Donald Low, Centennial Asia Advisors
Keck Seng Tower133
Cecil Street
Singapore

Risks of Belt and Road Initiative Projects in ASEAN

Final Report

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1. Introduction

The Association of Southeast Asian Nations (ASEAN), consisting of 10 Southeast Asian countries was founded in 1967 to boost the regional economy, social progress, cultural development and connectivity. In November 2018, ASEAN launched the Master Plan on ASEAN Connectivity (MPAC) 2025, which aimed to achieve a comprehensively connected and integrated ASEAN community. MPAC is made up of five strategic areas, including sustainable infrastructure, digital innovation, seamless logistics, regulatory excellence, and people mobility. These objectives coincide with China's initiative to enhance infrastructure connectivity in the region—the Belt and Road Initiative (BRI).

On March 28, 2015, the Chinese government issued the "Vision and Actions on Jointly Building Silk Road Economic Belt and 21st Century Maritime Silk Road" report, outlining the framework, key areas of cooperation, and cooperation mechanisms of BRI. Although it has been over six years since it was first announced, BRI's full scope is widely regarded as opaque. It is observed that BRI projects are mainly related to infrastructure development in the transport, energy, mining, and information communication technology (ICT) domains. Still, they have also come to include industrial parks, Special Economic Zones (SEZ), tourism and urban development projects, most of which are expensive and risky ventures.

Driven by the industrialization and urbanization, Southeast Asian governments have looked to large-scale infrastructure projects to drive economic growth. According to the Belt and Road Infrastructure Development Index (2019), Southeast Asia has maintained a strong momentum of infrastructure development and was ranked first among seven regions for three consecutive years.

However, the implementation of BRI brings various risks to the host countries. This paper mainly analyzes the three most salient risks, namely fiscal risk, governance risk and environmental risk host countries of BRI might confront. First, the implementation of BRI is in the context of the rapid rise of public and corporate debt levels, which increases the financial risk and vulnerability of host countries, mostly low-income developing countries. Large scale debt financing, especially in foreign currency and non-concessional terms, may lead to a rapid deterioration of the already increased debt vulnerability in the medium term. Second, most of BRI is carried out under the bilateral cooperation mechanism. The lack of transparency in large-scale public project procurement and information disclosure brings governance and geopolitical risks to the host country. Third, the existing infrastructure projects under BRI has shown that the environmental risk of the host country is significantly increased, which poses a great threat to local, sustainable development.

2.Literature Review

Some scholars believe that Southeast Asian countries can benefit significantly from BRI in various aspects. BRI is closely related to ASEAN integration, and the success of BRI projects in the region could facilitate ASEAN integration by forming a new “inter-regional public goods supply pattern” (He, K, 2017). According to a recent World Bank report by Soyres et al. (2018),

the BRI's transport projects that are completed or planned would significantly reduce cross-border shipment time and costs. Southeast Asian countries will be among the economies to experience the biggest reductions in trade costs because of BRI projects. Lower trade costs can expand trade volume and increase foreign direct investment which would raise the Gross Domestic Product (GDP) and social welfare of ASEAN countries, helping to alleviate poverty in the region. At the global level, BRI-related investments could lift 7.6 million people out of extreme poverty (World Bank, 2019). However, some argue that risks related to BRI should not be neglected.

First, fiscal risks in low-income developing countries have risen significantly over recent years, and the share of countries at high risk of debt distress or in debt distress has doubled since 2013 to about 40 per cent (IMF and World Bank, 2018). Indeed, fiscal risk raised from huge debt-financed projects is highly sensitive to how these investments affect local economic growth. Although it is widely recognized that different types of investment generate a different impact on growth (Calderon, 2009) and that the efficiency of investment spending may vary across countries, some reveal that the contribution of infrastructure capital to productivity and economic output tends to be overstated, especially in many low-income countries with poor institutions because of weak public investment management (Keefer and Knack 2007). Given the economic fragility of most BRI recipients and questionable project feasibility, some have reminded these host countries to guard against China's 'debt-trap diplomacy', that BRI is a geopolitical tool, utilizing debt to exert huge regional political influence (Beauchamp Mustafaga, 2015; Baviera, 2016; Chellaney, 2017). Some even argue that despite most Chinese loan are concessional, lending terms (i.e. fixed interest rate with a median rate of 2 per cent) may not be the optimal for borrowing countries (Bandiera and Tsiropoulos, 2019).

Second, in terms of governance capacity, a report from the Work Bank (2019) points out that megaprojects usually inherently contain risks, including corruption and failures in public procurement. The fundamental reason "for the emergence of these weaknesses" -lies in the lack of governance capacity (Luca Bandiera, Vasileios Tsiropoulos 2019). China's "Beijing Initiative for the Clean Silk Road" calls for international cooperation to promote transparency and integrity and combat corruption (World Bank 2019). However, due to frequent corruption scandals in China, the international business community generally holds an unfavorable attitude towards the level of transparency in China (Transparency International, 2019). Most Southeast Asian countries are developing countries or emerging markets, and the procurement system is not comprehensive (World Bank, 2016). Some express concern about the ability of China and recipient countries to administer these projects fairly and transparently (Peter Wolff 2016).

Third, as for environmental and social risks, a report from the World Bank (2019) points out that diverse and extensive infrastructure investments will pose a wide range of direct and indirect environmental risks. World Bank Group International Financial Cooperation (2017) stated that environmental and social issues are intrinsically interlinked. A specific environmental impact can often directly and/or indirectly result in an additional environmental impact or alternatively, result in direct and indirect social impacts. China's President Xi Jinping has called for a "green, healthy, intelligent and peaceful" Silk Road in 2016, showing China's resolution to pursue sustainable BRI development. However, Southeast Asia is highly

ecologically sensitive, including arid regions, biodiversity hotspots, and protected areas (Tracy et al., 2017), and the governance capacity is poor (EPI,2019). There are mounting concerns over its potential impacts on biodiversity and the environment (ISEAS,2019)

In this regard, this paper aims to analyze the risks of BRI projects in ASEAN from three dimensions: fiscal risks, governance risks and environmental risks.

3. Methodology

This paper aims at analyzing the key risks related to BRI projects in ASEAN countries and providing recommendations for risk management. In terms of methodology, this research will use case studies and desktop research based on existing BRI projects undertaken in Southeast Asia to conduct analysis, and then develop the recommendations to the Southeast Asian governments. Considering the project's completeness and relevance, three BRI projects are selected for cases studies. Specifically, case of China-Laos railway which trapped in the danger of defaulting on its debt will be used to evaluate the fiscal risk, case of Malaysia East Coast Rail Link (ECRL) which plagued by a lack of transparency and corruption scandals will be used to evaluate the governance risks, and the case of Myanmar Myitsone Dam project which is criticized for the high environmental and social risks. Detailed justification of individual case selection will be further explained in the corresponding sections below.

The southeast Asian countries or ASEAN countries in this paper exclude Singapore and Brunei for following reasons. First, the per capita income of Singapore and Brunei is much higher than that of other ASEAN countries. Except for Singapore and Brunei, other ASEAN countries are categorized as either low-income developing countries or emerging markets. In addition to more advanced economy, Singapore and Brunei have other competitiveness which lower the risk of investment and trade, such as advantageous geographical location, high-level infrastructure, open market, political stability, etc. Overall, Singapore and Brunei are countries with more favorable and secure business environment, which is significantly different from other ASEAN countries where BRI projects might bring substantial risks. Therefore, the analysis and recommendation in this paper might not be suitable for these two countries.

4. Fiscal Risks

4.1 Fiscal risk exposure varies across the region

In the aftermath of the Asian financial crisis in 1997, Southeast Asian countries spent the following decade recovering. Emerging countries in the region, such as Vietnam, Thailand, and Malaysia, have undergone rapid economic growth. But the levels of the public debt of Southeast Asian countries is rising, which has brought growing concerns over fiscal sustainability.

Great differences and disparities exist among Southeast Asian countries in terms of their politics, economy and social culture. From the perspective of economic development, Malaysia, Thailand and Indonesia have more robust economic and financial regimes and thus do comparatively better, while Philippines, Myanmar, Cambodia, Laos, and Vietnam are still

relatively under-developed, and their economies are dominated by traditional agriculture, natural resources, and low value-added manufacturing. These Southeast Asian countries lack the ability to manage high levels of public debt. Given the fact that various BRI projects, which are capital-intensive and have lengthy investment cycles, Southeast Asian countries should adopt more cautious attitudes towards the fiscal risks associated with BRI projects. According to IMF's debt sustainability analysis (DSA), a framework for conducting a country's public and external debt sustainability analyses, debt risks of several southeast Asian countries have risen since 2013, the year of BRI started. Countries including Laos, Indonesia and Vietnam have seen a rising warning of public debt risks whereas Thailand, Myanmar, Cambodia and Malaysia still maintained the original level.

Table 1 Debt Sustainability Analysis (DSA) of Southeast Asia Countries

Debt Sustainability Analysis(DSA) of Southeast Asia Countries							
	2013	2014	2015	2016	2017	2018	2019
Thailand	Low	Low	Low	Low	Low	Low	Low
Lao P.D.R.	Moderate	Moderate	Moderate	High	High	High	High
Myanmar	Low	Low	Low	Low	Low	Low	Low
Cambodia	Low	Low	Low	Low	Low	Low	Low
Indonesia	Low	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Philippines	Moderate	Moderate	Moderate	Low	Moderate	Moderate	Moderate
Malaysia	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Vietnam	Low	Low	Moderate	Moderate	Moderate	Moderate	Moderate

Source: IMF Country Report

Among the region, with an increase in debt accompanied by a decline in the degree of concessionary, Laos has been the only country assessed as "high" public debt risk by IMF since 2016, which may signal growing vulnerabilities not only in its own fiscal stance but also southeast Asia as a whole. Therefore, Laos, one of the poorest countries with serious financial distress, is selected for analyzing fiscal risks related to BRI in this paper, in terms of the current debt situation and its maturity structure. The China-Laos Railway, estimated to cost USD $7 billion, is the largest investment in the country's history. Salient fiscal risks related to this project can provide important lessons for not only Laos but also other ASEAN members.

4.2 Overview of Laos' finances

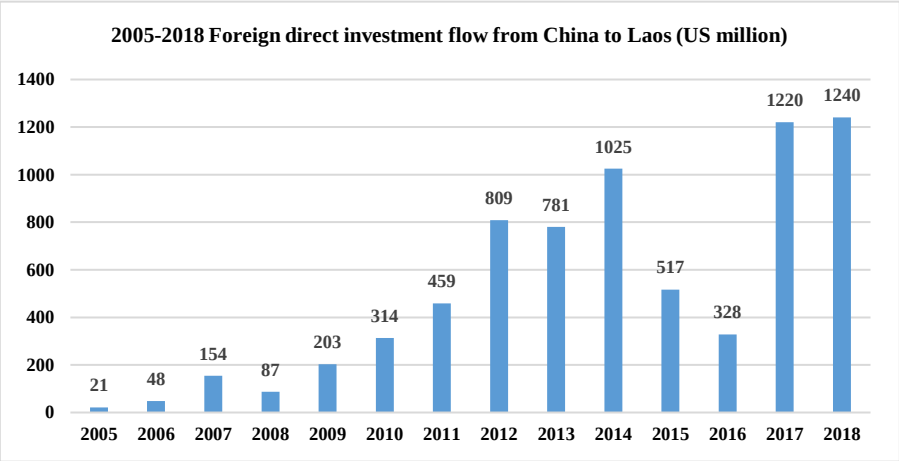
The Lao government has formulated a national strategy to transform Laos from a "land-locked country" to a "land-linked country", which aims to make Laos a hub connecting the Mekong River region. The land-linked strategy reflects the understanding of Laos' own positioning. "Laos is willing to further promote the integration of BRI and Laos land-linked strategy", said Bounnhang Vorachith, Lao President, in Beijing Diaoyutai state guesthouse on November 1st, 2018.[1]

From Figures 1 and 2, it can be seen that from 2005 to 2018, except for a few years of slight decline from 2014 to 2016, China's investment in Laos showed an increasing trend. FDI from China to Laos has increased significantly in terms of flow and stock. After 2014, China's

[1] https://www.yidaiyilu.gov.cn/xwzx/hwxw/70418.htm

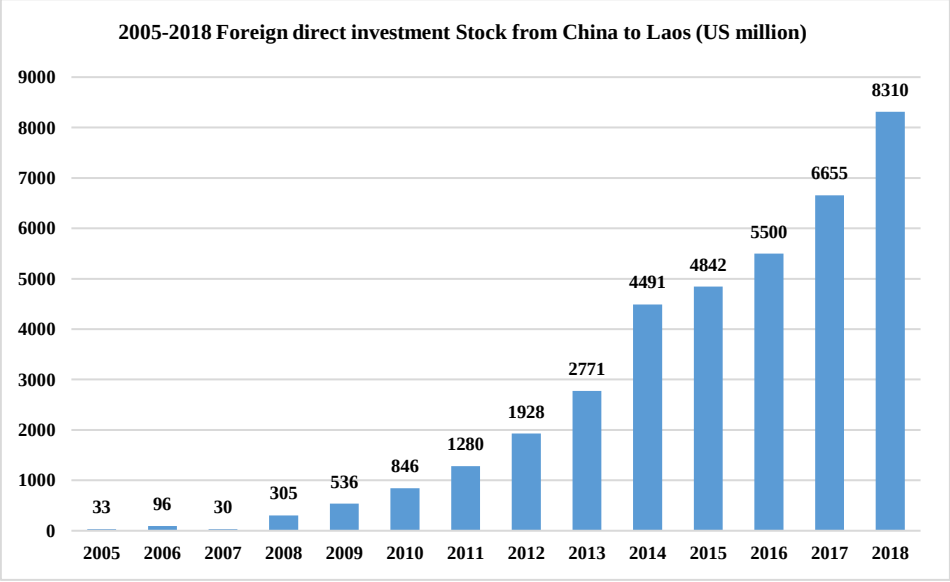
investment in Laos declined, mainly because the Lao government suspended granting mineral concessions in 2014. A slowdown in China also affected FDI, exports and growth. With Beijing attaching greater importance to "economy structural adjustment" and "export excess capacity", the direction of China's investment shifted from rough resource-intensive industries to more sophisticated areas. According to the annual report of the Lao Ministry of Planning and Investment, in 2016, China surpassed Vietnam as the largest FDI provider for Laos.

Figure 1 2005-2018 Foreign Direct Investment Flow from China to Laos (US million)



Source: Ministry of Commerce of the People's Republic of China

Figure 2 2005-2018 Foreign Direct Investment Stock from China to Laos (US million)



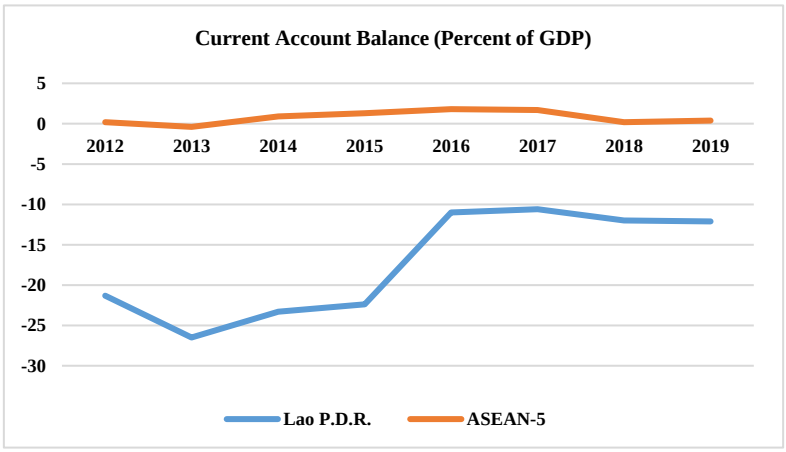
Source: Ministry of Commerce of the People's Republic of China

4.2.1 Sizable current account deficit

The current account balance as a per cent of GDP is a key indicator for the sustainability of government finance. A current account surplus usually indicates lower risks of the fiscal or

financial crisis. From Figure 3, it can be seen that Laos has run a sizeable current account deficit in the past decade, which reflects pressing needs to borrow from abroad to finance its huge infrastructure programs. Although the current account deficit has narrowed somewhat in recent years, it still stood at a relatively high -12.1% of GDP in 2019. Prolonged current account deficits depress demand and make Laos dependent on external loans to bridge the gap between spending and revenues. At present, Laos' public debt exceeds 60% of GDP, of which foreign debt accounts for 53.3% of GDP, or about 9.7 billion US dollars, as reported by the Vientiane Times.

