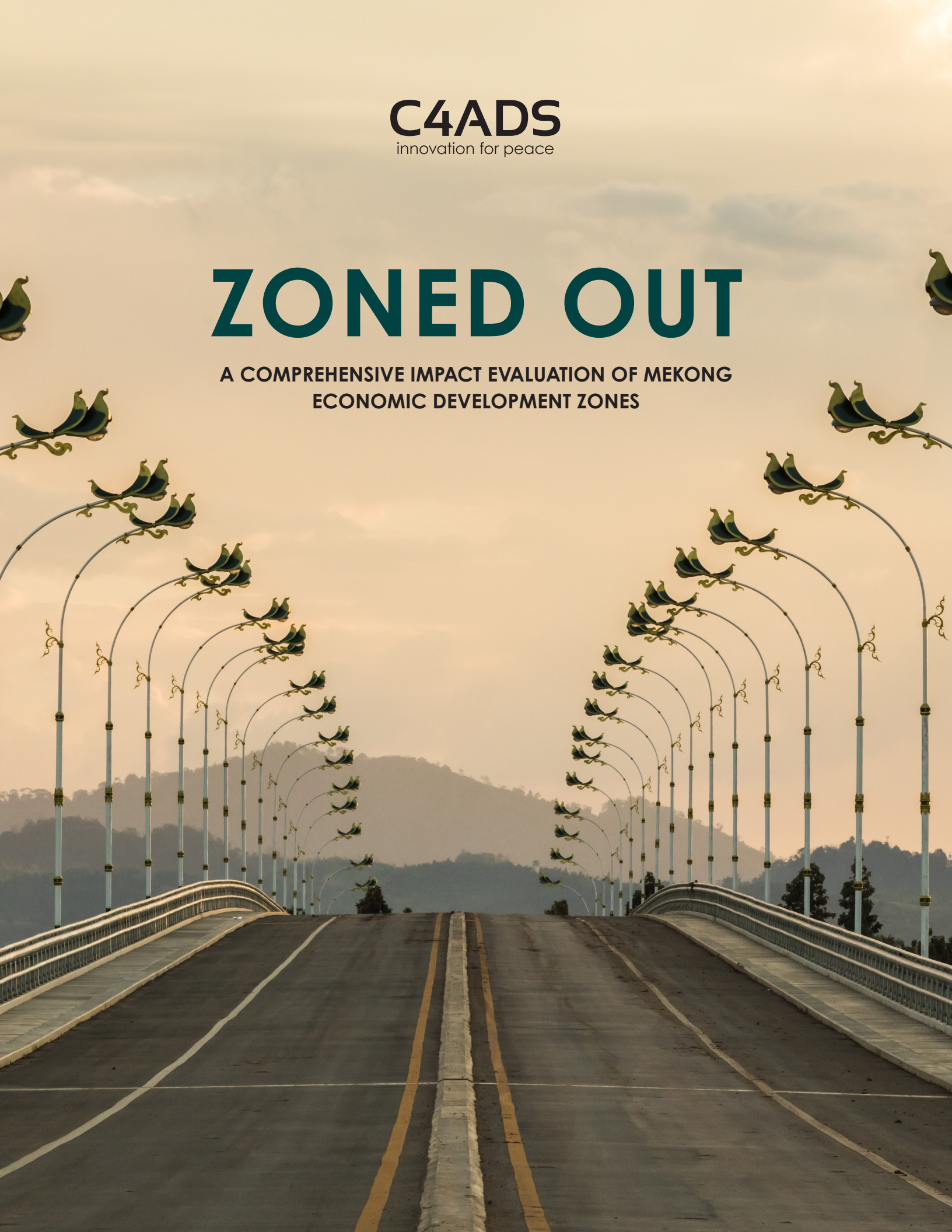


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ZONED OUT

A COMPREHENSIVE IMPACT EVALUATION OF MEKONG
ECONOMIC DEVELOPMENT ZONES



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Cover Image

Friendship Bridge at dusk, Mae Sot, Tak, Thailand

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EXECUTIVE SUMMARY

This report presents a study that applies publicly available information¹ to assess approximately one hundred foreign-invested economic development zones (EDZs) across the Mekong region.² Analysis of EDZ effects on three levels of evaluation—economic development, illicit activity,³ and geopolitics—demonstrates that while the creation of an EDZ is typically followed by an increased pace of development, zones can also facilitate adverse outcomes that undercut the benefits to economic growth. This study is organized around three analytical verticals:

- **Economic Development:** The study measures nighttime luminosity in EDZs to create an objective and scalable measurement to evaluate the relative economic performance of zones.
- **Illicit Activity:** The study uses various publicly available reports to demonstrate that illicit actors are exploiting many EDZs to conduct a variety of illicit activities, including corruption, environmental degradation, land conflict, drug trafficking, and wildlife trafficking.
- **Geopolitics:** The study offers a framework to evaluate the geopolitical impact of zones, including examples of zone attributes that increase the potential for the erosion of host government sovereignty and legitimacy.

Across all sections, the study evaluates the data environment, presents workflows for leveraging publicly available information, and offers policy recommendations for improving the data environment.

The study also includes five deep dives examining topics that were chosen to illustrate a variety of different themes that emerged in the analysis. These deep dives are intended as separate, independent stories, not a collective grouping:

- 1 Sihanoukville Special Economic Zone (SEZ) (Cambodia)
- 2 Shwe Kokko (Myanmar)
- 3 Eastern Economic Corridor (Thailand)
- 4 Transportation Infrastructure and EDZs in Northwest Laos
- 5 Chinese Private Security Companies (PSCs) in Mekong EDZs

Based on this research, the authors find that:

- 1 Economic development zones do not always precipitate development, and even when growth is present, negative externalities can undercut the benefits.
- 2 The limited data access around Mekong EDZs hurts both host governments and local communities.
- 3 Collaboration between government, grassroots organizations, private-sector, and civil society stakeholders will boost transparency and better match intentions to outcomes.

To empower stakeholders to improve EDZ impacts, this report offers the following recommendations:

- Develop **open, centralized repositories of information** on all aspects of economic development zones.
- Leverage emerging technologies to create **passive or high-efficiency monitoring processes**.
- Convene **cross-sector, interdisciplinary task forces** to address negative impacts.

INTRODUCTION

An economic development zone (also referred to as an “EDZ” or “zone”) is intended as a magnet, incubator, and springboard to prosperity. A successful zone will attract capital, additional infrastructure, and expertise; cultivate commercial operations, logistics networks, and human capital development; and launch the surrounding area into a trajectory of growth and modernization. A zone’s success depends on its ability to attract investors through a combination of regulatory incentives, infrastructure projects, or public awareness campaigns, so EDZs are typically designed to streamline business activities. While some zones objectively contribute to the economic growth of their host countries, GDP figures alone do not tell the whole story. Indeed, zones can and often facilitate adverse events and trends ranging from corruption⁴ and environmental degradation⁵ to the subversion of a host nation’s sovereignty.⁶

In order to develop a holistic understanding of an EDZ’s impact and make informed decisions regarding EDZ creation and management, decision makers and observers must evaluate a zone’s effect on the legal economy against its ramifications for illicit activity and geopolitics. A comprehensive framework is required.

All five countries in the Mekong region—Cambodia, Laos, Myanmar, Thailand, and Vietnam, also referred to as “Mekong countries”—currently host EDZs.⁷ Indeed, EDZs are becoming increasingly common

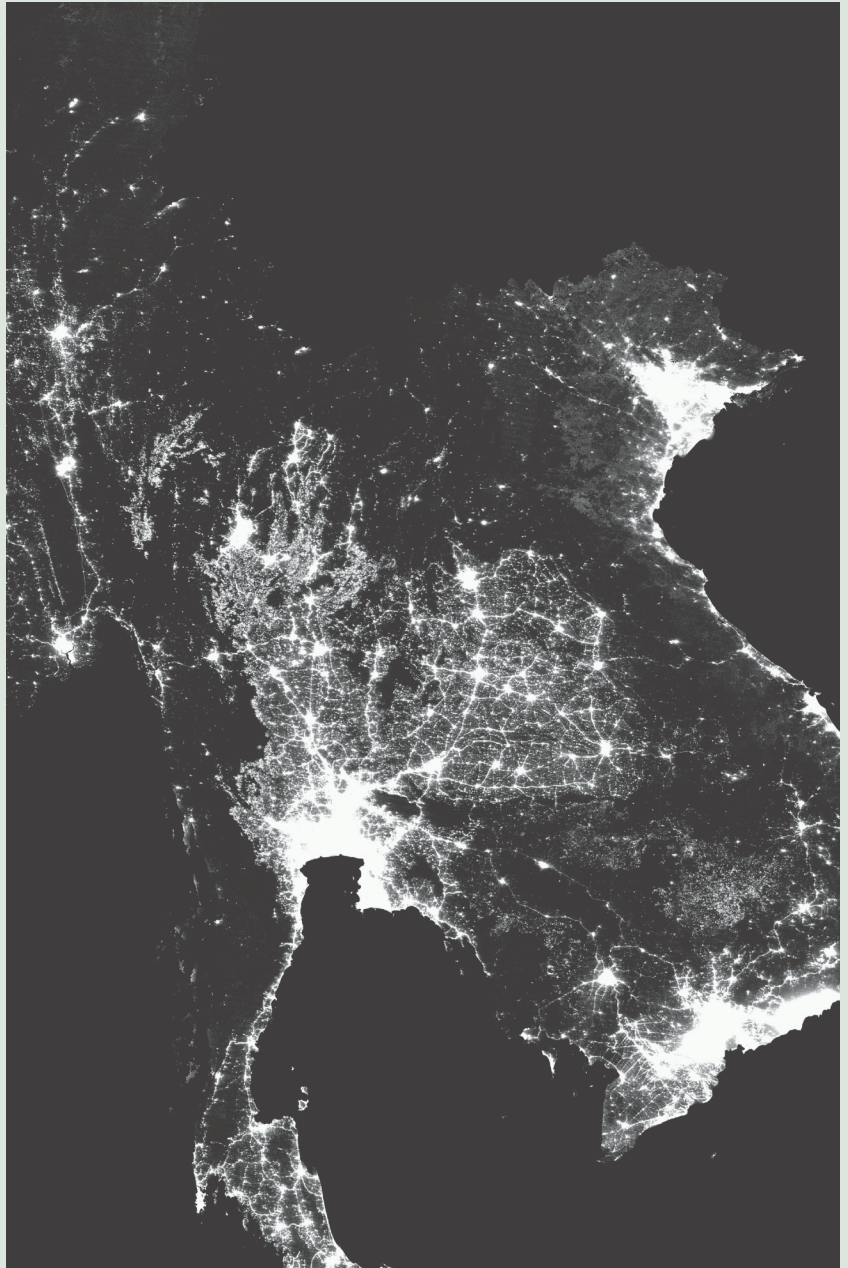
in the region.⁸ A 2015 report on economic zones in the Association of Southeast Asian Nations (ASEAN) characterized them as “cornerstone strategies for economic development in countries around the world.”⁹ Increasing foreign investment is an explicit goal of the EDZs, and a substantial number of the zones in Mekong countries involve investment from foreign governments and private companies.¹⁰

However, EDZs can have an impact beyond capital and infrastructure: neither the zones’ economies, their illicit activities, nor the host nations’ geopolitics exist in a vacuum. Without proper management, EDZs can serve as staging grounds for multiple types of transnational illicit activity and geopolitical machinations. Further complicating the situation is a paucity of accessible data, leaving policymakers and observers alike struggling to draw informed conclusions on the effects of zones. While the data in this report is specific to the Mekong countries, the implications of these findings and the research methodology can be extrapolated to EDZs around the world.

To secure the legal economy, protect local populations, and ensure the preservation of national sovereignty, stakeholders in government, civil society, and the private sector should adopt a comprehensive approach to evaluating and monitoring EDZ impact.

ECONOMIC DEVELOPMENT

As measured by nightlight data, this study found that Economic Development Zones in the Mekong region typically meet the goal of economic growth, but there are many zones that see stagnant growth or even contraction soon after implementation. Other remote sensing technologies are also assessed for their utility in monitoring EDZ development, while a framework for evaluating individual zones is presented.



► NIGHTLIGHT LUMINOSITY ACROSS THE MEKONG REGION

INTRODUCTION

As economic development is, definitionally, the goal of an EDZ, any analysis of these zones must include a discussion of the economic impacts. The zones aim to encourage economic progress in the host country through increased and diversified investment, employment, and production.^{11 12} To evaluate the success of an EDZ, one must first determine whether it meets this goal. For an EDZ to buoy the economic development of the host nation, the economic benefit catalyzed by the establishment of an EDZ must outweigh the costs of administration and any negative impacts facilitated by the zone, such as displaced local populations, increased crime, or decreased geopolitical agency. If an EDZ does not advance the economic interests of the host nation, then that nation has lost value even before considering the externalities—a poor return on investment for the host nation. Much of the existing evaluative research focuses on successful zones, applying a case study approach.¹³ This study attempts to take a more systematic approach by using sensor data to fill the gaps in economic performance data and evaluate the economic impact of zones. This study finds that many EDZs in the Mekong region exhibit growth after their establishment, but this is not true of all zones. Many zones see lackluster growth, or even contraction, after establishment. A framework for analyzing the development of individual zones is proposed, which considers economic performance, physical development of the zone, human activity, and a qualitative review of the development plan.

To evaluate whether an EDZ is inducing economic growth, the performance of a zone should be considered against the natural growth rate of the zone's host country. In order for an EDZ to drive economic output at the national level, growth within the EDZ must surpass the yearly growth of its host country. As economic data on EDZs in the Mekong is rarely shared publicly, this study uses nightlight data collected via satellite to evaluate the economic

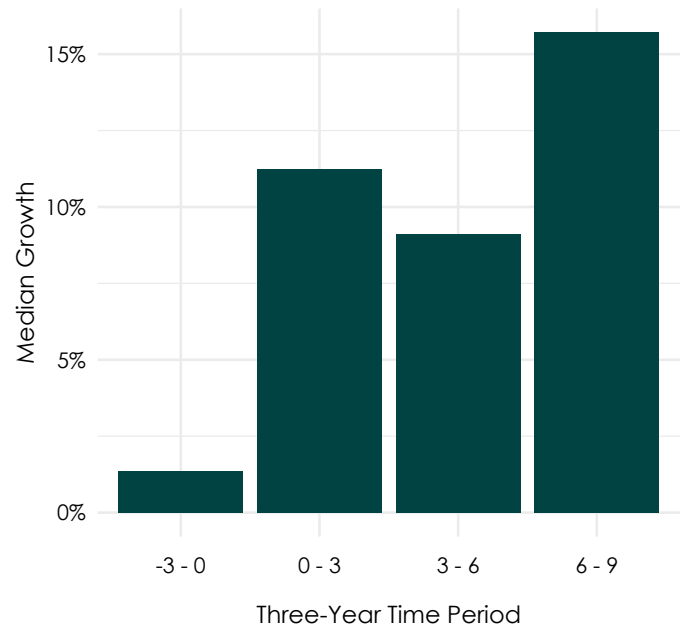
performance of both zones and countries. Nightlights are a commonly used proxy for traditional economic metrics, like GDP, in regions and sub-regions where such data is scarce; studies show a strong correlation between nightlight data and economic activity.^{14 15 16} To measure the performance of a particular zone, this study uses the percentage of the host country's lights that are emitted within the bounds of that zone (referred to as "Percent of Light" or "POL"). In this way, the authors can easily determine whether a zone's growth is faster, slower, or similar to the overall growth of its host country.

Remote sensing options are becoming more sophisticated and increasingly available for use by researchers. As proof of concept, the authors of this study explored other remote sensing options that can provide universally available sources of analysis for regions with limited data availability. For one data source, C4ADS analysts worked with engineers from Planet Labs to analyze satellite imagery over EDZs using artificial intelligence. Using a building-detection model, C4ADS and Planet Labs engineers estimated the building coverage within each EDZ on a monthly basis over the years 2017 to 2020. Another valuable source of data came from a mobile phone location data provider. The authors analyzed more than 4 terabytes of anonymized mobile phone location data in the Mekong region from November 2018 through November 2020. Using proxies for how economic progress, physical building development, and human activity are changing within zones, as well as a qualitative review of zones' effects, will allow future researchers to have a clearer picture of developmental progress inside EDZs.

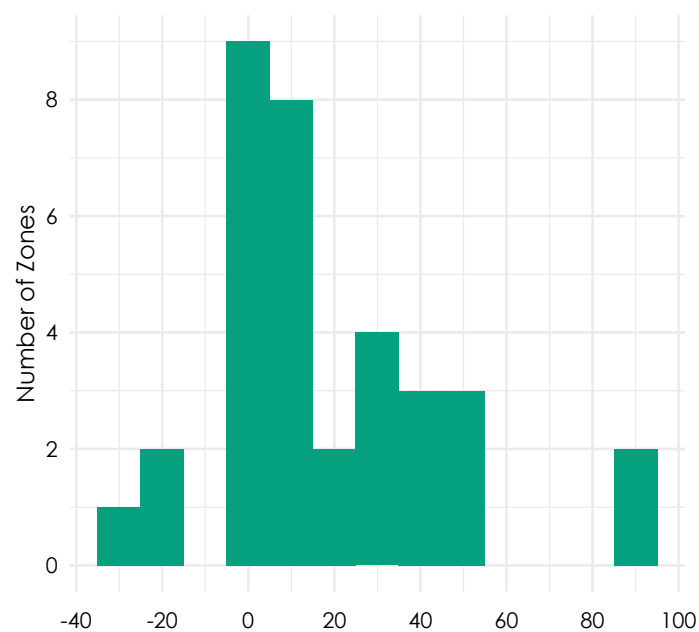
RESULTS

In general, analysis of nightlight data shows that establishing an EDZ in the Mekong region does indeed promote economic development. To get a clearer picture of short-term development results, the authors compared measures of growth in three-year

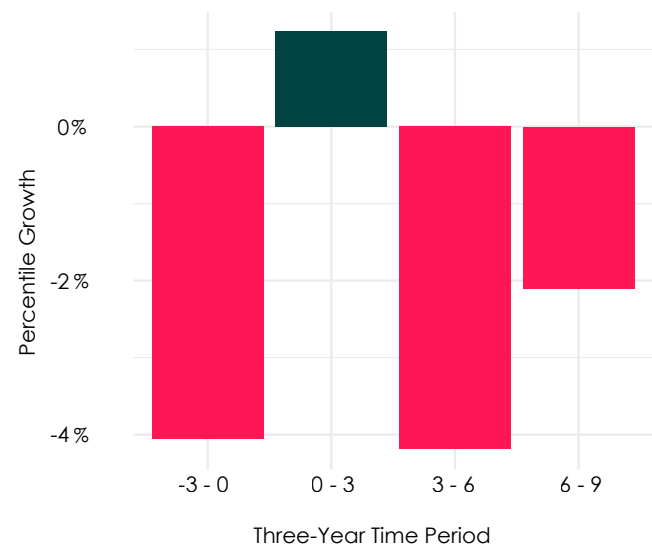
► FIGURE 1: MEDIAN GROWTH OF ZONES



increments over the early lives of EDZs in the sample. Figure 1 shows the median growth for each period from years -3 to 0, 0 to 3, 3 to 6, and 6 to 9, where year 0 is the date of establishment for the EDZ. The change in average POL within the zone between periods serves to measure the effect of zone establishment on economic growth inside the zone. For the three years before zone establishment, the thirty-four zones with available data in that range had a median growth rate of about 1.3%. For the three years post-establishment, this measure of growth jumped to more than 11%. This means that more than half of the zones in the sample saw more than 11% growth (above the baseline of their host country) over those three years. This elevated growth continued for the median zone through the first nine years of the zone's life. On average, it appears that EDZs promote growth in the short term. These zones seemingly provide economic benefits, though negative externalities introduced by the zone are not yet considered.



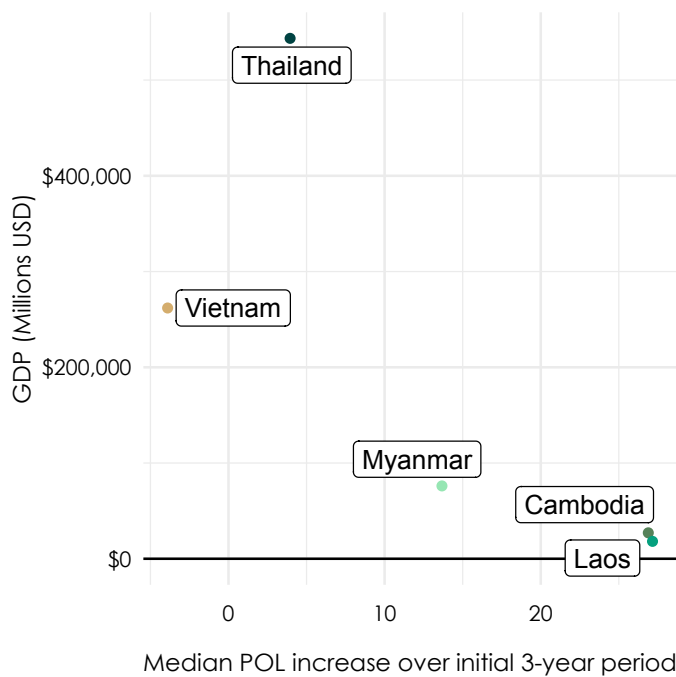
► FIGURE 3: 25TH PERCENTILE GROWTH OF ZONES



Overall, zone establishment is followed by increased growth, though the data shows that success is not guaranteed. The EDZs had a vast array of results during the first three years following their establishment. Figure 2 shows a histogram of the average Percent of Light growth over the initial three-year period. Within the sample, one-quarter of the zones saw less than 1.25%

growth, and indeed, six zones (17% of the sample) saw negative growth during the first three years following establishment.¹⁷ Figure 3 shows the first quartile results over the same periods as in Figure 1. Results here show that many zones exhibit negative growth over the short term. While it is true that some zones successfully produce growth, many saw a contraction in that period compared to the host country.

► **FIGURE 4: MEDIAN PERCENT OF LIGHT INCREASE AND 2019 GDP OF MEKONG COUNTRIES**



The host country plays a large role in the success of economic development in Mekong EDZs. Figure 4 shows the median POL increase over the first three years of a zone's existence for each Mekong country, compared to that country's GDP. The figure shows that as GDP increases, the success of EDZs decreases. This is consistent with the economic theory of convergence, which states that as countries become more developed, their growth slows as they come in line with more developed countries.¹⁸ In more developed countries, zone costs (including negative externalities) to the host country, laborers, and local population may not be worth the lackluster growth produced by EDZs.

