



# ASSESSMENT OF GREATER MEKONG SUBREGION ECONOMIC CORRIDORS

***THAILAND***

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10TH ECONOMIC CORRIDORS FORUM  
13 DECEMBER 2018





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Photos on the front cover (left to right):

Aerial view of Danang Port. This port is the third largest port system in Viet Nam and lies at the eastern end of the GMS East–West Economic Corridor (photo by ADB).

Bridging borders. The bridge between the Lao People’s Democratic Republic and Thailand allows people to trade and travel (photo by Pitchayawat Proongsak).

Erenhot railway station. Trucks parked at the Erenhot railway station in the People’s Republic of China (photo by 2011 Dengjia for ADB).

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Note: In this report “\$” refers to United States dollars.

ADB recognizes “China” as the People’s Republic of China and “Laos” as the Lao People’s Democratic Republic.



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# ABBREVIATIONS

ADB	Asian Development Bank
AH	Asian Highway
BOI	Board of Investment
CBTA	Cross-Border Transport Facilitation Agreement
EEC	Eastern Economic Corridor
EWEC	East-West Economic Corridor
GMS	Greater Mekong Subregion
IEAT	Industrial Estate Authority of Thailand
km	kilometer
kph	kilometer per hour
Lao PDR	Lao People's Democratic Republic
m	meter
NESDB	National Economic and Social Development Board
NH	National Highway
NSEC	North-South Economic Corridor
NSEC-1	Kunming-Chiang Rai-Bangkok via the Lao PDR or Myanmar
NSEC-2	Kunming-Boten-Oudumxay-Laungprabang-Vang Vieng-Vientiane-Nong Khai-Udon Thani-Nakhon Rathchasi-Laem Chabang Subcorridor
NSEC-7	Laem Chabang-Bangkok-Nakhon Ratchasima-Udon Thani-Nakom Phanom-Thakek-Na Phao-Vung Ang-Ha Noi Subcorridor
OSS	one stop service
PRC	People's Republic of China
SEC	Southern Economic Corridor
SEC-1	Dawei-Bangkok-Phnom Penh-Ho Chi Minh City-Vung Tau Subcorridor
SEC-2	Bangkok-Siem Reap-Stung Treng-Pleiku-Quy Nhon Subcorridor
SEC-3	Bangkok-Trat-Kampot-Ha Tien-Nam Can Subcorridor
SEZ	special economic zone
sq km	square kilometer

The Assessment of Greater Mekong Subregion (GMS) Economic Corridors consists of six country reports and an integrative report prepared by a study team composed of Filologo Pante, Jr. (team leader), Josephine Duque-Comia of the GMS Secretariat, Hir Samnang (Cambodia), Sengsavang Phandanouvong (Lao People's Democratic Republic), Phyo Kyaw Thu (Myanmar), Liu Zengjun (People's Republic of China), Pawat Tantrongjita (Thailand), and Pham Thanh Tung (Viet Nam). Cuong Minh Nguyen of the GMS Secretariat provided overall guidance and coordinated with GMS countries while Cira Rudas assisted in finalizing the reports. Concerned ministries and agencies in the GMS countries extended valuable cooperation and support in the conduct of the assessment.

All photos, except those on the cover, are by Pawat Tantrongjita.





# I. INTRODUCTION

The development of transport corridors as economic corridors has been at the center of the Greater Mekong Subregion (GMS) Program since the GMS countries adopted the economic corridor approach in 1998. Economic corridors are geographically defined areas that facilitate the national and trans-national movement of people, goods, services, capital, and information. They are key instruments for promoting economic integration in the GMS. Along this line, the East–West Economic Corridor (EWEC), North–South Economic Corridor (NSEC), and Southern Economic Corridor (SEC) were designated as flagships of the GMS Program.

A review of the configuration of the economic corridors was conducted in 2016 to take into account the opening up of Myanmar and ensure that (i) there is a close match between corridor routes and trade flows, (ii) GMS capitals and major urban centers are connected to each other, and (iii) the corridors are linked with maritime gateways.

At the 21st GMS Ministerial Conference held in Chiang Rai, Thailand on 30 November to 1 December 2016, the GMS ministers endorsed the recommended changes in the configuration of the economic corridors

which addressed the following gaps: (i) limited involvement of the Lao PDR and Myanmar in EWEC and NSEC; (ii) absence of Yangon, Nay Pyi Taw, and Vientiane in any economic corridor; (iii) Yangon Port is not linked to any economic corridor; and (iv) omission of the principal cross-border trade routes between the PRC and Myanmar; Myanmar and Thailand; and the PRC, the Lao PDR, and Thailand in the economic corridors.<sup>1</sup> Figure 1 shows the new configuration of the GMS economic corridors.

The adoption of a new configuration of the GMS economic corridors has underscored the need to conduct an assessment of the state of development of the corridors to guide future investments and other interventions for their development. This report presents the findings of the assessment of the Thailand component of the GMS economic corridors focusing on (i) the status and physical condition of transport infrastructure and cross-border facilities, with emphasis on road transport; (ii) cross-border transport and trade; and (iii) economic potential (special economic zones, tourist attractions, and investment opportunities along and around the economic corridors). The observations regarding the physical condition of the roads in the GMS economic corridors in Thailand are based on the field survey conducted in June 2017.

<sup>1</sup> Asian Development Bank. 2018. *Review of Configuration of Greater Mekong Subregion Economic Corridors*. Manila. <https://www.adb.org/documents/review-configuration-gms-corridors>.

Figure 1: New Configuration of the Greater Mekong Subregion Economic Corridors



Source: ADB. 2018. *Review of Configuration of Greater Mekong Subregion Economic Corridors*. Manila. <https://www.adb.org/documents/review-configuration-gms-corridors>.

## II. OVERVIEW OF GMS ECONOMIC CORRIDORS IN THAILAND

### A. East–West Economic Corridor

The GMS East–West Economic Corridor (EWEC) is a land route linking the Andaman Sea in the Indian Ocean and the South China Sea starting from Yangon–Thilawa or Mawlamyine in Myanmar to Da Nang in Viet Nam totaling 1,320 kilometers (km). EWEC in Thailand traverses Mae Sot, Phitsanulok, Khon Kaen, Kalasin, and Mukdahan provinces (Figure 2). The distance between Mae Sot (bordering with Myanmar) to Mukdahan (bordering with the Lao PDR) is 756 km. Table 1 shows basic information on the Thailand component of EWEC, including starting points and end points, routes, distances, and number of traffic lanes.

- 1. Commercial Nodes:** Mae Sot, Phitsanulok, Khon Kaen, and Mukdahan.
- 2. Border Nodes and Crossing Points:** Mae Sot–Myawaddy between Thailand and Myanmar; and Mukdahan–Savannakhet between Thailand and the Lao PDR. The government of Thailand has established special economic zones in Mae Sot and Mukdahan to stimulate economic activities in the border provinces.
- 3. Interchange Nodes:** EWEC has four major interchange nodes: (i) Tak interchange of Bangkok–Chiang Mai via Asian Highway

No. 1 (AH1), (ii) Phitsanulok interchange of Bangkok–Chiang Rai via R11, (iii) Khon Kaen interchange of Bangkok–Nong Khai via AH12, and (iv) Khon Kaen interchange of Bangkok–Nakhon Phanom via AH15.

- 4. Tourism Nodes:** Mae Sot, Tak, Sukhothai, Phitsanulok, Mukdahan.

### B. North–South Economic Corridor

The North–South Economic Corridor (NSEC) has three subcorridors in Thailand (Figure 4):

- (i) Kunming–Chiang Rai–Bangkok via the Lao PDR or Myanmar Subcorridor (NSEC-1);
- (ii) Kunming–Boten–Ouduxay–Laungprabang–Vang Vieng–Vientiane–Nong Khai–Udon Thani–Nakhon Ratchasima–Laem Chabang Subcorridor (NSEC-2); and
- (iii) Laem Chabang–Bangkok–Nakhon Ratchasima–Udon Thani–Nakhon Phanom–Thakek–Na Phao–Vung Ang–Ha Noi (NSEC-7).

The Laem Chabang–Nakhon Ratchasima–Udon Thani section in NSEC-2 overlaps with that in NSEC-7. The total distance from Laem Chabang to Nong Khai is 668.5 km, and that from Laem Chabang to Nakhon Phanom is 776 km.

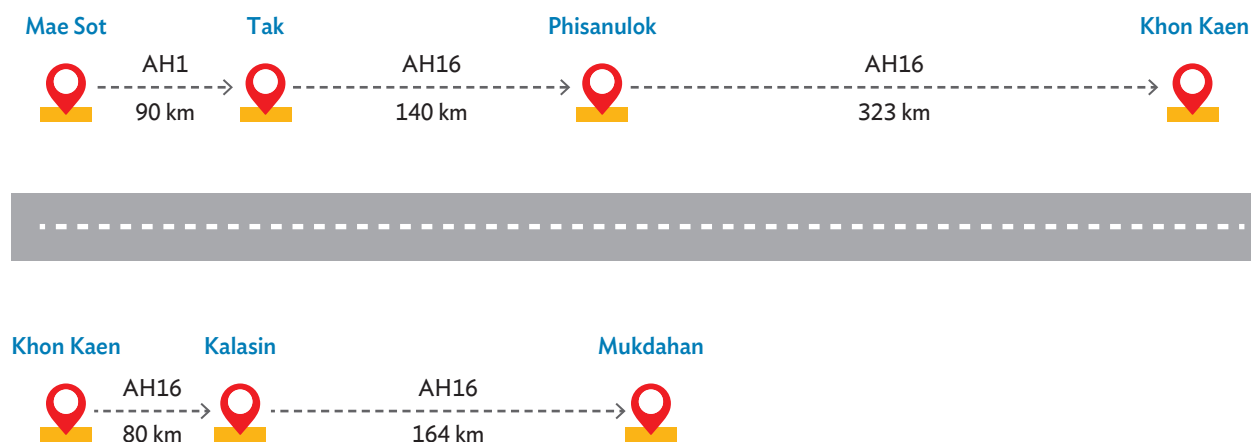


Figure 2: East-West Economic Corridor in Thailand



Source: ADB. GMS Economic Corridor Assessment Team.

Figure 3: East–West Economic Corridor Distances and Routes



AH = Asian Highway, km = kilometer.

Source: ADB. GMS Economic Corridor Assessment Team.

Table 1: Basic Information on the Thailand Component of East–West Economic Corridor

Starting Point	End Point	Route	Distance (km)	Traffic Lanes
2nd Friendship Bridge	Mukdahan	AH16 (NH12)	7	4
Mukdahan	Kamchaee	AH16 (NH12)	35	4
Kamchaee	Kalasin	AH16 (NH12)	129	2/4
Kalasin	Khon Kean	AH16 (NH12)	80	4/6
Khon Kean	Chumpae	AH16 (NH12)	82	2/4
Chumpae	Phitsanulok	AH16 (NH12)	241	2
Phitsanulok	Tak	AH16 (NH12)	140	4
Tak	Mae Sot	AH1 (NH12)	90	2/4
<b>Total</b>		<b>via cities</b>	<b>804</b>	
Mukdahan	Mae Sot	direct	757	2/4

km = kilometer.

Source: ADB. GMS Economic Corridor Assessment Team.

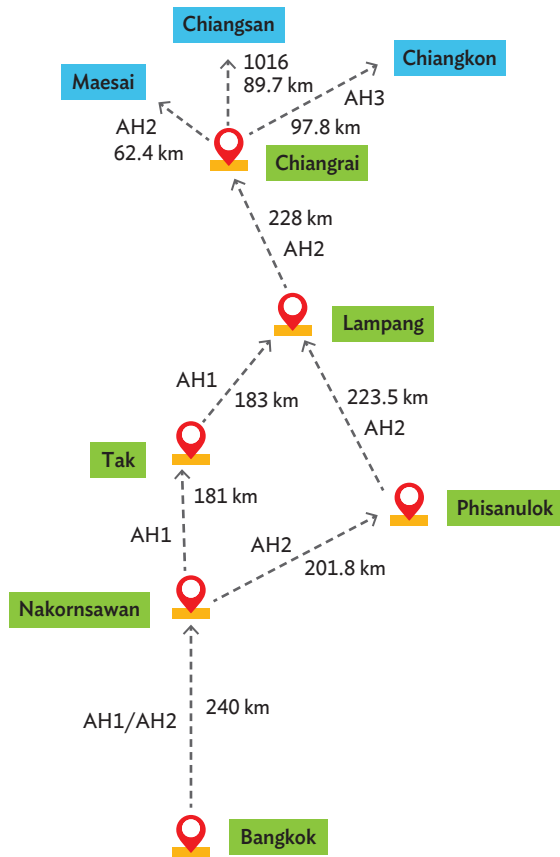
Figure 4: North-South Economic Corridor Routes in Thailand



Source: ADB. GMS Economic Corridor Assessment Team.

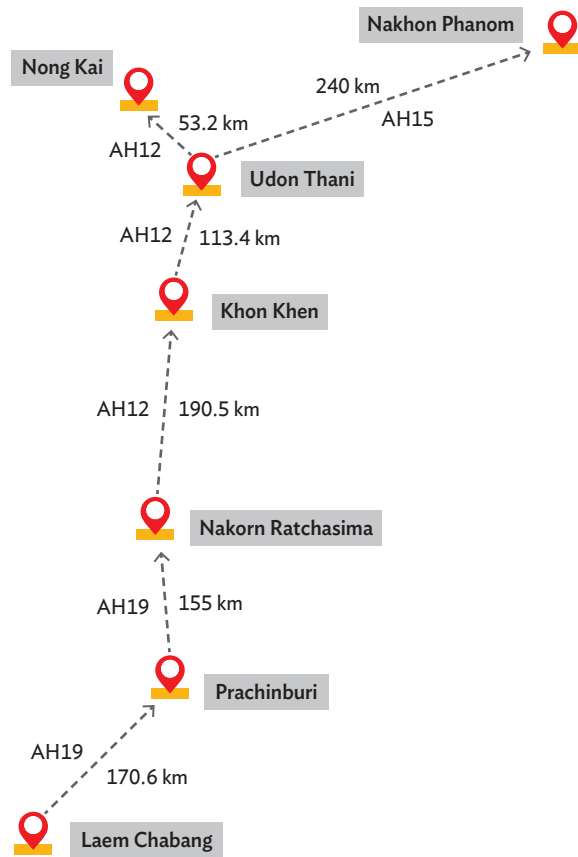


**Figure 5: North–South Economic Corridor-1 Distances and Routes in Thailand**



AH = Asian Highway, km = kilometer.  
 Source: ADB. GMS Economic Corridor Assessment Team.

**Figure 6: NSEC-2 and NSEC-7 Distances and Routes in Thailand**



AH = Asian Highway, km = kilometer, NSEC = North–South Economic Corridor.  
 Source: ADB. GMS Economic Corridor Assessment Team.

Table 2 shows basic information on the Thailand component of NSEC-1, NSEC-2, and NSEC-7, including starting points and end points, routes, distances, and number of traffic lanes.

- 1. Commercial Nodes:** (a) NSEC-1, Bangkok, Nakorn Sawan, Phitsanulok, and Chiang Rai; (b) NSEC-2 and NSEC-7, Laem Chabang, Bangkok, Nakhon Ratchasima, and Udon Thani.

**2. Border Nodes and Crossing Points:**

- (a) NSEC-1: Chiang Khong–Houayxay–Mohan (trade route between Thailand, the Lao PDR, and the PRC via R3a);
- (b) NSEC-2: Nong Khai–Vientiane between Thailand and the Lao PDR;
- (c) NSEC-7: Nakhon Phanom–Thakhek (Khumuan) between Thailand and the Lao PDR. The government of Thailand has established SEZs in Chiang Kong, Nong Khai, and Nakhon Phanom to attract domestic and international investment into the respective areas.

**3. Interchange Nodes:** NSEC has 2 major interchange nodes: (a) NSEC-1, Tak and Phitsanulok interchange of Mae Sot–Mukdahan (EWEC) via AH1/AH16; and (b) NSEC-2 and NSEC-7, Khon Kaen interchange of Mae Sot–Mukdahan (EWEC) via AH16, and Udon Thani interchange of Laem Chabang–Nong Kai and Laem Chabang–Nakhon Phanom via AH12 and AH15.

**4. Tourism Nodes:** Rayong, Chonburi, Bangkok, Nakhon Ratchasima, Khoen Kaen, Udon Thani, Nong Kai, and Nakhon Phanom.

### C. Southern Economic Corridor

The Southern Economic Corridor (SEC) has three subcorridors that include Thailand (Figure 7):

- (i) Dawei–Bangkok–Phnom Penh–Ho Chi Minh City–Vung Tau Subcorridor (SEC-1);
- (ii) Bangkok–Siem Reap–Stung Treng–Pleiku–Quy Nhon Subcorridor (SEC-2); and
- (iii) Bangkok–Trat–Kampot–Ha Tien–Nam Can Subcorridor (SEC-3).

SEC-1 in Thailand starts from Ban Phu Nam Ron, Kanchanaburi; traverses Bangkok, Chachoengsao, Sa Kaeo; and ends at Aranyaprathet Checkpoint. Total distance from Ban Phu Nam Ron to Aranyaprathet is 454 km. SEC-3 starts from Bangkok; traverses Rayong, Chantaburi, Trat; and ends at Hat Lek Checkpoint. Total distance from Bangkok to Hat Lek is 467 km. Table 3 shows basic information on the Thailand component of SEC-1, SEC-2, and SEC-3, including starting points and end points, routes, distances, and number of traffic lanes.

**1. Commercial Nodes:** Kanchanaburi, Bangkok, Chonburi, Rayong, Chantaburi, Trat.

**2. Border Nodes:** (a) SEC-1, Ban Phu Nam Ron–Htikhi between Thailand and Myanmar, Aranyaprathet–Poipet between Thailand and Cambodia; and SEC-3, Trat–Koh Kong between Thailand and Cambodia. The government of Thailand has established SEZs in Kanchanaburi and Trat Provinces to attract domestic and international investment to the respective areas.

**3. Interchange Nodes:** Bangkok interchange of Ban Phu Nam Ron–Aranyaprathet (SEC-1 and SEC-2) and Bangkok–Hat Lek (SEC-3).

**4. Tourism Nodes:** Kanchanaburi, Bangkok, Chonburi, Rayong, Chantaburi, Trat.

**Table 2: Basic Information on the Thailand Component of NSEC-1, NSEC-2, and NSEC-7**

Starting Point	End Point	Route	Distance (km)	Traffic Lanes
<b>NSEC-1</b>				
Chiang Khong	Chiang Rai	AH3 (NH1020,1128,1126)	98.7	4
Chiang Rai	Lampang	AH2 (NH1)	228.0	4
Lampang	Tak	AH1 (NH1)	183.0	4
Tak	Nakhon Sawan	AH1 (NH1)	181.0	4
Lampang	Phisanulok	AH2 (NH1)	223.5	4
Phisanulok	Nakhon Sawan	AH1/AH2 (NH117)	201.8	4
Nakhon Sawan	Bangkok	AH1/AH2 (NH1A,32)	240.0	4
Chiang Khong	Bangkok	Direct	853.8	
<b>NSEC-2</b>				
Laem Chabang	Prachinburi	AH19 (NH304,7)	170.6	4
Prachinburi	Nakhon Ratchasima	AH19 (NH304)	155.0	4
Nakhon Rachasima	Khon Kaen	AH12 (NH2)	190.5	4
Khon Kaen	Udon Thani	AH12 (NH2)	113.4	4
Udon Thani	Nong Kai	AH12 (NH2)	53.2	4
<b>Total</b>		<b>via cities</b>	<b>682.7</b>	
Laem Chabang	Nong Khai	Direct	668.5	4
<b>NSEC-7</b>				
Laem Chabang	Prachinburi	AH19 (NH7,304)	170.6	4
Prachinburi	Nakhon Ratchasima	AH19 (NH304)	155.0	4
Nakhon Rachasima	Khon Kaen	AH12 (NH2)	190.5	4
Khon Kaen	Udon Thani	AH12 (NH2)	113.4	4
Udon Thani	Nakhon Phanom	AH12 (NH22)	240.0	2/4
<b>Total</b>		<b>via cities</b>	<b>869.5</b>	
Laem Chabang	Nakhon Phanom	direct	775.9	

AH = Asian Highway, km = kilometer, NH = National Highway, NSEC = North–South Economic Corridor.

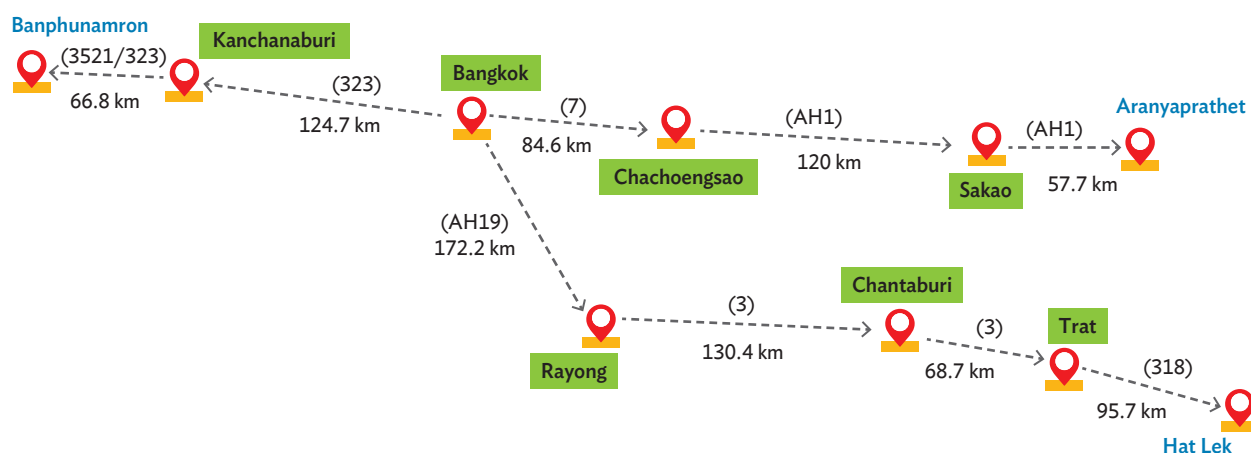
Source: ADB. GMS Economic Corridor Assessment Team.

Figure 7: Southern Economic Corridor Routes in Thailand



Source: ADB. GMS Economic Corridor Assessment Team.

Figure 8: Southern Economic Corridor Distances and Routes in Thailand



AH = Asian Highway, km = kilometer.

Source: ADB. GMS Economic Corridor Assessment Team.

Table 3: Basic Information on the Thailand Component of SEC-1, SEC-2, and SEC-3

Starting Point	End Point	Route	Distance (km)	Traffic Lanes
<b>SEC-1 and SEC-2<sup>a</sup></b>				
Ban Phu Nam Ron	Kanchanaburi	AH123 (NH3521,3229)	66.8	2
Kanchanaburi	Bangkok	AH123 (NH323,4)	124.7	4
Bangkok	Chachoengsao	AH123 (NH7)	84.6	4
Chachoengsao	Sa Kaeo	AH1 (NH304,359,33)	120.0	4
Sa Kaeo	Aranyaprathet	AH1 (NH33)	57.7	4
<b>Total</b>		<b>via cities</b>	<b>453.8</b>	
Ban Phu Nam Ron	Aranyaprathet	direct	438.0	
<b>SEC-3</b>				
Bangkok	Rayong	AH19 (NH7)	172.2	4
Rayong	Chantaburi	AH123 (NH3)	130.4	4
Chantaburi	Trat	AH123 (NH3)	68.7	4
Trat	Hat Lek	AH123 (NH3)	95.7	2/4
<b>Total</b>		<b>via cities</b>	<b>467.0</b>	
Bangkok	Hat Lek	direct	411.6	

AH = Asian Highway, km = kilometer, NH = National Highway, SEC = Southern Economic Corridor.

<sup>a</sup> The Bangkok–Aranyaprathet section is the same for SEC-1 and SEC-2.

Source: ADB. GMS Economic Corridor Assessment Team.

# III. STATE OF ROAD AND RELATED TRANSPORT DEVELOPMENT IN THE GMS ECONOMIC CORRIDORS IN THAILAND

## A. East-West Economic Corridor

The road along EWEC from Mukdahan to Tak is Asian Highway No. 16 (AH16) passing through nine provinces: Mukdahan, Kalasin, Khon Kaen, Chiayaphum, Phetchabun, Phitsanulok, and Tak with a distance of 6,757 km. The assessment of the condition of the roads along EWEC in Thailand is summarized in Table 4.

### 1. Roads

**2nd Friendship Bridge–Mukdahan (7 km via AH16).** The road has four lanes but becomes two lanes at the bridge. The road surface is good and smooth along the section. The entire route is equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Table 4: Road Condition in the Thailand Component of East-West Economic Corridor**

Section	Road Class/ Traffic Lanes	Road Condition	Remarks
Mae Sot–Tak	I (2/4)	Good	
Tak–Phitsunulok	I (4)	Good	
Phitsunulok–Chumpae	I (2)	Good	
Chumpae–Khon Kaen	I (2/4)	Good	
Khon Kaen–Kalasin	I (4/6)	Good	There is a bottleneck between Lom Sak and Khon Kaen districts covering 43 kilometers.
Kalasin–Kamchaee	I (2/4)	Good	
Kamchaee–Mukdahan	I (4)	Good	
Mukdahan–Second Friendship Bridge	I (4)	Good	

Source: ADB. GMS Economic Corridor Assessment Team.



