ENHANCING ASEAN CONNECTIVE INITIAL PIPELINE OF ASEAN INFRASTRUCTURE PROJECTS

PROJECT BRIEFS







			U U
INTRODUCTION AND RECOMMENDATIONS			
PROJECT BRIEFS			12
01	Jalan Rasau Road Upgrading		13
02	Siem Reap - Ratanakiri Road Upgrading		17
03	Kuala Tanjung International Hub Port and Industrial Estates - Phase II		21
04	Expansion of Hang Nadim International Airport		25
05	Development of Kijing Port		29
06	Lao PDR National Road No. 2 Upgrading		33
07	Lao PDR National Road No. 8 Upgrading		37
80	Lao PDR - Viet Nam Power Interconnector		41
09/1	0 Lao PDR - Myanmar Power Interconnector		45
11	Nay Pyi Taw - Kyaukpyu Expressway		49
12	Muse - Tigyaing - Mandalay Expressway		53
13	Yangon - Mandalay Expressway		57
14	Tarlay - Kyainglat Road Upgrading		61
15	ASEAN Digital Hub		65
16	Hat Yai - Sadao Motorway		69
17	Bangkok - Nong Khai HSR - Phase II		73
18	Southern Coastal Corridor Project - Phase II		77
19	Ho Chi Minh City - Moc Bai Expressway		81

Page

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INTRODUCTION & RECOMMENDATIONS

Introduction

TO HELP ACCELERATE INVESTMENT IN INFRASTRUCTURE IN THE REGION, THE MASTER PLAN ON ASEAN CONNECTIVITY 2025' (MPAC 2025), RECOMMENDED THE ESTABLISHMENT OF "A ROLLING PRIORITY PIPELINE LIST OF POTENTIAL ASEAN INFRASTRUCTURE PROJECTS AND SOURCES OF FUNDS." With the technical assistance of the World Bank and the support of the ASEAN - Australian Development Cooperation Program Phase II (AADCP II), ASEAN has developed (a) the Initial Pipeline of ASEAN Infrastructure Projects across the transport, energy, and information and communication technology (ICT) sectors, together with (b) a high-level funding/financing options analysis for each of the projects in the Initial Pipeline.

The Initial Pipeline is intended to be a list of physical infrastructure projects that have the potential to enhance the movement of people, services, goods, and innovations within ASEAN and contribute to ASEAN's objectives of improving access and increasing connectivity in and among the ASEAN Member States.

The purpose of this summary report is to provide an overview of each of the projects (project briefs) selected for inclusion in the Initial Pipeline to those stakeholders that may have a potential interest in supporting the preparation and/or eventual funding/ financing of the projects.

^{1.} MPAC 2025, http://asean.org/storage/2016/09/Master-Plan-on-ASEAN-Connectivity-20251.pdf



The ASEAN Member States submitted 42 projects for consideration for inclusion in the Initial Pipeline.

After applying a screening and scoring methodology designed by the World Bank for developing the Initial Pipeline (please see the accompanying booklet 'Initial Pipeline of ASEAN Infrastructure Projects: Context and Approach'), ASEAN selected 19 projects for inclusion in the Initial Pipeline.

Table 1. List of Projects in the Initial Pipeline

Project Name	Sector	Country
Jalan Rasau Road Upgrading	Road	Brunei Darussalam
Siem Reap to Ratanakiri Road Upgrading	Road	Cambodia
Kuala Tanjung International Hub Port and Industrial Estates - Phase II	Port	Indonesia
Expansion of Hang Nadim International Airport	Airport	Indonesia
Development of Kijing Port	Port	Indonesia
Lao PDR National Road No. 2 Upgrading	Road	Lao PDR
Lao PDR National Road No. 8 Upgrading	Road	Lao PDR
Lao PDR - Viet Nam Power Interconnector	Power	Lao PDR
Lao PDR - Myanmar Power Interconnector (Lao PDR section) ²	Power	Lao PDR
Myanmar - Lao PDR Power Interconnector (Myanmar section) ²	Power	Myanmar
Nay Pyi Taw - Kyaukpyu Expressway	Road	Myanmar
Muse - Tigyaing - Mandalay Expressway	Road	Myanmar
Yangon - Mandalay Expressway	Road	Myanmar
Tarlay - Kyainglat Road Upgrading	Road	Myanmar
ASEAN Digital Hub	ICT	Thailand
Hat Yai - Sadao Motorway	Road	Thailand
Bangkok - Nong Khai HSR - Phase II	Rail	Thailand
Southern Coastal Corridor Project - Phase II	Road	Viet Nam
Ho Chi Minh City - Moc Bai Expressway	Road	Viet Nam

2. As both Lao PDR and Myanmar submitted separate applications for the Lao PDR - Myanmar Interconnector, these two applications are combined into a single project brief.



Importance of Environmental & Social Impact Analysis

The project briefs provide an indication of some of the potential Environmental & Social (E&S) impacts arising from the implementation of the project, together with an indication of the potential E&S risk classification of the project in the context of the World Bank's Environmental and Social Framework (ESF)³. However, the final E&S risk classification of the project will need to be determined based on comprehensive E&S impact studies.

While many of the projects submitted are at a very early stage of development and may not have yet considered in any depth the E&S impacts (including whether the project may overlap with areas that are protected, or recognized, for their biodiversity value or the impact of the alignment on the numbers of people to be physically or economically resettled), it is important that each ASEAN Member State carries out a systematic review of the E&S risks and impacts of all the feasible alternatives, to minimize and mitigate the risks and impacts. In particular, attention must be directed to ensuring 'no net loss' or, in circumstances where critical habitats are impacted, a 'net gain' of biodiversity values, by developing alignments and designs to avoid adverse impacts. This E&S impact analysis process should start as soon as possible and be conducted concurrently with the feasibility and alignment selection studies in an integrated manner. Ideally, this should include some early studies that take into consideration critical areas (for example, biodiversity) that can then be used to provide some early input into alignments and design considerations (for example, the use of tunnels).

In conjunction with a robust approach to the assessment of E&S risks and impacts on a project-by-project basis, the relevant direct, indirect, and cumulative E&S risks and impacts also need to be assessed in an integrated manner throughout the project life cycle, including taking into account associated facilities. An integrated approach is needed, as the success of each of the proposed infrastructure developments is often highly reliant on other enabling or supporting developments proceeding.

Hence, it is very important to consider cumulative impacts of individual projects in combination with impacts from other relevant past, present, and reasonably foreseeable developments, as well as unplanned but predictable activities enabled by the project that may occur later or at a different location. Cumulative impacts can result from individually small but collectively significant activities taking place over time. Therefore, the process of E&S impact assessment should consider cumulative impacts that are recognized as important on the basis of scientific concerns and/ or reflect the concerns of project-affected parties. These potential cumulative impacts should be determined as early as possible, ideally as part of project scoping, engaging with stakeholders in an inclusive and participatory manner. Where Indigenous Peoples and other vulnerable groups are present, engagement methods must consider differentiated measures to allow the effective participation of such individuals or groups.

 https://projects-beta.worldbank.org/en/projects-operations/environmental-andsocial-framework



An early cumulative E&S assessment will help to ensure that sustainability is mainstreamed in the development planning process and a robust E&S management framework should be developed to assist governments to do so. There may also be a need to consider whether a Strategic Environmental Assessment (SEA) or Regional Impact Assessment (RIA) is required in the region where projects will be developed. Such assessments are typically led by government agencies, as they consider the wider impacts beyond individual projects and support sustainable longterm development.

As noted above, in some cases, the results of the E&S assessments may necessitate a change of alignment, for example, where the alignment has been identified to cross (or affect) areas designated for their biodiversity value (or areas that may be of potential biodiversity value, even if not designated), to avoid such areas. Similarly, for physical and economic displacement, avoidance and minimization should be integrated into the decision-making process from the outset, although it is recognized that other factors including cost and technical feasibility may also need to be taken into account. Where decisions have already been made, the impact assessment process may lead to a reconsideration of these decisions and potentially new alignments to ensure that E&S risks and impacts are minimized.

In managing E&S risks and impacts, a 'mitigation hierarchy' should be adopted. The mitigation hierarchy is a concept used to prioritize the reduction of E&S impacts that should be robustly adopted in project development. The mitigation hierarchy is as follows:

- Anticipate and avoid risks and impacts from the outset, such as careful selection of an alignment, to completely avoid impacts, for example, in areas of high biodiversity.
- Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels, such as measures taken to reduce the duration, intensity, and/or extent of impacts that cannot be completely avoided, as far as is practically feasible.
- Once risks and impacts have been minimized or reduced, mitigate the remaining risks and impacts.
- Where significant residual impacts remain, compensate for or offset them (where technically and financially feasible) to achieve no "net loss" or a "net gain" of biodiversity.

As part of the impact assessment process, maximization of stakeholder engagement through enhanced consultation, participation, and accountability should be practiced, including consideration of Indigenous Peoples. This includes early disclosure of projects and a robust stakeholder engagement process as included in the World Bank Environmental and Social Framework.

Recommendations for Project Implementation

While the development of the Initial Pipeline is a critical first step in enhancing regional connectivity, connectivity will only be enhanced if the projects in the Initial Pipeline are implemented in a timely and sustainable manner.

To successfully implement the projects, the ASEAN Member States, along with their partners, will need to take into account the recommendations set out in the project briefs.

While the recommendations vary depending on the project, sector and country, there are some common underlying themes to the recommendations, including the need to:

Strengthen implementing capacity

The capacity to plan, prioritize, prepare, procure, and manage a project is critical to its success, especially for the larger and more capital-intensive projects. Such capacity can be gained through experience. However, where such experience is lacking, it will be important to hire professional and reputable transaction advisers. Therefore, the ASEAN Member States are encouraged to make the upfront investments in good transaction advisers to help prepare, structure, procure, and negotiate the projects in the Initial Pipeline. For low and middle-income countries, project preparation funds, which can help pay for advisers, are often available through international financial institutions (IFIs), bilateral institutions, and other donors.

Undertake early E&S consultations and impact assessments

While some of the submitted projects had a pre-feasibility or feasibility study, very few have undertaken any assessment of E&S risks and impacts in a robust manner. As highlighted earlier, it is critical that a systematic review of the E&S risks and impacts (both at the individual project level as well as cumulatively, where required) is carried out for each of the projects in the Initial Pipeline as soon as possible, as the results of the analysis may necessitate a change in alignment or other project modifications to reduce the E&S impacts of the project. This must be undertaken by appropriately experienced and qualified parties. It is also very important to engage in consultations with a wide range of stakeholders, particularly those that can be adversely affected by the project. In this context, special attention should be given to Indigenous Peoples or other vulnerable groups, and other people whose economic livelihood and social well-being may be adversely affected through the implementation of the project.

Mitigate infrastructure redundancy risk

Some projects in the Initial Pipeline are at risk of being 'redundant' due to other competing project(s) along the same corridor. For example, some ports will only be viable if a competing port's capacity is capped, while some roads are only viable if a competing railway line is not built. To mitigate the risk of too much capacity being built at the same time and in the same place, an options analysis should be undertaken on projects proposed along similar corridors to determine if all projects are needed and, if not, which of the options is more suitable for implementation.

Ensure implementation of interdependent projects

Several projects in the Initial Pipeline are dependent on the construction of other 'linking' projects for their economic viability. Examples of such projects would include ports that depend on the development of a special economic zone (SEZ), railways that need to link up with other railway projects to fully benefit from the network effect, and roads that depend on the development of ports or other roads. Therefore, it is critical, as part of the overall master planning process, that such projects are implemented in a sequential manner to ensure that projects are being built when needed to avoid 'stranded assets' and that scarce financial resources are being deployed to those projects with the highest overall economic impact.

Promote transparency and competitive procurement

The best way to maximize value for money is to undertake transparent and competitive procurement of the projects in the Initial Pipeline, particularly when projects are the result of an unsolicited proposal. Although, based on the applications submitted, it seems that most of the projects are planned to be competitively procured, many government projects in the past have been procured on a direct assignment or negotiated basis. Therefore, the World Bank strongly recommends that the ASEAN Member States follow competitive procurement practices when procuring the Initial Pipeline projects.

Monitor debt levels to ensure fiscal sustainability

Budget constraints of several of the ASEAN Member States, result in many publicly funded projects being financed through debt, often through official development assistance (ODA) or bilateral loans. Bilateral loans can impose a significant fiscal burden on the ASEAN Member States, if the expected economic benefits of the infrastructure project do not materialize. Therefore, it is very important to properly account for the fiscal impacts of the projects in the Initial Pipeline and avoid taking on a level of debt that is not sustainable.

Carefully assess the economic benefits of bilateral projects

Given fiscal constraints, it is important that the ASEAN Member States mobilize other sources of financing and project preparation support. This support can come from IFIs, bilateral institutions, donors, and the private sector. However, when support and/or financing for a project is being provided on a 'tied' basis, it is important that the relevant ASEAN Member State thoroughly assesses the project to determine whether it is economically and fiscally viable from an 'own' country perspective.

Collect good quality and up-to-date data

To properly assess the need and feasibility of a project, it is critical that robust data is collected as 'good' decisions can only be made if they are based on good quality data and inputs. Such inputs and data include existing and future demand (for example, traffic on roads, volumes of freight through ports, electricity demand); site surveys (for example, geological conditions); and E&S data (for example, presence of Indigenous Peoples, protected flora and fauna).