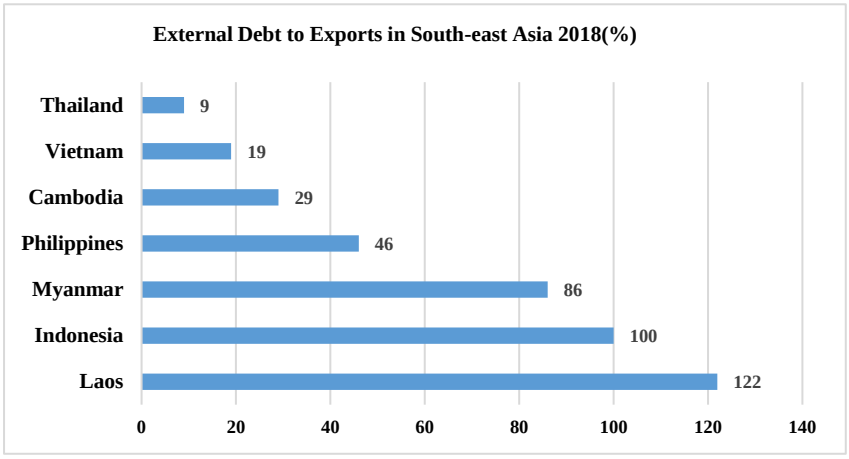
Figure 3 Current Account Balance (Per cent of GDP)



Source: IMF, 2019

Laos' external debt to exports ratio, a metric used by the World Bank to assess a country's solvency, is also the most unfavourable. The ratio for Laos stood at 122.8 per cent in 2018, well above the average for low and middle-income countries, which was 107 per cent. The Lao government has acknowledged that Laos will continue to face financial difficulties as revenues have not increased as expected, while expenditures have soared significantly over the past decade.

Figure 4 External Debt to Exports in South-east Asian Countries in 2018 (%)



Source: World Bank

It is undeniable that Laos will still heavily rely on FDI to boost economic growth in the short run. But the Lao government has already become aware of the rising fiscal risks. As Deputy

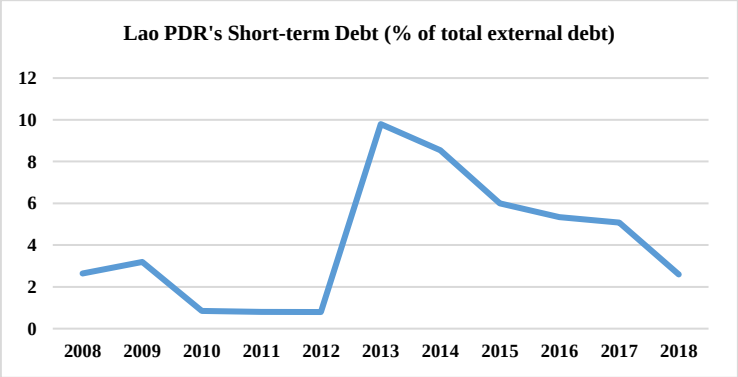
Prime Minister Somdy Duangdy indicated, the Lao government plans to significantly reduce or eliminate the fiscal deficit in 2020 and promote prudent investment in economically viable projects while avoiding non-essential spending.

4.2.2 Fragility of debt structure

The structure of foreign debt has a significant impact on the size of foreign debt, the cost of foreign debt and the efficiency of utilization. The following three indicators measure the rationality of foreign debt structure: debt maturity, sources of debt and debt currency.

Debt maturity mainly gauges the proportion of short-term debt and long-term debt to assess the stability of the debt structure. The share of short-term debt of Laos is still in line with the internationally recognized standard of no more than 25%. Although data on the average maturity of long-term debt in Laos is not available, long-term debt accounts for the largest proportion of Laos' total external debt, whereas the share of short-term debt has never exceeded 10% during the past decade. Therefore, for Laos, although the structure of debt maturity seems robust at present, it cannot deny the potential risk of the huge long-term debt coming due all together simultaneously.

Figure 5 Lao PDR's Short-term Debt (% of total external debt)

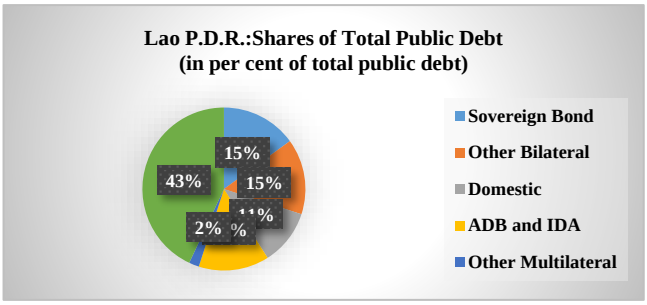


Source: World Bank

Over time, China has become the most important investor, and the largest bilateral creditor, according to Khamlien Phonsena, Laos Deputy Minister of Planning and Investment, in 2016.[2] In the past decade, official bilateral lending from China increased from US$100 million (IMF DSA 2007) to about US$ 3.8 billion, accounting for 43 per cent of the total public debt in 2018. The IMF has warned Laos against being heavily dependent on external loans[3], and increasing domestic concerns have been raised over economic dependence on China.[4]

[2] The Economic and Commercial Counsellor's Office of the Embassy of the People's Republic of China in the People's Democratic Republic of Laos: http://la2.mofcom.gov.cn/
[3] https://asia.nikkei.com/Economy/Chinese-dams-ramp-up-Lao-external-debt
[4] https://www.aseantoday.com/2018/02/why-laos-reliance-on-chinese-money-could-bankrupt-the-country/

Figure 6 Lao P.D.R. Shares of Total Public Debt



Source: World Bank

At present, the currency structure of Laos' external debt is dominated by the US dollar. The cyclical fluctuation of the US dollar exchange rate not only affects the total amount of external debt but also gives rise to uncertainty over borrowing costs. In addition, the liquidity and usage of the domestic currency, Lao Kip, is relatively low, further creating uncertain risks over external debt repayment. Although the Central Bank of Laos decided in June 2014 to suspend the approval of the establishment of new commercial banks and restrict foreign currency transactions and circulation in the country, whether these financial reform measures can achieve the desired results remains unclear.

4.3 Case study: China-Laos Railway

4.3.1 Project overview

The China-Laos Railway is expected to cost U.S. $7 billion (40 billion RMB), and construction will be completed in 5 years. Beijing and Vientiane have reached a bilateral agreement to jointly construct and operate the railway by establishing a joint venture, Laos-China Railway Co. Ltd. (LCRC). According to the agreement, Beijing will bear 70 per cent of the total construction cost while Laos will finance the remaining 30 per cent, equivalent to US$2.1 billion, by borrowing from the China Export-Import Bank, with an interest rate at 2.30% and 35-year maturity. As a condition for borrowing from Beijing, Laos agreed to adopt the “resources for capital” repayment solution, guaranteed by domestic unexploited mineral resources, potash. Potash, common name given to a group of minerals containing potassium (K), is one of the advantageous resources in Laos, and mainly used as agricultural fertilizers. However, China is short of potash resources. At present, the domestic potash production in China is less than 10% of the demand, and the domestic supply gap relies on imports.[5]

In a special session held by the Lao parliament in September 2019, Lao Deputy Prime Minister Somsava Lengsavad indicated that, it is expected that the revenue generated from the railway will reach the U.S. $95 million in the first operating year, and the total net profit was projected at the U.S. $16.39 billion in the 50th operating year.[6] The revenue generated from the railway-related service industry is estimated to account for 50% of total revenue, which the Lao government plans to use to develop other infrastructure projects and to promote economic development. The detailed information of the project is shown in the table below.

[5] China Land and Resources News
[6] http://news.cri.cn/gb/42071/2015/09/29/8011s5118956.htm

Figure 7 China-Laos Railway

Source: Wikipedia

Table 2 The Overview of China-Lao Railway Construction

The Overview of China-Lao Railway Construction	
Total miles	417km
Total investment	U.S. $7 billion
Construction period	5 years
Ratio of Chinese/Laos investment	70%/30%
Commencement of construction	12.2.2015
Construction company	A consortium led by China Railway Corporation
Equipment supplier	SANY Heavy Industry Co., Ltd

Source: China Economy, http://www.ce.cn

The U.S. $7 billion investment has been questioned internationally because the investment accounts for over half of GDP in 2015. Although its economy has grown at over 7 per cent for ten consecutive years since 2000, highly indebted Laos still suffers from a fragile economy. Launching costly and lengthy infrastructure projects such as the China-Laos Railway, even if understandable for potential development opportunities, thus presents clear risks. Opponents argue that the disadvantages brought by the project outweigh the advantages for the following reasons. First, sovereign debt risks are growing rapidly. The sovereign debt risk of Laos has been rated as “high” by the IMF since 2016, after launching a number of BRI projects ranging from hydropower stations to railways.

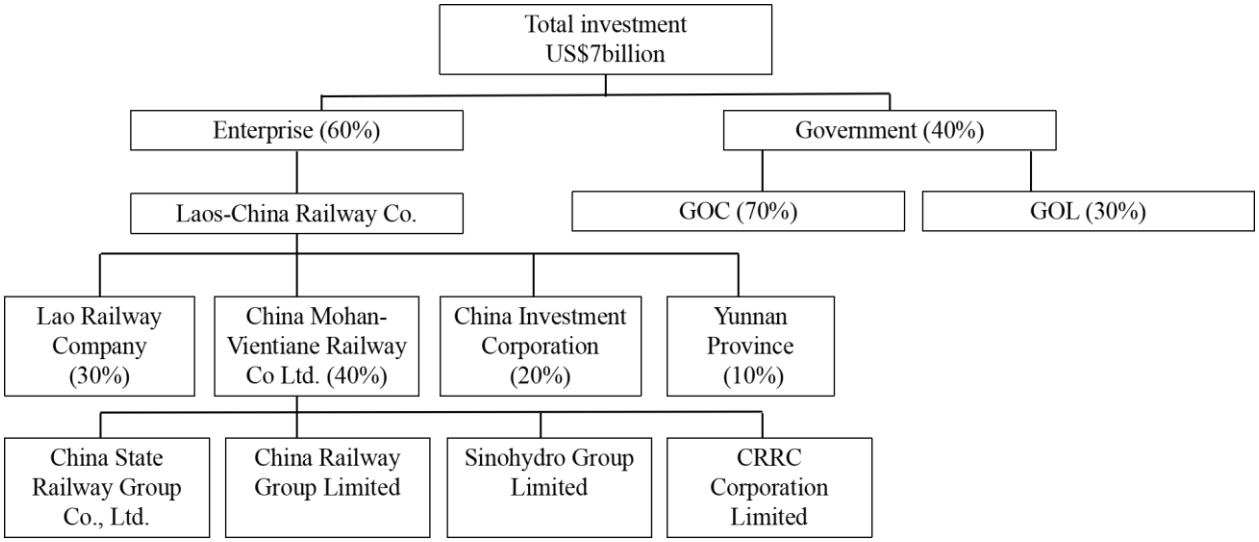
Second, the economic sustainability of debt is questionable. The economic viability of the costly railway is doubtful given that the route goes through sparsely populated, rugged areas, casting doubt on whether the project can meet official projections for increased traffic. In addition, whether the mega infrastructure project will bring intended positive economic and social impact on Laos remains unclear. Although infrastructure investment is expected to boost regional economic development, with output elasticities to infrastructure investment ranging from 0.06 to 0.18 (Calderón, Moral-Benito and Servén, 2011), substantial researches and studies find that output brought by infrastructure investment varies across countries (Canning and Pedroni, 2008) and monetary measures of public investment tend to be overstated in many low-income countries with a poor institution (Keefer and Knack 2007) due to weakness in

public investment management.

4.3.2 Analysis on lending terms

China-Laos Railway is constructed under one of the public/private partnership forms, build-operate-transfer (BOT). In terms of railway ownership, China and Laos own 70% and 30 % respectively, of the joint venture, Laos-China Railway Co. Ltd. (LCRC). To be specific, 30 per cent stake is owned by the Lao government, represented by Lao Railway Company, while 70 per cent shareholding is owned by China is held through the China Mohan-Vientiane Railway Co. Ltd. (40%), China Investment Corporation (20%) and Yunnan Province (10%).

Figure 8 China-Lao Railway Investment



Note: GOC stands for govenrment of China and GOL stands for government of Laos

Source: China Railway Newspaper http://gcb.crec.cn/

Generally speaking, the annual interest rate of concessional loans should be below 2.5%, or even zero, with a minimum maturity of 15 years and a maximum of 50 years. According to historical data from the World Bank, the trend of government preferential loan interest rate is getting lower yearly. The average annual interest rate of official creditors gradually decreased from 5.4% in 1990 to 2.1% in 2009, while maturity and grace periods remain relatively stable.[7]

Table 3 The Global Trend of Government Preferential Loan Interest Rate

Average terms of new commitments	1990	1995	2000	2005	2006	2007	2008	2009
Official creditors								
Interest (%)	5.4	5.8	4.8	3.6	3.9	3.7	2.9	2.1
Maturity (years)	22.8	19.2	20.2	22.1	22.8	23.2	23.6	21.2
Grace period (years)	6.6	5.3	5.1	5.7	6.2	6.5	6.7	6.2

Source: World Bank

[7] World Bank, 2011. "Global Development Finance 2011: External Debt of Developing Countries," World Bank Publications, The World Bank, number 8132. https://treasury.worldbank.org/en/about/unit/treasury/ida-financial-products/lending-rates-and-fees

Traditional multilateral financial providers, the World Bank and the Asian Development Bank, provide funds for public infrastructure projects in Southeast Asia. The International Bank for Reconstruction and Development (IBRD), a part of the World Bank Group that supports creditworthy low and middle-income countries, is most closely associated with BRI project financing. The IBRD Flexible Loan rates in major currencies are reset semiannually based on six-month LIBOR plus a variable or fixed spread, according to the maturity of the loan. In addition, a one-time front-end fee of 0.25% of the total loan is charged at the start of the project. IBRD loans must be used for designated purposes only and subject to the supervision of the World Bank, in contrast to the far more flexible bilateral lending.

Table 4 Current IBRD Flexible Loan Rates for Lao PDR

Current IBRD Flexible Loan Rates for Lao PDR							
As of January 1, 2020							
Loan Currency	Variable Spread over LIBOR	Fixed Spread over LIBOR					
		up to 8 yrs	8+ to 10 yrs	10+ to 12 yrs	12+ to 15 yrs	15+ to 18 yrs	18+ to 20 yrs
USD	0.48%	0.65%	0.85%	0.95%	1.10%	1.30%	1.40%
EUR	0.48%	0.50%	0.70%	0.80%	0.95%	1.15%	1.25%
JPY	0.48%	0.30%	0.50%	0.60%	0.75%	0.95%	1.05%

Source: International Bank for Reconstruction and Development

Chinese policy banks such as China Development Bank (CDB) and China Export-Import Bank, are the major finance providers for overseas BRI projects. With a significant number of fiscal subsidies from the central treasury, concessional loans can be provided at relatively low interest rate by Chinese policy banks. The figure below shows the latest announced lending rate of CDB. Although the lowest interest rate for six-month maturity is 4.35%, Chinese policy banks provide most concessional loans at a rate of less than 3% for BRI projects in southeast Asia (which can refer to Table 7).

Table 5 Types of Loans and Annual interest rate (%)

Types of loans	Annual interest rate(%)
1.Short-term loan	
≤ Six months	4.35
Six months-one year	4.35
2.Medium & Long-term Loans	
One-five years	4.75
Three-five years	4.9
Over five years	4.9

Source: China Development Bank

Laos will need to inject 30 per cent of the total U.S. $7 billion investment, equivalent to U.S. $2.1 billion, or around 17% of GDP in 2015. Even more challenging is that the railway requires start-up funds of U.S. $2.385 billion which means Laos must provide about 30 per cent of the

initial equity, or U.S. $715 million immediately. The Lao government has announced that the start-up funds will come from two sources: U.S. $250 million from the fiscal budget over the next five years, accounting for 7 per cent of the national budget in 2015 and 2.1 per cent of the external debt; and U.S. $465 million to be financed by China Export-Import Bank. According to the information from the Center for Global Development (CGD), Laos will repay the U.S. $465 million in loans from China Export-Import Bank at an interest rate of 2.3%, with a 5-year grace period and 35-year maturity. International practice suggests that concessional loans are not typically provided for project start-up funds. However, Beijing has generously made an exception and agreed to provide Laos with U.S. $465 million in start-up funds at a relatively low interest rate (2.3%).

The Lao government should consider carefully its ability to repay and potential problems related to "resource for capital" as a backup solution.

First, there is no denying that the Lao government could be in danger of defaulting on its debt. Although its economy has grown relatively fast, Laos still relies heavily on industries with low employment rates, such as mining and hydropower. Further, Laos is suffering from a weak fiscal position and a high current account deficit. The Lao government appointed a new finance minister last July whose goal is to shrink the national deficit. The government also tried to lessen the financial burden by issuing government bonds in the Thai market and tightening the budget to control expenditures. Thitinan Pongsudhirak, Director of the Institute of Security and International Studies at Chulalongkorn University, said that the weak fiscal position had worsened the overall fragility of the economy. What's worse, the economic viability of the costly railway remains questionable given the unfavourable geographical and social conditions, which will make it more difficult for the Lao government to repay the loan by making profits from the project.