**Mukdahan–Kamchaee (35 km via AH17).**

The road is covered with asphalt and has four lanes. The road surface is good and smooth along the section. The entire route is equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Kamchaee–Kalasin (129 km via AH17).**

The road is covered with asphalt and has two and four lanes. The road surface is good and smooth along the section. The entire route is equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Kalasin–Khon Kean (80 km via AH17).**

The road is covered with asphalt and has four and six lanes. The road surface is good and smooth along the section. The entire route is equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Khon Kean–Chumpae (82 km via AH17).**

The road is covered with asphalt and has four lanes. The road surface is good and smooth along the section. The entire route is equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Chumpae–Phitsunulok (241 km via AH17).**

The road is covered with asphalt and has two lanes. The road surface is good and smooth along the section. The entire route is equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Phitsunulok–Tak (140 km via AH17).**

The road is covered with asphalt and has four lanes. The road surface is good and smooth along the section. The entire route is equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Tak–Mae Sot (90 km via AH17).** The road is covered with asphalt and has two and four lanes. The road surface is good and smooth along the section. The entire route is equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition. The 5 km route from Mae Sot district to Mae Sot Customs Checkpoint, Tak Province, has four to six lanes; is paved with concrete; and is smooth most of the way but has occasional potholes. The 1 km route from Mae Sot Customs Checkpoint, Tak Province, across the Myanmar at the 1st Thai–Myanmar Friendship Bridge to Myawaddy Customs Checkpoint, which has seven lanes and is covered with asphalt (both in Thailand and in Myanmar), is mostly smooth with occasional potholes.



## 2. Ongoing and Planned Projects

The major ongoing projects along EWEC in Thailand are mostly projects to construct or widen Route No. 12 (or AH16) into four lanes to improve road safety and enhance links to remote areas.

**Mae Sot bypass and 2nd bridge across Moei River.** This project with a budget of 3.8 billion baht is aimed at supporting increased trade between Thailand and Myanmar through this border crossing. It includes the construction of a bridge across the Moei River, the road connecting the bridge on both sides, border control facilities to accommodate agencies responsible for border crossing inspection, and a joint service area for offices such as the Customs Department, Immigration Department, and Department of Livestock Development. The bridge is a reinforced concrete box bridge, with a total length of 670 meters (m), divided into 515 m on the Thai side and 155 m on the Myanmar side. The project starts on Highway No. 12 across the Moei River/Tong Yin River at Ban Wang Ta Kian; runs through Ta Sai Luad subdistrict, Mae Sot district, Tak Province to Ban Te Pu, Moo, Myawaddy town (Myawaddy Province, Myanmar); and ends at Route No. 85 on the Myawaddy–Kawkareik route. Once finished, it will be part of AH1. The Thai government will provide a grant to the Myanmar government for the construction in Myanmar. The road is expected to be operational by 2019.

Table 5 summarizes ongoing and planned projects along EWEC in Thailand.

## 3. Railway Development Related to East–West Economic Corridor

**Ban Phai–Maha Sarakham–Roi Et–Yasothon–Mukdahan–Nakhon Phanom Rail Project.** This project will (i) expand the railway network in the country, which is an important basic infrastructure to facilitate travel; (ii) accommodate 7,791,000 passengers a year; and (iii) transport goods equivalent to 45,500 TEUs a year. It also supports connectivity of the network with neighboring countries. It is a dual track railway line with a total length of 354 km. It will have 30 stations and one junction, and support a train speed of 160 kph. The project starts at Ban Nongwangrai Junction, Nai Mueang subdistrict, Ban Phai district, Khon Kaen; and ends at the 3rd Friendship Bridge station at Samat subdistrict, Mueang district, Nakhon Phanom. The railway will run across six provinces: Khon Kaen, Maha Sarakham, Roi Et, Yasothon, Mukdahan, and Nakhon Phanom. There will be six stations with container yard: Phu Lek, Maha Sarakham, Roi Et, Phon Thong, 2nd Friendship Bridge, and 3rd Friendship Bridge.

**Chira Road Junction–Khon Kaen Dual Track Rail Construction Project.** The objective of this project is to increase the capacity of rail transport to accommodate 37,000 to 55,000 passengers daily and 36,400 tons of goods daily, and to reduce travel time and cost. The meter-gauge railway line which is 196 km long, will be built parallel to the old railway track, using ballast, prestressed concrete sleepers type mono block. The entire railway has 18 stations. The existing stations will be

rehabilitated: the main station (Khon Kaen station), two large stations (Bua Yai Junction and Muang Khong), 3 medium-sized stations (Non Sung, Mueamg Phon, and Ban Phai), and 13 small stations (Ban Ko, Ban Kradon, Nong Maeo, Ban Dong Phlong, Ban Maka, Phon Songkhram, Ban Don Yai, Non Thong Lang, Nong Bua Lai, Nong Makhua, Ban Han,

Ban Haet, and Tha Phra). There will be a container yard (CY) for the handling of goods at three stations: Ban Kradon, Bua Yai Junction, and Tha Phra. The Ban Kradon station will be the new location of the CY, replacing the one at Ban Ko station to support future growth and avoid the communal area of Ban Ko station.

**Table 5: Ongoing and Planned Projects along East–West Economic Corridor in Thailand**

Projects	Implementation Plan	Distance (km)	Budget (million baht)
1. Construction of Tak–Mae Sot Highway No. 105	Construction and expansion of 4 lanes between Km 22–64	50.0	...
2. Mae Sot–Tak Road Expansion Project	Construction and expansion of 4 lanes between Km 48–63 (Currently under construction; expected to be completed by the end of 2017).	24.0	...
3. Project to improve Route No. 12 between Lom Sak district–Nam Nao district	Construction and expansion of 4 lanes between Lom Sak district–Nam Nao district to reduce accidents along the route	52.5	3,970
4. Project to enlarge communication network to accommodate Mukdahan Special Economic Development Zone	Enlarge communication network by widening road to 4 lanes to accommodate Mukdahan Special Economic Development Zone	7.5	...
5. Project to construct Rural Roads No. Ngor2, Ngor3, Kor1, and Kor2. The city plan includes Mae Sot, Tak Province.	Construction of Rural Roads No. Ngor2, Ngor3, Kor1, and Kor2. The city plan includes Mae Sot, Tak Province (construction period is between 2017–2019; project is currently in the bidding stage).	13.9	725
6. Project of Tak–Mae Sot Highway No. 12 Section 3, Tak Province	Construction and expansion to 4 lanes (currently under construction; expected to be completed by the end of 2017).	25.5	1,400

*continued next page*

**Table 5: Continued**

<b>Projects</b>	<b>Implementation Plan</b>	<b>Distance (km)</b>	<b>Budget (million baht)</b>
7. Project of Kalasin–Somdet district Highway No. 12 Section 2, Kalasin Province	Construction period between 2015–2017 (project has been completed).	11.0	326.7
8. Highway No. 12 Kalasin–Highway No. 12 (Ban Na Krai) Part 2 Section 2	Construction and expansion to 4 lanes (currently, under construction; expected to be completed in January 2019).	34.7	1,447.0
9. Project to construct Mae Sot bypass and the 2nd bridge across the Moei River	Construction of Mae Sot bypass and the 2nd bridge across the Moei river, Mae Sot district, Tak Province (towards the north of Mae Sot district, connecting Myawaddy–Kawkareik Route in Myanmar). The objective is to develop the highway network to support EWEC, connect communication and transport between Thailand and Myanmar, and accommodate increased volume of traffic. The route consists of the highway network in Thailand and Myanmar via the 2nd bridge across the Moei River. The bridge is currently under construction, with work progressing by 25%. The bridge is expected to be operational by 2019.	21	3,900
10. Mae Sot Airport Rehabilitation Project	Rehabilitation of basic infrastructure to accommodate aviation by providing services to passengers. Construction consists of runway, aircraft parking bay, runway reinforcement, and a new passengers' terminal. Currently, the rehabilitation has progressed by 57.6% and is expected to be completed in 2018.		1,112

... = no data available, km = kilometer.

Source: Ministry of Transport.


**Table 6: Summary of Railway Development Related to East–West Economic Corridor**

Projects	Objective/Status	Distance (km)	Budget (million baht)
1. Ban Phai–Maha Sarakham–Roi Et–Yasothon–Mukdahan–Nakhon Phanom Railway Construction Project	Dual track rail project to support the network with neighboring countries. It is an important basic infrastructure for travel and transport of goods. It can link Nakhon Phanom Special Economic Development Zone and the gateway to border trade at the 3rd Friendship Bridge on the Mekong River. The environmental impact assessment of the project is being conducted.	354	60,353
2. Chira Road Junction–Khon Kaen Dual Track Rail Construction Project	Dual track rail project to increase the capacity of rail transport. Currently, the construction of elevated rail at Khon Kaen station for the distance of 5.4 km to solve the problems of intersection of cars and rail, filling the track, installing new rail, and open a temporary station to replace the dismantled one is ongoing. The construction has progressed by 21.98%.	187	26,007

km = kilometer.

Source: Ministry of Transport.



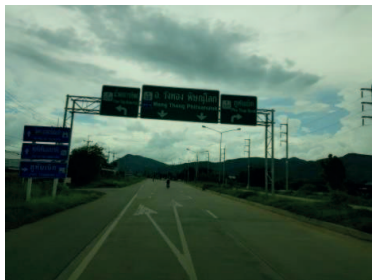


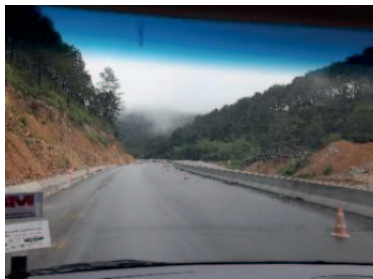



**Table 7: East–West Economic Corridor Route: Mae Sot–Mukdahan**

		<p><b>Mukdahan Checkpoint and common control area</b> The Mukdahan Checkpoint is located on the end of the 2nd Thai–Lao Friendship Bridge, across is Savanakhet, Lao PDR.</p>
		<p><b>Mukdahan Checkpoint</b> The Mukdahan Checkpoint is a major cross-border trade route between Thailand and the Lao PDR.</p>
		<p><b>Mukdahan–Kalasin</b> The road condition between Mukdahan–Kalasin is in a good condition; however, there are only two lanes.</p>
		<p><b>Kalasin–Khoen Kaen</b> The four-lane road linking Kalasin and Khoen Kaen, is very good.</p>
		<p><b>Khoen Kaen–Phetchabun</b> There are two to four lane road linking Khoen Kaen–Phetchabun is in good condition.</p>

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Table 7: Continued

		<p><b>Khoen Kaen–Phetchabun</b> The Khoen Kaen–Phetchabun road along the EWEC passes through the mountain site.</p>
		<p><b>Phetchabun–Phitsanulok</b> AH16 four lane traffic linking Phetchabun to Phitsanulok, road condition is good.</p>
		<p><b>Phitsanulok–Tak</b> There are four lane traffic linking Phitsanulok to Tak.</p>
		<p><b>Tak–Mae Sot</b> The AH2 is a two to four lanes traffic linking Tak to Mae Sot passing through a mountain range.</p>
		<p><b>Mae Sot Checkpoint</b> Mae Sot Checkpoint is located at the end of the Thai–Myanmar Friendship Bridge, across which is Myawaddy, Myanmar.</p>

Source: ADB, GMS Economic Corridor Assessment Team.

## B. North–South Economic Corridor

As noted in Section II.B, the North–South Economic Corridor has three subcorridors traversing Thailand: NSEC-1, NSEC-2, and NSEC-7. The current status and physical state of each subcorridor are discussed below.

The assessment of the condition of the roads along NSEC-1, NSEC-2, and NSEC-3 are summarized in Tables 8, 9, and 10, respectively.

### 1. North–South Economic Corridor-1: Chiang Khong–Bangkok

**Chiang Khong–Chiang Rai (98.7 km via AH3).** The road has four lanes. The road is smooth along the entire section. The road is safe, equipped with traffic signs, road marks,

and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition. The distance between the Chiang Khong Customs Checkpoint and the Houaxay Customs Checkpoint in the Lao PDR is 3 km. This is a concrete road with four lanes. It is smooth along this short section. The road is safe, equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

### Chiang Rai–Lampang (228 km via AH2).

The road has four lanes. The road is smooth along the entire section. The road is safe, equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Table 8: Road Condition in the Thailand Component of North–South Economic Corridor-1**

Section	Road Class/ Traffic Lanes	Road Condition	Remarks
Chiang Khong–Chiang Rai	I (4)	Good	No bottleneck along the route
<b>Via Phitsanulok</b>			
Chiang Rai–Lampang	I (4)	Good	
Lampang–Phisanulok	I (4)	Good	
Phisanulok–Nakornsawan	I (4)	Good	
<b>Via Tak</b>			
Lampang–Tak	I (4)	Good	No bottleneck along these routes; the projects along these routes involve road repairs and expansion of traffic lanes to improve speed of travel and safety.
Tak–Nakornsawan	I (4)	Good	
Nakornsawan–Bangkok	I (4)	Good	

Source: ADB. GMS Economic Corridor Assessment Team.



**Table 9: Road Condition in the Thailand Component of North-South Economic Corridor-2**

Section	Road Class/ Traffic Lanes	Road Condition	Remarks
Nong Kai-Udon Thani	I (4)	Good	No bottleneck along these routes; the projects along these routes involve road repairs and expansion of traffic lanes to improve speed of travel and safety.
Udon Thani-Khon Kaen	I (4)	Good	
Khon Kaen-Nakhon Ratchasima	I (4)	Good	
Nakhon Ratchasima-Prachinburi	I (4)	Good	
Prachinburi-Laem Chabang	I (4)	Good	

Source: ADB. GMS Economic Corridor Assessment Team.

**Table 10: Road Condition in the Thailand Component of North-South Economic Corridor-7**

Section	Road Class/ Traffic Lanes	Road Condition	Remarks
Laem Chabang-Prachinburi	I (4)	Good	Road is smooth along the entire sections; safe, with traffic signs, road marks, guide posts and guard rail in good condition.
Prachinburi-Nakon Ratchasima	I (4)	Good	
Nakon Ratchasima-Khon Kaen	I (4)	Good	
Khon Kaen-Udon Thani	I (4)	Good	
Udon Thani-Nakhon Phanom	I (2-4)	Good	

Source: ADB. GMS Economic Corridor Assessment Team.

**Lampang-Tak (183 km via AH2).** The road has four lanes. The road is smooth along the section. The road is safe, equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Lampang-Phitsanulok (223.5 km via Highway 11).** The road has four lanes. It is the main north-south highway linking the provinces in the central plains and the north of Thailand. The road is smooth along the whole

section. The road is safe, equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Tak-Nakhon Sawan (181 km via AH2).** The road has four lanes. The road surface is smooth along the section. The road is safe, equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Phitsanulok–Nakhon Sawan (201.8 km via Highway 11).** The road has four lanes. The road is smooth along the whole section. The road is safe, equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Nakhon Sawan–Bangkok (240 km via AH1 or AH2).** Both roads have four lanes and are smooth along the whole sections. They are safe, equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

## 2. North–South Economic Corridor-2: Laem Chabang–Nong Khai

**Laem Chabang–Prachinburi–Nakhon Ratchasima (325.5 km via AH19).** The road has four lanes. The road surface is smooth along the section. The road is safe, equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Nakhon Ratchasima–Khon Kaen (190.5 km via AH12).** The road has four lanes. The road surface is smooth along the section. The road is safe, equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Khon Kaen–Udon Thani (113.4 km via AH12).** The road has four lanes. The road surface is smooth along the section. The road is safe, equipped with traffic signs, road marks,

and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Udon Thani–Nong Khai (53.2 km via AH12).** The road has four lanes. The road surface is smooth in the entire section. The road is safe, equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

## 3. North–South Economic Corridor-7: Laem Chabang–Nakhon Phanom

**Laem Chabang–Prachinburi–Nakhon Ratchasima (170.6 km via AH19).**

The road has four lanes. The road surface is smooth along the entire section. The road is safe, equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Nakhon Ratchasima–Khon Kaen (190.5 km via AH12).** The road has four lanes. The road surface is smooth along the entire section. The road is safe, equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Khon Kaen–Udon Thani (113.4 km via AH12).** The road has four lanes. The road surface is smooth along the entire section. The road is safe, equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Table 11: Ongoing and Planned Projects Related to North–South Economic Corridor**

Projects	Action Plan	Distance (km)	Budget (million baht)
1. Project to construct Highway No. 103 Rong Kwang district–Ngao district Segment 2, Phrae Province	Construction and four lane expansion km 10–30 to link Phrae Province with Lampang Province and to increase highway efficiency. The road surface is covered with asphalt concrete. Construction period between 2016–2018.	20.0	800
2. Project to construct Highway No. 1280 Chiang Saen–Chiang Khong Segment 3 km 62+026–83+026	Construction of special climbing lane for large vehicles, with 2 layered asphalt concrete surface. Construction is expected to be completed in 2018.	21.0	653.1
3. Highway 1152 Construction Project	Construction and expansion of 4 lanes	46.0	1,800
4. Highway 1129 Construction Project	Four-lane construction of Chiang Saen–Chiang Khong section	51.0	2,060
5. Highway 1016 Construction Project	Four-lane construction of Mae Chan–Chiang Saen section	30.2	1,168
6. Highway 101 Construction Project	Construction of 4 lanes according to special standard classification to accommodate and provide safety to drivers and support increased traffic in the future. Presently, the road has 2 lanes.	91.2	2,598
7. Project to rehabilitate regional main network for Highway No. 1 Nakhon Sawan–Tak Segment 1	Rehabilitation of Highway No. 1 Nakhon Sawan–Tak Segment 1, km 386–422	25.0	...
8. Project to rehabilitate regional main network for Highway No. 1 Nakhon Sawan–Tak Segment 2, Section 2	Rehabilitation of Highway No. 1 Nakhon Sawan–Tak Segment 2, Section 2, km 509–545	28.8	...
9. Project of Kor road with city plan incorporating Nakhon Sawan (Mahathep Road), Nakhon Sawan Province	Construction of Kor Road with city plan incorporating Nakhon Sawan (Mahathep Road). Construction duration between 2017–2018. Bidding ongoing.	1.9	100

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Table 11: Continued

Projects	Action Plan	Distance (km)	Budget (million baht)
10. Chiang Rai Bypass Construction Project	Construction of Chiang Rai Bypass km 0–18	18.4	...
11. Construction of Facilities at Mai Sai Customs Checkpoint, Mae Sai subdistrict, Mae Sai district, Chiang Rai Province	...	...	...
12. Transport basic infrastructure with the construction of Kor road and city plan incorporating Mueang district, Nong Khai Province	Construction of Kor road, with city plan incorporating Mueang district, Nong Khai Province. Construction period between 2016–2018.	6.4	233
13. Project of Chonburi–Nong Khai Inter City Motorway, Chonburi Segment (Laem Chabang–Prachinburi)	...	600	...
14. Project of Highway No. 304 Kabin Buri (Prachinburi Province)–Wang Nam Khieo (Nakhon Ratchasima Province) Segment 3	Expansion to 4 lanes to increase highway efficiency. Construction period is 2015–2017.	15.5	1,590
15. Project of Highway No. 304 Kabin Buri district–Pak Thong Chai district (linkage with forests), Prachinburi Province	Expansion to 4 lanes to increase highway efficiency. Construction period is between 2015–2017.	3.0	1,346
16. Project of Highway No. 2 Nakhon Ratchasima Outer Ring Road Segment 2 (south), Nakhon Ratchasima Province	Project of Highway No. 2 Nakhon Ratchasima Outer Ring Road Segment 2 (south). Construction period is between 2016–2018.	14.0	1,080
17. Bang Pa In–Nakhon Ratchasima Inter City Motorway Construction Project	Construction of Inter City Motorway is expected to be completed in 2019.	196.0	76,600

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Table 11: Continued

Projects	Action Plan	Distance (km)	Budget (million baht)
18. Chiang Khong Intermodal Facilities, Chiang Rai Province Project	Develop the intermodal facilities into a gateway of trade along NSEC, accommodate international goods transported along Highway R3A, and support the transshipment of goods from road to rail and vice versa.	...	2,366
19. Nakhon Phanom Border Transportation Center Project	It is the center for distribution of goods, and one stop service in preparation for linking road transport with rail, and future special economic development zones.	...	1,054
20. Coastal Pier (Pier A) Construction Project at Laem Chabang port	Construction of Coastal Pier (Pier A) at Laem Chabang. It is expected to be completed in 2017 and be operational in 2018.	...	1,864

... = no data available, km = kilometer.

Source: Ministry of Transport.

**Udon Thani–Nakhon Phanom (240 km via AH12).** The road has two to four lanes. The road surface is smooth along the entire section. The road is safe, equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

#### 4. Ongoing and Planned Projects Related to the North–South Economic Corridor

Important ongoing projects along NSEC are mostly road construction, lane expansion, road rehabilitation, and fast-

track lane construction. The projects for road construction, lane expansion, and road rehabilitation aim to facilitate convenience and speed in travelling, reduce traffic congestion, and provide road safety. The projects for fast-track lane construction will increase the potential of the roads to connect the trade and investment network along the border, facilitate travel, and enhance road safety for transporting goods and tourism. Table 7 provides information on ongoing and planned projects along or around NSEC-2, NSEC-2, and NSEC-7.

The Nakhon Phanom Border Transportation Center Project to be located at the 3rd Friendship Bridge on the Thai–Lao border with a total area of 1,131,200 sqm is a major transportation center which will support the growth of cross-border trade and operation of SEZs in the GMS. It will serve as the distribution center for the transport of goods between Thailand, the Lao PDR, Viet Nam, and the PRC via Highway 12, using the 3rd Friendship Bridge across the Mekong River. It will provide a one stop service point to facilitate cross-border and transit trade, and establish a link between road and rail in the future. The land in the Center will be subdivided based on five main activities; (i) center for the transport of goods; (ii) passengers' terminal; (iii) Trade Promotion Center of the Nakhon Phanom Provincial Commercial Office and residential area for customs officials; (iv) intermodal facilities to link road to rail; and (v) center for trade and exchange of goods.

## 5. Railway Development

The development of basic infrastructure for rail transport is the top priority of the Ministry of Transport. Major projects to develop rail transport that covers NSEC consist of dual-track rail construction and high-speed train construction projects. They include new (i) Den Chai–Chiang Rai–Chiang Khong segment of Dual Track Rail Project; (ii) Khon Kaen–Nong Khai

segment of Dual Track Rail Project; (iii) Pak Nam Pho–Den Chai segment of Dual Track Rail Project; (iv) Thailand–Japan High Speed Train (Bangkok–Phitsanulok) Project; and (v) Thailand–PRC High Speed Train (Bangkok–Khorat) Project. All five projects are under the Transport Infrastructure Investment Action Plan 2017. Table 8 provides basic information on these projects.

Aside from supporting the expansion of the domestic transport network, the Den Chai–Chiang Rai–Chiang Khong segment of Dual Track Rail Construction Project also involves a connection to neighboring countries. It starts at Den Chai train station, Phrae Province to Chiang Khong district, Chiang Rai Province with a total distance of 327 km, covering 27 stations, via four provinces (Phrae Province, Lampang Province, Phayao, and Chiang Rai Province). It will have three tunnels: (i) at Song district, Phrae Province with a length of 754 km (the longest in the country); (ii) at Mueang district, Phayao Province with a length of 259 km; and (iii) at Doi Luang district, Chiang Rai Province with a length of 357 km. The entire rail track will be equipped with accident prevention system at intersections. Because some sections of the proposed rail line pass through mountains and forests, implementation of the project has been deferred to give way to the conduct of a thorough environmental impact assessment (EIA).

**Table 12: Railway Projects Related to the North–South Economic Corridor in Thailand**

Projects	Action Plan	Distance (km)	Budget (million baht)
1. Den Chai–Chiang Rai–Chiang Khong New Dual Track Rail Construction Project	Den Chai–Chiang Rai–Chiang Khong new dual track rail construction. Implementation deferred until completion of environmental impact assessment.	326.0	76,979
2. Khon Kaen–Nong Khai Dual Track Rail Construction Project	Khon Kaen–Nong Khai Dual Track Rail Construction. Bidding is underway.	166.0	26,066
3. Pak Nam Pho–Den Chai Dual Track Rail Construction Project	Pak Nam Pho–Den Chai Dual Track Rail Construction. Bidding is underway.	...	56,066
4. Thailand–Japan Project (Bangkok–Phitsanulok)	Bangkok–Phitsanulok high speed train construction	384.0	224,416
5. Thailand–China Project (Bangkok–Khorat)	Bangkok–Khorat high speed train construction	252.5	228,614

... = not available, km = kilometer.