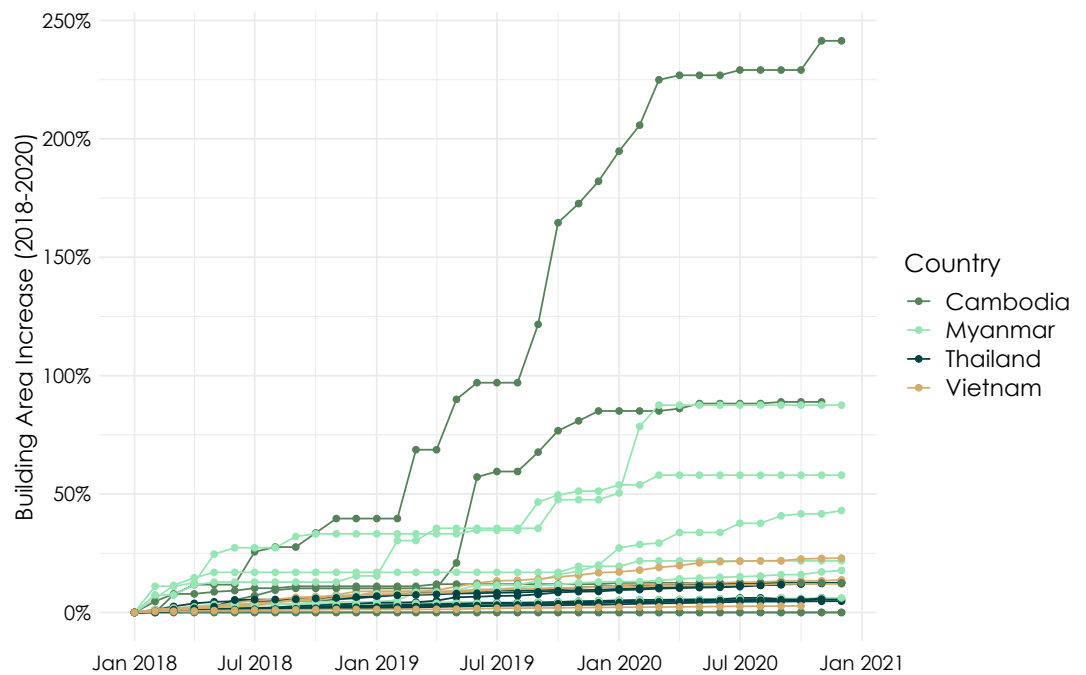
FUTURE OF REMOTE SENSING DATA

By partnering with satellite imagery providers, observers can use remote sensing data to monitor the development of EDZs and other locales without reliance on reporting from local officials. Data collection can be automated, allowing organizations with limited staffing to analyze zone performance. Automated reporting of development in certain areas can alert human analysts if certain thresholds are reached, easing the requirements for monitoring and studying the impacts and effects of EDZ implementation.

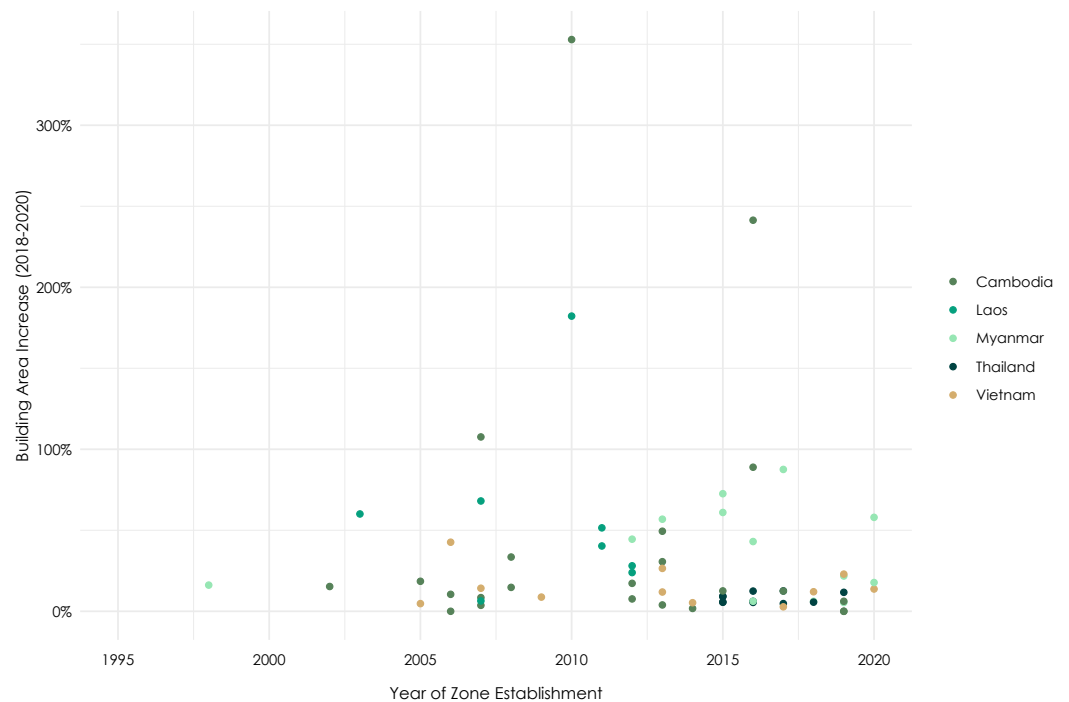
The authors of this report used Planet Labs' AI analysis of its satellite imagery to approximate the rate of construction in each EDZ from 2018 to 2020. Figure 5 shows cumulative monthly building coverage progress during the period of analysis for zones established since 2015. During this period, many (official and unofficial) zones in Myanmar made enormous development gains, as well as *Tian Rui Agricultural Trade Special Economic Zone* and *UBE Snoul Special Economic Zone*, which are smaller zones in Cambodia. Figure 6 compares the percentage of building increase during 2018 to 2020 to the year of zone establishment. The figure shows that many zones see significant development well after their establishment. For instance, MDS Thmorda SEZ, which was established in 2010, increased the amount of building coverage by more than 350% from 2018 to 2020. Further analysis of the satellite imagery indicates that very little of the zone was developed before 2017. Many additional buildings were constructed, and major roads have been rerouted since that time. Using methods like these, researchers are easily able to monitor the physical development of EDZs using remote sensing. However, a comprehensive review of the zone shows another side of the story. The company that manages the zone, Try Pheap Group Co., Ltd., has been repeatedly accused of illegal logging, and of committing human rights and environmental abuses in the process.^{19 20 21} The owner of the business, Try Pheap, owns or controls at least eleven companies that have been designated by the US Department of State for

their involvement with his illegal logging network.²² Two of these companies are directly involved in the management of MDS Thmorda SEZ, and there are reports of residents in proximity of the zone witnessing timber being transported out of the zone.^{23 24} The Cambodian Center for Human Rights (CCHR) reports that during the construction of the zone, local residents were forcibly removed from their houses, and many of their homes and belongings were destroyed.²⁵ CCHR also reported that residents' protests of these actions were often met with violence.²⁶ The story of MDS Thmorda highlights the importance of a comprehensive review of zone effects, as the analysis of developmental progress via satellite imagery would overlook such abuses.

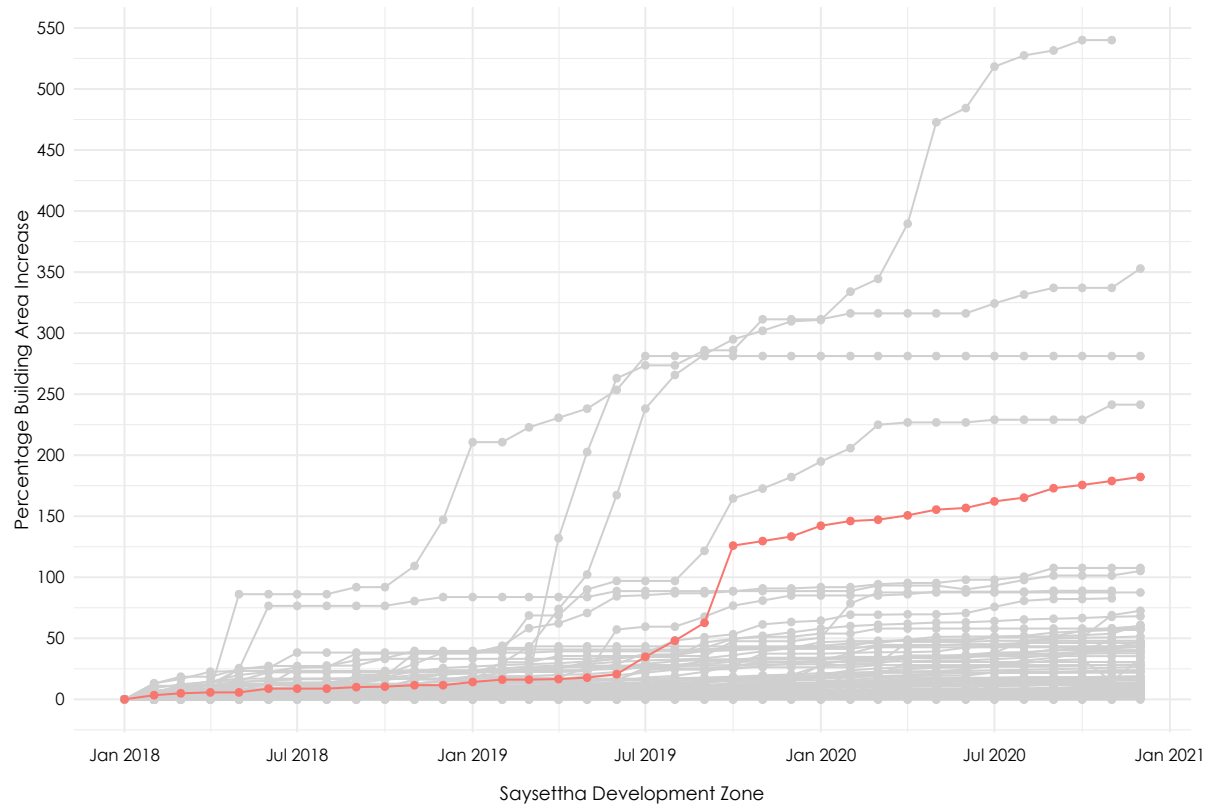
► **FIGURE 5: CONSTRUCTION IN SAMPLE ZONES, JAN 2018- JAN 2021**



► **FIGURE 6: ZONE BUILDING AREA INCREASE 2018-2020 COMPARED TO YEAR OF SAMPLE ZONE ESTABLISHMENT**



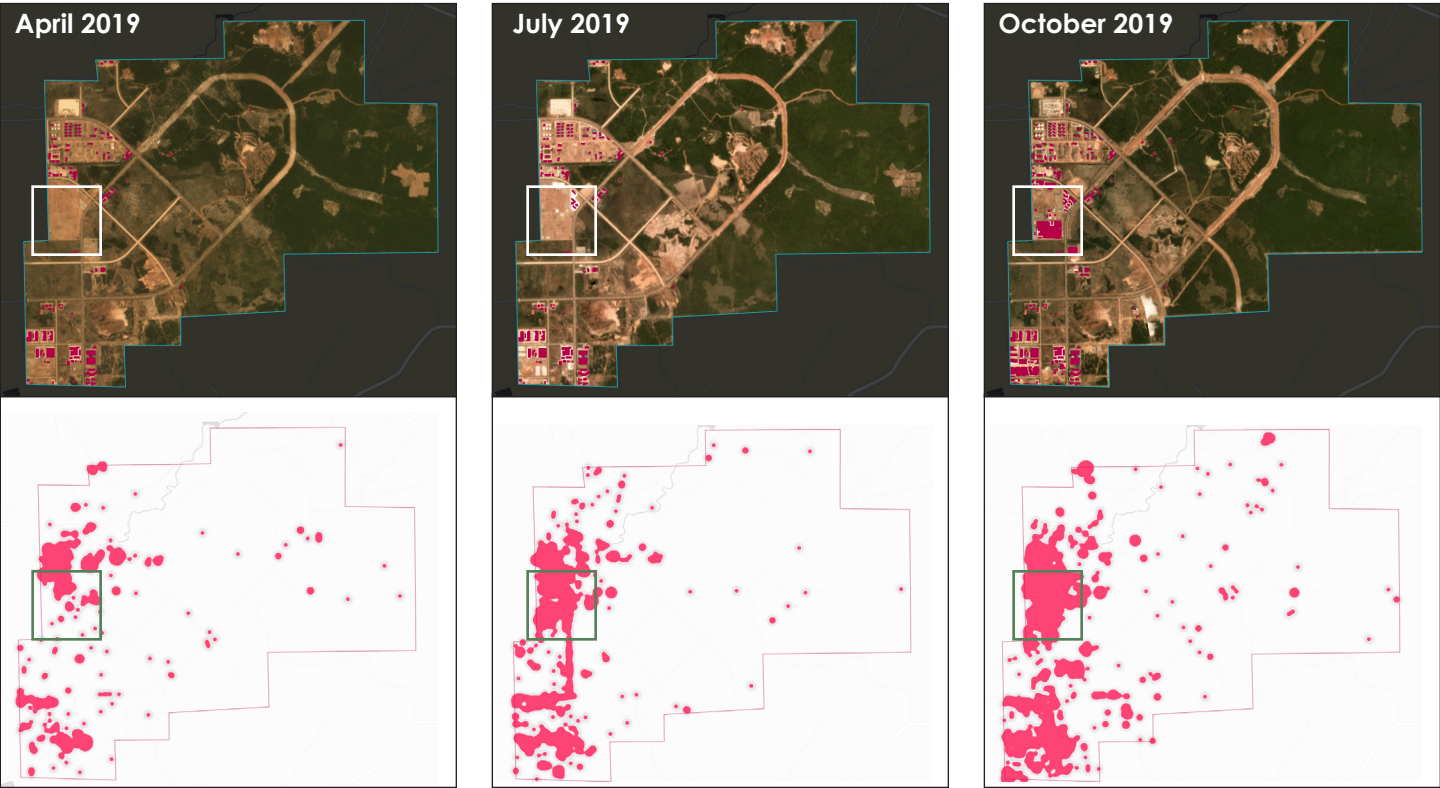
► **FIGURE 7: CONSTRUCTION IN SAYSETTHA DEVELOPMENT ZONE, JAN 2018 - JAN 2021
COMPARED TO YEAR OF SAMPLE ZONE ESTABLISHMENT**



Within individual zones, mobile phone location data can be used as a proxy for human activity, showing where humans are moving throughout zones and sometimes indicating the location of future developments. For example, one EDZ that showed significant development between 2018 and 2020 was Saysettha Development Zone, east of the Laotian capital of Vientiane. Figure 8 shows Planet Labs building analysis (top) and a heatmap of anonymized mobile phone activity (bottom) during three months in 2019. The building analysis shows Planet Lab's satellite imagery with red highlighting over areas where buildings were detected. These three snapshots show how developmental progress can be monitored using phone activity and satellite imagery analysis. The April 2019 imagery indicates significant phone activity around the existing buildings in the zone. In July of 2019, however, the imagery also shows considerable activity

in the location highlighted by the green box, which is free of structures. Looking forward three months, however, this high-phone activity site was home to a large building. Analysis of the phone activity can anticipate where active development is occurring as workers congregate at the building site. Further investigation reveals that this site is being constructed as part of a larger development push. In April of 2019, China and Laos signed an agreement to increase the pace of construction in the zone.²⁷ Figure 7, which shows the cumulative building increase since 2018, indicates that this agreement preceded a significant increase in building development. The spread of phone activity over this time also expanded during this time period, perhaps as a result of renewed focus on the project.

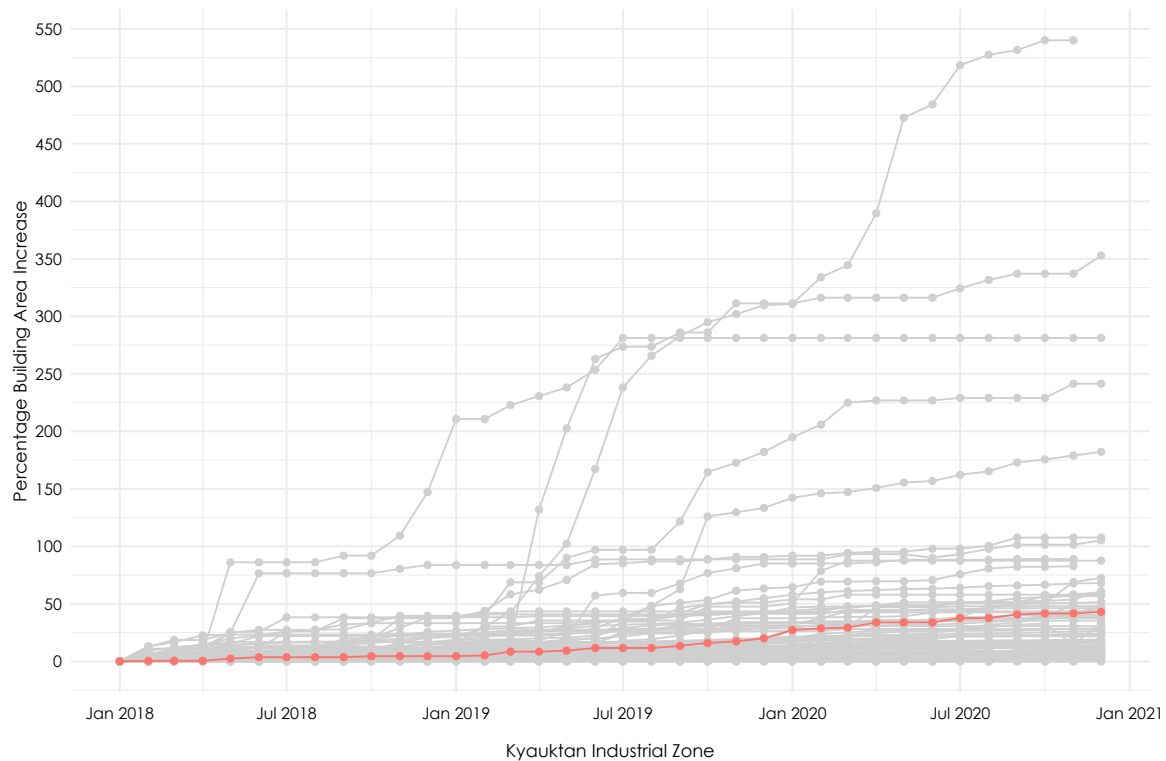
► FIGURE 8: MOBILE PHONE ACTIVITY AND CONSTRUCTION IN SAYSETHA DEVELOPMENT ZONE



► FIGURE 9: KYAUKTAN DEVELOPMENT ZONE



► FIGURE 10: CONSTRUCTION IN KYAUKTAN DEVELOPMENT ZONE, JAN 2018 - JAN 2021



Kyauktan Industrial Zone is another prime example of how remote sensing can be used to understand the economic development of an EDZ. Established in 2016,²⁸ the zone saw over 150% growth in nightlight activity, as well as a moderate amount of construction since that time as measured through satellite imagery analysis. Figure 10 shows that from 2018 to 2020, building coverage increased by an estimated 43%, covering an additional nearly 2% of the entire zone. Former farmland has been developed, and the zone now specializes in manufacturing metals, cement, textiles, and other industrial activities.^{29 30} Satellite imagery indicates that over the past three years, additional factories and warehouses have been built in the zone, expanding building coverage from around 85,000m² to an estimated 120,000m². Figure 11 shows satellite imagery analysis and mobile phone location data in January and October 2020. Mobile phone location data may indicate increased activity in areas that are

under development. For example, boxes in figure 11 shows a rise in human activity in a spot where buildings would later be completed.

Nightlight data shows that Kyauktan has experienced significant development for the period of study. The zone is located near Mawlamyine, which has a population of nearly 300,000 people as of 2014.³¹ Analysis of these areas shows the industrial zone is close to residential areas with sports facilities, restaurants, and housing. Some of the zone's success may have to do with the concept of "embeddedness," which provides a framework for analyzing how zones integrate with local supply chains, labor supply, and the economy. This concept has been identified as one of the principal factors of successful economic zones.³² The proximity to a residential area may contribute to the economic success of Kyauktan.

► FIGURE 11: MOBILE PHONE ACTIVITY AND CONSTRUCTION IN KYAUKTAN DEVELOPMENT ZONE BUILDING



DISCUSSION

The economic argument for EDZ establishment is based on the idea that the prioritization of capital and investment over other considerations—environmental, labor, local populations, government revenue—will provide growth and diversification for the local economy. If this initial premise is not met, any costs or negative externalities of the zone will be for naught. Having a comprehensive understanding of the range of potential effects of EDZs is vital for implementing new zones with the greatest chance of successful development while minimizing the detrimental impact of EDZ investments on local communities.

There is an inverse relationship between crime rates and economic indicators like gross domestic product (GDP).³³ Studies have shown that crime decreases as GDP increases and vice versa. With sustainable growth that benefits local populations, would-be criminals are more likely to work within the legal economy, and local communities can benefit from the expanded local economy without being displaced. However, it should not be assumed that economically successful zones outweigh the adverse effects on local communities. Zones are often seen as land grabs, as zone development usually requires the seizure of agricultural and other lands that belong to local populations.³⁴ In India, special economic zones have been found to have detrimental effects on the farming industry and community through displacement, dislocation, and land seizures.³⁵ For EDZs to provide economic relief for local populations while avoiding consequences like armed conflict,³⁶ sustainable development must be achieved without land seizures and with local community engagement.