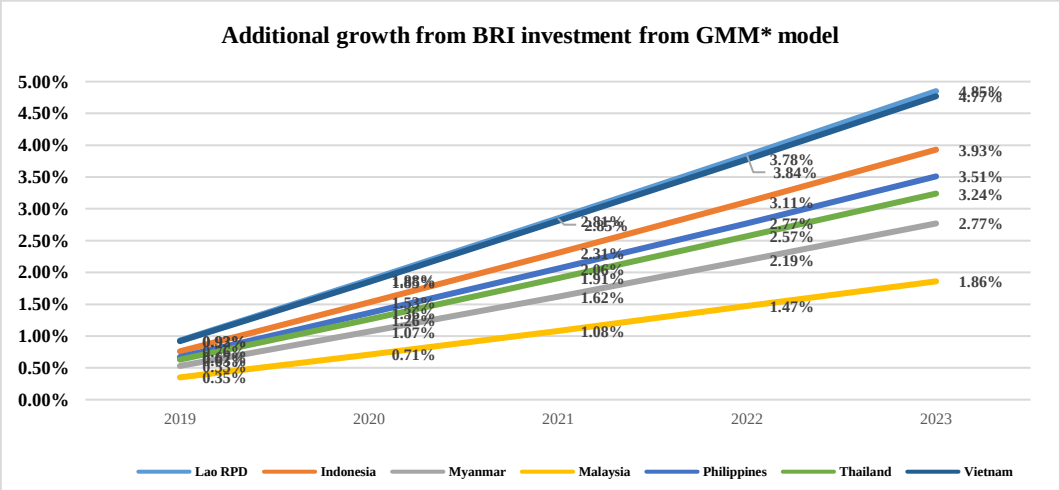
As a mixed passenger and freight railway, China-Laos railway is expected to enhance local transport efficiency and quality effectively and has a positive impact on Laos tourism, business and trade and the living standard of the local people. But whether these potential positive impacts and externalities, which are difficult to realize in the short-term at least, can cover huge costs is still unknown. Laos Deputy Prime Minister is optimistic about the profit forecast of the railway from his statement, but like most railway projects around the world, the operation results show that the profit forecast during the construction period tends to overestimate the traffic and profit. Even in China's high-speed railway, with an enormous commuter's volume, most of the railway lines are loss-making at present, especially in the relatively underdeveloped areas of Western China. Due to the lack of ideal geographical and social conditions, the Lao government's plan to repay the loan through railway profits may fail.

However, some argue that the economic and social benefits brought by the railway cannot be simply measured by financial data, but should pay attention to its contribution to the long-term economic development. Many scholars and researchers believe that infrastructure investment is conducive to the long-term economic development of a country, but the impact of infrastructure investment on economic growth varies across countries. Some scholars believe that the economic impact of infrastructure investment greatly depends on project selection and implementation. Other suggest that governance capacity also plays a role. For example, the

impact of the monetary measures of public investment tends to be overstated in many low-income countries with poor institutions due to weakness in public investment management (Keefer and Knack 2007).

According to the World Bank's estimate, BRI can bring growth to Laos' economy from 0.93% to 4.85% over the period from 2019 to 2023. Although Laos is the country with the largest positive impact of infrastructure investment on economic growth in Southeast Asia, a positive growth gap[8] shows that this growth is insufficient to offset the impact of BRI-related borrowing on the debt-to-GDP ratio. Moreover, according to The Worldwide Governance Indicators (WGI), the governance quality of Lao government underperforms the global average level substantially[9], which makes the economic growth of infrastructure investment in Laos even more uncertain

Figure 9 Additional Growth from BRI Investment in Southeast Asia Countries



Source: The World Bank

Across southeast Asia, BRI-related infrastructure investment is expected to have a positive effect on regional economic development, but the impact may not be sufficient to offset the fiscal distress caused by indebtedness. The World Bank has estimated that BRI-generated growth does not offset the increase in BRI debt in three southeast Asian countries, namely Laos, Myanmar and Malaysia. Others, including Thailand, Philippines, Vietnam and Indonesia have shown undefined growth gaps, which means that the output of BRI-related investment is highly uncertain depending on different assumptions on economic variables. But perhaps more significantly, none of the southeast Asian countries' BRI-generated growth is completely sufficient to outperform the increase in debt.

Second, the consequences of default need to be further considered. Although both parties

[8] According to World Bank explanation, the growth gap is defined as the difference between the PPG debt-to-GDP ratio at the end of 2023 which includes the effect of BRI on debt and growth and the PPG debt-to-GDP ratio which excludes the effect of BRI.

[9] Lao government underperform in five (out of six) dimensions including Voice and Accountability, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption, according to The Worldwide Governance Indicators, 2019 Update

* Note: In the World Bank research paper, *A Framework to Assess Debt Sustainability and Fiscal Risks under the Belt and Road Initiative*, estimation methodology is the generalized method of moments (GMM) for dynamic models of panel data (Arellano and Bond, 1991; Arellano and Bover 1995; Blundell and Bond, 1998), which is suited for dynamic panel data and accounts for some endogeneity in the explanatory variables through instrumentation.

agreed to adopt the “resources for capital” repayment solution, rigorous analysis of different aspects concerning the detailed plan should be conducted. Between 1988 to 2018, Laos continued to see FDIs focused around the energy sector (30%), mining (22%) and construction (11%).[10] Given that mining contributes to a significant proportion of national income, the development of Laos will be negatively affected if excessive resources are utilized for paying the debt. Little evidence has suggested that China and Laos negotiated and disclosed the details of “resource for capital” plan, such as the pricing mechanism of the mineral resources and whether maximum mining limit will be imposed. Ideally, selling resources would neither hinder socioeconomic development nor negatively affect the operating cash flow of the project.

It is argued that potash used for debt repayment is far from being the economic engine to Laos, but it is of great strategic significance to China. The Lao export volume of potash accounts for about 2.3% in 2018, which is smaller than the share of gold, silver, copper and other major mineral resources. The Vientiane Basin, planned to have better connectivity by the construction of China-Laos Railway, has affluent in potash resources deposits after preliminary exploration. In fact, Yunnan Provincial Bureau of Geology and Mineral Resources has made certain progress in the preliminary exploration, with proven potash deposit of 14.2 billion tons, and Yunnan Zhongliao Mining Company, a Chinese SOE, has obtained the mining concession and commenced the project. It is believed that the China-Laos Railway can provide better transportation conditions for China's importing potash from Vientiane Basin. However, it is noteworthy that the loan was guaranteed by Laos with potash resources that have yet to be fully mined. The precise amount of mineral deposits that will actually be available is still unpredictable. This introduces additional risks that the "resources for capital" plan will not support sustained repayments over decades.

In addition, BRI projects tend to be larger and more expensive than host countries can afford, leading to reliance on opaque work-around and side deals with developers. A report of the Asia Society Policy Institute finds out that these in some cases include natural resource concessions that are not objectively valued or granted without public disclosure and comment, as well as land grants, often without clear titles.[11] These side deals to foster corruption and creates significant social and political problems. Laos has made tax and land concessions to support the China-Laos Railway, significantly undercutting the benefits it will derive.[12] Past experience has shown that further concessions may be needed to meet the government's obligations. In 2008, the Lao government had to cede land to a Chinese developer as compensation for the bad debts of a Chinese-built stadium in Vientiane.[13]

Based on the above analysis, Laos, one of the least developed countries in Southeast Asia, should carefully examine the fiscal risks on national finance, and seize the opportunity of infrastructure investment to facilitate positive externalities to stimulate economic and social development. Although Laos may represent a relatively extreme case in terms of its poorest

[10] Ministry of Planning and Investment of Laos

[11] Navigating the Belt and Road Initiative. Retrieved from https://asiasociety.org/policy-institute/belt-and-road-initiative

[12] “China’s Railway Project Running Roughshod over Laos,” Chiangrai Times, August 18, 2018, https://www.chiangraitimes.com/chinas-railway-project-running-roughshod-over-laos.html.

[13] Macan-Markar, “China’s Belt and Road Rail Project”; and Darren Schuettler, “China Land Deal Rankles Laos Capital,” Reuters, April 6, 2008, https://www.reuters.com/article/us-laos-chinatown/china-land-deal-rankles-laos-capital-idUSBKK24347820080407.

economy in the region, lessons from Laos case study is still valuable for other ASEAN countries. As the World Bank pointed out in 2006, the "Middle Income Trap" (MIT), a status that countries are stagnating and not growing to more advanced level, has become one of the difficult issues that many ASEAN countries are facing. Accordingly, ASEAN countries actively carry out industrial transformation and upgrading, improve national competitiveness, and strive to avoid the trap. China's BRI, whose main content claimed to be improving connectivity by infrastructure investment, is clearly aligned with the vision of many ASEAN countries which are struggling to leap over the MIT. However, how to mitigate the fiscal risks brought by large-scale infrastructure investment and grasp opportunities to ensure economic development are common problems faced by these ASEAN countries.

4.4 Recommendations

Based on the case study of China-Laos Railway, several findings could be shown from the analysis above. But to draw a fuller picture of how other similar BRI projects (mostly railway projects) in southeast Asia are financed, and identify potential risks and recommendations for the region as a whole, Table 6 is presented for further investigation. By comparing the interest rate and maturity of the concessional loan provided by China (see Table 6) with officially announced lending terms from multilateral financial providers, it is found that Beijing is in fact in line with normal international practices. However, Southeast Asian countries need to consider other factors when borrowing.

First, the host countries should diversify sources of financing to identify optimal terms and ensure BRI projects are commercially viable.

China has basically made its concessional loan bilateral. Little evidence shows that China and BRI recipient countries have disclosed their financing agreement, whereas detailed financing agreement can be found under each Asia Development Bank's projects. Relatively confidential and opaque bilateral agreements make it difficult for borrowers to compare terms provided by other financing institutions in the market. Thailand has tried to lower the interest rate of the Sino Thai Railway from 2.5% to 2%, which is the lending rate for the Indonesian high-speed railway. However, China rejected Thailand's request at first but eventually agreed. Some indicated that a 2% rate for Indonesia was awarded because Indonesia gave China land development rights along the railway while Thailand did not. However, a spokesman for the Chinese embassy in Thailand refused to acknowledge any Chinese demands related to land development rights. Although formal agreements are not available, news and internet sources show that most of the BRI railway projects in Southeast Asia interest rates range from 2% to 3%.

Table 6 Interest Rate and Maturity of Selected BRI Projects in Southeast Asia

Project	Country	Financing Model	Interest Rate	Maturity	Grace Period
Jakarta-Bandung high-speed railway	Indonesia	PPP(SPV)	2%	40 years	10 years
Sino Thai Railway	Thailand	EPC+SPV	2%	-	-
Cat Linh – Ha Dong metro line in Hanoi	Vietnam	BOT	Lower than 2.5%	info n/a	info n/a

East Coast Rail Link (ECRL)	Malaysia	PPP(SPV)	3.25%	info n/a	7 years
China-Laos railway	Laos	BOT	2.30%	25 years	5 years
Subic-Clark Railway	Philippines	PPP	2%-3%	20 years	7 years
The planned Phnom Penh-Sihanoukville Expressway	Cambodia	BOT	info n/a	info n/a	info n/a
Muse-Mandalay Railway	Myanmar	BOT	info n/a	info n/a	info n/a

Source: https://www.beltroad-initiative.com/projects

As Table 6 show that, low-income development countries (LIDCs) can obtain a more favourable interest rate from external creditors rather than from Chinese lenders, except LIDCs with high debt distress. Since Southeast Asia countries mostly fall into the categories of LIDCs and EMs, it would be for their interests to pursue more transparent financing arrangement with China, or consider diversifying debt financing package, such as seeking opportunity from Multilateral Development Banks.

Table 7 Interest Rate on External Financing (Median by group)

Interest Rate on External Financing (Median by group)			
From all external creditors			
LIDCs	1.5%	EMs	2.5%
LIDCs-BRI	1.3%	EMs-BRI	2.8%
LIDCs-BRI-Low debt distress	1.0%	EMs-BRI-Low scrutiny	3.0%
LIDCs-BRI-Moderate debt distress	1.9%	EMs-BRI-High scrutiny	2.6%
LIDCs-BRI-High debt distress	2.3%	-	-
From Chinese lenders			
LIDCs	2.0%	EMs	2.5%

Note: LIDCs stands for low-income development countries, and EMs stands for emerging markets

Source: World Bank

Whenever possible, financing by Chinese policy and development banks, and any host country project funds should often be combined with private sector investment, as attracting such financing ensures the financial viability of the project and maintains transparency. Diversified financing instruments such as investment grants, technical assistance, and loan guarantees can help attract international public and private financing by lowering transaction and project costs, reducing risks, and improving the likelihood of a project's success.

Second, the host countries should grasp the opportunity from BRI infrastructure investment to boost indigenous economic growth.

As discussed above, the output brought by infrastructure investment varies across countries,

and it greatly depends on project selection, implementation and management capacity. To facilitate indigenous growth, BRI recipients should maximize the use of local labour and companies and limit their reliance on imported Chinese labour and materials. Therefore, the host country should carefully consider other economic and social externalities brought by BRI such as procurement, local employment opportunities, technology transfer, etc. In 2016, China-Laos Railway announced all the winners of the bids for six different sections of the project. Coincidentally, all the winners are Chinese entities, although it appears to have a competitive bidding section conducted. The low proportion of local involvement into BRI projects will not only provoke widespread community resentment but also impede to indigenous growth.

Table 8 Winners of Bid for Six Sections of China-Lao Railway

Section	Location	Length	Successful bidder
1	Boten to Meuang Xay	88.64km	China Railway No.5 Engineering Group Co.Ltd.
2	Meuang Xay to Nam Seu Bridge	68.8km	China Railway International Group Co.Ltd.
3	Nam Seu Bridge to Phou Sanaen	65.5km	China Railway No.8 Engineering Group Co.Ltd.
4	Phou Sanaen to Ban Pa village	61.49km	Sinohydro Group Ltd.
5	Ban Pa village to Phonhong	79.5km	Power Construction Corporation of China

Source: Ministry of Commerce of the People's Republic of China

Increased local employment and business generate community support for the project, which in turn reduces problems and risks, thereby enhancing long-term sustainability and operations. As reported by Xinhua Net, Chinese contractors have announced they need to recruit 7,112 Lao workers for the construction of the Laos-China railway project, a senior government official has said. Institutional linkages with Chinese technical and management schools would help improve skills and create a qualified labour pool to support local BRI projects. The Lao government is planning to build a Lao railway vocational-technical college with assistance from China to train and supply professional railway personnel. Students will learn all aspects relating to the running of railway machinery, including driving trains, services at stations, as well as electrical repairs and maintenance. However, UN rights envoy still warns Laos of favouring China's BRI over its people, by granting big concessions for land and resources is leaving many citizens behind.[14]

5.Governance Risks

5.1 Governance capacity in ASEAN

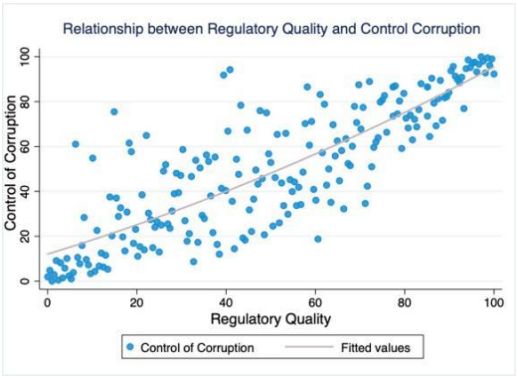
The projects under Belt and Road Initiative (BRI) in ASEAN countries are mainly focused on construction of infrastructure such as railways and power plants. According to the

[14] https://www.scmp.com/news/asia/southeast-asia/article/3003766/too-few-jobs-and-too-much-debt-un-rights-envoy-warns-laos

Transparency International 2011 Bribe Payers Index, public works contracts and the construction sector are considered to have higher levels of bribery than other sectors, which means the risk of corruption in such areas is higher (Hardoon Deborah, Heinrich Finn 2011). This is because a construction project usually involves multiple stakeholders, such as government departments, agencies, bidders and experts, and rent-seeking or kickbacks may occur among each of them; in addition, each project is unique so it is difficult to benchmark the costs and time (Hardoon Deborah, Heinrich Finn 2011).

The ability to control corruption is one dimension of governance. The higher a country's regulatory quality, the better it is in controlling corruption (Figure 11). Thus, given the corruption-prone nature of infrastructure projects, regulators must be effective to diminish risks.