Source: Ministry of Transport.

The Khon Kaen–Nong Khai dual track rail segment is part of the Bangkok–Nong Khai Dual Track Rail Construction Project. This segment, which is 177 km long, will have a speed of 170 kph, with the railway curved radius of at least 1,700 m for safety. The project is in the bidding stage, with the invitation for bids scheduled from July to

December 2017. The Pak Nam Pho–Den Chai Dual Track Rail Construction Project is also in the bidding stage. Implementation of the Thailand–China High Speed Train Project (Bangkok–Khorat) is divided into 4 phases: Phase 1 with a distance of 3.5 km; Phase 2 with a distance of 11 km; Phase 3 with a distance of 119 km; and Phase 4 with a distance of 119 km.



**Table 13: North-South Economic Corridor-1 (Chiang Rai-Bangkok)**

		<p><b>Chiang San Port</b> The Chiang San Port is a Mae Kong River port that transports cargos between Thailand and Yunnan, People’s Republic of China (Guenlei Port).</p>
		<p><b>Chiang Rai-Chiang San</b> The four lane highway from the city of Chiang Rai to Chiang San where Mae Kong River port is located covers a distance of about 90 km that can be driven in less than 60 minutes.</p>
		<p><b>Mae Sai Checkpoint</b> Mae Sai Checkpoint, Chiang Rai is the trade point and border crossing between Chiang Rai, Thailand and Tachileik, Myanmar.</p>
		<p><b>Chiang Rai-Mae Sai</b> AH2 is a 62 km four lane highway along the NSEC from Chiang Rai to Chiang San.</p>
		<p><b>Chiang Kong Checkpoint</b> Chiang Kong Checkpoint is located on the end of the 4th Thai-Lao Friendship Bridge connecting AH3 and R3B route to Kunming, Yunnan.</p>

*continued next page*









Table 13: Continued

	<p><b>Chiang Rai–Chiang Kong</b> The AH3 is 98 km long four lane highway from Chiang Rai to Chiang San.</p>
	<p><b>Phare–Phitsanulok</b> The AH2 is a four lane highway in good condition from Phare to Phitsanulok along the NSEC.</p>
	<p><b>Phitsanulok–Bangkok</b> The four to eight lane highway from Bangkok to Phitsanulok along the NSEC is in very good condition.</p>

AH = Asian Highway, km = kilometer, NSEC = North–South Economic Corridor.

Source: ADB. GMS Economic Corridor Assessment Team.









**Table 14: NSEC-2 and NSEC-7 (Laem Chabang–Nong Khai and Nakhon Phanom)**

		<p><b>Nakhon Phanom Checkpoint (R12)</b> Nakhon Phanom Checkpoint is located on the end of the 3rd Thai–Laos Friendship bridge before crossing to Savannakhet, Lao PDR.</p>
		<p><b>Nakhon Phanom SEZ</b> The Nakhon Phanom SEZ was established in 2014 for attracting cross-border trade and investment from outside the area.</p>
		<p><b>Nakhon Phanom SEZ</b> Nakhon Phanom SEZ is offering warehouse, logistics services to accommodate border and cross-border trade between Thailand–Lao PDR–Viet Nam and the People’s Republic of China.</p>
		<p><b>Udon Thani–Nakhon Phanom</b> The AH15 four lane highway links Udon Thani to Nakhon Phanom and is a new extension of the NSEC-7 corridor.</p>

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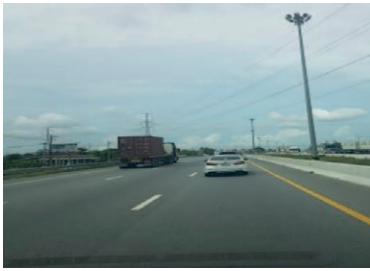




Table 14: Continued

		<p><b>Nong Kai Checkpoint (Vientiane &amp; R8)</b> The Nong Kai Checkpoint is located at the end of the 1st Thai–Laos Friendship bridge, across Vientiane, Lao PDR.</p>
		<p><b>Udon Thani–Nong Khai</b> The 12 four lane AH is a new extension of NSEC-2.</p>
		<p><b>Khon Kaen–Udon Thani</b> The AH12 four lane highway is a new extension of NSEC-2 linking Udon Thani–Nakhon Phanom.</p>
		<p><b>Nakhon Ratchasima–Khon Kaen</b> AH12 is the new extension of NSEC-2 with four lanes linking Nakhon Ratchasima to Khon Kaen both major cities in the Northeast Thailand.</p>
		<p><b>Bangkok–Nakhon Ratchasima</b> The new extension of NSEC-2, AH19, is a four to eight lane highway linking Bangkok to Nakhon Ratchasima province.</p>

continued next page

Table 14: Continued

		<p><b>Laem Chabang–Bangkok</b> The AH19 a four to eight lane extension of NSEC-2, linking Laem Chabang to Bangkok.</p>
		<p><b>Laem Chabang–Bangkok</b> Laem Chabang to Bangkok Motorway nearby Suvannabumi airport. The traffic is congested due to heavy traffic, however, road expansion is under construction and expected to be finished end-2018.</p>

AH = Asian Highway, km = kilometer, NSEC = North–South Economic Corridor, SEZ = special economic zone.

Source: ADB. GMS Economic Corridor Assessment Team.

## C. Southern Economic Corridor

As noted in Section II.C, the Southern Economic Corridor has three subcorridors traversing Thailand: SEC-1 (Dawei–Bangkok–Phnom Penh–Ho Chi Minh City–Vung Tau Subcorridor), SEC-2 (Bangkok–Siem Reap–Stung Treng–Pleiku–Quy Nhon Subcorridor), and SEC-3 (Trat–Kampot–Ha Tien–Nam Can Subcorridor). The current status and physical state of each subcorridor in Thailand are discussed below.

### 1. SEC-1 and SEC-2

SEC-1 in Thailand starts from Ban Phu Nam Ron, passes through Kanchanaburi, Bangkok, Chachoengsao, Sa Kaeo and ends at Aranyaprathet Checkpoint.

The Bangkok–Aranyaprathet section in SEC-1 overlaps with that of SEC-2.

#### **Ban Phu Nam Ron–Kanchanaburi (66.8 km via AH123).**

The road has two lanes. Its surface is paved with concrete or asphalt and smooth with occasional potholes. The route is safe, has traffic signs and complete and undamaged safety equipment, with curved guide posts and complete guard rail in good condition. The distance from the permanent Checkpoint at Ban Phu Nam Ron to Htikhi Checkpoint is 5 km. At the Ban Phu Nam Ron Checkpoint, the roads are paved with asphalt, but at the Htikhi Checkpoint on the Myanmar side, the roads are non-asphalt roads. The road surface at the two checkpoints is rough for about one-fourth of the way.

**Kanchanaburi–Bangkok (124.7 km via AH123).**

The road has four lanes. The road surface is paved with asphalt, and the road is smooth along the way. The road is safe with traffic signs, road marks, and complete, undamaged safety equipment. There are also curved guide posts and complete guard rail in good condition.

**Bangkok–Chachoengsao (84.6 km via Motorway No. 7).**

Motorway No. 7 Bangkok–Ban Chang is Thailand’s first intercity motorway. It serves as a link to eastern seaboard, alleviates congested traffic on Sukhumvit Road and Highway No. 34, and the link to the new international airport, Suvarnabhumi Airport. It is part of AH19 and AH123. The road surface is paved with asphalt, and the road is smooth along the way. It is safe with traffic signs,

road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Chachoengsao–Sa Kaeo (120 km via AH1).**

The road has four lanes, and its surface is paved with asphalt. It is smooth along the way. It is safe with traffic signs, road marks, and complete and undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Sa Kaeo–Aranyaprathet (57.7 km via AH1).**

The road has four lanes. Its surface is paved with asphalt and smooth along the way. It is safe, equipped with traffic signs, road marks, and complete and undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

**Table 15: Road Condition in the Thailand Component of SEC-1 and SEC-2<sup>a</sup>**

Section	Road Class/ Traffic Lanes	Road Condition	Remarks
Ban Phu Nam Ron– Khanchanaburi	(I) 2	Good	There is a bottleneck between the Ban Phu Nam Ron checkpoint and Htikhi checkpoint. The road is covered with red earth and the road surface is rough. This segment is classified as Class III.
Khanchanaburi–Bangkok	(I) 4	Good	
Bangkok–Chachoengsao	(I) 4	Good	
Chachoengsao–Sa Kaeo	(I) 4	Good	
Sa Kaeo–Aranyaprathet	(I) 4	Good	

SEC = Southern Economic Corridor.

<sup>a</sup> The Bangkok–Aranyaprathet section in SEC-1 overlaps with that in SEC-2.

Source: ADB. GMS Economic Corridor Assessment Team.

## 2. SEC-3

### Bangkok–Rayong (172.2 km via AH123).

The road has four lanes. The road surface is paved with asphalt and smooth along the way. It is safe, equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

### Rayong–Chantaburi (130.4 km via Route 3).

The road has four lanes. The road surface is paved with asphalt and smooth along the way. It is safe, equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

### Chantaburi–Trat (68.7 km via Route 3).

The road has four lanes. The road surface is paved with asphalt and smooth along the way. It is safe, equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.

### Trat–Hat Lek (95.7 km via AH123).

The road has two to four lanes (four at the beginning and at the end). The route is paved with asphalt and smooth along the way. It is safe, equipped with traffic signs, road marks, and complete, undamaged safety equipment, with curved guide posts and complete guard rail in good condition.







**Table 16: Road Condition in the Thailand Component of Southern Economic Corridor-3**

Section	Road Class/ Traffic Lanes	Road Condition	Remarks
<b>Bangkok–Hat Lek</b>			
Bangkok–Rayong	I (4)	Good	
Rayong–Chantaburi	I (4)	Good	
Chantaburi–Trat	I (4)	Good	
Trat–Hat Lek	I (2–4)	Good	There is a bottleneck in this section around the intersection to enter Ban Mai Road involving a distance of 23.5 kilometers.

Source: ADB. GMS Economic Corridor Assessment Team.



**Table 17: Southern Economic Corridor Route – Ban Phunamron–Aranyaprathet and Trat**

		<p><b>Ban Phunamron Checkpoint.</b> Ban Phunamron Checkpoint is the gateway connecting Kanchanaburi, Thailand with Dawei Port in Myanmar.</p>
		<p><b>Kanchanaburi–Ban Phunamron.</b> The AH123 is a new extension of SEC, a two lane traffic linking Kanchanaburi town to Ban Phunamron checkpoint.</p>
		<p><b>Bangkok–Kanchanaburi.</b> AH123 is a four lane highway linking Bangkok–Kanchanaburi–Ban Phunamron</p>

AH = Asian Highway, SEC = Southern Economic Corridor.

Source: ADB. GMS Economic Corridor Assessment Team.

#### 4. Ongoing and Planned Projects along the Southern Economic Corridor

Major ongoing projects in the SEC in Thailand are mostly intercity motorways, rural roads, and highway expansion (Table 18). Important intercity motorway construction projects include Motorway No. 81 Bang Yai–Kanchanaburi, with a distance of 87 km. This project is aimed at connecting the transport network to the west and Dawei deep sea port, and linking the the country’s production base to neighboring countries (Figures 9 and 10).

The Pattaya–Map Ta Phut Motorway No. 7 project involves the construction of a new road through two provinces with a distance of 32 km (Figures 11 and 12). Its objective is to increase the efficiency of the country’s transport and logistics services, including the improvement of the road network around U-Tapao airport, Laem Chabang port, and Map Ta Phut industrial estate. Work on this project is expected to start by the end of 2017 and road will be open for service by 2019. Other projects include the development of a coastal pier at Laem Chabang port, and establishment of a center for transporting goods by rail at Laem Chabang port.

**Table 18: Ongoing and Planned Projects in the SEC in Thailand**

Projects	Description	Distance (km)	Budget (million baht)
1. Bang Yai–Kanchanaburi Intercity Motorway No. 81 Project	Bang Yai–Kanchanaburi Intercity Motorway to connect the transport network to the west and Dawei deep sea port project, and improve capability of highway to connect the production base of the country and neighboring countries. Intercity Motorway No. 91 continues from Motorway No. 8 Kanchanaphisek Route, which is Outer Ring Road in the west. The project starts at km 0+000 and ends at km 87+410. The Motorway has 4–7 lanes and is expected to be completed by 2020.	96.0	49,120
2. Chonburi–Pattaya Intercity Motorway No. 7 Project	The project is the extension of Intercity Motorway No. 7 Bangkok–Chonburi, with the extension Chonburi–Pattaya to increase the country’s transport and logistic efficiency. The route will enter the toll system by 2017.	42.0	...

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Table 18: Continued

Projects	Description	Distance (km)	Budget (million baht)
3. Pattaya–Map Ta Phut Intercity Motorway No. 7 Project	The Intercity Motorway No. 7 Project Pattaya–Map Ta Phut involves the construction of a new road through two provinces, to increase the efficiency of the country’s transport and logistics, and improve the road transport network around U-Tapao airport, Laem Chabang port, and Map Ta Phut industrial estate. It is also in accordance with the plan to develop the Eastern Economic Corridor (EEC) 2017–2021. The Motorway starts at km 2+300, and is connected to the Motorway No. 7 via Bang Lamung–Sattahip–Map Ta Phut municipality, Rayong Province. It ends at km 34+400. The work on the project has progressed with civil engineering work 30% (as of March 2017) and system work is expected to start by 2017 and open for service by 2019.	32.0	17,819
4. Project to construct rural road from Highway 33–Ban Khlong Luek Border Checkpoint, Aranyaprathet district, Sa Kaeo Province	Construction of rural road from Highway 33–Ban Khlong Luek Border Checkpoint, Aranyaprathet district, Sa Kaeo Province. The project aims to develop rural roads to support special economic zones of the Department of Rural Road. The project’s duration is between 2015–2018.	15.4	935
5. Project to construct rural road at one interchange on Highway 33–Ban Khlong Luek Border Checkpoint, Aranyaprathet district, Sa Kaeo Province	Project to construct rural road at one interchange on Highway 33–Ban Khlong Luek Border Checkpoint, Aranyaprathet district, Sa Kaeo Province. The project aims to develop rural roads to support special economic zones of the Department of Rural Road. The project’s duration is between 2016–2018.	...	330

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Table 18: Continued

Projects	Description	Distance (km)	Budget (million baht)
6. Project to expand Highway No. 3183 from Ban Bueng district–Highway No. 331–Ban Khai district Section 3, Rayong Province	Project to accelerate the expansion of 4 lanes and improve the efficiency of highways with the project duration between 2015–2017.	18.2	656
7. Project to expand Highway No. 314 Bang Pa Kong district–Chachoengsao Section 2, Chachoengsao Province	Project to accelerate the expansion of 4 lanes and improve the efficiency of highways with the project duration between 2015–2017.	3.2	214
8. Project to construct the bypass of Klaeng district, Rayong Province on Highway No. 3	The project intends to develop a network of international highways over a 2-year period, from 2016–2018.	11.0	490
9. Trat–Hat Lek Highway No. 3 Project	Highway Section 3 (Trat–Hat Lek) has a bottleneck with 2 lanes for a distance of 32 km. The construction of Section 2 is expected to be completed by 2017, and that of Section 3, by 2018.	35.0	1,400
10. Project to construct 4 lanes at the entrance of multi-purpose pier at Khlong Yai, Trat Province	Construction of 4 lanes at the entrance of the multi-purpose pier at Khlong Yai, Trat Province. The project is expected to start in 2017.	0.4	...
11. Highway No. 367 Kanchanaburi bypass at km .+197 Project	Construction of Kanchanaburi bypass at km .+197. Currently, the construction has progressed by 70% and is expected to be completed in 2017.	...	...

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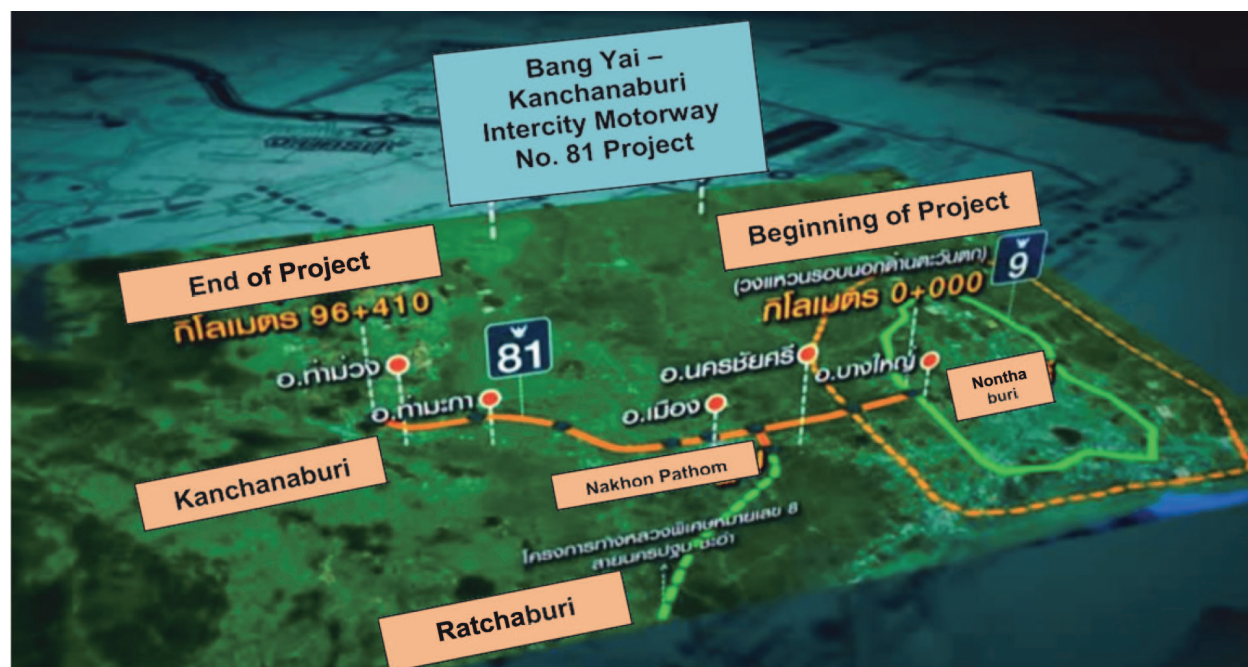
Table 18: Continued

Projects	Description	Distance (km)	Budget (million baht)
12. Project to develop coastal pier (pier A) at Laem Chabang port	Development of coastal pier (pier A) at Laem Chabang port as follows: - pier length 125 m and 120 m - Supporting hinterland 68,800 sqm. Ability to support two ships of 1,000 DWT and 3,000 DWT at the same time	...	1,864
13. Project to develop the center of transport of goods via rail at Laem Chabang port Phase I	...	...	2,945

... = no data available, km = kilometer, m = meter, sq = square meter.

Source: Ministry of Transport. 2017.

Figure 9: Bang Yai–Kanchanaburi Intercity Motorway No. 81 Project



Source: Intercity Motorway Construction Project with three routes, Department of Highways, Ministry of Transport, 2017.

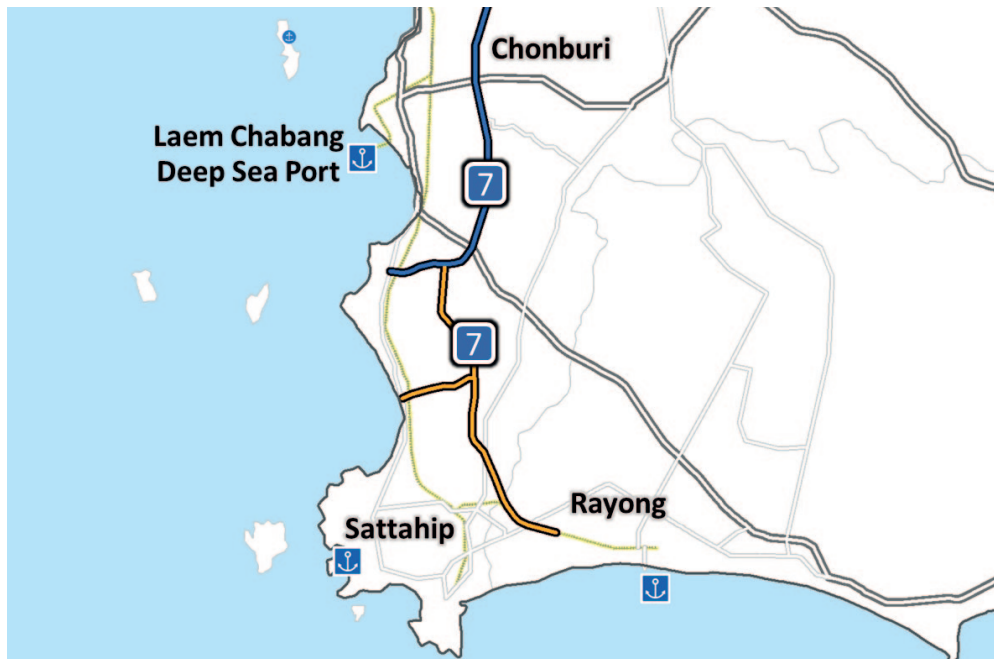


Figure 10: Bang Yai–Kanchanaburi Intercity Motorway No. 81 Connection to Dawei Deep Sea Port



Source: Intercity Motorway Construction Project with three routes, Department of Highways, Ministry of Transport, 2017.

Figure 11: Pattaya–Map Ta Phut Intercity Motorway No. 7 Project (1)



Source: Intercity Motorway Construction Project with three routes, Department of Highways, Ministry of Transport, 2017.



Figure 12: Pattaya–Map Ta Phut Intercity Motorway No. 7 Project (2)



Source: Ministry of Transport.

## 5. Related Railway Development in the Southern Economic Corridor in Thailand

The major rail projects in Thailand related to the SEC include 12 projects, such as the Bangkok–Rayong High Speed Train Project and the Dual Track Rail Bangkok–Nakhon Ratchasima, and Nakhon Ratchasima–Map Ta Phut Development Project (Table 19).

The Bangkok–Rayong High Speed Train Project starts at Lad Krabang station; passes through Chachoengsao, Chonburi,

Sriracha, and Pattaya stations; and ends at Rayong station. It is a double track rail line with standard gauge and distance of 183 km. The electric high speed train will take approximately one hour from Lad Krabang to Rayong, with a speed of 250 kph. Initially, the train terminal will be at the current Map Ta Phut industrial estate. The Bangkok–Rayong High Speed Train will connect three airports: Suvarnabhumi, Don Mueng, and U-Tapao airports. It is expected to start operation by 2020 (as of July 2016).

**Table 19: Railway Projects in the Southern Economic Corridor in Thailand**

Projects	Status	Distance (km)	Budget (million baht)
1. Bangkok–Rayong High Speed Train Project	SRT prepared additional information and submitted it to Office of Transport and Traffic Policy and Planning who screened the project before submitting it to the Ministry of Transport on 14 October 2016.	193.5	152,528
2. Bangkok–Nakhon Ratchasima and Nakhon Ratchasima–Map Ta Phut Dual Track Rail Development Project	Development of the dual track rail with standard gauge (speed 190 km/hr). In 2017, in the process of bidding and land expropriation. Construction is expected to start in 2019.	512	...

... = no data available, hr = hour, km = kilometer.

Source: Government of Thailand, Ministry of Transport.

## IV. BORDER FACILITIES

### A. East–West Economic Corridor

EWEC has two border crossing checkpoints in Thailand: Mukdahan Customs Checkpoint, Mukdahan Province and Mae Sot Customs Checkpoint, Tak Province. Each border checkpoint offers facilities for the cross-border transport of people, goods, and vehicles.

#### 1. Mukdahan Customs Checkpoint

There are two border checkpoints in Mukdahan Province—one at the municipal pier and another at the 2nd Thai–Lao Friendship Bridge. The Mukdahan Customs Checkpoint is one of the five pilot border checkpoints in the country, the others being Aranyaprathet, Mae Sot, Mae Sai, and Sadao. The plan is to set up a one stop service (OSS) in the pilot border checkpoints to facilitate customs clearance for imports and exports at a single point. Moreover, e-Customs in various forms, such as e-Declaration, e-Payment, e-Container, e-Licensing, and e-Certificate will be increasingly used so that entrepreneurs can submit the required documentation via the internet. Information and communication technology facilities in these checkpoints will be installed and/or upgraded to support e-Customs.

From 2012 to 2016, inbound–outbound vehicles at the second Thai–Lao Friendship Bridge (Mukdahan–Savannakhet) increased on a continuous basis (Table 20). The inbound–outbound vehicles are classified into “Truck, Bus, and Car.” In 2012, inbound vehicles accounted for 147,965 units. Cars constituted the highest number of inbound vehicles, accounting for 107,180 units, followed by trucks and buses. In 2012, outbound vehicles accounted for 173,010 units, the highest number being cars, followed by trucks and buses. In 2016, the number of inbound–outbound vehicles was the highest for the last 5 years. Outbound cars exceeded the inbound cars and cars constituted the highest number of both inbound–outbound vehicles.