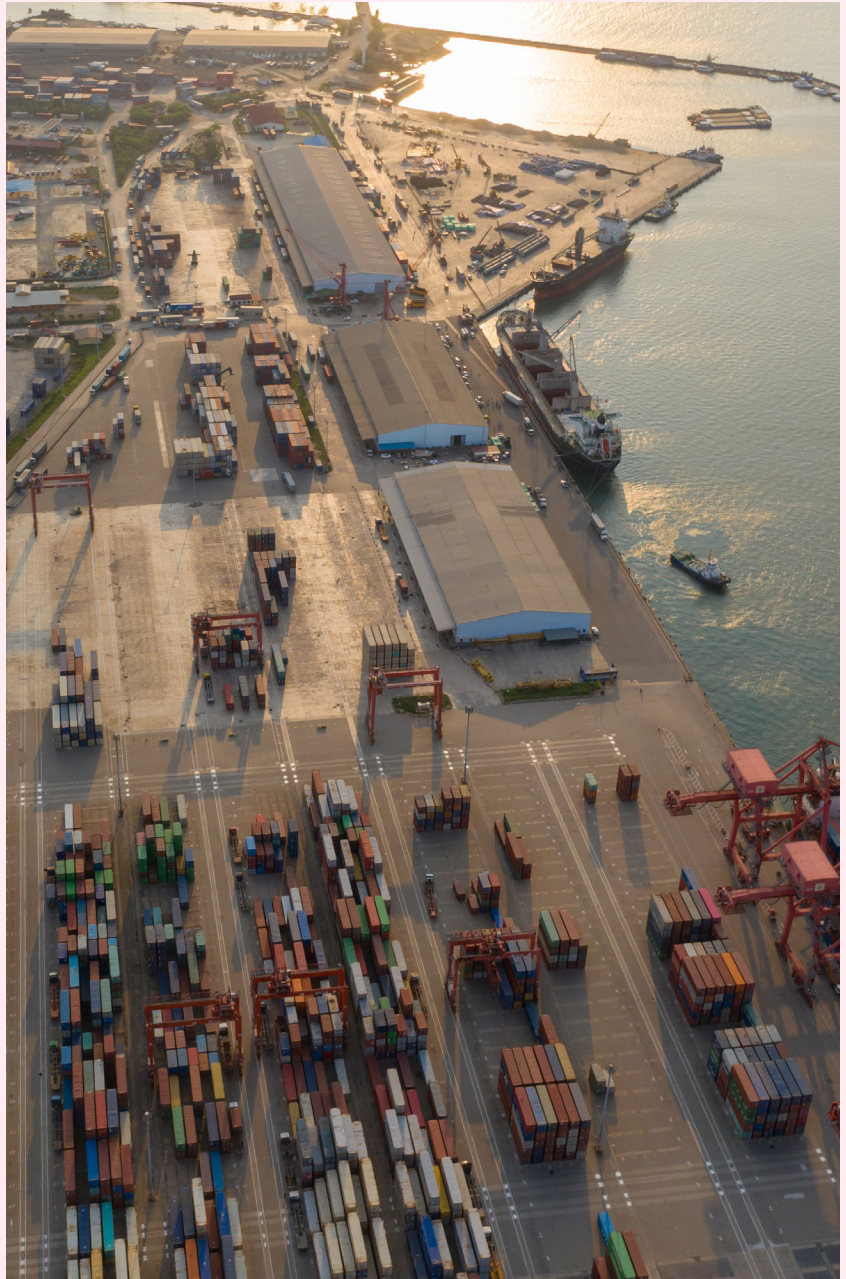
Remote sensing solutions such as nightlight data, satellite imagery, and aggregated mobile phone location data are becoming increasingly available and offer a solution to the paucity of data around the economic performance of EDZs. For local communities, these data sources can provide information that does not rely on the reporting of either zone authorities or government officials. This allows researchers to corroborate or disprove information released by authorities, building trust in the EDZ process. The missing piece for optimal analysis of EDZs is easily accessible information about EDZ implementation. Information about things like the start date of construction, zone development progress, and economic performance indicators is vital for analyzing the effects of EDZs, and open data would vastly improve analytical capabilities by civil society. Host countries could make more informed decisions on EDZ implementation and other issues by collecting and publishing information that could be used for such analysis.

ECONOMIC DEVELOPMENT EVALUATION FRAMEWORK

FACTOR	IMPACT	DATA SOURCES
Nightlight data	Does the nightlight output for the zone increase compared to the output of its host country?	► <i>VIIRS Day/Night Band</i>
Construction	<p>Are there construction projects underway in the zone?</p> <p>How much of the zone is undergoing new construction?</p> <p>Are businesses moving in to the zone?</p> <p>Have construction projects stagnated?</p>	<p>► <i>Qualitative surveys</i></p> <p>► <i>Local zone visits</i></p> <p>► <i>Satellite imagery analysis from providers like Planet Labs</i></p>
Human activity	<p>Are local businesses (restaurants, shops, local services) opening in the vicinity of the zone?</p> <p>Are people relocating to the zone to take advantage of employment opportunities?</p> <p>Are people moving away from the zone?</p>	<p>► <i>Qualitative surveys</i></p> <p>► <i>Local zone visits</i></p> <p>► <i>Anonymized cellular activity data</i></p>
Qualitative review of zone	<p>Is the zone near major infrastructure that will connect it to national supply chains?</p> <ul style="list-style-type: none"> • Highways • Airports • Seaports • Major Cities <p>Are there sufficient facilities near the zone to accommodate a local workforce, such as restaurants, adequate housing, convenience and grocery stores?</p> <p>Is the zone's development happening on schedule and within budget?</p> <p>How many jobs does the project propose to create?</p> <p>Is the zone experiencing delays that were not accounted for in the proposal?</p>	<p>► <i>Individual zone proposals</i></p> <p>► <i>Qualitative review of the surrounding areas</i></p> <p>► <i>Local zone visits</i></p> <p>► <i>Local news sites</i></p>

ILLICIT ACTIVITY

Governments, foreign investors, and private developers of EDZs in the Mekong region should learn from previous failures to incorporate environmental, social, and governance considerations in the planning, construction, and operation of EDZs. Developers should be required to complete rigorous environmental impact assessments, gain the consent and approval of affected populations, and conform with all relevant industrial regulations. Governments should establish independent regulatory authorities to ensure that EDZs do not serve as vehicles of corruption for public officials or as hubs of illicit activity by criminal networks. To aid the exposure of illicit networks, governments should improve the collection and availability of information such as land titles, corporate records, and customs data.



► SIHANOUKVILLE AUTONOMOUS PORT IN SIHANOUKVILLE, CAMBODIA, MARCH 15, 2020

While EDZs promise material benefits to the Mekong region, they can also facilitate illicit activities that undercut benefits to economic development. Previous studies of EDZs worldwide have found that lax regulatory oversight within these zones creates fertile ground for criminal activities such as smuggling, tax evasion, and money laundering.³⁷ In the Mekong region, many EDZs are vulnerable to exploitation for the trafficking of illicit goods such as drugs and wildlife products, while others have served as vehicles for acts of public corruption. The construction of EDZs has also resulted in cases of population displacement, environmental degradation, and conflict over land use.

This study assesses the illicit activities related to EDZs in the Mekong region across four analytical categories:

- **corruption**
- **environmental degradation and conflict**
- **money laundering**
- **trafficking of drugs and wildlife**

These four categories were chosen based on a literature review of threats facing the Mekong region and the illicit activities most frequently cited in association with EDZs. Unlike economic output, phenomena such as trafficking, corruption, and environmental conflict are not easily measurable through proxy variables such as nightlight coverage. Thus, C4ADS relied on publicly available information derived from government, nongovernmental organization (NGO) and media reports, academic research, and other sources to gauge the relationship between the four analytical categories and sample EDZs. Where possible, the study attempts to assess whether these relationships are causal or simply factors of broader socioeconomic conditions in the Mekong countries.

CORRUPTION

Allegations of corruption related to the permitting, construction, and operation of regional EDZs were found across all countries. Corruption can take a variety of forms, including bribery, embezzlement, clientelism, and crony capitalism. Like all forms of illicit activity, corruption is difficult to measure because it is intentionally hidden from public view. In some cases across Mekong countries, a lack of transparency surrounding the tendering and development process was sufficient to stoke distrust among local populations and fuel allegations of corruption.³⁸ In other cases, more concrete evidence emerged in public sources of bribery on the part of EDZ developers, either in connection to the projects themselves or to developers' other business activities.³⁹ Perhaps the clearest example of corruption concerning EDZs came from Cambodia, where contracts for at least 12 EDZs were allocated to "business tycoons" with close ties to Prime Minister Hun Sen or the ruling Cambodia People's Party, according to a 2016 Global Witness report.⁴⁰

Although EDZs may be vulnerable to acts of public corruption, they appear no more susceptible than other features of the regional political economy. In 2020, Transparency International (TI) ranked all five Mekong region countries in the bottom half of its Corruption Perceptions Index, a widely-used global indicator of public corruption, with Cambodia, Laos, and Myanmar in the bottom third.⁴¹ According to TI's Global Corruption Barometer, 37% of public service users in Cambodia reported paying a bribe in the previous twelve months.⁴² Because all countries in the Mekong region display relatively high baseline levels of corruption, it is difficult to separate the effect of EDZs on corruption from that of broader structural conditions.



EDZs and Corruption

Although not an officially sanctioned SEZ, the Myanmar Yatai Shwe Kokko Special Economic Zone on Myanmar's border with Thailand—a reported US\$15 billion collaboration between the Border Guard Forces, a subdivision of the Tatmadaw, and Yatai International Holding Group, a Hong Kong-registered company—has drawn criticism for low transparency, land confiscations, and concerns about illicit activity.⁴³ Allegations of illegality have also been directed at public officials in Myanmar: In June 2020, the Myanmar government reportedly launched an investigation into illicit activity in the zone,⁴⁴ and three military officers were accused in October 2020 of accepting bribes related to illegal casinos there.⁴⁵

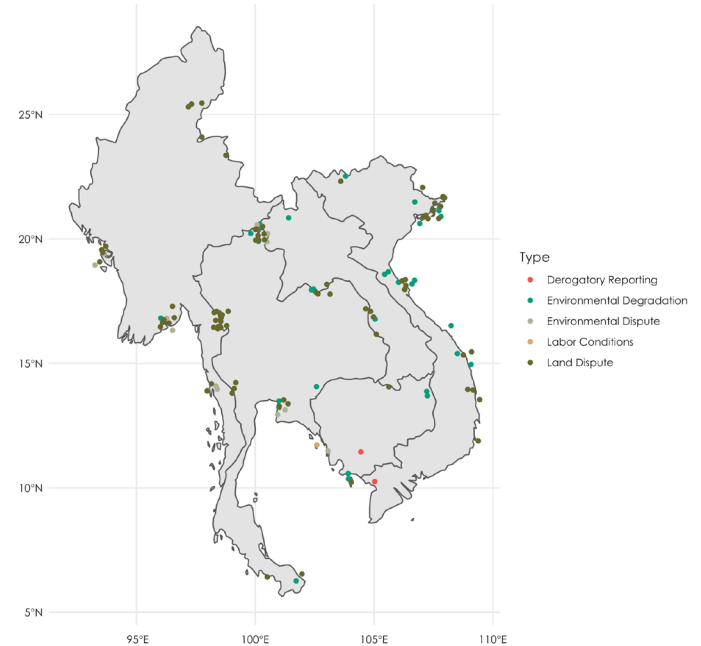


For more information about the Shwe Kokko SEZ see page 50.

ENVIRONMENTAL DEGRADATION AND CONFLICT

Of the four categories of illicit activity assessed, the link between EDZs, environmental degradation, and environmental conflict was clearest. Sixty percent

► FIGURE 12: REPORTS OF ENVIRONMENTAL DEGRADATION AND CONFLICT IN SAMPLE ZONES



of the 110 Mekong region EDZs analyzed were associated with at least one report of environmental degradation or conflict with local communities.⁴⁶ Environmental degradation can take many forms depending on the location of the zone and the nature of business activities within the zone. Water and air pollution, often seen in connection with industrial activity, was the most frequently cited form of environmental degradation. Other environmental impacts included deforestation,⁴⁷ erosion,⁴⁸ river diversion,⁴⁹ and wildlife trafficking.⁵⁰

The negative environmental effects of EDZs often result from inadequate environmental impact assessment (EIA) processes. In the case of Dawei SEZ in Myanmar, for example, an EIA that was supposed to be completed before project implementation was only executed after the completion of a major access road.⁵¹ Local communities along the road were neither invited to stakeholder consultations nor received information about the project as it was carried out, according to the World Wildlife Fund.⁵²

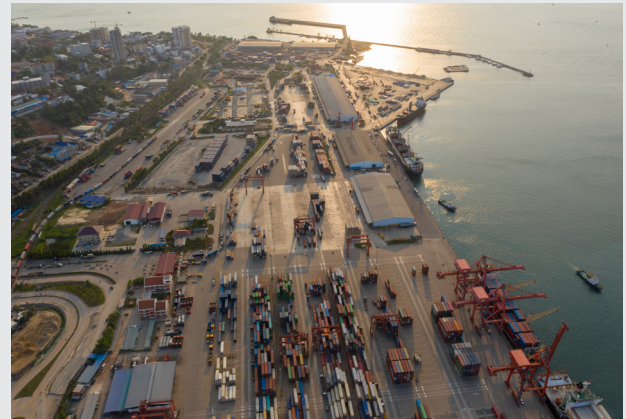
A lack of prior consultation and engagement with local stakeholders is just one of several social issues that emerge surrounding EDZs. In some cases, the social impacts of

EDZs are more extreme: in Cambodia, Myanmar, and Thailand, for example, cases of forced eviction by public security forces have been documented.⁵³ Even when affected populations are compensated for their losses of land or livelihood, they often express dissatisfaction with the level of compensation.⁵⁴

MONEY LAUNDERING

Lax regulatory oversight, weak inspection and registration procedures, inadequate anti-money laundering safeguards, and lack of coordination between zone and customs authorities render many economic development zones around the world vulnerable to illicit activity.⁵⁵ Money laundering can occur in EDZs through various mechanisms, including trade mis-invoicing, fraudulent investment in business and real estate, and the manufacture and smuggling of illegal, counterfeit, or regulated goods (see box, right).⁵⁶

Some EDZs in the Mekong region are vulnerable to money laundering through the rapidly expanding casino industry, which the United Nations Office on Drugs and Crime (UNODC) has called “a perfect partner or offshoot industry for organized crime groups that need to launder large volumes of illicit money.”⁶⁰ Journalists⁶¹ and subject matter experts⁶² alike have highlighted the links between organized crime and EDZ gambling activities. Casinos offer a range of financial services that can be used for money laundering—from foreign exchange to check issuance—and host third-party intermediaries that can obscure gamblers’ identities and activities.⁶³ In a January 2019 report, the UNODC identified 150 licensed casinos in Cambodia alone, up from 57 in 2014.⁶⁴ According to the UNODC, allegations of links to organized crime and money laundering have been directed at casinos across Cambodia, Laos, and Myanmar.⁶⁵



EDZs and Tariff Evasion

In June 2019, the United States fined several companies for the transshipment of Chinese goods via Sihanoukville SEZ in Cambodia to avoid paying US tariffs on imports from China, according to “Reuters.”⁵⁷

Although US officials did not specify the number of companies involved, all were located within the Sihanoukville SEZ, which serves as a hub for the manufacture of textiles, garments, bags, leather products, and other goods.⁵⁸

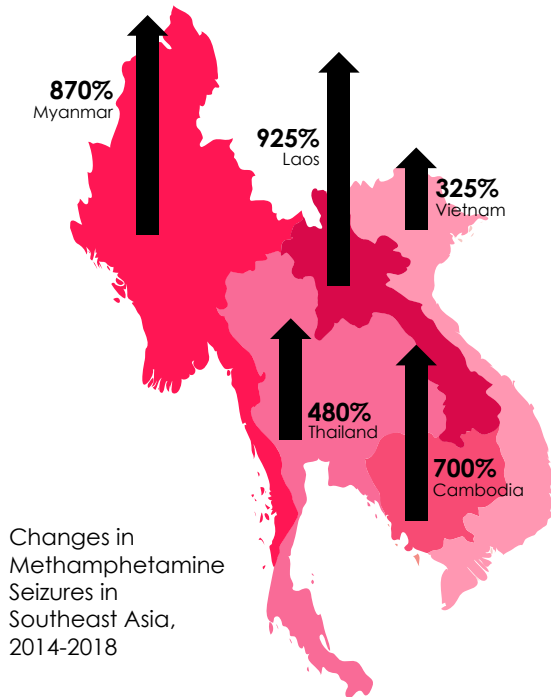
The growth of the SEZ, established in 2008, has also coincided with a rise in illicit activities in the surrounding port city of Sihanoukville, such as illegal gambling and money laundering.⁵⁹



[For more information about Sihanoukville SEZ see page 30.](#)

DRUG AND WILDLIFE TRAFFICKING

► **FIGURE 13: CHANGES IN METHAMPHETAMINE SEIZURES IN MEKONG COUNTRIES (2014-2018)**



Economic Development Zones in the Mekong region may be vulnerable to the trafficking of a variety of illicit products, ranging from illegal cigarettes⁶⁶ to counterfeit goods.⁶⁷ The trafficking of wildlife and drugs, however, are particularly salient risks for EDZs across the Mekong region.

The Mekong region has long hosted some of the world's largest wildlife markets and plays a vital role in the smuggling of African wildlife products, such as ivory, rhino horn, and pangolin scales,⁶⁸ as well as products from the region itself. The region is also home to a rapidly expanding trade in illegal drugs: transnational criminal networks dedicated to the manufacture and smuggling of methamphetamine are expanding through the region, many displaced from China following law enforcement efforts to crack down on drug trafficking within its borders.⁶⁹ Between 2014 and 2018, methamphetamine seizures across the five Mekong countries rose by an average of 654%.⁷⁰

Based on available data, EDZs linked to illicit wildlife and drug trafficking tend to be situated at international borders. Large markets for illicit wildlife have been documented in at least two border EDZs within Laos: Boten, located on the border with China, and Golden Triangle SEZ, which borders Myanmar and Thailand (see box, page 22). The capital of Vientiane, where several new tourism- and industry-oriented EDZs are being developed, also hosts wildlife markets and serves as a transit hub for international wildlife smuggling networks. In Vietnam, at least eight wildlife seizures have been recorded at the Mong Cai SEZ, which has been identified by the Environmental Investigation Agency, an NGO, as a key border crossing for ivory being smuggled through Vietnam to China by "organized criminal gangs, aided by corrupt customs and border control officers."⁷¹ In Myanmar, researchers have documented the sale of pangolin scales at the Mong La SEZ bordering China.⁷²

Drug seizures have also been documented at borderland EDZs, most notably in the Golden Triangle SEZ, where police seized large quantities of methamphetamine as early as 2011 (see box, page 22).⁷³ Unlike illicit wildlife, however, the transport and sale of drugs tend not to occur in open markets, which makes data on illicit drug trafficking flows scarcer. Drug seizures in or adjacent to Mekong EDZs typically occurred in large cities or industrial areas, according to data collected by C4ADS. In 2015, for example, authorities in Myanmar confiscated more than 26 million tablets of methamphetamine found in the back of an abandoned truck in the Mingaladon Industrial Zone,⁷⁴ located in the city of Yangon.⁷⁵ The same year, authorities in Thailand busted a drug-smuggling ring operating out of the Map Ta Phut Industrial Estate,⁷⁶ a large industrial park on the country's eastern seaboard.⁷⁷

Despite a few well-documented cases, the direct relationship between EDZs and drug and wildlife trafficking is not clear. Given the proximity of many EDZs to consolidation points for both licit and illicit transport networks, such as shipping hubs, border

crossings, and populated cities, it is difficult to draw any analytical conclusions beyond loose correlations on their relationship with illicit trade. EDZs are built for a variety of economic activities—some serve as tourist destinations and others as manufacturing centers—and the presence of markets or smuggling networks dedicated to illicit products appears to depend largely on the zone's function and location.



Laborers assembling a scaffolding in Laos for a Chinese-owned casino. Source: Christophe Archambault/AFP via Getty Images

Golden Triangle SEZ

Several EDZs in the Mekong region are notorious for their reported ties to drug and wildlife trafficking networks. The Golden Triangle SEZ in Laos, in particular, has been the subject of various investigative reports into its role as a transit hub for the smuggling of methamphetamine and other drugs across international borders.^{78 79} The zone is also known for its illicit wildlife markets, which as of February 2020 were alleged to include ivory, rhino horn, helmeted hornbill parts, and pangolin scales.⁸⁰ The zone's beneficial owner was sanctioned by the United States for both drug and wildlife trafficking, among other crimes, in 2018.⁸¹



For more information about Golden Triangle SEZ see page 46.

USING PUBLIC DATA TO INVESTIGATE ILLICIT ACTIVITY

Illicit activities such as money laundering, corruption, and drug and wildlife trafficking impose costs on local communities and host governments. Financial tolls may include public healthcare expenditures to address complications from pollution, loss of taxable revenue as a result of trafficking or bribery, maintenance projects to remediate subpar construction, and budgets for counter-trafficking operations. Nonfinancial costs are more difficult to isolate and quantify but include the loss of biodiversity and habitats, as well as the diminished popular legitimacy of the host government. By evaluating and mitigating the potential of EDZs to facilitate illicit activity, zone stakeholders can reduce exposure to these downstream costs.

Governments, foreign investors, and private developers of EDZs in the Mekong region should learn from previous failures to incorporate environmental, social, and governance considerations in the planning, construction, and operation of EDZs. Developers should be required to complete rigorous environmental impact assessments, gain the consent and approval of affected populations, and conform with all relevant industrial regulations. Governments should establish independent regulatory authorities to ensure that EDZs do not serve as vehicles of corruption for public officials or as hubs of illicit activity by criminal networks. These tasks will undoubtedly be complicated in many countries by weak state institutions and low transparency, but only through careful planning and proper oversight can states and private developers deliver the sustainable, long-term benefits that SEZs promise to bring the Mekong region.

Illicit activity and its impacts are not easily measured because such activity is often concealed from public view by design. The exposure of corruption, illicit trade, and environmental issues depend on the work of local journalists and robust networks of local civil society organizations and journalists. These groups can collect

and share such evidence as photographic documentation, in-depth interviews with human sources, and official documents from local government offices. Illicit networks can also be observed through their digital footprints, by data recorded in sources such as corporate registries, national gazettes, property registries, public contracting records, court dockets, and commercial trade databases. For this information to be effectively integrated and analyzed for signs of illicit activity, however, governments must first collect the data and make it publicly available. The current state of public data transparency across the Mekong region varies by country, but access to corporate information and trade data is generally low.

In addition to official government sources, data from sources such as satellite imagery, social media, and local reporting can provide insights into the activities of illicit actors (see table).