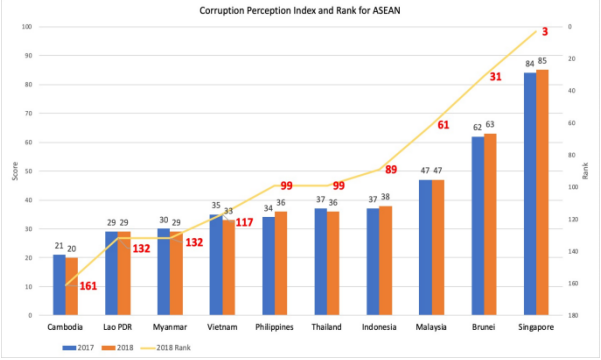
Figure 10 Relationship Between Regulatory Quality and Control Consumption



Source: Author's calculation according to the Worldwide Governance Indicators 2018

The unfavorable international perception of domestic corruption should be alarming to ASEAN leaders (Figure 12). Only Malaysia and Singapore scored higher than 50 out of 100 (where 100 is very clean and 0 is highly corrupt) in the Corruption Perceptions Index (CPI), an indicator developed by Transparency International, Paolo Mauro points out that "if the corruption index (0 is most corrupt, 10 least) improves by one standard deviation, the investment rate increases by more than 4 per centage points" (Mauro 1997). The perception of corruption will seriously affect international cooperation and domestic livelihoods. Taking BRI projects as an example, fierce controversies have erupted in southeast Asian countries where numerous BRI projects have been renegotiated and even halted due to the lack of transparency.

Figure 11 The Score and Rank of ASEAN Corruption Perception Index in the Global Context



Source: Corruption Perceptions Index 2019, Transparency International.

5.2 Internationally accepted good practice of infrastructure projects

Implementing high-quality infrastructure projects can be divided into three parts, namely strategy; development, procurement, delivery and operations; and recycling capital. Following standard procedures can effectively avoid potential risks in governance, construction and operation stages, which can improve the efficiency and success rate of project operations. Table 9 explains this framework. Every stage is essential, but considering the circumstances of ASEAN countries, this section will highlight the strategy stage - the fundamental step and public procurement stage. On the one hand, due to the lack of clear and transparent information disclosure and monitoring mechanisms, they are often overlooked and have higher governance risk than other stages; on the other hand, these two parts determine what kind of project to choose and how to implement it, which is the key to the successful operation of the project.

Table 9 Scope of Work in Each Stage of the Infrastructure Project

	Scope of work in each stage of the infrastructure project	
1. Strategy	• Identifying a need for infrastructure • Understanding local and/or regional requirements (such as regulations) • Prioritizing projects effectively to ensure capacity is utilized most effectively • Conducting studies to identify market opportunities and assess the financial, commercial, and technical feasibility of a project	
2.Design and execution	2a. Development	• Understanding and mitigating potential risks • Finding a viable contract, financing and legal project structure that best balances the interests of all stakeholders • Designing the technical specifications of the project • Obtaining funding and understanding delivery partners (architects, advisors, construction companies, operators)
	2b. Procurement	• Planning of procurement strategies • Preparation of tenders and running the tender process • Identifying potential bidders and finalizing commercial and financial terms • Obtaining financing
	2c. Delivery	• Physical construction of assets • Managing the project over its construction phase
	2d. Operations	• Operating and maintaining the asset over its lifetime
3. Recycling capital	• Divesting the asset partially or fully • Re-investing capital into new projects	

Source: Understanding infrastructure opportunities in ASEAN Infrastructure Series Report 1

5.3 Project selection stage

Project selection is the first stage of the above procedure of conducting an infrastructure project includes identifying a need for infrastructure, prioritizing the projects in accordance with the requirement of the local situation and conducting studies to identify market opportunities and assess the financial, commercial, and technical feasibility of a project (PwC 2017).

This stage is mainly about evaluate each project ideas and prioritize the projects in the light of local development needs, which is essential in the whole procedure. First, the limited resource, financial fund and time make it impossible for the government to implement all the projects. Having a clear strategy, the government can screen the projects and initiatives that are consistent with the development need, which can increase resource utilization rate and improve the efficiency in implementing the public project.

Second, a clear, transparent and detailed strategy can attract investors interested in the projects because it shows that the government has a clear framework in conducting Private-Public Partnerships project. Without a scientific framework of strategy, the project will be questioned that the output is not proportional to the input or the outcome of the project will not achieve the national development plan goals. The suspension of projects often occurs. This is because the government's choice of projects is not open enough, and there is a lack of scientific and consistent criteria to measure which projects should be carried out. Therefore, the perform of the strategy is one dimension of governance.

In the context of the global economic slowdown, ASEAN still has a good growth momentum, with an expected economic growth rate of 4.8% in 2020.[15] In 2018, foreign direct investment (FDI) flowing into ASEAN reached US $ 149 billion.[16] ASEAN surpassed Europe and China and became the main driver of global foreign direct investment growth. Among them, FDI from China is 13.694 billion US dollars.[17] ASEAN's current urbanization level is less than 55%, but it is growing at an annual rate of 6%.[18] ASEAN countries are facing a lot of development needs, such as infrastructure, transportation, education, health care, etc. As the main recipient country of the BRI project and the primary goal of a large amount of foreign investment, it is necessary to adequately measure the priority of each project to ensure that the implemented projects meet the needs of national development.

5.4 Public procurement stage

The public procurement stage determines how the government purchases goods, such as the procurement method, evaluation criteria, the process of procurement, the degree of disclosing information and so on. There is always a high risk of corruption in this stage because multiple stakeholders are involved, such as government departments, agencies, bidders and rating experts, and rent-seeking or kickbacks may occur among each of them. A weak and inadequate public procurement stage will lead to a project over budget and delays. The completeness of this stage reflects the governance capacity. Therefore, building a clear, open and transparent public procurement process is essential. First, it can attract more investors to participate in the

[15] https://www.imf.org/en/News/Articles/2019/10/18/na102319-prolonged-uncertainty-weighs-on-asias-economy

[16] http://sg.mofcom.gov.cn/article/gqjs/201910/20191002903900.shtml

[17] http://www.asean-china-center.org/2019-07/30/c_1210221058.htm

[18] https://www.premia-partners.com/sc/insight/emerging-asean-finding-economic-growth-beyond-china-and-india

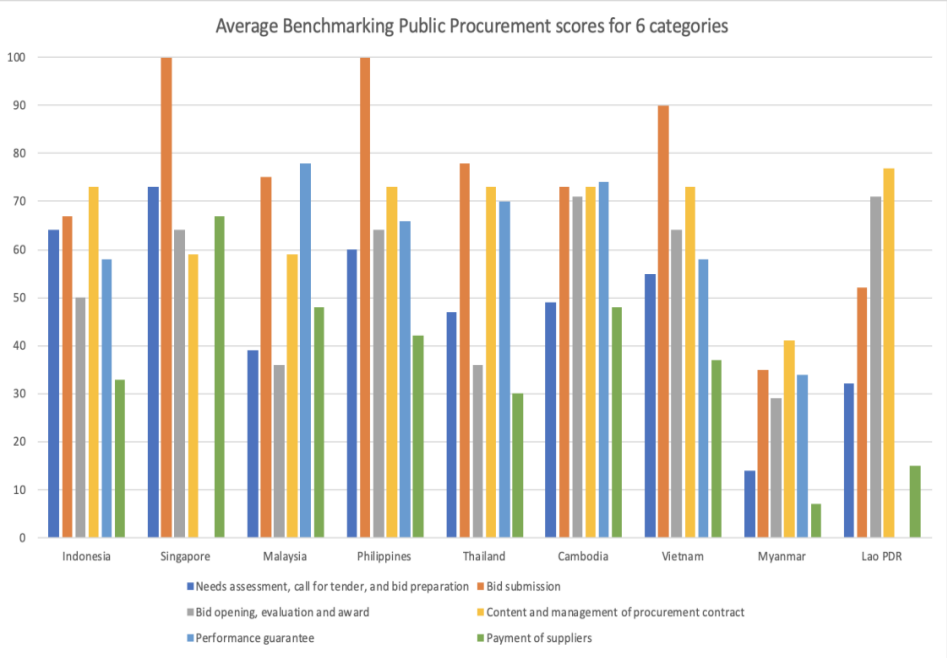
bidding, which provides more alternatives for the government. Furthermore, conducting a rigorous and transparent process can reduce the risks of corruption, over budget and delays, which ultimately ensure the public interest and the smooth operation of the project.

5.4.1 Public procurement law and regulation in ASEAN

With the development of the economy, the scale of public procurement in ASEAN is also expanding steadily. The average size of the public procurement market in ASEAN countries is about 5-8 per cent of GDP, slightly below the OECD countries' average of 9 per cent, which shows there is still enormous potential to grow (Gourdon, J. and V. Bastien 2019).

At present, the development of the public procurement system of ASEAN countries is uneven.

Figure 12 Average Benchmarking Public Procurement Scores for 6 Categories



Note: Higher scores (excludes performance guarantee) denote that a country/region is applying better practices. Source: Author's calculation according to the data from World Bank Benchmarking Public Procurement 2017

Singapore, as the only developed country in ASEAN, has a strong and strict public procurement system. While the public procurement system in most of the ASEAN countries (except Singapore) have some weaknesses, which includes fragmented procurement procedures; the lack of professional procurement expertise; the absence of open, competitive tendering; widespread corruption; and the lack of transparency (Jones, 2007). Such weaknesses post risks for ASEAN to execute the BRI projects and arose fierce public criticisms.

5.5 Case Study: East Coast Rail Link (ECRL)

The East Coast Rail Link (ECRL) project, as one of the most ambitious and expensive government-to-government infrastructure projects with China in Malaysia and even ASEAN recently, exposes the risk of inadequate governance capacity in running BRI project.

The following is the specific reasons why we chose ECRL as the object for in-depth study.

First of all, it is one of the few projects that have been suspended by the recipient country because of a lack of transparency and corruption scandals against the ruling leadership. It also did not meet the standards in the stage of project selection and public procurement, which lays a hidden danger for the failure of the project. It is recognized that Malaysia outperforms other ASEAN countries in governance measures. However, Malaysia still faces various challenges due to governance risks in implementing BRI project, the case of ECRL, therefore, would sound warning bells for ASEAN countries which are weaker in governance than Malaysia.

Second, it is also the first BRI project that withdrew inequitable terms and significantly cut costs through renegotiation with China. Malaysia's success is remarkable, which may provide experiences and open a floodgate for the review of other projects under BRI in ASEAN so as to maximize national interests.

5.5.1 Overview of ECRL

The East Coast Rail Link (ECRL) is a planned standard gauge double-track railway link infrastructure project, designed to bridge the economic divide between the more prosperous west coast and the relatively undeveloped east coast, which persists since the British colonial era. It is designed to carry both passengers (30%) and freight (70%) from the West Coast of Peninsular Malaysia to its East Coast within 4 hours (cut from 12 hours). According to the prime minister, the economies of the east coast region states of Pahang, Terengganu, and Kelantan would experience additional annual growth of 1.5% after the ECRL is completed as high value-added economic activities in sectors such as agriculture and tourism are stimulated.

Source: MRL Website

Figure 13 ECRL Project Trade Route

Source: Lopez 2016

Figure 14 Impact on Southeast Asian Trade Route

The ECRL project, although mainly conceived to increase domestic connectivity, will also act as the land bridge between the South China Sea Port of Kuantan and the Klang Port in the Straits of Malacca, thus reducing the need for vessels to travel through the busy Straits of Singapore. As the most expensive infrastructure project planned between Malaysia and China, it is also a landmark project of the BRI. ECRL's success (or failure) will directly impact how other BRI recipient countries view and approach the Initiative.

5.5.2 Governance risks related to the ECRL

In sharp contrast to the idea that ECRL would definitely have a huge positive effect is its long and difficult history. Since Malaysia signed an agreement with China and joined the BRI, the ECRL project has been controversial and experienced work stoppages, contract renegotiations, and route and budget adjustment (See appendix 2: The timeline and contract modification of ECRL). Fundamentally ,the problems of the tortuous ECRL project all stem from weak governance capacity and the lack of transparency.

Opponents argue that the ECRL is a "white elephant project" with high costs, an opaque bidding process, and unknown freight and passenger traffic benefits. According to China-ASEAN research institute, many Malaysians see the Chinese-led ECRL as a "treasonable deal" that pawns national sovereignty, highlighting China's geopolitical ambitions. They view the ECRL as another example of China's increased geopolitical influence in the region.

Lack of transparency

First, the foundation of any successful project is good governance and transparent project selection and procurement. However, the ECRL project deviates greatly from internationally accepted good practice for undertaking public projects.

- **Non-public project selection**

Undoubtedly, it is quite important to make project selection more transparent by establishing a transparent process for how government projects are prioritized, consistent with government development plans. The ECRL actually was conceived before the Najib administration, but due to the lack of funding, it was shelved by the previous government. With China's willingness to financially fund the project, the ECRL project was approved by the Najib government's 2017 budget in the absence of sufficient disclose of the project selection process.

Daim Zainuddin, Malaysian politician, businessman and the former finance minister from 1984 to 1991, claimed that the Economic Planning Unit (EPU), which prepares Malaysia's five-year development plans, had objected to the ECRL project and had voiced its concerns. However, the former prime minister Najib Razak ignored advice by the EPU about the ECRL when pushing for the RM65.5 billion rail project.[19] Deputy Transport Minister Datuk Ab Aziz Kaprawi, also responded in his speech during the Budget 2017 Debate that ECRL is under the purview of the EPU and not the ministry of transport (MOT), therefore MOT has limited knowledge of the project and he could also not answer queries posted in Parliament regarding the ECRL.[20]Based on the above facts, it is not difficult to understand why the public doubts that the approval of the ECRL construction proposal is not a collective decision.[21]

Moreover, the effectiveness of the ECRL was contest by experts. According to Deputy Defense Minister Liew Chin Tong, ECRL costs too much and mean very little to Malaysia in terms of

[19] Najib ignored govt advice on ECRL, says Daim https://www.freemalaysiatoday.com/category/nation/2019/04/21/najib-ignored-govt-advice-on-ecrl-says-daim/

[20] ECRL project not under MoT's purview, says deputy minister https://www.theedgemarkets.com/article/ecrl-project-not-under-mot's-purview-says-deputy-minister

[21] Daim wonders if Najib's Cabinet had made collective decision on ECRL project https://www.theedgemarkets.com/article/daim-wonders-if-najibs-cabinet-had-made-collective-decision-ecrl-project

connectivity and regional strategy.[22] Liew points out that transport by ship is an alternative transportation route and currently shipping from Port Klang on the west coast to Kuantan Port on the east coast via the Strait of Malacca usually takes only three days at most, but if the cargo is shipped by rail from one port to another, and adds the loading and unloading time, which will certainly take more than three days.[23] Transport by ship not only save time but are also more cost-effective then transport by ECRL. Therefore, the necessity of building ECRL is questioned.

During the Najib era, the focus was on developing infrastructure and the transportation sector. According to the 11th Malaysia Plan (2016-2020), formulated under the Najib administration, various urban public transport systems such as Mass Rail Transit (MRT 1) and MR2 were built or planned to be made. Redundant railway construction plans have attracted people's attention, one of the most significant disputes about the selection of the ECRL project is its necessity, and the opportunity cost of the much-touted RM 65.5 billion. Compared with other projects, whether this transport infrastructure is currently a priority for Malaysia to get out of the middle-income trap which is the most important proposition that restricts the development of Malaysia at present (Loh, 2017).

Some scholars pointed out that one of the main reasons behind the middle-income trap in Malaysia is its inability to transition to higher value-added activities that require increasingly complex technologies and better quality human capital. Therefore, compared with targeted measures such as deepening Malaysia's domestic industrial and innovation capacity (Hasanov & Cherif 2015; Yusuf & Nabeshima 2009), expanding technical and vocational education and training and attracting productive foreign companies to produce in Malaysia (Flaaen et al. 2013), ECRL does not seem to be a priority to escape the middle-income trap (Loh, 2017; Lim,2018). All of these policy measures mentioned above to help Malaysia escape the middle-income trap require sustained public funding, and these policies are more meaningful to the Malaysian economy than a big-ticket public project stretching mostly through a remote part of Peninsular Malaysia (Lim, 2018; Arduino & Gong, 2018).