Ensure the necessary 'soft infrastructure' is in place

Physical infrastructure will only be able to reach its full potential, if there is a supporting enabling environment. MPAC 2025 recognizes this through its complementary pillars of "institutional connectivity" and "people to people connectivity". To maximize the socio-economic gains from investment in physical infrastructure, it will be important to continue to remove barriers to regional trade and competition, harmonize regulations and develop regionally recognized standards. These measures, when taken alongside the development of physical infrastructure, will help to reduce the costs of trade and spur overall regional connectivity and growth.



The capacity of the ASEAN Member States to plan, prioritize, prepare, procure, and manage infrastructure projects, varies greatly from country to country and sector to sector.

If this capacity is not strengthened through wide-ranging capacity-building support, there is a risk that some of the projects in the Initial Pipeline may not progress, despite strong support at the country level. More importantly, to supplement this capacity building, it will be important for several ASEAN Member States to have access to professional advisers to help them prepare and structure projects.

In addition, there are a number of regional, subregional, and national master plans that are often overlapping and sometimes conflicting with each other. Therefore, it will be critical for ASEAN and the ASEAN Member States to coordinate and monitor the various master plans and project pipelines to ensure they are consistent, not only with each other, but more importantly with ASEAN's vision for connectivity. This will require an active and open dialogue between the ASEAN Member States.

In this context, it is advisable that the next stage of this initiative focuses on:

- Building capacity (particularly with respect to assessing E&S risks and ensuring that the results of the assessments are then reflected throughout the lifecycle of a project);
- Providing funding to support the necessary due diligence and structuring required to ensure all projects in the Initial Pipeline are implementable and can help enhance ASEAN regional connectivity; and
- c. Strengthening master planning and coordination at the regional level.



PROJECT BRIEFS



Initial Pipeline Projects

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-		Page
01	Jalan Rasau Road Upgrading	13
02	Siem Reap - Ratanakiri Road Upgrading	17
03	Kuala Tanjung International Hub Port and Industrial Estates Phase II	21
04	Expansion of Hang Nadim International Airport	25
05	Development of Kijing Port	29
06	National Road No. 2 Upgrading	33
07	National Road No. 8 Upgrading	37
08	Lao PDR - Viet Nam Power Interconnector	41
09/10	0 Lao PDR - Myanmar Power Interconnector	45
11	Nay Pyi Taw - Kyaukpyu Expressway	49
12	Muse - Tigyaing - Mandalay Expressway	53
13	Yangon - Mandalay Expressway	57
14	Tarlay - Kyainglat Road Upgrading	61
15	ASEAN Digital Hub	65
16	Hat Yai - Sadao Motorway	69
17	Bangkok - Nong Khai HSR - Phase II	73
18	Southern Coastal Corridor Project - Phase II	77
19	Ho Chi Minh City - Moc Bai Expressway	81

15.0

JALAN RASAU ROAD UPGRADING

Project 01

Brunei Darussalam







Estimated Cost (USD) 44 Million (2019)

Implementing Agency

Public Works Department under the Ministry of Development (MOD)

Potential for Public Private Partnership¹ Limited

Project Overview

The project is an approximately 19 km two-lane road, extending from the Sungai Tujuh Miri checkpoint at the Malaysia -Brunei Darussalam border to the Seria Bypass at Telisai Lumut Highway in Brunei Darussalam. The road, located in the Belait district of Brunei Darussalam, meets Class III ASEAN highway standards, with two 3.75 m lanes (one in each direction) without shoulders. The project scope involves widening the current two-lane road to a four-lane road, with a maximum traffic speed up to 100 km/h. A 200 m long bridge will also be upgraded from a two-lane to a four-lane bridge.

Disclaimer: This project brief has been prepared based on (a) information provided by the relevant ministries and implementing agencies in each country as well as (b) publicly available information or other third-party sources. The World Bank Group has not verified the accuracy, reliability, or completeness of the information provided. Consequently, no assurance on such information is given. Any changes in the underlying assumptions or information on the project may result in changes to the analysis and recommendations set forth in this project brief.

The assessment of whether this project has the potential to be procured as a PPP has been based on limited information. Therefore, before any final decision is made to procure the project as a PPP, more detailed studies and analysis need to be carried out, including detailed technical and demand studies.



Status of Project

As the project is at the early concept stage, no pre-feasibility/ feasibility study or Environmental and Social Impact Assessment (ESIA) has been conducted for the project. The implementing agency has indicated that the project will likely be publicly funded.

Strategic Relevance

The main objective of widening this road is to reduce travel times on the existing roadway. During peak periods, such as public holidays, queues from the checkpoint can take three to four hours to reach Miri in Sarawak, Malaysia. The project is part of Brunei Darussalam's Master Plan and expected to accommodate future traffic capacity arising from increased ASEAN connectivity.

Connectivity Benefits

The Jalan Rasau road is a part of the Pan-Borneo Highway network, also known as Asian Highway 150 (AH150), which is one of the main land routes connecting Brunei Darussalam and Sarawak, Malaysia. The Pan-Borneo Highway includes a stretch of 62 km within Brunei Darussalam from the Sungai Tujuh Checkpoint to the Seria Bypass on the Telisai Lumut Highway.

Potential for PPP

Given the low capital costs of the project, the relatively straightforward nature of the road upgrading and the experience of MOD in procuring and funding similar projects, the public funding model may offer the best value for money.

Preliminary E&S Screening

After a preliminary environmental and social (E&S) risks screening, the project has been classified as having an overall Substantial² E&S risk, due to the presence of a locally protected area (including conservation status species) and potential impacts from the existing gas pipeline.

Recommendations for Project Implementation

The government has indicated that it would prefer a public funding approach to the project. As limited studies have been carried out to-date, it is recommended that MOD (a) undertakes a detailed traffic forecast to determine the expected level of traffic and toll revenues, (b) updates the cost estimates, and (c) carries out a detailed ESIA that uses local requirements and the World Bank's Environmental and Social Framework (ESF) where relevant. This should be iterative (where necessary) and integrated to the project phases (and assess the contextual risks identified to date) and adopt the mitigation hierarchy. The output should include an Environmental and Social Management Plan (ESMP), that considers both the construction and operational phases of the project (including contractual "flow-down" to contractors).

2. This E&S assessment follows the World Bank's ESF classification methodology and reflects the risks that would typically be associated with a project of this type and scale. However, this classification is of course only a preliminary indication of the potential classification and is based on limited information, studies and site visits. Therefore, a much more thorough study and analysis of the E&S impacts of the project will need to be undertaken before confirming the final ESF classification.



SIEM REAP - RATANAKIRI ROAD UPGRADING



Project 02

Cambodia







Estimated Cost (USD) 463 Million (2019)

Implementing Agency

Ministry of Public Works and Transport (MPWT)

Potential for Public Private Partnership¹ No

Project Overview

The project includes the rehabilitation and upgrading of an existing 390 km road between Siem Reap and Ratanakiri that crosses four provinces: Siem Reap, Preah Vihear, Stueng Treng and Ratanakiri. The current condition of the road is poor, with cracked pavements in many places, resulting in multiple potholes, increased travel times and a high incidence of road accidents. The project will improve and upgrade the corridor by improving the quality of the road surface, while retaining the 10m width of the roads. Improvements will include road surface treatment with 100 percent asphalt concrete pavement, maintenance works of bridges, improvements of drains, installation of road signs and markings and selected climate change features such as slope protection and storm water dissipation.

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 The assessment of whether this project has the potential to be procured as a PPP has been based on limited information. Therefore, before any final decision is made to procure the project as a PPP, more detailed studies and analysis need to be carried out, including detailed technical and demand studies.



Status of Project

The project is at its pre-feasibility stage with no prior feasibility studies having been prepared. However, MPWT has completed the Initial Environment and Social Impact Assessment (IESIA) and concluded that sufficient information is available to undertake a more detailed study.

Strategic Relevance

The project aligns with the national sectoral priorities set out in the Outline of the Road Network Planning Project for the Kingdom of Cambodia (July 2016), and the Sufficient capacity and variety by Multi-modality and Advanced Technology for Reliable Transport (SMART) Logistics 2025 Plan. At the regional level, the project lies in the Greater Mekong Sub-region (GMS) Southern East-West Corridor, which is one of the key connectivity routes linking Thailand with Viet Nam via Cambodia. As part of its broader national strategy, Cambodia plans to take advantage of its geographic position between these two larger neighboring countries, to develop labor-intensive economic nodes along the corridor, which may serve, among others, to assemble automotive and high technology spare parts from Viet Nam and Thailand, as well as improve the transportation, storage and processing of agricultural products.

Connectivity Benefits

This road segment, which connects the Stueong Bot cross border facility (with Thailand) to Ratanakiri (near the Viet Nam border) is part of the sub-regional GMS Southern East-West Corridor. There are ongoing upgrading works being undertaken by both the Asian Development Bank (ADB) and Japan International Cooperation Agency (JICA) on certain segments of the road, particularly around Siem Reap. The overall corridor upgrade is expected to improve regional connectivity, and potentially also enhance trade and logistics between Cambodia, Thailand, and Viet Nam. While the Cambodian government is keen to attract industries along this corridor, at present, the main economic activities along the alignment are mainly linked to the agricultural sector. Therefore, it is likely that increased traffic demand would only arise if the implementation of the planned special economic zones (SEZs) at Siem Reap, Preah Vihear, Stung Treng and Ratanakiri are successful, and if the required broader infrastructure (including power and water) is developed to support the planned economic development. The connectivity impact of the project will also be very dependent on the development of an efficient and effective cross-border facility at the border with Viet Nam, including soft infrastructure to support smoother trade flows across the border. Finally, the project is expected to help improve connectivity in the northern and northeastern parts of Cambodia, which are relatively poor compared to other parts of Cambodia.

Potential for PPP

While a PPP has the potential to generate value for money outcomes, the low level of traffic on the road, combined with MPWT's lack of experience of procuring PPP projects (particularly on an availability payment basis), suggests that this project may be best taken forward using public funding. However, MPWT is encouraged to consider using an Output Based Performance Contract, which combines the lower costs of finance of public procurement with potentially higher value for money through a transfer of certain and proportionate performance risks to the private sector.

Preliminary E&S Screening

After a preliminary environmental and social (E&S) risks screening, the project has been classified as having an overall Substantial² E&S risk, taking into account proximity of cultural heritage sites, potential for resettlement, presence of Indigenous Peoples (IPs), and potential for indirect impacts on biodiversity-rich protected areas. There may also be cumulative impacts from the development of labor-intensive industries along the road and from enhancing the Thailand - Viet Nam corridor.

Recommendations for Project Implementation

MPWT should (a) undertake a more comprehensive feasibility study, covering technical specifications (including the need for climate resilience), traffic projections and costing data (according to MPWT a detailed feasibility study is currently in the tendering phase); (b) ensure coordination with the strategy and timing of the planned SEZs (for example, type of industries to be developed); and (c) proactively engage in stakeholder communications throughout the whole project development process.

MPWT should also proceed with building on the initial impact assessment work conducted with E&S data gathering, field surveys, engagement with local stakeholders and nongovernmental organizations (NGOs) on biodiversity and Indigenous Peoples, and scoping of studies. Potential impacts on biodiversity and cultural heritage should be screened, based on the final proposed road alignment. The ESIA should also include consideration of cumulative and indirect risks and impacts and any associated facilities. Should the road project pass through the Angkor Wat area, it would need to be approved by ICC-Angkor (International Coordinating Committee for the Safeguarding and Development of the Historic Site of Angkor).

A full study on land acquisition, presence of communities (and if required, Indigenous Peoples) and potential for resettlement is also recommended. It is also recommended to ensure gender equality in further stakeholder engagements. Developing and implementing an Environmental and Social Management Plan (ESMP) is recommended as the project progresses with flowdown of requirements to relevant parties (including contractors). Where there is to be land acquisition and resettlement, a land acquisition and resettlement plan (including livelihood restoration) should be developed with a grievance redress mechanism.

Traffic forecast analysis suggests that, in addition to the upgrade, MPWT should further consider the possibility of widening some sections of the road, given that even in the most conservative scenarios, traffic volumes along certain sections of the road are expected to reach maximum capacity between 2045 and 2051, with the Siem Reap - Damdek section exceeding the current capacity as early as 2024, if not sooner.

KUALA TANJUNG INTERNATIONAL HUB PORT AND INDUSTRIAL ESTATES - PHASE II



Project 03

Indonesia







Estimated Cost (USD) 265 Million, Phase II only (2019)

Implementing Agency PT Pelabuhan Indonesia I (Pelindo I)

Potential for Public Private Partnership¹

Limited (based on current demand projections)

Project Overview

Kuala Tanjung is envisioned to be a fully integrated port and industrial estate with industrial clusters covering an area of about 3,000 ha and, when all phases are completed, have an annual throughput capacity of 200 million metric tons of cargo & 10 million TEUs in container traffic. The development of the project is intended to be large enough to achieve significant economies of scale and provide a competitive alternative to other major ports in the region, including Port of Singapore, Port Klang, and Port Tanjung Pelepas. Phase I of the port has been completed and comprises a multi-purpose terminal (MPT) intended to handle container and crude palm oil (CPO) cargoes.

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 The assessment of whether this project has the potential to be procured as a PPP has been based on limited information. Therefore, before any final decision is made to procure the project as a PPP, more detailed studies and analysis need to be carried out, including detailed technical and demand studies.