#### 2. Mae Sot Customs Checkpoint, Tak Province

The Mae Sot Customs Checkpoint is located at the Thai–Myanmar border. Its facilities include a Customs Checkpoint, Immigration Checkpoint, Disease Control Checkpoint, Plant and Animal Quarantine Checkpoint, Checkpoint for goods from and to Myawaddy, Myanmar, and 22 temporary warehouses. It is open daily between 5:30 a.m. and 8:30 p.m. It is one of the country’s important departure channels, efficiently promoting international trade with a large amount of cross-border goods and people.



**Table 20: Inbound–Outbound Vehicles at the 2nd Thai–Lao Friendship Bridge Border Checkpoint, 2012–2016**

Type of Vehicles		Number of Vehicles (units)				
		2012	2013	2014	2015	2016
<b>In</b>	Truck	35,466	37,739	38,112	38,689	47,116
	Bus	5,319	5,321	4,972	4,899	4,530
	Car	107,180	83,163	103,544	144,581	145,901
	<b>Total</b>	<b>147,965</b>	<b>126,223</b>	<b>146,628</b>	<b>188,169</b>	<b>197,547</b>
<b>Out</b>	Truck	37,239	38,139	37,844	38,251	46,406
	Bus	5,474	5,509	4,982	5,134	4,774
	Car	130,297	108,807	113,989	146,501	147,980
	<b>Total</b>	<b>173,010</b>	<b>152,455</b>	<b>156,815</b>	<b>189,886</b>	<b>199,160</b>

Source: Government of Thailand, Mukdahan Customs Checkpoint, Mukdahan Province.

From 2012 to 2016, the inbound–outbound vehicles at the Thai–Myanmar Friendship Bridge Border Checkpoint, Mae Sot district, Tak Province increased every year except in 2016 when the number was slightly down to 443,988 vehicles (Table 21). Vehicles registered in Myanmar outnumbered vehicles registered in Thailand among inbound–outbound vehicles in every year during this period. However, the difference between the two has narrowed significantly. In 2012, the vehicles from Myanmar were about three times more than those from Thailand. In 2016, the gap was down to only 13%. This was due to the increase in the number of vehicles registered in Thailand (more than 300%) rather than those from Myanmar (29%).

## B. North–South Economic Corridor

There are four border checkpoints in NSEC in Thailand: (i) Chiang Khong Customs Checkpoint, Chiang Rai Province; (ii) Mae Sai Customs Checkpoint, Chiang Rai Province; (iii) Nong Khai Customs Checkpoint, Nong Khai Province; and (iv) Nakhon Phanom Customs Checkpoint, Nakhon Phanom Province. Each border checkpoint has facilities for the cross-border movement of people, goods, and vehicles.

### 1. Chiang Khong Customs Checkpoint, Chiang Rai Province

The Chiang Khong Customs Checkpoint is located opposite Houayxai of Bokeo Province, the Lao PDR. It is responsible for the areas along the border with the Lao PDR (Bokeo

**Table 21: Inbound–Outbound Vehicles at the Thai–Myanmar Friendship Bridge Border Checkpoint, Mae Sot, 2012–2016**

Registration	Year				
	2012	2013	2014	2015	2016
Myanmar	184,574	285,800	282,704	250,390	237,672
Thailand	57,422	99,694	172,354	205,382	206,031
Other	...	...	...	710	285
<b>Total</b>	<b>241,996</b>	<b>385,494</b>	<b>455,058</b>	<b>456,482</b>	<b>443,988</b>

... = no data available.

Source: Government of Thailand, Mae Sot Customs Checkpoint, Tak Province.

Province and Sainyabuli Province) both on land and along the Mekong River. The import channel for Chiang Khong Khong Customs Checkpoint consists of the 1st Chiang Khong Border Checkpoint (Bach Pier), 3rd Chiang Khong Border Checkpoint (Tha Pha Tan Riverfront), and 4th Chiang Khong Border Checkpoint (4th Friendship Bridge).

There are five checkpoints for border trade in Chiang Rai Province: Ban Had Bai, Chiang Khong district; Ban Jam Pong, Viang Kan district; Ban Heuyleuk, Viang Kan district; Ban Rom Pho Thong, Thoeng district; and Ban Huak, Phusang district. The Chiang Kong Customs Checkpoint has also set up an OSS point to facilitate safe and smooth border crossing of people, especially tourists who cross the border by car during peak season.

The number of inbound and outbound trucks and buses crossing the Chiang Khong border checkpoint increased every year from 2012 to 2016 (Table 22). Inbound vehicles

numbering 20,925 in 2012 increased to 61,108 vehicles in 2016. Outbound vehicles numbering 21,704 in 2012 increased to 66,108 vehicles in 2016. The number of outbound traffic was greater than inbound traffic, although the difference is not large. Trucks outnumbered buses in both inbound and outbound traffic, although the number of inbound and outbound tourist buses registered the largest increase of more than 20 times during this period.

## 2. Mae Sai Customs Checkpoint, Chiang Rai Province

The areas of responsibility include Chiang Rai and Phayao Provinces. In Chiang Rai Province, the areas of responsibility include 9 districts: Mueang, Mae Sai, Mae Chan, Mae Fah Luang, Mae Lao, Mae Suai, Phan, Pa Daet, and Wiang Pa Pao. In Phayao Province, the areas of responsibility include 7 districts: Mueang, Chun, Mae Chai, Pong, Phu Kamyao, Dok Khamtai, and Chiang Muan.

**Table 22: Inbound–Outbound Vehicles via Chiang Khong Border Checkpoint, 2012–2016**

Type of Vehicle		Number of Vehicles (units)				
		2012	2013	2014	2015	2016
In	Truck	19,726	21,516	22,895	29,569	36,252
	Bus (tourists)	1,199	4,327	12,103	22,085	24,908
	<b>Total</b>	<b>20,925</b>	<b>25,842</b>	<b>34,998</b>	<b>51,654</b>	<b>61,061</b>
Out	Truck	20,557	23,607	23,65	34,395	40,359
	Bus (tourists)	1,147	4,040	12,033	21,658	25,749
	<b>Total</b>	<b>21,704</b>	<b>27,746</b>	<b>35,688</b>	<b>56,053</b>	<b>66,108</b>

Source: 2016 Annual Report, Chiang Khong Customs Checkpoint, Chiang Rai Province, 2017.

There are four checkpoints for border trade: Tha Ban Sai Lom Joy, Tha Ban Koh Sai, Tha Ban Pang Ha, and Tha Din Dum. Moreover, Mae Sai Customs Checkpoint set up the OSS to accommodate and provide services and safety for people's lives and property.

In 2016, inbound vehicles at Mae Sai Customs Checkpoint numbered 87,023 units, of which 21,669 were trucks and 65,354 were buses

(Table 23). Outbound vehicles numbered 46,880 units of which 22,058 were trucks and 25,932 were buses. There were more inbound vehicles all throughout the period from 2012 to 2016. Except for 2012, inbound buses consistently exceeded inbound trucks. There is no clear pattern as far as outbound buses and trucks are concerned.

**Table 23: Number of Inbound–Outbound Vehicles via Mae Sai Customs Checkpoint, 2012–2016**

Type of Vehicle		Number (units)				
		2012	2013	2014	2015	2016
In	Truck	24,937	34,027	29,583	28,710	21,669
	Bus	6,102	51,839	61,120	65,098	65,354
	<b>Total</b>	<b>31,039</b>	<b>85,866</b>	<b>90,703</b>	<b>93,808</b>	<b>87,023</b>
Out	Truck	23,221	34,172	30,636	26,050	22,058
	Bus	...	19,827	23,685	25,817	25,932
	<b>Total</b>	<b>23,221</b>	<b>53,999</b>	<b>54,321</b>	<b>51,867</b>	<b>47,990</b>

... = no data available.

Source: Government of Thailand, Mae Sai Customs Checkpoint, Chiang Rai Province.



### 3. Nong Khai Customs Checkpoint, Nong Khai Province

The Nong Khai Customs Checkpoint is on the border between Thailand and the Lao PDR demarcated by the Mekong River. It is situated in the Nong Khai Government Complex on Friendship Road, Mueang district, Nong Khai Province. It consists of two Permanent Border Checkpoints and four checkpoints for border trade: Ban Mo, Ban Muang, Ban Peng Chan, and Ban Jum Pon. Its area of responsibility, which extends to Udon Thani and Khon Kaen Provinces, covers nine districts in Nong Khai Province: Mueang, Si Chiang Mai, Sang Khom, Tha Bo, Phon Phisai, Rattanawapi, Pho Tak, Fao Raj, and Sakhrui. It uses

paperless, electronic customs procedures, and is equipped with reloadable system x-ray to inspect imported and exported goods with 100% efficiency, and CCTV to foster transparency and facilitate work. Information is linked to 36 agencies in Thailand via the National Single Window and will develop toward information linkage with various agencies in ASEAN in the future via ASEAN Single Window.

The number of inbound–outbound vehicles and passengers via the Nong Khai Customs Checkpoint posted yearly increases from 2012 to 2016, with inbound vehicles numbering 657,807 and outbound vehicles, 661,292 in 2016 (Table 24).

**Table 24: Inbound–Outbound Vehicles and Passengers via Nong Khai Customs Checkpoint, 2012–2016**

Type of Vehicle		Number (units/persons)				
		2012	2013	2014	2015	2016
In	Truck	20,716	18,444	17,534	16,170	16,743
	Empty vehicle	77,369	70,748	76,569	76,834	88,329
	Bus	3,900	3,900	3,900	3,900	3,975
	Car	369,756	398,739	440,518	493,200	548,760
	<b>Total</b>	<b>471,741</b>	<b>491,831</b>	<b>538,521</b>	<b>590,104</b>	<b>657,807</b>
	Passenger	2,677,706	2,427,016	2,641,453	2,836,462	2,993,286
Out	Truck	99,969	113,492	94,311	103,961	107,198
	Empty vehicle	4,461	4,805	4,047	3,130	2,623
	Bus	3,900	3,900	3,900	3,900	3,975
	Car	368,499	397,363	439,329	492,688	547,496
	<b>Total</b>	<b>476,829</b>	<b>519,560</b>	<b>541,587</b>	<b>603,679</b>	<b>661,292</b>
	Passenger	2,653,223	2,359,971	2,514,520	2,661,070	2,824,208

Notes: 1. Empty vehicle = Truck loaded and returned trucks  
 2. Bus = Passenger Car + Shuttle Bus + Van  
 3. Passenger car = Car + Pickup truck + Voiture consulaire

Source: Government of Thailand, Nong Khai Customs Checkpoint, Nong Khai Province.

Cars outnumbered trucks and buses considerably for both inbound and outbound traffic. For instance, there were 548,760 inbound cars in 2016 compared to 109,047 trucks (including empty trucks) and buses that passed through this border checkpoint. The comparable number for outbound vehicles is 547,496 cars against 113,796 trucks and buses. It is interesting to note that the number of inbound empty trucks dwarf the number of inbound trucks (88,329 vs. 16,743 in 2016). The opposite is true for outbound trucks. Outbound empty trucks were few compared to outbound trucks (2,623 vs. 107,198 in 2016). The number of inbound and outbound passengers averaged about 2.5 million per year, with the number of inbound passengers about 200,000 more than outbound passengers.

#### 4. Nakhon Phanom Customs Checkpoint, Nakhon Phanom Province

The Nakhon Phanom Customs Checkpoint is situated at At Samat subdistrict, Mueang district, Nakhon Phanom Province at the Thai–Lao border demarcated by the Mekong River. It was established in 1938 in accordance with an order from the Ministry of Finance. The area of responsibility of the Nakhon Phanom Customs Checkpoint includes Nakhon Phanom and Sakon Nakhon Provinces.

There are four checkpoints for border trade: Tha Uthen, Don Paeng, That Phanom, and Bannad.

The 3rd Thai–Lao Friendship Bridge which connects Thailand (Nakhon Phanom) and the Lao PDR (Khammouane) is located at Ban Hom, on Nakhon Phanom–Tha Uthen Road at Samat subdistrict, Mueang district, Nakhon Phanom Province. On the Laotian side, the Bridge is at Ban Wern Tai, Ta Kaek, Khammouane Province. The Bridge with two lanes and length of 1,423 m was completed on 11 November 2011. It is a major route for trade and tourism exchanges among Thailand, the Lao PDR, the PRC, and Viet Nam.

There is a large number of inbound–outbound passenger cars going through the Nakhon Phanom Border Checkpoint, with the number of inbound–outbound Laotian cars being more than three times greater than inbound–outbound Thai cars in 2015 (Table 25). The number of inbound–outbound six and ten-wheel trucks, container trucks, and buses is also high posting significant increases every year (Table 26). The number of outbound trucks (six and ten-wheelers and container trucks) exceeds the number of inbound trucks by a large margin (111,851 vs. 36,757 in 2015). Inbound–outbound six and ten-wheeler trucks have consistently outnumbered trailer trucks from 2011 to 2015.

**Table 25: Inbound–Outbound Passenger Cars via Thai–Lao Friendship Bridge and Pier, Nakhon Phanom, 2011–2015**

Year	Number of Passenger Cars			
	Thai cars (units)		Laotian cars (units)	
	Inbound	Outbound	Inbound	Outbound
2011	611	–	1,525	–
2012	6,779	7,566	17,828	17,385
2013	10,226	10,797	31,186	31,080
2014	12,655	13,085	42,088	42,067
2015	15,320	15,657	51,519	51,325

Source: Government of Thailand, Nakhon Phanom Customs Checkpoint.

**Table 26: Inbound–Outbound Vehicles at Nakhon Phanom Province, 2011–2015**

Year	Six-wheel/ten-wheel Trucks (units)		Container Trucks (units)		Buses (units)	
	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound
2011	2,470	9,154	1,705	1,037	–	–
2012	2,476	13,210	2,043	565	2,554	2,531
2013	4,726	16,304	2,658	3,130	2,926	2,919
2014	5,468	20,387	3,164	8,776	2,920	2,920
2015	8,034	27,405	4,014	11,883	2,808	2,909
<b>Total</b>	<b>23,173</b>	<b>86,460</b>	<b>13,584</b>	<b>25,391</b>	<b>11,208</b>	<b>11,178</b>

Source: Government of Thailand, Nakhon Phanom Customs Checkpoint.

## C. Southern Economic Corridor

There are three border checkpoints in the SEC in Thailand: (i) Khlong Yai Customs Checkpoint, Trat Province; (ii) Aranyaprathet Customs Checkpoint, Sa Kaeo Province; and (iii) Ban Phu Nam Ron Customs Checkpoint, Kanchanaburi Province. Each checkpoint is equipped with facilities for the cross-border movement of people, goods, and vehicles.

### 1. Khlong Yai Customs Checkpoint, Trat Province

The Khlong Yai Customs Checkpoint is located at Khlong Yai subdistrict, Khlong Yai district, Trat Province. With an area of responsibility covering the whole of Trat Province, the Checkpoint is tasked with providing customs services, facilitating trade, and conducting customs control. Khlong Yai Customs Checkpoint provides three channels

for the import and export of goods: Ban Hat Lek Permanent Border Checkpoint, at Hat Lek subdistrict, Khlong Yai district, open daily from 6:00 a.m. to 10:00 p.m.; temporary checkpoint at Ban Mamuang, Bo Rai district open daily from 6:00 a.m. to 6:00 p.m.; and temporary checkpoint at Ban Muen Dan, Bo Rai district which currently is not operational for arrivals and departures.

The number of inbound–outbound vehicles crossing the Khlong Yai Customs Checkpoint was in an uptrend from 2012 to 2016, with trucks having the greatest number followed by cars and motorcycles (Table 27). The number of inbound and outbound vehicles were only slightly different from each other. In 2016, there were 25,936 inbound vehicles, of which trucks constituted the biggest number (18,317). In the same year, outbound vehicles numbered 26,181, of which 18,410 were trucks.

**Table 27: Inbound–Outbound Vehicles via Khlong Yai Customs Checkpoint, 2012–2016**

Type of Vehicle		Number (vehicles)				
		2012	2013	2014	2015	2016
IN	Truck	8,415	7,365	12,167	15,761	18,317
	Car	3,484	3,638	4,134	5,601	6,469
	Motorcycle	690	717	664	964	1,150
	<b>Total</b>	<b>12,589</b>	<b>11,720</b>	<b>16,965</b>	<b>22,326</b>	<b>25,936</b>
OUT	Truck	8,843	7,811	12,454	15,972	18,410
	Car	3,283	3,667	4,118	5,506	6,522
	Motorcycle	735	729	771	1,033	1,249
	<b>Total</b>	<b>12,861</b>	<b>12,207</b>	<b>17,343</b>	<b>22,511</b>	<b>26,181</b>

Source: Government of Thailand, Khlong Yai Customs Checkpoint, Trat Province.

**Table 28: Inbound–Outbound Passengers via Khlong Yai Customs Checkpoint, 2012–2016**

Passenger	Number (passengers)				
	2012	2013	2014	2015	2016
IN	6,406	9,278	11,673	16,923	9,219
OUT	6,551	9,275	11,786	16,645	9,595
<b>Total</b>	<b>12,957</b>	<b>18,553</b>	<b>23,459</b>	<b>33,568</b>	<b>18,814</b>

Source: Government of Thailand, Khlong Yai Customs Checkpoint, Trat Province.

In 2016, the number of inbound–outbound passengers via the Khlong Yai Customs Checkpoint declined from 33,568 to 18,814 persons, with the number of both inbound and outbound passengers going down by roughly the same extent (Table 28). On the other hand, the number of inbound and outbound passengers going through this checkpoint increased yearly by about 38% from 2012 to 2015. There is no big difference between the number of inbound passengers versus outbound.

## 2. Aranyaprathet Customs Checkpoint, Sa Kaeo Province

The Aranyaprathet Customs Checkpoint is located in Suwannasorn Road, Khlong Luek subdistrict, Aranyaprathet district, Sa Kaeo Province. It provides one permanent border checkpoint at the Khlong Luek Border Checkpoint which is also along Suwannasorn Road. Its area of responsibility covers the provinces of Sa Kaeo, Prachinburi, Nakhon Nayok, and Saraburi.

Aranyaprathet Customs Checkpoint is one of the five pilot checkpoints of the Customs Department. As such it has to establish OSS at Ban Khlong Luek Border Checkpoint. The implementation plan and the project to set up the OSS have been laid out. Seven agencies will assign officials to be stationed at the checkpoint: Aranyaprathet Customs Checkpoint, Food and Drug Checkpoint, Aranyaprathet, Aranyaprathet District Public Health Office, Sa Kaeo Animal Quarantine Station, Sa Kaeo Fish Inspection Office, Office of Foreign Trade, and Aranyaprathet Immigration Checkpoint. The Aranyaprathet Customs Checkpoint has set up a website to disseminate information.

The number of trucks crossing the Aranyaprathet Customs Checkpoint has been on an upward trend. From 2011 to 2015, the number of both 25-ton trucks and 45-ton trucks going through the checkpoint increased every year except in 2013 when there was a very slight decline (Table 29). In 2015, 119,283 25-ton trucks and 66,268 45-ton trucks passed through this checkpoint.

**Table 29: Inbound–Outbound Trucks via Aranyaprathet Customs Checkpoint, 2011–2015**

Year	Number	
	25-ton truck	45-ton truck
2011	75,261	41,812
2012	100,828	56,015
2013	100,737	55,965
2014	110,010	61,117
2015	119,283	66,268

Source: Government of Thailand, Aranyaprathet Customs Checkpoint, Sa Kaeo Province.

### 3. Ban Phu Nam Ron Permanent Checkpoint, Kanchanaburi Province

The Ban Phu Nam Ron Permanent Checkpoint is situated at Moo 12, Ban Kao subdistrict, Meung district, Kanchanaburi Province. The checkpoint was opened on 20 May 2012 to foster good relations between Thailand and Myanmar by connecting transport routes between the two countries, and supporting trade and tourism development. The checkpoint is opposite Htikhi village, Dawei city, Tanintaryi Region, Myanmar. It is open daily from 6:00 a.m. to 8:00 p.m. The distance between the Ban Phu Nam Ron Checkpoint to Dawei is approximately 170 km.

The journey takes about five hours as the road is in poor condition. Crossing to and from Myanmar through immigration is convenient. An identification card is sufficient to obtain a temporary border pass.

Construction of the customs office at Ban Phu Nam Ron Permanent Checkpoint started in 2017 with a target date of completion in 2019. This sets the stage for the Checkpoint to serve as the gateway for trade with the west and tourism in Dawei. It is expected to become a logistics hub, supporting Thailand's economy and industries in general, and the Dawei deep sea port project, in particular.



# V. INVESTMENT AND BUSINESS OPPORTUNITIES IN THE GMS ECONOMIC CORRIDORS IN THAILAND

## A. Special Economic Zones

Thailand started establishing special economic zones (SEZs) in 10 provinces in 2015.<sup>2</sup> The first phase SEZs are Tak, Mukdahan, Sa Kaeo, Trat, and Songkhla, while the second phase SEZs are located in Nong Khai, Narathiwat, Chiang Rai, Nakhon Phanom, and Kanchanaburi (Table 30 and Figure 13).

Targeted activities in the SEZs in the 10 provinces have been set in 13 industrial sectors as follows: Agricultural, fishery and related industries; Ceramics products; Textile, garment, and leather industries; Manufacture of furniture; Gems and jewelry; Medical equipment; Automotive, machinery, and parts; Electrical appliances and electronics; Plastics; Medicine; Logistics; Industrial estates or zones; and Tourism-related industries. The target industries in each SEZ which will be developed in two phases are shown in Tables 31 and 32.

**Table 30: Special Economic Zones in 10 Provinces**

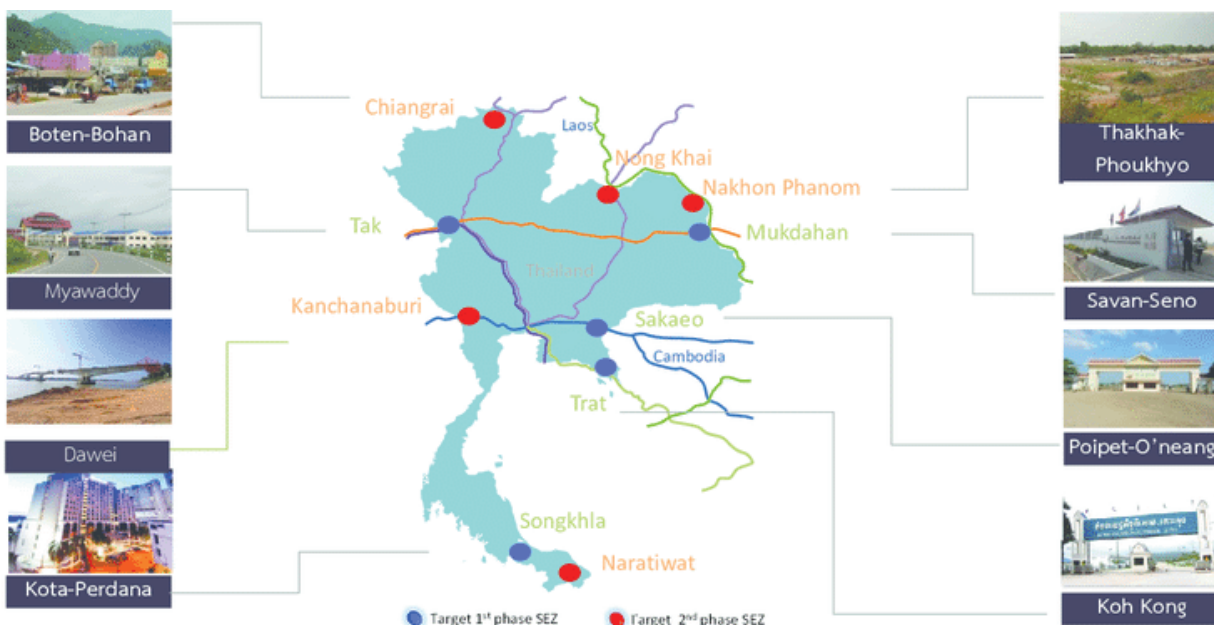
Special Economic Zones	Land Area	
	sq m	rai
Tak	1,419.0	886,875.0
Mukdahan	578.5	361,542.5
Sa Kaeo	332.0	207,500.0
Trat	50.2	31,375.0
Songkhla	552.3	345,187.5
Nong Khai	473.7	296,042.0
Narathiwat	235.2	146,995.6
Chiang Rai	1,523.6	952,226.5
Nakhon Phanom	794.8	495,743.7
Kanchanaburi	260.8	162,993.7
<b>Total 10 SEZs</b>	<b>6,220.1</b>	<b>3,886,481.6</b>

SEZ = special economic zones, sq m = square meter.

Source: Office of the National Economics and Social Development Board. 2017. [www.nesdb.go.th](http://www.nesdb.go.th).

<sup>2</sup> Government of Thailand, Thailand's Special Economic Zones, Spatial Development Planning and Strategy Office, Office of the National Economic and Social Development Board; and Office of the Board of Investment. 2017. *Guide to Investment in the Special Economic Development Zones (SEZs)*. Bangkok.