- **Non-standard public procurement**

However, the above doubts had not been taken seriously and adopted by the Najib, the ECRL project still awarded to a Chinese state-owned entity, China Communications Construction Company (CCCC), without an open tender. Normally, the tender process for public procurement makes the bidding process more competitive to ensure value-for-money in public projects. It also helps to reduce rent-seeking, a long-term issue plaguing public projects in Malaysia. However, without an open tender, there is a high possibility that the project will be overpriced or larger than needed, ultimately breeding corruption due to lack of competition among bidders. The Najib Razak government at the time only conducted a market survey, on March 15 2016, to gauge market interest, and the results of the survey were not made public. The survey solicited views via a Request for Information (RFI) for the ECRL, covering the

[22] ECRL and HSR cost too much, mean too little — Liew Chin Tong https://www.theedgemarkets.com/article/ecrl-and-hsr-cost-too-much-mean-too-little-%E2%80%94-liew-chin-tong

[23] East Rail, High Speed Rail Not of Substantial Strategic Importance to Malaysia-China https://www.malaysiakini.com/news/440023

following aspects: project cooperation, railway design, funding, construction, operations and maintenance of the entire supply chain. An official revealed that about 22 companies from three countries had shown interest in the project based on the survey, with some respondents asking for 24 months to prepare the tender. Although other bidders expressed interest in the project, the government directly awarded the project to China CCCC without open bidding only two months later in Beijing (The Star Online, 2016). According to the public procurement methods in Malaysia (shown in Table 10), the government is required to use tender for the procurement of works above RM500,000. However, ECRL costs about RM 44 billion, well above the required standard but was awarded to CCCC without tender. Deputy Defence Minister Liew Chin Tong said the ECRL was hastily implemented against the required standard-open tender.[24]

Box1.The public procurement system in Malaysia

Malaysia is one of the major economies in Southeast Asia, with GDP ranking fourth and GDP per capita ranking third in ASEAN 2018 (ASEAN 2019). It is also China's largest trading partner in the region. By the end of 2018, the trade volume between the two countries was US$10.86 billion (or RM 45.58 billion), equivalent to 20 per cent of the total trade between China and ASEAN countries (Hong Liu 2019). In recent years, many Chinese enterprises have participated in public procurement projects in Malaysia, some of which are carried out under the Belt and Road Initiative.

The public procurement system in Malaysia is governed by the Government Procurement Division of the Ministry of Finance (MOF) in accordance with The Financial Procedures Act of 1957, The Government Contract Act of 1949 and a range of administrative regulations (David S Jones 2018). The principles of public procurement in Malaysia are in line with international standards, namely, public accountability, transparency, value for money, open and fair competition, and fair dealing. The choice of public procurement methods in Malaysia depends on the amount and content, and there are three main methods in Malaysia including tenders, quotation and direct purchase, shown as Table 10 (Ministry of Finance Malaysia 2010).

Table 10 The Choice of Public Procurement Methods in Malaysia

Types of Procurement	**Modes of Procurement**		
	Direct Purchase	Quotation	Tenders
Supplies and Services	Up to RM50,000	RM50,000-RM500,000	above RM500,000
Works	Up to RM20,000	RM20,000- RM500,000	Above RM500,000

Source: Malaysia’s government procurement regime.

Studies show that there are some challenges with Malaysia's public procurement system, such as lack of adequate annual procurement planning, lack of transparency, opaque evaluation and decision process, splitting of contracts, no open tender, and so on (David S Jones 2018). These problems reflect weaknesses in Malaysia's procurement system and may lead to corruption and fiscal losses.

[24] Liew: ECRL hastily implemented without open tenders

In fact, Najib signed a series of cooperation agreements during his visit to China. Table 11 shows some selected projects agreed upon by Najib in bilateral negotiations with China. According to a study of BRI public procurement conducted by the World Bank, the Preferential Trade Agreements involving BRI countries reveals that existing trade agreements do not include substantive provisions governing public procurement. This creates the potential for BRI countries to negotiate procurement agreements (Word Bank, 2019).

Table 11 Selected China-related Infrastructure or Real Estate Projects in Malaysia under Najib

Project	BRI Project	Natural of the project	Project value (estimated USD)	Procurement method	Major Chinese investor/partner	Status	Duration
Forest City	√	Real estate	100 billion	Direct negotiation	Country Garden	Partially completed and sold	2013-2035
East Coast Rail link	√	Rail	13 billion, later revised to 20 billion	Direct negotiation	China Communications Construction Corporation	Under construction	2017-2026
Malacca Gateway	√	Port	10 billion	Direct Negotiation	China Power International	Under construction	2014-2025
Gemas-Johor Bahru Electrified Double Tracking Railway	√	Railway	2 billion	Direct Negotiation	A consortium of China Railway Engineering Corporation（30% of stake）, China Railway Construction Corporation（40% of stake）, and China Communications Construction Corporation（30% of stake）	Under construction	2016-2021
Malaysia-China Kuantan Industrial Park		Industrial Park	806 million	Direct Negotiation	Guangxi Beibu Gulf International Port Group	In operation	2013-2020
Kuantan Port's Expansion (Deep Water Terminal)		Port	950 million	Direct Negotiation	Guangxi Beibu Gulf International Port Group	In operation	2016-2039
Digital Free Trade Zone		Free trade zone, logistics base	100 million	Direct Negotiation	Alibaba	In operation	2016-??
Trans-Sabah Gas Pipeline		Pipeline	1 billion	Direct Negotiation	China Petroleum Pipeline Bureau	Canceled and negotiated compensation	2017-??
Multi-Product Pipeline		Pipeline	1.35 billion	Direct negotiation	China Petroleum Pipeline Bureau	Canceled and negotiated compensation	2017-??

Source: Various sources, compiled by the author

Belt and Road Initiative - Project Overview https://www.beltroad-initiative.com/projects/

http://www.nids.mod.go.jp/english/publication/joint_research/series17/pdf/chapter02.pdf

- **Insufficient disclosure of project information**

The government has also been criticized for lack of disclosure of ECRL project information. The federal government did not provide the public with the feasibility study of the ECRL project even a month before its construction began. When the Transportation Minister was asked when the specific studies of the project would be released, he did not give a precise time. Except for the feasibility report, engineering, procurement, construction, and commissioning (EPCC) contracts signed with Beijing on November 1, 2017 were also not made public.

https://www.freemalaysiatoday.com/category/nation/2018/08/23/liew-ecrl-hastily-implemented-without-open-tenders/

According to Lim (2018), “Without publicly releasing a detailed engineering and economic feasibility study, both the practicality and cost of the ECRL will always be in doubt. The Malaysian public stands to lose even more if the ECRL does not generate enough passenger and freight volume, leading to underutilization and an exorbitant undertaking.”

Furthermore, CCCC is responsible for subcontracted projects, and also has been criticized for insufficient information disclosure. The procurement contract with the CCCC includes a requirement to collaborate with "local partners" and the proportion of business for local contractors is 30% (raised to 40% after renegotiation). The Malaysian public suspected that CCCC awarded nearly all contracts to Chinese builders and material suppliers and that most of the workers were from China, because CCCC did not provide detailed subcontractor information before renegotiations. Some critics even believe that even if Malaysians dominate the subcontracts, the transfer of cutting-edge technology to Malaysian subcontractors would not happen and Malaysia would benefit little from the project (Loh, 2017).

It is obvious that there were many loopholes in different stages of the ECRL when we closely examine the history of the project (see Table 12) and compare it with the standard public procurement process that reflects best international practice. First, the fact that such a large-scale project was agreed upon through direct negotiations with China violates the five major principles of public procurement in Malaysia, namely public accountability, transparency, value for money, open and fair competition, and fair dealing. Second, the details of each procurement stage suggest that they did not meet internationally recognized standards.

Table 12 Analysis of Each Stage of the ECRL

1.Strategy	From the initial strategic planning of the ECRL, the failure to quantify demand and the lack of assessment of comprehensive capabilities such as technology, capital and operations all reflect Malaysia's weak legal and regulatory frameworks and poor project planning, selection and preparation. The imbalance between the east and west coasts is a problem that has plagued Malaysia for a long time, but the federal government lacks capacity to implement this huge infrastructure project whether it be with respect to standard procurement processes, operational norms, technical capacity or public governance capabilities. It is obvious that the Najib government selected ECRL as a priority among many public projects is controversial.	
2.Design and execution	2a. Development	When the Najib government decided to develop the idea of ECRL, there were deficiencies in the recognition of potential risks and the balancing of the interests of different stakeholders. Although Land Public Transport Agency (SPAD) reported that 97% of corridor residents supported the project, after it was fully presented publicly, opposing opinions of some state governments and opposition parties were not taken into account in the planning, and some areas were not even publicly informed about the project. When looking for potential partners or financing channels, there was also

		a lack of comprehensive assessment and public consultation.	
	2b. Procurement	Main EPCC contract	• The government only used market interest gauging surveys to evaluate the market rather than relying on the standard public bidding process to produce credible estimates. • There are no standard processes such as the call for tender or bid submission. Cooperation with China was decided through bilateral government negotiations. • In terms of content and management of the procurement contract, the results of the negotiations between China and Malaysia and the details of the contract were not disclosed. SPAD only conducted public consultation on the route plans of the project, and other specific terms of the contract were not made public. • The project was directly approved by the national government, the supervision of other relevant functions is not in place, and there is a lack of re-evaluation by any second-tier review department. • The government agreed to pay a 15% advance to CCCC, despite that it historically has always capped such advances at 5%-10%[25].
		40% local contractors	• As a result of renegotiations, 214 local contractors previously approved by CCCC to participate in the construction of the ECRL will be called back. • Following the relatively open and transparent competition guidelines, the new government adopted a standard procurement process to conduct public bidding for local subcontracts. • A pre-qualification exercise was undertaken to identify eligible Malaysian contractors to participate in 40% of the project's civil works in May 2019. The pre-Q evaluation committee, consisting of experts from MRL and CCCC, were tasked with ensuring that good governance and ethical practices are upheld in the pre-qualification and evaluation of local contractors.

[25] After renegotiation on April 12,2019, CCCC has agreed to refund part of the RM3.1 billion advance payment paid for Phase 2, double tracking and the northern extension works under the original contract.

	2c. Delivery	The resumption of the project gradually got on the right track, but the construction is difficult due to geological conditions, so the government needs a more transparent system to monitor and manage the project.
	2d. Operations	Inequitable operational risk allocation has been improved through negotiations. MRL and CCCC will share responsibility equally[26].
3. Recycling capital	The project is still in the construction stage, and the economic sustainability of the project has been questioned and is difficult to predict. After the renegotiation, the cost has been greatly reduced, and the financial burden of the government has been alleviated.	

Corruption Scandals

Second, a lack of transparency creates space for corruption, and thereby undermines the public interest as well as public trust. Corruption is the key to the controversy of ECRL, and the direct fuse for its suspension.

The website Sarawak Report was the primary exposer of corrupt practices related to Prime Minister Najib, alleged that ECRL was part of a plan to siphon off money to help the troubled Najib-linked firm, 1 Malaysia Development Berhad (1MDB). [27] It revealed that the initial budget for the project is R.M. 27 billion estimated by CCCC; however, there is to be a so-called "Additional Differential" cost of RM29.85 billion, which will more than double the cost to make a total bill of RM60 billion, including a fat percentage of profit for CCCC. The extra cost will be use to launder out cash to 1MDB related companies. CCCC, which is backed by the China Government, will help pay off the 1MDB debt in advance and progressively. In return, CCCC will be rewarded with high profits and land.

According to Sarawak Report, in a document marked "For Internal Use Only" shows more details on the very suspicious terms that the Najib government had struck with CCCC. As a deal, the Najib government should directly award on extremely favourable terms on an accelerated basis and adopt Chinese rail technology into Malaysia's mega infrastructure project. CCCC also given land on generous terms, including a chunk of land which was given cheap by Najib to 1MDB, the land is valued at US$1.3 billion will be offered to CCCC for US$850 million. What's more, CCCC will also get 10years tax break for goods and services tax (GST) and income tax, and it will also be allowed to select partners, suppliers and subcontractors (Sarawak Report, 2016). Unexpectedly, Sarawak Report, the whistleblowing website, was blocked by the Najib government for reporting on what it called "unverified content".

According to minutes from a series of previously undisclosed meetings reviewed by the Wall Street Journal, Chinese officials told visiting Malaysians that China would use its influence to try to get the U.S. and other countries to drop their probes of Najib Razak and others who had

[26] Under the old ECRL deal, CCCC is only responsible for the usual legal responsibilities related to product performance and safety, and it is not responsible for manage, operate and maintain after the project's completion. After renegotiation, a joint-venture company was formed to manage, operate and maintain the ECRL rail network (MRL 50%: CCCC 50%).

[27] OUTRAGE! - Najib's Secret Deal with China to Pay Off 1MDB (And Jho Low's) Debts! - SHOCK EXCLUSIVE http://www.sarawakreport.org/2016/07/outrage-najibs-secret-deal-with-china-to-pay-off-1mdb-and-jho-lows-debts-shock-exclusive/

plundered the fund known as 1MDB. Six different countries have since investigated the operations of 1MDB and its shell companies for breach of financial regulations, especially rules on money laundering. The U.S. Department of Justice ordered a seizure of assets in the U.S. linked to or acquired using 1MDB funds. Former Prime Minister Najib was personally charged with money laundering and breach of credit, but he denied the charges. Some pointed out that the secret discussions show how China uses its political and financial clout to bolster its position overseas, while the Chinese government responded that it "does not accept baseless accusations against China." (Wall Street Journal, 2019).

Najib's secret deal with China to pay off 1MDB debts was also proved by the Mahathir government. It was subsequently discovered after Najib was removed as prime minister that CCCC was paid RM3.1 billion in advance payments even before much work had been done on the phase 1 of ECRL. After the renegotiation between the Mahathir government and CCCC, CCCC has agreed to refund part of the RM3.1 billion advance payment paid for Phase 2, double tracking and the northern extension works under the original contract.[28]

In addition to the ECRL project, the Trans-Sabah Gas Pipeline and Multi-Purpose Pipeline projects signed with the Chinese government during the Najib administration have also been linked to the 1MBD corruption case. According to the new Finance Minister Lim Guan Eng, the two projects did not receive much attention before the election because the terms and details of these projects were not subject to public scrutiny. After the new government took over, details about these projects were revealed. Lim added that the terms of these projects were "lop-sided." The modus operandi of these two projects were similar to ECRL, in which China's Export-Import Bank provided the loan, while a Chinese state-owned company, China Petroleum Pipeline Bureau, was awarded the project without open tender (Ngeow,2019). While there were several reasons leading to these project's rejection and cancellation, the disquiet surrounding the Najib administration's management of the BRI ranks as one of the more significant factors.

On the one hand, because of the scandals, the Malaysian public has doubts and resists the ECRL and other BRI projects, on the other hand, many Western companies and entities are hesitant to conduct business with Malaysia's current presidential administration due to political corruption risk. The impacts of corruption scandals on Malaysia are serious and far-reaching.

Political Games

Third, opaque administrative decisions and corruption scandals are used by the opposition to mobilize citizens to fight against proposed initiatives and the current political regime. The ECRL, reached without an open tender, has become key focal point for political competition between the PH coalition (opposition) and the BN coalition (former-ruling faction).

[28] PM: China Communications to refund part of ECRL RM3.1b advance payment https://www.theedgemarkets.com/article/pm-mahathir-china-communications-refund-part-ecrl-rm31b-advance-payment

The ECRL was criticized early on by the then opposition coalition PH. Opposition leader Mahathir said that once he wins the 2018 general election, he would re-evaluate a series of large-scale infrastructure projects approved by the BN government, especially the ECRL. Because the ECRL and other projects are tainted by the widely-held corruption perceptions of Najib, they must be canceled to convey a sense of cleaning-up the mess left by the past government.

Often, project delays and compensation issues are not attributable to market conditions but to the internal politics. Malaysia's ECRL project for instance was suspended by Mahathir on the grounds of "national interest". The new government revealed that the previous Barisan Nasional government had concealed the real costs of the ECRL project which was deemed too costly. Mahathir's decision to shelve the ECRL is widely interpreted as a cost-cutting measure, but probably its more important goal is to shrink the economic base of the Najib clique (Liu & Lim, 2018). However, as the ECRL was billed as the flagship BRI project between China and Malaysia during the Najib era, the diplomatic implications of outright cancellation would have to be seriously considerations. Besides, the new PH government also had to be concerned about the financial compensation and other legal implications of the termination of an agreement signed between two governments (Ngeow, 2019).

In addition to the different attitudes towards the ECRL project of the governments of Najib and Mahathir, there also are different opinions within the ruling coalition. The Hope Alliance, established in 2015, is composed of the Democratic Action Party (DAP), the People's Justice Party (PKR), and the National Trust Party (AMANAH). Differences of power within the group also affected the new government's assessments of the ECRL project.

Earlier, although Prime Minister Mahathir claimed that the government had saved RM300 billion by cancelling many infrastructure projects including the ECRL, Finance Minister Lim told parliament that ECRL was still under negotiation and no consensus had been reached to cut costs. In this regard, it was reported that they may have different views on the ECRL. The same is true of the confusion caused by the very different comments of different ministers at the beginning of 2019. The Minister of Economic Affairs announced the government's decision to terminate the ECRL project, but Finance Minister Lim said that the government had not yet made a decision on whether to terminate the project. This raised questions of whether the new leader Mahathir was adequately informed about the nature of some of these projects, whether he deliberately politicized these projects, and whether the new coalition government could form a coherent government now they were in power (Ngeow, 2019).