FRAMEWORK FOR MEASURING ILLICIT IMPACT OF AN EDZ

CATEGORY	IMPACT	DATA SOURCES
Corruption	<p>Do zone management and oversight increase the ability of local officials to leverage their office for personal gain?</p> <p>Are there viable reporting mechanisms?</p>	<p>▶ <i>Media monitoring tools</i></p> <p>▶ <i>Public contracts</i></p>
Environmental Degradation and Conflict	<p>Is development coming at the cost of the environment?</p> <p>Are environmental impact assessments sufficiently rigorous?</p> <p>Are they being effectively implemented?</p>	<p>▶ <i>Tender documentation</i></p> <p>▶ <i>Corporate registry data</i></p> <p>▶ <i>Satellite imagery</i></p> <p>▶ <i>Concession data/land-titling databases/property registries</i></p>
Trafficking (drugs, wildlife, humans)	<p>Do enforcement authorities have the access and resources to enforce the country's laws?</p> <p>Do "fast-track" shipping processes adequately screen for illicit activity?</p>	<p>▶ <i>Social media and dark web monitoring tools (Fivecast)</i></p> <p>▶ <i>AIS (Windward) and ADS-B (Icarus) data</i></p> <p>▶ <i>Government seizure notifications</i></p>
Money Laundering	<p>Do the regulatory incentives for the zone facilitate the exploitation of the licit financial system by organized criminal syndicates?</p>	<p>▶ <i>Corporate registry data</i></p> <p>▶ <i>Cryptocurrency data</i></p>

GEOPOLITICS



EMBEDDING GEOPOLITICS IN EDZ ASSESSMENTS

Though host countries usually establish EDZs for economic reasons, the zones often have geopolitical importance as well. Geopolitical impacts can be positive. Signaling openness to foreign investment can win a host country powerful friends in foreign business and political circles. Further, joint investments near borders can bring stability to unstable regions,⁸² and prosperity and wealth are the most direct route to geopolitical influence. But EDZs can also expose host countries to new vectors of foreign manipulation. Foreign investment in EDZs, like foreign investment more broadly, can risk handicapping the host government's ability to manage critical domestic issues and narrow its foreign policy options.^{83 84} While "geopolitical impact" can be a complex and nebulous variable, increasing access to information on zone characteristics and activities will allow policymakers and observers to draw more informed conclusions about zone impacts.

Evaluating geopolitical impact is extremely challenging. Much of the coverage on the effects of foreign investment (including EDZs) is subjective—it can even become a

Rorschach test for the analyst's political leanings, with commentators from different camps drawing different conclusions from the same data.⁸⁵ Moreover, it should be emphasized that host nations can, and sometimes should, choose to prioritize attracting new investment or infrastructure over geopolitical positioning. The existence of negative geopolitical consequences, as perceived by the host country or another stakeholder, does not necessarily render an EDZ illegitimate. But without developing a holistic picture of the geopolitical impact of EDZs, it is impossible to conduct a comprehensive cost-benefit analysis of zone impact.

This section offers a framework with which local and national decision makers can consider the geopolitical implications of EDZs. This framework relies on three categories of zone-specific data: contract terms, foreign activities, and physical zone characteristics. These categories were identified based on qualitative research into the nexus of international commerce and geopolitical coercion and the dynamics of foreign investment in EDZs. When implementing this framework, data relating to these categories should be analyzed against the backdrop of broader geopolitical research, as the authors endeavored to do here.

FRAMEWORK FOR MEASURING GEOPOLITICAL IMPACT OF AN EDZ

FACTOR	IMPACT	DATA SOURCES
Contract terms	Constrained geopolitical options for host country	<div><div>► Financing structure</div><div>► Degree and concentration of foreign ownership</div></div>
Foreign activities	Foreign interference in host country domestic politics	<div><div>► Connections with local power brokers</div><div>► Foreign government ties of the investing entities</div><div>► Presence of private security companies</div></div>
Physical characteristics	Use of EDZ infrastructure and resources to further the discreet aims of an investor country	<div><div>► Geostrategic value</div><div>► Planned infrastructure</div><div>► Machine learning-based automated monitoring tools</div></div>

CONTRACT TERMS

Foreign involvement in official EDZs is typically governed by legally binding contracts, the details of which may affect the potential for legal zone activities to affect the host country's geopolitics. Specifically, the financing structure, the nature of the foreign entities involved in the deal, and the rights bestowed on those entities may bring negative geopolitical impacts to the EDZ hosts. However, contract terms are often not made publicly available. This can make it difficult for stakeholders in the host government,⁸⁶ international governing bodies, civil society, and the private sector to evaluate a zone's merits.

The structure of EDZ financing dictates the amount of financial liability taken on by the host country stakeholder, usually the host government. Under unfair contract terms, host countries can end up with immense stocks of foreign-held debt, which the foreign investor can leverage to influence host government decisions. In some cases, the situation can be cyclical: Heavily indebted host countries may be forced to accept poor terms, which increases the leverage of the investor and makes it even more difficult for the host country to access "fair" capital.⁸⁷

In the Mekong region, Laos is in the most precarious position when it comes to debt. Laos has the highest external debt of any Mekong country (93% of its Gross National Income as of 2018).⁸⁸ Its debt is highly concentrated, with 50% held by Chinese entities as of 2019.⁸⁹ Chinese investors also own a controlling stake in six of Laos' 15 official EDZs.⁹⁰ In the face of loan defaults and the ensuing economic fallout, host governments like Laos may be coerced into political compromises antithetical to their national interest.⁹¹

The specific rights endowed by the agreement and the timeline of those rights also frame both zone operations and oversight, which dictate, in part, the capacity of foreign actors to conduct geopolitically consequential activities. These include land ownership and managerial authority, including the responsibility of domestic or

foreign law enforcement within the zone. For example, a foreign investor with a 99-year land lease and full managerial rights possesses a long-term influence over host-government territory with limited mandated oversight. In some cases, such zones can become semi-autonomous enclaves, with foreign security agencies enforcing laws within the zone.⁹²

Another important feature of a contract is the degree of foreign ownership, which varies by country in Mekong region EDZs. Among sample EDZs with available data, Thai zones had the lowest average foreign ownership stake (12%), followed by Cambodia (43%), Myanmar (59%), and Laos (73%).⁹³ Note that a large foreign ownership stake does not entail financial leverage if the shares are spread across investors from different countries. For example, the contracts to develop the New Yangon EDZ have been distributed between Chinese, Thai, and Indian companies.⁹⁴ EDZ developers from some countries like Japan, however, prefer to populate their zones with businesses that are from their home country. Japanese investors often take charge of marketing their zones and bringing in tenants. As a result, Japanese-backed zones are filled mostly by Japanese companies. For example, in Cambodia's Japan-backed Phnom Penh and Tai Seng Bavet EDZs, Japanese companies account for 60% and 50% of tenants, respectively.⁹⁵

Host countries and zone management authorities have numerous means at their disposal to ensure that contracts do not open the door to negative geopolitical consequences. To ensure that foreign companies do not assume de facto ownership over domestic spaces, zone management authorities should seek to maintain a domestic controlling stake (or a minority stake with investors from multiple foreign countries also holding minority stakes) and minimize the timeframe for contracts that bestow significant rights to foreign actors. When it comes to investing companies, host governments should seek investors without strong government ties, such as private companies, and thoroughly evaluate prospective investors for both

formal and informal links to foreign governments. Finally, to mitigate financial leverage from an EDZ project, host governments can seek forgiving sources of funding, such as official developmental assistance or low-interest loans and maintain a diversity of foreign creditors to avoid concentrating leverage in a single lender.⁹⁶

MALIGN FOREIGN ACTIVITIES

The words and conduct of foreign entities involved in the financing, development, and management of EDZs can lend insight into potential geopolitical impact. Activities of concern can range from the employment of foreign security companies to excessive relationship building with local powerbrokers and other signs of political rather than business motivations. Host governments should analyze the pursuits to which a foreign actor devotes time, words, or resources regarding the specific EDZ or broader bilateral engagement and assess their track record in other countries to keep abreast of ongoing and intended operations.

At the border of Myanmar and China, for example, the Ruili-Muse Border Economic Cooperation Zone afforded China the opportunity to insert itself into local political dynamics. Chinese companies signed an agreement to create the Ruili-Muse Border Economic Cooperation Zone in 2007, but construction stagnated, due in part to ongoing illicit activity and simmering conflict with limited central government presence in the region.⁹⁷ An assessment of foreign engagement in the conflict suggested that Chinese stakeholders capitalized on the cycle of clashes and ceasefires, expropriating land and acquiring natural resources.⁹⁸ In 2013, China established itself as a formal player in the area's conflict mediation with the formation of the special envoy for Asian affairs.⁹⁹ In other words, China's economic presence in local EDZs led to greater government involvement in the region.

Foreign private security companies (PSCs) are particularly challenging foreign actors to manage and have increased their presence in the region alongside the new foreign investors entering through EDZs and

other means. Though PSCs are not formal security apparatuses of foreign governments, the proliferation of PSCs constitutes a nontraditional path by which investors (or investor countries) can shape the local security environment by introducing armed groups. More than ten mainland Chinese PSCs have established branches in Mekong countries, constituting roughly half of the Chinese PSCs that operate overseas.¹⁰⁰ This is in addition to the many Chinese nationals who have established PSCs in the region. In Cambodia and Myanmar—the only regional countries with full corporate registries that include the nationality of owners for PSCs—Chinese nationals run more than half of all foreign PSCs. While not all PSCs can be tied to EDZs, some PSCs have established offices in EDZs, including Zhongbao Hua'an Group [中保华安集团有限公司]¹⁰¹ and Overseas Security Guardians [中军军弘安保集团].¹⁰² In addition to providing security for Chinese workers, these companies reportedly offer various services, including safety training, epidemic prevention and response,¹⁰³ security technology,¹⁰⁴ and mining cooperation.¹⁰⁵ Notably, Overseas Security Guardians has allegedly used the Sihanoukville port as a “maritime escort base” [海上护航保障基地], which a post on the company's website describes as serving to “protect fisheries.”¹⁰⁶ The PSCs, which operate in a legal gray zone that presents real risks for investors and host countries alike, are discussed in more detail in the deep dive, “Private Security Companies.”

One way of looking for potentially malign foreign activity is to examine the types of foreign entities involved in a deal. Generally, the more affiliated a foreign investor is to its home government, the greater the potential that the investing entity may serve as a vector of geopolitical leverage, either at the time of the deal or in the future. State affiliation includes formal ties (government organizations, state-owned enterprises, or private companies with government embeds) and informal links (family connections and other personal relationships). This is not to say that investments from such actors are inherently insidiously political in nature; however, greater government influence over the investor can entail increased government influence over zone operations.

In Myanmar, three of seven planned zones with confirmed foreign controlling stakes involve investors who are officially affiliated with a foreign government, including China,¹⁰⁷ South Korea,¹⁰⁸ and Singapore.¹⁰⁹ When making geopolitical assessments, zone management authorities should be aware of corporate links to political influence bodies like China's United Front Work Department or Taiwan's Overseas Community Affairs Commission. Where such ties exist, host governments can negotiate down the stake held by politically affiliated foreign entities. For instance, the Myanmar government objected to Kyaukphyu SEZ's ownership structure, which was planned to be 85% held by the Chinese state-owned CITIC, and successfully revised the investor's ownership stake down to 70%.^{110 111}

PHYSICAL CHARACTERISTICS

EDZs can serve as vectors of geopolitical influence when they are located near strategically valuable land or contain dual-use infrastructure, meaning infrastructure that can be repurposed to support military operations. These and similar factors should be integrated into geopolitical risk assessments for EDZs.

The strategic value of an EDZ's location is dynamic and relative to the goals of the foreign investor—an investor from a landlocked country with bountiful natural gas endowments has different geopolitical priorities than a coastal state that relies on energy imports. The logistical opportunities and natural resource endowments of a zone, which are typically evaluated in the context of attracting investors, should be analyzed against the geopolitical priorities of the investor country, especially when state-controlled entities are involved in the deal. Environmental and social impact assessments can be augmented with survey data to include geopolitical context, such as whether an investor country has previously attempted to obtain control over the location or others like it in the region.¹¹²

In some cases, the geopolitical benefits of a zone's location have been specific to the investor country. For

example, Japan invested in the Dawei SEZ and China invested in the Kyaukphyu SEZ, both in Myanmar, in part to obtain access to deep-sea ports and logistics hubs that would allow them to circumvent logistical chokepoints in the Malacca Strait.^{113 114 115}

Zones can also house dual-use infrastructure, enabling an investor country to establish a military foothold in the area. This is particularly the case in large zones: a 5 kilometer² (km) EDZ made up of a business district and modest industrial park cannot support advanced geopolitical objectives to the same extent as a 36,000-hectare zone with a deep-water port, airport, power plants, water reservoirs, and agricultural areas.¹¹⁶ Infrastructure such as deep-water ports, interchange yards, container handlers, helicopter landing zones, and shipyard facilities can be considered dual-use infrastructure.¹¹⁷ Dara Sakor EDZ in Cambodia is even reported to include the country's longest runway.¹¹⁸ While most large, complex EDZs are not destined to house military operations, oversight of large zones is more difficult, and their potential dual uses can affect the strategic operating environment.¹¹⁹

BUILDING OUT MORE COMPLETE DATA PICTURES

Assessing the full scope of geopolitical impacts of an EDZ's contract terms, foreign activities, and physical characteristics requires more data than is currently made available. Two critical areas for improvement are data on foreign shareholders and information on the specifications of planned infrastructure. The foreign-domestic breakdown of investors (let alone the investors' identities or even nationalities) for active EDZs was only available for half of the Burmese zones, a fifth of Cambodian zones, and two Vietnamese zones.¹²⁰ Transparency is also an issue when it comes to potential dual-use infrastructure in zones. While official websites of EDZs typically provide insight into existing and planned infrastructure, the information is usually unstructured and sometimes only presented in a graphic.

► **FIGURE 14: LOT ASSIGNMENTS FOR MINGALADON INDUSTRIAL PARK**



A breakdown of lots for the first phase of the Mingaladon Industrial Park.¹²¹ Other portions of the website list the size of each plot and the tenant, if currently rented.¹²² Mingaladon offers an example of above-average data transparency for contract terms.

To rectify this situation, international organizations, governments, and local stakeholders should:

- Prioritize the acquisition and centralized publication of relevant zone data (such as financing structure, investor ultimate beneficial ownership, infrastructure plans, and natural resource endowments) currently held by EDZ officials. This will empower civil society stakeholders and researchers to supplement the zone management authorities' capacity with additional resources and expertise.
- Make zone plans, contracts, and programs widely available. These should be standardized, publicized, and monitored by zone authorities or government stakeholders. As concepts such as strategic value, government affiliation, and influence operations can be more nebulous, insight into these factors will likely require collaboration between government stakeholders, civil society, and private-sector stakeholders, as well as regular monitoring over time.
- Invest in developing tools that leverage emerging machine learning technologies for automated

monitoring of certain factors: observers could use commercially available change detection algorithms¹²³ to track infrastructure development through satellite imagery and local sentiments through social media. Variations of Planet Labs' machine-learning detection algorithms used to measure building and road construction, discussed earlier, could be trained to monitor zones for the development of dual-use infrastructure. International organizations and global NGOs should also support such efforts to encourage sustainable development initiatives across the world.



Key Takeaways

As with illicit activity, the geopolitical consequences of an EDZ should be recognized, evaluated, and continuously monitored alongside the economic development potential. This evaluation could take the form of a “geopolitical impact assessment” that assesses the contract terms for foreign activities related to, and physical characteristics of an EDZ, using the impact framework laid out at the beginning of this section.

A host government may decide to move forward with a geopolitically risky zone to galvanize development in a disadvantaged region. In other words, in a comprehensive assessment of EDZ impact, authorities may decide that the economic opportunity is worth the gamble on geopolitics. But only by integrating geopolitical thinking into EDZ decision making can host countries reap the benefits of foreign investment while mitigating the risk of foreign control.

DEEP DIVE CHINA'S INVESTMENT IN CAMBODIA

The Belt and Road Initiative (BRI) promises benefits for local communities. In the case of Sihanoukville SEZ, however, development was greatly undercut by increasing crime rates, rising rents, overwhelmed infrastructure, and the suppression of local culture in the city of Sihanoukville. China allegedly used its influence to pressure Cambodia to ban online gambling as part of a broader campaign against gambling by China.¹²⁴ This ban further disrupted the city of Sihanoukville by devastating the local gaming economy and causing thousands to leave the city.



► SIHANOUKVILLE, CAMBODIA

INTRODUCTION

In 2016, Chinese President Xi Jinping described Cambodia's Sihanoukville Special Economic Zone as a "model for practical cooperation."¹²⁵ The zone's setting is the city of Sihanoukville, or Preah Sihanouk, a small tourist destination in the early 2010s.¹²⁶ Sihanoukville SEZ was founded in 2008 to focus on developing infrastructure, manufacturing facilities, and building and leasing other industrial facilities.^{127 128} Since that time, Chinese investment in Cambodia and Sihanoukville has increased dramatically, changing the nature of the city along with it.¹²⁹ Increased official investment preceded a massive influx of private-sector investment. Sihanoukville became an enclave for Chinese nationals, with some estimating in mid-2019 that there were as many Chinese nationals as Cambodians residing in the city.¹³⁰ Locals note that businesses and street signs that once communicated messages in Khmer now use Chinese.¹³¹ Cambodian officials have estimated that 90% of businesses were Chinese-owned.¹³² Many of these businesses were casinos, which flourished as Chinese tourists flocked to Sihanoukville to patronize its booming gambling industry, and gamblers in China took advantage of Sihanoukville's online gambling offerings. There were more than eighty casinos, only about half of which were legally registered.¹³³ As a result of this boom, tourism increased by 700% between 2012 and 2017.¹³⁴ In 2017, 160,000 Chinese tourists visited the city, which had a population of 157,000.¹³⁵ This rapid increase in business, tourism, and population overwhelmed the existing infrastructure, causing a "mounting garbage problem, strained utilities and soaring rents."¹³⁶ Reports also indicate that the boom in Sihanoukville was often closed to local Cambodian entities, as Chinese nationals did business with each other but excluded locals wherever possible.¹³⁷

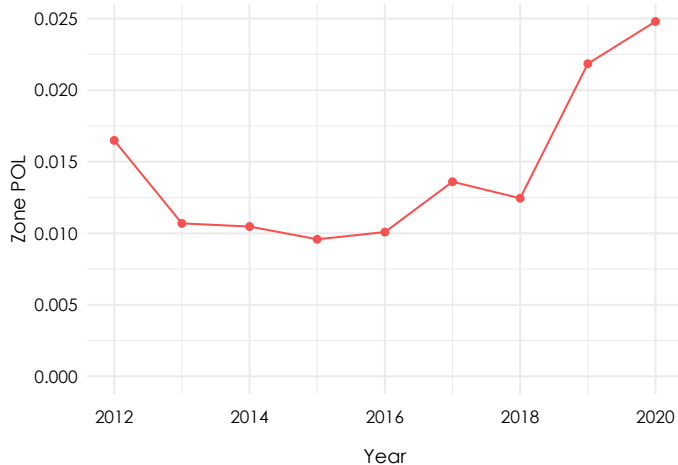
► FIGURE 15: CONSTRUCTION IN SIHANOUKVILLE SEZ, JAN 2018 AND DEC 2020



PLANET LABS USED A BUILDING DETECTION MACHINE LEARNING MODEL TO ANALYZE SATELLITE IMAGERY OF SIHANOUKVILLE SEZ. THE RAW IMAGES ARE SHOWN ABOVE FOR JANUARY 2018 AND DECEMBER 2020. THE BOTTOM ROW SHOWS THESE SAME IMAGES WITH ANNOTATIONS FOR WHERE THE MODEL DETECTED BUILDINGS. THE IMAGERY SHOWS CONSIDERABLE CONSTRUCTION OVER THE THREE-YEAR PERIOD, AS DEVELOPMENT IS PUSHING IT FARTHER INTO THE ZONE.

DEVELOPMENT

► **FIGURE 16: NIGHTLIGHT GROWTH FOR GROWTH, SIHANOUKVILLE SEZ, 2012-2020**

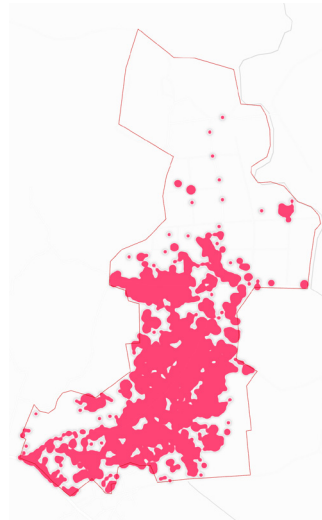


ANALYSIS OF NIGHTLIGHT DATA EMITTED FROM SIHANOUKVILLE SEZ SHOWS LACKLUSTER PERFORMANCE WITHIN THE EDZ, UNTIL 2016, WHEN THE ZONE SURPASSED 100 TENANTS

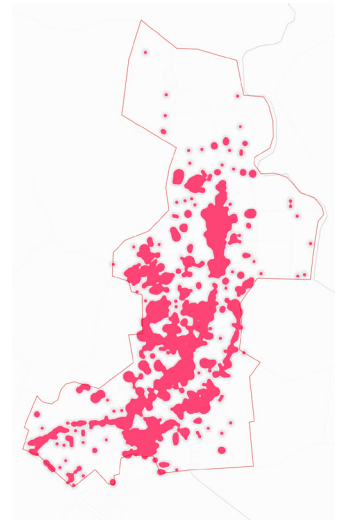
Sihanoukville SEZ was the first zone in close proximity to Sihanoukville and is a joint venture between two Chinese companies that purportedly specialize in Cambodian investments.^{138 139} The EDZ is now described as a “landmark” BRI project on a provincial government’s Belt and Road online portal.¹⁴⁰ The zone is located on the outskirts of Sihanoukville, about 12 km from the Port of Sihanoukville and approximately 3 km from Sihanoukville International Airport. It includes more than 100 factories and employs more than 20,000 people.¹⁴¹ According to the zone’s website, it is focused on “textiles and garments, luggage and leather goods, wood products” in its first phase of development, and “hardware machinery, building materials, home furnishings, auto parts and tires, new photovoltaic materials, fine chemicals” in its second phase.¹⁴²

► **FIGURE 17: MOBILE PHONE ACTIVITY IN SIHANOUKVILLE SEZ AUG 2019 - AUG 2020**

August 2019



August 2020

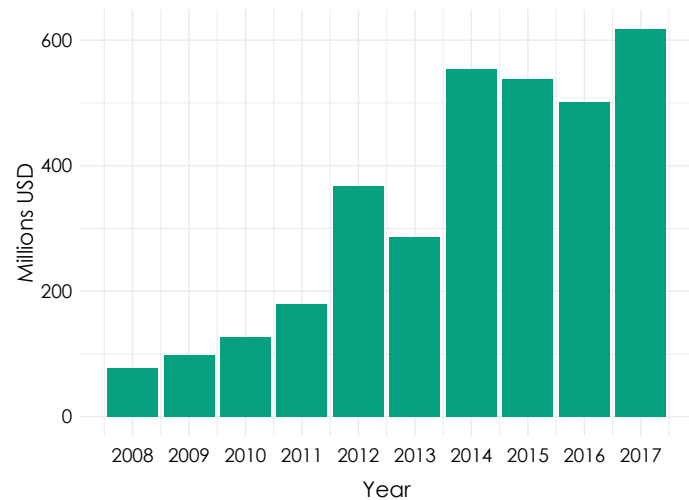


THIS HEATMAP SHOWS ANONYMIZED MOBILE PHONE LOCATION DATA OVER SIHANOUKVILLE SEZ IN AUGUST OF 2019 AND 2020. THIS DATA SHOWS AN EXPANSION OF HUMAN ACTIVITY INTO THE FARTHER REACHES OF THE ZONE AS MORE BUILDINGS ARE CONSTRUCTED IN THESE LOCATIONS.