**Figure 13: Location of Special Economic Zones**



Source: George Abonyi. 2016. Cross Border Development and Investment Initiative for Cambodia, Lao PDR, Myanmar and Thailand (CLM-T): Scoping Study. UNCDF, Local Finance Initiative Practice Area, Bangkok, Thailand.

**Table 31: Targeted Activities in the Special Economic Zones (Phase I)**

Industrial Sectors	Tak	Sa Kao	Trat	Mukdahan	Songkhla
1. Agricultural, fishery and related industries	☆	☆	☆	☆	☆
2. Ceramics products	☆				
3. Textile, garment, and leather industries	☆	☆	☆		
4. Manufacture of furniture	☆	☆	☆		
5. Gems and jewelry	☆	☆			
6. Medical equipment	☆	☆			
7. Automotive, machinery, and parts	☆	☆			
8. Electrical appliances and electronics	☆	☆	☆		
9. Plastics	☆	☆			
10. Medicine	☆	☆			
11. Logistics	☆	☆	☆	☆	☆
12. Industrial estates or zones	☆	☆	☆	☆	☆
13. Tourism-related industry	☆	☆	☆	☆	☆

Source: BOI. 2015. *A Guide to Investment in the Special Economic Development Zones*. [www.boi.go.th](http://www.boi.go.th).

**Table 32: Targeted Activities in the Special Economic Zones (Phase 2)**

Industrial Sectors	Nong Khai	Chiang Rai	Kanchanaburi	Nakhon Phanom	Narathiwat
1. Agricultural, fishery, and related industries	☆	☆	☆	☆	Eligible for Investment Promotion Policy for Industrial Development in Border Provinces in Southern Thailand
2. Ceramics products			☆	☆	
3. Textile, garment, and leather industries	☆	☆	☆	☆	
4. Manufacture of furniture		☆	☆	☆	
5. Gems and jewelry		☆	☆	☆	
6. Medical equipment		☆	☆	☆	
7. Automotive, machinery, and parts			☆	☆	
8. Electrical appliances and electronics			☆	☆	
9. Plastics		☆	☆	☆	
10. Medicine		☆	☆	☆	
11. Logistics	☆	☆	☆	☆	
12. Industrial estates or zones	☆	☆	☆	☆	
13. Tourism-related industry	☆	☆	☆	☆	

Source: BOI. 2015. *A Guide to Investment in the Special Economic Development Zones*. [www.boi.go.th](http://www.boi.go.th).

### Governmental Support Measures

Projects investing in the Special Economic Development Zones will receive government support in the form of fiscal measures and government facilitation.<sup>3</sup> Target activities will be entitled to fiscal incentives, which are measures under the Office of the Board of Investment (BOI) and under the Ministry of Finance.

### Investment Promotion Policy for Investment in Special Economic Zones

In reference to BOI Announcement No. 4/2557 dated 18 December 2014 regarding investment promotion in the Special Economic Development Zones, fiscal incentives will be granted to projects investing in the SEZ in two cases (Table 33):

<sup>3</sup> From BOI. 2017. *Guide to Investment in the Special Economic Development Zones*. Bangkok.

<p>(i) If the activities carried out in the project are listed in the eligible list of activities under BOI Announcement No. 2/2557 regarding policy and criteria for investment promotion dated 3 December 2014; and</p> <p>(ii) If the activities carried out in the project are listed by the National Policy Committee on Special Economic Zone Development.</p>	<p><b>Measures under the Revenue Department</b></p> <p>Non-BOI promoted projects can apply for incentives offered by the Revenue Department, Ministry of Finance. These provide a reduction of corporate income tax from 20% to 10% for 10 accounting periods for (i) new projects or expansion of permanent building used in the project; (ii) revenue derived from goods manufactured for import substitution, for export goods losing competitiveness; or (iii) revenue derived from services or use of services in the SEZs.</p>
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**Table 33: Fiscal Incentives in Special Economic Development Zones**

General Activities Under the Board of Investment's List of Eligible Activities	Targeted Activities (13 industrial sectors) for Special Economic Zones Specified by the Policy Committee on Special Economic Zone Development
<p>Projects shall receive the following incentives:</p> <ul style="list-style-type: none"> <li>– 3 additional years of corporate income tax exemption</li> <li>– In cases where projects are already granted an 8-year CIT exemption, an additional 5-year 50% CIT reduction shall be granted instead.</li> <li>– Double deductions from the costs of transportation, electricity, and water supply for 10 years</li> <li>– Additional 25% deduction of the cost of installation or construction of facilities</li> <li>– Exemption of import duty on machinery</li> <li>– Exemption of import duty on raw materials used for export production</li> <li>– Other non-tax incentives</li> </ul>	<p>Projects shall receive the following incentives:</p> <ul style="list-style-type: none"> <li>– 8-year corporate income tax exemption and additional 5-year 50% reduction of corporate income tax</li> <li>– Double deductions from the costs of transportation, electricity, and water supply for 10 years</li> <li>– Additional 25% deduction of the cost of installation or construction of facilities</li> <li>– Exemption of import duty on machinery</li> <li>– Exemption of import duty on raw materials used for export production</li> <li>– Other non-tax incentives</li> </ul>
<p>Permission to use foreign unskilled workers</p>	<p>Permission to use foreign unskilled workers</p>

Source: BOI. 2015. *A Guide to Investment in the Special Economic Development Zones*. [www.boi.go.th](http://www.boi.go.th).

**Eligibility for Use of Incentives  
(in accordance with a draft of related  
Royal Decree as of June 2015)**

A company or juristic partnership entitled to a reduction of corporate income tax must meet the following qualifications:

- Must be a registered company or must have juristic partnership rights in the Special Economic Development Zone before or in the year 2017;
- Must not be using corporate income tax exemption privilege under the investment promotion law, either total or partial;
- Must not be using corporate income tax exemption or reduction privilege offered to SMEs, under the Royal Decree issued in accordance with the Revenue Code on reduction and exemption of duty (No. 530) B.E. 2554 and amendments;
- Must have separate accounting books for projects not receiving fiscal incentives and projects receiving fiscal incentives under the SEZ.

**Other Government Measures**

- Permission for foreign labor to enter for temporary work not exceeding seven days
- Training for Thai and foreign labor
- For BOI-promoted projects in the SEZ, both skilled and unskilled legal foreign labor allowed
- 40 working days approval for investment application
- One work day approval for work permit application for a foreign worker

**Development of Industrial Estates  
in the Special Economic Zones**

The Industrial Estate Authority of Thailand (IEAT) has divided the development of industrial estates under the Phase I of the SEZ development program into two stages:

**1st Stage:**

- Tasai Luat subdistrict, Mae Sot district, Tak
- Pa Rai subdistrict, Aranyaprathet district, Sa Kaeo
- Samnak Kham subdistrict, Sadao district, Songkhla

**2nd Stage:**

- Kham Ahuan subdistrict, Muang Mukdahan district, Mukdahan
- Mai Rut subdistrict, Klongyai district, Trat

Incentive Measures under IEAT for companies located in general industrial estate and IEAT free zones include:

*Non-Tax Incentives:*

- Permission to own land in the industrial estate
- Permission to bring in foreign workers who are technicians, experts, spouse, and dependents
- Permission to remit foreign currency

*Tax Incentives* in the IEAT Free Zones include:

- Exemption from import duty, value added tax and excise tax for (a) machinery, accessories, equipment, and tools including any materials to be used in the manufacturing of goods or for commercial purposes and any materials to be used in the construction,



- assembling, or installation of factories or buildings; and (b) imported materials to be manufactured into goods or for commercial purposes; the tax incentive applied to such materials is non-binding as the asset of the owner.
- Exemption from export duty, value added tax and excise tax for raw materials, by-products, and other things deriving from the production
- Exemption or drawback of tax for goods under the legal provision for exemption or drawback of tax when exported out of Thailand, including goods not exported out of the country, but imported into IEAT free zones: for machinery, equipment and raw materials
- Imported goods into the IEAT free zones to receive the same incentives as duty free zones

- An important channel to transport goods such as beverages, fruits, and electronic parts to Viet Nam and the southern provinces of the PRC
- Opportunity created for co-production with the Savan–Seno Special Economic Zone (Lao PDR) which have investments from various foreign countries, e.g., factory producing camera parts (Nikon), and factory producing aircraft seats and equipment (Aero works)

**Target Activities:** agricultural, fishery, and related industries; electrical appliances and electronics; logistics; industrial estates or zones; and tourism-related industry

**Figure 14: Mukdahan Special Economic Zone**

## B. East–West Economic Corridor

### 1. Special Economic Zones

#### Mukdahan Special Economic Zone

The Mukdahan Special Economic Zone is in the first phase of the SEZ development program. It has a total land area of 578.5 sq km (361.542 rai) and covers 11 subdistricts along the border area of Mueang, Wan Yai, and Don Tan districts.

#### **Competencies and Opportunities:**

- Located on EWEC with connection to the Lao PDR and Viet Nam, and East Asia (Japan, the Republic of Korea, and Taipei,China)



Source: BOI. 2015. *A Guide to Investment in the Special Economic Development Zones*. [www.boi.go.th](http://www.boi.go.th).

### Tak Special Economic Zone

The Tak SEZ with a total area of 1,419 sq kms. (886,875 rai) covers 14 subdistricts along the border area of Mae Sot, Phop Phra, and Mae Ramat districts.

#### Competencies and Opportunities:

- The Tak SEZ is located in EWEC.
- West toward Myanmar is a corridor to Yangon, which is the economic center of Myanmar.
- Myanmar is a link to India and southern provinces of the PRC.

- The Myanmar border area has an ample supply of labor to support development in the Mae Sot area, as well as co-production with an industrial estate in Myawaddy (Myanmar).

**Target Activities:** agricultural, fishery, and related industries; ceramic products; textile, garment, and leather industries; manufacture of furniture; gems and jewelry; medical equipment; automotive, machinery, and parts; electrical appliances and electronics; plastic; medicine; logistics; industrial estates or zones; and tourism-related industry

Figure 15: Tak Special Economic Zone



Source: BOI. 2015. *A Guide to Investment in the Special Economic Development Zones*. [www.boi.go.th](http://www.boi.go.th).

### Nakhon Phanom Special Economic Zone

The Nakhon Phanom SEZ with a total area of 794.79 sq km (495,743.75 rai) covers 13 subdistricts along the border area of Mueang and Tha Uthen districts.

#### Competencies and Opportunities:

- Nakhon Phanom SEZ is a channel for cross-border trade with Viet Nam and southern provinces of the PRC, with potential to become a transportation route to East Asia through Vung Anh Seaport in Viet Nam.
- The development plan for Nakhon Phanom Airport and Ban Pai Railway (Khon Khaen)–Mahasarakam–Mukdahan–Nakhon Phanom will connect the railway in Nakhon Phanom with the main railway of Thailand, which offers an opportunity to expand domestic and international logistic activities.
- It is a production hub of quality agro-products, e.g., rice, sugar cane, and tapioca, which support the development of the agro-processing industry.

**Figure 16: Nakhon Phanom Special Economic Zone**



Source: BOI. 2015. *A Guide to Investment in the Special Economic Development Zones*. [www.boi.go.th](http://www.boi.go.th).

- The Mekong River offers a panoramic view suitable for tourism and development of residential areas for both Thai and foreign investors.
- There is sufficient space for a commercial zone and supporting facilities, such as duty-free shops, bonded warehouses, convention centers, hotels, and tourist information centers.

**Target Activities:** agricultural, fishery, and related industries; ceramic products; textile, garment, and leather industries; manufacture of furniture; gems and jewelry; medical equipment; automotive, machinery, and parts; electrical appliances and electronics; plastic; medicine; logistics; industrial estates or zones; and tourism-related industry

## 2. Tourist Attractions

There is wide variety of interesting tourist attractions along and around EWEC. Table 34 contains descriptions of the main tourist destinations in the provinces along EWEC.

### Tak Province

Tak's interesting and attractive tourist attractions derive from nature as the province offers beautiful scenery and healthy weather. Tourists can visit all year round. The main attractions are: Thi Lo Su Waterfall; Doi Hua Mot; Bhumibol Dam; Mae Moei National Park; Wat Phra Borommathat; Umphang Wildlife Sanctuary; Doi Muser Crops Research Station; Doi Soi Malai; Nang Khruan Waterfall; Pha Charoen Waterfall; and Thai-Myanmar Friendship Bridge.

### Mukdahan Province

The tourist attractions in Mukdahan's districts are listed below.

**Meuang district:** Mukdahan Tower on the Mukdahan-Don Tan Road, Chao Mae Song Nang Phi Nong Shrine, Wat Si Mongkon Tai, Indochina Market on the bank of the Mekong River; Keang Ka Bao waterfront; and Wat Phra Sri Maha Po

**Table 34: Tourist Attractions in North–South Economic Corridor-1**

<b>EWEC: Mae Sot–Mukdahan</b>	
<b>Tak</b>	
1.	<b>Wat Phra Borommathat</b> in Amphoe Ban Tak is the former site of Ancient Tak City lying along the bank of Maenam Ping, approximately 25 kilometers north of the City. The site contains several ruins including the legendary hill-top pagoda in Phum Khao Binh style (of Sukhothai era).
2.	<b>The Thi Lo Su Waterfall</b> is claimed to be the largest and highest waterfall in Thailand. It stands 250 m high and nearly 450 m wide on the Mae Klong River, flowing down from Huaiaya Klotho into the Umphang Wildlife Sanctuary in Tak Province in northwestern Thailand.
3.	<b>Namtok Pha Charoen National Park</b> is a national park in the Phop Phra District, Tak Province, Thailand. Most of its area is high complex mountains of 1,765 m elevation and features a mixed deciduous forest and a coniferous forest.
4.	<b>Thai–Myanmar Friendship Bridge</b> connects the Asian Highway between Thailand and Myanmar, and is located at Tambon Tha Sai Luad, opposite a town called Myawadi in Myanmar. The Asian Highway also runs to other regions in South Asia, the Middle East, and Europe. The bridge opens daily and the border pass fee is 20 baht for Thais and 10 baht for people from Myanmar. The document can be obtained from either Mae Moei City or Mae Sot Municipal.
<b>Phisanulok</b>	
5.	<b>Wat Phra Si Rattana Mahathat</b> , locally known as Wat Yai, is considered the most important temple in Phitsanulok. It was built in 1357 during the reign of Phra Maha Thamma Racha I of Sukhothai Kingdom to enshrine the famous Phra Buddha Chinnarat statue. Phra Buddha Chinnarat is a bronze-casted statue widely considered the most beautiful image of the Buddha in Thailand.
6.	<b>Wat Chedi Yod Thong</b> The temple is famous for its Sukhothai-style bud shaped chedi. This chedi is the only remaining one of this style in Phitsanulok. On the campus, there is a complex of monk houses facing a small lake, and there is a small, modern temple structure nearby.
7.	<b>Wat Chulamani</b> is one of the oldest temples in Phitsanulok Province. It is believed to be the location of the old Phitsanulok Town. According to the history of this temple, King Trailokkanat built this temple and was ordained here for 8 months and 15 days. There were 2,348 courtiers who were ordained to follow him.
8.	<b>Somdej Phra Naresuan Maharat Shrine</b> The shrine of King Naresuan the Great is situated at Tha Rong subdistrict, and was built to commemorate King Naresuan who liberated the nation from Burmese power.
9.	<b>Wang Chan Palace</b> was believed to have been built during the first half of the 17th century was the residence of several Ayutthaya Kings. King Naresuan who ruled the Ayutthaya Kingdom from 1590 until 1605. He was born in the Palace and was one of Thailand's more loved Kings because of his successful battles against the Burmese.

*continued next page*



Table 34: Continued

<b>Khoen Kaen</b>	
10.	<b>Phra Mahathat Kaen Nakhon</b> , Kaen Nakhon, ‘The Great Buddha’s Relics’ or ‘The Nine Story Stupa Located in Wat Nong Waeng,’ is a Thai royal temple of the old town. Wat Nong Waeng is located close to Kaen Nakhon marsh on Klangmuang Road, Muang District.
11.	<b>Wat Pa Saeng Arun</b> has the Sim Isan’s outstanding features which are its typical shape, style, and solidity; and the beauty of its murals. In addition to being a significant tourist attraction, this revered place was meant to help later generations to learn, treasure, and conserve local architecture.
12.	<b>Ku Praphachai</b> also known as Ku Ban Na Kham Noi, is an ancient Khmer-style tower constructed around the 13th century during the reign of King Jayavarman VII of the ancient Khmer Empire. It is built of laterite bricks and sandstone.
13.	<b>Wat Chaisi</b> is known for its beautiful murals both inside and outside of the ordination hall— Sim or Ubosot of Wat Chai Si. These were painted by a folk artisan from Maha Sarakham known as Thong Thipcha. The walls are built of brick and plastered with lime, but every available surface is covered by an eclectic series of murals depicting the past lives of the Buddha, punishments in various Buddhist hells, and a variety of local traditions.
<b>Mukdahan</b>	
14.	<b>Wat Si Mongkol Tai</b> is situated near the immigration checkpoint of Mukdahan. According to legend, the first lord of Mukdahan discovered Phra Chao Ong Luang, the province’s important image of the Lord Buddha, while overseeing the construction of the city. The temple was built to house the sacred image which is 2.2 m in length and 2 m in height. The temple also owns another image of a steel Buddha with its top part protruding from beneath a Bodhi Tree.
15.	<b>Ho Kaeo Mukdahan</b> is an observation tower standing tall at 65 m high. The lower floors exhibit and showcase Mukdahan’s chronological history, art, and culture of the various indigenous tribes and their way of life along the Mekong River. There is an observation deck where visitors can enjoy a panoramic view of the Mekong River and the surrounding area of Mukdahan, Sawannaket.
16.	<b>Tat Ton Waterfall</b> is a waterfall that is 7 m high and 30 m wide. The pool is suitable for swimming and relaxing. Tat Ton Waterfall is situated south of Nong Sung and west of Kham Chai-I.
17.	<b>Wat Phra Si Mahapho</b> is a unique temple featuring ancient architecture. The old “Sim” or Ubosot was built in 1916 in the folk northeastern style with beautifully carved wooden brackets supporting the roof. The murals inside feature the Vessantara Jataka and depict Prince Damrong Rajanubhab riding a cart when he made an inspection trip to Isan. There is also a 2-storey building done in French architecture. It is used as the monk’s residence.

m = meters.

Sources: ADB. GMS Economic Corridor Assessment Team and <https://www.tourismthailand.org/About-Thailand/Destination>.



**Don Tan district:** Phu Sa Dok Bua National Park, Bronze drum at Wat Matchimawas, and the Princess Mother Park

**Nong Sung district:** Wat Banpot Kiri (Phu Chor Kor) and Tat Ton Waterfall

**Nikhom Kham Soi district:** Wat Phudantae or Wat Phuttho Thammatharo and Huai Khi Lek reservoir

### Phisanulok Province

The tourist attractions in Phitsanulok Province are Wat Phra Si Rattana Mahathat (Wat Yai), Wat Chedi Yod Thong, Wat Chulamani (one of the oldest temples in Phitsanulok Province), Somdej Phra Naresuan Maharat Shrine, Wang Chan Palace Chan or “Wang Chan.”

### Khoen Kaen Province

The tourist attractions in Khoen Kaen Province are: Phra Mahathat Kaen Nakhon, Kaen Nakhon, ‘The Great Buddha’s Relics’ or ‘The Nine Story Stupa, Wat Pa Saeng Arun, Ku Praphachai’ also known as Ku Ban Na Kham Noi Wat Chaisi.

The total number of visitors to the four provinces along EWEC was nearly 11 million. Khoen Kaen Province was the most visited with almost 4 million visitors, followed by Phitsanulok with around 3 million (Table 35). Majority of the visitors were tourists (staying more than 24 hours), except in Mukdahan where there were more excursionists (staying less than 24 hours).

**Table 35: Number of Visitors in Provinces along East–West Economic Corridor in Thailand in 2015**

Province	Tourist <sup>a</sup> (persons)	Excursionist <sup>b</sup> (persons)	Visitors (persons)
Tak	1,505,422	399,329	1,904,751
Mukdahan	641,199	1,209,296	1,850,495
Phisanulok	1,813,705	1,154,659	2,968,364
Khoen Kaen	2,493,113	1,388,533	3,881,646

Notes: <sup>a</sup> A tourist is a temporary visitor who stays in the visited country for at least 24 hours.

<sup>b</sup> An excursionist is a temporary visitor who spends less than 24 hours in the visited country (including those traveling on a boat).

Source: Department of Tourism, Ministry of Tourism and Sports.

### 3. Cross-border Trade

The value, trends, and major commodities traded at the border checkpoints along EWEC in Thailand in the last 5 years are discussed below.

#### Mukdahan Customs Checkpoint

The trade value at the Mukdahan Customs Checkpoint amounted to 94,301 million baht. In 2016, export value was at 56,445 million baht and import value was at 22,599 million baht (Table 36). There was no transit trade registered in 2012. There was a relatively small amount of transit trade in 2013, which by 2016 almost doubled in value.

Major exports included electronic processing units in computer hard disks, printed circuit boards, camera components, fuel, and plastic parts (Table 37). Major imports included copper, camera components, electricity, electronic processing units in computer hard disks, and mobile phones.

#### Mae Sot Customs Checkpoint

Exports have consistently exceeded imports by a substantial margin at the Mae Sot Customs Checkpoint (Table 38). For instance, exports in 2010 amounted to \$28.7 million while imports amounted to only \$1.1 million. While the ratio of exports to imports remained sizeable, it has somewhat narrowed from nearly 29 to 1 in 2010 to 20 to 1 in 2016. Total trade at the checkpoint declined from 2010 to 2011 but picked up rapidly after that, growing by about 38% per year from 2011 to 2016.

Major exports via the Mae Sot Customs Checkpoint are mostly consumer goods (Table 39). The top 10 exports included sugar, mobile phones with equipment, motorcycles, beer, and diesel fuel. In 2017, sugar had the largest export value, followed by mobile phones with equipment, motorcycles, and energy drinks.

Major imports via the Mae Sot Customs Checkpoint include peanuts, live cattle, antimony oxide, dried chilis, green beans, antimony, wooden furniture, mobile phones, and onions (Table 40). Peanuts topped the list of imports in 2016, followed by live cattle, antimony oxide, dried chilis, and green beans.

#### Nakon Phanom Customs Checkpoint

Trade via the Nakon Phanom Customs Checkpoint posted yearly increased from 2012 to 2015, with the largest increase being from 2012 to 2013 when trade grew almost five times (Table 41). There was a small decline in 2016 due to the slowdown in imports. Similar to the situation at the Mae Sot Customs Checkpoint, exports were greater than imports. However, the imbalance is smaller, as the ratio of exports to imports narrowed from 3 to 1 in 2012 to 1.4 to 1 in 2016.

Goods traded at the Nakhom Phanom Customs Checkpoint are diversified. They include consumer goods, beverage, food, fruits, finished garments, textile, and industrial goods such as electronic equipment, printed circuit boards, round bars, and vehicles (Table 42).

**Table 36: Trade Value at the 2nd Thai-Lao Friendship Bridge Border Crossing, 2012–2016**

Item	Trade Value (million baht)				
	2012	2013	2014	2015	2016
Export	12,006	41,875	36,426	30,719	56,445
Import	16,670	25,294	29,325	40,486	22,599
Transit	...	8,204	7,905	13,057	15,257
Total	28,677	75,373	73,656	84,262	94,301

... = no data available.

Source: Government of Thailand, Mukdahan Customs Checkpoint.

**Table 37: Major Commodities Traded at the 2nd Thai-Lao Friendship Bridge Border Crossing Point**

Imports			Exports		
No.	Item	Amount (million baht)	No.	Item	Amount (million baht)
1	Copper	9,885.6	1	Electronic processing units in computer hard disks	20,738.5
2	Camera components	8,624.5	2	Printed circuit boards	4,831.1
3	Electricity	8,276.4	3	Camera components	1,595.2
4	Electronic processing units in computer hard disks	6,777.3	4	Fuel	1,404.3
5	Mobile phones	2,912.1	5	Plastic parts	1,110.1

Source: Government of Thailand, Mukdahan Customs Checkpoint.

**Table 38: Trade Value at Mae Sot Customs Checkpoint, 2010–2016**

	Trade Value (million baht)						
	2010	2011	2012	2013	2014	2015	2016
Exports	28,673.1	17,491.5	33,968.6	41,464.0	55,957.4	64,240.1	79,627.1
Imports	1,109.7	854.6	1,162.6	2,510.4	3,519.0	4,073.5	4,179.1
<b>Total</b>	<b>29,782.8</b>	<b>18,346.1</b>	<b>35,131.2</b>	<b>43,974.4</b>	<b>59,476.4</b>	<b>68,313.6</b>	<b>83,806.2</b>

Source: Government of Thailand, Mae Sot Customs Checkpoint.

