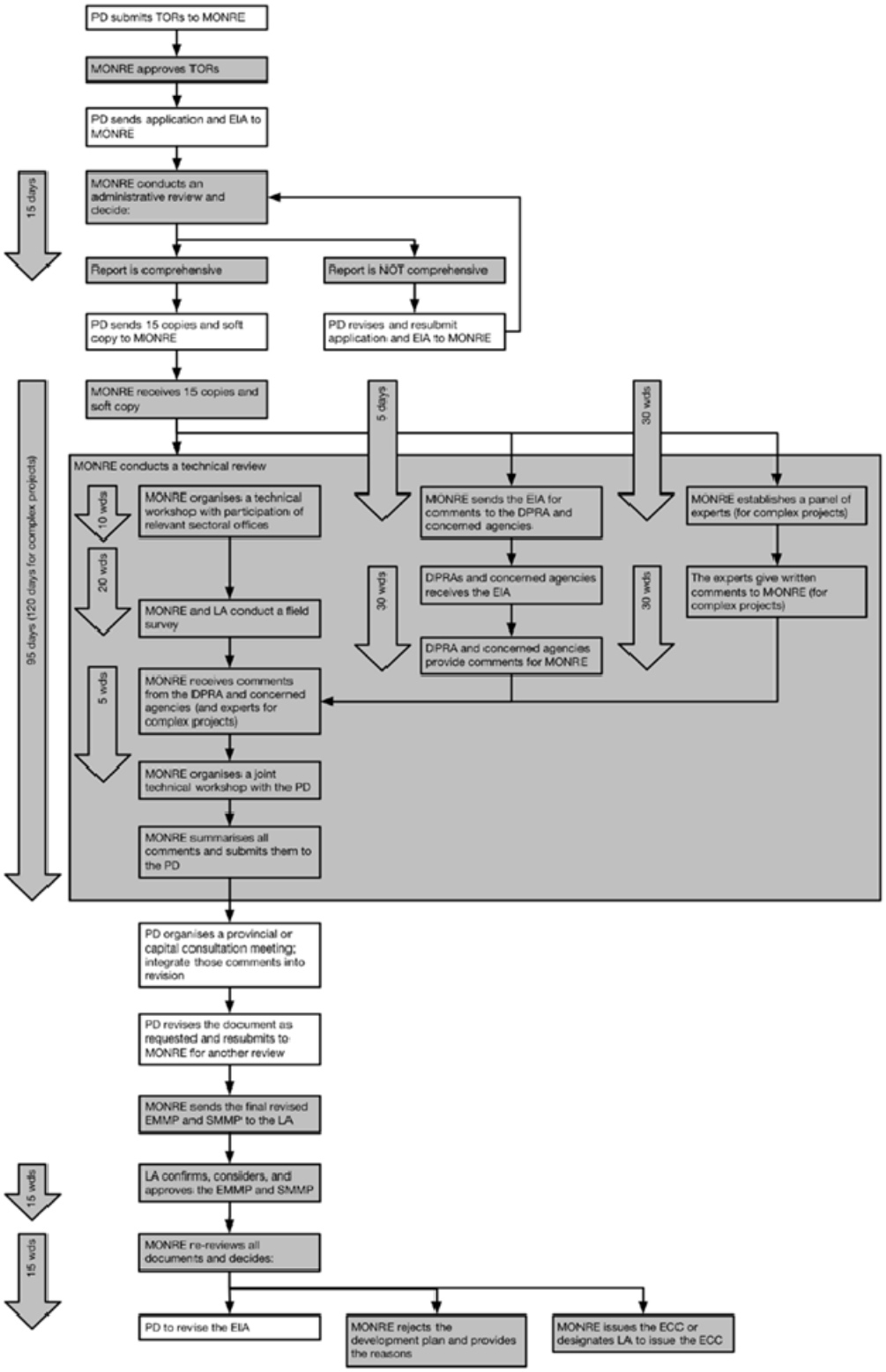
Figure 9.3 shows the EIA process implemented in Lao PDR. Basically, the EIA process involves the following four basic steps: (a) screening and scoping, (b) preparation of the EIA report, (c) review decision-making, and (d) post-project monitoring. As mentioned earlier, all investment projects are classified into either Category 1 or Category 2 based on the scale and type of the project.

For the project screening, the project developer (or owner) must submit an investment application to MoNRE (Decree 112/PM, Article 6). The project developer must refer to the list of projects for which EIAs are required, as well as consider the significance of the project's potential impacts. Based on the information provided by the project developer, MoNRE decides whether the proposed project needs an IEE or an EIA.

During the project scoping, the project developer prepares a scoping report and a detailed terms of reference (TOR) for the preparation of the EIA as required by Decree 112/PM (Article 11). Section 3 of this EIA decree provides relevant guidance for the preparation of both the scoping report and the TOR. Then, MoNRE provides comments on and/or approves both the submitted scoping report and TOR before the project developer officially starts the EIA preparation.

MoNRE conducts an administrative and technical review of the EIA report, the environmental and social monitoring and management plan (ESMMP), and the development plan. The project developer may be required to revise the EIA report, ESMMP, and development plan in order to comply with the consolidated comments provided by MoNRE. Once MoNRE is satisfied with these revised documents, the ECC is issued with specific conditions, if required. It is noted that EIA report preparation necessitates consultations with local authorities and affected people.

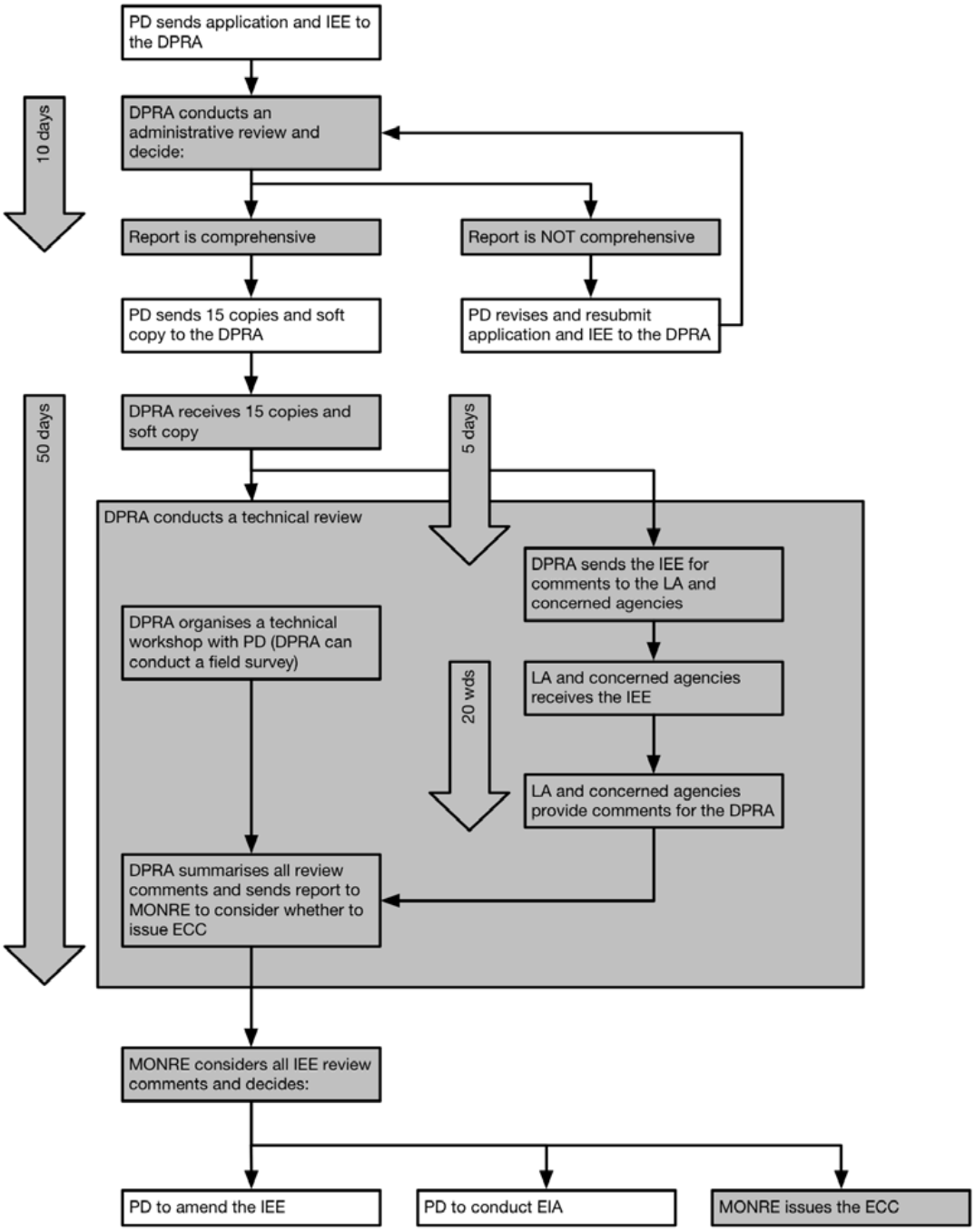
Figure 9.4 shows the IEE process implemented in Lao PDR.



Note: PD - project developer; ECC - environmental compliance certificate; LA - local administration; wds - working days; DPRA - development project responsible agency

Source: JICA Study Team.

Figure 9.3 EIA Process in Lao PDR



Note: PD - project developer; ECC - environmental compliance certificate; LA - local administration; wds - working day; DPRA - development project responsible agency.

Source: JICA Study Team.

Figure 9.4 IEE Process in Lao PDR

9.1.4 Public Participation

The EIA Decree requires public participation through involvement. It defines involvement as the

process of consulting and disseminating information on an investment project in order to collect comments from those who are likely to be affected by or benefit from the investment project, as well as from those who are interested in the investment project. This information is used to prepare the IEE and/or EIA report and the ESMMP. Involvement can be in the form of participation in all meetings of stakeholders and persons likely to be affected by the investment project during the project construction and operation period.

Article 7 of the EIA Decree stipulates that people (residents) who are or will be affected by an investment project and other stakeholders have the following rights and duties:

1) Receive information on the investment project development plan, the benefits that they will receive, and the possible environmental and societal impacts;

2) Provide information and data on the local environment and society in the project area and in nearby locations to be used in an initial environment assessment report consisting of measures to prevent and minimize environmental and social impacts or in preparing an EIA report, an ESMMP;

3) Receive information contained in the IEE report, including measures on prevention and minimization of environmental and societal impacts, the EIA report, the ESMMP as well as the progress report on the implementation of measures to prevent and minimize the impacts of the investment project;

4) Participate in consultation meetings at all levels to deliberate on the IEE and/or EIA report, the ESMMP;

5) Participate in discussions on compensation, migration/resettlement and restoration of the living conditions of people affected by the investment project;

6) Participate in discussions on implementing environmental and social activities as well as the ESMMP; and

7) Make a written proposal to solve environmental and social problems caused by the investment project to the local administrations at each level; submit proposals directly to MoNRE if the problems are not solved.

Article 8 of the EIA Decree stipulates that MoNRE, local administrations, sectoral bodies in charge of investments, and the project developer have a joint responsibility to ensure the participation of people affected by an investment project and other stakeholders consistent with the IEE or EIA process, as follows:

1) When collecting information to prepare the IEE and/or EIA report, the local administration and

the project developer must organize dissemination meetings to inform the villagers of the project development plan and the possible environmental and social impacts as well as to collect opinions of people affected by the investment project.

2) When preparing and examining the IEE report, measures to prevent and minimize the environmental and social impacts should be included. When preparing the EIA report and the ESMMP, MoNRE, the local administration, the development project responsible agencies, and the project developer must organize consultation meetings at village, district and province levels. The consultation meetings will constitute a forum that provides an opportunity for the project affected people and other stakeholders to share their opinions and give comments on the report and plans, from the first until the final drafts.

3) During survey-exploration, construction and operation of the project, the project developer must inform people affected by the investment project and other stakeholders of the project activities which are likely to affect the environment and society, such as clearing the ground surface, destroying rocks, transporting, using and storing dangerous chemical objects and substances, and discharging water from the reservoir. At the same time, the project developer must allow project affected people and other stakeholders access to general information about the project.

During this Study on the proposed VLP Project, two stakeholder meetings were held, as follows:

- 1st Stakeholder Meeting: May 30, 2014; and
- 2nd Stakeholder Meeting: November 7, 2014.

More detailed descriptions for each stakeholder meeting are summarized in the following section.

9.1.5 Information Disclosure

The EIA Decree classifies information into the following two categories: (i) general information, and (ii) confidential information.

Disclosure of general information shall be performed as follows:

1) MoNRE has the responsibility to manage information on the environmental and social aspects of an investment project in coordination with the sectoral body concerned and the project developer. MoNRE also has a duty to facilitate information access for stakeholders and the people who are or will be directly affected by the investment project.

2) The project developer has the responsibility to manage information on the implementation of measures to prevent and mitigate environmental impacts, the ESMMP and to facilitate information access for people who are or will be directly affected by the investment project

and other stakeholders. In relation to the investment projects in Category 2, project developers shall build information centers within the investment project areas and in related districts.

3) The data and information to be disseminated must be both in Lao and English, and consist of:

(a) IEE report or an environmental and social impact assessment report and ESMMP, except confidential information provided in Article 32 of this Decree;

(b) Report on the implementation of measures to prevent and mitigate environmental impacts, an ESMMP provided by the project developer;

(c) Reports from MoNRE or local administrations that issued an ECC in relation to monitoring of the implementation of the ESMMP;

(d) Detailed information on fines or other disciplinary measures that MoNRE or its provincial/municipal counterparts and the sectoral authority in charge of the investment project have imposed on the project developer; and

(e) The investment project expenditures for environmental and social activities.

Confidential information shall be handled as follows:

1) MoNRE reserves the right to keep confidential any information related to national stability and not to disclose this information in any IEE report or in any environmental or social impact assessment report, ESMMP.

2) Upon written request from a project developer, MoNRE may consider keeping some information confidential and can refuse to put such information in any IEE report, environmental and social impact assessment report, ESMMP. This information includes:

(a) Information related to the privacy of an individual;

(b) Information on property; and

(c) Information on commercial licenses;

3) If a project developer does not wish to disclose any of the information stated in Article 32(2) above, the project developer may submit a request to MoNRE with the information in question. Within 25 public working days, MoNRE shall conclude whether all or some part of the information in question is confidential or not.

4) If the submitted information is considered confidential, that information shall be kept confidential for four (4) years. If the project developer wishes to extend this period, he or she must submit a request 60 public working days prior to the expiry date; otherwise, the

information will not be regarded as confidential.

In the VLP study, the following two public reviews and information disclosure periods are established:

- 1st Public Review and Information Disclosure: July 18, 2014 – August 17, 2014; and
- 2nd Public Review and Information Disclosure: November 6, 2014 – December 5, 2014.

More detailed descriptions of this public review and information disclosure process are summarized in the following section.

9.1.6 Gap Analysis of Environmental Assessment between JICA Guidelines and Lao PDR

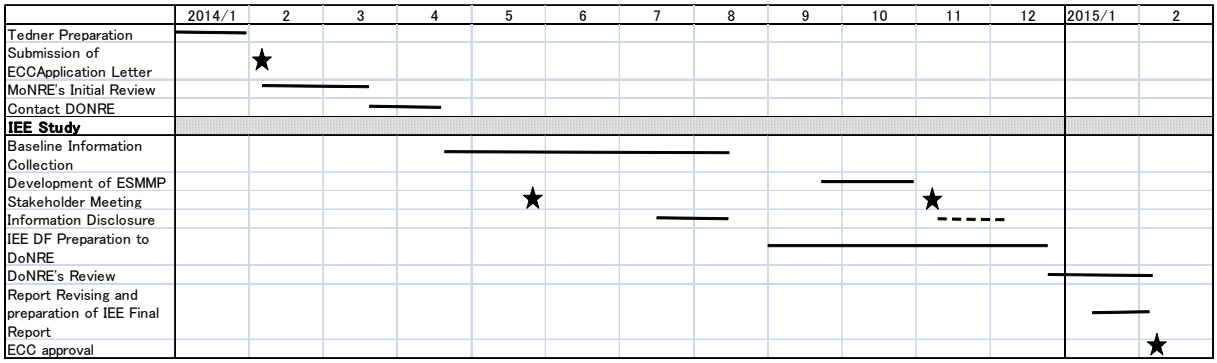
The current legislation system in Lao PDR is well-developed and comprehensive, compared with other developing countries in Southeast Asia. Although there are some minor gaps between the current domestic regulations and JICA Guidelines, no mutual contradictions have been identified. These observations are also mentioned in the Environmental Profile Study of Lao PDR (JICA, 2013). However, like other developing countries, its actual implementation is not in good condition. According to current reports (e.g., Wayakone et al., 2013), the followings points are raised on the EIA practice in Lao PDR:

- Environmental units of line ministries have insufficient staffing to carry out the necessary functions for implementing EIAs. These institutions' personnel are constrained by extremely limited technical, financial, and managerial resources and expertise, particularly in environmental and social issues. Furthermore, environmental knowledge in non-environmental agencies is also limited. The overall quality of EIA reports in Lao PDR is unsatisfactory. The lack of expertise among EIA professionals and approval authorities, along with reluctance on the part of project proponents to allocate resources are some of the hindrances to raising EIA quality.
- Reviewing of EIA reports in Lao PDR is generally process- and substance-oriented, except for some comments on the quality of impact assessment by EIA expert appraisal committees. Most EIA reports hardly discuss assumptions and limitations of analyses carried out by consultants. Lack of expertise and limited resources with executing authorities result in inferior decision-making.
- The absence of "follow-up" environmental management activities within most jurisdictions is often identified as the most critical weakness of EIA practice. Another problem facing Lao PDR is that monitoring is not a formal practice; many projects ignore and do not implement ESMMPs. Environmental units of line ministries and at the central level have insufficient personnel to carry out the necessary functions for monitoring EIAs. Their personnel also have limited experience and background in environmental monitoring.

9.1.7 Environmental Approval for the Proposed VLP Project

In order to apply for an ECC for the proposed VLP Project, either an EIA or an IEE shall be conducted, based on the EIA Decree of Lao PDR. In February 2014, MPWT submitted an ECC application letter to MoNRE (see Figure 9.5). Based on the explanation of the entire project outline by MPWT and submitted material, MoNRE concluded that an IEE study shall be conducted in order to obtain an ECC for the project and DoNRE is the supervising governmental organization for this IEE study.