100 Scale (KM's)

Project Overview (Continued)

Future development of the port is planned to occur in four further phases (Phases II to V), with each phase being developed in response to market demand. The proposed works by phase are set out in Table 2.

Table 2. Summary of Works fo	r Upcoming Phases	(II - V)
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Phase	Description of works
Phase II	Construction of a thermal power plant, cement factory and 50m wide breakwater. Total projected costs of US\$252 million (real 2017), mostly expended over 2022-2024.
Phases III - V	Construction of an oil tank terminal and oil offloading jetties, a refinery, breakwater extension, container terminals and breakbulk facilities. Total projected costs of US\$3,437 million (real 2017), incurred in line with projected demand out to 2050.

Status of Project

Several studies have been conducted on the project (including Outline Business Cases in 2016 and 2017, Business Strategy in 2016, Port and Industrial Area Development Plan in 2017, Review on Financial Feasibility in 2017) and a feasibility study was recently completed by Pelindo I and Port of Rotterdam in 2019. Phase I of the project was completed in 2018. The project included in this Initial Pipeline covers Phase II and does not have any committed financing at this stage.

Strategic Relevance

Kuala Tanjung is one of two ports selected by the Government of Indonesia to be international hub ports. Kuala Tanjung has been designated a national priority project by the President and is one of the important links of the 'Maritime Highway' program, which is a government led program to reduce logistics costs by improving port infrastructure and enhancing connectivity between Indonesian ports. The program comprises the construction, expansion or upgrade of 24 existing or new commercial ports. These objectives are consistent with the government's overall strategy of growing the economy in regional areas and Indonesia as a whole. The strategic rationale for Kuala Tanjung rests to a significant degree on (a) the non-feasibility of continuing to develop Belawan Port (the current main port in the area located 90 km north west of Kuala Tanjung that is unsuitable for development beyond approximately 1.7m TEUs) and (b) the potential for development of industries in the northwestern region of Sumatra, including energy, petrochemical, basic industries, and manufacturing.

Connectivity Benefits

Kuala Tanjung is located on the northeastern coast of Sumatra on the Strait of Malacca, the corridor for approximately 30 percent of the world's trade and 15 percent of the world's crude oil and petrol products. Kuala Tanjung also has the potential to contribute significantly to a broader 'gateway' strategy for North Sumatra, as the location of the port has good connectivity to a range of different transport links. For example, it is one hour's travel time via the Trans-Sumatra toll road (currently under construction) to Medan, the economic center of North Sumatra, and 40 km by rail to the Sei Mangkei Special Economic Zone.

Potential for PPP

High level cashflow analysis has indicated that the project will generate insufficient revenues to pursue a privately financed PPP with user fees², unless there is a significant increase in demand or there is a very significant viability gap funding contribution from the government. Therefore, at current estimated demand levels, it is likely that public funding will be needed to support the development of Phase II and future phases of this port.

Preliminary E&S Screening

After a preliminary environmental and social (E&S) risks screening, the project has been classified as having potentially a High³ E&S risk, due to the proximity of biodiversity-rich protected areas (including internationally-recognized Important Bird Areas [IBAS]) with potential for loss of marine and coastal habitats including mangrove, river and wetland habitats and impacts from dredging, proximity to potential cultural heritage sites, and land acquisition and resettlement (including economic displacement e.g. through limiting access to fishing grounds). There will also be cumulative impacts from the industrial zone and transport corridors to the port.

Recommendations for Project Implementation

Pelindo I should continue to assess the need and demand for the project to determine whether, based on the level of need and demand for Phase II of the project, the project is economically and financially viable. It is recommended that Pelindo I:

- Continues to monitor the utilization of the current Kuala Tanjung and Belawan ports to validate the timing of future development phases;
- b. Regularly engages in market consultations with both domestic and international companies in order to validate and update demand projections;
- c. Engages with various government stakeholders to address the need for the development of viable value chains, from producers to end consumers, that will be enabled by this project;
- d. Reviews the feasibility and viability of the project in the absence of any additional government support, once a robust economic case for Phase II based on validated demand projections has been established; and
- e. Engages with the Government of Indonesia on plans for the future closure, capping or repurposing of Belawan Port.

In terms of E&S, recommended next steps include reviewing the impact assessment work completed to-date to assess the methodologies and information used in the assessment (E&S data gathering, field surveys, engagement with local stakeholders, impact assessment, cumulative impact assessment, etc.). In particular, the scope and approach in relation to biodiversity, cumulative impacts, and land acquisition and resettlement should be reviewed to consider the surveys undertaken, approach to compensation and livelihood restoration and long-term planning to minimize the impacts. Where gaps are identified, an approach to address these should be formulated, including ensuring that management and mitigation measures are adopted throughout the life of the project (including contractual "flow-down" to contractors in the construction and operational phases of the project). A land acquisition and Resettlement Action Plan (including livelihood restoration) should be developed with a grievance redress mechanism.

2. Ports are typically not financed on an availability payment basis

3. This E&S assessment follows the World Bank's ESF classification methodology and reflects the risks that would typically be associated with a project of this type and scale. However, this classification is of course only a preliminary indication of the potential classification and is based on limited information, studies and site visits. Therefore, a much more thorough study and analysis of the E&S impacts of the project will need to be undertaken before confirming the final ESF classification.

EXPANSION OF HANG NADIM INTERNATIONAL AIRPORT



Project 04

Indonesia







Estimated Cost (USD) 421 Million

Implementing Agency:

BP Batam

Potential for Public Private Partnership

Project is currently under procurement as a Public Private Partnership

Project Overview

The project involves the expansion of an existing international airport in the industrial and tourist island of Batam, Sumatera.

Hang Nadim International Airport was originally built with a capacity of 3.5 million passengers and 40,000 tonnes of cargo, but had 5.6 million passengers in 2018, which is substantially above its current capacity. The project is going to be undertaken in several phases. The first phase focuses on the refurbishment and renovation of Terminal 1 to increase capacity. Later phases will focus on a new Terminal 2 and its associated supporting infrastructure, including expanded apron and taxiway.

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Status of Project

BP Batam has decided to procure all phases of the project through a PPP, structured as a design-build-finance-transferoperate-maintain (DBFTOM) contract. PT SMI has been appointed as advisors to BP Batam for the project preparation and transaction. International bidders will need to partner with local companies to meet the requirement for 51 percent local ownership for Indonesian airports. Although a request for prequalification was issued in January 2019, no bidders prequalified, primarily due to administrative reasons (mostly due to delays in the consularisation of documents). The request for prequalification was reissued on May 7, 2019, with a briefing held on May 14, 2019. It is understood that seven bidders have passed the prequalification stage.

Strategic Relevance

This project is part of the Indonesia Medium Term Development Plan 2015 - 2019 and is referred to in Ministerial Decree No. 69/2013, which requires the airport to go from secondary to primary airport status between 2020 - 2030. Hang Nadim International Airport is being marketed to investors with a strong cargo focus. The expansion and modernization of the airport is expected to spur economic growth by facilitating the creation of new business opportunities in Batam.

Connectivity Benefits

The expansion of the airport would allow the opening of new regional and international routes. However, it is expected that the majority of flights will be domestic.

Potential for PPP

BP Batam has selected a PPP option as the preferred procurement option and has already issued an RFQ. Feasibility studies and market soundings have indicated that the project is financially viable as a PPP.

Preliminary E&S Screening

After a preliminary environmental and social (E&S) risks screening, the project has been classified as having an overall Moderate¹ E&S risk. This is based on the project being developed within the existing footprint of the operational airport, with the refurbishment of an existing terminal, the development of a new passenger terminal, and expansion of the existing apron and runway.

Recommendations for Project Implementation

BP Batam should continue the competitive and transparent procurement process in line with best practice. From an E&S perspective, it is understood that a local impact assessment was prepared in 2009/2010 for the project. This should be updated, in consideration of the project design and introduction of international E&S standards, in addition to ensuring that local permit/approval requirements are met. The output should include an Environmental and Social Management Plan (ESMP) that considers both the construction and operational phases. To implement the ESMP, the project must allocate resources and budget, including "flow-down" to contractors of relevant ESMP obligations with monitoring and reporting on its implementation.

^{1.} This E&S assessment follows the World Bank's ESF classification methodology and reflects the risks that would typically be associated with a project of this type and scale. However, this classification is of course only a preliminary indication of the potential classification and is based on limited information, studies and site visits. Therefore, a much more thorough study and analysis of the E&S impacts of the project will need to be undertaken before confirming the final ESF classification.



DEVELOPMENT OF KIJING PORT



Project 05

Indonesia







Estimated Cost (USD) 400 Million

Implementing Agency:

Pelindo II

Potential for Public Private Partnership

Project is already under implementation through an SOE

Project Overview

Kijing Port is a new deep-water port, currently under construction, that is strategically located near the South China Sea and designed to handle the growing demand for cargo in West Kalimantan.

Pelindo II, a state-owned port operator, was assigned responsibility for the development and operation of the port under Presidential Decree No. 43/2017. Kijing Port will be the gateway port for the region, handling both container and bulk cargoes and stimulating local industries.

The project will be developed with the capacity to handle projected throughput demand of over 50 million tons by 2030, which is substantially above the volumes currently being handled by the existing Pontianak Port. Construction will include the establishment of container, multipurpose, liquid bulk and dry bulk terminals. A two-phase development plan has been adopted to construct the port to balance overhead costs and economies of scale.

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Status of Project

The project is being implemented by Pelindo II and is being financed through monies raised by issuing corporate bonds at the group level. As of June 2019, around 200 ha of land had been acquired by Pelindo II and part of this land will be available for development by the end of 2019/early 2020. Construction of Phase 1 has already started.

Strategic Relevance

As a national strategic port, Kijing Port is expected to become the largest international port in Kalimantan. The project is aligned with several of Indonesia's strategic priorities:

- Kijing Port was designated a national priority project by the President when it was launched in early 2015.
- The project is part of the government's Port Development Master Plan.
- This project is aligned to the National Medium Term Development Plan (RPJMN) 2015-2019, as well as Presidential Decree No. 58/2017 regarding the Acceleration of the Implementation of National Strategic Projects.
- The port is located in the same region as the recently announced future capital of Indonesia, which could positively impact demand.

Connectivity Benefits

Kijing is located along international shipping corridors and will be well positioned to enhance Indonesia's connectivity to other countries. In addition, the port will strengthen connectivity between the islands of Indonesia and support the government's drive to develop a maritime axis. In terms of supporting infrastructure, a permit has already been obtained for the construction of a new road and there are also plans to develop a new airport (Singkawang Airport), which will only be 60 km (an hour's drive) from Kijing Port. It is understood that studies on the need for rail transport and toll roads from Pontianak to Singkawang, have already been undertaken by the Ministry of Transport (MOT) to inform future potential development requirements.

Potential for PPP

The project has already been awarded to Pelindo II and it has secured the necessary financing through a bond issuance. However, Pelindo II has indicated that it would like to see the private sector involved in the logistics and industrial development components of the port.

Preliminary E&S Screening

After a preliminary environmental and social (E&S) risks screening, the project has been classified as having an overall High¹ E&S risk. This is due to the greenfield nature of the port development with an offshore component and potential for biodiversity offshore and onshore impacts during construction and operations, as well as the planned land acquisition and resettlement (approximately 100 ha) including economic displacement e.g. restriction to fishing grounds and other resources. There will also be cumulative impacts from transport corridors being developed to service the port.

Recommendations for Project Implementation

Although it has already been decided that the Kijing Port expansion will be implemented by Pelindo II and financing has already been secured for the initial phases, it may be worth considering the potential for private sector participation in the actual operations of the port. The current intention seems to be to run the port on a Landlord model, with Pelindo II sub-leasing areas within and around the port facility to third parties to invest in and develop core and complementary activities. However, for future expansions of Kijing, Pelindo II could enter into a BOT type contract which would help mitigate demand risk by sharing traffic risk with a private operator by allowing a private operator to charge and collect port user fees.

From an E&S perspective, immediate next steps include scoping and commencement of biodiversity field surveys to inform the biodiversity assessments and Biodiversity Action Plan/Biodiversity Offset Plan in accordance with the mitigation hierarchy and scoping and surveys for assessment of land acquisition and resettlement (physical and economic). These should also be incorporated into a full ESIA. Any risks and impacts identified and mitigation proposed in the ESIA, other E&S studies or associated permitting documents, should also be reviewed to ensure the mitigation hierarchy is adopted. As the project progresses, drawing on the ESIA / AMDAL² requirements, development and implementation of an Environmental and Social Management Plan (ESMP) with flow-down of requirements to relevant parties (including contractors) is recommended. For the land acquisition, a Resettlement Action Plan (including livelihood restoration) should be developed with a grievance redress mechanism.

^{1.} This E&S assessment follows the World Bank's ESF classification methodology and reflects the risks that would typically be associated with a project of this type and scale. However, this classification is of course only a preliminary indication of the potential classification and is based on limited information, studies and site visits. Therefore, a much more thorough study and analysis of the E&S impacts of the project will need to be undertaken before confirming the final ESF classification

^{2.} AMDAL stands for Analisis Mengenai Dampak Lingkungan, which in Indonesian means Environmental Impact Analysis Report.