In addition to the politicization of the project, the frequent change of political parties in Malaysia might also increase the uncertainty of the project. Former Prime Minister Mahathir submitted his resignation to Malaysian Supreme Head of State Abdullah on February 24, 2020, after less than two years in power. Muhyiddin Yassin was appointed as the new Prime Minister; he had previously also criticized the corruption case of the 1MDB and questioned the ECRL. Thus, his assumption of power creates huge uncertainty about the future of the project.

From the case of Malaysia, we can see that the change of political parties, political instability, elite in-fighting and weak governance capacity in a host country pose significant risks to the large-scale international cooperation projects that the BRI was intended to produce.

Geopolitical Risks

Last but not least, China could take advantage of the above-mentioned governance weaknesses of host countries to make deals in a "bilateral way", and in the process enhance Beijing's geopolitical influence in the region. As one of Malaysia's most ambitious government-to-government infrastructure projects in recent years, ECRL has the potential of extending the geopolitical goals of China.

It is obvious that the controversy about the low demand and limited trade volume capacity of the ECRL still continues, opponents believe that the argument about the great economic and strategic geopolitical value to China seems at odds with concerns about whether the project is economically viable due to low demand.

In contrast, optimistic supporters believe that the ECRL could not only resolve China's perennial 'Malacca Dilemma' but also foster closer trade connectivity with other economies. Almost 80% of China's current energy demand passes through the narrow Straits of Malacca, the new network might create alternative trade routes, and the project could also have a negative impact on Singapore's position as a shipping and commercial hub in Southeast Asia. All this also illustrates the tension between the geopolitical goals and commercial motivations of the BRI.

The new routes opened up by ECRL may also offer Malaysia a window of opportunity to bypass Singapore. However, the real situation is that several major China container shipping industry consortiums shifted their shipping operations from Port Klang in Malaysia to Singapore despite the development of the ECRL. With Singapore also building a new Tuas mega-port, the impact of ECRL on the shipping and trade patterns in the region remains uncertain.[29] It further intensifies critics' concerns that the project is being used for expanding Chinese political influence rather than for economic opportunities for Malaysia (Fei, 2018). Coupled with other broader geopolitical issues, such as the ongoing territorial disputes between China and several Southeast Asian countries over the South China Sea, lopsided projects such as ECRL could heighten tensions and pose a challenge for BRI (Arduino & Gong, 2018).

Wong Lee, a Member of Parliament and a member of the Democratic Action Party of Malaysia (DAP), argued that Chinese investment in the ECRL is concessionary and part of a larger geopolitical strategy. However, in a speech about the project, Najib defended China's involvement, explicitly stating that this collaboration would not impact Malay sovereignty and "should not be politicized".

[29] Hellenic Shipping News Worldwide. http://www.hellenicshippingnews.com/singapore-ports-will-rule-despitemalaysian-mega-port-projects/

Latest government statistics show that China became Malaysia's largest investor in 2016, contributing investment totaling US$1.6 billion (equivalent to 17.5% of the country's total FDI inflow). Concerns have been expressed in society that China's investments in Malaysia have grown "too much, too fast, too soon", and question whether BRI projects are in line with Malaysia's own development plans. Obviously, with BRI, China has not only brought large-scale capital investment to Malaysia but has also created fears that national sovereignty has been undermined, and public interest compromised in favor corrupt elites. All this may generate anti-China sentiment in the host country.

Scholars from Singapore analyzed the ECRL projects from the standpoint of geopolitics (see Table 13) and concluded that BRI's success (or failure) is dependent on three key conditions: fulfilment of Malaysia's longstanding pro-ethnic Malay policy; a shared vision between the state and federal authorities, and advancement of geopolitical interests for both China and Malaysia. Only by dealing with these three variables properly can projects be launched smoothly. This three-tier analysis helps to incorporate the motivations of multiple interest groups, particularly in countries with federal government structures (such as Malaysia), and where political power is often unevenly distributed between central and local administrative units (Liu & Lim, 2018).

Table 13 Alignment of Interests between China and the Belt and Road Initiative Recipient States

Project/analytical dimension	Intertwining of domestic ethno-political agenda with Chinese objectives	State–federal contestation	Convergence of China–Malaysia geopolitical goals
East Coast Rail Link	High	Low	High

Source：Liu & Lim, 2018

As shown in the Table 13, ECRL performs well in both intertwining of domestic ethnopolitical agenda with Chinese objectives and convergence of China-Malaysia geopolitical goals, and the ECRL should have been a resounding success rather than criticized and suspended by the Mahathir government. The experience of ECRL enlightens us that the governance capacity and the coordination of interests within the recipient country play a leading role in the success of infrastructure projects. Even if a project such as ECRL is strategically in line with the needs of both countries (recipient and host countries), it could fail because of the poor institutional capacity of the ruling party, such as Najib government. ECRL it failed is due more to Najib's incompetent handling of it and the widespread perceptions that it was a deal that benefitted Najib and not necessarily Malaysia.

Overall, it is not difficult to find that the two sides did not reach an agreement on some dimensions, so disputes will inevitably arise. The BRI recipient country has its own political and economic goals that may not be in line with BRI objectives. When a divergence emerges, the former tends to assume a bigger role in determining the outcome. Mahathir’s decision to

immediately suspend a number of infrastructure cooperation projects with China provides evidence for this argument. Of course, the recipient country also faces huge costs if it were to walk away from the agreement.

In conclusion, the above geopolitical risks should sound warning bells for ASEAN countries. The above ECRL case study suggests that it is in the interest of both sides (i.e. the Chinese and the recipient country) to be cautious in concluding an agreement, consider and evaluate the various political and governance risks in the project at the outset, and to insist on a transparent procurement process. Failure to do so may backfire subsequently on both parties as the political environment in the host country changes, and the environment becomes more hostile for BRI projects that have been, or are perceived to be, improperly financed or implemented.

5.6 Recommendations

One puzzling aspect of the case study is that Malaysia does well on many governance indicators, but the ECRL deal with china was still filled with loopholes. It reveals the governance problems of deals made at the very top (government-to-government) level and that, even in a well-governed country, it can be undermined by this specific type of governance risk. Therefore, recipient countries should strengthen their evaluation and institutional frameworks in approving large public project, also should make sure that the agreement is in compliance with the official decision-making process. Under the situation, a highly transparent project selection is recommended.

For governments to reap the benefits of BRI projects, procurement should be open, transparent, and competitive—with awards going to the firms best placed to execute a project. By comparing with the international good public procurement standards and processes introduced above, it is obvious that there are loopholes in the procurement process of ECRL. The renegotiation of ECRL also warns other ASEAN countries, as recipients of BRI, to pay attention to the potential management and governance risks of the BRI project. The joint efforts from both China and ASEAN can resolve these obstacles. As president Xi Jinping pointed out in his opening speech at the second Belt and Road Forum for International Cooperation, China would institute reforms, as the need for high quality, sustainability, reasonable pricing as well as transparency are emergent. He noted, “Everything should be done in a transparent way.” With transparency, everything else follows. If China can live up to this pledge, the path for its Belt and Road projects should be much smoother. For ASEAN, in order to ensure the projects to meet the needs of national development and conduct transparently, the following points need to be considered.

Conduct a comprehensive and transparent project selection system.

The ASEAN countries are in a rapid development stage, facing a large number of development needs such as infrastructure, transportation, education, health care and so on. Since resources and funds are limited, the government should invest these in the areas that the country needs most. A project screening mechanism needs to be established. Each department will submit the

projects that they want to execute to this system. The system will conduct a detailed assessment of the project from environmental, economic, social, labour and other aspects. Ultimately, the project that best meets the development needs of the country will be prioritized. Myanmar's experience in this area can be used for reference.

Myanmar launched a project bank - a publicly accessible online platform to provide information about the projects which will be implemented according to the Myanmar Sustainable Development Plan 2018-2030. The government aims to establish a predictable and transparent system that can identify, screen, appraise and prioritize major investment projects based on social, environmental, economic and risk indicators[30]. This system can help the project to connect with the proper funding source and increase the opportunity for private sector participation in Myanmar's development.

Build a transparent and effective public procurement process.

Improving transparency is an important way to prevent corruption. A transparent process can attract more suppliers to participate in the bidding, and then promote the rational and economical use of monetary funds. Governments should enhance transparency in the following aspects:

Re-examine the existing public procurement system. Governments should review and improve the current public procurement system based on the sound international procurement system, such as the Agreement on Government Procurement (GPA) and Preferential Trade Agreement (PTA). Both emphasize economy and effectiveness, encourage international competition and attach importance to the transparency of the procurement system; the principles emphasize value for money, competitiveness, transparency and non-discrimination. Implementing international standards, the government can build a rigorous and transparent public procurement system, which reflects the governance capacity. First, it can attract investors to participate in the bidding which provides the government more alternative plans. Second, the risks of corruption, over budget and suspension will be reduced under strict monitoring. Therefore, the project can deliver smoothly, which can enhance the sustainability of country development.

Enhance information disclosure. Governments should build online procurement portals for the disclosure of information. The information may include, but need not be limited to, a comprehensive bidding process, award criteria, announcement of awards of contracts and bidders, disclosure of the value of the contract and notification of the reasons for the award to other bidders, announcement of the suppliers who failed and reasons for their failure, and the publication of the construction schedule of the project and the real-time progress of the contractor.

Set complaint mechanisms. Bidders have the right to complaint about the unfair treatment and the flaw of the public procurement process. Therefore, there is a need to establish complaint mechanisms to respond to and resolve bidders' comments and complaints, which can ensure procurement to be conducted more fairly and transparently and enhance bidders' trust in the procuring entity. In additional it provides a platform for the citizen to contest the procurement

[30] https://projectbank.gov.mm/en/

process and public official's behavior.

6. Environmental and Social Risk

Environmental and social sustainability is a critical issue for a country's long-term development. China's President Xi Jinping highlighted the importance of a "green, healthy, intelligent, and peaceful BRI" in his speech delivered at the Legislative Chamber of the Uzbek Supreme Assembly in 2016, showing China's resolution on green development with BRI host countries.

6.1 Trade-off between development and preservation

Focusing on transport and energy infrastructures (see Appendix 1), BRI brings certain environmental and social benefits to the host countries.

Transport infrastructure will provide much travel convenience. Efficient and well-planned transport networks relieve urban congestion, save commute time, enhance local and regional social connectivity. Besides, a study from the World Bank (2019) shows that railway, particularly high-speed railway (HSR) powered by electricity, has less impact on air pollution compared to road, air, and waterway transport since HSR exhaust less greenhouse gas (GHGs) emissions per passenger or freight.

Energy infrastructure is another significant type of BRI investment. ASEAN has a target of reaching 23% renewable energy by 2025 in the ASEAN Energy Mix, showing that governments have realized the negative consequence of the dependence on fossil fuels and are seeking suitable renewable sources of energy. Taking advantage of the mountainous terrain, tropical monsoon climate, and good rivers with an abundant flow, hydropower is one of Southeast Asia's biggest renewable energy sources. International Renewable Energy Agency stated in 2018 that hydropower capacity in Southeast Asia grew from nearly 16 GW in 2000 to 44 GW in 2016. Some BRI projects in ASEAN have been on planning or construction. If properly planned, they will provide stable, renewable, and low-cost electricity for industrial production and household's daily consumption, acting as a catalyst to foster living standard and energy security improvement.

However, there is a trade-off between development and preservation. While host countries are enjoying the benefits from the BRI projects, potential risks along with should not be neglected.

6.2 Environmental and social risks in BRI

Southeast Asia has long been an ecologically fragile area. Environmental and social risks may occur or intensify, and obstruct the implementation of BRI projects.

6.2.1 Vulnerable ecosystem and the induced environmental and social impacts

Geography and climate in Southeast Asia make the ecosystem in this region naturally fragile. Since the entire region is affected by the southwest monsoon, the rainy season brings large but unevenly distributed rainfall. Mountainous inland terrain and extensive lowland plains near downstream of rivers make the natural environment more vulnerable to risk.

On one hand, human activities such as growing population, fast industrialization and urbanization are increasing the burden on the environment. Thus, the increasing BRI infrastructures, if not being well-planned, will expand the negative environmental impacts.

On the other hand, since human-being and the environment are closely related, the environmental risks in BRI will, in turn, bring about social risks.

Combining the issue highlighted in the Fifth State of ASEAN Environment Report, the World Bank Environmental and Social Standards (ESS) and a BRI study from the World Bank (2019), we identify the following environmental and social risks of BRI infrastructure constructions in the ASEAN region.

Hydrologic impacts and threatening of livelihood

Southeast Asia has a wide and complex hydrologic network, which is badly affected by climate and human activities. Large hydropower sites or transport projects in BRI will alter the hydrologic systems, divert the course of important rivers such as the Irrawaddy River and the Mekong River, reduce sediments and delta. It will eventually lead to aggravated floods, erosion, and loss of shorelines in the downstream, threatening the regional ecosystems.

As the hydrologic system is altered, individuals and communities will be affected. Millions of people in ASEAN countries make their living rely on their nearby river for the source of food and income. Hydropower project constructions make farmlands and places of residence more prone to be flooded. It also strikes the planting agriculture and fishing industry. Nearby residents are forced to move out due to land acquisitions. Some conflicts occur because of the dissatisfaction of resettlement compensation and the difficulty of finding jobs they are familiar with in a new environment. It will lead to public protests when the interests of some people are affected.

Pollutions and health diseases

Energy consumption projects such as fossil fuel and renewable energy projects etc., will generate excessive greenhouse gas (GHGs), PM2.5, and other pollutants, which will cause haze, acid rain, yields reduction, plant death, and soil composition. (Zhou, et al. 2019) pointed out that “From 2014 to 2017, 91 percent of the energy-sector syndicated loans in which the six major Chinese banks included in this study participated, and 61 percent of the energy-sector loans financed entirely by China Development Bank and/or China Exim Bank were in fossil fuels.” The dependence on fossil fuel will seriously affect the energy consumption structure and lead to hazardous air pollution.

For HSR projects, the source of electricity generation and consumption will affect its impact on air pollution. Although HSR, mainly powered by electricity, is considered to be a more environmental-friendly transport, if large coal is used to generate electricity, significant production of SO_2 will be produced.

For road projects, pollutions not only directly come from the construction process, but also indirectly come from the induced traffic, which emits a large amount of vehicle exhausts.

Also, when trash, exhaust emission, and pollutants, produced through constructions, are washed into waterway directly without treatments, they will lead to serious water pollution.

Air pollution does harm to people's health and probably leads to illness or diseases such as pneumonia, bronchitis, and lung cancer. In terms of water pollution, since the river basins cover a wide range of residential and agriculture areas, many people draw water from the river for daily consumption. The foul-smelling polluted water will affect public sanitation.

Deforestations, biodiversity loss, and ecosystem imbalance

Tropical forests in Southeast Asia cover nearly 15% of the world's tropical forests. They are significant for climate comfort, soil and water protection, and wildlife habitat preservation. However, traffic constructions will aggregate deforestation in Southeast Asia. A meta-analysis by Geist and Lambin (2001) finds that the extension of road infrastructure is a proximate cause of deforestation in 61% of the cases studied while rail expansion is the proximate cause in 11%. Since many species rely on tropical forests, they will lose their habitats, and thus illegal poaching and wildlife trades will increase.

Human-being, flora, and fauna play significant roles in the ecosystem. The reduction of tropical forests or endanger of species will eventually have a significant impact on human-being. For example, deforestation in Pan Borneo Highway, which spans Malaysia, Indonesia, and Brunei, causes landslides, floods, and other disaster mitigation concerns (Frost, 2020), leading to long-term economic loss and human safety risk particularly during the rainy season.

Natural or cultural heritage destructions

Moreover, some infrastructures will demolish or flood local natural or cultural constructions, which are symbols of a city or an ethnic group, leading to irreversible loss of ethnic culture and weakening the sense of ethnic and national belonging.

6.2.2 Weak government capacity

In such an environmentally and socially sensitive region, governance capacity is of great importance to manage the induced risks from BRI projects. Poor government capacity will lead to or intensify environmental and social risks. However, it has been a concern that some ASEAN countries have poor governance capacity since their previous government actions fail to manage risks neither from natural disasters nor human activities.

In 2008, the category 4 Cyclone Nargis slammed into Myanmar's low-lying Irrawaddy Delta, but Myanmar military government neglected both before and after the cyclone, not adopting immediate actions and even impeding international assistance. The government failed to conduct disaster anticipation, information tracking, and fast response to the cyclone. Delayed rescue caused about 140,000 deaths and 800,000 displaced lives, heavily striking the economy and public health. The military government made the environment disaster become a political governance disaster that triggered serious social damage.