The local environmental consulting firm, NAREEN, was selected to conduct the IEE-related study and official report preparation, through the tender process, conducted in February and March of 2014. The actual IEE-related study was initiated in May 2014 after NAREEN and DoNRE discussed and agreed on the IEE-TOR in April 2014. The IEE Draft Final Report was submitted from MPWT to DoNRE on December 25, 2015, and was officially received by DoNRE on December 26, 2015. Eventually, the ECC examination was initiated and the ECC was approved in early February 2015. After that, the final IEE report was delivered from MPWT to DoNRE.



Source: JICA Study Team.

Figure 9.5 IEE Study Schedule of Proposed VLP Project

9.1.8 Legal Framework of Land Acquisition and Involuntary Resettlement

(1) Relevant Laws and Regulations

Table 9.2 summarizes the major legal codes of the land-take and resettlement in Lao PDR. Within the Lao PDR's Constitution, it is declared that land is a national heritage. The Land Law (2003) clarifies that groups or individuals can acquire land legally in three ways: allocation by the state, transfer (defined as "sale, transfer or exchange"), and inheritance (Articles 52, 57, and 58). In Lao PDR, the compensation principles and policy framework for land acquisition and resettlement are governed by these and other laws, decrees, and regulations described in the table.

Table 9.2 Major Legal Codes of Land-take and Resettlement in Lao PDR

	Legal Codes/Regulations	Descriptions
1	Constitution (2003)	Article 16 of the Constitution declares that the State protects and promotes all forms of property rights: State, collective, and private domestic and foreign investment in the Lao PDR. Article 17 states that the State protects the property rights (such as the rights of possession, use, usufruct, and disposition) and the inheritance rights of organizations and individuals. It also declares that land is a national heritage, and the State ensures the rights to use, transfer, and inherit it in accordance with the laws.
2	Land Law (2003)	Adopted by the National Assembly in 2003 (supersedes the Land Law 01/97 dated 12 April 1997), the Land Law is the principal legislation by which the State exercises its constitutional responsibility for tenure, access, use, management, and preservation of land. Compensation is treated in Articles 68 to 72 of the Land Law. Article 70 states that persons or entities requiring a right-of-way (ROW) and who thereby cause damage to crops or buildings must make appropriate compensation. Article 71 was added to the amended law. It states that when the use of land belonging to other persons or organizations becomes necessary for the public interest, the State will compensate any damage suffered by the rightful user of the requisitioned land, as appropriate. Furthermore, the Law requires that each village, province, municipality, or special zone keep 5% of its total land area in reserve to ensure the compensation of requisitioned land.
3	Road Law (1999)	In this law, MPWT is the responsible ministry for managing and supervising lands allocated for transportation activities. Road width shall have the area consisting of carriageway, shoulders, pathways, drainages, slope of road, and ROW (Article 17). All construction and other activities are banned within the ROW except in extraordinary cases, for which the permission to initiate activities is to be requested from the road management authority (Article 21).
4	Forestry Law (2007)	This law sanctions the conversion of forests and forest land to other uses (e.g., for transmission line right of way) when necessary and in the public interest (subject to approval from responsible authorities). It, however, places responsibility on individuals or organizations given permission to convert forest to another use to pay a conversion fee, perform land reclamation, and plant trees. The law allows the continuation of long practiced activities such as collecting wood for fences and fuel, non-timber forest products (NTFP), hunting and fishing for non-protected species for household consumption, and other customary uses.
5	Decree of the Prime Minister on Compensation and Resettlement of People Affected by Development Projects (Decree 192/2005)	The Decree and Regulations adopted in 2005 and 2010 under the Water Resource and Environment Administration (now the MONRE)) define principles, policies, and procedures for land acquisition, compensation and resettlement for all development projects including those funded by the Government of Lao PDR, private investors and/or donors. Technical guidelines include regulations which cover all stages of project development from project identification and pre-feasibility studies through construction and operation of the project.
6	New improved decree 699/ PMO-WREA (currently MoNRE) dated 12 March 2010 on Compensation and Resettlement of the Development Projects	The technical guidelines included in this regulation cover all stages of project development, from project identification and pre-feasibility studies through construction and operation of the project.
7	PM Implementation Decree 101/PM, 20 April (2005)	Article 25 presents various goals for expropriation or requisition of private land, which are defined as follows: (1) Land for public facilities, (2) National defense, (3) National security, (4) Specific development by the State, (5) Accessing irrigation systems, canals, electricity wire installation, water pipes, etc. Article 24 mentions the "withdrawal" of land use rights and refers to Article 62 of the Land Law, elaborating on the 4 types of "loss of land use rights," while land expropriation is set in the Article 63 entitled 'termination of land use rights'. Article 24 states "The Government and the Land Management Authority are charged with making the decision on the withdrawal of land use rights and land utilization rights within the scope of their right and power…and the person subjected to the withdrawal must be informed in writing at least 6 months in advance."
8	PM Decree on the Implementation of the Land Law No 88, 03 June (2008)	Provides the most detailed definitions of relevant terminologies, such as state land, collective land, land use, land use rights, land utilization rights, and land concession. Article 28 on compensation for the losses of land states that the damage to the concerned person will be compensated on a case-by case basis as follows: (1) In case of necessity to use land for public facility, national defense,

	Legal Codes/Regulations	Descriptions
		national security or using the land for specific development purposes by the state, (2) Use land for the purpose of building passage way, irrigation canal, electric wire track. The compensation of the losses may be paid in cash or in kind, or by providing land in exchange, based on the mutual consent reached by the two parties in an appropriate manner
9	Mining Law (1997)	Article 47 states the following: Mining operators shall perform the following compulsory expenses such as (1) Resettlement of the population from the mining and ensure their livelihood, (2) Compensation of damage to land, constructions and crops, (3) Rental of land, (4) Environmental protection, and (5) Improvement and rehabilitation of the mining area. Such funds shall be included in the capital of the mining projects.
10	Law on Investment Promotion (2009)	The law stipulates principles, regulations and measures regarding the promotion and management of domestic and foreign investment in Lao PDR. It aims at a centralized and uniform management of investments, to increase the overall investment climate of the country and to be in line with national policy and existing rules and regulations. The law thereby sets the overarching framework for investment in land leases or land concessions.
11	PM Decree 135 on State Land Lease and Concession (2009)	This decree divides land concessions into administrative and commercial types, and outlines the requirements to be met for granting land concessions of state land. Before determining the area to be leased or conceded, it is necessary to do a land survey, prepare a land map, and prepare a land use map. If the area to be leased or conceded extends into the land of the people or individual land, the land use rights of the corresponding parties should be maintained by advising the lessee or concessionaire to conclude contracts with the land owners, or to give such land into a share.

Source: JICA Study Team.

(2) Relevant Organizations

Resettlement planning and implementation activities are the integral part of the development project, especially for projects that require large-scale resettlement. Relevant activities will run parallel to project planning and implementation activities within the project process cycle, and MoNRE is the competent ministry for the coordination of the land acquisition and relevant resettlement.

(3) Procedures

The typical land-take and resettlement process in Lao PDR is shown in Figure 9.6. Basically, this land-take process consists of seven steps, as follows:

1) Project Identification

(a) Identifying likely social impacts and issues relevant to the project;

(b) Review and screening of existing data;

(c) Determining the level and amount of information required for subsequent phases of the project; and

(d) Establishing purpose of data collection for resettlement planning, monitoring/evaluation, and preparing the TOR.

2) Pre-Feasibility

(a) Selection of suitable design option;

(b) Refining of the project objectives, scope and resources needed for project implementation;

(c) Conducting specific technical studies, economic analyses and preparation of preliminary designs;

(d) Determining whether the potential resettlement impacts of the proposed project are likely to be significant, and identification of key stakeholders including PAPs; and

(e) Assessment of various design options for avoiding or minimizing adverse impact and selection of suitable design option.

3) Feasibility and Detailed Design

(a) Project boundaries are finalized, although these may be further modified after feasibility studies are completed;

(b) In parallel with feasibility studies and preparation of technical designs, social assessment study, where necessary, is completed;

(c) If resettlement is necessary:

- Detailed census and socioeconomic surveys are completed;
- Inventory of affected assets are prepared as an essential element of resettlement preparation;
- Where necessary, additional information on ethnic minority groups are collected;
- Consultation with stakeholders is carried out throughout the resettlement preparation stage. Based on detailed surveys and field investigations, necessary documents such as the RPs, Ethnic Minority Development Plans, and Social Assessment Reports are prepared and finalized.

(d) Normally, government approval for projects is obtained upon completion of feasibility studies following which detailed engineering designs and bidding documents are prepared (both licenses at this stage should be given, the investment license and concession license).

4) Implementation

(a) Implementation of the project;

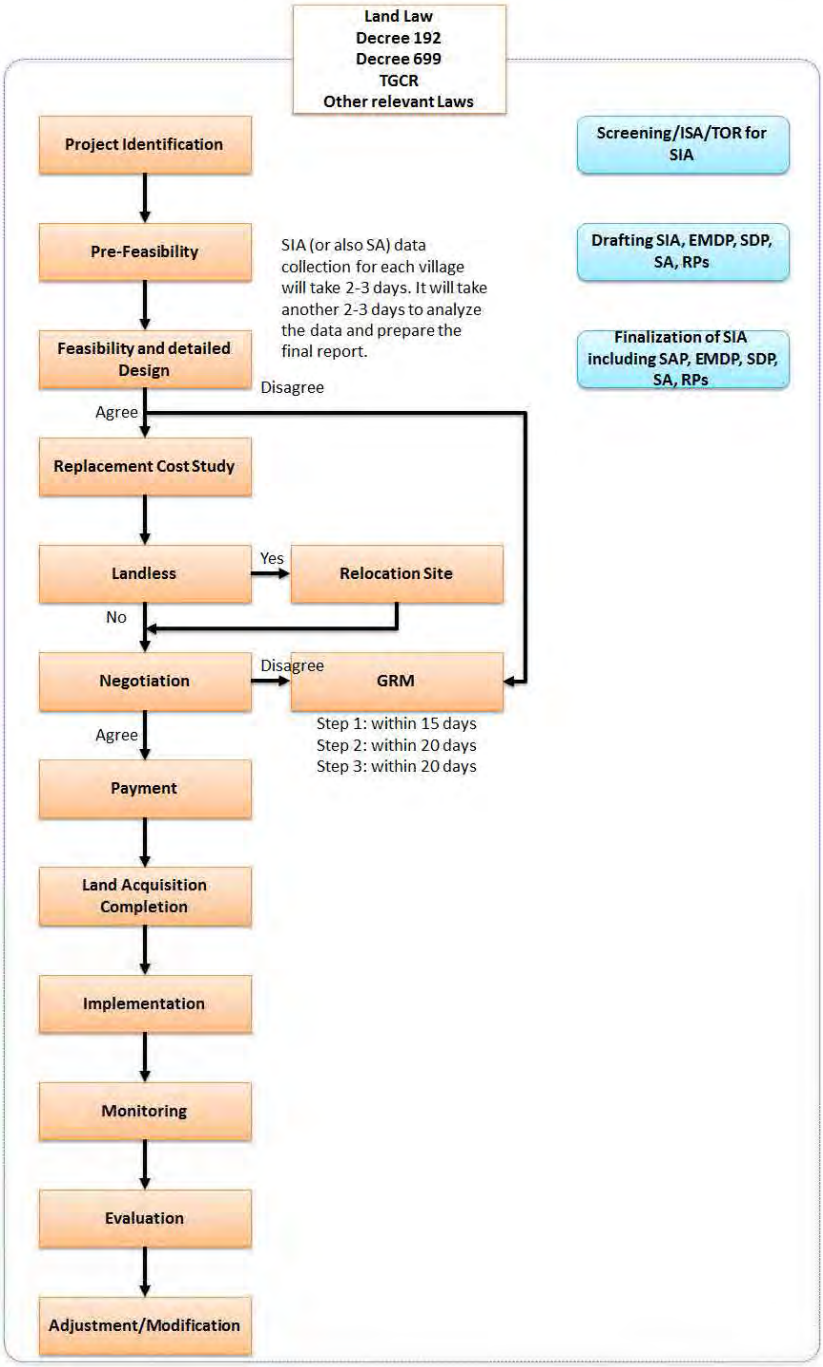
(b) However, prior to the start of construction and project operation, the implementation of resettlement activities have to be done, except in some linear projects where civil works on some sections of the project may begin even when resettlement implementation in other sections is still ongoing:

- Land acquisition/transfer;
- Compensation payment; and
- Relocation activities for displaced affected persons (APs).

5) Monitoring

6) Evaluation

7) Adjustment/Modification



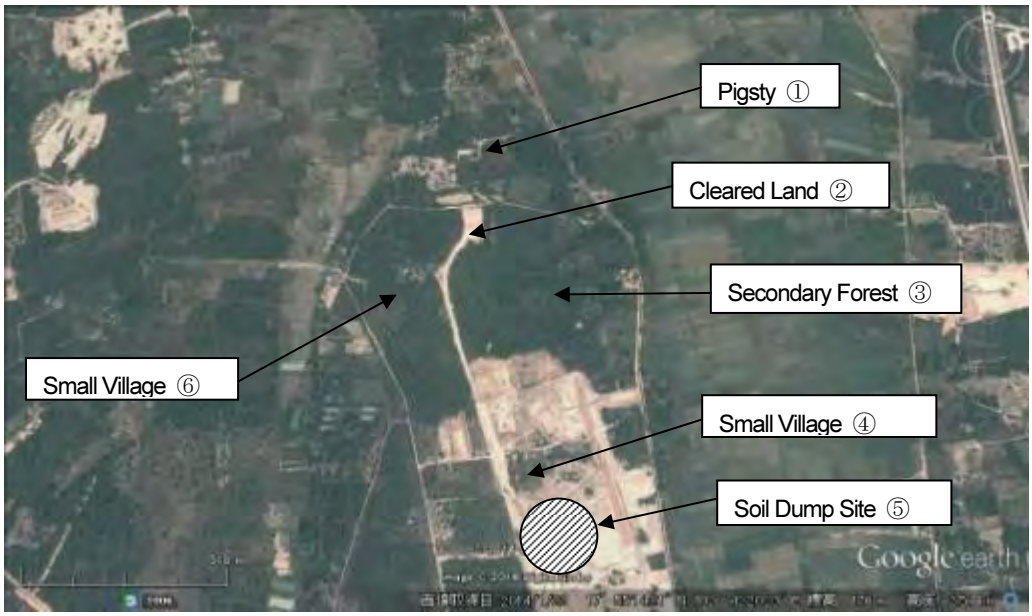
Note: SA - Social Assessment; SAP - Social Action Plan; SDP - Social Development Plan; SIA - Social Impact Assessment; ISA - Initial Social Assessment; RP - Resettlement Plan; EMDP - Ethnic Minority Development Plan; TGCR - Technical Guidelines on Compensation and Resettlement of People Affected by Development Projects; GRM - Grievance Redress Mechanism.
Source: JICA Study Team.

Figure 9.6 Land-Take and Resettlement Process in Lao PDR

9.2 Baseline Environmental and Social Conditions

9.2.1 Summary of Baseline Geographical Features

Technical site visits were conducted several times between February and August 2014. Figure 9.7 shows the current geographic condition around the proposed VLP study site. It is noted that NEDA-funded VLP construction projects are partially in progress (more detailed technical descriptions for these ongoing construction activities are summarized in the engineering section of this report), and relevant land take-related study is ongoing. The relevant field survey was initiated in January 2014 and completed in March 2014, and its survey Draft Final Report is being reviewed by DoNRE[7].



Source: JICA Study Team.

Figure 9.7 Current Geographical Condition Around the Study Site

Photo records of the six sites, indicated in Figure 9.7, are shown in Figure 9.8 to Figure 9.13.

[7] In accordance with the Study Team's communication with the Department of Railway (DoR), MPWT, 2014.

Front View of Piggery

Inside of the Piggery (roughly 500 pigs/year are raised therein)

Family House of Piggery Owner (Part 1)

Family House of Piggery Owner (Part 2)

Source: JICA Study Team.

Figure 9.8 Photos of Site Surroundings (Piggery)

Ongoing Railway Extension Construction Activity at Northern End (Part 1)

Ongoing Railway Extension Construction Activity at Northern End (Part 2)

Ongoing Railway Extension Construction Activity at Northern End (Part 3)

Benchmark Set at Ongoing Railway Extension Construction Site at Northern End

Source: JICA Study Team.

Figure 9.9 Photos of Site Surroundings (Construction-Related Cleared Land)

Secondary Forest Remaining Around the Railway Extension Construction Site at Northern End (Part 1)

Secondary Forest Remaining Around the Railway Extension Construction Site at Northern End (Part 2)

Source: JICA Study Team.

Figure 9.10 Photos of Site Surroundings (Remaining Secondary Forest)

Communities Remaining at Ongoing Container Yard Construction Site (Part 1) (roughly 11 houses exist)

Communities Remaining at Ongoing Container Yard Construction Site (Part 2)

Communities Remaining at Ongoing Container Yard Construction Site (Part 3)

View of Railway Extension Site from Remaining Community

Source: JICA Study Team.

Figure 9.11 Photos of Site Surroundings (Remaining Village Community)

Entire View of Soil Dumpsite (Part 1)

Entire View of Soil Dumpsite (Part 2)

No slope protection at soil dumpsite.
Several community houses still exist (Part 1)

No slope protection at soil dumpsite.
Several community houses still exist (Part 2)

Source: JICA Study Team.

Figure 9.12 Photos of Site Surroundings (Soil Dump Site)

Village Houses Located Around the Railway
Extension Site at the Northern End (Part 1)

Village Houses Located Around the Railway
Extension Site at the Northern End (Part 2)

Source: JICA Study Team.

Figure 9.13 Photos of Site Surroundings (Small Village)

9.2.2 Summary of Land-Take for NEDA-Funded VLP Construction Project

Table 9.3 summarizes the breakdown of the estimated compensation to be required for the NEDA-funded VLP construction project. As mentioned earlier, DoR, MPWT completed the Resettlement Action Plan (RAP)-related field work in March 2014 and submitted the Draft Final Report to DoNRE of Vientiane Capital City. Currently, DoNRE is examining contents of that report and the payment is to be made once the report is approved. The entire land-take process for this NEDA-funded project is conducted based on the procedures summarized in Section 9.1.8. As of

December 2014, the RAP Report examination of the NEDA VLP project by DoNRE is still in progress.