LAO PDR NATIONAL ROAD NO. 2 UPGRADING



Project 06

Lao PDR







Estimated Cost (USD) 272 Million (2019)

Implementing Agency

Ministry of Public Works and Transport (MPWT), and Department of Public Works and Transport (DPWT)

Project Overview

The project involves the widening and reconstruction of the existing National Road 2E (NR2E) and National Road 2W (NR2W) (collectively NR2) in the north-west of Lao PDR.

NR2W runs from Pakbeng district (Oudomxay) to Muang Xay district (Oudomxay), with a length of approximately 130 km and NR2E stretches from Muang Xay district (Oudomxay) to Khoua district (Phongsaly), with a length of approximately 100 km.

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NR2 was first constructed with assistance from China in the 1970s, and subsequently upgraded with World Bank support in 2003 - 2004. However, the road was not designed for the current volumes of traffic and is one of the few remaining Asian Highway Routes which falls below the minimum ASEAN Highway Standards. Damage from floods, natural disasters and terrain issues have caused the road to deteriorate over time and some sections of the road have now become unpassable during the wet season. Increasing volumes of heavy trucks from neighboring countries (Thailand and Viet Nam) have further exacerbated damage to the road.

The deterioration in the road conditions has adversely affected the livelihoods of the local people in Oudomxay, who heavily rely on the road for day to day transport. Therefore, an upgrade and major reconstruction will be necessary to bring the road up to the standards necessary to support current and future traffic profiles and volumes.

 The assessment of whether this project has the potential to be procured as a PPP has been based on limited information. Therefore, before any final decision is made to procure the project as a PPP, more detailed studies and analysis need to be carried out, including detailed technical and demand studies.


A pre-feasibility study was undertaken in 2010. However, it is understood that no further studies have been undertaken since then.

Strategic Relevance

The project aligns with the national strategic priorities set out in Lao PDR's latest 8th National Socio-Economic Development Plan (NSEDP) 2016 - 2020. At the sectoral level, the project is part of MPWT's Strategic Development Plan 2016 - 2020, which aims to achieve the country's aspiration to become a 'landlinked' country as opposed to a 'landlocked' country. The national strategy also aims to bring all national roads up to ASEAN Highway Standards (AHS) Class III or higher, consistent with ASEAN's recommendations set out in the Master Plan on ASEAN Connectivity (MPAC) 2025. Currently, in Lao PDR, only NR2 and 18A have technical specifications less than AHS Class III. Finally, NR2 is part of a segment of the Asian Highway 13 (part of the Asian Highway Network [AHN]), linking southwest to Thailand, north to China, and east to Viet Nam.

Connectivity Benefits

The road links eastwards to Viet Nam via NR2E and southwestwards to Thailand via NR4A. As such, NR2 is a critical link in improving cross-border connectivity and trade and logistics between these ASEAN countries. Furthermore, the road crosses Muang Xay, which is Oudomxay Province's capital and one of the main stations on the Lao PDR - China High-Speed Railway (HSR). A dry port in Oudomxay has also been earmarked for development. To benefit from the economic growth brought about by these key infrastructure projects, improvements in the province's road transportation (including NR2) will be critical. Post upgrade, NR2 is expected to provide enhanced connectivity for businesses and increased labor productivity. With the expected influx of people and freight from the Lao PDR - China HSR and dry port, there is the potential for Oudomxay to substantially develop its manufacturing industries, logistics, real estate, and tourism sectors. A robust local road network will be required to support such economic development.

While a PPP could potentially deliver value for money, a PPP model would present significant deliverability risks given the lack of experience in Lao PDR with PPPs. Therefore, this project may be best procured using public funding. However, a form of private participation that has already been successfully tested in the country is an Output Performance Based Contract (OPBC), which offers a balance between public procurement (for the construction phase) and the potentially higher value for money that a private participation in the O&M phase can offer. In addition, at some point in the future when traffic flows have been proven, it may be possible to consider some form of concession contract for the road.

Preliminary E&S Screening

After a preliminary environmental and social (E&S) risks screening, the project has been classified as having an overall Substantial² E&S risk, due to the potential for transboundary impacts caused by the improved connectivity between Thailand, Lao PDR and Viet Nam as the result of the road. In addition, while there are existing rights of way (ROW) on the brownfield alignment, there may be potential impacts where ROW is required on any greenfield sections of the road (for example, bypasses) and potential land acquisition and resettlement.

Recommendations for Project Implementation

As the pre-feasibility study was undertaken in 2010, it is strongly recommended that MPWT conducts a detailed technical study to develop more robust traffic forecast estimates and to assess in more detail the actual capital costs of this project. In this context, MPWT should consider seeking technical and financial assistance from donor agencies to undertake a detailed feasibility study, which is the most critical next step. A detailed feasibility study should include:

- a. A technical study with reference to design and alignment (compliant with at least the minimum AHS requirements of Class III, as well as being able to accommodate future traffic growth);
- b. Robust cost estimates;
- c. Updated traffic projection surveys (and, if tolls are planned to be implemented, willingness to pay surveys); and
- d. Public consultations and stakeholder engagement with local communities.

With regard to E&S, early assessment of impacts on the nature and extent of any land acquisition, biodiversity and Indigenous Peoples is recommended to screen for potential risks and impacts and incorporation into the final design. In addition, as the project develops, an ESIA to international standards is recommended to be prepared. The ESIA should include consideration of cumulative, transboundary and indirect risks and impacts and any associated facilities, particularly considering that this road provides a critical link in improving cross border connectivity and trade and logistics between Thailand, Lao PDR and Viet Nam. The output should also include an Environmental and Social Management Plan (ESMP) that considers both the construction and operational phases. To implement the ESMP, the project must allocate resources and budget, including "flow-down" to contractors of relevant ESMP obligations with monitoring and reporting on its implementation. For the land acquisition, a Resettlement Action Plan (including livelihood restoration) should be developed with a grievance redress mechanism.

Should a PPP option be selected as the preferred procurement option, MPWT should conduct market sounding sessions with potential contractors to better understand their views on the project. This may include an assessment of the contractor's capacity to undertake such a significant reconstruction work scope. In addition, it is recommended to have the PPP Decree approved, so as to provide a sounder legal framework for any potential PPP transaction.

LAO PDR NATIONAL ROAD NO. 8 UPGRADING



Project 07

Lao PDR







Estimated Cost (USD) 207 Million (2019)

Implementing Agency:

Ministry of Public Works and Transport (MPWT)

Potential for Public Private Partnership¹ No

Project Overview

National Road No.8 (NR8) is a two-lane road of 132 km length that crosses the central region of Lao PDR at its narrowest point. It stretches from National Road 13 in the west to the Nam Phao international checkpoint on the Lao PDR - Viet Nam border, and passes through Borikhamxay Province and Khammuane Province.

The current road is in poor condition, mainly arising from flood damage, and this has resulted in an increase in both travel times and road accidents. The scope of works considered by the latest feasibility study carried out by the Korea International Cooperation Agency (KOICA), includes improving the alignment and widening the road to meet ASEAN Highway Standard Class II requirements (a two-lane highway of 12 m width and design speed of 40-60 km per hour). It is expected that the improved alignment would reduce the road length from 132 km to 123.9 km. The project will also include the repair of 29 bridges and the construction of two new tunnels.

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 The assessment of whether this project has the potential to be procured as a PPP has been based on limited information. Therefore, before any final decision is made to procure the project as a PPP, more detailed studies and analysis need to be carried out, including detailed technical and demand studies.



100 Scale (KM's) Project Area

Page 38

Status of the project

A feasibility study was conducted by KOICA in 2018. As the most critical components of the upgrade consist of the construction and repair of 29 bridges along the NR8 alignment, KOICA has initiated a second feasibility study that only focuses on these components and is currently seeking co-financing from other development partners on other components of the project.

Strategic Relevance

The project aligns with the national strategic priorities set out in Lao PDR's latest 8th National Socio-Economic Development Plan (NSEDP) 2016-2020. At the sectoral level, the project is part of MPWT's Strategic Development Plan 2016-2020, which supports the country's aspiration to become a 'land-linked' rather than a 'land-locked' country. The road is also part of the Asian Highway Network (AH15), and its improvement was formally included as an objective in the Master Plan on ASEAN Connectivity 2025 (MPAC 2025).

Connectivity Benefits

The road forms part of the Asian Highway Network (AH15) and Greater Mekong Sub-region (GMS) East West Corridor. NR8 provides the shortest connection between Vientiane (the capital of Lao PDR) and the Viet Nam border. According to MPWT, the connecting road in Viet Nam has been upgraded at the end of 2018 and new border control facilities have been developed. Viet Nam and Lao PDR are currently discussing the development of the Vientiane - Hanoi Expressway (supported by Japan International Cooperation Agency [JICA]) which, depending on the chosen alignment, has the potential to either complement or compete for traffic along NR8. One of the two possible alignments for the expressway, includes a connection with NR8, which would reinforce the case for an upgrade of this road. In addition to this major connectivity benefit, there is potential for improved connectivity with Thailand once the Lao-Thai Friendship Bridge No. 5 in Paksan (90 km north from start of NR8) is completed (MPWT expects this to be completed by 2022). Finally, there is an ongoing proposal to improve 300 km of the NR13 south from km70 to Khammuane, which connects to NR8 and would further improve road connectivity to NR8.

While a PPP could potentially deliver value for money, a PPP model would present significant deliverability risks given the lack of experience in Lao PDR with PPPs. Therefore, this project may be best procured using public funding. However, a form of private participation that has already been successfully tested in the country is an Output Performance Based Contract (OPBC), which offers a balance between public procurement (for the construction phase) and the potentially higher value for money that a private participation in the O&M phase can offer. In addition, at some point in the future when traffic flows have been proven, it may be possible to consider some form of concession contract for the road.

Preliminary E&S Screening

After a preliminary environmental and social (E&S) risks screening, the project has been classified as having an overall High² E&S risk, as the proposed alignment passes through three national biodiversity conservation areas (with potential biodiversity impacts on wildlife including endangered species and forest areas), and there is a potential impact from land acquisition and resettlement, including physical and economic displacement in addition to loss of community assets. In addition, there are potential cumulative and transboundary impacts, considering this road forms part of the Asian highway network and contributes to connectivity between Lao PDR and Viet Nam.

Recommendations for Project Implementation

It is recommended that immediate next steps include scoping and commencement of biodiversity field surveys to inform the biodiversity assessments and Biodiversity Action Plan/Biodiversity Offset Plan in accordance with the mitigation hierarchy and scoping and surveys for assessment of land acquisition and resettlement (physical and economic). These should also be incorporated into a full ESIA that includes stakeholder engagement and develops adequate measures to mitigate the E&S impacts, as well as takes into consideration cumulative, transboundary and indirect risks and impacts and any associated facilities. Should the project move ahead, adherence to a robust E&S framework for assessment and mitigation of E&S impacts and risks is recommended. For the land acquisition, a Resettlement Action Plan (including livelihood restoration) should be developed with a grievance redress mechanism.

To enhance the connectivity impact of the project, Lao PDR should continue discussions with Viet Nam concerning the Vientiane - Hanoi Expressway and synergize the planning to maximize the benefits of both projects.

Based on the cost estimates from the feasibility study, MPWT should identify financial resources necessary for project works and eventually reach out to donor agencies for concessional loans or grants.

LAO PDR - VIET NAM POWER INTERCONNECTOR



Project 08

Lao PDR







Estimated Cost (USD) 50-130 Million²

Implementing Agency Ministry of Energy and Mines (MEM) Potential for Public Private Partnership¹ Yes

Project Overview

The Lao PDR - Viet Nam Interconnector Project is a power transmission line between the southern part of Lao PDR (Attapeu and Xekong Provinces) and Viet Nam (Pleiku and Thanh My Provinces).

The project aims at facilitating power trade between the two countries with excess power from Lao PDR being sold to Viet Nam. This will help to enhance power connectivity in the region and optimize the use of renewable energy.

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- The assessment of whether this project has the potential to be procured as a PPP has been based on limited information. Therefore, before any final decision is made to procure the project as a PPP, more detailed studies and analysis need to be carried out, including detailed technical and demand studies.
- Final cost will depend on several factors including: a) voltage, b) length of the transmission line, c) specific alignment and type of terrain along the transmission route, and d) additional design components such as substations and switching stations.



100 Scale (KM's) Project Area

Multiple studies are currently under way to assess different technical and commercial alternatives, including both public and private options.

Strategic Relevance

This interconnector initiative was included in the Greater Mekong Sub-region (GMS) Regional Investment Framework 2022 and could be the second GMS power interconnection project (after Lao PDR - Thailand), helping to contribute to the creation of an ASEAN Power Grid (APG). The project will help to meet bilateral energy agreements (Energy Cooperation Agreement between Government of Lao PDR and Government of Viet Nam) and Lao PDR's national strategy (8th National Socio-Economic Development Plan 2016-2020 and Energy Sector Development Action Plan 2015) to increase and diversify its energy sales.

Connectivity Benefits

Connecting Viet Nam's and Lao PDR's power grids has a strong regional integration argument, as it could pave the way toward the longer-term objective of full system-to-system integration in the ASEAN region. On the Lao PDR side, the project is very dependent on Independent Power Producers (IPPs), because generation facilities are predominantly developed by the private sector and, given the moderate growth in the domestic demand for electricity, new concessional agreements are generally not being granted to IPPs, unless Electricite du Laos (EDL)⁴ has an export market.