The zone began operating in 2012, and despite a slow start in the following years, nightlight data shows the EDZ had significant growth beginning in 2016 when the zone celebrated its 100th tenant.¹⁴³ Planet Labs’ analysis shows that Sihanoukville is continuing to expand its factory facilities; the zone’s building coverage increased by 33% between 2018 and 2019. Figure 15 shows imagery that analyzes the expansion in building coverage from 2018 through 2020. Figure 17 shows similar growth in human activity into the less developed parts of the zone, as measured by anonymized mobile phone location data.

GEOPOLITICS

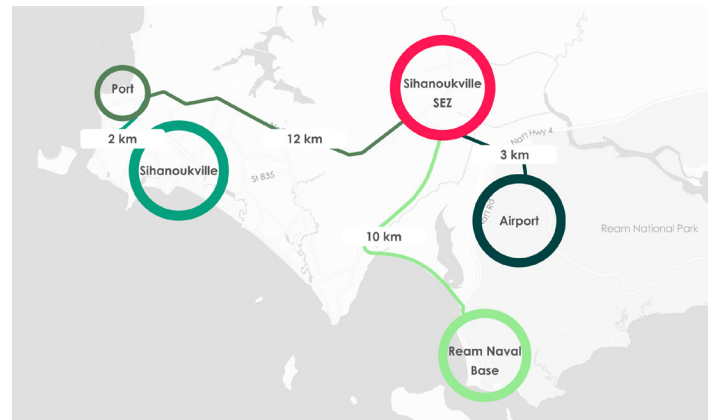
► **FIGURE 18: CHINESE FOREIGN DIRECT INVESTMENT IN CAMBODIA, 2008-2017**



CHINA'S INVESTMENT IN CAMBODIA INCREASED OVER 700% BETWEEN 2008 AND 2017, ACCOUNTING FOR MUCH OF CAMBODIA'S FOREIGN INVESTMENT¹⁴⁴

In Cambodia, Chinese investments have increased by 700% between 2008 and 2017.¹⁴⁵ According to the Council for the Development of Cambodia, Chinese Foreign Direct Investments (FDI) accounted for 22% of all approved FDI in Cambodia from 1994 to 2019.¹⁴⁶ The level of Chinese involvement with Cambodia is so significant that Cambodian Prime Minister Hun Sen felt the need to deny that Cambodia is a de facto Chinese colony, adding, "although China wishes to control Cambodia, Cambodia will not let it do so."¹⁴⁷ As Chinese investment in Cambodia has grown, however, so too has China's military involvement with the country. In 2016, China and Cambodia began Golden Dragon, an annual joint military exercise that increased in scope each year until 2021, when it was canceled due to COVID-19.^{148 149} Increased investment into Cambodia seems to have yielded benefits for China's navy. The Wall Street Journal reported in 2019 that China signed a secret agreement with Cambodia that allows exclusive access to part of Ream Naval Base, which is just 11 km from Sihanoukville SEZ.¹⁵⁰

► **FIGURE 19: SIHANOUKVILLE SEZ AND SURROUNDING INFRASTRUCTURE**



SIHANOUKVILLE SEZ IS IDEALLY SITUATED. IT IS LOCATED WITHIN 15 KM OF ONE OF CAMBODIA'S LARGEST CITIES, CAMBODIA'S ONLY DEEP SEA PORT, SIHANOUKVILLE INTERNATIONAL AIRPORT, AND REAM NAVAL BASE. DEVELOPMENT IS ALSO UNDERWAY FOR CAMBODIA'S FIRST EXPRESSWAY, WHICH WILL CONNECT THE CITY OF SIHANOUKVILLE TO CAMBODIA'S CAPITAL.

Sihanoukville SEZ was an early Cambodian investment for China, and in terms of strategic location, few sites in Cambodia are as well-placed. The SEZ is well located for exporting goods, transporting goods within Cambodia, and proximity to military facilities. The EDZ is within thirty minutes of many key components of Cambodia's infrastructure: Cambodia's only deep-sea port is 12 km away,¹⁵¹ an international airport is within 2 km, Ream Naval Base is just 11 km from the zone, and development of Cambodia's first expressway, funded by Chinese investors, is underway.¹⁵² The road will connect Sihanoukville to Phnom Penh, providing ease of access to the capital and the rest of Cambodia.

Security in Sihanoukville and Sihanoukville SEZ have become increasingly reliant on Chinese PSCs. The Zhongbao Hua'an Group (ZBHA, also known as China Insurance Huaan [Cambodia] Security Services Co., Ltd.; (中保华安集团)), has managed security of the SEZ since August 2017.¹⁵³ The security force protects the

personnel and property within the zone.¹⁵⁴ In 2014, ZBHA became the first Chinese security company to be officially registered in Cambodia.¹⁵⁵ Since then, PSCs have become increasingly involved in the security of both Cambodia and Sihanoukville. For example, ZBHA collaborated with the Chinese Chamber of Commerce in Cambodia to create safety hotlines for Chinese citizens in Cambodia, which was celebrated in an opening ceremony attended by the Chinese ambassador to Cambodia, Ambassador Xiong Bo.¹⁵⁶ Another Chinese PSC, Overseas Security Guardians, has used Sihanoukville port as a “maritime escort support base,” one of many that it uses across the Maritime Silk Road to protect the interests of Chinese fishery operations.^{157 158} The PSCs have become closely involved with the domestic police, even conducting an operation with Cambodian police to rescue a Chinese citizen detained in a Sihanoukville hotel.¹⁵⁹

ILLICIT ACTIVITY

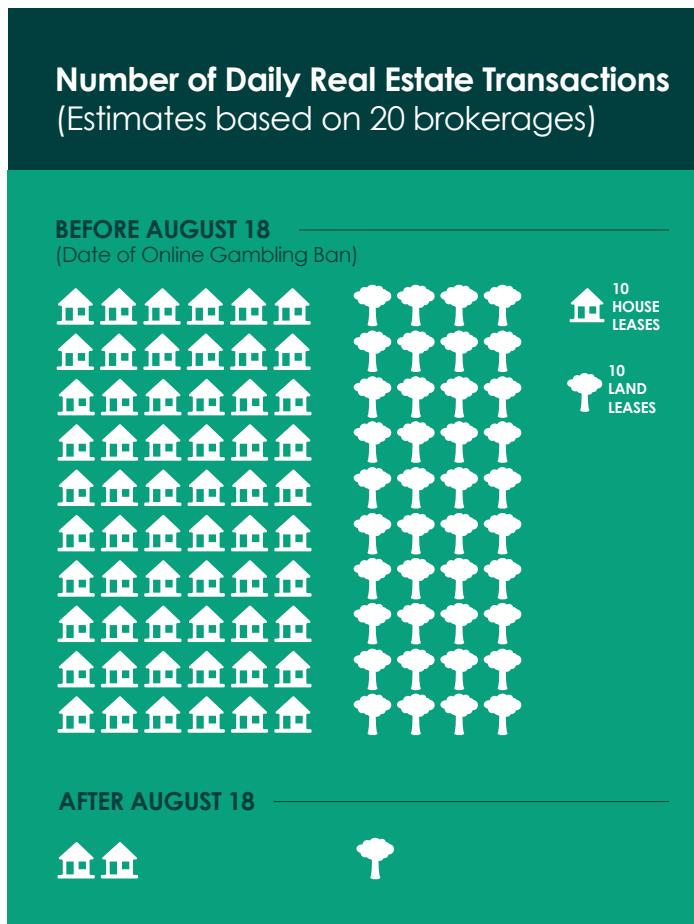
As Chinese investments proliferated in Sihanoukville, so too did illicit activities. The rapid expansion of the population and tourism has caused growing pains for the city in many areas. During the summer of 2019, a building owned by a Chinese national collapsed, killing more than 20 people.¹⁶⁰ The building had been under construction, despite an apparent lack of permits, orders to cease, and warnings about “serious problems at the site.”¹⁶¹ Regulations and building prohibitions are allegedly routinely ignored in the city, and construction workers often work without the benefit of safety equipment.^{162 163} Property developments and higher demand are causing rents to skyrocket, so construction workers often sleep inside buildings on which they are working.^{164 165} Additionally, Sihanoukville’s infrastructure has not kept pace with such rapid construction. Damaged roads and traffic jams impede the removal of trash, which has expanded from 100 to 200 tons per day in 2015 to 1,000 tons per day in 2019.¹⁶⁶ There are 2019 videos of raw sewage being piped onto Sihanoukville’s beachfront, which is often covered with garbage.^{167 168} Many of the



buildings being developed were new casinos, around which a host of other illicit activities flourished in the late part of the 2010s. A 2019 Al-Jazeera report stated that human rights abuses were rampant, with casino employees working six twelve-hour days per week, all while enduring sexual and verbal harassment.¹⁶⁹ That same Al-Jazeera report also stated that the casinos recruit girls as young as fifteen years old to coerce online gamblers into continuing to play.¹⁷⁰ In a letter to the Interior Ministry, the former governor of Sihanoukville wrote, “[t]he influx of Chinese tourists has created opportunities for the Chinese mafia to come in and commit various crimes and kidnap Chinese investors, causing insecurity in the province.”¹⁷¹

Reports of illicit activity also come directly from inside Sihanoukville SEZ. Employees inside the zone reportedly work six days a week, eight hours a day, with frequent overtime.¹⁷² Reports allege that working overtime is mandatory for employees, or they would face termination.¹⁷³ Additional reports allege that factory employers lock workers inside their facility to ensure their employees continue to work.¹⁷⁴ Payment for this work is allegedly often “irregular and incomplete.”¹⁷⁵ The rising cost of rent also means that workers’ wages are not high enough to afford adequate housing. Workers in the EDZ sometimes live with many other people to save costs. In other cases, they have to use free housing within the zone, but their family members are not allowed to live with them.¹⁷⁶ In general, factories inside Sihanoukville SEZ have poor conditions, including

► **FIGURE 20: DAILY REAL ESTATE TRANSACTIONS IN SIHANOUKVILLE SEZ, BEFORE AND AFTER ONLINE GAMBLING BAN**



ACCORDING TO A SURVEY BY THE FEDERATION OF BUSINESS ASSOCIATIONS OF SIHANOUK PROVINCE, THE AUGUST 18 ONLINE GAMBLING BAN MARKED A STARK DECREASE IN THE REAL ESTATE MARKET IN SIHANOUKVILLE. ¹⁸⁸

frequent accidents, punishments for reduced output, and limited unionization.¹⁷⁷ Internationally, companies inside Sihanoukville SEZ have been accused by the US government of transshipment, meaning Chinese goods were passed off as Cambodian to avoid US tariffs.¹⁷⁸ A statement by the US Embassy indicates that two companies operating in Sihanoukville SEZ were fined over transshipment of glycine and sleep pipe fittings; zone authorities denied the allegation.¹⁷⁹

In August of 2019, Hun Sen decided to halt the rapid expansion in Sihanoukville. In a move widely believed to have been made under pressure from China, the Prime

Minister issued a temporary ban on online gambling, which later became permanent.^{180 181} This ban came when China was beginning to crack down on overseas and online gambling broadly in the region.¹⁸² In Sihanoukville, online gambling was the largest source of revenue for the casinos; a consulting firm estimates that money earned online made up around 90% of the revenue for the Sihanoukville gaming industry.¹⁸³ Commercial rents in the city dropped 30%, and hotel rates dropped 50%.¹⁸⁴ Across the province of Preah Sinouk, about 7,700 Cambodians lost jobs in casinos by just December 2019.¹⁸⁵ More than half of the casinos in Sihanoukville closed, almost 80% of Chinese nationals living in Sihanoukville left, thousands lost their jobs, and Cambodia reportedly stands to lose millions of dollars in casino revenue.^{186 187}



Key Takeaways

The expansion in the city of Sihanoukville that excluded most profits from Cambodians in the first place has now left many Cambodians indebted and with crumbling infrastructure.¹⁸⁹ Local developers are left with debt, and thousands of businesses have closed.¹⁹⁰ Economic progress that benefits all of the players is an admirable goal, but the economic benefit of this expansion appears to have come at the expense of many Cambodians. Belt and Road Initiative investments, including Sihanoukville SEZ, ostensibly espouse the goal of progress for local communities and countries. However, in this case, that progress greatly harmed the local populations with increasing crime rates, higher rents, overwhelmed infrastructure, suppression of the local culture, with locals cut locals out of the profits.¹⁹¹

DEEP DIVE EASTERN ECONOMIC CORRIDOR: BRIGHT LIGHTS, DIM EXTERNALITIES

Thailand's Eastern Economic Corridor (EEC)¹⁹² highlights that even zones with significant positive impacts can be improved, particularly in reconciling national development priorities and local community interests. The EEC—which is run by a committee that includes the highest levels of government—displays strong indicators of positive effects on economic development and diverse foreign ownership, but also anecdotes of environmental degradation and land conflict. Increased transparency in planning may help improve local agency and strengthen returns on investment.



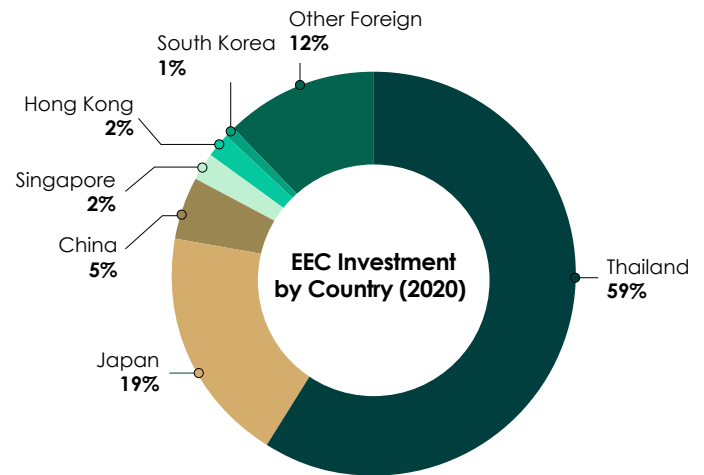
INTRODUCTION

The Eastern Economic Corridor (EEC) is a \$45 billion initiative¹⁹³ to promote economic development across three provinces southeast of Bangkok.¹⁹⁴ The zone is a component of the larger “Thailand 4.0”—a strategic plan to promote and support innovation, development, higher technologies, and green technologies.¹⁹⁵ The EEC aims to build on the successes of the 1980’s Eastern Seaboard Development Plan¹⁹⁶ through the creation of a regional tech, industrial, and logistics hub.¹⁹⁷

Data on EEC’s nightlight performance and foreign investment suggest that it could be a model for other EDZs in the region: the zone has precipitated economic growth while balancing foreign political clout. Nightlight data shows that in the two years following the 2018 passage of the EEC Act¹⁹⁸ (discussed below), economic development within the zone outpaced that of the entire country. Specifically, luminosity in the EEC increased by 14% more than Thailand’s average growth over the same time period—the second-highest growth rate of Thailand’s 15 zones, an impressive feat given the EEC’s size and high baseline of development.

Additionally, the EEC—which occupies a strategic location on the Gulf of Thailand, in the center of the Mekong sub-continent^{199–200}—appears to strike a balance between the various foreign investors. Multiple countries have expressed interest in the zone,²⁰¹ but the Thai government has maintained diversified investment and greatly diminished the risk of expropriation by a foreign entity.²⁰² As shown in Figure 21, Thailand remains the main source of capital, with its total investments nearly triple those of the next largest investor (Japan).

► FIGURE 21: INVESTMENT IN EEC BY INVESTOR COUNTRY²⁵⁵



While residents interviewed did raise concerns about specific issues, such as limited customs screening capacity²⁰³ and spillover from existing illicit hubs,²⁰⁴ they do not see organized criminal activities (such as poaching, drug trafficking, or money laundering) as endemic to the EEC. When asked, stakeholders highlighted established enforcement mechanisms designed to mitigate organized crime, as opposed to activities such as environmental degradation or land grabbing, against which enforcement mechanisms are seen as ineffective.²⁰⁵ An alternative (or auxiliary) explanation is that the Thai government’s balancing of foreign investors has precluded transnational organized crime from gaining a foothold in the zone. The EEC has accomplished more economically than many other zones in the Mekong region, while maintaining a favorable geopolitical position. However, allegations suggest it faces some of the same negative externalities as other, less economically successful zones, including allegations of human rights violations,²⁰⁶ land grabs,²⁰⁷ and environmental degradation.²⁰⁸ In fact, a third-party assessment of the zone found that the centralized governing structure and domestic regulatory regime that were designed to optimize development may underpin these negative impacts.²⁰⁹

Since the benefits of the EEC have been well covered by other observers,²¹⁰ this study focused on identifying the extent of the opposing impacts of the zone using

publicly available information that was supplemented by interviews with several local stakeholders: a retired resident, the director of an advocacy group, an MP from the Move Forward Party,²¹¹ and an MP from the Palang Pracharat Party.²¹² These interviews were conducted to collect varied on-the-ground data and perspectives that might not be captured in publicly available information, from multiple local stakeholders. However, such information is anecdotal and not necessarily reflective of the respective populations, municipalities, or issues mentioned.

CENTRALIZED GOVERNANCE

The governance structure of the Eastern Economic Corridor is dictated by the EEC Act, the latest in a series of laws aimed at increasing development in the region by centralizing power in the hands of Thailand's military junta. One of the first such laws came in 2015: having risen to power the previous year, the National Council for Peace and Order passed 'Article 44,' a law that gave Prime Minister Prayut Chan-o-cha discretion for any initiatives to "strengthen public unity and harmony."²¹³ The following year, the council passed orders 3/2559 and 4/2559, which specifically eased construction regulations within economic development zones. According to a Thai environmental organization and an international human rights advocacy group, these laws waive environmental laws that impeded zone construction.²¹⁴ In 2017, the council passed order 2/2560, which designated the Eastern Economic Corridor as a hub for "S-curve" industries.²¹⁵ The following year, the EEC Act superseded order 2/2560 as the governing document for the zone.²¹⁶

Under the EEC Act, the EEC is managed by the Eastern Special Development Zone Policy Committee (also known as the "EEC Policy Committee"), a 27-member group chaired by the prime minister and staffed by other political leaders including 15 members of the Cabinet.²¹⁷ The EEC Act allows the committee to take unilateral action in order to advance the development of the zone. For example, Section 9 of the act allows

the EEC Policy Committee—with permission from the Cabinet—to change Thailand's laws related to the zone in order to promote development:

"If...the Policy Committee is of the view that any law, rule, regulation, by-law, notification or order causes inconvenience or delay, is redundant or creates an undue and excess burden, or in case of any other problems or obstacles, the Policy Committee shall propose such matter to the Cabinet for consideration of the amendment of such law, rule, regulation, by-law, notification or order, or for the enactment of a new law to ensure that the development of the Eastern Special Development Zone be carried out efficiently, conveniently, and promptly, provided that such amendment or enactment does not prejudice the equality, rights, and liberties of the people and does not constitute discrimination of any kind."²¹⁸

Authority does not necessarily entail abuse. Nonetheless, this structure means that if the EEC Policy Committee decides that an amendment to the law would benefit zone development without prejudice, the proposed amendment need only be approved by the Cabinet (three-quarters of whom sit on the Policy Committee).

The powers endowed by the EEC Act allow the Policy Committee to make decisions that both "develop the Eastern Region to its fullest potential" and "enhance the country's competitiveness overall."²¹⁹ Indeed, the nightlight data does show the EEC developing more quickly than the country average. However, local stakeholders also offer anecdotes that the intensely centralized governance structure precludes local participation.²²⁰

RISING INEQUALITY

In order to obtain capital, prospective EEC investors are being offered cheap land, tax breaks, and favorable labor regulations,²²¹ which can erode positive impacts of the zone for local communities,²²² and, in some cases, resulting in negative outcomes for locals.²²³

Land expropriation

The concentration of authority under the EEC Act means that local communities—who typically lack the capital and network of competitive investors—are often not involved in the planning of zone development,²²⁴ unaware of the impact of construction or even whether their land leases will be sold off.²²⁵ There are anecdotes of local residents facing intimidation from military or commercial actors when the residents are unwilling to hand over their land. In one case, a local activist alleged that an employee of Blue Tech City set fire to a property in Chachoengsao in order to chase residents off the land.²²⁶ A government official has rejected allegations of land grabbing. He cited a case of residents along a Ban Beung - Klaeng road, who won a case against the Department of Highways when the latter tried unsuccessfully to sue for more land.²²⁷

While the EEC Act does stipulate compensation for affected residents (in either land or cash), interplay between the EEC Policy Committee, prospective investors, and locals can result in residents getting short-changed. For example, a prospective investor might reach an agreement with the EEC Office for one [low] price, only to find that a later environmental and health impact assessment values the land at another [higher] price. According to one local activist, the investor will not pay the difference, but the EEC Office is no longer involved in the transaction.²²⁸ Disparities between initial valuations and environmental and health impact assessments are not unique to the EEC. Nonetheless, such gaps deprive residents of the full value of the land, undercutting the benefits of subsequent employment or training programs.