Basically, this survey was conducted at the following two sites: (i) Site around New Vientiane Station (Khamsavath and Nonwai), and (ii) Site around the VLP (Dong Phosy and Nakhauy Tai). As informed by DoR in 2014, the survey site boundary for the land-take for the VLP is fixed based on the results of the 2011 JICA VLP Study.

Table 9.3 Summary of Land-Take Compensation for NEDA-Funded VLP Project

	Village	Number of PAPs	Compensation amount (LAK)
1	Khamsavath	17	2,402,785,522
2	Nonwai	42	2,299,324,385
3	Dongphosy	63	1,228,099,652
4	Nakhauy Tai	62	3,947,873,555
	total	184	9,878,083,114

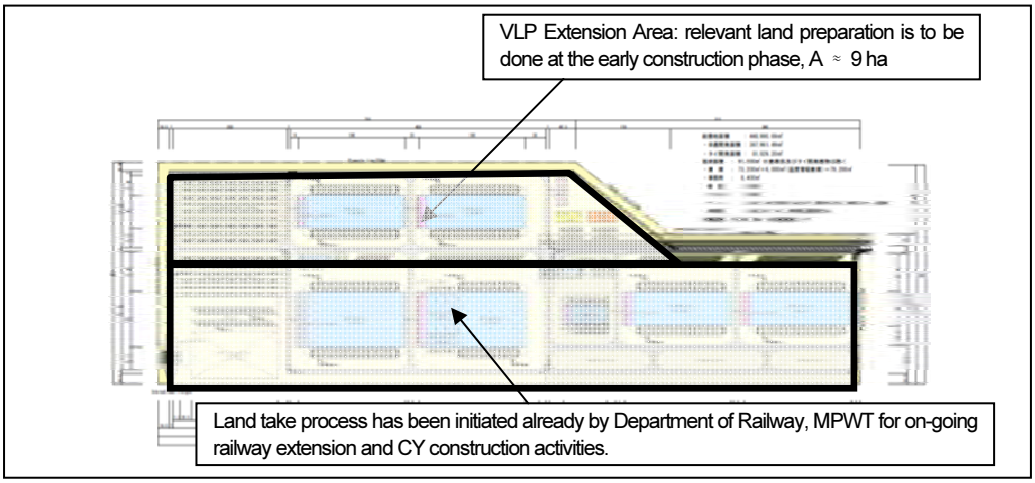
Note: Based on this summary, the entire compensation cost (estimated) for the NEDA-funded VLP Project is LAK5,175,973,207. About 125 properties will be affected.
Source :DoR, 2014

9.3 Preliminary Environmental Assessment

9.3.1 Introduction

The VLP project site is located at the east suburb area of Vientiane, 12 km away from the downtown of Vientiane City. Currently, several VLP-related construction projects such as the construction of the container yard (CY), supported by NEDA and the access road are in progress. Before starting these construction activities, DoR, MPWT, has initiated the relevant land-take process, based on results of the VLP Feasibility Study (JICA, 2011), and delineated the boundary of the entire project site (combined areas of Zones A, B and C in Figure 9.16, to be described later). This land-take process is conducted under the direction of DoNRE. So in this VLP study, it is postulated that MPWT will complete the ongoing land-take process and conduct the relevant land preparation prior to actual construction activities of the proposed VLP (see Figure 9.14).

It is found that the proposed VLP requires an extension area (around 9 ha, currently 24 households and/or 99 residents exist therein; Zone D in Figure 9.16, to be described later). Thus, a new land-take process for this extension area will be required in order to obtain this land space. With this preliminary environmental assessment, both environmental checklist and environmental scoping are prepared based on this working definition.



Source: JICA Study Team.

Figure 9.14 Land-Take Status for Study Area of VLP-IEE Study

9.3.2 Site Descriptions (SD Table)

A site description (SD) is the basis of implementation of the environmental screening and scoping for the area of concern. Table 9.4 below shows the SD of the VLP site featuring the socio-cultural environment and the bio-physical environment.

Table 9.4 Site Descriptions (SD Table)

Item	Description
Socio-Cultural Environment	
Community (residents /minority/ awareness of the proposed project and others)	Several small communities exist across the study area. No community of ethnic minorities/indigenous peoples exist. Currently, the NEDA-funded VLP construction projects (e.g., container yard) are ongoing, and the project commencement declaration of these ongoing projects was done to surrounding communities. The outline of the JICA-funded VLP Project was explained at both the 1st and 2nd stakeholder meetings held on May 30, 2014 and November 7, 2014, respectively.
Land Use (urban/ rural/ historical sites/ scenic places/ hospitals and others)	Neither historical site nor scenic place exists around the study area. The study area was a part of the Dongphosy Forest Reserve, categorized into the Provincial Protected Area of Vientiane Capital City. At the cabinet meeting held on April 5, 1995, it was decided that the eastern portion of Dongphosy Forest Reserve was to be used for the future railway project, and the entire project implementation will be supervised by MPWT (069/MPWT).
Regional economy/ transport condition (commercial/ agricultural activities, industrial parks/ bus terminals and others)	The Thanaleng Warehouse, railway station and the national border facilities exist around the Thai-Laos Friendship Bridge. The 450 Year Road connecting Thanaleng and the western part of Vientiane already started its operation. Construction of an industrial park around the 450 Year Road is ongoing.
Bio-Physical Environment	
Topography/ Geology (e.g., cliffs, steep slopes, floodplains, marshes, wetlands/ fault lines)	The study area is located at a gradual hilly site. The geological structure in the study area is categorized as Vientiane Formulation, unconsolidated gravel, sand, silt and clay mostly of fluvial origin with basaltic lava flows, ash and loess. Laterized intra-sequence erosion surfaces are present.
Important flora/fauna (e.g., national parks, occurrence of rare or endangered species)	There is no important flora and fauna that would need special protection (most of regional flora is classified as secondary forest). The study area was a part of the Dongphosy Forest Reserve that straddles two districts; Xaysettha and Hathxayfong. This forest reserve was originally conserved as the Nong Heo National Park by Department of Forest since 1941. Afterwards, the jurisdiction of the area has been transferred to Vientiane Capital City in 1990. Since that transfer, the land use of this forest reserve has been discussed among Vientiane Capital City.
Pollution	
Complaints	Several complaints have been reported regarding the ongoing NEDA-funded VLP construction

Item	Description
	project, in particular, land-take and its compensation. Temporal degradation of roadside environment such as noise/vibration and noise occur dues to the circulation of construction vehicles.
Mitigations	DoR, MPWT, continues to have a series of ongoing community meetings through the guidance of DoNRE.
Miscellaneous	The land-take and compensation survey for the NEDA-funded VLP construction project was completed in January-March 2014 and DoNRE is evaluating the report. The ECC for the NEDA-funded VLP construction project has not been obtained yet.

Source: JICA Study Team.

9.3.3 Environmental Checklist

Based on the current environmental and social conditions of the VLP study site as well as the project outline of the proposed VLP Project, the JICA environmental checklist (other infrastructure project, checklist 19) is filled out, as shown in Table 9.5.

Table 9.5 Environmental Checklist (Other Infrastructure Project: Checklist 19)

	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations
1. Permits and Explanation	(1) EIA and Environmental Permits	(a) Have EIA reports been officially completed? (b) Have EIA reports been approved by authorities of the host country's government? (c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied? (d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	(a) Y (b) Y (c) N (d) N/A	(a) IEE Final Report of proposed JICA-funded VLP study was submitted from MPWT to DoNRE in February 2015. (b) ECC was approved in February 2015. (c) N/A (d) N/A
	(2) Explanation to the Public	(a) Are contents of the project and the potential impacts adequately explained to the public based on appropriate procedures, including information disclosure? Is understanding obtained from the public? (b) Are proper responses made to comments from the public and regulatory authorities?	(a) Y (b) Y	(a) Two (2) stakeholder meeting (STM) and relevant information disclosure processes were conducted within the proposed JICA-funded VLP study. 1st STM was conducted on May 30, 2014 while relevant information disclosure was set after July 18, 2014 for one month. Similarly, the 2nd STM was on November 7, 2014 and a one-month information disclosure was initiated. (b) Question and answer session was established at the STM. Comments obtained from those stakeholder meetings and information disclosure process are to be feedbacked to the engineering works of the proposed VLP study.
	(c) Consideration of Alternative Proposals	(a) Have several alternatives to this project been considered (during the study, including items related to environmental and social matter)?	(a) Y	(a) Following two alternatives are developed: Alternative 1: entire VLP layout is set within the land space, delineated based on 2011 JICA F/S, and Alternative 2: Alternative 1 + Extension Area (9 ha).
2. Mitigation Measures	(1) Air Quality	(a) Do air pollutants, (such as sulfur oxide (SOx), nitrogen oxides (NOx), and soot and dust) emitted from the proposed infrastructure facilities and ancillary facilities comply with the country's emission standards and ambient air quality standards? (b) Are emission factors of power sources of relevant facilities (such as CO2, NOx and SOx) small?	(a) N (b) N	(a) Temporal roadside air quality degradation due to dust may occur, but manageable by proper implementation of EMP. (b) No facilities using power sources with large emission factors are planned.

	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations
	(2) Water Quality	(a) Do effluents or leachates from various facilities, such as infrastructure facilities and the ancillary facilities comply with the country's effluent standards and ambient water quality standards?	(a) Y	(a) Temporal water quality degradation may occur during both construction and operation phases, and relevant effluent treatment plans are to be developed within EMP of the proposed VLP study in order to meet environmental standards of Lao PDR.
	(3) Wastes	(a) Are wastes from the infrastructure facilities and ancillary facilities properly treated and disposed of in accordance with the country's standards?	(a) Y	(a) Certain amounts of construction wastes are to be generated during both construction and operation phases, and relevant waste treatment plans are to be developed in the EMP of the proposed VLP study in order to meet environmental standards of Lao PDR. .
	(4) Soil Contamination	(a) Are adequate measures taken to prevent contamination of soil and groundwater by the effluents or leachates from the infrastructure facilities and the ancillary facilities?	(a) N/A	(a) No toxic chemical that would cause regional soil contamination is planned to be used during both construction and operation phases..
	(5) Noise and Vibration	(a) Do noise and vibrations comply with the country's standards?	(a) N/A	(a) EMP will be developed, addressing roadside noise and vibration issue during both construction and operation phases.
	(6) Subsidence	(a) In the case of extraction of a large volume of groundwater, is there a possibility that the extraction of groundwater will cause subsidence?	(a) N	(a) No extraction of a large volume of groundwater will occur.
	(7) Odor	(a) Are there any odor sources? Are adequate odor control measures taken?	(a) N	(a) No severe odor source will exist during both construction and operation phases.
3. Natural Environment	(1) Protected Areas	(a) Is the project site located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	(a) N	(a) The study area was a part of the Dongphosy Forest Reserve, categorized into the Provincial Protected Area of Vientiane Capital City. At the cabinet meeting held on April 5, 1995, it was decided that the eastern portion of Dongphosy Forest Reserve was to be used for the future railway project, and the entire project implementation will be supervised by MPWT (069/MPWT).
	(2) Ecosystem	(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)? (b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions? (c) If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem? (d) Is there a possibility that the amount of water (e.g., surface water, groundwater) used by the project will adversely affect aquatic environments, such as rivers? Are adequate measures taken to reduce the impacts on aquatic environments, such as aquatic organisms?	(a) N (b) N (c) N (d) N	(a) Remaining forest is secondary forest. (b) No rare and/or important faunal/floral species exist. (c) Same as above. (d) No extraction of large amount of water occur within the proposed JICA-funded VLP study.
	(3) Hydrology	(a) Is there a possibility that hydrologic changes due to the project will adversely affect surface water and groundwater flows?	(a) Y	(a) Certain amount of forest area will be cleared, so that it is expected to have some changes in local hydrological conditions.
	(4) Topography and Geology	(a) Is there a possibility the project will cause large-scale alteration of the topographic features and geologic structures in the project site and surrounding areas?	(a) Y	(a) Large amount of soil work will be conducted, so that it is expected to have some changes in local topographic conditions.
4. Social Environment	(1) Resettlement	(a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement? (b) Is adequate explanation on relocation and compensation given to affected persons prior to resettlement? (c) Is the resettlement plan, including	(a) Y (b) Y (c) Y (d) Y (e) Y (f) Y (g) Y (h) Y (i) Y	(a) Additional land (area is 9 ha) is expected to be acquired as the VLP Extension Area (currently 24 households and /or 99 residents exist). New land-take process shall be required for this VLP extension area. (b) Relevant explanations and information are provided through the STM and information disclosure. In addition, necessity of additional explanations is to be discussed with DoNRE.

	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations
		proper compensation, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement? (d) Is compensation paid prior to the resettlement? (e) Is resettlement policy documented? (f) Does the resettlement plan pay particular attention to vulnerable groups or persons, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples? (g) Are agreements with the affected persons obtained prior to resettlement? (h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan? (i) Is a plan developed to monitor the impacts of resettlement? (j) Is handling of complaints considered?	(j) Y	(c) Official resettlement plan will be developed by MPWT under the direction of DoNRE based on finalized VLP layout plan. (d) Payment is to be done before the resettlement. (e) Relevant resettlement policies are to be documented. (f) Comprehensive social considerations addressing this issue are to be developed. (g) Agreement is to be made prior to resettlement. (h) Comprehensive organizational framework is to be established. (i) Comprehensive monitoring plan is to be developed.. (j) GRM is to be developed.
	(2) Living and Livelihood	(a) Is there a possibility that the project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary?	(a) Y	(a) ESMMP (Environmental and Social Monitoring and Management Plan) addressing this issue is to be developed.
	(3) Heritage	(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage sites? Are adequate measures considered to protect these sites in accordance with the country's laws?	(a) N	(a) No local archeological, historical, cultural, and religious heritage sites exist.
	(4) Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken? (b) Is there a possibility that large-scale and/or high-verticalized building such as accommodation facilities will adversely affect the local landscape?	(a) N (b) N	(a) No important landscape to be preserved exist around the study area. (b) Same as above.
	(5) Ethnic Minorities and Indigenous Peoples	(a) Does the project comply with the country's laws for rights of ethnic minorities and indigenous peoples? (b) Are considerations given to reduce the impacts on culture and lifestyle of ethnic minorities and indigenous peoples?	(a) N/A (b) N/A	(a) No ethnic minority communities exist. (b) Same as above.
	(6) Working Environment	(a) Are local acts about the working environment conformed to during the implementation of this project? (b) Is the plan safety-conscious for the related people of this project? For example, are installation of safety facilities and management of hazardous substances for industrial accident prevention considered? (c) Are designing safe sanitation plans and safety training for laborers including road safety and public health implemented for related people of this project? (d) Are appropriate measures implemented for security personnel related to this project so as not to violate the safety of concerned personnel and residents?	(a) Y (b) Y (c) Y (d) Y	(a) ESMMP addressing this issue is to be developed. (b) Same as above. (c) Same as above. (d) Same as above.
5. Others	(1) Impacts During Construction	(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)? (b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures	(a) Y (b) Y (c) Y	(a) ESMMP addressing this issue is to be developed. (b) Same as above. (c) Same as above.

	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations
		considered to reduce impacts? (c) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?		
	(2) Monitoring	(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts? (b) Are the items, methods and frequencies included in the monitoring program judged to be appropriate? (c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)? (d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?	(a) Y (b) Y (c) Y (d) Y	(a) ESMMP addressing this issue is to be developed. (b) Same as above. (c) Same as above. (d) Same as above.
6. Notes	Reference to Checklist of Other Sectors	(a) Where necessary, pertinent items described in the Roads and Railways checklist should also be checked (e.g., projects including access roads to the infrastructure facilities). (b) For projects, such as installation of telecommunication cables, power line towers, and submarine cables, where necessary, pertinent items described in the Electric Power Transmission and Distribution Lines, and Oil and Gas Pipelines checklists should also be checked.	(a) N/A (b) N/A	(a) Necessity of references to checklist of other sectors are to be discussed after the VLP layout is finalized (as of September 2014). (b) Same as above.
	Note on Using Environmental Checklist	(a) If necessary, the impacts to trans-boundary or global issues should be confirmed (e.g., the project includes factors that may cause problems, such as trans-boundary waste treatment, acid rain, destruction of the ozone layer, or global warming).	(a) N	(a) Not likely to have negative trans-boundary issue by implementing the proposed JICA-funded VLP project.

Notes: 1: Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are made, if necessary. In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience).
2: Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which it is located.

Source: JICA Study Team.

9.3.4 Preliminary Environmental Scoping

Table 9.6 summarizes the preliminary environmental scoping results of the proposed VLP Project.