Potential for PPP

The selection of the preferred financing option will very much depend on whether the project is being pursued as a Government-to-Government (G2G) or a Business-to-Government (B2G) initiative. As the different project options progress and continue to be assessed, it is recommended that the necessary transmission infrastructure remains under consideration for a PPP.

Preliminary E&S Screening

After a preliminary environmental and social (E&S) risks screening, the project has been classified as having an overall High³ E&S risk, because of potential risks to national biodiversity areas, Indigenous Peoples and cultural heritage, as well as potential community health and safety risks in the construction and operation phases.

Recommendations for Project Implementation

As part of the development of the project scope and selection of the transmission line route, it is important that E&S considerations are taken into account. This includes scoping and commencement of surveys on biodiversity, Indigenous Peoples and cultural heritage to inform alignment selection. These should also be incorporated into a full ESIA that includes stakeholder engagement and develops adequate measures to mitigate the E&S impacts, such as compensation and Resettlement Action Plans, as well as detailed Biodiversity Action Plans and Offset Plans. As an outcome of the impact assessment, developing and implementing an Environmental and Social Management Plan (ESMP) is recommended as the project progresses with flowdown of requirements to relevant parties (including contractors).

Lao PDR needs to enter into tariff negotiations with Viet Nam, as the level of tariff paid by Viet Nam will determine the project's feasibility. On the Viet Nam side, further analysis is required to check for adequate transmission capacity from the connection points to the grid towards central Viet Nam and southern Viet Nam, where the main system demand exists.

Should a PPP option be selected as the preferred procurement route, MEM/EDL should conduct market sounding sessions with potential investors to assesses their appetite to participate in the project and better understand their views.

3. This E&S assessment follows the World Bank's ESF classification methodology and reflects the risks that would typically be associated with a project of this type and scale. However, this classification is of course only a preliminary indication of the potential classification and is based on limited information, studies and site visits. Therefore, a much more thorough study and analysis of the E&S impacts of the project will need to be undertaken before confirming the final ESF classification.

4. Électricité du Laos is the state corporation of Lao PDR that owns and operates the country's electricity generation, electricity transmission and electricity distribution assets.



LAO PDR - MYANMAR POWER INTERCONNECTOR / MYANMAR - LAO PDR POWER INTERCONNECTOR¹



Project 09 & 10

Lao PDR / Myanmar







Estimated Cost (USD) Lao PDR 16.5 Million (2019)² Myanamar 50 Million (2019)²

Implementing Agency

Lao PDR: Ministry of Energy & Mines (MEM) Myanmar: Ministry of Electricity & Energy (MOEE) **Potential for Public Private Partnership**³ Yes

Project Overview

The Lao PDR - Myanmar Interconnector Project is a 300 MW power transmission line, connecting the northern part of Lao PDR and Shan State in Myanmar.

Most of the 230kV line (approximately 120 km) is expected to be in Myanmar, with just a short section of line (20 km to 30 km) in Lao PDR. This is because the Nam Pha Hydropower Plant (HPP) in Lao PDR, that has been tentatively identified to export power to Myanmar, is very close to the Myanmar border.

1. This brief is based on two separate project applications submitted respectively by Lao PDR and Myanmar.

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- The final cost will depend on several factors including (a) voltage, (b) actual length of the transmission line, (c) specific alignment and type of terrain along the transmission route, and (d) design components such as substations & switching stations.
 The assessment of whether this project has the potential to be procured as a
- 3. The assessment of whether this project has the potential to be procured as a PPP has been based on limited information. Therefore, before any final decision is made to procure the project as a PPP, more detailed studies and analysis need to be carried out, including detailed technical and demand studies.



Following a Memorandum of Understanding (MoU) for Lao PDR - Myanmar Power Cooperation signed in January 2018, the two countries are continuing bilateral discussions on the project, and in line with this both countries have submitted two complementary project applications for this project to be included in the Initial Pipeline. The Asian Development Bank (ADB) is supporting project preparation by way of a technical pre-feasibility study to consider the technical viability of the project and identify suitable interconnection points.

Strategic Relevance

The project has the potential to be of high strategic importance. A power transmission line between Lao PDR and Myanmar has been included in the Greater Mekong Sub-region (GMS) Regional Investment Framework 2022. The project fulfills bilateral agreements (Lao PDR - Myanmar Electric Power Cooperation MoU) and both countries have submitted this project for inclusion in the Initial Rolling Priority Pipeline of Potential ASEAN Infrastructure Projects. In addition, this project has also been included in a priority project pipeline list developed by Myanmar's Project Bank.

Connectivity Benefits

Connecting Myanmar and Lao PDR's power grids has a strong regional integration argument, as it could help pave the way towards the longer-term objective of full system-to-system integration in the ASEAN region.

On the Lao PDR side, the planned Nam Pha HPP is very close to the Myanmar border and could be a potential source of power for this project. However, construction has not yet started on this hydro project. In Myanmar, the project can be connected to the planned transmission line from Tachileck to Kengtaung (planned to be completed by 2024–2025 according to the current Master Plan). A transmission line from Kengtaung to Namsan (where it connects to the Myanmar national grid) is currently under construction. At Tachileck, there is an existing 33 kV transmission line that connects Myanmar with Thailand, with plans for it to be upgraded to 230 kv. The 33kV line continues to Kyainglat at the border with Lao PDR.

Potential for PPP

The selection of the preferred financing option will very much depend on whether the project is being pursued as a Government-to-Government (G2G) or a Business-to-Government (B2G) initiative. As the different project options progress and continue to be assessed, it is recommended that the necessary transmission infrastructure remains under consideration for a PPP.

Preliminary E&S Screening

Based on a preliminary environmental and social (E&S) risks screening, the project has been classified as having an overall High⁴ E&S risk, given the high potential for the presence of Indigenous Peoples, areas of potential biodiversity interest in the vicinity of the potential project area, potential risk of conflict and unrest in the area, and the likely need for land acquisition for pylons and associated infrastructure.

Recommendations for Project Implementation

Once ADB's pre-feasibility study has been completed, it is recommended that the Lao PDR and Myanmar governments work together to develop a detailed feasibility study and ESIA. The ESIA should also include consideration of cumulative and indirect risks and impacts and any associated facilities. It is also recommended to ensure gender equality in further stakeholder engagement and involve the NGOs for Indigenous Peoples as stakeholders. Should the project move ahead, adherence to a robust E&S Framework for assessment and mitigation of E&S impacts and risks is recommended.

It will be important to develop adequate measures to mitigate the E&S impacts including a compensation and Resettlement Plan, as well as detailed Biodiversity Action Plans and Offset Plans as part of an ESIA. A Social and Conflict Analysis is recommended to be carried out in order to assess the degree to which the project may be negatively affected by existing tensions, conflict and instability. An outcome of the ESIA should be to develop and implement an Environmental and Social Management Plan (ESMP) with flow-down of requirements to relevant parties (including contractors).

In addition, it will be important for both governments to agree on the alignment and the electricity tariff to be paid by Myanmar.

Should a PPP option be the preferred procurement route, the relevant agencies in both countries should conduct market sounding sessions with potential investors to assess the appetite of private investors/developers to participate in the project and better understand their views on the project.



NAY PYI TAW - KYAUKPYU EXPRESSWAY



Project 11

Sector Road

Greenfield / Brownfield

Implementing Agency Ministry of Construction (MOC)

Potential for Public Private Partnership¹ Yes

Project Overview

To support the increasing levels of economic activity between China and Myanmar, a transportation corridor for carrying goods between Kyaukpyu Special Economic Zone (SEZ), central Myanmar, and China is deemed necessary by both countries

The project includes a mix of greenfield and brownfield works to develop a four-lane expressway connecting the planned Kyaukpyu Port and Nay Pyi Taw. The expressway will be a combination of at grade road, viaducts, bridges, and tunnels. The total length of the expressway is expected to be 380.85 km and will include (a) a brownfield section: from the proposed Kyaukpyu Port to Ma-e (around 120 km) and (b) a greenfield section: Ma-e to Nay Pyi Taw (around 260.85 km).

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1. The assessment of whether this project has the potential to be procured as a PPP has been based on limited information. Therefore, before any final decision is made to procure the project as a PPP, more detailed studies and analysis need to be carried out, including detailed technical and demand studies.

In December 2015, the Government of Myanmar (GoM) announced plans for the development of the Kyaukpyu Special Economic Zone (SEZ), including the Kyaukpyu deep-water port. In the same year, the GoM mandated a consortium led by CITIC Group Corporation (CITIC) to develop the Kyaukpyu Port. Two years later, in 2017, China State Construction Engineering Corporation (CSCEC) submitted a proposal to MOC to develop an expressway between Kyaukpyu and Nay Pyi Taw. Following this, MOC signed a Memorandum of Understanding (MoU) with China Harbour Engineering Company (CHEC) to conduct a feasibility study for the project. This feasibility study is expected to be completed in early 2020.

Strategic Relevance

Since 2017, the GoM has been actively developing trade relationships with China, including the establishment of several economic cooperation zones on the China - Myanmar border. However, the existing infrastructure is not considered sufficient to support the future flow of goods between the countries or cater to the growing activity in the region. In 2018, Myanmar signed an MoU with China to establish the China - Myanmar Economic Corridor (CMEC), as part of China's Belt and Road Initiative (BRI). Under the MoU, China and Myanmar have agreed to collaborate on a number of projects across various economic sectors, including infrastructure. construction and transport. At the national level, the project supports the goals of the Myanmar Sustainable Development Plan (MSDP), which includes as priorities the upgrading of international transport corridors and expanding access to expressways for heavy commercial vehicles. This project is part of Myanmar's National Transport Masterplan and has also been included in the priority project pipeline list developed by Myanmar's Project Bank.

Connectivity Benefits

This project supports increasing trade flows from China's western provinces into Myanmar, and then on to the rest of the world (particularly South Asia) through the proposed Kyaukpyu Port. Currently there is no adequate connection between Kyaukpyu and the arterial road network of Myanmar to transport goods between the planned port and the main cities in Myanmar or China. The existing roads between Kyaukpyu and the main arterial network of Myanmar, either pass through Magway to the north (around 520 km) or Pyay to the south (650 km) of the proposed alignment of this expressway and are, respectively, 1.4 and 1.7 times longer than the proposed alignment. The existing roads connecting Ma-e and Nay Pyi Taw also range in width and condition and pass through a number of towns and villages, which make them unsuitable for hauling increasing volumes of goods.

In this context, the connectivity impact of this project is heavily dependent on the successful development of the Kyaukpyu deep-sea port. Although construction has stalled for several years, reportedly because of concerns around its high costs (initially forecasted at US\$7.3 billion), CITIC signed a framework agreement with the GoM in November 2018 which committed an investment of US\$1.3 billion for the implementation of the first phase of the deep-sea port (which includes the construction of two deep-sea berths).

The project has demonstrated that it is financially viable based on the cost estimates and traffic forecasts presented in the CSCEC feasibility study. However, these estimates need to be further validated to ensure that the assumptions used are not overly optimistic. In particular, traffic demand will be very dependent on the successful development and expansion of the Kyaukpyu Port. Furthermore, the viability of any PPP option ultimately depends on a commercially acceptable tolling policy being implemented and the level of traffic demand.

Preliminary E&S Screening

After a preliminary environmental and social (E&S) risks screening, the project has been classified as having an overall High² E&S risk, due to potential impacts on biodiversity, land acquisition and resettlement, potential presence of Indigenous Peoples and risk of conflict and unrest in some areas of the project.

Recommendations for Project Implementation

It is recommended that MOC :

- a. Thoroughly reviews the feasibility study currently being prepared by CHEC (including alternate alignments) as the CHEC study is expected to provide more up-to-date details of the technical specifications, traffic projections and project costs;
- b. Obtains a comprehensive understanding on the status of the Kyaukpyu Port and its planned operations in order to better estimate the traffic demand;
- c. Closely monitors the conflict in Shan State, as it could potentially affect the feasibility of the project, given that the transit corridor on which the project lies, stretches from Kyaukpyu through to Muse; and
- d. Proceeds with E&S data gathering, field surveys, engagement with local stakeholders and NGOs on biodiversity and Indigenous Peoples, and scoping of studies that considers alignments in the CHEC study.

A Social and Conflict Analysis is recommended to be carried out in order to assess the degree to which the project may be negatively affected by existing tensions, conflict and instability. As the project progresses, a robust ESIA should be carried out, including surveys of biodiversity and Indigenous Peoples, affected settlements and culture heritage. The ESIA should also include consideration of cumulative and indirect risks and impacts and any associated facilities. It is also recommended that gender-neutral stakeholder communications be regularly undertaken throughout the whole project development, and NGOs for Indigenous Peoples are involved as stakeholders. The output should include an Environmental and Social Management Plan (ESMP), that considers both the construction and operational phases of the project (including contractual "flow-down" to contractors). A Resettlement Action Plan (including livelihood restoration) should be prepared, together with a grievance redress mechanism.

Should a PPP option be selected, MOC needs to determine a tolling policy which is acceptable to both investors and end users, noting that some past BOT projects in Myanmar have not proven to be financially viable based in part on the level of tolls. Once it has been determined to pursue a PPP option, MOC should conduct market sounding sessions with potential investors to assess their appetite to participate in the project and better understand their views on the project.