Table 39: Top 10 Exports at Mae Sot Customs Checkpoint, 2010–2016

Commodity	Export Value (million baht)				
	2012	2013	2014	2015	2016
1. Sugar	...	...	...	860.2	4,174.4
2. Mobile phones with equipment	269.8	1,451.9	3,120.6	4,824.0	2,353.6
3. Motorcycles	668.1	376.1	736.9	1,264.7	2,063.5
4. Energy drinks	...	...	...	447.8	1,283.2
5. Harvesting and threshing machines	...	...	...	1,128.3	1,227.1
6. Beer	2,197.7	2,333.7	3,631.1	3,224.1	1,209.2
7. Soft drinks, beverage	487.5	452.6	443.6	...	1,178.8
8. 100% cotton printed fabric	...	...	...	...	1,153.7
9. Liquified petroleum gas	...	...	...	...	967.6
10. Diesel	883.0	1,448.8	1,969.7	1,794.5	899.8

... = no data available.

Source: Government of Thailand, Mae Sot Customs Checkpoint.

Table 40: Top 10 Imports at Mae Sot Customs Checkpoint between, 2010–2016

Commodity	Import Value (million baht)				
	2012	2013	2014	2015	2016
1. Peanuts	...	909.4	558.7	363.8	764.6
2. Live cattle	30.5	521.8	1,394.3	1,402.8	684.3
3. Antimony oxide	...	...	115.4	303.0	358.5
4. Dried chili	651.0	196.7	109.4	123.4	295.8
5. Green beans	13.5	63.2	16.9	45.5	169.9
6. Antimony	10,858.0	76.8	...	...	128.5
7. Wooden furniture	30,052.0	300.4	229.3	177.9	120.0
8. Mobile phones	...	...	...	90.2	115.3
9. Onions	...	3.1	54.4	187.5	111.6
10. Used bicycles	1,757.0	25.4	40.3	...	95.3

... = no data available.

Source: Government of Thailand, Mae Sot Customs Checkpoint.

**Table 41: Trade Value at Nakhon Phanom Customs Checkpoint Year, 2012–2016**

	Trade Value (million baht)				
	2012	2013	2014	2015	2016
Exports	5,708.4	29,585.7	43,981.0	56,000.7	60,360.4
Imports	2,724.0	9,216.4	33,900.1	50,061.1	44,214.0
<b>Total</b>	<b>8,432.4</b>	<b>38,802.1</b>	<b>77,881.1</b>	<b>106,061.8</b>	<b>104,574.4</b>

Source: Government of Thailand, Nakhon Phanom Customs Checkpoint.

**Table 42: Top 10 Exports and Imports at Nakhon Phanom Customs Checkpoint in 2016**

Top 10 goods with the highest import value			Top 10 goods with the highest export value	
Rank	Types of Goods	Value (million baht)	Types of Goods	Value (million baht)
1	Electronic equipment	22,244.3	Processing units	24,574.2
2	Computer with complete set of equipment and tablet	13,653.0	Energy drinks	10,537.4
3	Electric power	2,536.9	Fresh fruits	6,550.8
4	Printed circuit boards	642.2	Dried longans	4,823.0
5	ISO tanks to contain gas	600.0	Mangoes, mangosteens	2,359.9
6	Accessories to finished clothes	347.5	Batteries	1,473.9
7	Clothes for girls/women	229.0	Petroleum and additives	817.5
8	Bags	189.9	ISO tanks to contain gas	554.4
9	Woven pile fabrics and chenille fabrics	182.3	Air conditioners	404.00
10	Women T-shirts/shirts	157.2	Electric power	362.7
11	Others	3,431.8	Others	7,902.7
	<b>Total</b>	<b>44,214.0</b>	<b>Total</b>	<b>60,360.4</b>

Source: Government of Thailand, Nakhon Phanom Customs Checkpoint.



## C. North–South Economic Corridor

### 1. Special Economic Zones

#### Chiang Rai Special Economic Zone

Chiang Rai Special Economic Zone is part of the second phase SEZs.<sup>4</sup> The Chiang Rai SEZ with a total area of 916.2 sq km (572,629 rai) covers 21 subdistricts along the border area of Mae Sai, Chiang Saen, and Chiang Khong districts (Figure 17).

**Figure 17: Chiang Rai Special Economic Zone**



Source: BOI. 2017. *A Guide to Investment in the Special Economic Development Zones (SEZs)*.

#### Competencies and Opportunities

- Located on NSEC with connection to Yunnan Province of the PRC by land and water transport. There are two means of access by land: (i) via Route 3A (Chiang Khong International Border Checkpoint with the Lao PDR); and (ii) via Route 3B (Mae Sai International Border Checkpoint with Myanmar). By water transport, access is via the Mekong River at Chiang Saen Port.
- Linked to the southern region of Thailand via Laem Chabang Seaport for shipping goods to other regions inside and outside Thailand
- High competency in providing logistic services to southern PRC and upper areas of Myanmar and the Lao PDR for the transport goods through the Laem Chabang Seaport
- Tourist destination linked to other tourist destinations in southern PRC and upper areas of Myanmar, the Lao PDR, and south of the PRC
- Home to industries including agro and food processing, furniture, and wood products, where there is opportunity to increase the value chain
- Availability of an international airport—the Mae Fah Luang International Airport

#### Activities

**Mae Sai:** Border checkpoint development to support trade and tourism; preparation for establishing hotels, convention centers, duty free shops, mass transit station, and tourist information centers

<sup>4</sup> Thailand's Special Economic Zones, Spatial Development Planning and Strategy Office, Office of the National Economic and Social Development Board; and Office of the Board of Investment. 2017. *Guide to Investment in the Special Economic Development Zones (SEZs)*.

**Chiang Saen:** Development of free trade areas and zones into international transportation center; preparation for establishing seaport, cross dock warehouse, commerce, and customs offices

**Chiang Khong:** Trade, tourism, multimodal transportation; preparation for establishing logistics center, commerce, and customs offices

### Target Industries

Target industries in the zone include agricultural, fishery, and related industries; textile, garment, and leather industries; manufacture of furniture; gems and jewelry; medical equipment; plastic; medicine; logistics; industrial estates or zones; and tourism-related industry.

### Nong Khai Special Economic Development Zone

The Nong Khai SEZ with a total area of 473.67 sq km (296,042 rai) covers 13 subdistricts along the border area of Mueang and Sakhrai districts.

### Competencies and Opportunities

- Channel for cross-border trade between Thailand and the Lao PDR (highest cross-border trade value among border checkpoints in Thailand) with access to the Lao PDR through the 1st Thai-Lao PDR Friendship Bridge) and connecting railway
- Location near Udon Thani Airport (approximately 60 km)
- Support for development of economic activities along the route linking Bangkok, Nong Khai, Vientiane (Lao PDR), and Luang Prabang (Lao PDR)

**Figure 18: Nong Khai Special Economic Zone**



Source: BOI. 2017. *A Guide to Investment in the Special Economic Development Zones (SEZs)*.

- Attraction of Nong Khai as a residential city, which could be further developed into residential area for both Thai and foreign investors

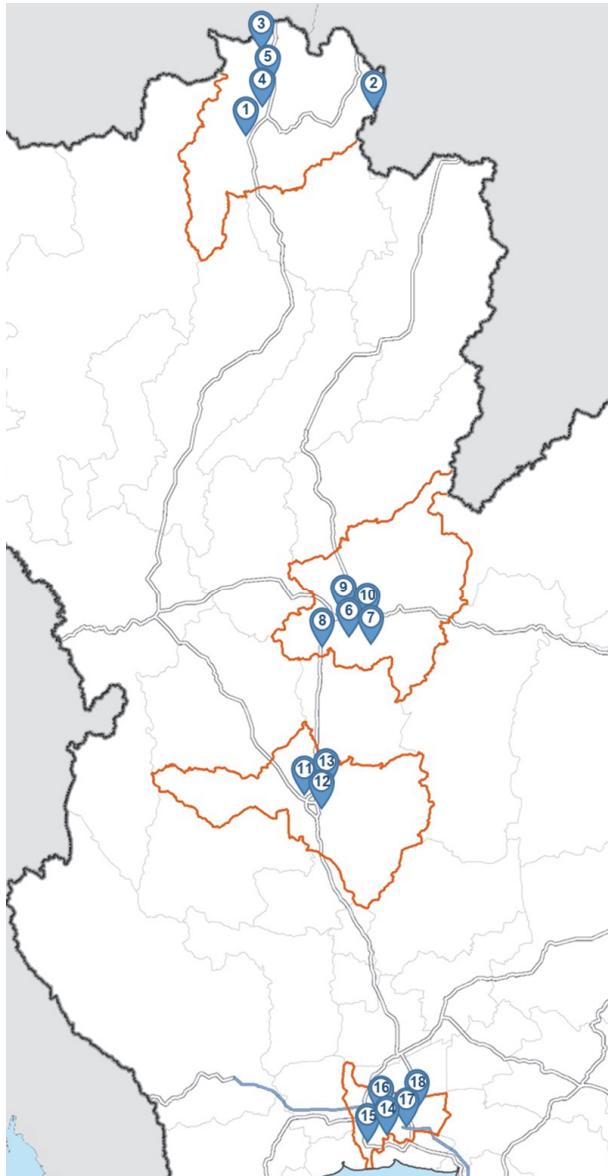
### Activities

International trade, tourism, and multimodal transportation; preparation for establishing logistics center, commerce and government agencies, tourism

### Target Industries

Target industries include agricultural, fishery and related industries; textile, garment, and leather industries; logistics; industrial estates or zones; and tourism-related industry.

**Figure 19: Map of Major Tourist Attractions along North–South Economic Corridor-1**



Note: See Table 43 for the tourist attractions along the North–South Economic Corridor-1 shown in the map.

Source: ADB. GMS Economic Corridor Assessment Team.

## 2. Tourist attractions

Along the NSEC-1 through Chiang Rai, Lampang, Tak, Nakhon Sawan, and Phitsanulok and along the NSEC-2 through Nong Khai, Udon Thani, Khon Kaen, and Nakhon Ratchasima), there are major tourist attractions in each Province as follows (Figure 19 and Table 43):

### Provinces along the North–South Economic Corridor-1

**Chiang Rai Province:**<sup>5</sup> Doi Tung; Wat Rong Khun; Doi Mae Salong; Phu Chi Fa; Golden Triangle; Baandam Museum; Wat Phra Kaew; and Wat Pra Sing

**Phitsanulok Province:**<sup>6</sup> Phra Si Rattana Mathat Temple; Phu Hin Rong Kla National Park; Namtok Chat Trakan National Park; Thung Salaeng Luang National Park; Wat Chedi Yod Thong; and Wat Chulamani

**Nakhon Sawan Province:** Wat Chaom Khiri Nat Phrot Temple and Bueng Boraphet swamp

Chiang Rai province was the most visited among the provinces in NSEC-1 in Thailand with more than 3 million visitors in 2015.<sup>7</sup> Phitsanulok was a close second, while Nakhon Sawan was a far third with 1.7million visitors in the same year (Table 44).

<sup>5</sup> Source: [www.tourismthailand.org](http://www.tourismthailand.org).

<sup>6</sup> Source: Tourism Authority of Thailand and National Parks in the North.

<sup>7</sup> Visitors are divided into two types: Tourist (Tourist) is a temporary visitor staying in a country for at least 24 hours and traveling. Excursionist is a temporary visitor, spending less than 24 hours in a country. This included those traveling by boat.

**Table 43: Tourist Attractions in North–South Economic Corridor-1**

<b>NSEC-1: Bangkok–Chiang Rai</b>	
<b>Chiang Rai</b>	
1.	<b>Wat Rong Khun</b> , perhaps better known to foreigners as the White Temple, is a contemporary, unconventional, privately owned, art exhibit in the style of a Buddhist temple in Chiang Rai Province, Thailand.
2.	<b>Phu Chi Fa</b> , also known as Phu Chee Fah, is a mountain area and national forest park in Thailand. It is located at the northeastern end of the Phi Pan Nam Range, 12 km to the southwest of Doi Pha Tang at the eastern edge of Thoeng District, Chiang Rai Province.
3.	<b>Doi Tung Royal Villa</b> The Doi Tung royal villa, former residence of the princess mother Somdej Phra Srinagarindra, is also high up on the hill. The royal villa was originally built as a summer residence for the princess mother and now houses a museum and displays her work to improve the life quality of local tribal people.
4.	<b>Wat Phra Kaew</b> is one of the most renowned temples of Chiang Rai as it was where the sacred Emerald Buddha was enshrined in 1444. The Emerald Buddha was later been relocated to Wat Phra Kaeo in Bangkok, with a few stops at Lampang and Vientiane. Wat Phra Kaeo now enshrines an official replica of the Emerald Buddha made of green jade. The temple also houses a 700-year bronze statue of Phra Chao Lan Thong in the Chiang Saen style ubosot that is hardly found elsewhere.
5.	<b>Wat Pra Sing</b> is a Buddhist temple located on Thanon Singkhilai in Tambon Wiang, Mueang district, Chiang Rai Province, northern Thailand. Wat Pra Sing was built by Pra Chao Maha Proma.
<b>Phitsanulok</b>	
6.	<b>Wat Phra Si Rattana Mahathat</b> , locally known as Wat Yai, is considered to be the most important temple in Phitsanulok. The Wat Yai was built in 1357 during the reign of Phra Maha Thamma Racha I of Sukhothai Kingdom to enshrine the famous Phra Buddha Chinnarat statue. Phra Buddha Chinnarat is a bronze-cast statue widely believed to be the most beautiful image of the Buddha in Thailand.
7.	<b>Wat Chedi Yod Thong</b> is a temple famous for its Sukhothai-style bud shaped chedi. This chedi is the only remaining one of this style in Phitsanulok Province. On the campus, there is a complex of monk houses facing a small lake, and there is a small, modern temple structure nearby.
8.	<b>Wat Chulamani</b> is one of the oldest temples in Phitsanulok Province. It is believed to be the location of the old Phitsanulok Town. King Trailokkanat built the temple and was ordained there for 8 months and 15 days. There were 2,348 courtiers who were ordained to follow him.

*continued next page*

Table 43: Continued

9. <b>Somdej Phra Naresuan Maharat Shrine of King Naresuan the Great</b> is situated at Tha Rong subdistrict and was built to commemorate King Naresuan who liberated the nation from Burmese power.
10. <b>Chan Palace</b> or “Wang Chan” was believed to have been built during the first half of the 15th century and was the residence of several Ayutthaya kings. King Naresuan, who ruled the Ayutthaya Kingdom from 1590 until 1605, was born in the Palace. He was one of Thailand’s more beloved kings because of his successful battles against the Burmese.
<b>Nakhorn Sawan</b>
11. <b>Wat Khiriwong</b> is located on the Dao-wa-dung hill in Amphoe Muang, Nakhon Sawan province. It has a sacred golden pagoda, the Prajulamanee pagoda. On the fourth floor of the pagoda is the awesome scenery of Nakhon Sawan province 10 kilometers around. To the east are Kao Gob, Boraped pond, and Pak Nam Pho market.
12. <b>Khok Mai Den Ancient City</b> , which is over 1,000 years old, is quite expansive. Traces of the old city wall remain and an artifact in the form of a sculpture of the elephant Phaya Chatthan was discovered here. The word “Khok Mai Den” refers to a kind of tree. The city was founded in the Thawarawadi period around 11th–17th Buddhist centuries ( 8.6–4.6 AD).
13. <b>Wat Woranat Banphot</b> or Khao Kop is the ancient temple of Nakhon Sawan on top of and along a hillside of Kop Mountain, around 19.5 m above sea level. There are two ways to ascend: by a flight of 438 steps or an asphalt road with twisted bends. At the mountaintop are ancient objects such as the Lord Buddha’s footprint and a Chedi built in the Sukhothai period.
<b>Bangkok</b>
14. The <b>Grand Palace</b> is a magnificent complex of buildings of great significance. Construction of the complex began in 1782 when King Rama I decided to move the capital of Thailand from Thonburi to an area known as Rattanakosin Island on the east side of the Chao Phraya river.
15. <b>Wat Arun Ratchawaram Ratchawaramahawihan</b> or Wat Arun is best known of Thailand’s landmarks and the first light of the morning reflects off the surface of the temple with pearly iridescence.
<b>NSEC-1: Bangkok–Chiang Rai</b>
16. <b>Wat Phra Kaew</b> , commonly known in English as the Temple of the Emerald Buddha and officially as Wat Phra Si Rattana Satsadaram, is regarded as the most sacred Buddhist temple in Thailand.
17. <b>Wat Saket Ratcha Wora Maha Wihan</b> in Pom Prap Sattru Phai district, Bangkok, Thailand. The temple dates back to the Ayutthaya era, when it was known as Wat Sakae.
18. <b>Wat Benchamabophit Dusitvanaram</b> is a Buddhist temple in the Dusit district of Bangkok, Thailand. Also known as the marble temple, it is one of Bangkok’s most beautiful temples and a major tourist attraction.

Source: <https://www.tourismthailand.org/About-Thailand/Destination>.



The trend and composition of visitors to each of the three provinces from 2011 to 2015 are shown in Tables 45 to 47. In all of the provinces, the majority of visitors are Thai.

Chiang Rai had the largest number of foreign visitors among the three provinces. Table 43 contains descriptions of the major tourist destinations in the three NSEC-1 provinces in Thailand.

**Table 44: Number of Visitors by Province in NSEC-1, 2011–2015**

Province	2011	2012	2013	2014	2015
<b>Northern Region</b>	<b>18,583,706</b>	<b>22,804,190</b>	<b>24,996,364</b>	<b>27,110,120</b>	<b>29,798,775</b>
Chiang Rai	2,311,370	2,751,780	2,909,804	2,869,008	3,078,976
Phitsanulok	2,100,184	2,543,766	2,714,770	2,811,609	2,968,364
Nakhon Sawan	901,400	1,159,376	1,231,014	1,241,250	1,661,391

Source: Government of Thailand, Department of Tourism, Ministry of Tourism and Sports.

**Table 45: Number of Visitors, Chiang Rai Province, 2011–2015**

	2011	2012	2013	2014	2015
<b>Visitor</b>	<b>2,311,370</b>	<b>2,751,780</b>	<b>2,909,804</b>	<b>2,869,008</b>	<b>3,078,976</b>
Thai	1,832,037	2,231,702	2,383,306	2,351,184	2,521,249
Foreigners	479,333	520,078	526,498	517,824	557,727
<b>Tourist</b>	<b>2,007,591</b>	<b>2,401,776</b>	<b>2,549,554</b>	<b>2,506,891</b>	<b>2,686,034</b>
Thai	1,576,189	1,943,656	2,090,664	2,057,389	2,201,902
Foreigners	431,402	458,120	458,890	449,502	484,132
<b>Excursionist</b>	<b>303,779</b>	<b>350,004</b>	<b>360,250</b>	<b>362,117</b>	<b>392,942</b>
Thai	255,848	288,046	292,642	293,795	319,347
Foreigners	47,931	61,958	67,608	68,322	73,595

Source: Government of Thailand, Department of Tourism, Ministry of Tourism and Sports.

**Table 46: Number of Visitors, Phitsanulok Province, 2011–2015**

	2011	2012	2013	2014	2015
<b>Visitor</b>	<b>2,100,184</b>	<b>2,543,766</b>	<b>2,714,770</b>	<b>2,811,609</b>	<b>2,968,364</b>
Thai	1,995,955	2,332,060	2,521,346	2,620,089	2,770,759
Foreigners	104,229	211,706	193,424	191,520	197,605
<b>Tourist</b>	<b>1,289,102</b>	<b>1,500,340</b>	<b>1,659,333</b>	<b>1,721,719</b>	<b>1,813,705</b>
Thai	1,194,361	1,332,432	1,512,976	1,577,950	1,665,742
Foreigners	94,741	167,908	146,357	143,769	147,963
<b>Excursionist</b>	<b>811,082</b>	<b>1,043,426</b>	<b>1,055,437</b>	<b>1,089,890</b>	<b>1,154,659</b>
Thai	801,594	999,628	1,008,370	1,042,139	1,105,017
Foreigners	9,488	43,798	47,067	47,751	49,642

Source: Government of Thailand, Department of Tourism, Ministry of Tourism and Sports.

**Table 47: Number of Visitors, Nakhon Sawan Province, 2011–2015**

Item	2011	2012	2013	2014	2015
<b>Visitor</b>	<b>901,400</b>	<b>1,159,376</b>	<b>1,231,014</b>	<b>1,241,250</b>	<b>1,661,391</b>
Thai	891,463	1,131,139	1,203,651	1,214,507	1,623,033
Foreigners	9,937	28,237	27,363	26,743	38,358
<b>Tourist</b>	<b>581,908</b>	<b>661,475</b>	<b>738,271</b>	<b>734,274</b>	<b>974,004</b>
Thai	576,099	651,310	726,585	722,975	961,242
Foreigners	5,809	10,165	11,686	11,299	12,762
<b>Excursionist</b>	<b>319,492</b>	<b>497,901</b>	<b>492,743</b>	<b>506,976</b>	<b>687,387</b>
Thai	315,364	479,829	477,066	491,532	661,791
Foreigners	4,128	18,072	15,677	15,444	25,596

Source: Government of Thailand, Department of Tourism, Ministry of Tourism and Sports.

### Tourist Attractions in the Provinces along North–South Economic Corridor-2 (Figure 20 and Table 48)

**Nong Khai Province:**<sup>8</sup> Sala Kaeo Ku or Wat Khaek and the Thai–Lao Friendship Bridge

**Udon Thani Province:** Wat Pa Phu Kon, Wat Pho Chai Sri, and Phathat Klang Nam

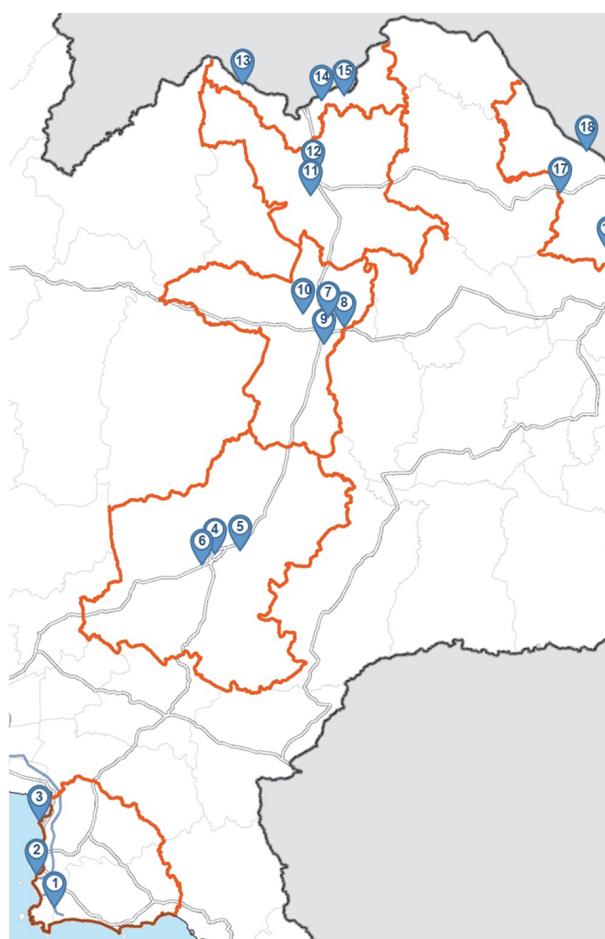
**Khon Kaen Province:** Khon Kaen Art and Cultural Centre, Phra Mahathat Kaen Nakhon, Ubol Ratana Dam, and Phu Wiang National Park

**Nakhon Ratchasima Province:** Nakhon Ratchasima Zoo, Khao Yai National Park, Prasat Phanom, and the Phimai Historical Park.

Nakhon Ratchasima is the most visited province among the four provinces, with nearly 8 million visitors in 2015 (Table 49). Following far behind are Khon Kaen (3.8 million), Udon Thani (3.2 million), and Nong Khai (2.5 million). The number of visitors had a generally upward trend from 2006 to 2015.

The trend in the number and composition of visitors to each of the four provinces of NSEC-2 are shown in Tables 50–53. As in the provinces along NSEC-1, the majority of the visitors are Thai. Nong Khai had the highest number of foreign visitors (545,350 in 2015). The other three provinces had a relatively small number of visitors ranging from around 60,000 to 140,000 in 2015.

**Figure 20: Map of Major Tourist Attractions along North–South Economic Corridor-2**



Note: See Table 48 for the tourist attractions along the North–South Economic Corridor-2 shown in the map.

Source: ADB. GMS Economic Corridor Assessment Team.

<sup>8</sup> ADB. GMS Economic Corridor Assessment Team.