Table 9.6 Preliminary Environmental Scoping

Environmental Factor		Phase			Comment
		Pre-Construction	Construction	Operation	
Socio-Cultural Environment					
1	Involuntary Resettlement	B	D	D	Based on the 2011 JICA VLP Study Report, DoR, MPWT, has already started relevant land-take negotiation for the entire VLP Project under the

Environmental Factor		Phase			Comment
		Pre-Construction	Construction	Operation	
					direction of DoNRE. The proposed VLP needs an additional land space of 9 ha as an extension VLP area (Note: currently 24 households and/or 99 residents live thereat). Current land use of this extension area is classified as private agricultural land and additional land-take negotiation is required for the implementation of the proposed VLP.
2	Local Job Market and Economy	B	D	D	As mentioned earlier, additional land-take negotiation is required to acquire the land space for the extension area. If some landowners request a land-for-land basis process and/or relocation, it is essential to prepare the compensation of physical relocation as well as recovery of livelihood.
3	Land use and Utilization of Local Resources	D	D	D	N/A
4	Social Institutions	D	D	D	N/A
5	Existing Social Infrastructures and Services	D	D	D	N/A
6	Poor and Indigenous Ethnic Groups	D	D	D	N/A
7	Misdistribution of Benefits and Damage	D	D	D	N/A
8	Cultural Heritage	D	D	D	N/A
9	Local Conflict of Interests	D	D	D	N/A
10	Water Use or Water Rights	D	D	D	N/A
11	Sanitation	D	B	C	Large-scale topographic change is expected to occur during both construction and operation phases. As a result, the risk of occurrence of local inundation due to the temporal worsening of local run-off condition and resultant outbreak of waterborne or insect-borne diseases such as dengue will increase.
12	Infectious Disease (e.g., HIV, AIDS)	D	B	C	As mentioned earlier, the risk of outbreak of waterborne or insect-borne diseases such as dengue or malaria will increase.
Bio-Physical Environment					
13	Topography	D	B	B	Due to earthwork, large-scale topographic change is expected to occur during the construction phase.
14	Groundwater	D	B	B	Temporal water quality degradation during the construction period. Disruption of regional groundwater flow due to earthwork.
15	Soil Erosion	D	B	B	Due to earthwork, the risk of local soil erosion and/or landslide will increase during both construction and operation phases.
16	Hydrology	D	B	B	Due to large-scale landfill of swamp and/or lowland areas and removal of surface vegetation due to earthwork, the risk of disruption of local run-off water will increase.
17	Coastal Ecosystem	D	D	D	N/A
18	Flora/Fauna and Biodiversity	D	D	D	No important flora/fauna occur.
19	Meteorology	D	B	C	Due to the change of local topographic and hydrological conditions mentioned above, the risk of local meteorological change will increase.
20	Landscape	D	D	D	N/A
21	Global Warming	D	B	C	Temporal increase of regional CO_2 emission due to the temporal increase of local traffic volume and usage of certain amount of mortar is expected to occur during the construction phase.
Pollution					

Environmental Factor		Phase			Comment
		Pre-Construction	Construction	Operation	
22	Air Quality	D	B	B	Temporal degradation of roadside air quality condition due to the temporal increase of local traffic volumes is expected to occur.
23	Water Quality	D	B	C	Risk of temporal water quality degradation of nearby tributaries and/or wells will increase during the construction phase.
24	Soil Contamination	D	B	B	Risk of soil contamination due to accidental spill of chemicals will increase during both construction and operation phases.
25	Waste	D	B	B	Certain amount of construction wastes is expected to occur. Amount of soil dumping is to be minimized by optimized earthwork balance.
26	Noise/Vibration	D	B	B	Temporal degradation of roadside noise/vibration condition due to the temporal increase of local traffic volumes is expected to occur.
27	Ground Subsidence	D	D	D	N/A
28	Obnoxious Smell	D	B	C	Risk of obnoxious smell (e.g., compost smell) due to the occurrence of unexpected local inundation and/or degraded run-off will increase during both construction and operation phases.
29	Sediment/Benthos	D	D	D	N/A
30	Accidents	D	B	C	Risk of traffic accident and worsened local traffic jam due to the temporal increase of local traffic volume, mentioned earlier, will increase.

Note: A - significant, B - major, C - unknown, D - less significant
Source: JICA Study Team.

9.4 TOR for Development of Relevant Environmental and Social Studies

9.4.1 Introduction

Within the proposed VLP Project, it is important to obtain the ECC, based on both JICA Guidelines and relevant EIA regulations of Lao PDR (see Section 9.1 for more detailed descriptions of major environmental codes in Lao PDR). As mentioned earlier, the IEE Draft Final Report of this proposed VLP Project was submitted to DoNRE in December 2014. Eventually, the ECC examination was initiated and the ECC was approved in February 2015. Thereafter, the final IEE Report was delivered from MPWT to DoNRE.

Aside from this proposed JICA-funded VLP Project, construction activities of CY and the railway extension are in progress. Basically, the land-take process for the entire VLP facilities has already been started based on the site boundary, delineated within the 2011 JICA-funded VLP study, and then construction of the railway extension and CY facilities were initiated. Negotiations of this land-take process are still ongoing and relevant negotiations with several households and landowners are continuing. The land acquisition for the successful project implementation is one of the Lao Government's undertakings, but still several difficulties that may cause some delays in the entire project implementation schedule are observed. Therefore, it is preferable to provide relevant technical support by assigning a long-term JICA expert to supervise the entire land acquisition process and post-monitoring activities for PAPs.

There are several houses and families living in the agricultural lands that are proposed for the 9-ha extension area. Thus, the additional land-take process should be implemented promptly. There were two major issues that needed to be addressed within environmental and social considerations, to be taken within this proposed project, namely: (1) IEE Final Report and ECC approval; and (2) Land-take process and relevant studies (e.g., preparation of Compensation and RAP).

(1) IEE Final Report and ECC Approval

It was essential to conduct meaningful environmental and social studies within the IEE study of this proposed VLP Project for the successful ECC application. To do this, it was imperative to develop a meaningful IEE TOR based on the finalized engineering study results (e.g., VLP layout, construction schedule and others) as well as preliminary environmental study results (see Section 9.2 for those results).

In this section, the ToR of the IEE study that was used for the ECC application is described. The study area of this IEE study covered both direct and indirect areas to be influenced by the construction and operation activities of the proposed VLP Project.

(2) Preparation of Land-Take and RAP

In the IEE study, a preliminary land-take-related compensation filed study was conducted and the inventory of potential PAPs was summarized. Then, the total amount of compensation prices was estimated based on the summarized inventory. More detailed descriptions are summarized in Section 9.4.4.

The official land-take negotiation including the official RAP development is one of MPWT's undertakings. For the VLP Project, the official land-take process was initiated under the direction of DoNRE after the project approval among line ministries such as MPWT, MPI, and DoNRE. Then, the details of compensation for the land-take was officially prepared through the field survey by DoNRE.

9.4.2 Fundamental Directions for Environmental Management Program

Table 9.7 summarizes the fundamental directions of the environmental issues, evaluated as "A" and/or "B" in the preliminary environmental scoping results of the proposed VLP Project.

Table 9.7 Summary of Environmental Management Directions

	Environmental Issue	Mitigation/Management Policy
1	Involuntary Resettlement	After the proposed VLP project is approved among line ministries such as MPI, MoNRE (or DoNRE), MPWT and others, additional land-take process shall be initiated for the successful implementation of the proposed VLP Project while establishing close liaison with DoNRE.
2	Local Job Market and Economy	Comprehensive compensation scheme covering recovery of livelihood shall be developed.
11	Sanitation	① To develop a monitoring system, in particular, intensive daily field inspection system during

	Environmental Issue	Mitigation/Management Policy
12	Infectious Disease (e.g., HIV, AIDS)	the rainy season shall be done in order to find out the occurrence of local inundation at the early stage. ② Local field drainage system shall be well-designed to avoid long-term inundation. Anti-mosquito outbreak EMP shall be developed. ③To develop periodical medical seminar for construction workers for disease prevention.
13	Topography	Environment-friendly facility design and/or layout shall be developed. In particular, special attention shall be paid to the local drainage system as well as vegetation system in order to minimize the impact of local hydrological balance changes. ①To include a description of the practices to be employed to ensure that the quality of the run-off leaving the construction site is compliant with water quality standards. ②To implement appropriate facilities such as sedimentation ponds in drainages and glass plantation areas at early construction phases in order to deal with any soil from land preparation works. ③To implement sediment control structures to be regularly monitored and maintained throughout construction phase.
14	Groundwater	
15	Soil Erosion	
16	Hydrology	
19	Meteorology	
22	Air Quality	①To establish periodical roadside air quality monitoring program (e.g., PM2.5, PM10, NOx, CO) during both construction and operation phases. ②To describe the practices the contractor will follow to minimize air quality impacts during both construction and operation phases. This generally would include commitments with respect to equipment maintenance, equipment operating procedures, dust control, and so on.
23	Water Quality	①To implement methods in order to avoid contaminating local drainages and ponds with waste and wastewater which may be mixed with concrete and other chemicals. ②To establish periodical water quality monitoring program (e.g., DO, BOD, COD, pH and others) during both construction and operation phases.
25	Waste	① To determine how to deal with liquid and solid waste to be generated from construction works, such as burning, land filling, off-site disposal, recycling, and so on. ② To implement methods to minimize areas to be disturbed by accumulating waste. ③ To determine how to handle sewage, refuse and other liquid and solid waste will be handled at the construction sites.
26	Noise/ Vibration	①To implement appropriate manners for minimizing noise generated throughout construction phases, such as of determining operating hours and any possible abatement measures. ②To notify possibilities of generating noise and making some disturbances around the project area, especially residential areas. ③To establish periodical roadside noise/vibration monitoring program (e.g., L_{eq} and L_{10}) during both construction and operation phases.
28	Obnoxious Smell	①To implement appropriate waste management systems during both construction and operation phases.
30	Accidents	①To address how the contractor will handle, safely store and utilize hazardous materials. ② To address how waste from hazardous materials usage will be disposed of in environmentally safe manner. ③To address common preventive action and procedures against any event of accidents on site to be determined by the contractor prior to the construction phase. ④To implement programs for all the workers of instructing how to handle fuel, lubricating oil, hydraulic fluids and any other hazardous chemicals. ⑤To list equipments to be used on site by construction workers in emergency cases. ⑥To implement workers' health, safety and environment training programs, safety precautions and procedures which all the construction workers are required to care and take prior to their construction works.

Source: JICA Study Team.

9.4.3 IEE TOR (Draft)

Based on preliminary environmental scoping results, a draft TOR for the IEE study was developed. Basically, this TOR development was carried out abiding by the IEE/EIA Law and/or relevant

environmental regulations of Lao PDR and the JICA Guidelines. Table 9.8 summarizes the major tasks of the IEE study to be required for the VLP Project. More detailed descriptions of this TOR are attached in Appendix F. The contents of this IEE TOR draft was approved through a series of discussions with DoNRE in May 2014 prior to the actual initiation of IEE study for this project.

Table 9.8 Major Tasks of Environmental and Social Consideration Study

	Major Tasks to be Conducted
1	Descriptions of Baseline Environment Condition
2	Environmental Field Survey
3	Social Survey
4	Environmental Impact Assessment
5	Environmental Mitigation
6	Environmental Management
7	Environmental Monitoring
8	Public Involvement

Source: JICA Study Team.

9.4.4 Land-Take for Extension Area

Figure 9.15 shows the photo records of several houses observed within Zone D (area is 9 ha), and Figure 9.16 shows the current cadastral map across the entire VLP project area (an extension area included). As mentioned earlier, the land-take negotiation of Zones B and C has been initiated already and relevant construction activities of the railway extension and CY were started. It is noted that the land-take negotiation of some areas therein is still in progress. It is found that the additional area, so-called “Extension Area (Zone D),” is required for the successful implementation of the proposed VLP Project. Thus, an additional land-take process shall be initiated to acquire the “Zone D land space” promptly.

Based on the preliminary RAP-related study conducted in the IEE study for the VLP, it is found that there are 24 households (99 residents) within Zone D. Throughout the field study of this preliminary RAP study, the inventory of private lands and properties were summarized, and then the total amount of compensation prices were estimated. This estimation was conducted using both the government compensation rates and the current market prices (see Table 9.9). In the RAP-related study, preliminary interviews with each PAP were conducted in order to grasp the possibility of a smooth land-take process. All PAPs answered that they will take a constructive attitude to the land-take negotiation with the government when the land compensation is calculated based on the market price. The land price around Zone D, set during August 2014-September 2015 varies between THB500 (LAK132,500)/m^2 and USD80/m^2. To simplify, this rate was used as the lowest value for the preliminary estimation of the compensation calculation.

As summarized in this table, it can be seen that the total amount of the compensation price of the land-take for Zone D, using the government rate is less than half of the market price. The official

amount of compensation prices are to be calculated by DoNRE after the proposed VLP Project is approved among the relevant ministries such as MPWT, MPI, MoNRE (or DoNRE), etc., after which a special ad-hoc committee for the land-take is to be established between MPWT and DoNRE.

Table 9.9 Compensation Price (Estimated) for Zone D

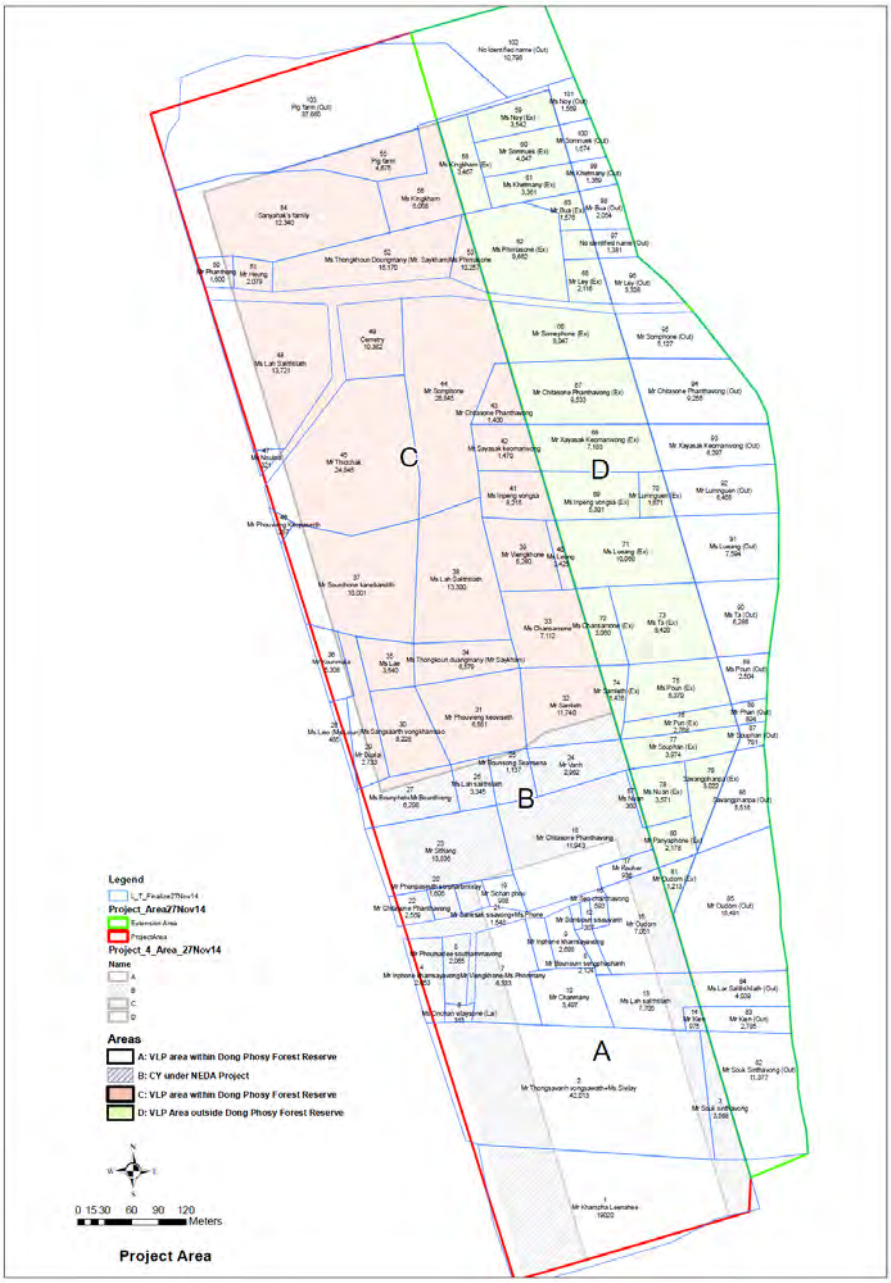
	Using Government Rate	Using Market Price
Land	4,642,450,000 (577,635)	12,302,492,500 (1,530,732)
Properties (bar land)	160,884,350 (20,017)	279,562,200 (34,784)
Total	4,803,334,350 (597,652)	12,582,054,700 (1,565,516)

Note: Numbers in parenthesis are US Dollar-based Price (USD1.00 = LAK8,037)

Source: JICA Study Team.

Source: JICA Study Team.

Figure 9.15 Houses Observed within Zone D



Note: Land-take negotiation of Zones A & C are ongoing between property owners and government and that of Zone B was settled already (as of December 2014). Zone D is the additional site to be required for the JICA-funded VLP project.

Source: JICA Study Team.

Figure 9.16 Current Cadastral Map in the Entire VLP Project Site

Table 9.10 presents the market price-based entitlement matrix that summarizes the relevant compensation for PAPs in Zone D.

Table 9.10 Entitlement Matrix for Zone D

Item No.	Type of Loss	Entitled Person (Beneficiaries)	Entitlement (Compensation Package, LAK)	Implementation Issue/Guideline	Responsible Organization
1	Loss of agricultural land, pond, ditches and orchards, etc.	Legal Owner of Land 1. Ms Kingkham 2. Ms Noy 3. Mr Somnuek 4. Ms Khetmany 5. Ms Phimasone 6. Mr Bua 7. No identified name 8. Mr Ley 9. Mr Somephone 10. Mr Chitasone Phanthavong 11. Mr Xayasak Keomanivong 12. Ms Inpeng vongsa 13. Mr Lumnguen 14. Ms Lueang 15. Ms Chansamone 16. Ms Ta 17. Mr Samleth 18. Ms Poun 19. Mr Pun 20. Mr Souphan 21. Ms Nuan 22.Savangphanpa 23. Mr Panyaphone 24. Mr Oudom	 1. 452,090,000 2. 401,740,000 3. 462,027,500 4. 389,947,500 5. 1,264,977,500 6. 134,090,000 7. 98,447,500 8. 192,920,000 9. 946,712,500 10. 1,120,950,000 11. 842,302,500 12. 687,807,500 13. 133,957,500 14. 1,170,372,500 15. 365,567,500 16. 963,010,000 17. 155,952,500 18. 751,937,500 19. 321,180,000 20. 458,185,000 21. 437,647,500 22. 255,990,000 23. 238,500,000 24. 56,180,000 Total 12,302,492,500	Compensation package, listed in this table is a preliminary one, using the current market price information. Official land-take related survey is to be conducted by valuers of DoNRE after the cut-off date is set through meetings between MPWT and DoNRE.	DoNRE and MPWT
2	Loss of access to cultivable land by owner cultivator/ tenant/ sharecropper	Tenants/sharecropper/ Legal owner/grower/ socially recognized owner/ lessee/ unauthorized occupant of land Same as above.	Same as above.	Same as above.	Same as above.
3	Loss of homestead/ residential/ commercial/ CPR plots by owners/Authorities	Legal Owner of Land and Assets 1. Ms Phimasone 2. Unknown 3. Mr Chitasone Phanthavong 4. Ms Inpeng vongsa	 1. 1,800,000 2. 45,000,000 3. 51,600,000 4. 5,625,000 Total 104,025,000	Same as above.	Same as above.