MUSE - TIGYAING - MANDALAY EXPRESSWAY

Project 12

Myanmar

Estimated Cost (USD) 868 Million (2019)

Implementing Agency: Ministry of Construction (MOC) Potential for Public Private Partnership¹ Yes

Project Overview

The project includes the development of a greenfield road connecting Mandalay, Tigyaing, and Muse. The expressway will be a combination of at grade road, viaducts, bridges, and tunnels.

The total length of the expressway is expected to be 443 km and it will include (a) a north-south greenfield section: Mandalay to Tigyaing (approximately 255 km) and (b) an east-west greenfield section: Tigyaing to Muse (approximately 188 km). The main objective of the project is to support freight movements between China and Myanmar, by providing an alternative route to the congested existing National Highway 3 (NH3), that runs between Mandalay and Muse through Lashio. This expressway will be part of an estimated 1,700 km long corridor that will connect Kunming, the capital of China's Yunnan Province, to Myanmar's major economic centers, first to Mandalay in central Myanmar, and then south to Yangon and west to the Kyaukpyu Special Economic Zone (SEZ) and Port.

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 The assessment of whether this project has the potential to be procured as a PPP has been based on limited information. Therefore, before any final decision is made to procure the project as a PPP, more detailed studies and analysis need to be carried out, including detailed technical and demand studies.

In 2018, MOC signed a Memorandum of Understanding (MoU) with China Harbour Engineering Company (CHEC) to conduct a feasibility study for the project. This feasibility study is expected to be completed in early 2020.

Strategic Relevance

At the national level, the project supports the goals of the Myanmar Sustainable Development Plan (MSDP), which includes a strategy to build a priority infrastructure base, through the upgrading of international transport corridors and expanding access to expressways for heavy commercial vehicles. The 2014 National Transport Master Plan (NTMP), developed by Japan International Cooperation Agency (JICA), identified the Central North-South corridor, of which the North-South section of the project (Mandalay to Tigyaing) is a part, as a priority corridor to spur economic development in the northern region. At a higher strategic level, the project aims to support an increase in economic activity between China and Myanmar. Since 2017, the Government of Myanmar (GoM) has been actively developing trade relationships with China, including the establishment of a number of economic cooperation zones on the China - Myanmar border. In 2018, Myanmar signed an MoU with China to establish the China-Myanmar Economic Corridor (CMEC) as part of China's Belt and Road Initiative (BRI). Under the MoU, the two governments have agreed to collaborate on a number of projects across various economic sectors, including infrastructure, construction, and transport. This project has also been included in the priority project pipeline list developed by Myanmar's Project Bank.

Connectivity Benefits

The Mandalav-Muse Corridor is the second most important economic corridor in the country and a key segment of the Greater Mekong Subregion (GMS) North-South Economic Corridor (NSEC), which connects Kunming to Yangon. The NSEC is the main trade route between China and Myanmar and is expected to increase in importance, not only as a trade route to Myanmar, but also to South Asia, as it provides an alternative trading route to South Asia, compared with the current route through the Strait of Malacca. Currently, the Mandalay - Muse Corridor runs through Lashio. However, the existing Mandalay - Lashio - Muse road (NH3) is heavily congested (for example, it carries 2.14x more trucks than design capacity) and is in poor condition (average roughness, according to the International Roughness Index [IRI], is above IRI 10, reaching IRI 15 near the border with China). The travelling time on the existing NH3 is estimated to be one to two days for cargo trucks and 9-12 hours for small cars. After the development of the Muse - Tigyaing - Mandalay Expressway, the travelling time is expected to be reduced to approximately five hours, which can be critical for trucks hauling perishable goods. It is to be noted that the connectivity benefits of the project will be highly dependent on the existence of an efficient border crossing facility to enable a seamless trade flow between China and Myanmar.

Based on a high level cashflow and value for money analysis, this project has the potential for PPP. However, the viability of any PPP option ultimately depends on a commercially acceptable tolling policy being implemented and the level of traffic demand.

Preliminary E&S Screening

After a preliminary environmental and social (E&S) risks screening, the project has been classified as having an overall High² E&S risk, mainly because of (a) conflict and unrest in the area of the project, resulting in uncertainty over the ability to conduct E&S studies and meet Environmental and Social Standards-related requirements, and (b) impacts on areas of biodiversity interest, which could potentially be irreversible or unprecedented, if unmitigated, and likely land acquisition and resettlement. Some ethnic communities, which are also considered as Indigenous Peoples, are likely to be present within the project area, and the presence of cultural artefacts is likely.

Recommendations for Project Implementation

It is recommended that MOC (a) thoroughly reviews the feasibility study currently being prepared by CHEC (including alternate alignments), as the CHEC study is expected to provide more up to date details of the technical specifications, traffic projections (taking into account NH3 and the possibility of the Muse - Mandalay railway project being implemented) and project costs; (b) closely follows up on developments with respect to the Muse - Mandalay railway project which would compete for traffic along the expressway; (c) monitors the status of the Muse border crossing; and (d) proceeds with E&S data gathering, field surveys, engagement with local stakeholders and NGOs on biodiversity and Indigenous Peoples, and scoping of studies that considers alignments in the CHEC study. A Social and Conflict Analysis is recommended to be carried out in order to assess the degree to which the project may be negatively affected by existing tensions, conflict and instability. As the project progresses, a robust ESIA should be carried out, followed by implementation of an Environmental and Social Management Plan (ESMP) with flow-down of requirements to relevant parties (including contractors). Finally, it is important that MOC engages in meaningful stakeholder communications throughout the whole project development process.

Should a PPP option be selected, MOC needs to determine a tolling policy which is acceptable to both investors and end users, noting that some past BOT projects in Myanmar have not proven to be financially feasible based in part on the level of tolls. Once it has been determined to pursue a PPP option, MOC should conduct market sounding sessions with potential investors to assess their appetite to participate in the project and better understand their views on the project.

YANGON - MANDALAY EXPRESSWAY

Project 13

Myanmar

Estimated Cost (USD) 935 Million (2019)

Implementing Agency Ministry of Construction (MOC) Potential for Public Private Partnership¹ Yes

Project Overview

The project involves the upgrading of the existing 589 km two-lane expressway between Yangon and Mandalay, with a design speed of 100 km/h.

Currently trucks are not allowed to use the expressway due to the poor quality of the road and related safety issues. In 2016, there were 744 accidents, resulting in 149 deaths and 1,037 injuries. As a result, trucks must currently use the local National Highway 1 (NH1), which passes through regional towns and takes up to 48 hours to travel between Yangon and Mandalay compared with an estimated 6 hours on the expressway.

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 The assessment of whether this project has the potential to be procured as a PPP has been based on limited information. Therefore, before any final decision is made to procure the project as a PPP, more detailed studies and analysis need to be carried out, including detailed technical and demand studies.

Multiple studies have been conducted on the expressway, which have focused on various options for improving the road from both a safety and capacity perspective. These include the following:

a) Various Asian Development Bank (ADB) studies as part of the project 'Republic of the Union of Myanmar: Greater Mekong Subregion Highway Modernization Project (2018) - road safety improvement of 65 km section from Yangon to Bago';

b) Feasibility study by China Road and Bridge Corporation (2017); and

c) Pre-feasibility study by Korea International Cooperation Agency (KOICA), prepared by Korea Expressway Corporation and Kyong Dong Engineering Co. Ltd. (May 2017).

KOICA is currently in the process of conducting a full feasibility study which is expected to be completed by the end of 2019/early 2020. As part of an ongoing ADB project, the 65 km section from Hlegu in Yangon to Bawnetgyi near Bago will be upgraded and improved to enable future use by trucks. On the rest of the expressway, the ADB project will mitigate some safety risks by providing signage and line marking and installing safety barriers at some critical bridge approaches, but without a full road upgrading. The Government of Myanmar (GoM) is currently seeking financing for the upgrading of the remaining sections of the expressway.

Strategic Relevance

The expressway links Myanmar's two main economic centers, Yangon with Mandalay, passing through the capital Nay Pyi Taw. As such, the expressway is the main transport 'backbone' corridor of the country. It is part of the country's North - South Economic Corridor (NSEC), which is identified as a key priority in the Myanmar National Transport Development Plan (MNTDP). At the broader national strategic level, the project supports the goals of the Myanmar Sustainable Development Plan (MSDP), wherein Goal 3 under Pillar 2 (Job Creation and Private Sector-Led Growth) includes Strategy 3.6, to build a priority infrastructure base that facilitates sustainable growth and economic diversification, including as priorities upgrading of international transport corridors, and expanding access to expressways for heavy commercial vehicles. This project is part of Myanmar's National Transport Master Plan (NTMP) and has also been included in the priority project pipeline list developed by Myanmar's Project Bank.

Connectivity Benefits

The expressway connects to an existing road network that links with China and forms the backbone of the road network in Mvanmar. The Yangon - Mandalav corridor accounts for 64 percent of all passenger trips and 67 percent of freight trips in the country, taking into account both the Yangon - Nay Pyi Taw - Mandalay corridor and the parallel Yangon - Pyay - Magway - Mandalay corridor. There are currently two competing modes of transport along the NSEC: (a) NH1, which is operated under a build-operate-transfer (BOT) contract and runs on a similar point-topoint alignment to the project, but passes through a number of small towns. and (b) the Yangon to Mandalay railway line, which is currently undergoing an upgrade to increase freight capacity, funded by Japan International Cooperation Agency (JICA).

Based on a high level cashflow and value for money analysis, this project has the potential for PPP. However, the viability of any PPP option ultimately depends on a commercially acceptable tolling policy being implemented and the level of traffic demand.

Preliminary E&S Screening

After a preliminary environmental and social (E&S) risks screening, the project has been classified as having an overall Substantial² E&S risk. Although it is a brownfield project on an existing road with established rights of way (ROWs), there is a potential for some land acquisition/resettlement to be required due to encroachment within the existing right of way, straightening of curves, and impacts in urban areas.

Recommendations for Project Implementation

It is recommended that MOC: (a) updates the traffic forecast based on updated actual usage, willingness to pay and induced freight usage from NH1 (taking into account that some of the freight may use the upgraded Yangon - Mandalay Railway); (b) updates the capital and operating cost estimates and economic analysis and conducts a robust options analysis of technical options; (c) identifies all risks relevant to this project and prepares and maintains a risk register for the project; and (d) engages with the relevant authorities including local stakeholders throughout the process.

As the project progresses, a robust ESIA should be carried out that includes surveys related to land acquisition and resettlement, and considerations of cumulative and indirect risks and impacts and any associated facilities. The output should include the development and implementation of an Environmental and Social Management Plan (ESMP) with flowdown of requirements to relevant parties (including contractors). For the land acquisition, a Resettlement Action Plan (including livelihood restoration) should be developed with a grievance redress mechanism.

Should a PPP option be selected, MOC needs to determine a tolling policy which is acceptable to both investors and end users, noting that some past BOT projects in Myanmar have not proven to be financially viable based in part on the level of tolls. If MOC decides to pursue a PPP option, it should conduct market sounding sessions with potential investors to assess the appetite of private investors/developers to participate in the project and better understand their views on the project.

TARLAY - KYAINGLAT ROAD UPGRADING

Project 14

Myanmar Image: Sector Road Image: Sector Type Brownfield Image: Sector Sector (USD) Type Brownfield

Implementing Agency Ministry of Construction (MOC) Potential for Public Private Partnership¹ No

Project Overview

The project involves the upgrading of a 56.3 km long existing road between Tarlay and Kyainglat (in the east part of Myanmar close to the border with Lao PDR) to ASEAN Class III standard.

This upgrading will include the widening of curved sections, barriers and retaining walls, as well as improving the drainage system where required along the road. The road is currently in poor condition and its width varies between 3.66 m to 7 m.

In Tarlay, the road connects to Asian Highway 2 (AH2) which is part of the Asian Highway Network (AHN) connecting Myanmar with Thailand. The purpose of the project is to improve the interconnection between Myanmar and Lao PDR to help improve trade between the two countries and improve transportation links for the population living alongside the existing Tarlay - Phasho - Kyainglat road.

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 The assessment of whether this project has the potential to be procured as a PPP has been based on limited information. Therefore, before any final decision is made to procure the project as a PPP, more detailed studies and analysis need to be carried out, including detailed technical and demand studies.

This project is at an early stage of development and it is understood that no studies on the project have been carried out to date.

Strategic Relevance

Improving this road link is aligned with Myanmar's sectorial and national plans. At the sectoral level, this project is part of the Second East-West Corridor (the only corridor linking Myanmar with Lao PDR) identified in the National Transport Master Plan (NTMP). At the national level, the project supports the goals of the Myanmar Sustainable Development Plan (MSDP), wherein Goal 3 under Pillar 2 (Job Creation and Private Sector Led Growth) includes Strategy 3.6, to build a priority infrastructure base that facilitates sustainable growth and economic diversification, including as priorities the upgrading of international transport corridors and expanding access to expressways for heavy commercial vehicles. This project has also been included in the priority project pipeline list developed by Myanmar's Project Bank.