Labor rights and skills training

The EEC Act provides a flurry of incentives, such as tax breaks, to attract investors to the zone.²²⁹ EEC business are automatically eligible for a 50% corporate income tax reduction of up to 15 years, and corporations in strategic industries (such as biotechnology, petrochemicals, and food industries) can be completely tax-exempt.²³⁰ While it is common EDZ practice to sacrifice short-term tax revenue for long-term development in the form of job creation, skill acquisition, and backwards linkages, local stakeholders and international observers offer anecdotes of poor working conditions, limited job opportunities, and ineffective training programs.²³¹

An independent evaluation of the EEC found that the Thai government has not effectively legislated or enforced workers' protection (such as the minimum wage and local hiring quotas).²³² This failure has resulted in the mistreatment of zone employees, especially migrant workers, some of whom have allegedly been denied wages, terminated for union involvement, and subjected to unreasonable working conditions.²³³ There are mechanisms for redress—an interviewed government official confirmed that there is a platform for filing complaints around working conditions. However, the system is only available for registered workers.²³⁴ Moreover, the official acknowledged shortcomings in oversight capacity, citing an example of three Ministry of Industry staff tasked with inspecting tens of thousands of factories.²³⁵

The EEC does offer job training programs—a government official described a scholarship for Thai workers to learn rail transport in China, with the Chinese rail company covering expenses.²³⁶ He also cited donations from US Delta and Japanese Mitsubishi of robotics materials for Chonburi vocational schools.²³⁷ However, an opposition politician claimed that in some cases, job training programs often focused on obsolete or redundant skills.²³⁸ With regards to employment, a local activist alleges that some companies exclusively hire from a specific nationality (for example, an

industrial factor in Rayong is reported to accept only Chinese workers).²³⁹

According to one local advocate, the inequality is such that local Thai entrepreneurs have begun masquerading as foreigners to enjoy what locals perceive to be preferential treatment.²⁴⁰ One government official expressed confidence that the EEC would help resolve “social problems” in local communities;²⁴¹ however, on-the-ground anecdotes highlight that development is not a panacea. Ensuring the accessibility of development plans and raising awareness of worker opportunities and protections will maximize social returns of economic initiatives.

ENVIRONMENTAL DEGRADATION AND OTHER ILLICIT ACTIVITY

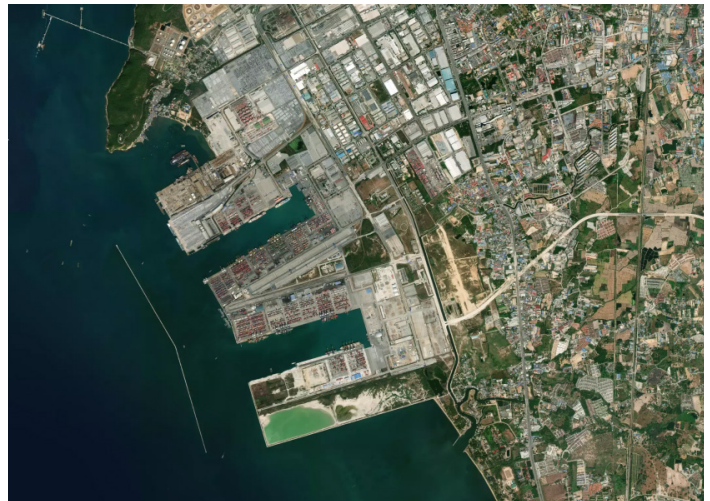
The EEC Act explicitly seeks to promote the development of environmentally-friendly industries.²⁴² However, the zone has been linked to multiple reports of environmental degradation:

- Industrial projects in the EEC are pulling water from Thailand’s entire eastern region. This water is reportedly not reaching local communities—a local resident described the water at his house as having “a dark color, as if it’s an Ovaltine drink.”²⁴³
- An expansion of the Laem Chabang Seaport is opposed by the local community based on its environmental impact assessment, according to the Thai Development Research Institute.²⁴⁴
- Developers allegedly began to acquire land and solicit investors for land in Ban Pho district before the environmental and health impact assessment was completed.²⁴⁵
- An environmental activist alleges that the construction of the Bang Pakong Power Plant precipitated the extinction of a species of sea crab.²⁴⁶
- Residents in Chachoengsao petitioned the prime minister to stop the construction of an industrial

estate. They allege that the developer, Blue Tech City, proceeded without a construction permit or environmental impact assessment, and chased residents off the land before their leases had expired.²⁴⁷

Without rigorous scrutiny of environmental impact, zone development risks deforestation and large-scale disturbance of hydro and geological systems.²⁴⁸

► LAEM CHABANG PORT²⁴⁹



In response to these concerns, one government official stated that residents “need to be strong in protecting themselves.”²⁵⁰ However, stakeholders highlighted the difficulties in accessing official information. One local activist stated that he submitted a complaint to the Supreme Administrative Court in July of 2020 about the lack of strategic environmental assessments in EEC development.²⁵¹ As of March, 2021, there has been no substantive reply, despite a follow-up letter sent to the court in November and repeated requests for an in-person meeting with a lawyer.²⁵² In a separate case, a local politician requested the documentation for environmental impact assessments for EEC projects but was told that the information was confidential.²⁵³ After citing the Official Information Act and waiting for three months, the politician received an eight-page document that constituted 27 environmental impact assessments and allegedly contained multiple mistakes in its details.²⁵⁴



Key Takeaways

The Thai government established in the EEC Act a unique set of laws that delegated authority to executive-dominated governing bodies.²⁵⁶ Diverse minority foreign ownership structure has mitigated the potential for foreign actors to subvert the zone, and nightlight data shows that the region's economic growth outpaces the country average. Yet the development has also been linked to allegations of environmental degradation and land expropriation, as well as a perception of disenfranchisement among local communities. The EEC case demonstrates that—even for high-performing zones—there is still opportunity for stakeholders to improve net zone impact by leveraging publicly available information.

Development initiatives on the scale of the EEC are rarely without controversy. It is important to note that all stakeholders interviewed supported the idea of developing their region. Criticisms were directed at aspects of the EEC's implementation, not its existence. Ultimately, the Thai government has the purview to pursue development as it sees fit: the government may decide that the negative outcomes discussed above are outweighed by the country's development priorities.

The EEC is on the cusp of serving as a model economic development zone with comprehensively positive impact. To cross the threshold, the Thai government should consider adopting a new legislative process that codifies local participation and partner with grassroots organizations to proactively provide information about plans and opportunities to local residents.

DEEP DIVE TRANSPORTATION INFRASTRUCTURE AND EDZS



Belt and Road-linked infrastructure in Northern Laos and the Mekong region. National Route 3 and the Boten-Vientiane Railway converge south of the Boten SEZ along Laos's northern border with China.

China-linked EDZs in the Mekong region are often built around BRI transportation infrastructure such as roads and railways. This integration is apparent in northern Laos, where seven EDZs and two major infrastructure projects have been launched in the past two decades. National Route 3 (also referred to as “NR 3”)—a highway project jointly funded by Thailand, China, and the Asian Development Bank—was completed in 2008, connecting the Boten SEZ on the Chinese border to the Golden Triangle SEZ bordering Thailand and Myanmar. Another string of EDZs is now under development along the Boten-Vientiane railway, which will stretch through the interior of Laos from Boten to the capital of Vientiane, and link to other railway projects throughout the region. These systems for transport and trade are reshaping landscapes and livelihoods in northern Laos, and in the process, creating new risks for illicit activity, such as corruption and environmental degradation.

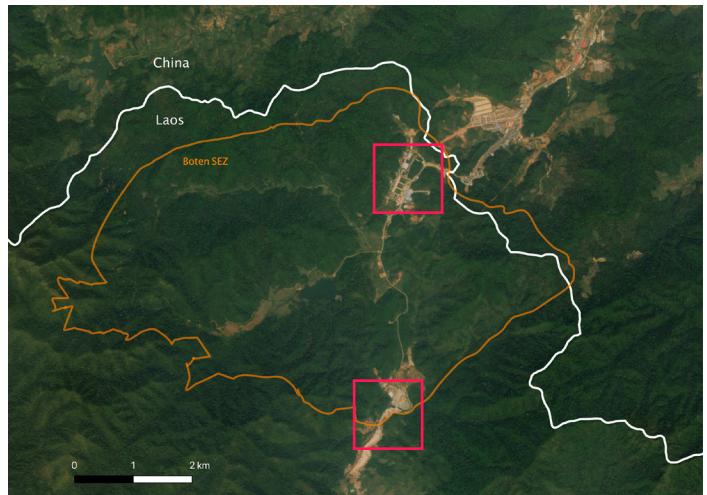
BOTEN

Laos is an increasingly popular destination for Chinese tourists, whose numbers in the country nearly doubled from 422,440 in 2014 to 805,833 in 2018.²⁵⁷ Boten, a small town on the China-Laos border, is the main port of entry for Chinese tourists to Laos, accounting for 60% of all visits in 2018, according to the Laos Ministry of Information, Culture and Tourism.²⁵⁸ The World Bank estimates that the Boten-Vientiane railway could increase the number of passengers crossing the border at Boten (by rail or road) to 1.18 million people by 2030.²⁵⁹

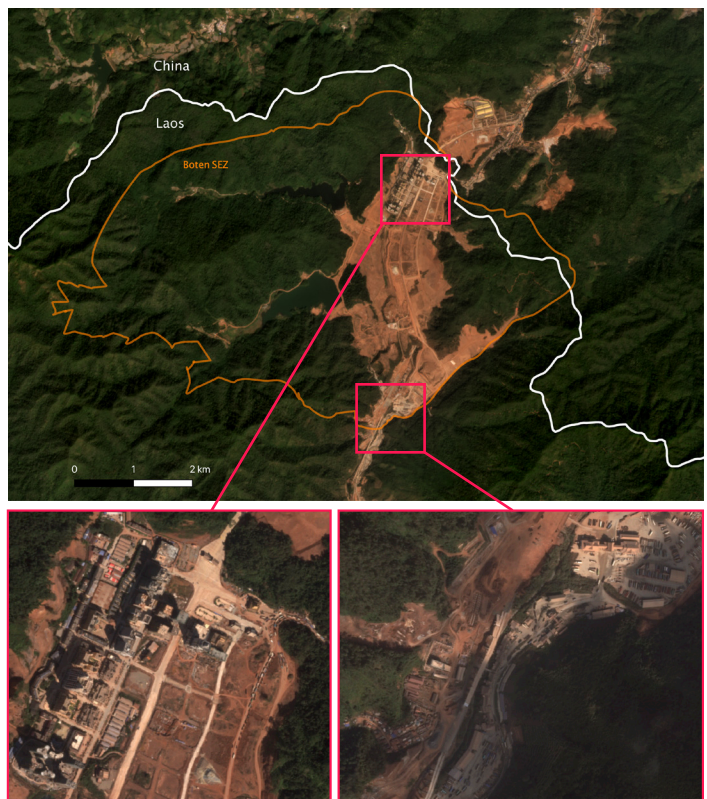
Boten has hosted a special economic zone since 2003 when a 6.3 square-mile concession called “Boten Golden City” was awarded to a Hong Kong-registered company on a thirty-year lease.²⁶⁰ By 2011, the zone’s reputation as a gambling haven—reports had emerged of Chinese gamblers held hostage for unpaid debts—drew the attention of Chinese authorities, who reportedly urged the Laotian government to close the zone.²⁶¹ The following year, China-registered Yunnan Hai Chang Industrial Group Stock Co. took over

► **FIGURE 22: HEAVY CONSTRUCTION IN BOTEN BETWEEN 2016-2021**

Boten, March 2016



Boten, January 2021



management of the concession, which was renamed the “Boten Beautiful Land Special Economic Zone,” with plans to shift the zone’s focus from gambling to commerce and tourism.²⁶²

Since 2016, Boten has undergone heavy construction to make way for the new railway and create space for urban development. Although the zone’s casinos have been abandoned, it continues to draw tourists to its duty-free markets, where researchers have documented a range of illicit wildlife products for sale.²⁶³ A 2016 survey of several shops in the zone recorded 981 individual items of animals, their parts, or derivatives—including items such as pangolin scales, tiger bone wine, and bear bile products—from at least thirteen mammal species and two reptile species.²⁶⁴

NATIONAL ROUTE 3



Boten SEZ forms the northern end of National Route 3, a newly constructed highway transiting northwestern Laos. The route has opened up the remote, mountainous interior of northwestern Laos to international trade, stimulating a new export-oriented agricultural economy. But the development of this transportation corridor has created new risks for illicit activity, from land grabs and money laundering in the region’s booming rubber industry²⁶⁵ to sex trafficking along the highway and in its EDZs.²⁶⁶

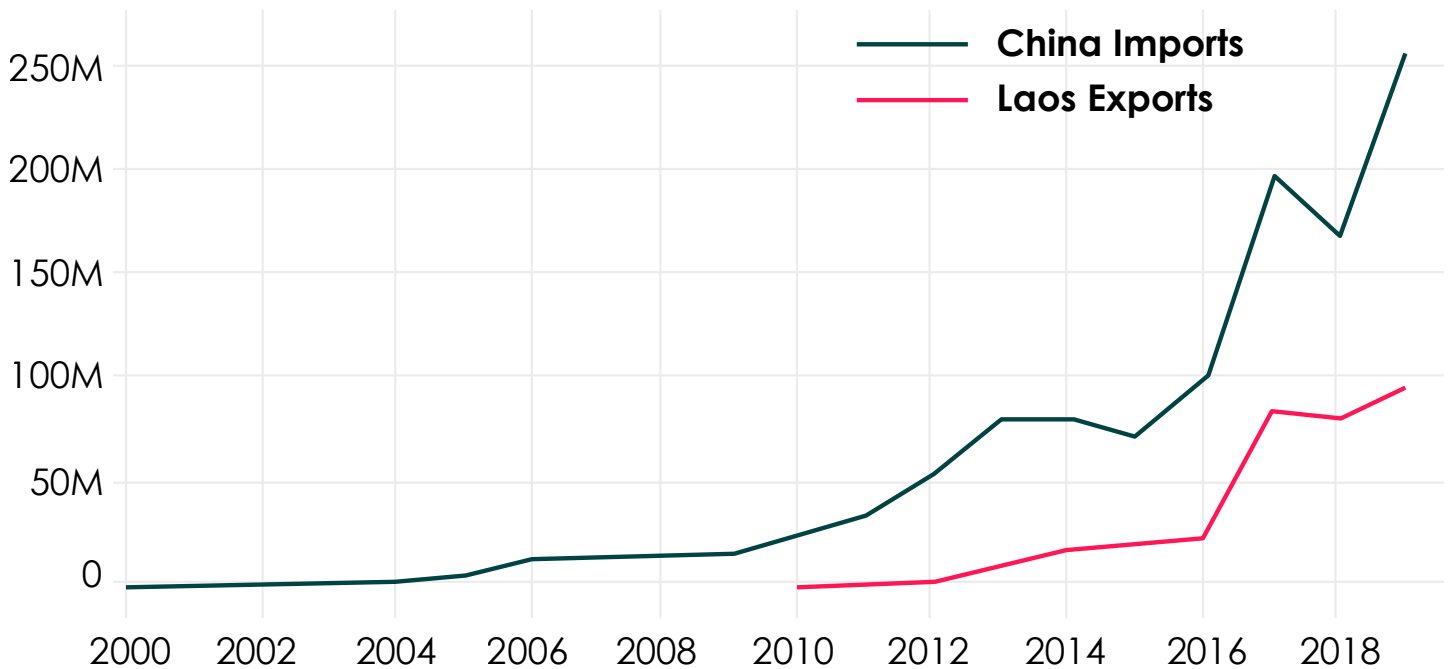
The route, which officially opened in March 2008,²⁶⁷ connects China to Thailand through the northern Laotian provinces of Luang Namtha and Bokeo. The highway intersects the Boten-Vientiane railway several km south of Boten at Nateuy, the site of several recently-constructed rubber and paper factories.²⁶⁸ National Route 3 is heavily trafficked by cargo trucks, many transiting Laos between Thailand and Yunnan province in China.²⁶⁹

The arrival of NR 3 coincided with a rubber boom in Luang Namtha. Smallholder rubber planting picked up in 2001 to meet growing demand from China. It increased rapidly between 2004 and 2008 after China introduced the Opium Replacement Program, which subsidized Chinese rubber investment in Laos and stimulated the proliferation of processing facilities and trading networks in Luang Namtha.²⁷⁰

Transnational business networks based on longstanding cross-border social and economic ties between China and Laos have helped facilitate Chinese investment in Luang Namtha’s rubber trade. Large companies employ the labor and services of Chinese-speaking migrant communities that have inhabited northern Laos for generations.²⁷¹ Much of the investment occurs on a smaller scale outside officially sanctioned channels, however, and is not reported to authorities.²⁷² In border villages or villages close to transportation networks, informal contracts between investors and farmers are common, and sales to intermediary traders often take place on an unofficial basis.²⁷³

While the rubber industry has brought positive economic outcomes to agricultural areas in Laos, a disproportionate share of the benefits from the bilateral trade relationship may ultimately accrue to China. According to the UN Commercial Trade Database, Chinese imports of rubber from Laos increased in value from US\$280,801 in 2001 to US\$256,660,610 in 2019.²⁷⁴ Although the UN has only recorded Laotian trade statistics since 2010, the annual value of rubber exports to China declared by Laos has remained consistently below import values declared by China

► FIGURE 23: CHINESE IMPORTS AND LAOS EXPORTS OF RUBBER, 2000-2018



(Figure 23). Such trade gaps occur for various reasons but are often attributed to mis-invoicing or other trade-based money laundering techniques designed to shift capital across borders.²⁷⁵ Although the revenue gap displayed below is not by itself proof of such activity, it highlights the potential revenue losses facing Laos as commodity-oriented export agriculture intensifies across the country and agricultural products are shipped through EDZs with weak customs controls and oversight processes.

In addition to potentially depriving the state of taxable revenue through informal contracts and sales, informality in Laos's rubber sector also raises the specter of land grabbing and corruption. Due to the lack of formal land titling in many areas, control of communal land risks being shifted from local villages to private investors through informal contractual agreements.²⁷⁶ Local public officials also appear to have cashed in on the rubber boom. In two districts in Luang Namtha,

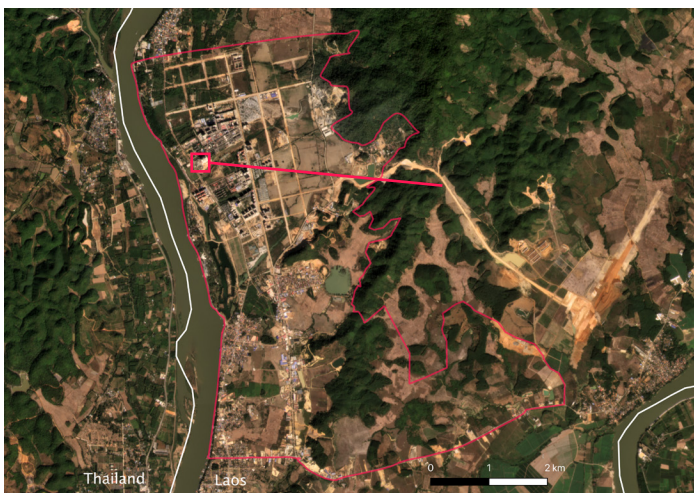
government officials and private associates reportedly appropriated parcels of communal land for rubber development without prior consultation, offering only modest compensation to local villagers.²⁷⁷

As Laos's rubber economy continues to grow, EDZs such as Boten will function as consolidation points for transnational shipping routes and hubs for agricultural processing, helping to expedite the flow of raw commodities from Laos to China. The improvement of transportation and trade infrastructure in northern Laos has increased access to public services and delivered new economic opportunities to local populations. To ensure that local communities reap the full rewards of these changes, however, policymakers should maintain strong customs regimes in border zones such as Boten, or they may deprive the state of taxable revenue and ordinary citizens of opportunities for economic advancement.

GOLDEN TRIANGLE SEZ

The Fourth Thai-Lao Friendship Bridge at Houayxay crosses the Mekong River to Chiang Khong District in Thailand, connecting NR 3 to Thai Route 1129. First built in 2013, the bridge marked the completion of Asian Highway 3 (an international transport initiative distinct from Laotian NR 3), extending through China from Russia in the north to the Mekong region in the south. National Route 3 continues north after Houayxay, following the Mekong along the Laotian border with Myanmar. Fifty-five km north of Houayxay, NR 3 crosses Golden Triangle SEZ, one of the region's most notorious hubs for illicit activity.

In 2007, the Laos government and Hong Kong-registered Kings Romans International (HK) Co., Ltd. signed a 99-year lease that gave Kings Romans an 80% stake in the Golden Triangle SEZ, a 102-square-mile concession on the bank of the Mekong along the border with Thailand and Myanmar.²⁷⁸ In 2009, the company opened Kings Romans Casino, which was followed by a "Chinatown"-themed shopping and entertainment district in 2013.²⁷⁹



The Kings Romans Casino, photographed from the Mekong River (image source: Lillian Suwanrumpha/AFP via Getty Images), and satellite imagery of the Golden Triangle SEZ.

The zone quickly became known for its flourishing illicit trade. In a 2015 report, the Environmental Investigation Agency called the Golden Triangle SEZ a "free-for-all illegal wildlife supermarket" catering to Chinese tourists and gamblers.²⁸⁰ In 2018, the US Department of the Treasury sanctioned Kings Romans International along with its owner, Chinese national Zhao Wei, for allegedly using the zone and casino to engage in drug trafficking, human trafficking, money laundering, bribery, and wildlife trafficking.²⁸¹

According to October 2020 media reports, Zhao is now developing a new international port in the zone adjacent to his casino and commercial complex.²⁸² A local official interviewed by Radio Free Asia alleged that Osiano Trading Sole Co., the project's principal investor, was owned by Zhao.²⁸³ The port, expected to be completed in nine years at the cost of at least US\$50 million, will handle mostly Chinese cargo and will include a hotel and office park.²⁸⁴ The development has already faced pushback from local residents, however, who have rejected compensation offers for resettlement.²⁸⁵ The port is being constructed just nine miles upstream from an existing Thai port, which has led experts to question the economic logic of the project.²⁸⁶ Rather than function as a conduit for multilateral trade integration, Mekong expert Brian Eyler believes the port will primarily serve to "facilitate commerce, legal and illicit, of goods from China that will benefit Chinese commercial interests, legal and illicit, in Laos."^{287 288}

The Environmental Investigation Agency has pointed to corruption as a major obstacle to effective law enforcement in the Golden Triangle SEZ, noting that several current or former high-level government officials patronized or were actively involved in developing the zone.²⁸⁹ A February 2020 report published by TRAFFIC, a wildlife conservation NGO, indicates that the Golden Triangle SEZ continues to host a thriving market in illicit wildlife products, particularly ivory, rhino horn, helmeted hornbill parts, and pangolin scales.²⁹⁰

Without the commitment of the Laos government to regulate the zone—and with the development of a new port to facilitate commerce—the Golden Triangle SEZ will likely remain a hub for illicit drug and wildlife trafficking.