Item No.	Type of Loss	Entitled Person (Beneficiaries)	Entitlement (Compensation Package, LAK)	Implementation Issue/Guideline	Responsible Organization
4	Loss of trees/ perennials/ fish stocks	Person with Legal Ownership of the land 1. Ms Kingkham 2. Ms Khetmany 3. Ms Phimasone 4. Mr Bua 5. Mr Somephone 6. Mr Xayasak Keomanivong 7. Ms Inpeng vongsa 8. Mr Lumnguen 9. Ms Lueang 10. Ms Chansamone 11. Ms Ta 12. Mr Samleth 13. Ms Poun	 1. 1 320,000 2. 600,000 3. 660,000 4. 520,000 5. 560,000 6. 2,400,000 7. 957,000 8. 1,819,800 9. 15,899,400 10. 4,966,200 11. 13,082,400 12. 2,718,600 13. 10,215,000 Total 54,718,400	Same as above.	Same as above.
5	Loss of residential/ commercial structure by owner(s)	Legal Titleholder Owner(s) of structures No residential/ commercial structure exists.	N/A	N/A	N/A
6	Loss of residential/ commercial structure by squatters and unauthorized occupants	Informal settlers / squatters/ non-titled PAPs occupying public land without title/ or squatting on government land No illegal settler exists.	N/A	N/A	N/A
7	Loss of access to residential houses/ commercial structures (Owners/rented or leased)	Tenants of rented/ leased properties Neither rent nor lease observed.	N/A	N/A	N/A
8	Loss of business by CBEs due to dislocation	Owner/operator of the business as recorded by JVS No particular business operator exists.	N/A	N/A	N/A
9	Loss of income and work days due to displacement	Household head / employees identified by the Joint Verification Team (JVT) N/A	N/A	Survey of compensation package, regarding this issue, is to be conducted by valuers of DoNRE after the cut-off date is set through meetings between MPWT and DoNRE.	DoNRE and MPWT
10	Poor and vulnerable households	Poor and vulnerable households including informal settler, squatters/ women	N/A	Same as above.	Same as above.

Item No.	Type of Loss	Entitled Person (Beneficiaries)	Entitlement (Compensation Package, LAK)	Implementation Issue/Guideline	Responsible Organization
		headed household without elderly son/ non-titled PAPs identified by JVT N/A			
11	Displacement of community structure (CPR)	Community structure representative as identified by the JVT None	N/A	N/A	N/A
12	Temporary impact during construction	Community / Individual N/A	N/A	N/A	N/A
13	Unforeseen impact	Concerned impactees N/A	N/A	N/A	N/A

Source: JICA Study Team.

9.5 Public Involvement and Information Disclosure

9.5.1 Outline

As mentioned earlier, two stakeholder meetings and relevant information disclosure were held for the proposed VLP Project (see Table 9.11).

Table 9.11 Outline of Stakeholder Meetings and Information Disclosure

	Stakeholder Meeting	Information Disclosure Period
1st	May 30, 2014 Conference Room of Thanaleng Railway Station) 44 people attended	July 18-August 7, 2014
2nd	November 7, 2014 Conference Room of Vientiane Municipality 44 people attended	November 6-December 5, 2014

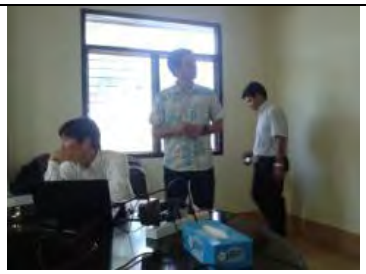
Source: JICA Study Team.

The list of meeting participants was developed through discussions among MPWT, DoNRE, JICA Laos Office, and the JICA Study Team. Prior to the information disclosure of the proposed VLP Project, public notices, written in Lao and English, were made using several local newspapers. During the information disclosure period, information such as handout materials used for the stakeholder meetings, minutes of meeting, list of participants and other relevant material were put in the public domains (e.g., Department of Transport, MPWT, District Office and Nareen (selected IEE consulting company for the proposed JICA-funded VLP study). Also, contact information such as email, surface mail and/or cellular phone numbers were put on the public notice for the comment feedback from the stakeholders. Also, PDF files of all meeting materials of both the 1st and 2nd meetings were posted at the website of MPWT (http://www.mpwt.gov.la/lo/projects-lo/vlp-project-menu-lo) from November 26, 2014.

9.5.2 1st Stakeholder Meeting and Information Disclosure

Figure 9.17 shows the program outline and photo records of the 1st Stakeholder Meeting. A total of 44 people attended. At this meeting, the project outlines of the JICA-funded and NEDA-funded VLP Projects were first explained. Then, relevant environmental and social considerations such as the TOR of the IEE study of the JICA-funded VLP Project were presented. After these presentations, a Q&A session followed. The list of participants and the minutes of the meetings are attached as Appendices B and C.

1. Registration	8:00
2. Opening Remark	8:30 -8:45
3. Participant Introduction (Representative)	8:45-8:50
4. Main Presentation	9:00
5. Entire VLP Project Outline	9:00 – 9: 10
6. Ongoing Railway Extension Construction Project	9:10 – 9: 40
7. Proposed VLP Project	9:40 – 10:10
8. Tea Break	10:10 – 10: 20
9. Environmental and Social Considerations - TOR of IEE Study - Schedule of Entire Stakeholder Meeting - Preliminary RAP Study - Public Involvement and Information Disclosure	10:20 – 10:50
10. Question and Answer Sessions	10:50 – 11:30
11. Post-Meeting Questionnaire Survey	11:30 – 11:45
12. Closing Remark	11:45 – 12:00



Source: JICA Study Team.

Figure 9.17 Program and Photo Record of 1st Stakeholder Meeting (held on May 30, 2014)

All meeting materials, minutes of meeting, the list of participants and photo records were disclosed during the information disclosure period (July 18-August 17, 2014). It is noted that neither question nor comment was received during this period.

9.5.3 2nd Stakeholder Meeting and Information Disclosure

Figure 9.18 shows the program outline and photo record of the 2nd Stakeholder Meeting. A total of 44 people attended. At the meeting, a review of the previous 1st Stakeholder Meeting was first conducted. Then, the progress of the JICA-funded and NEDA-funded VLP Projects was explained. This was followed by a presentation of the major study results of the IEE study of the proposed VLP Project. After these presentations, the Q&A session followed. The list of participants and the minutes of meeting are attached as Appendices D and E.

1. Registration 2. Opening Remark 3. Introduction of Meeting Objective, Agenda and Participants 4. Review of 1st Stakeholder Meeting 5. Progress of NEDA-funded Construction Project 6. Progress of Proposed VLP Project 7. Progress of VLP IEE Study 8. Tea Break 9. Question and Answer Session 10. Post-Meeting Questionnaire Survey 11. Closing Remark	8:00 - 8:45 8:45 – 8:55 8:55 – 9:05 9:05 – 9:20 9:20 – 9:35 9:35 – 9:50 9:50 – 10:15 10:15 – 10:30 10:30 – 11:45 11:45 – 11:55 11:55 – 12:00
	

Source: JICA Study Team.

Figure 9.18 Program and Photo Record of 2nd Stakeholder Meeting (held on November 7, 2014)

As in the first meeting, all meeting materials, minutes of meeting, the list of participants and photo records of the second meeting were disclosed during the information disclosure period (November 6-December 5, 2014). As mentioned earlier, the PDF files of all meeting materials of the two meetings were posted at the website of MPWT during this period. It is noted that five questions and comments (four on the compensation with the land-take and one on the implementation of EMP (ESMMP) were received during this period.

9.6 Directions for Environmental Management Program Development

9.6.1 EMP (ESMMP) Framework

In the IEE study, it is mandatory to include an appropriate environmental management program (EMP and/or ESMMP) for the successful project implementation. This EMP/ESMMP shall be developed, addressing potential negative impacts identified through the environmental scoping process and proper environmental and social considerations such as RAP-related follow-up study, mentioned earlier, shall be taken during both the construction and operation phases. Key issues of this EMP development work are summarized below:

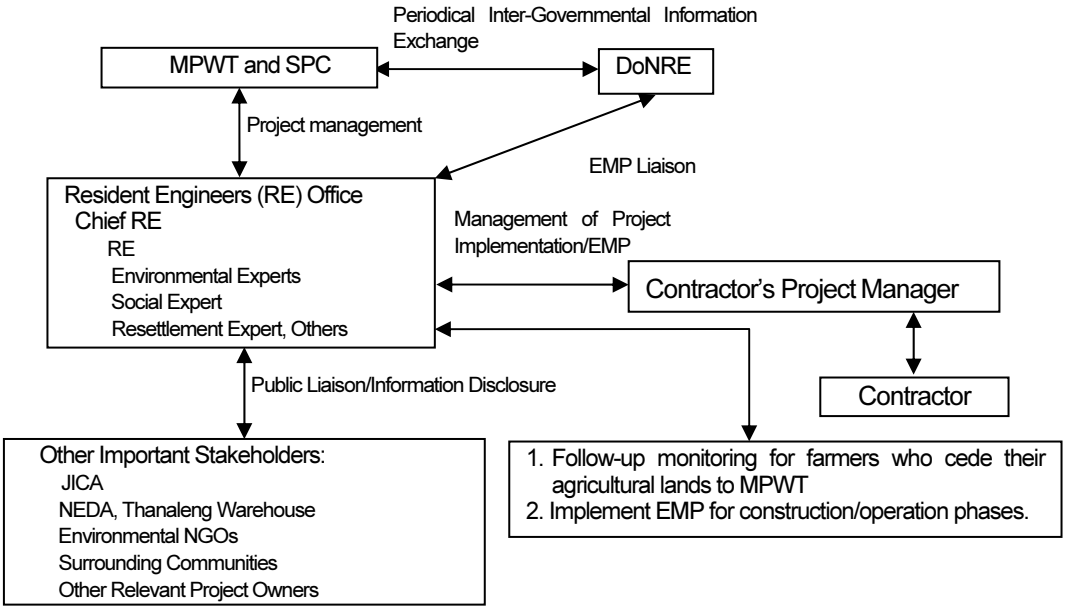
- Development of Monitoring Program (e.g., roadside air quality, noise/vibration, water quality and sedimentation of nearest tributaries);
- Data processing of all monitoring results;
- Framework of project-related complaints handling (e.g., set-up of appropriate GRM);

- Contingency plans for accidents during construction period;
- Liaison with relevant stakeholders;
- Follow-up monitoring of PAPs, particularly farmers who lost agricultural lands due to depot construction; and
- Others.

It is noted that the abovementioned issues are addressed in the EMP (i.e., ESMMP) developed in the IEE Draft Final Report which was submitted to DoNRE in December 2014 (see Table 42 in Section 6.3 of the VLP IEE Draft Final Report). According to this report, the estimated price of environmental monitoring activities such as the roadside air quality, water quality, etc. to be required for the environmental management of the VLP project is of USD40,750. The specific funding source for these environmental monitoring activities is not determined yet (most likely, the SPC will fund). The major relevant environmental and social costs to be required after this study are summarized below.

Land-take for Zone D	USD1,550,484	MPWT
EMP Implementation	USD 40,750	(SPC)
Total	USD1,591,234	

There are several crucial factors for the successful EMP implementation. In particular, the establishment of good liaison among SPC, MPWT, DoNRE, surrounding communities, relevant NGOs and others would play a vital role. Figure 9.19 shows the schematic diagram of the EMP framework. In the VLP Project, relevant official land-take negotiations are to be conducted by MPWT under the direction of DoNRE. To avoid occurrences of undesirable events, it is important to take a comprehensive approach for PAPs while establishing the proper public participation and information disclosure process prior to the land-take. Also, it is important to conduct relevant follow-up studies to monitor PAPs such as farmers who are to lose their agricultural lands.



Source: JICA Study Team

Figure 9.19 EMP Implementation Framework

9.6.2 Environmental Monitoring

Table 9.12 summarizes the fundamental directions of the environmental monitoring activities to be implemented in the EMP (ESMMP) of the proposed VLP Project. As mentioned earlier, more detailed descriptions for each monitoring activities are summarized in the IEE Draft Final Report (see Section 6.3 of that report), already submitted to DoNRE. The exact monitoring locations, parameters to be monitored, and/or monitoring frequencies of each activity are to be determined through a series of discussions with JICA, SPC, MPWT, DoNRE and other competent ministries and/or organizations.

Environmental baseline surveys of roadside air quality, noise/vibration and water quality shall be conducted prior to the construction phase. This survey shall be conducted in both dry and rainy seasons, respectively. It is noted that several field surveys of roadside air quality, noise and water quality (surface and sub-surface) were conducted in the 2011 JICA-funded F/S. A baseline database shall be developed, incorporating that survey information. A monitoring plan to be used for the proposed VLP Project is attached as Appendix G.

Table 9.12 Directions for Environmental Monitoring

	Monitoring Issue	Monitoring Location and/or Area	Activity Period		Comments
			Construction	Operation	
1	Air Quality (e.g., Dust, SPM, PM10, CO, NOx, Sox)	Roadside of nearby community/ feeder and/or major roads (e.g., 3～4 points)	◎	◎	Monthly measurement (Once/month) is preferable.
2	Water Quality (e.g., pH, SS, BOD, COD, DO, Total Nitrogen, Total P, Heavy Metal, Oil)	Nearby channel/ river/ wells and/or effluent discharge points (3～4points)	◎	○	Same as above.
3	Waste	N/A	◎	△	Daily on-site inspection shall be conducted to avoid illegal dumping.
4	Noise/Vibration	Roadside of nearby community/feeder and/or major roads (e.g., 3～4 points)	◎	◎	Monthly measurement (Once/month) is preferable.
5	Obnoxious Smell	N/A	○	△	Daily field inspection and observation shall be conducted during construction phase.
6	Relocation	All PAPs	○	○	Periodical follow-up for all PAPs shall be conducted (e.g., twice/year).
7	Recovery of Livelihood	Same as above	○	○	

Note: ◎ Intensive, ○ Major, △ Moderate

Source: JICA Study Team

9.7 Undertaking for Lao PDR's C/P for Successful Project Implementation

From the viewpoint of the land-take, the entire VLP project area consists of two parts, namely: (i) area where the official land-take process has already been initiated and still in progress (note: the site boundary is delineated based on the 2011 JICA VLP F/S Report), and (ii) an extension area (official land-take process is not initiated yet). To initiate the entire VLP Project smoothly, it is important to complete the on-going land-take process while initiating land-take process for the additional extension area promptly prior to the construction phase.

Although proper land-take processes as well as the land-take-related legal framework related to development projects have already been established in Lao PDR, there are still several land-take-related disputes that occur within the on-going infrastructure development projects. So, it is essential to conduct a series of follow-up studies such as the monitoring of the land-take negotiation process and a post land-take-related social study for PAPs (e.g., farmers) through possible joint long-term study between JICA and MPWT.

The IEE Draft Final Report of the proposed VLP Project has been submitted to DoNRE in December 2014 and the ECC was approved in early February 2015. On the other hand, the ongoing railway extension and CY construction projects have not obtained an ECC yet. In particular, the CY is one of important facilities within the entire VLP Project and it would be preferable to obtain the ECC smoothly. By doing this, a thorough environmental accountability can be established across the entire project. Therefore, it is essential to have relevant discussions among MPWT, DoNRE (or MoNRE)

and JICA while conducting the relevant follow-up studies in order to check the progress of the entire ECC status. Table 9.12 summarizes the major tasks to be required for the successful implementation of EMP (ESMMP) for the project. The draft of the preliminary due diligence report for the NEDA-funded construction work is attached as Appendix H.

Table 9.13 Major Tasks for Environmental Approval Application of VLP Project

	Major Tasks
Land-Take	A. Extension Area 1. Successful and peaceful land acquisition prior to beginning the construction phase, satisfying the JICA Guidelines and WB OP4.12. Following are crucial factors within this land-take process: ①Socioeconomic Study of PAPs ②Establish close liaison between MPWT and all PAPs while encouraging constructive participation of PAPs for VLP Project ③ Set up of GRM ④Follow-up studies (e.g., Periodical Monitoring and Evaluation) 2. Preparation of periodical Community Meeting Program between MPWT and all PAPs、 3. Official land-take process and relevant study with direction from DoNRE B. Ongoing Land-Take Process 1. Identifying difficulties that cause delays in the entire land-take process. 2.Completion of ongoing land-take process
IEE Study	1. ECC approval of ongoing NEDA-funded CY construction and railway extension projects. 2. Preparation of EMP implementation
EMP Implementation	1. Establish EMP framework and initiation of EMP (ESMMP) implementation 2. Periodical report to DoNRE and JICA 3. Set-up of periodical Community Meeting regarding the progress of VLP Project

Source: JICA Study Team

Chapter 10 Future Issues

10.1 Remaining Issues

As mentioned in previous chapters, the VLP development plan is almost completed and the basic examination of implementation scheme, the financial examination, risk assessment, etc., are underway. As for IEE procedure, DoNRE in Vientiane Capital City has forwarded it through the proper channel, and ECC was issued on 2nd February 2015. The steering committee has approved the business plan and development plan in the 3rd steering committee convened on 10th October 2014. However, the Vice Minister of MPWT has additionally requested an explanation of the development and management of the VLP to the major stakeholders, e.g., the Customs Department in the Ministry of Finance, Lao International Freight Forwarder Association, etc., in detail through the discussion after the 3rd steering committee. The Vice Minister has agreed to the necessity of the VLP development as a core and leading international logistics facility in Lao PDR in line with international standards after the establishment of AEC.

The dedicated committee, which the Lao Government would establish in 2015, would consist of the involved Ministry in Lao PDR, and MPWT would play a main role of the dedicated committee. The Japanese Logistics Company, which would stake the VLP project, needs the remaining examination as follows after the establishment of the dedicated committee.

- To elaborate the implementation scheme of the VLP development and management; and
- To elaborate the financial analysis.

10.1.1 Elaborated Implementation Scheme

The SPC established by the Lao PDR Government and the Japanese Logistics Company would implement the VLP business under the PPP scheme at this time. The SPC would handle the leasing and management besides the public warehouse management. The concept of the implementation scheme of the VLP has been approved by the involved entities; however, the implementation structure would be elaborated in terms of the following aspects.

- Agendas of SPC establishment, e.g., participation of agencies as stakeholders in Lao side to SPC organization, equity allocation, evaluation of land value and CY supported by NEDA investment in kind, and so on.

- Agendas of the existing warehouse in Thanaleng, e.g., discontinuance and reutilization of the existing warehouse, transfer of the existing staff and workers in the existing warehouse, and so on.
- Agendas of customs clearance function, work condition of customs officers, data exchange between the VLP and customs, and so on.
- Agendas of Lao State Railway, e.g., future cargo handling, cargo train operation, and so on.