Connectivity Benefits

The project is the only road connecting Myanmar and Lao PDR and is currently in poor condition. The project will also connect to the AH2, allowing the Tarlay - Phasho - Kyainglat Road to be part of the broader Asian Highway Network. While the current trade volumes between Myanmar and Lao PDR are low in comparison to Myanmar's trade with other partners, data suggest that trade volumes are slowly increasing. The connectivity justification of upgrading the Tarlay - Kyainglat Road very much depends on the operating status of the cross-border facility (CBF) at Kyainglat. The CBF and associated Lao PDR- Myanmar Friendship Bridge was completed in 2019. However, it is understood that there is currently no official bilateral border crossing agreement in place between Myanmar and Lao PDR. As a result, there is essentially no official movement of vehicles through this border gate.

Potential for PPP

Since this is a rural road with low traffic, public funding is likely to be the most appropriate procurement option for this project.

Preliminary E&S Screening

After a preliminary environmental and social (E&S) risks screening, the project has been classified as having an overall High² E&S risk, mainly due to safety concerns arising from conflict with the rebels and military, limited land acquisition which could result in potential physical and economic displacement, including for Indigenous Peoples, in addition to community impacts during the operation of the upgraded road with increased traffic volumes and speeds.

Recommendations for Project Implementation

It will be important for MOC to clarify the status of the crossborder facility at Kyainglat, as well as plans to improve the connecting road on the Lao PDR side. This will be necessary to properly assess the connectivity and economic benefits of the project. MOC should also consider seeking technical and financial assistance from donor agencies to undertake a detailed feasibility study, which is the most critical next step. A detailed feasibility study should include:

- a. A technical study with reference design and alignment (compliant with at least the minimum ASEAN Highway Standards requirements of Class III, as well as being able to accommodate future traffic growth),
- b. Robust cost estimates;
- c. Traffic projection surveys; and
- d. Ensuring a robust ESIA is undertaken that includes consideration of cumulative and indirect risks and impacts and any associated facilities.

As part of these studies, there needs to be ongoing public consultations and stakeholder engagement with local communities, ensuring gender equality and the involvement of NGOs for Indigenous Peoples as stakeholders. Additionally, a Social and Conflict Analysis is recommended to be carried out to assess the degree to which the project may be negatively affected by existing tensions, conflict and instability. An outcome of the E&S assessment work should include the development and implementation of an Environmental and Social Management Plan (ESMP) with flow-down of requirements to relevant parties (including contractors). For the land acquisition, a Resettlement Action Plan (including livelihood restoration) should be developed with a grievance redress mechanism.

ASEAN DIGITAL HUB

Project 15

Thailand

Estimated Cost (USD) **152 Million**

Implementing Agency:

Ministry of Digital Economy and Society (MDES) through the Communication Authority of Thailand (CAT)

Potential for Public Private Partnership

Project is already under implementation

Project Overview

The ASEAN Digital Hub project proposes to increase bandwidth on existing terrestrial domestic and submarine international communications cable connections and create new cable routes and links. It also aims to support Thailand's drive to become one of the digital hubs of the ASEAN region through three components:

- Component 1: Increasing domestic network bandwidth to support connectivity with neighboring countries by approximately 2,300 Gbps.
- Component 2: Increasing existing international cable systems' bandwidth by approximately 1,770 Gbps.
- Component 3: Constructing a new international submarine cable system connecting Thailand to several Pacific region countries.

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This project is in the process of being implemented by the Communication Authority of Thailand (CAT), a state-owned telecommunications service provider.

Strategic Relevance

This project is aligned with the ASEAN ICT Masterplan 2015 (AIM 2015) which envisions a framework and roadmap for the development of information and communication technology (ICT) at the regional level, to propel ASEAN toward a digitally enabled economy that is secure, sustainable, and transformative and to enable an innovative, inclusive, and integrated ASEAN community.

The Thai Government is also promoting ICT through various domestic initiatives, including the government's broadband initiative, announced in 2015, to create a national broadband network infrastructure by 2035 offering affordable, universal access at minimum speeds of 30 Mbps. In this context, the government has set aside US\$571 million for MDES to fund the National Broadband Project, which involves building national broadband infrastructure to provide affordable internet access to 70,000 villages (95 percent of total villages) nationwide by 2023.

The ASEAN Digital Hub project is more focused on improving Thailand's international bandwidth capacity to other countries in the region and will support the rollout of the national broadband network which is currently under construction. Finally, the Thailand 4.0 initiative launched by the government in 2016, aims to transform the nation's economy to a value-based economy that is driven by innovation, technology and creativity. This initiative includes investments in soft and hard infrastructure to promote the digital agenda in Thailand.

Connectivity Benefits

The project comprises the development of a fiber optic cable system potentially involving five countries that will position Thailand as one of the region's digital hubs. This project will also form part of the ASEAN Broadband Corridor and supports ASEAN's Internet Exchange Network (aIX) project. The ASEAN Broadband Corridor is a project that aims to promote greater broadband penetration, affordability and universal access throughout ASEAN. The aIX project is a single platform established to increase internet speed and performance and reduce the cost for regional internet access.

The Government of Thailand has decided to adopt a public funding approach for all three components of the project.

Preliminary E&S Screening

After a preliminary environmental and social (E&S) risks screening, the project has been classified as having an overall Moderate¹ E&S risk. Although land/ROWs are said to have already been obtained, the project will involve enhancing/ developing terrestrial and subsea cable systems, and there will be risks and impacts associated with the planning, construction, and operation of associated infrastructure (for example, data centres).

Recommendations for Project Implementation

Although it has been decided that this project should be publicly funded, the government may want to consider private sector participation in future phases of the project. Options may include:

- a. PPP procurement for any future expansions of the project;
- b. Potential privatisation of the existing infrastructure for the ASEAN Digital Hub on a concession basis; and
- c. Private participation through an O&M contract.

Irrespective of how this or other future phases of the project are procured, the success of this project is largely dependent on the presence of a robust enabling ICT environment. This can help maximize the benefits of each incremental ICT infrastructure project, encourage potential private sector participation, and ensure that the benefits of a strong ICT industry are widely and fairly distributed. Specifically:

- a. Wholesale and retail distribution of bandwidth/capacity should occur on a fair and open basis, including non-discriminatory pricing, so that the monopoly provision of cable and other fixed infrastructure does not stifle competition in downstream markets;
- As much as possible, pricing needs to reflect the actual costs of service provision, reflecting to a reasonable degree the allocation of assets and operating costs to specific services; and
- c. Prices and other incentives should be adjusted to ensure that services are affordable, without reducing the incentives to deliver these services.

The risks and impacts associated with the planning, construction, and operation of associated infrastructure (for example, data centres or subsea cables) in Thailand will require further assessment and review as well as implementation of management and mitigation measures throughout the life cycle of the project. This may require development of an Environmental & Social Management Framework (ESMF) that will support assessment of the E&S risks and impacts of subcomponents as they are identified. The ESMF should set the principles, rules, guidelines and procedures to assess the environmental and social risks and impacts and measures to reduce, mitigate and/or offset adverse risks and impacts, including incorporation of Thai requirements and the World Bank E&S Framework where relevant.

HAT YAI - SADAO MOTORWAY

Project 16

Thailand

1,295 Million (2019)

Implementing Agency:

Department of Highways (DOH), Ministry of Transport Office of Transport Planning (MOT-OTP)

Potential for Public Private Partnership¹ Yes

Project Overview

The project comprises the construction of a new 70.4 km four-lane highway from Hat Yai, in the Songkhla Province of South Thailand, to the Thailand/Malaysia border at Sadao.

The new highway will provide an alternative route to the existing National Highway 4 (NH4) that passes through Hat Yai to the Malaysian border, thereby alleviating congestion (average annual daily traffic volumes is already above 35,000 vehicles in some areas of NH4) and providing a more direct route for traffic (and in particular heavy trucks) wishing to bypass the town of Hat Yai on the way to/from the Malaysian border. The project will also support the future growth of several Special Economic Zones in the area.

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 The assessment of whether this project has the potential to be procured as a PPP has been based on limited information. Therefore, before any final decision is made to procure the project as a PPP, more detailed studies and analysis need to be carried out, including detailed technical and demand studies.


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A feasibility study on the project was conducted by Panya Consultants Co., Ltd. and Tranconsult Co., Ltd. in 2017. DOH intends to implement the project as a public-private partnership (PPP) and the majority of studies, including a PPP study, have been completed. Based on discussions with DOH, the project is pending final approval from the National Economic and Social Development Council.

Strategic Relevance

The project is a high-priority project according to Thailand's Master Plan for the Development of Intercity Highway Networks for 2017-2036 and the Transport Investment Action Plan 2017. The project is also part of the Transport Infrastructure Development Master Plan 2015-2022, which aims to strengthen social and economic security, increase transport safety, improve quality of life, enhance the competitiveness of the country, and optimize potential benefits to be gained from the ASEAN Economic Community. In the most recent National Economic and Social Development Plan's (2017-2021) Strategy for Advancing Infrastructure and Logistics, the Padang Besar Border Crossing (one of two border crossings between Sadao District and Malaysia) was one of two priority areas listed for improvement.

Connectivity Benefits

The project is expected to improve connectivity within the ASEAN region through better facilitation of the movement of goods and people to/from the Malaysian border, and to promote sub-regional trade, investment and economic development. The project is part of a cooperation framework known as the Indonesia - Malaysia - Thailand Growth Triangle (IMT-GT) and the Extended Songkhla - Penang - Medan Corridor (Nakhon Si Thammarat - Phatthalung - Songkhla - Yala - Pattani - Penang - Medan). In particular, the project will connect the Port of Songkhla and the planned second Songkhla Deep-sea Port in Songkhla Province in Thailand with Penang Port. The more efficient connection of these ports is expected to support trade between the Gulf of Thailand and the Andaman Sea. Traffic on the project route is expected to increase further due to the development of the following projects:

- a. Songkhla Special Economic Zone and Sadao Special Economic Zone,
- b. Construction of the new Sadao checkpoint, and
- c. Expansion of the Kota Perdana Special Economic Zone (SEZ) in the Bukit Kayu Hitam District and the Chuping Valley Industrial Area (CVIA) in Malaysia.

Potential for PPP

Based on a high level cashflow and value for money analysis, this project has the potential for PPP. However, the viability of any PPP option ultimately depends on a commercially acceptable tolling policy being implemented and the level of traffic demand.

Preliminary E&S Screening

After a preliminary environmental and social (E&S) risks screening, the project has been classified as having an overall Substantial² E&S risk, due to the potential for land acquisition and resettlement and impact on features of cultural heritage interest. An Environmental and Impact Assessment (EIA) has reportedly been completed to meet local requirements.

Recommendations for Project Implementation

The government has indicated its intention to take this project forward as a PPP. Further analysis and market soundings should be undertaken to ascertain market interest in the project, as well as the appetite of the market to take demand risk.

At this stage it is understood the alignment of the project has been selected and an EIA completed. A review of the EIA should be undertaken to assess the alignment options from an E&S perspective. In addition, the EIA should be reviewed to consider how the methodologies and information used in the assessment (E&S data gathering, field surveys, engagement with local stakeholders, impact assessment, etc.) compares with the approaches under the World Bank ESF, to assess if there are any significant gaps and further work is required. This review should also consider biodiversity impacts, Indigenous Peoples screening, impacts on cultural heritage, and cumulative impacts.

The output should include an Environmental and Social Management Plan (ESMP) that considers both the construction and operational phases of the project (including contractual "flowdown" to contractors). For the land acquisition, a Resettlement Action Plan (including livelihood restoration) should be developed with a grievance redress mechanism.

2. This E&S assessment follows the World Bank's ESF classification methodology and reflects the risks that would typically be associated with a project of this type and scale. However, this classification is of course only a preliminary indication of the potential classification and is based on limited information, studies and site visits. Therefore, a much more thorough study and analysis of the E&S impacts of the project will need to be undertaken before confirming the final ESF classification.



BANGKOK-NONG KHAI HSR - PHASE II



Project 17

Thailand







Implementing Agency: State Railway of Thailand (SRT) **Potential for Public Private Partnership**¹ Limited

Project Overview

The project involves the greenfield construction of a 355 km standard gauge double-track, passenger high-speed rail (HSR) line connecting Nakhon Ratchasima (220 km northeast of Bangkok) and Nong Khai on the Thailand - Lao PDR border. The project's alignment will mostly run parallel to the existing northeastern line, which connects Bangkok - Nakhon Ratchima - Nong Khai, which will continue to serve both local traffic and freight. The project is Phase II of the wider Bangkok to Nong Khai HSR project within Thailand, complementing the Phase 1 HSR project from Bangkok to Nakhon Ratchasima and connecting to the Lao PDR - China HSR at the border in Nong Khai.

Once it is completed, the project will facilitate long-distance passenger travel within Thailand and the region.

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 The assessment of whether this project has the potential to be procured as a PPP has been based on limited information. Therefore, before any final decision is made to procure the project as a PPP, more detailed studies and analysis need to be carried out, including detailed technical and demand studies.



The project is being developed by the State Railway of Thailand (SRT), a state rail operator in Thailand. A feasibility study for Phase II from Nakhon Ratchasima to Nong Khai was prepared by a consortium of consultants. The feasibility study did not disclose a publication date, but it is understood to have been completed in 2016. The government has approved the project, subject to separate approval of the Environmental and Social Impact Assessment (ESIA) study by the Cabinet. Financing sources and procurement method are still being determined for Phase II, but it is understood that the government intends to use public funding for the project, which may come from the central budget, domestic loans, or potentially through bilateral loans from China.