Table 14 shows the 2018 Environmental Performance Index (EPI). The index ranks 180 countries and 24 policy performance indicators on environmental health and ecosystem vitality. Singapore is the only ASEAN region country that ranks in Top 50. 60% of the ASEAN

countries rank in the lower third, showing that many country governments in this region do not take enough positive, strong, and effective actions to environmental issues.

Table 14 The 2018 Environmental Performance Index in ASEAN

Rank	Country	Score
49	Singapore	64.23
53	Brunei	63.57
75	Malaysia	59.22
82	Philippines	57.65
121	Thailand	49.88
132	Vietnam	46.96
133	Indonesia	46.92
138	Myanmar	45.32
150	Cambodia	43.23
153	Laos	42.94

Source: Environmental Performance Index 2018

The weak governance capacity will enlarge social loss, intensify social contradictions, lead to public oppositions, affect the long-term economic growth and social stability.

6.3 Case Study: Myanmar Myitsone Dam Project

Energy infrastructure is one of the main types of BRI investment in the ASEAN region. Most of the countries in this region are undeveloped with fast population growth and high infrastructure demand. To utilize the advantages of the mountainous terrain and large rivers such as the Mekong and Irrawaddy River, hydropower is widely used as a cost-efficient, clean, and stable source for renewable energy to fulfill the energy demand. The Myitsone Dam project, initiated before the BRI, is a representative case to provide a significant value of reference and experience for other projects planned in the ASEAN countries. The conflicts on the complex environmental and social risks exposed in the Myitsone Dam project are miniatures of the dilemma between development and preservation in the ASEAN region.

6.3.1 Introduction on Myitsone Hydropower Dam project

Myanmar is facing great demand for electricity, one of the countries with the lowest electrification rate in Asia. Only 34% of the population in Myanmar have access to grid power electricity (IIED,2016). Estimations from Myanmar Living Conditions Survey 2017 (UNDP, 2019) reveals that nearly 11.8 million people, 24.8 % of the population, lives under Myanmar's 2017 poverty line, which is 1,590 kyat (about US$1.13) per adult equivalent per day. Confronting a large energy demand, the National Electrification Plan (2014) aims to provide electricity to the entire country by 2030 and emphasizes hydropower as a long-term energy solution to reach 9,000 MW by 2030. Myanmar's hydropower installed capacity in 2018 is 3,331MW (IHA, 2019), two-thirds of the country's energy mix.

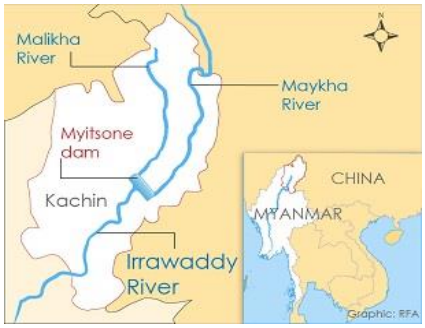
The Myitsone Hydropower Dam is proposed to be built the first dam on the mainstream Irrawaddy River in Kachin State, at the confluence of the Mali and N'Mai rivers. It is one of the seven new hydroelectric projects on the upper Irrawaddy River and is planned to be the

world's fifteenth largest hydroelectric power station, with a generation capacity of 6,000 MW. Supported by the military government, the $3.6 billion construction site was built by the Upstream Ayeyawady Confluence Basin Hydropower Company, a joint venture between the China State Power Investment Corporation (SPIC) Yunnan International Power Investment Co., Ltd. (85%), the Myanmar Ministry of Electricity and Energy (15%), and Asia World Company (5%). SPIC is the successor of China Power Investment Corporation (CPI) when CPI was merged with the State Nuclear Power Technology Corporation to form the SPIC in 2015. 90% of its electricity is planned to be exported to Yunnan in China. The rest is for Myanmar's domestic use. According to a BOT (built-operation and transfer) mode of agreement, Myanmar will gain ownership of the dam after 50 years. The construction began in December 2009. However, the dam project caused consistently strong oppositions in Kachin. In September 2011, it was suspended by then President Thein Sein, who came into power in March 2011 and was claimed to be the first democratically-elected president by the military.

Since January 2016, National League for Democracy (NLD) has become the ruling party, but NLD has avoided deciding on the project's future. A poll conducted by the Yangon School of Political Science (YSPS) in 2017 estimated that 85% of people in Myanmar opposed to the Myitsone Dam. International Financing Cooperation (2018) conducted a Strategic Environmental Assessment for Myanmar hydropower sector that the hydropower sector planning should "maintain healthy basins over the next 100 years and beyond by avoiding significant natural resource degradation from the loss of mainstem connectivity and important sub-basin environmental and social values." However, In December 2018, the Chinese Ambassador for Myanmar visited Kachin state and lobbied the restart of Myitsone Dam.

The Myitsone Dam was planned to be the Chinese government's flagship development project in Myanmar. The suspension of the Myitsone Dam project signals a change in the political environment where the new government would like to listen to and respond to the citizens, but this may also lead to a potential conflict in the China-Myanmar bilateral relations.

Figure 15 Myanmar Myitsone Damp Project



Source: refworld.org

6.3.2 Environmental and social risks

There are fierce interest conflicts among the military government, the civilian-run government after 2011, the Kachin ethnic groups, the general public, and the Chinese investor. The construction of the Myitsone dam involves complex environmental and social externalities.

Biodiversity loss

The suitable sites for the dam location overlap with the region's high-biodiversity hotspots and densely populated areas. The Irrawaddy River area is one of the five great rivers in the Mekong subregion. Kachin State is located on the border between two of the most bio-diverse and threatened ecological regions on earth: the Indo-Burma and South-Central China "hotspots." The Indo-Burma hotspot is one of the eight "hottest hotspots" in the world with 7,000 endemic plant species.

Hydrology disruptions and threatening of the local inhabitants' livelihood

The constructions of the dam will cause hydrology disruption, biodiversity loss, disruption of species habitat, and threatening of local inhabitants' livelihood, since many residents rely on the Irrawaddy River for diet and income from agriculture, fishery, and tourism.

The project will disrupt the hydrology of the entire lower Irrawaddy River basin, a life-sustaining ecosystem affecting mainland Southeast Asia. "The project will disconnect and regulate flows from 11.6% of the Ayeyarwady basin area that contributes an estimated 42% of the total basin discharge" (IFC, 2018). Flow reduction will substantially reduce basin sediment load and disrupt the natural replenishment of water and nutrients to wetlands and floodplain areas downstream, affecting agricultural productivity along the Irrawaddy, the delta of which provides nearly 60% of Myanmar's rice (KDNG,2007). Rice and fish are key staples in Myanmar but altering the water flow will cause riverbank destruction and increases erosion, which will weaken the farmland fertility. Besides, the alteration of water flow could potentially flood an area of 766 km^2, an area bigger than Singapore. Riverbank gardens, paddy fields in the downstream Irrawaddy Delta area of rice production will be flooded. The floods will also cut off the roads that connect between major towns, affecting communication, transportation, and trade.

Revenue from the freshwater fishery industry will be heavily struck. Myanmar has abundant freshwater fishery resources and the Irrawaddy River is one of the three main inland-waters systems of freshwater fish. If the dam is built, it will block the migration routes of fish and destroy the original habitat of downstream fish, thus reducing fish diversity and even causing species extinction. Tourism revenue will be also affected due to environmental destruction.

Displacement is another complicated issue. Approximately 10,000 people are likely to be displaced and lose their livelihoods. About 300 families were relocated in the resettlement housing in Aung Myin Tha. There are some advantages in the new housing, but most families now have less farmland and diminished access to the Irrawaddy (Ives,2017). Besides, when too many villagers resettle to a new town or city, it will intensify the resource scarcity and employment competition.

Health and Safety

Northern Myanmar is earthquake-prone. The Myitsone dam site is less than 100 km from the major Sagaing fault line. Dam breakage or unnatural flood surges would be disastrous along the river basin. Besides, the World Commission on Dams found that dams have increased human vulnerability to floods. When a large flood occurs and the reservoir cannot hold back

the water, it will spill over and make the flood very dangerous. This is particularly dangerous in the Myitsone project, which is merely 40 kilometers upstream (KDNG,2007). Besides, an increase in malaria and the release of toxic methyl-mercury from the dam construction will endanger people's health and safety. According to the World Commission on Dam (2000), "among the resettled, access to drinking water, health services and ability to cope with new social and physical environment determines health conditions." Drug addiction and HIV/AIDS in this area may also increase due to unemployment and illegal sex work. (KDNG,2007)

Natural and cultural heritage destructions

The Myanmar public regards the Irrawaddy River as the birthplace of Myanmar's civilization. But the construction of the dam will flood cultural sites including historical churches and temples. A sacred banyan tree at the confluence area will also be submerged. The endangered Irrawaddy dolphin, regarded as a sacred animal in Southeast Asia, may become extinct. Several cultural sites will be flooded if the dam is built. The Irrawaddy River is a symbol of Kachin identity and history. The destruction of the river will weaken the local people's sense of ethnic and national belonging.

Weak governance capacity and public protests

The construction of the Myitsone dam involves many interest groups but the military government has a weak governance capacity to respond to the environmental and social risks. Thus, it has arisen fierce opposition from the autonomous local government, ethnic groups, the general public, and international NGOs.

First, the military governments failed to deal with the historical ethnopolitical problem properly. Myitsone dam is located in Kachin State, in the north of Myanmar bordering with the Yunnan Province in China. Kachin State is the homeland of Kachin people, a minority ethnic group in Myanmar. Although there is no public census data in recent years, it is estimated that about one million Kachin peoples live in Kachin State. The state has been controlled by the Kachin Independence Organisation (KIO), an armed Kachin ethnic group in Kachin state opposing the government. It is the autonomous local government that controls most of the state, managing public order, and economic development. The KIO has signed a ceasefire agreement with the military government in 1994 but keeps pressuring the military government to restore the federal democratic government with greater autonomy to Kachin State. Previously, local conflicts could be halted by addressing economic rather than political grievances. However, increasing international investment are leading to a renewal of military tensions.

Second, the project involves conflicts of interest among the military government, local ethnic groups, and the general public. The military government lacked a comprehensive public consultation, did not disclose the details of the contract, and did not respond to inquiries or opposition from the public.

The KIO has opposed to the construction of the Myitsone Dam, though it has supported some previous hydropower development plans working with Chinese investors. For example, China's Jinxin Company is the contractor of the Mali Creek hydropower scheme and the Dabak River dam, which are initiated by the KIO in 1997. But the KIO changed its stance after some China investors chose to cooperate with the military government rather than the KIO, making

the KIO lose the interests of land and revenue. The KIO had cooperated with China's Datang Corporation on the Tarpein River dam project development and provided some funding. But when the military government intervened, Datang forced the KIO out and the military government soldiers occupied the area around the dam (Qin,2012).

"While the regime will gain new revenues, Burma's ordinary citizens, who have no say in the process, will bear the costs." (KDNG,2007). It leads to fierce public protests. Before the suspension, local and international ethnic groups, and the general public expressed their opposition. In 2017, elders and community leaders have sent protest letters to Burmese Senior General Than Shwe, calling to stop the project but with no response. Over the next two years, graffiti reading, such as "No dam" and "No Myitsone" increasingly appeared in public places in Myitkyina, the capital of the Kachin state. Anti-dam leaflets were distributed in villages throughout Kachin. When the military forced the villagers living around the confluence to leave, local churches held gatherings for oppositions to the dam project. In 2009, the Rural Reconstruction Movement Organization (RRMO) and Kachin Public Youth Organization (KPYO) enlisted the help of 50 local pastors to collect signatures of 4,100 Kachin residents and sent a petition to the Chinese government. In October 2009, the army's Northern Commander General Soe Win hold a meeting with over 100 local villagers. The villagers expressed their opposition to the dam construction but met no response.

In February 2010, the UK-based Kachin National Organization (KNO) protested against the Myitsone Dam project in front of the Burmese Embassies in the UK, Japan, Australia, and the United States. Routers (2019) reported the leaked United States cables that some protests in Myanmar were initiated by the local ethnic group and the general public, and the US embassy in Yangon funded some activist groups. Besides, Burma Rivers Network (BRN) and Kachin Development Networking Group (KDNG) gained international support through online publications and news-press. BRN also received support from international organizations, most prominently the US-based International Rivers Network. (Sayvetz,2012)

In March, 2011, President Thein Sein came into power. From August, pro-democracy politicians, including Aung San Suu Kyi, the leader of Myanmar's pro-democracy opposition, keep calling the halt for the Myitsone project by appealing Supreme Court intervention and nationwide referendum. On September 2, President Thein Sein received a petition "From Those who Wish the Irrawaddy to Flow Forever", which was signed by 1600 persons from various professionals. On September 30, the Myanmar government eventually announced the suspension of the Myitsone project.

Third, the Environmental and Social Impact Assessment on Myitsone Project was not transparent, effective and sufficient. International Rivers pointed that there are much less study and planning has been conducted for the Myitsone project compared to the Three Gorges Project, the world's largest power station in terms of installed capacity (22,500 MW) constructed in China Yangtze River. The Environmental Conservation Law in Myanmar was established in 2012, and the environmental and social impact assessment (ESIA) in Myanmar was introduced in 2016 with assistance from the Asian Development Bank (ADB), both after the Myitsone project establishment. In 2009, CPI assigned a team of 80 Burmese and Chinese scientists and environmentalists to conduct an environmental and social impact assessment of

the Myitsone Dam. The ESIA was not planned to be disclosed to the public. Burma Rivers Network obtained a copy of the ESIA and made it public. The ESIA concluded that the dam should never be built. Nonetheless, Myanmar Ministry of Electric Power-1 responded that it had done its own environmental assessment and that the dam would be built. (Asia Sentinel, 2019). Besides, a report from Kachin State Development Networking Group (KDNG) in 2007 stated that the assessment did not involve local communities. After the dam suspension, international NGOs become prominent and expressed their concerns on the project. The 2009 ESIA was reviewed in 2013 by Myanmar and international experts, initiated by International Rivers. The ESIA report was found having "serious deficiencies and flawed conclusions". It significantly underestimated the impacts of the dam on the river's downstream flow and sediment regime, fisheries, and aquatic biodiversity, and its implications for food security, livelihoods, and public health, while overstating benefits (International Rivers, 2013). In 2019, another international NGO, Human Rights Watch said that BRI should respect human rights, and some BRI projects without adequate transparent environmental and social impact assessments or without sufficiently local community consultation would prompting widespread protests.

Fourth, the military government did not provide safeguards to residents. The military government dispatched soldiers to ensure the security of the dam. However, local villagers were reportedly intimidated by military authorities during the resettlement process. In September 2006, Light Infantry Battalion 29, with an estimated 500 soldiers, relocated to Palana, which is only about 20 miles from the Irrawaddy Myitsone dam site. Over 50 households that lived near the new battalion's camp were forced to leave their homes without compensation (KDNG,2007). The Kachin Women's Association Thailand (KWAT) pointed out that women in the area are vulnerable to trafficking due to poverty and unemployment, and were forced to engage in involuntary sex work, or sold as wives to other countries. The Myitsone Dam project will worsen the problem due to increased displacement. Moreover, rapes committed by Myanmar Army troops against women have occurred in Lawpita, another hydropower project. Women near the Myitsone Dam project may also suffer sexual violence. In terms of healthcare, the healthcare system in Myanmar is too poor to support the potential health problems. In 2018, Myanmar was at the lowest among 190 countries on the World Health Organization's ranking of the world's health systems due to low expenditure on the healthcare sector.

The protests against the Myitsone Dam are not the only public protest against Chinese-invested infrastructure projects in Myanmar. The Sino-Myanmar pipeline project which is between Kunming in China and the Bay of Bengal in Myanmar has been in operation since 2017. In March 2018, the Myanmar residents held protests on environmental and safety concerns and inadequate compensation arrangements. But no news reports show that the conflict has been solved up to now.

6.3.3 Future: restart or shut down

The Myitsone Dam is a challenge for the Myanmar government to build trust with the domestic public and trust with China.

The revenue of the electricity export will be $500 million annually, 20% of Myanmar's government revenue. Besides, the suspension of the Myitsone Dam has blurred political trust between China-Myanmar relations. China remains the biggest foreign investor in Myanmar, directly investing more than $15 billion in 126 business projects in 2018, and Myanmar is liable to pay $800 million to China if the Myitsone project is canceled. It would also weaken investor confidence in Myanmar, and possibly affect the country's economic revival. Aung San Suu Kyi, the leader of NLD, was against the Myitsone Dam when she was in opposition. But after the election victory in 2015, she has changed her stance, saying that deals struck under the former military government should be honored. In 2019, she said that "For the dignity of our country, and for our country to be trusted in the world, we will need to keep our promises."