10.1.2 Elaborated Financial Analysis

It should be necessary that the financial analysis condition mentioned in Chapter 7 needs to be elaborated more realistically based on a detailed survey. Therefore, the involved agency in both sides should discuss the fund procurement, the funding options, investment ratio, etc., in a careful manner as follows.

- Elaborate the project and OM cost.
- Elaborate the cash in and out flow based on the realistic assumption of future cargo demand.
- Elaborate the capital and loan ratio, the loan conditions, etc.

Appendix

A List of Investment Projects subject to IEE and/or EIA

B List of Participants (1st Stakeholder Meeting, held on May 30, 2014)

C Minutes of the 1st Stakeholder Meeting on the Inception of VLP and IEE on May 30th 2014, at Thanaleng Railway Station

D List of Participants (2nd Stakeholder Meeting, held on November 07, 2014)

E Minutes of the 2nd Stakeholder Meeting on the Inception of VLP and IEE on November 07th 2014, at Vientiane Capital Administrative Office

F IEE-ToR

G Monitoring Form

H Preliminary Due Diligence Review of Land-Take process of NEDA-funded VLP Construction Project

A List of Investment Projects Subject to IEE and/or EIA

Table A.1 List of Investment Projects Subject to IEE and/or EIA (Industrial Sector)

	Type of Investment Projects	Category 1 (IEE)	Category 2 (EIA)
1	Meat production, processing and storages and production factory	≤ 20 Ton/day	> 20 Ton/day
2	Fish processing, storages and production factory	≤ 20 Ton/day	> 20 Ton/day
3	Fruit/Vegetable processing and storages and production factory	All	
4	Milk manufacturing plan	≤ 40 Ton/day	> 40 Ton/day
5	Tapioca factory	50 – 100 Ton/day	> 100 Ton/day
6	Feedstuff factory	All	
7	Sugar factory	≤ 50 Ton/day	> 50 Ton/day
8	Foodstuff factory	>1 Ton/day	
9	Alcohol, wine, beer production factory	≤ 500,000 L/yr	> 500,000 L/yr
10	Non-alcoholic production factory (soda, soft drink, mineral waters production)	All	
11	Pure drinking water factory	All	
12	Tobacco factory	All	
13	Fabric, thread, fiber production factory	All	
14	Clothes, decoration and painting, animal hairs production factory	All	
15	Animal skin processing factory	All	
16	Leather production factory (handbag, luggage, saddle, etc.)	≤ 1,000,000 Pc/yr	≤ 1,000,000 Pc/yr
17	Leather shoes production factory	≤ 1,000,000 Pair/yr	> 1,000,000 Pair/yr
18	Handicraft factory (using wood, bamboo, straw, etc.)	All	
19	Bamboo production factory	≤ 100,000 m^2/yr	> 100,000 m^2/yr
20	Paper and pulp production plant project	≤ 50 Ton/day	> 50 Ton/day
21	Printing service and stationary	All	
22	Petroleum industry		All
23	Basic chemical production factory besides chemical fertilizer and production that contained acid	≤ 500 Ton/day	> 500 Ton/day
24	Pesticide and chemical fertilizer production factory		All
25	Medical supplies, equipment and traditional medicine factory	≤ 500 Ton/day	> 500 Ton/day
26	Soap and detergent, cleansing material, brush, perfume and other cosmetic factory	≤ 10 Ton/day	> 10 Ton/day
27	Chemical production factory		All
28	Rubber processing factory	100 – 300 Ton/day	> 300 Ton/day
29	Plastic factory	≤ 500 Ton/day	> 500 Ton/day
30	Glass industry and glass production factory	All	
31	Non-metallic ores production factory	All	
32	Cement, lime and plaster cement factory	≤ 30 Ton/day	> 30 Ton/day
33	Steel and iron smelting factory	≤ 120 Ton/day	> 120 Ton/day
34	Non-ferrous metal smelting factory	≤ 50 Ton/day	> 50 Ton/day
35	Steel processing factory	≤ 50 Ton/day	> 50 Ton/day
36	Steel and iron processing factory	All	
37	Metal frame, tank, basin/sink production factory	All	
38	Dynamo production factory	All	
39	Domestic appliances production factory	All	
40	Office material equipment, accounting stationeries and computer production plant	All	
41	Generator and apparatus production factory	All	
42	Battery and dry cell battery production factory	≤ 100 Ton/day	> 100 Ton/day
43	Radio, television and communication device and tool	All	

	Type of Investment Projects	Category 1 (IEE)	Category 2 (EIA)
	production factory		
44	Medical equipment, meter and eyesight, watch and clock factory	All	
45	Vehicle assembly plant (light truck, heavy truck and semitrailer, etc.)	All	
46	Spare parts and vehicle parts and engine factory	≤ 1,000 Ton/day	> 1,000 Ton/day
47	Bicycle and wheel of disabled people	≤ 10,000 Unit/yr	> 10,000 Unit/yr
48	Furniture factory	≤ 10,000 products/yr	> 10,000 products/yr
49	Storage of solid waste not producing hazardous	All	
50	Disposal of solid waste producing hazardous		All
51	Solid waste treatments and environment management		All
52	Water supply factory	All	

Source: MoNRE, Environmental Impact Assessment Guideline, 2012

Table A.2 List of Investment Projects Subject to IEE and/or EIA (Infrastructure and Service Sector)

	Type of Investment Projects	Category 1 (IEE)	Category 2 (EIA)
1	Lake, river, channel land filling project impacts on public		All
2	Dormitories, resettlement construction project	> 50 rooms	
3	Golf course construction plant project	9 holes	
4	Multi-games sport project		All
5	Petrol depot construction project	600 – 60,000 barrels	
6	Industrial zone construction and development project		All
7	Special economic zone construction and development project		All
8	Inland waterway navigation project	All	
9	Waste water treatment plant project (waste water from district, hospital and industrial processing factory)		All
10	Road construction through national or provincial protected areas		All
11	New railway construction project		≥ 100 km
12	New road construction project (national, provincial, district, urban, extra construction)		All
13	Road improvement project (national, provincial, district, extra road improvement)	All	
14	Road rehabilitation or upgrading project (national, provincial road rehabilitation)	All	
15	New runway airport construction project	1,000 – 2,500 m	>2,500 m
16	Hospital construction project	≤ 100 beds	> 100 beds
17	Hotel or resort construction project near the river	≤ 80 rooms	> 80 rooms
18	Hotel or resort construction project	≤ 50 ha	>50 ha
19	Tourism and resort development project in the National or provincial protected area		All
20	Solid domestic waste recycling plant project	All	
21	Incinerator for domestic solid waste project		All
22	Incinerator for industrial solid waste project		All
23	Project using part or whole national or provincial protected area, historical or cultural vestiges, or unique landscape, conservation area of local authorities		All
24	Telecommunication network construction project	All	
25	River communication (improvement of river channel for boat)	≤ 200 Ton	> 200 Ton
26-1	Port construction project (passenger port)	≤ 500 Ton DWT	> 500 Ton DWT
26-2	Port construction project(general transportation port)	≤ 500 Ton DWT	> 500 Ton DWT
26-3	Transportation port producing hazardous substances such as chemicals, engine oil		All
27	Embankment construction project		> 1 km
28	Community solid waste management construction	≤ 50 ha	> 50 ha
29	Solid waste management construction		All
30	Industrial solid waste landfill site project		All

Source: MoNRE, Environmental Impact Assessment Guideline, 2012

B List of Participants (1st Stakeholder Meeting held on May 30, 2014)

Table B.1 List of Participants of 1st Stakeholder Meeting

1st Stakeholder Consultation Meeting on Inception of the VLP and IEE on 30th, May 2014 at Thanaleang Railway Station Office			
No.	**Name**	**Organization**	**Contact**
1	Ms. Mayumi Miyata	Representative of JICA Laos Office	
2	Mr. Hideto Taketani	JICA study team	020 28219090
3	Mr. Norihiro Izuno	JICA study team	020 98024101
4	Mr. Baba Yuichi	JICA study team	020 97183164
5	Ms. Phetmanivone Thattamnivong	JICA study team	020 22472384
6	Mr. Bouaphet Sayasane	DoT, DDG	
7	Dr. Bounta Onnavong	DoT, MPWT	020 5546 6466
8	Mr. Putthaxay Sirisack	DoT, MPWT	020 5513 1757
9	Mr. Chanthone Sayakhone	CY Project Manager, Dept of Railways	020 58569 8857
10	Mr. Somsana Ratsapmong	Dept of Railways (DDG)	020 2222 9877
11	Mr. Kitsana Chanthaviban	Lao World Construction Company	020 2229 0948
12	Mr. Savaeng sengmany	Head of Nakouay Tai Village	020 9800 7131
13	Mr. Bouavanh Luangsay	Public Works and Tsanspoh Institute	020 5562 2373
14	Mrs. Soulidavanh Keovilaivunh	Dept of Planning and Investment, VTE Capital	020 5561 9695/2334 3434
15	Mr. Phonexay	Namtha Construction Company/Land Development	020 5478 7788
16	Mr. Sompong Pholsena	Dept of Raiways, DG	020 5581 0528
17	Mr. Sone Chay	PWTO of Saysetha District	020 2222 6195
18	Mr. Ladsamee	DoNRE VTE Capital	020 9656 5665
19	Mr. Vanphong	NRE Office	020 9981 9620
20	Mr. Chansamai Louanglath	NRE Office	020 2221 1480
21	Mr. Souphakhone	Mekong Consultant Company	020 5805 9033
22	Mr. khumphai	Land owner in the VLP area	020 5691 5996
23	Mr. Sivongxay Avixay	Dept of Railways	020 2208 6777
24	Mr.Khankeo Thimmasy	Information-Culture and Tourism, VTE Capital	020 5550 8904
25	Mr.Sukan Vonglasamy	Village safeguard	020 2244 7597
26	Mr.Lanveth	Village safeguard	020 5520 8878
27	Mr. khunkeo	Village Laos Font	020 5521 3101
28	Ms. Nona	Village Laos Font	020 9622 6128
29	Mr. kamphou	Cabinet of Saysetha District	020 5414 1258
30	Mr. Dnpeng vongsa	Land owner in the VLP area	020 5599 8004
31	Mr Souvanh khunthavong	PAFO VTE Capital	020 2221 49 16
32	Mr. Bounhieng Thammavongsa	Cabinet of Saysetha District	020 5550 6895
33	Mr. Bounping Payachit	Vice Governor of Saysetha District	020 9999 5511
34	Mr. Bouaphet Sayasane	DoT, DDG	
35	Mr. Vienvanh Sisoophanthon	Villager	020 2223 2460
36	Ms. Vilaivanh Sisoophanthong	Villager	020 2223 2460
37	Mr. Sengsavang Phandanvong	DoT	020 9985 5363
38	Mr. Vichit Sadeltan	LIFFA	020 5551 1481/2888 8900
39	Mr. Lieng Monthalath	DoT	020 5565 4198
40	Mr. Nounta Hamputhoun	Transport Company VTE Capital	020 2222 2108
41	Mr. Mone Nouansyvong	Environment Consultant	020 22219986
42	Mr. Vanthakone Dejvongsa	Environment Consultant	020 23456365
43	Ms.	Dept of Railways, Technical staff	
44	Ms.	Dept of Railways, Technical staff	

C Minutes of the 1st Stakeholder Meeting on the Inception of VLP and the IEE Study on May 30, 2014, at Thanaleng Railway Station

The 1st Stakeholder Meeting on the Inception of the Vientiane Logistics Park (VLP) and the IEE Study was held on May 30th 2014, at Thanaleng Railway Station. The meeting was co-chaired by Mr. Bouaphet Sayasane, Deputy Director of Transport Department, Mr.Bounping Panyachit, Vice Governor of Saysetha District and Ms. Mayumi Miyata, Representative of JICA Laos Office. The meeting was attended by 44 participants from the public and private organizations, and villages including people who use the land in the proposed VLP project.

The public sector participants came from the Department of Transport and Railway, Ministry of Public Works and Transport (MPWT); Department and Offices of Natural Resources and Environment, Planning and Investment, Public Works and Transport, Agriculture and Forestry, Information-Culture and Tourism of the Vientiane Capital and Saysetha District, respectively. The private sector representatives included Lao International Freight Association (LIFA) Authorities), Namtha Construction Company/Integrated Land Development Company, Pig Farm Owner, Lao World Construction Company; Nakouay village organization; and people who own the land in the proposed VLP project area.

The meeting was conducted in the full morning of May 30th, and started with (1) welcoming and introduction of the guests, (2) opening remarks, (3) presentation, (4) discussion and feedback, and finally (5) wrap up and closing the meeting.

The welcoming and introduction of the guests was made by Mr. Vanthakone Dejvongsa, an environmental consultant. The opening remark was honored by Mr. Bouaphet Sayasane, Deputy Director of Transport Department. The first presentation on the overview of logistics in Laos was made by Dr. Bounta, Chief of Planning and Finance Division, Department of Transport, MPWT. The second presentation on the plan and progress of the existing railway extension project was made by Mr. Chanthone Sayakone, Deputy Director of Railway Department. The third presentation on the VLP project was done by Mr. Taketani, Nippon Express Company, while the last one on environmental safeguard requirements, overall plan and approach was made by Mone Nouansyvong, the environmental consultant team leader.

After the presentations, the participants moved to the discussion session where a number of queries, comments and suggestions were raised and discussed. Through the discussion, it can be observed and summarized that, overall, the meeting was conducted in a good atmosphere and interactive way. Most participants agreed with the project but raised the concern that the IEE should identify and determine the level of impacts including mitigation measures for any major impacts. Among the impacts, many were more

concerned about land use or livelihood impacts rather than biological and physical impacts. The key expressions and comments regarding the land use issues are summarized below:

1. Ms. IV, land owner:

She was very curious where the proposed VLP is and whether her land is affected or not and also suggested that it would be good if the project could indicate the boundary clearly.

2. Head of the Nakouay Tai Village:

The head of the village, on behalf of villagers, generally agreed with the development project which could bring more benefits to the socioeconomic development of the nation. However, since the village cemetery exists in the proposed VLP, the relocation of the cemetery is needed and should be done appropriately and according to the villagers' customs and traditions. In addition, he also suggested the area close to the temple to be developed for the cemetery.

3. Mr. CS:

One of the main challenging issues is how to handle the encroachment or new developments in the railway extension project area. Although the Railway Department already informed the residents to pause all activities in the railway extension project area, it still happens and will take time and a complicated process to sort it out. Some people have less options or land for cultivation while some just get in, aiming to benefit from compensation. However, hereafter, the new developments or encroachment in the area should be prohibited.

4. Namtha Construction Company's Land Development:

The migration into the area is an encroachment rather than allocation. Many landowners are not in Nakouay Tai Village. When we would like to contact these people, it is difficult. Some lands have already been sold thrice over.

Actually this area is the (Dongphousy) conservation forest which was promulgated since 1942 and it is state property so government has right to develop it. However, during our soil excavation for the road construction, we compensated 27 families that used the land in the area (most are in the Lao World Construction Area rather than in the VLP area).

5. Mr. S, Railways Dept:

This area has been encroached for years. Many people who have lived or used this area are not in the family books nor registered legally with Nakhouay Tai Village. However, we need to conduct an inventory and document all land use type and land acquisition.

6. Mr. N, Dept of Public Work and Transport, VTE Capital

The socioeconomic development is important but it should be along with environment protection. In addition, it is important to consider the illegal but for subsistence and legal enforcement.

7. Dr. S, Dept of Railways

I would suggest that we make it clear in the F/S study and IEE so that we can see how it is feasible. In addition, I recommend we establish a specific committee or an organization to support and coordinate the study.

8. Mr. B, Vice Governor of Saysetha District

I have some observations and would like to suggest:

- Informing the villagers or residents who use or own the land in the area about the VLP project and suggest to them not to conduct land development and agro-forestry activities;
- The IEE should suggest how to minimize the negative impacts while increase the positive impacts (e.g., employment and support for local business);
- Compensation or implementation of the measures should be based on the existing regulations;
- The relocation of the cemetery of the village should organize the spiritual ceremony or follow the traditions of the villagers; and
- The project should indicate the advantages and disadvantages in the F/S so that it will be easy for decision making.

9. Mr. S, Dept of Transport

The IEE should cover more the social impacts/aspects, e.g., accidents, congestion when the transportation increases. Air might need to be monitored. And as for the positive impact, it needs to study what are the opportunities for local employment.

10. Mr. B, the chairman:

I observed that most of the developments can cause impacts that are inevitable. However, we can avoid or reduce by enforcing measures or there are options to realize a win-win situation.

Improving the livelihood and quality of lives of people is a responsibility of the government and government considers this in all developments so that we conduct F/S and IEE to determine if the project is sustainable or not.

In addition, we need to consider the significance of the project and sometimes compromise small or insignificant impacts or matters in order to realize the mega project or huge positive impacts.