Phase 1 from Bangkok to Nakhon Ratchasima is currently under construction with government funding. The government has tendered 14 civil contracts to Thai construction companies, based on a detailed design completed by a Chinese company.

Strategic Relevance

Phases 1 and 2 are part of a wider HSR project within Thailand, also known as the 'Thailand - China Railway Project', which also comprises the Kaeng Khoi - Map Ta Phut line. The project is aligned with Thailand's Rail Transport Infrastructure Development Strategy 2015-2022, which aims to improve the rail network and promote the use of rail as a public transportation tool. The 12th National Economic and Social Development Plan (2017-2021) ("Plan") stipulates that at least one HSR route should be constructed during the term of the Plan. The Plan also notes that urban development plans for areas surrounding the HSR routes should aim to decentralize development to regional cities and increase the standard of public transport services. As such, the project is expected to improve the public transport network and enable the development of regional cities along the route. Indeed, a key objective of the government is to support economic development in the less developed regions of northern Thailand. Nong Khai has been designated by the government as a Special Economic Zone (SEZ), as part of national efforts to boost investment and trade in border provinces. The establishment of new industrial estates has led to a growth in investments, particularly in manufacturing and trade. This has led to an increase in the movement of people and freight, further driving potential demand for the project.

Connectivity Benefits

The project will be connected in the north to the Lao PDR - China HSR, which is a 414 km line running from the Thai - Lao PDR border, passing through Vientiane, capital of Lao PDR, and eventually reaching the Lao PDR - China border. The Lao PDR - China HSR is about 60 percent complete and is due to be operational in 2021-2022. The Lao PDR - China HSR will in turn link up with China's HSR network, which connects to Yunnan's provincial capital of Kunming.

In the longer term, the Bangkok to Nong Khai HSR will be part of the Singapore - Kunming high speed rail Network (SG-KM HSR), which aims to deepen economic links between the Association of Southeast Asian Nations (ASEAN) countries and China. The SG-KM HSR aims to connect China, Lao PDR, Thailand, Malaysia and Singapore, facilitating the movement of people, goods and ultimately trade across the five countries. While the Singapore -Bangkok segments of the network have undertaken feasibility studies, there has been limited progress to date in implementing this part of the network. The Singapore - Kuala Lumpur High Speed Rail project is currently on hold for further cost rationalization and planning.

Potential for PPP

It is understood that the government is looking to publicly fund the project, as revenues are likely to be insufficient to cover capital and operating costs. However, there is the potential for some elements of the operations and maintenance of the track and stations to be tendered to the private sector.

Preliminary E&S Screening

After a preliminary environmental and social (E&S) risks screening, the project has been classified as having an overall Substantial² E&S risk. Although it is reported that SRT has acquired most of the land required, there is potential for additional land acquisition and resettlement. Other aspects that will require screening include Indigenous Peoples and cultural heritage and cumulative impacts.

Recommendations for Project Implementation

Although the government has decided that the project will be publicly procured, specific funding sources are yet to be confirmed. It is understood that the options under consideration are domestic bank loans and/or sovereign loans from China. In preparing the funding plan, the government should consider the impact on its fiscal position and any potential contingent liabilities due to the large investment value of this project.

The immediate next steps for the project are to obtain approval for the ESIA study, determine the detailed design, and finalize the funding plan. With regard to E&S impacts, the ESIA should be reviewed to assess the alignment options considered from an E&S perspective. In addition, the ESIA should be reviewed to consider how the methodologies and information used in the assessment (E&S data gathering, field surveys, engagement with local stakeholders, impact assessment, etc.) compares with the approaches under the World Bank ESF to assess if there are any significant gaps and further work is required. This review should also consider biodiversity impacts, Indigenous Peoples screening, impacts on cultural heritage, and cumulative impacts. In particular, the scope and approach in relation to land acquisition and resettlement should be reviewed to consider the surveys undertaken, approach to compensation and livelihood restoration and long-term planning to minimise the impacts. Where gaps are identified, an approach to address these should be formulated, including ensuring that management and mitigation measures are adopted throughout the life of the project (including contractual "flow-down" to contractors in the construction and operational phases of the project). A Resettlement Action Plan (including livelihood restoration) should be prepared, together with a grievance redress mechanism.

2. This E&S assessment follows the World Bank's ESF classification methodology and reflects the risks that would typically be associated with a project of this type and scale. However, this classification is of course only a preliminary indication of the potential classification and is based on limited information, studies and site visits. Therefore, a much more thorough study and analysis of the E&S impacts of the project will need to be undertaken before confirming the final ESF classification.

SOUTHERN COASTAL CORRIDOR PROJECT - PHASE II



Project 18

Viet Nam







Estimated Cost (USD) 346 Million (2019)

Implementing Agency

Cuu Long Corporation for Investment, Development and Project Management (CIPM), Ministry of Transport

Project Overview

This project comprises the second phase of the Southern Coastal Corridor from Ha Tien to Rach Gia. The primarily greenfield two-lane road has just under 6 km of shared right-of-way with QL80, another 84.47 km of greenfield development running parallel to QL80, and an additional 10.49 km of connecting roadway for a total of 100 km of combined brownfield, greenfield, and connecting roadways.

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The alternative of expanding the existing road alignment (QL80) was determined not to be practical, as the associated cost of resettlement would be too high (QL80 passes through crowded residential areas). If necessary, the project may be widened to a four-lane road at a later date. Other project components include the Ha Tien Bridge and Ha Tien Cross Border Facility on the border of Cambodia. The new bridge adds capacity alongside an existing bridge crossing the Giang Thanh River in Ha Tien.

 The assessment of whether this project has the potential to be procured as a PPP has been based on limited information. Therefore, before any final decision is made to procure the project as a PPP, more detailed studies and analysis need to be carried out, including detailed technical and demand studies.



Page 78

A first technical assistance for the entire Southern Coastal Corridor Project (SCCP) was prepared in 2007 and SCCP Phase I is now operational. A feasibility study for Phase II was completed in May 2016 by SMEC. Limited studies have been undertaken since this study was prepared.

Strategic Relevance

The project is included in Decision No. 326 'Master Plan on Vietnam's Expressway Network through 2020, with Orientations toward 2030' issued by the Prime Minister. The master plan under the Decision acts as a guide to facilitate rapid development of the national expressway network through the development of five road systems, ensuring linkages between key economic centers, major border gates and important traffic hubs. The project has not yet been included in the current Medium-Term Public Investment Plan (MTPIP) 2016-2020. However, it is intended for it to be included in the next MTPIP 2021-2025.

Connectivity Benefits

The road from Ha-Tien international border to Rach Gia is the only missing link of the Greater Mekong Subregion (GMS) Southern Coastal Corridor (one of nine GMS transport and economic corridors) which connects Thailand, Cambodia and Viet Nam. The project is expected to strengthen trade relationships with both Cambodia and Thailand and reduce travel times between Viet Nam and Cambodia. The existing road is not designed to meet projected traffic levels and has congestion in certain sections, in particular at the bridge close to the Ha Tien international border and near the Rach Gia bypass. The new cross border facility at Ha Tien will help ease traffic flows when crossing the border to Cambodia.

Potential for PPP

While a PPP could generate value for money, the potential difficulty in levying tolls on this road would indicate that an availability payment structure may need to be used if a PPP option was selected. However, given the lack of experience in Viet Nam with availability payment structures, public funding (as used to fund SCCP Phase I) may be the best option for this project.

Preliminary E&S Screening

After a preliminary Environmental and Social (E&S) risks screening, the project has been classified as having an overall High² E&S risk, due to land acquisition and resettlement (including physical and economic displacement in addition to loss of community assets) and potential for biodiversity impacts as the alignment passes through two areas of biodiversity interest.

Recommendations for Project Implementation

The immediate next steps for CIPM would be to i) secure in-principle approval from the Prime Minister or the Office of the Government to prepare the project proposal and ii) update the 2016 feasibility study with a particular focus on the following areas:

- a. Update the traffic survey along the entire stretch of SCCP, taking into consideration the impact of the improvement on connectivity between Viet Nam, Cambodia and Thailand;
- Update the capital costs which were estimated in 2016 and include operating cost estimates and major and medium-term maintenance costs;
- c. Analyze different alignment options to minimize E&S impacts; and
- d. Identify all risks relevant to this project and prepare and maintain a risk register for the project.

In addition, CIPM should undertake a detailed ESIA and include an Environmental and Social Management Plan (ESMP), that considers both the construction and operational phases of the project (including contractual "flow-down" to contractors). A Resettlement Action Plan (including livelihood restoration) should be prepared, together with a grievance redress mechanism.

^{2.} This E&S assessment follows the World Bank's ESF classification methodology and reflects the risks that would typically be associated with a project of this type and scale. However, this classification is of course only a preliminary indication of the potential classification and is based on limited information, studies and site visits. Therefore, a much more thorough study and analysis of the E&S impacts of the project will need to be undertaken before confirming the final ESF classification.



HO CHI MINH CITY - MOC BAI EXPRESSWAY



Project 19

Viet Nam







Implementing Agency:

Ho Chi Minh City and Tay Ninh Province or Ministry of Transport

Potential for Public Private Partnership¹ Yes

Project Overview

The Ho Chi Minh City - Moc Bai Expressway project is a four-lane greenfield expressway project that will connect Viet Nam's Ho Chi Minh City (HCMC) with the Moc Bai border facility on the border with Cambodia.

The project is part of a key transport corridor that will ultimately connect HCMC with Phnom Penh in Cambodia.

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Based on discussions with the Ministry of Transport (MOT), a greenfield alignment was preferred over an upgrading of the existing NH22 due to:

- The significant costs of land acquisition and resettlement associated with upgrading the existing road;
- b. The ability to improve average speeds and reduce accidents by permitting only motorized traffic on the new expressway; and
- c. Resolution 437/NQ-UBTVQH14 dated October 21st 2017, which only allows tolls to be levied on road projects that have an alternative non-toll road for end users. Therefore, a greenfield expressway would allow the government to fund the project, at least partially, through tolls collected from end users.

The assessment of whether this project has the potential to be procured as a PPP has been based on limited information. Therefore, before any final decision is made to procure the project as a PPP, more detailed studies and analysis need to be carried out, including detailed technical and demand studies.



The Korea International Cooperation Agency (KOICA) carried out a pre-feasibility study on this project in 2018 (the 'Prefeasibility Study'). While the Pre-feasibility Study examined three alignment options for the project route, it is understood that the Project Management Unit prefers alignment option 3. However, it is understood that MOT has not yet decided on the preferred alignment option. Alignment option 3, runs parallel to NH22 and intersects with NH22 just before the existing Moc Bai international border gate. As such, this alignment option does not require the development of a new cross-border facility in either country or the development of a new connector road in Cambodia, as alignment options 1 and 2 do.

The government is currently deciding whether the project should be implemented by MOT or HCMC People's Committee/Tay Ninh Province People's Committee.

Strategic Relevance

The project is one of the seven southern projects in the 'Master Plan on Vietnam's Expressway Network through 2020, with Orientations toward 2030', which has been approved by the Prime Minister. It has also been included in the regional development plans of both HCMC and Tay Ninh Province.

Connectivity Benefits

The project runs parallel to the NH22 road, which connects HCMC, the economic center of Viet Nam, to Cambodia, thereby facilitating trade between the two countries. The proposed alignment is part of several major regional economic corridors, including the Trans-Asian Highway, as well as the Greater Mekong Subregion (GMS) Southern Corridor, that connects HCMC to the ASEAN economic hubs of Bangkok and Phnom Penh.

Potential for PPP

Based on a high level cashflow and value for money analysis, this project has the potential for PPP. However, the viability of any PPP option ultimately depends on a commercially acceptable tolling policy being implemented and the level of traffic demand.

Preliminary E&S Screening

After a preliminary environmental and social (E&S) risks screening, the project has been classified as having an overall Substantial² E&S risk primarily due to land acquisition and resettlement, although the nature and extent will vary according to the final alignment selected.

Recommendations for Project Implementation

The immediate next steps for the implementing agency should include:

- a. Securing in-principle approval from the Prime Minister or the Office of the Government to prepare the project proposal;
- b. Undertaking a more comprehensive feasibility study, that will cover technical specifications, traffic projections and costing data;
- c. Managing stakeholder communications throughout the whole project development;
- d. Agreeing on the final alignment (incorporating E&S considerations, including land acquisition and resettlement) and coordinating the alignment very closely with Cambodia;
- e. Proceeding with E&S data gathering, field surveys, engagement with local stakeholders and NGOs on biodiversity and scoping of studies; and
- f. Adhering to robust E&S frameworks for assessment and mitigation of E&S impacts and risks and, as the project progresses, carrying out a robust ESIA, that should include an Environmental and Social Management Plan (ESMP), that considers both the construction and operational phases of the project (including contractual "flow-down" to contractors).

A Resettlement Action Plan (including livelihood restoration) should be prepared, together with a grievance redress mechanism. Engineering studies are recommended to ensure flood controls are integrated with design. The ESIA should also include consideration of cumulative and indirect risks and impacts and any associated facilities.

2. This E&S assessment follows the World Bank's ESF classification methodology and reflects the risks that would typically be associated with a project of this type and scale. However, this classification is of course only a preliminary indication of the potential classification and is based on limited information, studies and site visits. Therefore, a much more thorough study and analysis of the E&S impacts of the project will need to be undertaken before confirming the final ESF classification.







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