Table 48: Tourist Attractions in NSEC-2 and NSEC-7

NSEC-2 and NSEC-7: Laem Chabang–Nong Kai and Nakorn Phanom	
<b>Chonburi</b>	
1.	<b>Nong Nooch Tropical Botanical Garden</b> is a botanical garden and tourist attraction at kilometer 173 on Sukhumvit Road in Chonburi Province, Thailand. It can be reached via bus, taxi, or private land transportation.
2.	<b>Sanctuary of Truth</b> in Pattaya, Thailand is an all-wood, religious building filled with sculptures based on traditional Buddhist and Hindu motifs.
3.	<b>Khao Sam Muk</b> , a low hillock situated between Ang Sila district and Bang Saen beach, is a good spot to enjoy a panoramic view of Chonburi sea. The Sam Muk named was believed to come from a tragic love story about a young lady named Sam Muk who decided to end her life after she couldn't marry the man she loved. This hilltop is also a home for a group of wild monkeys.
<b>Nakorn Ratchasima</b>	
4.	<b>Ya Mo</b> is a statue of Thao Suranari that stands in the center of Nakhon Ratchasima and is a popular object of devotion. A festival in her honour is held each year at the end of March and the beginning of April. The statue was designed by Phra Thewaphinimmit (1888–1942).
5.	<b>Prasat Hin Phanomwan</b> was built in the 15th Buddhist century and was renovated during 18th and 19th centuries. The place was for Hindu religious practices and later became a Buddhist ritual site. Although most of the place was ruined, the main pagoda and a tiered pagoda still remain standing. Surrounded by a sandstone walkway and laterite wall, the southwest area is a sandstone pagoda called Prang Noi with a large Buddha statue inside.
6.	<b>Watpa Salawan</b> is a Thai Theravada Buddhist forest temple located in downtown Nakhon Ratchasima, Thailand.
<b>Khon Kaen</b>	
7.	<b>Phra Mahathat Kaen Nakhon</b> , Kaen Nakhon, 'The Great Buddha's Relics' or 'The Nine Story Stupa Located in Wat Nong Waeng,' is a Thai royal temple of the old town. Wat Nong Waeng is located close to Kaen Nakhon marsh on Klangmuang Road, Muang District.
8.	<b>Wat Pa Saeng Arun</b> has the Sim Isan's outstanding features which are its typical shape, style, and solidity, and the beauty of its murals. This revered place was intended for later generations to learn, treasure, and conserve local architecture.
9.	<b>Ku Praphachai</b> , also known as Ku Ban Na Kham Noi, is an ancient Khmer-style tower built of laterite bricks and sandstone. It was constructed around the 13th century during the reign of King Jayavarman VII of the ancient Khmer Empire.
10.	<b>Wat Chaisi</b> is a temple housing interior and exterior murals by a folk artisan from Maha Sarakham known as Thong Thipcha. The building originally had a northeastern roof style with an extended roof on each side. Later, a new roof of the Rattanakosin style replaced the old dilapidated one.

continued next page

Table 48: Continued

Udon Thani	
11.	<b>Wat Pa Ban Tat</b> is a Buddhist monastery in Udon Thani Province of Thailand. Wat Pa Ban Tat was set up by a famous Thai meditation bhikkhu called Venerable Ajahn Maha Bua.
12.	<b>Wat Thung Si Mueang</b> was constructed during the reign of King Rama III to house a replica of Buddha's footprint. The most beautiful structure in the temple is perhaps the wooden Tripitaka Library (Ho Trai) that was designed to sit on stilts in the middle of the pool to protect the materials inside from insects such as ants and termites. The architecture here is a mixture of Laos and rattankosin styles.
Nong Khai	
13.	<b>Sala Keoku</b> is a park featuring giant concrete sculptures inspired by Buddhism. It is located near Nong Khai, Thailand in immediate proximity to the Thai–Lao border and the Mekong river.
NSEC-2 and NSEC-7: Lam Chabang–Nong Khai and Nakorn Phanom	
14.	<b>Phra Aram Luang Wat Pho Chai</b> is a royal temple with a sacred Buddha image revered by the people of Nong Khai. This Buddha image with graceful features sits cross-legged, was cast from bright yellow gold in the posture of subduing Mara.
15.	<b>Wat Pha Tak Suea</b> is a mountaintop temple with a serene, commanding view of the livelihood of both Thais and Laotians. Visitors will experience the natural surroundings of the temple.
Nakorn Phanom	
16.	<b>Phra That Phanom Temple</b> is the most important Buddhist site in the province. It features a 3 meter tall, square-shaped pagoda, which is Laotian-influenced. It is believed that Phra That Phanom was originally built before the 12th Buddhist century, but it entirely collapsed on 11 August 1975 after several days of rain. The current pagoda was later built according to the former design. Atop the pagoda is a 110 kilogram solid gold spire.
17.	<b>Wat Phra That Mahachai</b> is composed of a 37-meter stupa regarded as a sacred monument as it houses relics of the Lord Buddha and Arhats. The temple also houses sacred Buddha images: Phra Phutthachaiyasit, the principal Buddha image, as well as a Buddha image carved from a Neem tree, which is the largest of its kind in Thailand. The temple also has one of the most magnificent mural paintings of the North East region.
NSEC-2 and NSEC-7: Lam Chabang–Nong Khai and Nakorn Phanom	
18.	<b>Phra That Tha Uthen</b> Constructed in 1912, the Phra That Tha Uthen houses relics of the Lord Buddha's disciple brought over from Yangon, Myanmar.

NSEC = North–South Economic Corridor.

Source: <https://www.tourismthailand.org/About-Thailand/Destination>.



**Table 49: Number of Visitors by Province in North–South Economic Corridor-2, 2006–2015**

Province	2011	2012	2013	2014	2015
<b>Northeastern Region</b>	<b>26,600,913</b>	<b>28,165,023</b>	<b>31,280,716</b>	<b>32,114,515</b>	<b>34,931,688</b>
Nong Khai	2,151,028	2,103,000	2,349,340	2,368,563	2,517,345
Udon Thani	2,973,569	2,750,429	3,033,967	3,073,887	3,245,508
Khon Kaen	3,210,374	3,247,176	3,593,042	3,669,884	3,881,646
Nakhon Ratchasima	5,771,424	6,198,758	6,804,563	7,063,059	7,879,571

Note: Visitors = Tourist + Excursionist.

Source: Government of Thailand, Department of Tourism, Ministry of Tourism and Sports.

**Table 50: Number of Visitors, Nong Khai Province, 2011–2015**

	2011	2012	2013	2014	2015
<b>Visitor</b>	<b>2,151,028</b>	<b>2,103,000</b>	<b>2,349,340</b>	<b>2,368,563</b>	<b>2,517,345</b>
Thai	1,930,133	1,625,372	1,829,762	1,841,582	1,971,995
Foreigners	220,895	477,628	519,578	526,981	545,350
<b>Tourist</b>	<b>1,163,041</b>	<b>1,012,510</b>	<b>1,146,466</b>	<b>1,156,527</b>	<b>1,241,475</b>
Thai	1,123,929	963,389	1,097,203	1,107,958	1,190,967
Foreigners	39,112	49,121	49,263	48,569	50,508
<b>Excursionist</b>	<b>987,987</b>	<b>1,090,490</b>	<b>1,202,874</b>	<b>1,212,036</b>	<b>1,275,870</b>
Thai	806,204	661,983	732,559	733,624	781,028
Foreigners	181,783	428,507	470,315	478,412	494,842

Source: Government of Thailand, Department of Tourism, Ministry of Tourism and Sports.

**Table 51: Number of Visitors, Udon Thani Province, 2011–2015**

Item	2011	2012	2013	2014	2015
<b>Visitor</b>	<b>2,973,569</b>	<b>2,750,429</b>	<b>3,033,967</b>	<b>3,073,887</b>	<b>3,245,508</b>
Thai	2,866,666	2,628,779	2,897,571	2,936,149	3,104,984
Foreigners	106,903	121,650	136,396	137,738	140,524
<b>Tourist</b>	<b>2,035,982</b>	<b>1,941,219</b>	<b>2,127,343</b>	<b>2,125,739</b>	<b>2,240,664</b>
Thai	1,968,576	1,871,331	2,051,490	2,050,234	2,163,506
Foreigners	67,406	69,888	75,853	75,505	77,158
<b>Excursionist</b>	<b>937,587</b>	<b>809,210</b>	<b>906,624</b>	<b>948,148</b>	<b>1,004,844</b>
Thai	898,090	757,448	846,081	885,915	941,478
Foreigners	39,497	51,762	60,543	62,233	63,366

Source: Government of Thailand, Department of Tourism, Ministry of Tourism and Sports.

**Table 52: Number of Visitors, Khon Kaen Province, 2011–2015**

	2011	2012	2013	2014	2015
<b>Visitor</b>	<b>3,210,374</b>	<b>3,247,176</b>	<b>3,593,042</b>	<b>3,669,884</b>	<b>3,881,646</b>
Thai	3,158,862	3,192,054	3,531,828	3,609,152	3,818,917
Foreigners	51,512	55,122	61,214	60,732	62,729
<b>Tourist</b>	<b>2,048,346</b>	<b>2,120,092</b>	<b>2,356,736</b>	<b>2,392,986</b>	<b>2,493,113</b>
Thai	2,014,680	2,082,763	2,316,175	2,352,917	2,452,004
Foreigners	33,666	37,329	40,561	40,069	41,109
<b>Excursionist</b>	<b>1,162,028</b>	<b>1,127,084</b>	<b>1,236,306</b>	<b>1,276,898</b>	<b>1,388,533</b>
Thai	1,144,182	1,109,291	1,215,653	1,256,235	1,366,913
Foreigners	17,846	17,793	20,653	20,663	21,620

Source: Government of Thailand, Department of Tourism, Ministry of Tourism and Sports.

**Table 53: Number of Visitors, Nakhon Ratchasima Province, 2011–2015**

	2011	2012	2013	2014	2015
<b>Visitor</b>	<b>5,771,424</b>	<b>6,198,758</b>	<b>6,804,563</b>	<b>7,063,059</b>	<b>7,879,571</b>
Thai	5,671,679	6,082,187	6,677,142	6,930,725	7,737,834
Foreigners	99,745	116,571	127,421	132,334	141,737
<b>Tourist</b>	<b>3,218,835</b>	<b>3,403,694</b>	<b>3,934,041</b>	<b>4,114,261</b>	<b>4,597,649</b>
Thai	3,143,633	3,320,846	3,842,727	4,019,347	4,497,367
Foreigners	75,202	82,848	91,314	94,914	100,282
<b>Excursionist</b>	<b>2,552,589</b>	<b>2,795,064</b>	<b>2,870,522</b>	<b>2,948,798</b>	<b>3,281,922</b>
Thai	2,528,046	2,761,341	2,834,415	2,911,378	3,240,467
Foreigners	24,543	33,723	36,107	37,420	41,455

Source: Government of Thailand, Department of Tourism, Ministry of Tourism and Sports.

### 3. Cross-Border Trade

#### Chiang Rai Province

##### Chiang Saen Customs Checkpoint

Export value at the Chiang Saen Customs Checkpoint more than doubled from 13.6 million baht 2012 to 26.7 million baht in 2013 (Table 54). This upward trend continued until it peaked at 34.1 million baht in 2015.

Export value dropped to 21.4 million baht in 2016. There is a large imbalance between exports and imports, with the ratio of exports to imports averaging 30 to 1 from 2012 to 2016. This ratio reached 48 to 1 in 2015. While export value grew rapidly between 2012 and 2015, import value did not grow as fast. The major exports and imports via this checkpoint are shown in Table 55.

**Table 54: Trade Value at Chiang Saen Border Checkpoint, 2012–2016**

	Trade Value (million baht)				
	2012	2013	2014	2015	2016
Exports	13,626.9	26,756.2	28,408.8	34,137.8	21,407.8
Imports	512.2	654.7	702.2	669.7	710.9
<b>Total</b>	<b>14,139.1</b>	<b>27,410.9</b>	<b>29,111.0</b>	<b>34,807.5</b>	<b>22,118.7</b>

Source: Government of Thailand, Chiang Saen Customs Checkpoint, Chiang Rai Province.

**Table 55: Main Commodities Traded at Chiang Saen Border Checkpoint, 2016  
(million baht)**

Imports			Exports		
No.	Item	Amount	No.	Item	Amount
1	fresh garlic	149.9	1	frozen chicken parts	3,137.8
2	sunflower seeds	130.0	2	pigs	3,037.7
3	Pomegranate	75.4	3	vehicle	1,409.2
4	dry garlic	72.0	4	sugar	1,023.2
5	potato	59.6	5	fuel	968.7

Source: Government of Thailand, Chiang Saen Customs Checkpoint, Chiang Rai Province.

**Chiang Khong Customs Checkpoint**

In 2016, the trade value via the Chiang Khong Customs Checkpoint amounted to 20.6 billion baht. Export value grew from year to year, averaging around 12% per year (Table 56). Import value increased by 10% from 2012 to 2013, but dropped slightly in 2014.

It quickly recovered in 2015 and 2016, growing by nearly 50% per year. However, this improved performance of imports did not change the imbalance at this checkpoint, with exports significantly exceeding imports during the period from 2012 to 2016. The major exports and imports via this checkpoint are shown in Table 57.

**Table 56: Trade Value at Chiang Khong Border Checkpoint, 2012–2016**

	Trade Value (million baht)				
	2012	2013	2014	2015	2016
Export	9,453.7	10,298.9	11,992.2	13,359.7	14,611.3
Import	3,071.1	3,344.0	3,285.8	3,803.7	5,983.1
<b>Total</b>	<b>12,524.8</b>	<b>13,642.9</b>	<b>15,278.0</b>	<b>17,163.4</b>	<b>20,594.4</b>

Source: Government of Thailand, Chiang Khong Customs Checkpoint, Chiang Rai Province.

**Table 57: Main Commodities Traded at Chiang Khong Border Checkpoint, 2016  
(million baht)**

Imports			Exports		
No.	Item	Amount	No.	Item	Amount
1	fresh fruits	2,886.9	1	rice	3,971.8
2	fresh vegetables	2,11.5	2	consumer goods	2,173.4
3	fresh flower	338.6	3	fresh fruits	2,056.0
4	machine and equipment	269.8	4	petroleum	1,094.4
5	argon gas	125.0	5	construction materials	880.3

Source: Government of Thailand, Chiang Khong Customs Checkpoint, Chiang Rai Province.

### Mae Sai Customs Checkpoint

In 2016, the trade value via Mae Sai Customs Checkpoint amounted to 9,530.33 million baht (Table 58). Export value amounted to 9,312.45 million baht in 2016, down from 9,726.35 million baht in 2015. Import value amounted to 217.88 million baht in 2016,

up from 180.18 million baht in 2015. There is no clear trend with respect to both export and import value during the period from 2012 to 2016, but the same pattern of exports significantly exceeding imports can also be observed at this checkpoint. The major exports and imports via this checkpoint are shown in Table 59.

**Table 58: Trade Value at Mae Sai Border Checkpoint**

	Trade Value (million baht)				
	2012	2013	2014	2015	2016
Export	9,456.8	10,778.3	11,575.1	9,726.3	9,312.4
Import	167.0	236.5	577.1	180.2	217.9
<b>Total</b>	<b>9,623.8</b>	<b>11,014.8</b>	<b>12,152.2</b>	<b>9,906.5</b>	<b>9,530.3</b>

Source: Government of Thailand, Mae Sai Customs Checkpoint, Chiang Rai Province.

**Table 59: Main Commodities Traded at Mae Sai Border Checkpoint, 2016  
(million baht)**

Imports			Exports		
No.	Item	Amount	No.	Item	Amount
1	Manganese	48,448.3	1	Fuel	1,182.0
2	Fresh fruits	28,309.6	2	Drink and beverage (non-alcohol)	449.9
3	Tea	14,299.7	3	Cement	415.5
4	Women ready-to-wear clothes	11,131.4	4	Liquor and beer	213.1
5	Men ready-to-wear clothes	9,810.7	5	Steel	175.6

Source: Government of Thailand, Chiang Sai Customs Checkpoint, Chiang Rai Province.



## Nong Khai Province

### First Thai–Lao Friendship Bridge Checkpoint

Export trade value via the First Thai–Lao Friendship Bridge Checkpoint was generally on a downtrend from 2012 to 2016, with the exception of the period from 2013 to

2014 (Table 60). Import value increased in 2015 and 2016, but this was from a low base, so the gap between export value and import value remained quite substantial, with the former being seven times more than the latter. The major exports and imports via this checkpoint are shown in Table 61.

**Table 60: Trade Value at the First Thai–Lao Friendship Bridge Checkpoint, 2012–2016**

	Trade Value (million baht)				
	2012	2013	2014	2015	2016
Export	61,349.8	56,044.8	58,631.1	57,258.0	56,560.9
Import	1,998.7	1,198.5	1,497.3	4,362.7	7,471.3
<b>Total</b>	<b>63,348.5</b>	<b>57,243.3</b>	<b>60,128.4</b>	<b>61,620.7</b>	<b>64,0031.9</b>

Source: Government of Thailand, Nong Khai Customs Checkpoint, Nong Khai Province.

**Table 61: Main Commodities Traded at the First Thai–Lao Friendship Bridge Checkpoint, 2016 (million baht)**

Imports			Exports		
No.	Item	Amount	No.	Item	Amount
1	Electricity	5,315.5	1	New car	8,380.9
2	New truck (<3000 cc)	882.4	2	Fuel	7,427.00
3	Electric cable for car	612.0	3	Drink & beverage (non-alcohol)	1,088.8
4	Shores component	293.2	4	Feeds	755.6
5	Green leaf tobacco	279.9	5	Used truck	717.6

Source: Government of Thailand, Nong Khai Customs Checkpoint, Nong Khai Province.

## D. Southern Economic Corridor

### 1. Special Economic Zones

#### Sa Kaeo Special Economic Development Zone

Sa Kaeo Special Economic Development Zone is in the first phase of the SEZ development program. It is situated at Pa Rai subdistrict, Aranyaprathet district, Sa Kaeo Province, 260 km from Bangkok via Highway No. 304. Its land area covers 332 sq km (207,500 rai). The initial investment for basic infrastructure and customs checkpoint development is 608 million baht with 216 million baht for transport and communications; 279 million baht for customs checkpoint; and 123 million baht for public utilities.

The Zone is located along SEC-1 where Cambodia's SEZs in Poipet-O'Neang, Siem Reap, and Sisophon have also been established. It can be developed into an area engaging in wholesale-retail trade with Cambodia along and across the border. It can also serve as a production base for the agro-processing industry, textile, clothes and leather, furniture, accessories, medical devices, electrical and electronic appliances, automotive and parts, and plastic products. It can also provide transport services, international warehousing, and support tourism-related industries.

Figure 21: Sa Kaeo Special Economic Development Zone



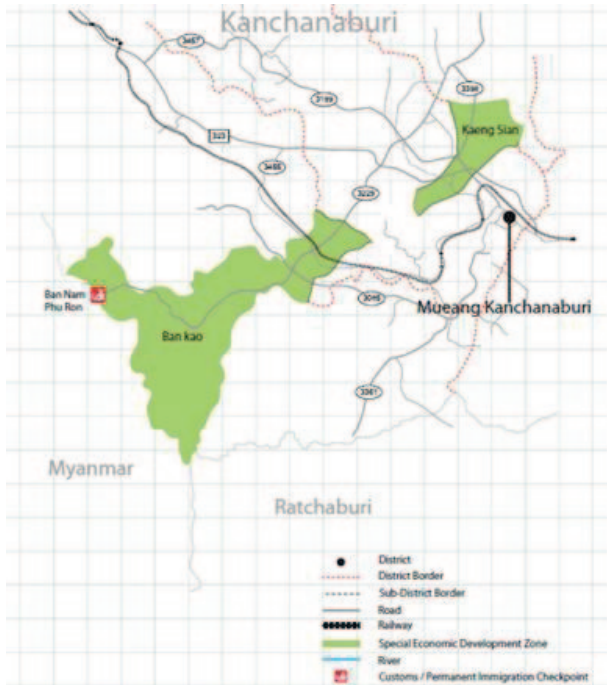
Source: BOI. 2017. *A Guide to Investment in the Special Economic Development Zones (SEZs)*.

#### Kanchanaburi Special Economic Development Zone

Kanchanaburi Special Economic Development Zone has a land area of 260.79 sq m (162,993.75 rai) covering two subdistricts along the border of Mueang district, Kanchanaburi Province. It is 129 km from Bangkok along Highway 4 and Highway 323. The Laem Chabang port-Bangyai-Ban Phu Nam Ron route is under construction.

The Kanchanaburi Special Economic Development Zone has strong potential to become a border economic zone.

**Figure 22: Kanchanaburi Special Economic Development Zone**



Source: BOI. 2017. *A Guide to Investment in the Special Economic Development Zones (SEZs)*.

With its link to the Dawei deep sea port, it can be developed into a major economic area generating cross-border trade and investment, and stimulating industry and commerce in the west. The target industries and activities in the Zone include agricultural, fishery and related industries; ceramic products; textile, garment, and leather industries; manufacture of furniture; gems and jewelry; medical equipment; automotive, machinery and parts; electrical appliances and electronics; plastic products; medicine; logistics; industrial estates or zones; and tourism-related industries.

**Figure 23: Trat Special Economic Development Zone**



Source: BOI. 2017. *A Guide to Investment in the Special Economic Development Zones (SEZs)*.

### Trat Special Economic Development Zone

The Trat Special Economic Development Zone is in the first phase of the program for developing SEZs in Thailand. It has a land area of 50.2 sq km (31,375 rai) covering the Khlong Yai district with three subdistricts (Khlong Yai, Mai Rood, and Hat Lek). It is situated along the SEC with connection to Laem Chabang port approximately 340 km away,

and Sihanoukville port in Cambodia approximately 2.0 km away. It is a gateway for cross-border trade and has the potential to become a hub for the distribution of goods, logistics, eco-tourism, and small-scale industries.

The Trat Special Economic Development Zone was, therefore, designed as an international trade and logistics hub, and a tourism base in the area. It can be linked to the Koh Kong Special Economic Zone in Cambodia which has attracted foreign direct investment in a car factory (Hyundai), volleyball factory (Mikasa), and factory producing electric wire for cars (Yazaki). Promoted target activities in the zone include agro-industry, fishery and related activities; logistics; industrial estates or zones; and tourism-related industries.

### **Eastern Economic Corridor**

The Eastern Economic Corridor (EEC) is considered the best strategic area in ASEAN with links to the PRC and India.<sup>9</sup> The east, particularly Chachoengsao, Chonburi, and Rayong Provinces, is the country's most important industrial production base. It is equipped with basic infrastructure such as the Laem Chabang commercial port, the Map Ta Phut industrial port, intercity motorways, a dual track rail, and the U-Tapao airport. It offers world-class tourist destinations such as Pattaya. It is also ready to support industrial expansion.

The development of EEC will be a move towards making it Asia's leading economic area. This will increase competitiveness, expand the country's economy, promote urbanization and urban environment, facilitate and provide incentives to investors, increase employment, and upgrade people's quality of life and income.

### **Target Areas in the Development of the Eastern Economic Corridor**

The development of Chonburi, Rayong, and Chachoengsao Provinces under the implementation plan to develop the EEC consists of four components: (i) Implementation plan to develop potential industries; (ii) Implementation plan to develop communication facilities and logistics; (iii) Implementation plan to support urbanization and provide public utilities (water, health, urban environment); and (iv) management (Figure 24).

Currently, the government's priority projects include the Laem Chabang port Phase 3 Project (construction of coastal pier A), and those aimed at improving facilities and solving traffic bottlenecks. These are expected to help meet the demands of increased international maritime transport of goods in the future, improve connectivity with other countries, and support diversification in terms of goods produced and traded. The other projects including the connection of Map Ta Phut,

<sup>9</sup> Office of the National Economic and Social Development Board Industrial Estate Authority of Thailand and Public Debt Management Office.

Figure 24: Implementation Plan of the Eastern Economic Corridor



Source: Public Debt Management Office (2016).

Laem Chabang, and Sattahip ports, and the Hua Mak-Chachoengsao-Sri Racha Rail Efficiency Improvement Project, construction of which is expected to start in 2019.

### Industrial Zones or Estates

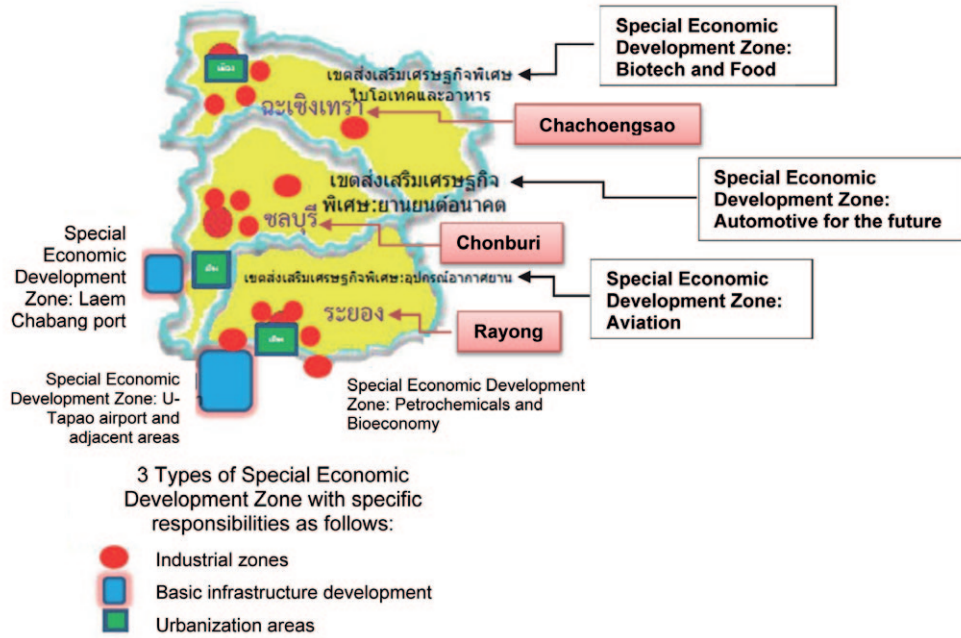
The industrial estates or zones in the EEC cover a total land area of 102,906 rai or roughly 164.96 square km (Figures 25 and 26). The development plan for industrial estates includes those involved in Innovation (CAT), Medical Hub, Food for the Future, Aviation and Logistics, Agriculture and Biotechnology, and Robotics. At present, the industrial estates in the EEC consist of 30 industrial estates: (i) 21 ready for investment; (ii) six undergoing going development; and (iii) three reserved (Padaeng, Laem Chabang, and Cosmic industrial estates).