(End of Minutes of Meeting)

D List of Participants of 2nd Stakeholder Meeting (held on November 7, 2014)

Table D.1 List of Participants in the 2nd Stakeholder Meeting

List of participants
2nd Stakeholder Consultation Meeting of the VLP and IEE
on 07th, October 2014 at Vientiane Municipality Office

No.	Name	Organization	Phone Number
1	Dr. Bangon Xayalath	DDG of DoNRE VTE Capital	22288337
2	Mr. Phimpha Khamphengxay	Chief of Environment Division, DoNRE	22219551
3	Mr. Khamking Keobounkong	Technical saff of DESIA, MONRE	55800717
4	Ms.Thongin Dethsandone	Land owner in the VLP area	22242408
5	Mr. Khamphet Mounthaly	Chief of Forest Dividion, PAFO VTE Capital	22440766
6	Mr. Chanthone Xayakone	Dept of Railways, CY projec manager	55698857
7	Mr. Bounthong Keohanam	Chief of Division, Dep. Of Urban Planning and Housing, MPWT	20215361
8	Ms. Inpeng Vongsa	Land owner in the VLP area	55998004
9	Mr. Bounthieng Soulin	Land owner in the VLP area	28266160
10	Mr. Someboun Sisouvanh	Land owner in the VLP area	97067869
11	Mr. Sounthone Saenbandith	Land owner in the VLP area	55428495
12	Ms. Xaysavanh Sinnasone	Technical staff. Dep. Of Information, Culture and Tourism, Vientiane Capital	22403181
13	Mr. Aloundeth Phanthamaly	Technical staff, PWTO of Saysetha District	54161444
14	Mr. Phouthaxay Silichack	Technical staff. DoT, MPWT	55131757
15	Ms. Phimmasone Silimanotham	Land owner in the VLP area	55499584
16	Mr. Phouvieng Keovisetth	Land owner in the VLP area	99982573
17	Mr. Khamkeng Chathavongsa	Environment Consultant, NAREENCI	55699473
18	Mr. Vanthakone Dejvongsa	Environment Consultant, Team Leader. NAREENCI	56364265
19	Mr. Thanongsack Khounphalangsy	Head of Aministration Office, Namtha Construction Company	99804464
20	Mr. Phousavanh Vongsa	Technical staff, Dep. Of Public Transpot, MPWT	56402050
21	Ms. Xaysomenuek Souvannavong	Technical staff, Dep. Of Public Transpot, MPWT	22333772
22	Mr. Bounhome Duangmany	Land owner in the VLP area (reprentative)	54852572
23	Mr. Bounmy Souksamlanh	DDG, Saysetha District Admistrative Office	54088415
24	Mr.Bounthanome	Land Division	
25	Mr. Thidsomephone Oradome	Lao Font for Nation Construction, Nakouay Tay Village	22215456
26	Mr. Somemith		
27	Mr. Thongma	Lao Font for Nation Construction, Nakouay Tay Village	99177152
28	Mr. Vilaysack Xayavong	Deputy chief of village, Nakouay Tay Village	55922193
29	Mr. Chansamone Thonglath	Chief of Environment Unit, Natural Resources and Environment Office, Xaysetha District	22211480
30	Mr. Latdavanh Phimphavong	Deputy Chief of Environment Unit, Natural Resources and Environment Office, Xaysetha District	55552923
31	Ms. Lothchana Phouangmanivong	Chief of Environment Division, DoNRE	22095535
32	Mr. Somechith Saenchonghack	Chief of Unit, DoNRE	22435779
33	Mr. Lathsamy Xaysongkham	Chief of Unit, DoNRE	96565665
34	Mr. Phavanh Sihavong	Chief of Water Resources Division, DoNRE	23999966
35	Mr. Khamthong	Deputy Chief of Environment Division, DoNRE	98333357
36	Mr. Kinnalone Sihanath	Chief of Meteorology and Hydrology Division, DoNRE	22232926
37	Ms. Daovone Sinthavong	Deputy Chief of Unit, DoNRE	22500259
38	Ms. Tounalome Malaythong	Deputy Chief of Unit, DoNRE	22232727
39	Mr. Vilaysack Saenpraseuth	Deputy Chief of Unit, DoNRE	28800224
40	Mr. Buakeuth Xayasith	Village Security, Nakouay Tay Village	56550062
41	Mr. Buavanh	Village Security, Nakouay Tay Village	97932330
42	Mr. Lanvaeth	Village Arm, Nakouay Tay Village	55208872

Remark: Two people of JICA study team participated in this meeting with 42 people on the tables.

E Minutes of the 2nd Stakeholder Meeting on the VLP IEE Study on November 7, 2014 at Vientiane Capital Administrative Office

The 2nd Stakeholder Consultation Meeting on the Vientiane Logistics Park (VLP) Initial Environment Examination (IEE) was held on November 7, 2014 at Vientiane Capital Administrative Office. The meeting was chaired by Deputy Director of Natural Resources and Environment Department, Ms Bangon Xayalath and participated by 42 people representing relevant public and private sector organizations, the Nakouay Tai Village, and project-affected people.

The public organizations include the Departments of Transport and Railway of the Ministry of Public Works and Transport, Environmental and Social Impact Assessment of the Ministry of Natural Resources and Environment; Natural Resources and Environment, Planning and Investment, Information, Culture and Tourism of the Vientiane Capital; Public Works and Transport, Agriculture and Forestry Office of Xaysetha District. The private sector consisted of Louang Namtha Construction/Integrated Land Development Company. Nakouay Tai village was represented by officers of village organizations. Other participants were PAPs who live in other villages.

The meeting followed the agenda consisting of five main sessions, namely: (1) introduction, (2) opening remark by chairman, (3) presentations, (4) open discussion including feedback survey, and (5) closing remark and meeting adjournment.

The introduction was moderated by Mr. Khamkeng, Environment Engineer, and this session consisted of welcoming, introduction of the participants, meeting objective and agenda. The opening remark was delivered by Deputy Director of Natural Resources and Environment Department, Ms Bangon Xayalath who emphasized on the importance of the IEE, stakeholder consultation, and expected contribution from participants especially feedback on the initial findings.

The firs presentation was to revisit the results of the 1st Stakeholder Consultation Meeting which highlighted the national policy and need for logistics development, the progress of the CY project, scope of the IEE, and environment concerns especially land acquisition to be followed up in the IEE. The second presentation on the progress of the CY project was made by Mr.Chanthone Xayakone (informing that the CY has been 65% completed). The third presentation on the VLP project and the last presentation on the IEE initial findings were both presented by Mr. Vanthakorn Dejvongsa, the IEE team leader (the main issues emphasized in the presentation included the preliminary environmental impacts and mitigation measures in brief, the key environmental impact of the loss of land particularly in tentative areas, the affected people, and also the work being done to validate the results).

After the presentation session, discussion and questions was opened for participants. Overall, it was deemed that the meeting operated under a good atmosphere and majority of the participants were in agreement with the importance of logistics development as well as the proposed VLP, the preliminary findings especially impact identification assessment of impact, and mitigation measures. The social impact or impact on land was agreed as the key impact, more significant than those on the biological and physical environment. Additionally, the participants also raised the following comments and questions on land:

1. ***Mr. Sonesack, Deputy Director of Railway Department***

Raised and indicated the significance of the VLP project to national and local benefits. The environmental impact of the project is considerably low. However, the remaining concern is land taken which need to be minimized as much as possible and which requires the establishment of a committee to handle this issue. Actually, the establishment of the committee was already proposed on June 4, 2014 to the Mayor of Vientiane Capital. So far, it is pending for a decision. The cost of the compensation is also an immediate issue while the government, through MPWT, might not have enough budget to pay out at once or it might take time and to make payments in several installments.

2. ***Mr. Vilaysack, Lao Front for Nation Construction of Nakouay Tai Village***

The land in Dongphosy area has been encroached for years. In addition, the land use permit was issued to the villagers before his period of village leadership in 2007. There were some misunderstandings and lack of provision of clear information about the boundary of Dongphosy. The collection of land use fee was also off and on and fee collection has been cancelled since 2011 (as this land should be returned to the government).

3. ***Ms. Inpeng Vongsa, Landowner***

I agree with the benefits that the project might bring but the concern is about the area of land which has not been addressed completely. I personally am curious about when the compensation will be, and prefer a one-time payment, and whether the remaining land could be issued the permanent land title or not.

4. ***Mr. Sounthone Vorasonh, Landowner***

There was some misunderstanding or incorrect information in the land use permits which indicated or classified as farm land without indication of conservation area. It was cheap so we bought it. However, we would like to propose that the solution of the land issue should be transparent and in an appropriate manner.

5. Mr. Chanthone Xayakone, the CY Project Manager, Department of Railway

As we know, the Dongposy site has been established and promulgated as conservation area since 1975. In principle, encroachment for cultivation and plantation in the area is prohibited, with no legal right to use the land for production. Nowadays, it is found that some land use permits issued previously are legally incorrect. So the government or land authority is addressing the problem following the rule of law.

6. Ms. Phimmasone Simmanotham, Landowner

I agree and have no objection about the government development direction. However, I would like to propose that the solution on the land issue should be transparent and appropriate. The payment should be one-time and the remaining land or unaffected land should be allowed for further use.

7. Mr.Khamkong, DoNRE

After a review of the summary of the IEE, there are some points on mitigations that need additional discussion with a technical working group so that we could ensure the appropriate solutions.

8. Representative of Department of Agriculture and Forestry

I observed that the land is the main issue of the project and this meeting. Based on experience, I am convinced that the government can find the appropriate solutions or alternatives on land issues. Government had experienced land compensation, e.g., 16th Km Stadium Project, which compensation work was done smoothly. I would like to suggest that to realize the appropriate compensation, we need to explore options and possibilities.

9. Ms. Bang On, the Chairman

Based on the consultation, we can conclude that:

- The development of the VLP project would bring about the benefits to the nation as well as local people.
- The IEE should be improved according to the suggestions and comments in order for DoNRE to issue the environment certificate.
- As for the land issue, the government (project owner) will help discuss further with project-affected people. This is necessary in effecting the issuance of the environment certificate.
- DoNRE will propose to the mayor of Vientiane Capital and push forward the establishment of the committee process in order to address the problem in an appropriate manner.

(End of Minutes of Meeting)

F IEE Terms of Reference (TOR)

F.1 Project Outline

The Government of Japan is sponsoring the project on Vientiane Logistics Park (VLP) Construction Project. This effort, titled "Preparatory Survey on Vientiane Logistics Park (VLP) Project (PPP Infrastructure Project) in Lao P.D.R.", is under the sponsorship of the Japan International Cooperation Agency (JICA), and who have selected a consortium of consultants to undertake the study. The JICA Study Team (JST), consisting of Nippon Express (Nittsu), Tokyo, Japan, is the leading consulting company of this study, in association with Nittsu Research Institute and Consulting, Nittsu Real Estate and International Development Center of Japan (IDCJ). Governmental Organization responsible for this VLP study is the Ministry of Public Work and Transport (MPWT, VLP implementing agency).

In this VLP Study, relevant environmental assessment study shall be conducted in order to obtain the official approval from the Ministry of Natural Resources and Environment (MNRE), Lao P.D.R while preparing to implement comprehensive environmental and social considerations during both construction and operation phases of the proposed VLP project. As mentioned earlier, VLP project owner is the MPWT while JST is in the position to provide relevant technical assistances to MPWT until the approval of the environmental license, issued by the Ministry of Natural Resources and Environment, Lao P.D.R and/or competent environmental agencies such as Department of Environment, Vientiane Municipality. This Terms of Reference (TOR) relates specifically to the technical assistance to relevant environmental assessment, to be required for this VLP study. This TOR is the basis for inviting local consulting firms to submit financial proposals to carry out to successful environmental assessment study.

Entire project background and outline are described in separate document (see Inception Report, prepared in December 2013).

F.2 TOR of Environmental Study for VLP Project

Relevant environmental and social studies shall be carried out based on both Lao EIA-related laws and JICA New Environmental and Social Guideline. It is noted that official environmental screening of this VLP project is to be conducted after MPWT will submit an official environmental license application letter to MNRE, and the type of environmental and social studies such as IEE and/or EIA will be determined eventually. It is also noted that this official letter is to be submitted in the afternoon of February 07, 2014, and then, its review result will be noticed to MPWT several days later.

Upon considering the project outline of this VLP project, certain type of the environmental study such as IEE would be appropriate enough for its environmental license application. So, a ToR for relevant IEE-level study is developed within this document. If IEE is officially selected for the application for the environmental clearance, the Department of Environment (DoE), Vientiane Municipality, would be a regulatory agency regarding the approval of the environmental license, and selected Consultant shall proceed with relevant IEE-related tasks through the consultations with DoE as well as with MPWT, JST and MNRE.

The details for subtask of this Environmental and Social Study are described in Tables F1 - F3. It is noted that selected Consultant shall finalize this IEE-ToR through consultations with either of MNRE and/or Department of Environment (DoE), Vientiane Municipality, based on both JICA Guideline and Lao EIA-related laws and regulation, and obtain approval from JST and either of MNRE and/or Department of Environment (DoE), Vientiane Municipality.

Table F.1 Major Environmental Tasks to be Required for the Environmental and Social Study

	Environmental Tasks
1	**Descriptions of Current Environment Condition**
	Collect environmental baseline information and describe current environmental condition. 1) Bio-Physical condition 2) Socio-Cultural condition More detailed descriptions of this baseline environmental information collection are attached in Table F2.
2	RAP-related Survey
	According to the past JICA-funded VLP study, it is reported that roughly 30 households are to be affected by the implementation of the proposed VLP project (JICA, 2011). Since then, almost two years has passed, so that entire RAP-related information, summarized within this report has to be updated and revised. More detailed descriptions of this baseline environmental information collection are attached in Table F3.
3	**Environmental Impact Assessment**
	Evaluate potential environmental impacts of three project stages such as 1) pre-construction phase, 2) construction phase, and 3) operational phase shall be described. Besides, following impact assessment studies shall be conducted in order to stress out the advantage/disadvantage of the proposed project quantitatively.
4	**Environmental Mitigation**
	Describe comprehensive, effective measures of the mitigation (i.e., avoidance, reduction, and elimination) of negative impacts for the pre-construction, construction and operation phases of the project
5	**Environmental Management**

	Environmental Tasks
	Establish appropriate environmental management plan. Specific objectives of this plan are to 1) define organizational and administrative arrangements for the environmental monitoring, including the definition of responsibilities of staff, coordination, liaison and reporting procedures, and 2) to discuss procedures for pro-active environmental management, so that potential problems can be identified and mitigation measures to be adopted prior to the construction commencement.
6	**Environmental Monitoring**
	Establish appropriate environmental monitoring program. The scope of the monitoring plan are 1) to identify the monitoring tasks, 2) to identify the nature and the schedule of the monitoring, and 3) to identify samples to be taken for analysis and parameters to be measured.
7	**Public Consultations**
	Public Consultation shall be conducted at Vientiane and the study site, respectively. More detailed descriptions of this baseline environmental information collection are attached in Table F4.
8	**Preparation of IEE D/F**
	Prepare IEE D/F Report that documents the impact study finding. 1) Basic IEE D/F Report 2) Summary of final report written in both Lao and English (10 – 15 pages in length).
9	**Preparation of Public Involvement**
	Prepare suitable handout or brochure to be used for the public participation process.
10	**Revising of IEE D/F**
	Based on the following information or results, revising of IEE D/F report shall be conducted 1) Feedback loop obtained from the public participation into the IEE process 2) Comments and advice from relevant environmental agencies. 3) Results of additional and/or supplemental studies.
11	**Preparation of IEE Final Report**
	Prepare IEE Final Report that documents the impact study finding. 1) Basic IEE Final Report 2) Summary of final report written in both Lao and English (10 – 15 pages in length). 3) Executive summary written in both Lao and English (3 – 5 pages in length). 4) Abstract from the executive summary or the summary written in both Lao and English (1 – 2 paragraphs in length)

Table F.2 Descriptions of Current Environment Condition

1. Bio-Physical Condition
1) Regional hydrology (e.g., major tributaries, channels, regional water balance) 2) Water quality of surface/subsurface within the study area. 3) Air quality 4) Regional drainage 5) Roadside noise/vibration/air quality 6) Climate 7) Geology 8) Disaster Records (e.g., past earthquake, landslide, inundation or flood events) 9) Soil 10) Biological Environment (e.g., Dong Ph osy Forest Conservation area)
2. Socio-Cultural Condition
1) Cultural (historical and archaeological) resources (e.g., ruins, memorial facilities, historic spots and others) 2) Visual resources (e.g., scenic zones, townscape) 3) Land take/resettlements (e.g., conditions of existing roadside building) 4) Illegal squatter 5) Land use 6) Water use (e.g., water supply system, well, oasis) 7) School, hospital, park, library, religious facilities. 8) Waste Disposal Site (location, capacity, treatment method) 9) Vehicle Registration 10) Vehicle Inspection/Maintenance Program 11) Clean Fuel Program 12) Sewage system 13) Property price (e.g., land and house by type) around the study area.
3. Pollution
1) Roadside Noise/Vibration 2) Roadside Air Quality It is noted that preliminary roadside noise and air quality field surveys at two (2) points around the study area may be conducted if there is a significant change the local traffic condition, compared with the study period of the JICA VLP project (2010-2011). 3) Soil Contamination 4) Water Contamination 5) Bad odor

Table F.3 RAP-related Survey

According to the past JICA-funded VLP study, it is reported that roughly 30 households are to be affected by the implementation of the proposed VLP project (JICA, 2011).

Since then, almost two years has passed, so that entire RAP-related information, summarized within this report has to be updated and revised by doing following tasks,

1) Collection of relevant legislations on land acquisition, resettlement and compensation

2) Inventory survey

3) Interview survey

4) Map showing location of each PAPs

2) and 3) aim to identify profiles of households living in the Study Area and to clarify the profiles of their inventories.

The surveys 2) and 3) include the preparation of questionnaires, the survey's implementation by means of questionnaire, compilation and analysis of survey results. Questionnaires consist of questions related to inventory of properties such as house, farmlands, buildings, crops and household profiles.

Table F.4 Public Consultations

(1) Outline

In order to disseminate the study outline, the draft ToR of the environmental survey and the findings of the survey, two (2) one-day public consultations at Vientiane and the study site, totaling four (4) consultations, shall be conducted. In particular, all PAPs shall be invited at the public consultations to be held at the study site. Public notice using either of poster, newspaper, TV, radio and other media shall be conducted prior to each stakeholder meeting campaigns.

At least three (3) consultants will work at each public consultation as the facilitator, the computer/equipment operator and note taker. All the expenses, including the copy of presentation materials, the hall charge, transport expenses of the participants, and meal/drinks are payable by the consultant and should be included in the cost proposal. Also, all the discussion at the public consultations will be recorded and minutes of the meeting are prepared by the consultants. Relevant information, to be used for the public consultation, is provided by the JST. It is noted that contents of both presentation and handout shall be consulted and approved by the JST before each stakeholder meeting.

(2) Opinion Surveys

Within this series of stakeholder meeting, several opinion surveys are planned to be conducted in order to analyze each stakeholder's view of the proposed VLP Project. The survey form is to be developed by the JST, and selected Consultant shall make appropriate amount of copies of that survey sheets, conduct those opinion surveys to all participants of each stakeholder meeting at the end of each meeting, and then, conduct post-data processing work.

(3) Public Review Period

All contents of Q/A Session, to be discussed within this stakeholder meeting, are to be presented in the public domain (e.g., Library, Internet or by some appropriate measures). This public review process shall be carried out after each stakeholder meeting (i.e., at least twice). Prior to each public review, appropriate public notice shall be conducted, using either of poster, newspaper, TV, radio and other media.

(4) Deliverables

1) Presentation Material (PowerPoint File)

2) M/M shall be prepared in both English and Lao.