LUANG PRABANG SEZ

Like National Route 3, the Boten-Vientiane railway—owned 30% by Laos's state railway company and 70% by Chinese state-owned companies²⁹¹—promises to open the interior of northwestern Laos to international trade, eventually linking Laos to Singapore as part of the greater China-Indochina Peninsula Economic Corridor.²⁹² By 2030, the railway could increase land-based trade between China and Laos by 2 million tons, and increase transit trade through Laos between China and the rest of Southeast Asia by 1.5 million tons, according to World Bank estimates.²⁹³ Midway along the railway between Boten and Vientiane is Luang Prabang, one of Southeast Asia's most popular tourist destinations and a commercial center designated as a UNESCO World Heritage site in 1995 for its rich architectural and artistic heritage. Already frequented by Chinese tourists, Luang Prabang is expected to attract a large share of passenger traffic on the new railway from China.²⁹⁴



The Luang Prabang SEZ, operated since 2016 by Laotian developer Phousy Group, aims to accommodate the influx of Chinese tourists. The 4,850-hectare, 99-year concession is divided into three parcels surrounding the historic city. Marketing materials depict Sites 1 and 3 as resort towns, with residential and commercial zoning designed to attract foreign tourists and permanent inhabitants.²⁹⁵ In addition to houses, hotels, and hospitals, the sites will devote land to cultural and recreational activities, including a golf course and polo ground.²⁹⁶ Site 2 is designed as a commercial zone, with 22% of its total area dedicated to railway logistics.²⁹⁷ In terms of total area, the Luang Prabang SEZ is about twice the size of the UNESCO zone, which encompasses the historic city center.

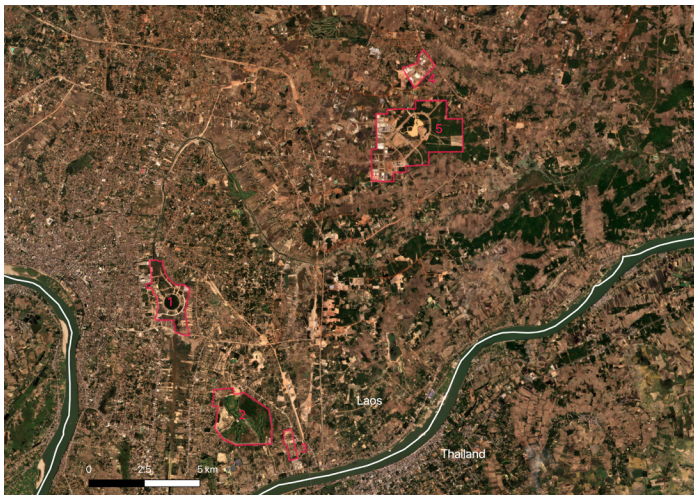
As early as 2009, the development of road infrastructure through and around Luang Prabang was cited as an impetus for deforestation and wildlife poaching, spurred by “Chinese business owners who not only provide finance but sell snares and traps, and place orders for fresh wildlife.”²⁹⁸ A 2016 survey of ivory markets across Laos counted 4,807 ivory items for sale in twenty-one retail outlets in Luang Prabang,²⁹⁹ and approximately 1,350 pangolin scales were recorded for sale in the city the same year.³⁰⁰ Reports of seizures in recent years—more than 73 kg of ivory were reportedly confiscated from a Luang Prabang shop in 2019³⁰¹—indicate that illicit wildlife markets remain commonplace in the city.³⁰²

The Boten-Vientiane railway and Luang Prabang SEZ—and the growth in tourism expected to accompany these developments—will drastically change the appearance of this historical city, which hosts over 120 sites of cultural or historic importance.³⁰³ These developments also risk increasing demand for wildlife products in Luang Prabang, which already hosts numerous shops selling wildlife products to foreign tourists. Although the Luang Prabang SEZ is still in an early stage, the completion of the railway could accelerate the project's development.

VIENTIANE EDZS

Laos's capital and largest city, Vientiane, will constitute the southernmost node of the Boten-Vientiane railway before it crosses into Thailand to connect with existing rail infrastructure. An important industrial hub, Vientiane hosts five EDZs dedicated to a mix of trade, tourism, and manufacturing:

- 1 That Luang Special Economic Zone
- 2 Longthanh-Vientiane Specific Economic Zone
- 3 Dongphosy Specific Economic Zone
- 4 Vientiane Industrial and Trade Area
- 5 Saysettha Development Zone



The Saysettha Development Zone is a 50-year concession³⁰⁴ operated since 2010 by the Lao-China Joint Venture Investment Co. Ltd., a company co-funded by Yunnan Provincial Overseas Investment Co., Ltd. and the Vientiane municipal government.³⁰⁵ Of all the EDZs along the Boten-Vientiane railway, Saysettha has the highest concentration of industrial activity, accommodating manufacturers in industries such as electronics, agricultural products, textiles, petrochemicals, and pharmaceuticals. According to its website, the zone had attracted roughly US\$1 billion in investment from 79 companies by March 2020.³⁰⁶

Industrial EDZs in Vientiane like Saysettha, may pose public health risks for surrounding populations due to air pollution and the unregulated disposal of hazardous waste. In 2016, a metal processing company in VITA Park was ordered to suspend operations³⁰⁷ at its electronic waste plant after reportedly contaminating local groundwater with chemical waste.³⁰⁸ Rising levels of particulate matter in Vientiane have been linked to factories in the Saysettha Development Zone.³⁰⁹ Despite Laotian law requiring EDZs to provide wastewater treatment facilities, the Saysettha Development Zone does not process its wastewater onsite; instead, it offloads its water treatment burden onto already strained municipal facilities.³¹⁰

Like Luang Prabang, Vientiane has many shops selling wildlife products, and the growth of tourist-oriented EDZs may strengthen incentives for the smuggling and sale of illicit wildlife products in the city. A 2016 survey of ivory markets across Laos found the highest concentration of products and vendors in Vientiane, counting 7,014 ivory items for sale across forty outlets in the city. A database of wildlife seizures maintained by C4ADS has recorded eighteen seizure incidents since 2009 in which Vientiane was the city of shipment origin, destination, or seizure.³¹¹ Vientiane was recorded as the destination city for ten shipments, at least seven of which were being sent from cities in Africa, and as the origin city for four shipments, all of which were being sent to cities in China.³¹² These patterns underscore Vientiane's role not merely as a regional wildlife trafficking hub but as a node in international trafficking networks.



Key Takeaways

National Route 3 and the EDZs on either end of the highway—Boten and Golden Triangle—have brought about stark socioeconomic changes in northern Laos. While the increased connectivity and economic opportunity resulting from these developments have delivered benefits to the population of the north, they have also encouraged speculative land deals, facilitated public corruption, contributed to the illicit trade in wildlife, and created the conditions for a growing commercial sex trade.³¹³ The negative effects of these developments erode their economic and social benefits, in the form of environmental degradation, public health costs, and lost tax revenue and less tangibly, by disrupting established social and economic institutions and introducing new models of land management and labor relations.

The Boten-Vientiane railway may create many of the same risks for surrounding populations. In Boten and other zones, Chinese investment in commercial land has already displaced hundreds of villagers and driven local shop owners out of business.³¹⁴ While the railway is expected to increase exports to China of agricultural and mining products,³¹⁵ the expansion of plantations and mines may ignite further social conflicts over land use as villages in the region are drawn away from subsistence farming toward export-oriented commodity production. The railway and EDZs will also pose new environmental threats from deforestation to groundwater pollution in a section of Laos deemed of “high conservation value” for its endemic biodiversity and high forest cover.³¹⁶ Finally, the influx of tourists to EDZs along the corridor may raise demand for wildlife products in a country already struggling to control a flourishing illicit wildlife trade.

To address illicit activity risks tied to industry and agriculture in northwestern Laos's EDZs, the government of Laos should establish a strict customs regime at its borders designed to screen illicit products such as drugs and wildlife and monitor irregularities in licit trade that may stem from trade-based money laundering. As the Boten-Vientiane railway nears completion, the government should implement policies to balance tourism with the needs of local populations to ensure the benefits of tourism and commercial development are shared equitably. Finally, the government of Laos should shut down illicit wildlife markets in Boten, the Golden Triangle SEZ, Luang Prabang, and Vientiane and continue monitoring these sites for wildlife trafficking activity as the region becomes more integrated through transportation infrastructure.

DEEP DIVE MYANMAR YATAI SHWE KOKKO SPECIAL ECONOMIC ZONE

A foreign-invested unofficial EDZ in Myanmar struggled due to weak national laws, diffusion of responsibility, and a lack of development plans. Without oversight, the zone became a hub for illicit activity.



► THE MOEI RIVER, A NATURAL BORDER LINE BETWEEN THAILAND AND MYANMAR

INTRODUCTION

In recent months, Shwe Kokko, an enclave on the Thailand-Myanmar border in the latter's Karen state, has attracted substantial negative attention for becoming a hub for illegal activity. This development is a result of the construction of Shwe Kokko New City, a US\$15 billion project funded by the Hong Kong-registered developer Yatai International Holding Group (Yatai International) in partnership with the Chit Lin Myaing Company. The Kayin State Border Guard Force (BGF), an ethnic Karen force that operates autonomously from but is aligned with the Myanmar military (the Tatmadaw) and has substantial power in Karen state, owns the Chit Lin Myaing Company.³¹⁷

New City includes a construction project and a purported special economic zone, New City SEZ. Officially known as the "Myanmar Yatai Shwe Kokko Special Economic Zone,"³¹⁸ the developers allegedly secured a 70-year land lease, with the possibility of extending to 99 years. This would violate Myanmar law (*The Pyidaungsu Hluttaw Law No. 1/2014*),³¹⁹ which caps lease terms for official SEZs at 50 years.³²⁰

A combination of legal ambiguity, limited host government enforcement, and poor zone management have created numerous negative externalities in Shwe Kokko, including increased criminal activity, decreased geopolitical power, and environmental degradation—all without delivering economic gain for the region itself.

GEOPOLITICS

Yatai International's China-born chairman, She Kailun (also known as She Zhijiang, among other aliases³²¹), has a history of illegal activity.³²² In 2014, a Chinese court convicted him of operating an illegal lottery business that earned 2.2 billion yuan (US\$298 million).³²³ Despite this, thousands of Chinese workers and visitors flocked to Shwe Kokko once he established New City. Chinese

casinos, restaurants, and warehouses sprung up out of the former farmland. Soon, Chinese investors and the BGF were alleged to effectively run the city.³²⁴

Yatai International began construction at Shwe Kokko in early 2017. The company promised to build five zones in New City: a technology district, an entertainment and tourism district, a culture district, a business and commerce district, and an ecological and agriculture district.³²⁵ Around this time, the BGF allegedly began confiscating land from villagers for New City, providing 50,000 baht (US\$1,600) per acre as compensation.³²⁶ By mid-2018, some 10,000 Chinese construction workers were present in Shwe Kokko.³²⁷

In September 2018, Yatai received permission from the Myanmar Investment Commission (a government-appointed body responsible for verifying and approving investment proposals) to construct luxury residential estate. But Yatai International's US\$15 billion plans were more extensive than those that had been approved.³²⁸ In mid-2019, the Karen state government found that the company's project had exceeded its permitted limits. Saw Chit Thu, BGF's leader, announced a temporary pause, but construction allegedly continued despite the announcement.³²⁹ In March 2019, Yatai International signed a "multi-dimensional strategic partnership" with Yunnan Keda Construction Group Co.,³³⁰ which had previously built hotels in Myanmar.³³¹

Meanwhile, in the spring of 2019, Yatai International began working with Chinese state-owned firms. In April, the company reached a strategic agreement with the China Railway 20th Bureau Group to cooperate on infrastructure and transportation in the zone.³³² Around this time, the Metallurgical Company of China announced in a now-deleted post on its website³³³ that it had reached an agreement with Yatai to build part of New City.³³⁴

Notably, the New City SEZ claimed in investment promotion materials³³⁵ to be a part of China's BRI, a

massive, state-backed global development program. However, given the diffuse coordination of BRI projects and the incentives for Chinese firms to support the initiative, Yatai International's claim of affiliation may have been a proactive marketing gambit rather than an indication of Chinese state support.³³⁶ In fact, China and Myanmar's shared displeasure with Yatai International soon became apparent.

ILLICIT ACTIVITY

In August 2019, the Myanmar Home Affairs Ministry began inspections of New City SEZ, promising to report its findings to the country's president.³³⁷ But after Cambodia banned online gambling in September 2019,³³⁸ Shwe Kokko saw further growth when Chinese investors shifted their investments there.³³⁹ Yatai International also ran advertisements in Sihanoukville, Cambodia's casino town, to attract Chinese businesspeople and gamblers driven out by the ban.³⁴⁰ In June 2020, the Myanmar government launched a tribunal to investigate the New City SEZ further.³⁴¹

Following this derogatory reporting, in July 2020, the China Federation of Overseas Chinese Entrepreneurs removed She as vice chairman and revoked his membership.³⁴² In August, the Chinese government distanced itself from New City. The Chinese embassy in Myanmar said on Facebook that the project was "a third-country investment and has nothing to do with the Belt and Road Initiative."³⁴³ This proclamation came despite the fact that Yatai International had in 2020 touted New City as a "flagship project" of the BRI.³⁴⁴ As of July 2020, New City had also been promoting its inclusion in the BRI.³⁴⁵ Nevertheless, in August, the Chinese embassy expressed support for the Myanmar government's establishment of a task force to investigate New City.³⁴⁶ In October 2020, local reporting alleged that officials from the BGF bribed the Tatmadaw to keep silent about illegal gambling activities in Shwe Kokko.³⁴⁷ At least one BGF officer also participated in illicit activities with the Chinese mafia there.³⁴⁸

Also in October 2020, the investigative Chinese media outlet Caixin published a story on She's illicit business history.³⁴⁹ Soon after, all WeChat posts and press releases from Yatai International Holding Group were deleted. The company's website did not appear to contain any content beyond a brief description of New City.³⁵⁰

Later, in January 2021, the civilian Myanmar government announced plans to tackle "irregularities" in Shwe Kokko. These alleged irregularities include land confiscations, illicit activity, and local concerns about the impacts of casinos.³⁵¹ That same month, the Myanmar government cracked down on Chinese crime groups in the area, also requesting that the Tatmadaw enforce national law in Shwe Kokko.³⁵² The Tatmadaw then forced BGF leader Saw Chit Thu, the aforementioned backer of New City, to resign from the BGF so the military could regain control of the autonomous region.³⁵³ Additionally, the national government announced it had drawn up standard operating procedures (SOPs) for all projects in Myanmar's border areas to prevent similar problems from occurring in future SEZs.³⁵⁴ The government did not provide any details of the SOPs.³⁵⁵

Mere weeks after this crackdown, on 1 February, the Tatmadaw instigated a successful coup against Myanmar's civilian government. It is unclear how the Tatmadaw will approach Shwe Kokko and other EDZs.

LACK OF REGULATORY OVERSIGHT

The illicit activities linked to New City EDZ were facilitated by a lack of accountability stemming from the unofficial nature of the zone. This is partially the result of ambiguity in Myanmar's laws and regulations for EDZs. This diffusion of responsibility has enabled various operations, including illegal land confiscations, Chinese gang activities, illegal casinos, money laundering, and environmental degradation.³⁵⁶

A review of Myanmar's 2014 SEZ law by the International

Commission of Jurists found that neither provided specific guidelines nor assigned responsibility for the government and private sector.³⁵⁷ For example, while the Ministry of Home Affairs is responsible for land leases, “[T]he law does not specify which of the over fifty national laws governing land, overlapping and often conflicting, apply in SEZs.”³⁵⁸

In addition to the legal ambiguity of the zone, the national Myanmar government's unwillingness or inability to step in and prevent BGF from establishing this EDZ with Yatai International created a situation in which the semi-autonomous military force was the only authority that could control the EDZ.

Third, there is no evidence of development plans from BGF or Yatai International, which would provide a framework for land use, provisions of physical infrastructure, resettlement and compensation provisions, and safeguards for the environment.³⁵⁹ The BGF and Yatai also failed to supply one-stop guidelines to cover specific services provided to investors within the EDZ; (although both promised this information in June 2019,³⁶⁰ it does not appear to have been released).



Key Takeaways

Economic development zones are supposed to attract capital, infrastructure, and expertise; cultivate commercial operations, and bring about growth and modernization. Unfortunately, because of Myanmar's incomplete and ineffective legal frameworks, the New City SEZ has not done any of this. Instead, Myanmar's ambiguous EDZ laws and inability to govern Karen state, along with Yatai International and the BGF's lack of development plans, set up New City for failure.

In practice, the New City SEZ does not appear to advance Myanmar's interests. Rather than benefit Shwe Kokko residents, the establishment of New City has led to numerous negative externalities: the proliferation of Chinese gambling enterprises, land grabs, and partnerships with armed groups that undermine Myanmar's national sovereignty.³⁶¹

These developments are precisely why the Myanmar government in January 2021 asked the Tatmadaw to reclaim Shwe Kokko.³⁶² Given the recent coup, it remains to be seen whether Myanmar can soon turn New City around.

DEEP DIVE

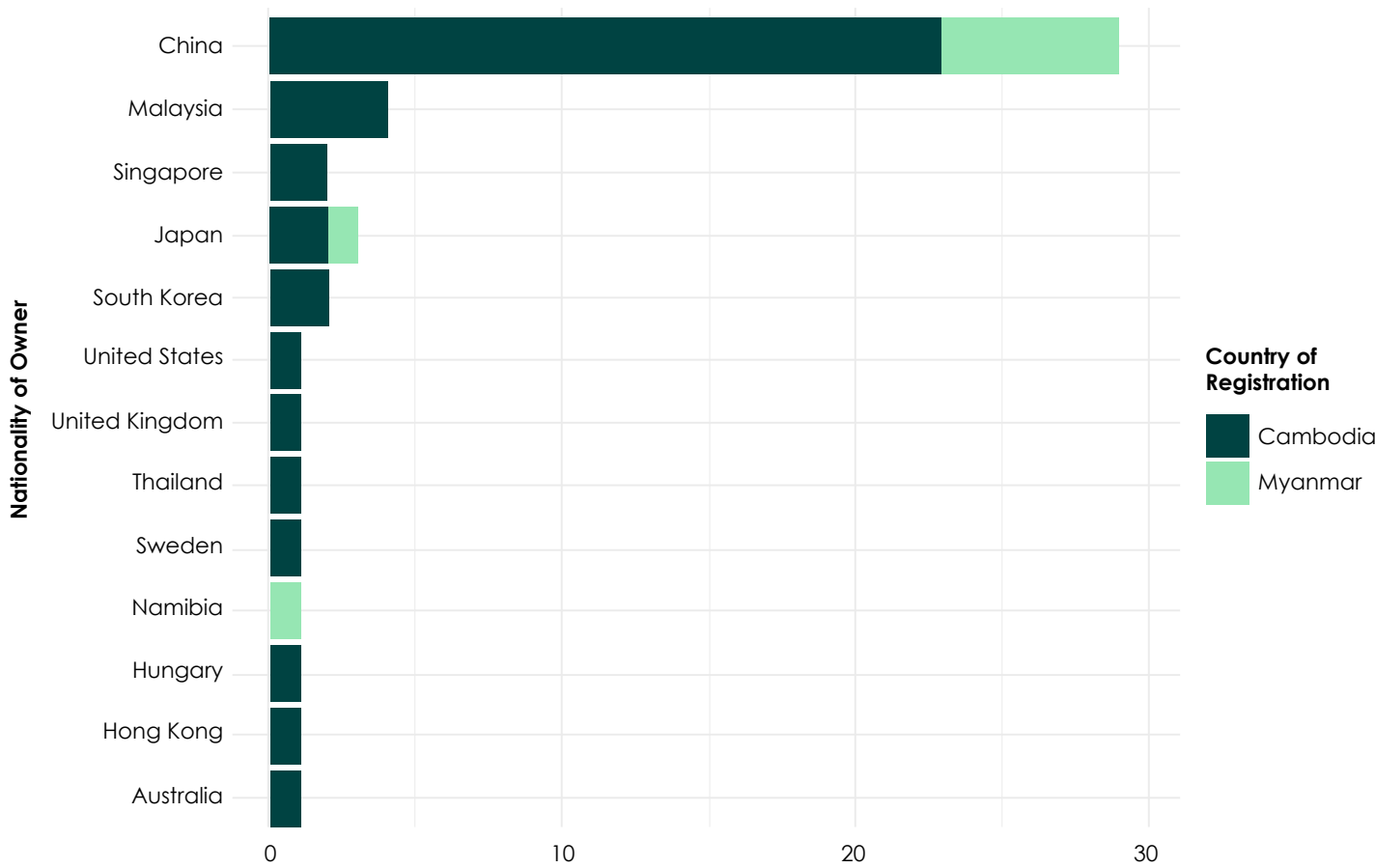
CHINESE PRIVATE SECURITY COMPANIES

Setting up businesses in remote EDZs, especially in unstable regions, introduces security risks for foreign investors and their home governments. In response, many businesses turn to private security companies (PSCs) to mitigate risk. These PSCs can serve as conduits of foreign hard and soft power. But they can also draw in risky actors like Wan Kuok Koi, a former triad boss who declared his intention to establish a Mekong-focused private security company in 2018. Because private security companies are not sufficiently accounted for in international humanitarian or criminal law, their operations are largely unregulated, presenting real risks for investors and host countries alike.³⁶³ Strong due diligence requirements and market regulations are needed to keep out risky actors, so that foreign PSCs provide their host countries valuable security services without posing long-term threats.



► POLICEMEN AT THE 1999 TRIAL OF FORMER TRIAD LEADER WAN KUOK-KOI, THE CURRENT OWNER OF A SECURITY COMPANY IN SOUTHEAST ASIA. IMAGE SOURCE: REUTERS

► FIGURE 24: NATIONALITY OF PRIVATE SECURITY COMPANIES REGISTERED IN CAMBODIA AND MYANMAR



Note: Of the five Mekong countries, only Cambodia and Myanmar have fully open corporate registries with complete directorship or ownership information that could be used to ascertain the nationalities of the directors of foreign private security companies.^{364 365}

Many foreign businesses in the Mekong region turn to PSCs run by their compatriots to provide for their security needs, but Chinese PSCs are by far the most common. China accounts for twenty-nine of the forty-nine foreign private security companies in Cambodia and Myanmar, the two countries where official corporate registries provide complete information on foreign ownership.^{366 367} Malaysian nationals, who run the next greatest number of PSCs, operate only four.³⁶⁸ ³⁶⁹ This growth in Chinese PSCs in the Mekong region is, in part, driven by signaling from the Chinese government, which has explicitly encouraged Chinese nationals to establish PSCs in Belt and Road countries.^{370 371}

To comprehensively evaluate the phenomenon, this deep dive focuses on Chinese PSC activities throughout Mekong countries, not only those in economic development zones. Nevertheless, EDZs constitute a platform upon which foreign investors set up business operations in a host country that they may secure with PSCs. Zones bring in new foreign investments, and new foreign investments, in turn, lead to more PSCs in the country. Moreover, due to loose restrictions and government oversight of foreign activities within EDZs, zones potentially present a unique set of risks for the operation of foreign PSCs from a host government's perspective.