Thant Myint-U, a Myanmar historian writer, stated that Burma can benefit enormously from Chinese trade and investment, but there is almost bound to be a backlash if Chinese projects are undertaken with zero transparency and little concern for their impact on local communities. (Harvey,2011)

Myanmar is under pressure from the Chinese government the Myitsone dam resume, but strong social against the dam project still exists. The deal of Myitsone Dam is made between China and the military government and the contract has not been disclosed so that the political and economic interests for the military government and Myanmar in the Myitsone Dam project have remained unknown.

Myanmar has transited from the military government to a civilian-run government since 2011. The current governing party National League for Democracy (NLD) is seeking to consolidate its governance. If the government chooses to restart the dam project, it will affect the result and victory of the 2020 election. In 2019, before Aung San Suu Kyi's visit to Beijing for The 2nd Belt and Road Forum for International Cooperation on April 25, people in Myanmar held a protest against the revival of the Myitsone Dam on April 22. Considering the election victory and party reputation, Aung San Suu Kyi should carefully decide the future of the Myanmar Dam project.

Some alternatives have been proposed if the Myitsone Dam is shut down. Routers pointed out in 2011 that the ESIA conducted in 2009 has recommended building two smaller hydropower dams to substitute the Myitsone Dam. Compared to large dams, small hydropower dams are quicker to develop technologies and with less negative impacts. New York Times reported in 2019 that Aung San Suu Kyi's spokesman, U Zaw Htay, said in 2016 that as a compromise for not building the Myitsone Dam, Aung San Suu Kyi was prepared to offer the Chinese a series of smaller hydropower projects that are less of a threat to the environment. Except for hydropower, David Dapice, an economist at Harvard who has studied Myanmar's hydropower sector, said in 2017 that in the country's south, gas generation would be cheaper than transmitting hydro over long distances. Solar energy is also rich in Myanmar. The International Growth Centre estimated in 2016 that Myanmar's solar potential will be 51,973 TWh per year, and WWH Myanmar has developed solar technology education in Kayin State, another Myanmar State.

6.3.4 Summary

Hydropower dam constructions will bring direct and indirect negative environmental impacts. Those damages on the environment will contribute to the economic loss and social conflicts among the nearby residents and vested interest such as the local ethnic groups. When the government decided the infrastructure construction plan, it is supposed to tackle those risks. However, the central government in Myanmar has a weak governance capacity towards these issues and even intensifies the conflicts. The domestic political environment in Myanmar is still unstable that infrastructure investments lead to military intension and security in such a complex ethnopolitical area. Besides, the military government paid few efforts in public consultation, transparency in ESIA, and safety guards for resettlements.

6.3.5 Chinese-back BRI hydropower dam projects in ASEAN

The below table is the Chinese-back BRI hydropower projects in ASEAN. These projects cover several countries, with different levels of investments and installed capacity. Similar to Myitsone Dam projects, below projects involve investors from companies in China and the host countries, sometimes involving minor investors from a third country. Some hydropower dams will also export part of the electricity generated. Thus, besides the common risks due to common geographic and demographic features, the financial interest, electricity benefits, induced social and international conflicts among the engaging countries should be noticed.

Table 15 Chinese-back BRI Hydropower Projects in ASEAN

Project	Country	Status	Main Investor(s)	Investment (US$)	Installed Capacity (MW)	Electricity Supply Area
Lower Se San 2 Hydropower Dam	Cambodia	Operating (2017-)	China's Huaneng Hydrolancang International Energy holding (51%), Cambodia's Royal Group (39 %), Vietnamese EVN International Joint Stock Company possessing (10%)	$781 million	400	domestic and export to Vietnam
Kayan River Hydropower Plant (5 stages)	Indonesia	MoU (2018)	Power Construction Corporation of China, Indonesia Kayan Hydro Energy	$17.8 billion	900 (first stage) 9000 (total)	domestic nd export to Malaysia
Central Sulawesi Hydropower Project	Indonesia	Singed Contract (2018)	China Gezhouba Group Investment Holding Co., Ltd., Indonesia's PT. Lentera Damar Amerta recently	$300 million	300	domestic
Nam Ou Hydropower Project (7 dams)	Laos	Dams 2,5,6: Operating (2019-) Dams 1,3,4,7 Under Construction (2016-)	Chnia Sinohydro Corporation, (75%-90%), Lao's EDL-GEN (10%-25%)	$2 billion	1146	domestic and export to Southeast Asia and China

Baleh Hydroelectric Project	Malaysia	Under Construction (2019-)	China Gezhouba Group Co. Ltd. (70%), Untang Jaya Sdn Bhd (30%)	$2.4 billion (RM9 billion)	1285	domestic
South Pulangi Hydroelectric Power Plant Project	Philippines	Signed contract (2019)	China Energy Engineering Co Ltd, Pulangi Hydro Power Corporation	$800 million	250	domestic

6.4 Recommendations

ASEAN countries have a high demand for infrastructure construction to promote economic and social development. To better avoid or reduce the potential induced environmental and social risks in the ASEAN region BRI projects, we would like to make the following recommendations based on the Avoidance-Minimisation-Restoration-Offsets impact mitigation hierarchy from The Biodiversity Consultancy. But it should be noticed that the implementation and effectiveness of these policy recommendations highly rely on the governance capacity of the country's government.

Avoidance

Prior researches on environmental and social costs-benefits identification for project selection is necessary to avoid investment and construction failure. The prior researches include public consultation, Environmental and Social Assessment Impact (ESIA), social cost and benefit analysis, and feasibility studies. These processes will help the government to decide the type, routes, and location of the projects.

The government public engagement should involve multi-stakeholders, collect opinions from the investors, local governments, affected residents, ethnic groups, private sectors, economists, environmentalists, culture scholars, universities and institutions, environmental and social NGOs. Southeast Asia region is a multi-ethnic region with various living habits, traditions, and cultures in different ethics groups. The infrastructure should take their lifestyles, livelihoods, and existing ethnic conflicts into account. The public consultation should identify the demand and interest of different groups in the ASEAN region and China. More importantly, the government should positively respond to the public's inquiries. It will avoid social conflicts due to uneven distributions.

Since the ASEAN region is vulnerable to environmental risk and is developing countries with complex social risks. The ESIA, cost and benefit analysis, and feasibility studies should be comprehensive and transparent. The ESIA should reflect the social benefits and social costs including environmental and social risks; land issues; security; community health and safety; stakeholder engagement and information disclosure; and labor issues, which are listed in the World Bank Environmental and Social Standards (ESS). Southeast Asia now has a large demand for domestic or cross-border traffic, energy, and urban planning. When designing the site of construction or transport routes in Southeast Asia, the government should carefully avoid the environmental and social sensitive locations, such as (1) biodiversity sensitive areas in

tropical forests, wetlands and river with large basins such as Irrawaddy River and Mekong River; (2) densely populated areas that may cause a large amount of resettlement;(3) rich natural or cultural heritage areas where many ethnic groups value those areas as their origins of civilization.

It is best if those routes or sites with high risks can be avoided. If they are unavoidable but the environmental and social loss is acceptable or can be under control, the project can continue and follow the minimisation-restoration-offsets steps using various policy instruments.

Minimisation

The negative impact of environmental and social costs can be minimised through various policy instruments. ASEAN governments should enhance their governance capacity when confronting environmental and social costs in BRI projects.

Legislation and regulations

The ASEAN region should improve and implement each country's environmental legislations and regulations to clarify the investors' and operators' legal responsibility and tackle potential risks such as deforestation, pollution, and resettlement. The government can also consider establishing a committee responsible for the inspections. Investors and contractors are supposed to disclose those environmental and social indicators periodically. For investors who break the law or regulation, they should assume legal or administrative punishment.

Tax

Economic instruments can be induced to encourage social sustainability. Projects with higher negative environmental impacts such as pollutant emissions will have a higher corporate tax rate or additional environment tax. Tax incentives can be used in local labor employment, deforestation reduction, and protected areas (Pas) establishment.

Complementary techniques

Some techniques can be applied to reduce the ecosystem damage. For example, to protect the extremely rich biodiversity and valuable species in tropical areas, the ASEAN country government can build wildlife crossings such as bridges and underpasses, sound barriers. retention of tropical trees, wetlands and tunnel-bridge-tunnel engineering. Besides, ASEAN country governments should establish or improve the mechanism on natural disaster management such as flooding, landslides, haze, and cyclone. The digital system can be used for meteorology anticipation and information tracking so that the governments can fast and effectively respond to natural disasters.

Social security and healthcare system

Many infrastructures project will lead to displacement and loss of livelihood. The compensation of resettlement should be properly assigned. Whether the government has involved in the investment or not, it should help its citizens to gain legal and reasonable compensations. Besides, the government should also assist the affected citizens for employment. Compensations on fields or trainings on professional skills for job is necessary. Besides, since pollutions may bring about public health problems, the government should

consider providing healthcare subsidy or medical assistance to the affected inhabitants. The government should pay more attention on the women's security since they are more vulnerable to violence, trafficking, and unemployment. There should be regulations on arm force to ensure that the resettlement and construction will be conducted peacefully without violence from the arm force. Moreover, many people in Southeast Asia remote areas do not raise awareness of safety and self-protection. Public education should be held to inform the important safety knowledge, the way for self-protection, assistance, and complaint.

Restoration

The government should take remedial actions to repair affected damage on tropical forests, waterways, wetlands, roads, and so on. Since Southeast Asia countries have frequent cyclones and large rainfall in the rainy season, the repair should be implemented in time to avoid second harm to the environment. For the natural or cultural heritages, governments can consider rebuilding or overall relocation of some plants or constructions if feasible.

Offsets

To offset the environmental damage, governments can invest new physical bioregions such as similar sites for endemic species or ecosystem functions to offset the potential biodiversity loss, erosion, and landslides. Some financial offsetting policies can also be introduced such as "Payment for Ecosystem Services" (PES) [31], biodiversity compensation funds, and biodiversity banks selling offsetting credits.

Seek alternatives

If the planned routes or sites with high environmental and social risks are unavoidable and with unacceptable social loss, the country should consider stop the planning process and seek alternatives for development, such as changing the routes or sites in another city, replacing with other sources of energy or designing new urban architects.

Overall, the ASEAN region has an urging demand for infrastructures to boost economic and social development but vulnerable to environmental and social risks. However, trade-off always occurs. The governments should identify all the environmental and social benefits and risks, and choose the alternative with the highest net social benefits for the country's sustainable development.

7. Conclusion

Based on the above analysis, we realize that fiscal, governance and environmental risks are not isolated, and instead, they are interconnected and mutually reinforcing. For example, in a developing landlocked country, fiscal distress and weak governance capacity exist simultaneously and influence each other, which increases fragility of ecological environment. These interconnected and mutually reinforcing risks all call for a key solution, a more

[31] WWF: PES is an innovative approach to nature conservation. It is a variety of arrangements through which the beneficiaries of environmental services, from watershed protection and forest conservation to carbon sequestration and landscape beauty, reward those whose lands provide these services with subsidies or market payments.

transparent decision-making and execution process.

On the second Belt and Road Forum held in Beijing in April 2019, the message conveyed by Chinese leader showed that policymakers had heard the criticism from the international community, prepared to admit some problems in its first five years of BRI and committed to addressing some of these challenges. President Xi Jinping has made it clear that "everything should be done in a transparent way."[32] He also called for compliance with international practices and standards in project development, operation and procurement, and encouraged multilateral financing institutions to participate. The Joint Communique of the forum directly outlines the need for enhanced cooperation in local human resources development, education and professional training, and calls for "improving project preparation to ensure that projects are investable, bankable, economically viable, and environment-friendly."[33] The policy direction pointed out in the speech of the Chinese leaders and the policy documents in the forum is consistent with the theme of this paper and our recommendations.

The recommendations made in this paper are ambitious, as is BRI itself. Some of the recommendations in this report, such as the requirement to implement existing international governance and standards, the requirement to launch reliable environmental and social feasibility study of the projects and the requirement for transparency of project major documents, can bring real benefits to the project host countries and China, and also enhance confidence in this initiative. Through more multilateral, transparent and credible cooperation, the host country can develop its economic, social, environmental and other national interests while China can gain a better international reputation.

Undeniably, there are several limitations in this paper. First, this paper may not identify and analyze all risk related to BRI. The potential risks BRI brings to the host country includes, but not limited to, the three main risks pointed out in this report. Second, although the cases used in this paper can provide some lessons for Southeast Asian countries in terms of decision-making, execution and evaluation of BRI projects in the future, these cases are limited to a certain extent by the unique national environment and social context. Therefore, the observations and conclusions based on these cases may not be able to generalize fully.

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Appendix 1 Selected BRI Projects in ASEAN Region

Below projects are listed in the Belt and Road Initiative Website. There are some other projects not listed in the website but announced as BRI projects.

Table 1: Selected BRI Projects in ASEAN Region

Project	Country	Type
Lower Sesan Two Hydropower Dam	Cambodia	Energy
Jakarta-Bandung Railway	Indonesia	Transport
MNC Lido City	Indonesia	Tourism
Kuala Tanjung Port	Indonesia	Transport
Kayan River Hydropower Plant	Indonesia	Energy
Lake Toba Tourism District	Indonesia	Urban
International Airport Lembeh	Indonesia	Transport
Vientane-Boten Railway	Laos	Transport
Savannakhet-Lao Bao Railway	Laos	Transport
Forest City	Malaysia	Urban
Melaka Gateway	Malaysia	Urban
East Coast Railway	Malaysia	Trans port
Gemas-Johor Bahru Railway	Malaysia	Transport
Dawei Port	Myanmar	Transport
Kyaukpyu Deep Sea Tanker Port	Myanmar	Energy
Kyaukpyu Special Economic Zone	Myanmar	Transport
Muse-Mandalay Railway	Myanmar	Transport
Bangkok-Nong Khai Railway	Thailand	Transport
Bangkok-Chiang Mai Railway	Thailand	Transport
Kuala Lumpur-Singapore High Speed Rail	Multiple	Transport

Appendix 2 Supplementary Information on Malaysia ECRL

Table 1: Timeline of the ECRL

Date	Events
March 15, 2016	Suruhanjaya Pengangkutan Awam Darat (SPAD) and East Coast Economic Region Development Council (ECERDC) conducted market interest gauging surveys to gain insight on views and ideas for the ECRL using a "Request for Information" (RFI).
October 21,2016	Malaysian prime minister Najib announced approval of the project in his speech to parliament on the 2017 budget.
November 1, 2016	Malaysian government signs "framework finance deal and construction agreement" valued at 13.1 billion USD, with CCCC as the "builder" for Phase 1 of ECRL construction.
March 2, 2017	SPAD grants conditional approval for the preferred route alignment for the ECRL and announces plan for a public inspection process for 3 months total at the SPAD head office and through a roadshow at 38 district office locations across the nation.
May 13, 2017	Prime Minister Najib witnessed the signing of a "Memorandum of Understanding" for the second phase of the ECRL.
June 2017:	Approval of final alignment and start of the construction.
July 3, 2018	Malaysia's Ministry of Finance pointed out that after re-estimation, the construction cost of East Rail is not RM55 billion, but nearly RM81 billion. The project is unlikely to recover operating costs, and the RM81 billion has not included the operating deficit that is now difficult to estimate. Only by slashing its costs can the government be able to build the railway.
July 4, 2018	Malaysia Rail Link Sdn Bhd (MRL) instructed CCCC to stop work immediately on the basis of national interests.
April 12, 2019	MRL and CCCC have signed a supplementary agreement after renegotiation. (See Table 2. The comparison on the two EPCC contract.)
July 25, 2019	ECRL officially resumed work.

Table 2 Comparison on the Two EPCC Contract of ECRL

	The original ECRL deal	The improved ECRL deal
Owner	Malaysia Rail Link Sdn Bhd	
Cost (Phase 1 + Phase 2)	RM65.5 billion (RM55 billion+RM10.5 billion)	RM 44 billion (reduction of RM21.5 billion or 32.8 %)
	RM95.5 million per km	RM68.7 million per km
The loan amount from China-EXIM Bank	RM56.7 billion (85%of the project cost)	• RM39.1 billion (85% of the cost of Phase 1 alone) • The balance of the RM17.6 billion for Phase 2 and the Northern Extension were yet to be signed.
Length	688km	640km
Completion Date:	30 June 2024	31 December 2026
Technical Standards	Standard gauge(1.435m) and double tracking of the ECRL is maintained	
Stations	23	20
Operation& Maintenance	CCCC is only responsible for the usual legal responsibilities related to product performance and safety, and it is not responsible for manage, operate and maintain after the project's completion.	• Form a joint-venture company to manage, operate and maintain the ECRL rail network. (MRL 50%: CCCC 50%). • CCCC will provide technical support and share the operational risk after the project's completion.
The per centage of local participation	30 % of civil works	40 % of civil works
Partial Refund of Advance Payment Paid to CCCC		CCCC to refund part of the RM3.1 billion Advance Payment paid for Phase 2, Double Tracking and the Northern Extension under the original contract.