3) List of Participants

4) Photo Records

5) Survey Sheets of Opinion Survey and Post Data Processing file (Excel-format)

(4) Equipment and others

Following equipments, handout material, refreshments and others shall be arranged by Consultant

Power Point Projector 1 set

Meeting Handout (e.g., project summary) 30 sets (minimum)

Paper Holder 30 sets (minimum)

Coffee & sweets (or snack)

F.3 Support for Environmental Approval Application

All study works, mentioned above, shall be completed by the end of July 2014, and environmental approval shall be made by the end of either of October or November 2014. In order to make a successful environmental approval process, selected Consultant shall support MPWT's relevant application work until the environmental license for the proposed VLP project is issued.

F.4 Expected Deliverables

(1) IEE Final Report (hard and soft copies), approved by MoNRE and/or competent environmental agency such as Department of Environment, Vientiane Municipality.

(2) Photo Records of Stakeholder Meeting

(3) Minutes of Meeting of Each Stakeholder Meeting (in English)

(4) Attendance List of Each Stakeholder Meeting,

(5) Handout and presentation file, used at Each Stakeholder Meeting

(6) Copies of official letters such as official approval letters of IEE, issued by MNRE and/or competent environmental agency such as Department of Environment, Vientiane Municipality

(7) PDF of all transaction materials such as official letters, approvals and/or notes exchanged among MNRE and/or competent environmental agency such as Department of Environment, Vientiane Municipality, MPWT, JST and selected Consultant (partially duplicated with Item (6)).

(8) PDF of Public Review-related Material (e.g., notice on newspaper and/or gazette)

(9) Survey Sheets of Opinion Survey and Post Data Processing file (Excel-format)

(10) Miscellaneous

It is noted that three (3) sets of hard copies and two (2) Electronic copies of IEE Final Report shall be submitted to JST.

Beside theses deliverables, one copy of draft IEE Report shall be submitted to JST after the completion of IEE Study.

F.5 Study Progress Meeting

Progress of this proposed IEE study is to be examined between JST and selected Consultant, periodically. Selected Consultant shall prepare relevant meeting documents. Timing of this study progress meeting is to be determined, considering the progress of entire IEE Study. Followings are timing of major study progress meetings JST intends to have (tentative),

- Study progress meeting #1 After Environmental Screening Result is notified from MoNRE.
- Study progress meeting #2 After 1st Stakeholder Meeting
- Study progress meeting #3 After 2nd Stakeholder Meeting
- Study progress meeting #4 After IEE D/F preparation

After receiving the meeting notice from JST, selected Consultant shall prepare relevant meeting materials for these study progress meetings. Specific timing of each study progress meeting will be noticed to select Consultant by JST in advance.

G Monitoring Form

G.1 Construction Phase

The latest results of the below monitoring items shall be submitted to the lenders as part of Quarterly Progress Report throughout the construction phase.

G.1.1 Response/Actions to Comments and Guidance from Government Authorities and the Public

Monitoring Item	Monitoring Results during Report Period
Number and contents of formal comments made by the public	To be counted and reviewed through the Grievance Redress Mechanism to be established within this project.
Number and contents of responses from Government agencies	To be responded based on review of comments, to be collected through GRM, mentioned above.

G.1.2 Pollution

(1) Water Quality

Item	Unit	Measured Value (Mean)	Measured Value (Max.)	Country's Standards	Standards for Contract	Referred International Standards	Measurement Point	Frequency
pH	-			5-9		6-8.5	Irrigation adjacent to project area. Water quality sampling points, set within past 2011 JICA-funded FS for surface/sub-surface water, would be appropriate to chose for the proposed monitoring activity.	Monthly
BOD	mg/l			1.5		5		
COD	mg/l			5		4		
Oil	mg/l			NA		NA		

(2) Air Quality (Ambient Air Quality)

Item	Unit	Measured Value (Mean)	Measured Value (Max.)	Country's Standards	Standards for Contract	Referred International Standards	Measurement Point	Frequency
Dust (TSP)	mg/m3			0.33		0.33	Project area. Air quality sampling points, set within past 2011 JICA-funded FS, would be appropriate to chose for the proposed monitoring activity.	Weekly

Dust (PM 10)	mg/m 3			0.12		0.12-0.35	Project area. Air quality sampling points, set within past 2011 JICA-funded FS, would be appropriate to choose for the proposed monitoring activity.	Same as above

(3) Noise

Item	Unit	Measured Value (Mean)	Measured Value (Max.)	Country's Standards	Standards for Contract	Referred International Standards	Measurement Point	Frequency
Noise Level. Leq.	dB(A)	<70	<115			<60-70	Project area. Noise survey points, set within past 2011 JICA-funded FS, would be appropriate to choose for the proposed monitoring activity.	Daily

G.1.3 Natural Environment

(1) Bird Electrocution and Collision

Monitoring Item	Monitoring Results during Report Period	Measures to be Taken
Bird Electrocution and Collision	Details of survey results, such as findings.	N/A

G.1.4 Social Environment

(1) HIV/AIDS and other STDs

Monitoring Item	Monitoring Results during Report Period	Measures to be Taken
HIV/AIDS and other STDs	Incidences per 1000 inhabitants	Set up construction site-based monitoring program and conduct monthly-based monitoring and HIV/AIDS and STD-related awareness program.

G.2 Operation Phase

The latest results of the below monitoring items shall be submitted to the lenders on biannual basis for the first two years of operation.

G.2.1 Response/Actions to Comments and Guidance from Government Authorities and the Public

Monitoring Item	Monitoring Results during Report Period	Frequency
Number and contents of formal comments made by the public	To be counted and reviewed through the Grievance Redress Mechanism to be established within this project.	At least monthly basis.
Number and contents of responses from Government agencies	To be responded based on review of comments, to be collected through GRM, mentioned above.	

G.2.2 Natural Environment

(1) Bird Electrocution and Collision

Monitoring Item	Monitoring Results during Report Period	Measures to be Taken	Frequency
Bird Electrocution and Collision	Details of survey results, such as findings.	N/A	

(2) Replanting / Reforestation

Monitoring Item	Monitoring Results during Report Period	Measures to be Taken	Frequency
Completion of reforestation (%)	Details of survey results, such as findings.	N/A	

G.2.3 Social Environment

(1) HIV/AIDS and other STDs

Monitoring Item	Monitoring Results during Report Period	Measures to be Taken	Frequency
HIV/AIDS and other STDs	Incidences per 1000 inhabitants		Monthly.

G.3 Land Take and Compensation

G.3.1 Preparation of Resettlement Sites (where necessary)

No	Explanation of the site (e.g. Area, no.of resettlement HH, etc.)	Status (Completed (date) / not complete)	Details (e.g.Site selection, identification of candidate sites, discussion with PAPs, Development of the site, etc.)	Expected Date of Completion
1			To be officially held by both DoNRE and MPWT.	
2				

G.3.2 Public Consultation

No	Date	Place	Contents of the consultation / main comments and answers
1			To be officially held by both DoNRE and MPWT.
2			

Resettlement Activities	Planned Total	Unit	Progress in Quantity			Progress in %		Expected Date of Completion	Responsible Organization
			During the Quarter	Till the Last Quarter	Up to the Quarter	Till the Last Quarter	Up to the Quarter		
Preparation of RAP									

Resettlement Activities	Planned Total	Unit	Progress in Quantity			Progress in %		Expected Date of Completion	Responsible Organization
			During the Quarter	Till the Last Quarter	Up to the Quarter	Till the Last Quarter	Up to the Quarter		
Employment of Consultants		Man-month							
Implementation of Census Survey (including Socioeconomic Survey)									
Approval of RAP			Date of Approval:						
Finalization of PAPs List		No. of PAPs							
Progress of Compensation Payment		No. of HHs							
Lot 1		No. of HHs							
Lot 2		No. of HHs							
Lot 3		No. of HHs							
Lot 4		No. of HHs							
Progress of Land Acquisition (All Lots)		ha							
Lot 1		ha							
Lot 2		ha							
Lot 3		ha							
Lot 4		ha							
Progress of Asset Replacement (All Lots)		No. of HHs							
Lot 1		No. of HHs							
Lot 2		No. of HHs							
Lot 3		No. of HHs							
Lot 4		ha							
Progress of Relocation of People (All Lots)		No. of HHs							
Lot 1		No. of HHs							
Lot 2		No. of HHs							
Lot 3		No. of HHs							

Resettlement Activities	Planned Total	Unit	Progress in Quantity			Progress in %		Expected Date of Completion	Responsible Organization
			During the Quarter	Till the Last Quarter	Up to the Quarter	Till the Last Quarter	Up to the Quarter		
Lot 4		ha							

H Preliminary Due Diligence Review of Land-Take process of NEDA-funded VLP Construction Project

H.1 Project Objectives and Project Components

The development objective of this construction project is to construct Vientiane Logistics Park (hereinafter referred to as "VLP") partially, based on past JICA - funded feasibility study report, named as "The Comprehensive Study on Logistics System in Lao PDR (2011)", with the assistance from Neighboring Countries Economic Development Cooperation Agency (NEDA) of Thailand. The VLP is the physical distribution center of the Vientiane to deal with both import and export cargo in order to provide customs clearance service and related services with higher efficient manner instead of the aged Thanaleng Warehouse. This construction project consists of (1) the railway container yard, (2) the access road, and (3) the railway extension. Construction activities and relevant land-take processes of this NEDA-funded VLP project have been already initiated, and then, relevant land-take process is also still on-going.

H.2 Objective of the Due Diligence Review (DDR):

Land-take process and its relevant compensation study have been initiated by the Department of Railway (DoR), Ministry of Public Works and Transport (MPWT), Lao PDR. Compensation - related study was conducted during January 2014 and March 2014, and then, the draft final report of this compensation study was submitted to DoNRE (Department of Natural Resources and Environment), Vientiane Capital, official administrative body of this land-take process, for its examination and approval (DoR, personal communication, 2014).

The main objective of this preliminary report is to summarize how the DDR was carried out within the land-take process of this NEDA-funded VLP-related construction project.

First of all, it should be noted that the study site, delineated by past JICA - funded VLP feasibility study (2011) was declared as the project site of this NEDA-funded project site, and relevant land-take process was initiated with owners of all PAPs (properties to be affected by project) located within this NEDA-funded project site by the contractor under the supervision of DoR. Exact cut-off date of this NEDA-funded VLP project is unknown.

Secondly, after the cut-off date of this NEDA-funded project was declared, relevant compensation study was conducted between January 2014 and March 2014, and then, was submitted to DoNRE for its official review and approval. As of April, 2015, the report review is still continued by DoNRE (MPWT, personal

communication, 2015). Prior to this compensation study, construction activities of some parts of NEDA-funded VLP construction project have already initiated. For owners of those PAPs, either of resettlement, cash compensation and/or others was carried out, and then, construction activity has been initiated although the compensation report, submitted to DoNRE in March 2014, was not officially approved.

Throughout a series of interview with DoR, MPWT, it was informed that several community meetings were held during this land–take process. Exact consultation schedule and procedure of those community meetings and negotiation with nearby communities including owners of PAPs are unknown.

The objective of this preliminary DDR for this NEDA-funded VLP construction project is:

a) Grasp basic land-take related information of NEDA-funded VLP construction project.

b) b) Summarize future tasks for full-scale due diligence review, to be taken after all land-take and relevant payment of compensation are done for all PAPs.

H.3 Review Methods

This preliminary due diligence report was summarized, based on (i) desk review of secondary information (including PDF copies of project documents provided by DoR, MPWT and (ii) interviews with DoR, MPWT, and (iii) brief interviews with some affected households of NEDA-funded construction project, recognized by chance within technical site visits, conducted within JICA-funded VLP study. Field trips to the NEDA-funded VLP construction site were also conducted to validate the review results as much as possible. Table 1 summarizes the total number of PAPs, to be affected by the railway extension project including NEDA-funded VLP construction project.

Table H.1 Magnitude of impact by area

	Village	Number of PAPs	Compensation amount (LAK)
1	Khamsavath	17	2,402,785,522
2	Nonwai	42	2,299,324,385
3	Dongphosy	63	1,228,099,652
4	Nakhauy Tai	62	3,947,873,555
	total	184	9,878,083,114

Source: Courtesy of Railway Department, MPWT, 2014

It is noted that information of Khamsavath and Nonwai, listed in this table, are numbers of PAPs, to be affected by the construction of new Vientiane Station. There is no direct interaction between this new station construction and JICA-funded VLP project, so that those information of Khamsavath and Nonwai Villages are not counted within this preliminary DDR.

H.4 Findings

This section presents some basic information about the NEDA-funded VLP construction project (which this preliminary DDR covers), followed by an evaluative review of various factors with a view to assessing the level of compliance of resettlement activities implemented by the government. Finally, the section presents a list of key safeguards issues that remain pending by the time the DDR was finalized.

H.4.1 Compensation Study for NEDA-funded VLP Construction Project

As mentioned earlier, relevant compensation study was initiated in January 2014, and was completed in March 2014. Then, the draft final report of this compensation report was submitted to DoNRE, for its examination. As of April, 2015, the report review by DoNRE is still continued (MPWT, personal communication, 2015).

In that draft final report, it was informed that there are 125 PAPs, to be affected by the implementation of NEDA-funded VLP project, and all amount of the compensation is calculated, using the government price, specified by the law. Basically, this compensation calculation consists of following three categories, i.e., (i) land, (ii) buildings, and (iii) crops and/or tress, planted in vegetation fields (see Table 2 for more detailed descriptions for the entitlement applicable for the compensation of this construction project). The total area of lands to be affected is of 373,513 m2. Breakdown information of all PAPs by the land space and/or amount of properties such as trees/crops was not obtained within this preliminary DDR.

Table H.2 Summary of entitlements provided to affected households (AHs).

Item	Type of Loss	Application	Entitled Persons	Compensation Policy
1a	Loss of land	Agricultural land - partially or fully affected, permanent.	All AHs affected with land.	Cash compensation for acquired land at government price stipulated by Land Law.
1b	Loss of land	Residential land Fully or Partially affected: Without remaining land sufficient to rebuild houses /structures	All AHs affected with residential land and housing.	Same as above.
2	Loss of structure	Secondary structures - partially or fully affected	Owner of structures regardless of tenure status	Cash compensation for acquired asset/structures at price stipulated by Land Law.
3	Loss of crops and trees	Loss or damage to assets/ Trees/Crops	Owners regardless of tenure status	Cash compensation for acquired crop/trees at government price stipulated by Land Law.

It is noted that rehabilitation allowances such as supports with the vocational training and the job change, supports for stabilizing household living standards, support for the displacement from residential housing and other miscellaneous expenditures such as payment of tax for the new land purchase are not applicable explicitly. It is partially said the government price unit, specified by law, already that allowances (Nuan, personal communication, 2015). Of course, it would need further confirmation regarding this issue also.

H.4.2 Land-take for NEDA-funded VLP Construction Project.

Construction of NEDA-funded VLP project was initiated and several land-take negotiations were taken

although the compensation report of this project was still at DoNRE's examination stage. It was informed that community meetings were held prior to the land-take. However, more detailed information of this community meeting as well as the compensation plan was not obtained within this preliminary DDR. It was also informed that AH who prefer to resettle to new nearby place moved into land, prepared by the government with proper land titles (DoR, personal communication, 2014). It would better to scrutinize this resettlement issue for its verification.

H.4.3 Budget for the compensation payment.

Basically, budget for the compensation payment for any development project is prepared after the compensation report is approved by competent governmental agencies such as MoNRE and/or DoNRE. As mentioned earlier, the examination of the compensation report for NEDA-funded VLP construction project is still on-going. It was informed that land-take and/or resettlement compensations for this NEDA-funded VLP construction project were conducted, using the revenue, generated by granting the land concession to a private company within other development project. It is recommended to conduct further verification regarding this issue.

H.4.4 Consultation and Information Disclosure:

Entire consultation and relevant information disclosure process of this NEDA-funded VLP construction project is unknown. However, several staff of DoR, MPWT, participated into two stakeholder meetings of JICA-funded VLP study (June/2014 and November/2014), and then, made presentations therein.

H.4.5 Grievance Redress Mechanism (GRM).

Unknown. It is recommended to conduct further verification whether GRM of NEDA- funded VLP construction project exists or not.

H.4.6 Livelihood Restoration.

Unknown. It is recommended to conduct further verification regarding this issue.

H.4.7 Other Financial Support to Local Community.

Unknown. It is recommended to conduct further verification regarding this issue.

H.5 Overall Compensation Progress and Pending Issues

Land-take process of this NEDA-funded VLP construction is not completed (as of April, 2015) while the review and examination of the compensation report, submitted from DoR to DoNRE, is still continued. Exact progress of entire land-take progress as well as the contents of the compensation payments, partially completed, are unknown.

H.6 Conclusions and Recommendations

H.6.1 Conclusions.

By April 2015 when this preliminary DDR was prepared, land-take negotiation of NEDA - funded VLP construction project is not completed, so that the compensation payment has been completed for all affected households. Exact number of households who want to continue the land-take negotiation with government and developer are unknown.

Based on the information provided, technical site visits, conducted by JICA Study Team, and the consultation with representatives of relevant government officials, this preliminary DDR indicated that:

- The Compensation Plan, officially approved (associated with NEDA-funded VLP Construction Project) was not prepared. Its compensation-related study and its study report is still at review and examination process by DoNRE (as of April 2015).
- However, a land-take process has been initiated before the official approval of the compensation report, mentioned above. Some affected households have been paid, and then, construction has been started.
- Some of affected households have handed their land over to the project owner of NEDA-funded VLP construction project.
- It is unknown whether some of affected households who handed over their lands have fully restored their livelihoods.
- The entire project site of NEDA-funded project site land (with which the project site of the JICA-funded VLP project will be linked) is not completely vacant. Several households are still living (as of April, 2015).

H.6.2 Recommendations.

Although proper land-take-related legal framework related to development projects have been established in Lao PDR already, there are still several land-take-related disputes occurred within the on-going infrastructure development projects. As mentioned earlier, actual land-take process has been already initiated before DoNRE's official approval of compensation report. Also, consultation process and relevant information disclosure process is still unknown. Several houses are still remained and some parts of NEDA-funded VLP project site are still untouched. So that, it is inevitable to have further land-take related-negotiations between DoR and those remained households in near future. It is strongly recommended to full-scale DDR Task Team shall work closely with MPWT, and decipher each land-take process carefully.