Private Security Companies enable the Chinese government to avoid some of the international criticism that would come with putting government or military boots on the ground, even as PSCs establish ties with host country governments that can serve as vectors for China to exert both hard and soft power over its neighbors. But PSCs operate in a legal gray zone, poorly accounted for in most legal frameworks and not accountable to a single sovereign power in the manner of military forces.^{372 373} For example, in Cambodia, Chinese PSCs have clashed with the police.³⁷⁴ The PSC market allows a diverse range of actors to operate in an armed and minimally regulated industry and could cause problems for China as well as the Mekong countries that host their activities.

THE FOUNDATIONS OF CHINESE SECURITY IN THE MEKONG REGION: LAW ENFORCEMENT TIES

Before Chinese PSCs entered the Mekong region, the Chinese police were establishing a presence there. In October 2011, a violent attack on a Chinese cargo ship in Thai waters near the Golden Triangle SEZ left thirteen Chinese sailors dead.³⁷⁵ The attack brought security concerns in Mekong countries home for the Chinese government, and in the wake of the attack, China adopted a more hands-on approach to managing security conditions in the region. Beijing set up a system for conducting joint patrols along the Mekong with Laos, Myanmar, and Thailand in 2011.³⁷⁶ The group established the Mekong River Patrol Law Enforcement Joint Headquarters in the same year with headquarters in Xishuangbanna, a Chinese city near the Myanmar and Laos borders.^{377 378} In the ten years that followed, the four nations have conducted over 100 joint patrols of the river with a focus on the Golden Triangle.^{379 380}

China has complemented this newly formed multinational law enforcement mechanism with bilateral law enforcement ties. The People's Armed Police, a component of China's armed forces, now garrisons a 25-person unit in a riverside facility at Muang

Mom in Laos.³⁸¹ In the Cambodian capital of Phnom Penh, Chinese police established their first global joint operations center in September 2019, with ninety Chinese police officers dispatched to help launch the project with the Cambodian police.³⁸²

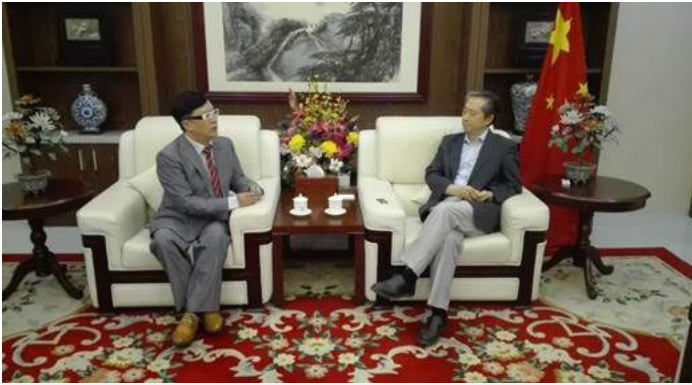
The Chinese law enforcement presence is, in part, established by Chinese business people who, from their home provinces, have helped Chinese law enforcement launch a greater presence in areas where their businesses have interests. In Sihanoukville, Cambodia, for example, where Chinese company Jiangsu Hongdou Group is backing an SEZ, the Jiangsu Province Department of Public Security is helping the local police department establish a new command center and video surveillance system.³⁸³ The Chinese chairmen of the Sihanoukville Special Economic Zone and Jiangsu Hongdou Group accompanied Cambodian police officials on a trip to Jiangsu, where they met with public security officials in the province and discussed ways to support the Sihanoukville SEZ.³⁸⁴ In this way, Chinese businesspeople leverage their personal connections with law enforcement personnel in China and foreign markets to help Chinese law enforcement agencies establish a greater global reach.

However, with tens of thousands of Chinese investments and millions of Chinese citizens spread out across the region, China has opted for an easier means of providing for the safety of its businesses: cultivating a private security industry.

PRIVATIZING CHINESE SECURITY IN THE MEKONG REGION

The global growth of the Chinese private security industry has its roots in a 2010 Ministry of Commerce policy guideline for Chinese companies operating abroad, which set the principle that "the sender is responsible" (谁派出, 谁负责) for the safety training of all employees.³⁸⁵ In other words, the onus of responsibility for ensuring the safety of Chinese workers abroad is on employers, not the Chinese government.³⁸⁶

“We cannot send marines like the United States ... the focus is to promote domestic security companies to provide security services overseas,” the Chinese Ambassador to Cambodia told the president of one Chinese PSC in 2017.³⁸⁷



Chinese Ambassador to Cambodia Xiong Bo (right) meets with the president of China Overseas Security Guardians (left) in March 2017.³⁸⁸

In response to this call, Chinese PSCs have rushed into markets abroad, becoming the most prominent foreign players in the Mekong region's private security industry. Chinese nationals run twenty-three of the forty registered foreign private security companies across all of Cambodia and six of nine across Myanmar.³⁸⁹ Chinese private security companies provide a range of services, from running safety trainings for companies³⁹⁰ to developing security apps for tourists³⁹¹ to providing armed guards for individuals or property.³⁹² Their work is focused on the significant number of Chinese businesses and tourists active in the region.

Chinese SEZ investors have begun to contract Chinese PSCs to run security in their zones. The Chinese director of Sihanoukville SEZ, for example, brought in the Zhongbao Hua'an Group to run security in the zone.³⁹³ Zhongbao Hua'an representatives subsequently met with the Chinese Chamber of Commerce in the Thai-Chinese Rayong Industrial Park and suggested that their operations in Sihanoukville, where Chinese PSCs secure a Chinese SEZ, could be a model for their operations in Rayong Industrial Park.³⁹⁴ Shortly after the meeting, Zhongbao Hua'an closed a deal to provide

security services to companies in Rayong Industrial Park.³⁹⁵

Many Chinese private security companies have partnered with local companies and local governments. In Laos, Overseas Security Guardians (中军军弘安保集团) reportedly formed a partnership with the state-owned security company.³⁹⁶ Guangxi Youbang Security has reportedly established partnerships with Khmer Hunter Security and Steel Eye Security in Cambodia and Myanmar, respectively.³⁹⁷ Zhongqiao Security, for its part, donated riot gear and new batons to the Cambodian police department in 2018.³⁹⁸



Amid the fallout from the COVID-19 pandemic, PSCs pivoted to become suppliers of personal protective equipment and conducted broader pandemic control activities. It was reported that Zhongbao Hua'an, for example, organized shipments of thousands of masks to partners in Cambodia and took charge of pandemic control in the Sihanoukville SEZ.³⁹⁹

By providing support to state security forces and aid in times of health crises, Chinese private security companies are increasing China's soft power in Mekong countries. They also, down the line, could serve as vectors of hard power.

Speaking with the president of the China Overseas Security Group (中国海外保安集团), China's ambassador to Cambodia suggested that PSCs could enable China to shape the law enforcement infrastructure in the region. The ambassador told the PSC president:

“The Security Bureau of the Ministry of Interior of Cambodia has just been established and it is still a blank. Now they choose you as a partner ... You must now seize the right to set the rules, to make good use of this advantage. Europe, the United States, and other countries are particularly good at using the power/right to set rules to obtain special benefits. In this regard, we also need to take advantage of the opportunity.”⁴⁰⁰

But while Chinese PSCs are primarily founded, run, and staffed by ex-policemen and military veterans (Chinese and host-country citizens who have the necessary training for the job), organized crime figures have also set up PSCs.⁴⁰¹ Wan Kuok Koi, a former leader of the Macau 14k triad who has become an active investor in Mekong country projects like the Saixigang and Shwe Kokko SEZs since his release from prison in 2012, announced his own security venture, Hongmen Security Company (洪门安保公司), in 2018. ⁴⁰²Wan's venture is successful, in part, because PSCs are an underregulated market.⁴⁰³

Wan has tried to cast his security venture as a patriotic initiative, one intended to support the work of the Chinese state. Wan said in an interview: “Why am I creating Hongmen Security Company? For the nation's China Dream. To accompany ‘One Belt, One Road.’” ⁴⁰⁴

This ostensible alignment of interests between actors like Wan and the Chinese state, even if denied by China, introduces real reputational risks for China in the region. Wan was designated under the US government's Global Magnitsky sanction regime in December 2020 for unspecified corrupt activities related to his ties with elite figures in Cambodia and Malaysia.⁴⁰⁵ The US Department of the Treasury's Office of Foreign Assets Control also claimed that Wan was a member of the Chinese People's Political Consultative Conference, though the Chinese Ministry of Foreign Affairs has denied the allegation.⁴⁰⁶



Key Takeaways

China will likely continue trying to ostensibly keep distance between the state and private security companies, even as it encourages them to spread across the Mekong region. Private security companies can defend Chinese economic interests while allowing China to avoid the material and reputational risks that arise from putting boots on the ground. These PSCs can also serve as conduits of Chinese soft power, providing a stabilizing influence to areas in need of economic growth and stepping in to provide public services in areas like public health when emergencies arise. As Wan's case shows, the PSC market is a potential reputational liability for China, even if many other PSCs are dependable conduits of geopolitical influence.

For EDZ stakeholders and host governments, the influx of Chinese PSCs into the region merits closer scrutiny. There is nothing inherently dangerous about a PSC run by an ex-Chinese police officer partnering with a local company to secure Chinese investments in an EDZ. But the PSC industry also provides cover for people with ties to organized crime, like Wan, to run armed companies in a host country, and can thus introduce broader geopolitical risks for the host countries. Without adequate regulation, PSCs may bring more risk than they do security.

CONCLUSION

Economic development zones do not exist in a vacuum. These focal points of trade and transport can galvanize economic development but also can facilitate adverse outcomes such as illicit activity and geopolitical machinations. Zone stakeholders—management authorities, commerce and finance officials, law enforcement, conservation agencies, policymakers, civil society organizations, and prospective and current investors—should adopt a comprehensive framework to better evaluate the benefits and consequences of EDZs. While there already exists substantial publicly available information that can be used to analyze zone impact, significant work remains to be done to improve data availability and access.

Economic development zones usually precipitate increased economic growth, but this outcome is not guaranteed. In the first three years after establishment, the median EDZ saw almost 10% higher growth than the country average; however, almost a fifth of analyzed EDZs showed negative growth during this timeframe. Because success is not guaranteed, economic development zones must be rigorously evaluated and monitored. Nightlight data, satellite imagery, and mobile phone data are examples of remote sensing data that offer objective, scalable, publicly accessible metrics for zone growth. Host governments and other EDZ observers should seek to develop partnerships with the private sector and civil society to harness these emerging technologies and maximize visibility into economic performance.

In addition to being (potential) foci for systems of legal transport and trade, EDZs can also be exploited for illicit activity, at the expense of the local population and sustainable development. A majority of sample EDZs were linked to allegations of environmental degradation or land conflict. Outcomes such as pollution and evictions harm the local population, cost taxpayers money, threaten biodiversity, and erode

the legitimacy of the host government. To protect EDZs (and local populations), zone management authorities should collaborate with police, counter-trafficking agencies, the private sector, and civil society to screen, investigate, and interdict illicit activities.

Finally, EDZs can serve as both tool and theatre for influencing the geopolitics of a country. Physical characteristics such as strategic location, dual-use infrastructure, and access to critical resources (including people) can shape the operating environment. Contract terms such as long-term leases, predatory loans, and concentrated ownership by foreign-state-affiliated investors can lead to foreign enclaves and political leverage. Foreign actors' activities such as contracting with foreign private security companies, engaging with local powerbrokers, and hosting high-level foreign politicians can erode the sovereignty and legitimacy of the host government. While these outcomes are by no means inevitable, zone management authorities should centralize and publish relevant data and collaborate with economic and security offices, as well as experts in civil society, to evaluate a zone's potential geopolitical impact and incorporate this impact into the overall cost-benefit analysis.

Understanding the comprehensive impact of economic development zones is a difficult but critical step in designing and implementing policies that maximize benefits for the host country and local population, not only in Mekong countries but in any nation hosting a foreign-invested EDZ. Today, emerging technologies such as nightlight capture, satellite imagery, and machine learning are enabling objective, scalable methodologies for analyzing certain zone impacts. Moreover, publicly available information offers an opportunity for zone management authorities to "crowdsource" data collection and analysis by tapping into resources and expertise from NGOs, private companies, and intergovernmental bodies. Through collaboration and data-driven analysis, host governments can ensure that EDZs serve the needs of the host country economy and the local population.

COMPREHENSIVE FRAMEWORK

CATEGORY	IMPACT	DATA SOURCES
ECONOMIC DEVELOPMENT		
Nightlight data	Does the nightlight output for the zone increase compared to the output of its host country?	► VIIRS Day/Night Band
Construction	<p>Are there construction projects underway in the zone?</p> <p>How much of the zone is undergoing new construction?</p> <p>Are businesses moving in to the zone?</p> <p>Have construction projects stagnated?</p>	<p>► Qualitative surveys</p> <p>► Local zone visits</p> <p>► Satellite imagery analysis from providers like Planet Labs</p>
Human activity	<p>Are local businesses (restaurants, shops, local services) opening in the vicinity of the zone?</p> <p>Are people relocating to the zone to take advantage of employment opportunities?</p> <p>Are people moving away from the zone?</p>	<p>► Qualitative surveys</p> <p>► Local zone visits</p> <p>► Anonymized cellular activity data</p>
Qualitative review of zone	<p>Is the zone near major infrastructure that will connect it to national supply chains?</p> <ul style="list-style-type: none"> • Highways • Airports • Seaports • Major Cities <p>Are there sufficient facilities near the zone to accommodate a local workforce, such as restaurants, adequate housing, convenience and grocery stores?</p> <p>Is the zone's development happening on schedule and within budget?</p> <p>How many jobs does the project propose to create?</p> <p>Is the zone experiencing delays that were not accounted for in the proposal?</p>	<p>► Individual zone proposals</p> <p>► Qualitative review of the surrounding areas</p> <p>► Local zone visits</p> <p>► Local news sites</p>

CATEGORY	IMPACT	DATA SOURCES
ILLIIC ACTIVITY		
Corruption	Do zone management and oversight increase the ability of local officials to leverage their office for personal gain? Are there viable reporting mechanisms?	<ul style="list-style-type: none"> ▶ <i>Media monitoring tools</i> ▶ <i>Public contracts</i>
Environmental Degradation and Conflict	Is development coming at the cost of the environment? Are environmental impact assessments sufficiently rigorous? Are they being effectively implemented?	<ul style="list-style-type: none"> ▶ <i>Tender documentation</i> ▶ <i>Corporate registry data</i> ▶ <i>Satellite imagery</i> ▶ <i>Concession data/land-titling databases/property registries</i>
Trafficking (drugs, wildlife, humans)	Do enforcement authorities have the access and resources to enforce the country's laws? Do "fast-track" shipping processes adequately screen for illicit activity?	<ul style="list-style-type: none"> ▶ <i>Social media and dark web monitoring tools (Fivecast)</i> ▶ <i>AIS (Windward) and ADS-B (Icarus) data</i> ▶ <i>Government seizure notifications</i>
Money Laundering	Do the regulatory incentives for the zone facilitate the exploitation of the licit financial system by organized criminal syndicates?	<ul style="list-style-type: none"> ▶ <i>Corporate registry data</i> ▶ <i>Cryptocurrency data</i>
GEOPOLITICS		
Contract terms	Constrained geopolitical options for host country	<ul style="list-style-type: none"> ▶ <i>Financing structure</i> ▶ <i>Degree and concentration of foreign ownership</i>
Foreign activities	Foreign interference in host country domestic politics	<ul style="list-style-type: none"> ▶ <i>Connections with local power brokers</i> ▶ <i>Foreign government ties with the investing entities</i> ▶ <i>Presence of private security companies</i>
Physical characteristics	Use of EDZ infrastructure and resources to further the discreet aims of an investor country	<ul style="list-style-type: none"> ▶ <i>Geostrategic value</i> ▶ <i>Planned infrastructure</i> ▶ <i>Machine learning-based automated monitoring tools</i>

ANNEX: METHODOLOGY

This study aims to comprehensively evaluate the impact of foreign-invested economic development zones for five countries in the Mekong region: Cambodia, Laos, Myanmar, Vietnam, and Thailand (hereafter referred to as “Mekong countries”). This study focuses primarily, but not exclusively, on official economic development zones, defined as discrete areas that the host government officially designates as locations of economic growth initiatives either with regulatory concessions, infrastructure projects, or public awareness campaigns.

The study defines zones as “foreign-invested” when there is evidence in publicly available information of financial capital that originates outside of the host country directed to zone development. In addition to official zones, the study also considers unofficial economic development zones, defined as areas that maintain a reputation as hubs for legal, economic activity but are not officially designated as an EDZ by the host government. For unofficial zones, reports of significant activity by foreign persons or commercial organizations qualify the zones as “foreign-invested.” Under these parameters, 110 economic development zones were identified: 40 in Cambodia, 15 in Laos, 20 in Myanmar, 16 in Thailand, and 19 in Vietnam.

The authors of this study primarily leveraged publicly available information. For this reason, all analyses herein are rooted in freely or commercially available data. In the information age, data availability has increased exponentially, allowing for innovative, democratic workflows. Nevertheless, such analyses engender certain limitations and biases. For example, the absence of public allegations of environmental degradation connected to a particular project could indicate strong environmental safeguards, but it could also result from environmental malpractice that goes

unidentified or unreported. Similarly, more economically developed countries (such as Thailand) tend to have more robust data environments and thus offer more points for analysis than those that are less developed, such as Laos. Searches were conducted using search strings in regional languages by consultants with fluency in those languages: Burmese, Khmer, Laotian, Thai, and Vietnamese. Even with multilingual collection, the authors treated the data used in the study as a nonexhaustive dataset.

Wherever possible, researchers removed such biases by using applied remote sensing data, such as nightlight luminosity, which is equally available for all study areas. Finally, to contextualize PAI findings in ground truth, researchers partnered with local journalists to conduct site visits to three zones: Sihanoukville SEZ, Eastern Economic Corridor, and Thai Binh SEZ.

The economic development impact of a zone was measured by applying an existing methodology that proxies economic performance using nightlight luminosity. The nightlight data in this report was collected by the Visible Infrared Imaging Radiometer Suite (VIIRS). The VIIRS Day/Night Band collection began in 2012 and is a considerably higher resolution than nightlight data used in previous studies.⁴⁰⁷ The sharper resolution (15 arc-seconds) allows for the analysis of smaller EDZs, like some found in the Mekong region, but limits the sample to those established post-2012. Limiting the sample to zones established after 2012 focuses the study on the most recently established zones, increasing the relevance of findings to future zones. This scope, however, greatly restricts the sample size used for this analysis. Limited open data about EDZs in the region further shrinks the sample size, precluding a statistical approach to examining the drivers of economic performance.

The nightlight data used in this study is reported in radiance values, which measure the amount of light emitted for a particular geographic location. To measure the economic activity for a certain region, the authors calculate the sum of all of the values that fall

within that region. To compare EDZ performance over time, they also baseline each value by the economic activity for the host country of that zone. A given zone's performance, called "Percent of Lights" in the study, is calculated as the percentage of its host country's lights emitted in that zone in a given year.

$$\text{Percent of Lights} = 100 \times \frac{\text{Zone Sum of Lights}}{\text{Country Sum of Lights}}$$

C4ADS also collaborated with Planet Labs and a mobile phone data provider to explore remote sensing data streams that could be used as proxies for economic development. Machine-learning satellite imagery analysis was used to estimate the amount and location of building coverage within each zone. Planet Labs uses an in-house building-detection model, trained on thousands of proprietary satellite images, to evaluate monthly satellite imagery of EDZs. Artificial intelligence allows for the scalability of this methodology, with a minimal trade-off in accuracy.

Similarly, the authors used anonymized phone data to examine human activity within zones, as measured by the physical movement of mobile phones. Venntel provided anonymized location data, and the authors examined heat maps that show where human activity is concentrated within EDZs. These remote sensing solutions allow for near real-time analysis in regions where data is scarce. They are easily scalable, and automated detection is possible.

Illicit activity related to a zone was evaluated through derogatory reporting—allegations of wrongdoing in publicly available information. To analyze the relationship between EDZs and trafficking activities, the study leverages the C4ADS Wildlife Seizure Database and the C4ADS Mekong Drug Seizure Database. The former maintains 668 records of ivory, rhino horn, and pangolin seizures and includes data on: seized products and quantities; date of seizure; origin, transit, and destination locations; obfuscation methods; individual(s) arrested during the seizure; airports and

seaports used to move the seized products, and sources of information. The latter maintains records of 126 seizures of illegal drugs tracing back to 2012 in provinces that host a sample EDZ. Because more recent sources are more prevalent, these databases contain bias in the amount of coverage over time. Because of such bias, these seizure databases are analyzed qualitatively rather than through attempts to statistically determine the effect of EDZs on activity. To analyze the relationship between EDZs and other illicit activities, the study leveraged a database of 149 publicly reported allegations of environmental degradation and land disputes between 2011 and 2020. An in-depth discussion of the various issues surrounding the use of seizure data can be found in the ROUTES report *Flying Under the Radar*.⁴⁰⁸ Database analysis was supplemented with qualitative reporting and investigative vignettes. The authors used local and international media, including zone and company websites, news reporting, contract tenders, and studies by civil society organizations to develop a better understanding of the breadth of potential impacts of EDZs on illicit activity. While this does not provide a systematic overview of these impacts, it can contextualize a discussion of broader trends.

The geopolitical impact of a zone was evaluated using a conceptual framework informed through primary source research and discussions with partners in government, academia, and civil society. The framework was applied using a variety of publicly available information, including officially reported zone information, national economic statistics, business intelligence data, satellite imagery, academic publications, local reporting, and social media. Where possible, the authors prioritized unbiased sources over rhetoric from foreign governments, as the motives behind such statements are impossible to ascertain. The conceptual framework is not meant to be exhaustive but is meant to serve as a guide for evaluating potential geopolitical considerations of an existing or proposed EDZ. This study provides descriptive rather than prescriptive assessments of geopolitical concerns, and should be viewed as such, as geopolitical impacts are difficult to analyze, even in hindsight.

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