### Target Industries

The target industries in the EEC area consist of a “Super Cluster” and 10 target industries using advanced and environmentally friendly technology. The Super Cluster includes: automotive and parts; electrical appliances, electronics, and telecommunication equipment; eco-friendly petrochemicals and chemicals; digital; Food Innopolis; medical hub; agro-processing; and textiles and garments. The 10 target industries included for the “First Curve”: next-generation automotive; smart electronics; affluent, medical, and wellness Tourism; agriculture and biotechnology; and food for the future. The “New S-Curve” under the 10 target industries includes: robotics; aviation and logistics; biofuels and biochemicals; digital; and medical hub. The budget for the initial investment plan of the 10 target industries is 630,000 million baht (2017–2021).

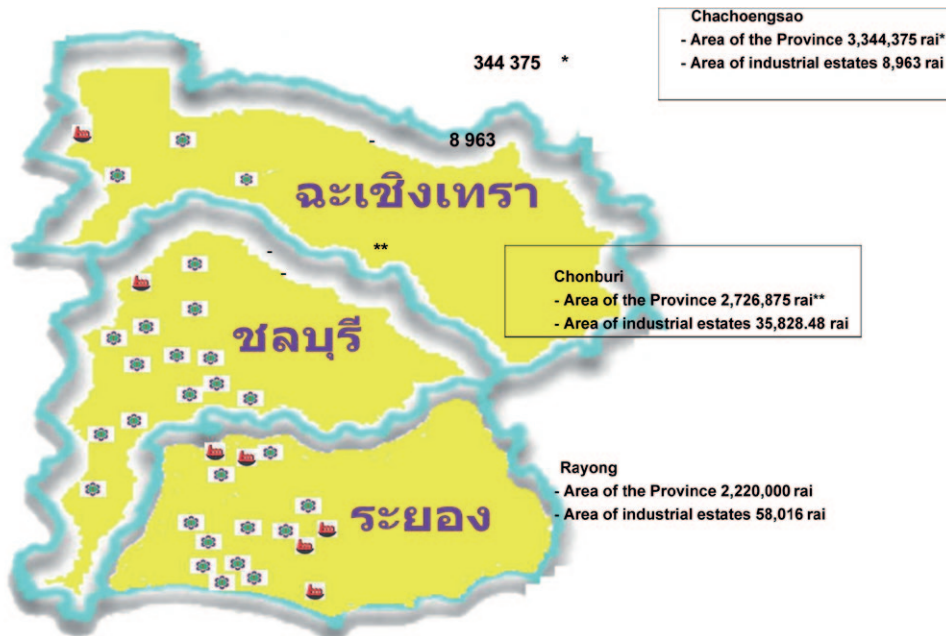


Figure 25: Development Plan of Eastern Economic Corridor



Source: IEAT. 2016. www.ieat.go.th.

Figure 26: Industrial Estates in the Eastern Economic Corridor



Source: IEAT. 2016. www.ieat.go.th.



### **Basic Infrastructure, Communication, and Logistics**

This component consists of projects involving road, rail, airport, and seaport development. The main projects under each category are listed below.

**Roads:** Construction of motorways covering the Bangkok, Map Ta Phut–Pattaya, and Chonburi–Laem Chabang–Nakhon Ratchasima routes; and improvement of the highway around U-Tapao, Map Ta Phut, and the route along the coast (Chonburi–Rayong).

**Rail:** Khlong Sib Kao–Chachoengsao–Khaeng Koi dual track rail; high speed train (Rayong–Pattaya–Bangkok); and U-Tapao railway station.

**Airport and aviation:** Development of U-Tapao airport as the third commercial airport; aviation maintenance, repair and operations; air cargo and logistics hub; general aviation; additional; passengers' terminal; training center; and free trade zone.

**Seaport development:** Sattahip sea port development to support ferries connecting the coasts on the Gulf for Thailand; Laem Chabang sea port development; Center for rail transport of goods (multimodal link); Coastal pier (pier A) at Laem Chabang sea port to improve utilities and solve traffic congestion in Laem Chabang port.

### **Public Utilities, Urbanization, Tourism, and Health**

This component includes the (i) development, improvement, and expansion of transmission system; (ii) increase in reservoir capacity; (iii) installation of water pipes, improvement and increase of capacity; (iv) upgrade of public health and education services; (v) development and integration of information and communication technology; and (vi) development of the environment of major cities (e.g., Chachoengsao, Pattaya, U-Tapao, Rayong), so that they are pleasant to live in, able to accommodate economic and social expansion, and have improved wastewater management. For tourism, Bali Hai Bay will be developed starting with the installation of electrical and underground telecommunications systems.

### **Investment Incentives**

**Personal income tax:** Exemption of income tax of multi-national corporations and international trading companies for 15 years; reduction in personal income tax of 15% for foreign experts; and personal income tax exemption for experts working in the target industries

**Corporate income tax:** At present, based on the BOI Investment Promotion Act of Super Cluster 6+2, for the “Super Cluster 6” (comprising “1. Automotive, 2. Electrical appliances, electronics, and telecommunication equipment, 3. Eco-friendly petrochemicals and chemicals, 4. Digital, 5. Food Innopolis, 6. Medical Hub”), these are an 8-year corporate income tax exemption, and a 50%

corporate income tax reduction for 5 years; and 50% corporate income tax reduction for 5 years for other clusters (Agro-processing, Textiles and Garments). In the future, the tax incentives for the “Super Cluster 6” will be retained, while those for other clusters will be a 3–8 year corporate income tax exemption and a 50% corporate income tax reduction for 5 years.

**Other taxes and incentives:** The Industrial Estate Authority of Thailand Act 4/2555 provides for the following incentives: (i) exemption from import duty, value added tax, and excise tax on machinery, equipment, tool to be used in the manufacturing of goods, assembling, and installation of factories; (ii) exemption from import duty, value added tax, and excise tax on imported materials to be manufactured into goods or for commercial purposes; and (iii) exemption from export duty, value added tax, and excise tax for raw materials, by-products, and other products derived from the production. Moreover, the BOI Investment Promotion Act presently allows work permit of foreign labor for 4 years. This will be extended to 5 years in the future. Foreign nationals living in the country may apply for permanent residency after using up their work permit visa of 5 years. The current One Stop Service will be an integrated One Stop Service including a logistics center which is envisioned to be set up by the private sector.

## 2. Tourist attractions

The SEC offers visitors a variety of touristic experience along the provinces and areas it traverses in Thailand.<sup>10</sup> These are listed below. Table 62 contains descriptions of the main tourist destinations in the provinces along SEC.

**Kanchanaburi:** Erawan National Park; Sai Yok Noi; The Bridge on the River Kwai; and Hellfire Pass Mon Bridge.

**Sa Kaeo:** Sdok Kok Thom; Pang Sida National Park; Lalu; Ban Khlong Luk Border Market; Srakaew and Srakwun; and City Pillar Shrine

**Trat:** Mu Ko Chang National Park; Ko Kut; Ko Kham; Ko Mak; Laem Ngop; Ban Nam; and Chieo.

**Chonburi:** Khao Chi Chan Buddha; Bangsaen Beach; Nong Mon Market; Silverlake Vineyard; and Ko Kham

**Rayong:** Taphong Agro-Tourism Center; Phra Samut Chedi Klang Nam; Nangyai Museum, Bandon Temple; Wang Kaew Garden; Laem Mae Phim Beach; Phayun Beach; and Phala Beach

**Chantaburi:** Namtok Phlio National Park; Kung Wiman Beach; Tuek Daeng; and Wat Mangkon Buppharam

<sup>10</sup> <https://www.tourismthailand.org/About-Thailand/Destination>.

**Table 62: Tourist Attractions in the Southern Economic Corridor**

<b>SEC: Ban Phunamron–Aranyaprathet and Trat</b>	
<b>Kanchanaburi</b>	
1.	<b>Erawan National Park</b> located near the Myanmar (Burma) border is known for Erawan Falls, which cascades down six tiers. The park’s many caves include Phartat Cave, which has stalactites and stalagmites, and Ta Duang Cave, featuring rock paintings. Limestone Wang Bah Dan Cave has two levels, with a stream in its lower chamber. The park is crossed by trails and is home to elephants and deer.
2.	<b>Sai Yok Noi</b> is a waterfall in the Tenasserim Hills, Sai Yok District of Kanchanaburi Province, Thailand, near the town of Nam Tok Sai Yok Noi. It is the most popular attraction of the Sai Yok National Park.
3.	<b>The Bridge on the River Kwai</b> is part of the infamous Death Railway, spanning over Kwai Yai River, built by prisoners of World War II under the supervision of the Japanese Imperialist Army. The 415-km railway was built to connect Thailand and Myanmar to secure supplies for the Japanese army during their Greater East-Asian War.
4.	<b>Hellfire Pass</b> is the largest rock cutting on the railway. A tunnel would have been possible to build instead of a cutting, but this could only be constructed at the two ends at any one time, whereas the cutting could be constructed at all points simultaneously despite the excess effort required by the POWs.
5.	<b>Mon Bridge</b> is Thailand’s longest wooden bridge with a length of 850 m and is the world’s second longest wooden bridge next to U Bein Bridge in Burma. The bridge was considered the route of international friendship between Thais and Mons because it links Sangkhlaburi district to the Mon community on the other side of the bank. It became one of the well-known tourist attractions in Kanchanaburi.
<b>Sakaeo</b>	
6.	<b>Sdok Kok Thom</b> , or Sdok Kak Thom, is an 11th century Khmer temple in present-day Thailand, located about 34 kilometres northeast of the Thai border town of Aranyaprathet. The temple was dedicated to the Hindu god Shiva.
7.	<b>Pang Sida National Park</b> is a national park in the Sankamphaeng Range, covering 844 sq km in the eastern Thai province of Sa Kaeo. It is 28 km north of Sa Kaeo City, the capital of the province.
<b>SEC: Ban Phunamron–Aranyaprathet and Trat</b>	
8.	<b>Lalu</b> is a new natural attraction of Sakaeo. Lalu is approximately 2,000 rai, and offers beautiful scenery and attractions. “Lalu” is a Khmer word meaning “pierced”, due to the natural phenomenon of spectacular rock formations caused by a shallow depression in the ground where soil erosion has produced strange shapes like city wall, cliff, rocket, and others also found in “Phae Muang Phi” of Phrae Province.
9.	<b>Ban Khlong Luk Border Market</b> is home to shops that sell clothes, shoes, bags, household goods, daily usables, food and more. The goods are procured from Cambodia at wholesale.

*continued next page*

Table 62: Continued

Trat
10. <b>Mu Ko Chang National Park</b> is a marine national park with an area of 650 sq km, including more than 52 islands. One of the largest Thai islands in the Gulf of Thailand contains dense, steep jungles. Mu Ko Chang National Park, a preserve with hiking trails and waterfalls such as tiered Klong Plu, covers the interior and extends to offshore coral reefs.
11. <b>Ko Kut</b> is an island in Trat Province in the Gulf of Thailand and the easternmost island before Cambodia. With about 2,000 residents, it is the district with the smallest population in Thailand.
12. <b>Ko Kham</b> is a small island near Ko Mak, in Trat Province, Thailand. It can be reached with a sea kayak from Ko Mak or by walking during low tide. Ko Kham has nice places to snorkel, depending on the direction of the wind.
13. <b>Ko Mak</b> is a small island of Trat Province, Thailand situated close to the Cambodian border. It is the 3rd biggest island in that area after Koh Chang and Koh Kut. The island is a small tropical paradise covering an area of 16 sq km with it being around 10 km wide and 5 km from north to south. The island is named after the Areca nut.

km = kilometer, sq km = square kilometer.

Source: <https://www.tourismthailand.org/About-Thailand/Destination>.

### **Number of Visitors to the Southern Economic Corridor Provinces in Thailand**

Chonburi is the most visited province among the six provinces in the SEC in Thailand, followed by Kanchanaburi and Rayong (Table 63). In 2015, there were 11.6 million visitors to Chonburi, 7.6 million to Kanchanaburi, and 6.6 million to Rayong. The number of visitors to Chantaburi, Trat, and Sa Kaeo was relatively small with around two million to each province. Nevertheless, there was a continuing upward trend in all of the six provinces during the period from 2011 to 2015. Tables 64–69 show the number of visitors to each province

broken down into Thai and foreign visitors. Chonburi is the only province where foreign visitors outnumbered Thai visitors. In 2015, there were 7 million foreign visitors to Chonburi compared to 4.8 million Thai visitors.

### **3. Cross-Border Trade**

The main channels for cross-border trade along the SEC in Thailand are the Aranyaprathet Border Checkpoint in Sa Kaeo Province and the Khlong Yai Border Checkpoint in Trat Province.

**Table 63: Number of Visitors to Kanchanaburi, Sa Kaeo, Trat, Chonburi, Rayong, and Chantaburi Provinces, 2011–2015**

Visitor	Year				
	2011	2012	2013	2014	2015
Kanchanaburi Province	5,748,241	5,996,482	6,413,556	6,641,111	7,574,278
Sa Kaeo Province	1,055,807	1,537,656	1,641,734	1,691,752	1,790,612
Trat Province	1,097,352	1,625,918	1,685,537	1,742,621	1,864,064
Chonburi Province	10,823,369	11,224,397	11,736,488	10,843,412	11,742,224
Rayong Province	4,583,551	5,347,954	5,643,533	6,150,336	6,650,710
Chantaburi Province	1,518,859	1,559,370	1,645,811	1,700,799	1,869,469

Source: Government of Thailand, Department of Tourism, Ministry of Tourism and Sports.

**Table 64: Number of Visitors, Kanchanaburi Province, 2011–2015**

	2011	2012	2013	2014	2015
<b>Visitor</b>	<b>5,748,241</b>	<b>5,996,482</b>	<b>6,413,556</b>	<b>6,641,111</b>	<b>7,574,278</b>
Thai	5,478,059	5,636,860	6,049,462	6,269,411	7,170,721
Foreigners	270,182	359,622	364,094	371,700	403,557
<b>Tourist</b>	<b>2,023,346</b>	<b>2,121,636</b>	<b>2,400,692</b>	<b>2,493,161</b>	<b>2,941,596</b>
Thai	1,932,586	1,965,728	2,245,848	2,336,991	2,770,008
Foreigners	90,760	155,908	154,844	156,170	171,588
<b>Excursionist</b>	<b>3,724,895</b>	<b>3,874,846</b>	<b>4,012,864</b>	<b>4,147,950</b>	<b>4,632,682</b>
Thai	3,545,473	3,671,132	3,803,614	3,932,420	4,400,713
Foreigners	179,422	203,714	209,250	215,530	231,969

Source: Government of Thailand, Department of Tourism, Ministry of Tourism and Sports.

**Table 65: Number of Visitors, Sa Kaeo Province, 2011–2015**

	2011	2012	2013	2014	2015
<b>Visitor</b>	<b>1,055,807</b>	<b>1,537,656</b>	<b>1,641,734</b>	<b>1,691,752</b>	<b>1,790,612</b>
Thai	907,808	1,330,620	1,423,966	1,468,247	1,553,813
Foreigners	147,999	207,036	217,768	223,505	236,799
<b>Tourist</b>	<b>458,696</b>	<b>666,637</b>	<b>701,016</b>	<b>719,077</b>	<b>757,514</b>
Thai	423,947	619,952	657,419	675,451	711,539
Foreigners	34,749	46,685	43,597	43,626	45,975
<b>Excursionist</b>	<b>597,111</b>	<b>871,019</b>	<b>940,718</b>	<b>972,675</b>	<b>1,033,098</b>
Thai	483,861	710,668	766,547	792,796	842,274
Foreigners	113,250	160,351	174,171	179,879	190,824

Source: Government of Thailand, Department of Tourism, Ministry of Tourism and Sports.

**Table 66: Number of Visitors, Trat Province, 2011–2015**

	2011	2012	2013	2014	2015
<b>Visitor</b>	<b>1,097,352</b>	<b>1,625,918</b>	<b>1,685,537</b>	<b>1,742,621</b>	<b>1,864,064</b>
Thai	859,093	1,255,511	1,281,384	1,325,966	1,416,041
Foreigners	238,259	370,407	404,153	416,655	448,023
<b>Tourist</b>	<b>1,037,272</b>	<b>1,547,198</b>	<b>1,600,817</b>	<b>1,655,249</b>	<b>1,770,554</b>
Thai	810,145	1,199,712	1,221,857	1,264,619	1,350,606
Foreigners	227,127	347,486	378,960	390,630	419,948
<b>Excursionist</b>	<b>60,080</b>	<b>78,720</b>	<b>84,720</b>	<b>87,372</b>	<b>93,510</b>
Thai	48,948	55,799	59,527	61,347	65,435
Foreigners	11,132	22,921	25,193	26,025	28,075

Source: Government of Thailand, Department of Tourism, Ministry of Tourism and Sports.



**Table 67: Number of Visitors, Chonburi Province, 2011–2015**

	2011	2012	2013	2014	2015
<b>Visitor</b>	<b>10,823,369</b>	<b>11,224,397</b>	<b>11,736,488</b>	<b>10,843,412</b>	<b>11,742,224</b>
Thai	4,536,581	4,430,332	4,520,383	4,367,710	4,784,716
Foreigners	6,286,788	6,794,065	7,216,105	6,475,702	6,957,508
<b>Tourist</b>	<b>9,028,523</b>	<b>9,753,227</b>	<b>10,167,469</b>	<b>9,246,430</b>	<b>10,002,914</b>
Thai	2,885,506	3,092,548	3,097,378	2,909,259	3,199,439
Foreigners	6,143,017	6,660,679	7,070,091	6,337,171	6,803,475
<b>Excursionist</b>	<b>1,794,846</b>	<b>1,471,170</b>	<b>1,569,019</b>	<b>1,596,982</b>	<b>1,739,310</b>
Thai	1,651,075	1,337,784	1,423,005	1,458,451	1,585,277
Foreigners	143,771	133,386	146,014	138,531	154,033

Source: Government of Thailand, Department of Tourism, Ministry of Tourism and Sports.

**Table 68: Number of Visitors, Rayong Province, 2011–2015**

	2011	2012	2013	2014	2015
<b>Visitor</b>	<b>4,583,551</b>	<b>5,347,954</b>	<b>5,643,533</b>	<b>6,150,336</b>	<b>6,650,710</b>
Thai	4,336,032	4,877,889	5,169,919	5,678,118	6,151,526
Foreigners	247,519	470,065	473,614	472,218	499,184
<b>Tourist</b>	<b>2,978,355</b>	<b>3,311,227</b>	<b>3,461,717</b>	<b>3,854,783</b>	<b>4,171,188</b>
Thai	2,760,879	2,928,471	3,080,952	3,478,384	3,773,969
Foreigners	217,476	382,756	380,765	376,399	397,219
<b>Excursionist</b>	<b>1,605,196</b>	<b>2,036,727</b>	<b>2,181,816</b>	<b>2,295,553</b>	<b>2,479,522</b>
Thai	1,575,153	1,949,418	2,088,967	2,199,734	2,377,557
Foreigners	30,043	87,309	92,849	95,819	101,965

Source: Government of Thailand, Department of Tourism, Ministry of Tourism and Sports.

**Table 69: Number of Visitors, Chantaburi Province, 2011–2015**

	2011	2012	2013	2014	2015
<b>Visitor</b>	<b>1,518,859</b>	<b>1,559,370</b>	<b>1,645,811</b>	<b>1,700,799</b>	<b>1,869,469</b>
Thai	1,467,195	1,488,038	1,571,614	1,626,262	1,791,080
Foreigners	51,664	71,332	74,197	74,537	78,389
<b>Tourist</b>	<b>1,095,215</b>	<b>1,072,348</b>	<b>1,119,447</b>	<b>1,157,567</b>	<b>1,291,710</b>
Thai	1,058,692	1,018,905	1,064,307	1,102,719	1,234,299
Foreigners	36,523	53,443	55,140	54,848	57,411
<b>Excursionist</b>	<b>423,644</b>	<b>487,022</b>	<b>526,364</b>	<b>543,232</b>	<b>577,759</b>
Thai	408,503	469,133	507,307	523,543	556,781
Foreigners	15,141	17,889	19,057	19,689	20,978

Source: Government of Thailand, Department of Tourism, Ministry of Tourism and Sports.

### Aranyaprathet Border Checkpoint, Sa Kaeo Province

In 2016, total trade value recorded at the Aranyaprathet Border Checkpoint was 66.6 billion baht, down from 77.1 billion baht in 2015. From 2012 to 2015, total trade value grew by about 15% per year, with both exports and imports posting yearly increases. Exports exceeded imports by a big margin, although the ratio between exports and imports narrowed from about 8 to 1 in 2012 to around 4 to 1 in 2016. The major exports and imports via this checkpoint are shown in Table 71.

### Klong Yai Border Checkpoint, Trat Province

The value of total trade via the Klong Yai Border Checkpoint is smaller than via the Aranyaprathet Border Checkpoint (Table 72). In 2016, trade at the Klong Yai Border Checkpoint was less than one half of that in Aranyaprathet. However, total trade has increased continuously from year to year unlike in Aranyaprathet which experienced a slowdown in 2016. Trade via this checkpoint is substantially imbalanced with the ratio of exports to imports remaining at around 8 to 1 in 2016. The major exports and imports via this checkpoint are shown in Table 73.

**Table 70: Trade Value at Aranyaprathet Border Checkpoint, 2012–2016**

Item	Trade Value (million baht)				
	2012	2013	2014	2015	2016
Export	44,976.6	51,625.9	59,508.8	61,061.4	53,903.1
Import	5,458.6	8,025.7	15,263.0	16,111.9	12,743.9
<b>Total</b>	<b>50,435.2</b>	<b>59,651.6</b>	<b>74,771.8</b>	<b>77,173.3</b>	<b>66,647.0</b>

Source: Aranyaprathet Customs House, Sa Kaeo Province.

**Table 71: Main Commodities Traded at the Aranyaprathet Border Checkpoint, 2016**  
(million baht)

Imports			Exports		
No.	Item	Amount	No.	Item	Amount
1	Cassava	6,974.8	1	Engine for motorcycle	3,570.6
2	Camera component	1,568.8	2	New cars	3,378.2
3	ISO tank container	4,255.5	3	Motorcycle spare parts	3,371.3
4	Car motor component	2,287.5	4	Agricultural machinery	3,245.0
5	Dog food	1,177.5	5	Tractors	2,181.1

Source: Aranyaprathet Customs House, Sa Kaeo Province.

**Table 72: Trade Value at Klong Yai Border Checkpoint, 2012–2016**

Item	Trade Value (million baht)				
	2012	2013	2014	2015	2016
Export	24,454.1	25,431.8	27,558.0	29,073.2	29,741.3
Import	482.6	1,394.0	2,081.3	2,743.7	3,975.0
<b>Total</b>	<b>24,936.7</b>	<b>26,825.8</b>	<b>29,639.3</b>	<b>31,816.9</b>	<b>33,716.3</b>

Source: Klong Yai Customs House, Trat Province.

**Table 73: Main Commodities Traded at Klong Yai Border Checkpoint, 2016**  
(million baht)

Imports			Exports		
No.	Item	Amount	No.	Item	Amount
1	Electronic cable for car	33,708.3	1	Drink & beverage (non-alcohol)	2,784.2
2	Ready to wear clothes	341.8	2	Sugar	2,067.6
3	Coconut	193.6	3	Milk & supplementary food	1,666.3
4	Fresher sea fish	100.9	4	Motorcycle	1,333.6
5	Bladder	31.00	5	Plasticware	1,133.1

Source: Klong Yai Customs House, Trat Province.

## VI. OVERALL ASSESSMENT OF ROAD TRANSPORT INFRASTRUCTURE

The routes in Thailand along the GMS economic corridors are mostly classified as Class I, with one route being at the Primary 1 level (Intercity Motorway No. 7). The roads have four to six lanes and their surface is covered with concrete or asphalt. The width of the lanes is no less than 3.50 m. Presently, the road surfaces are good and smooth along the sections. Road safety standards are high. However, a section of the route along the economic corridors cannot be expanded into four lanes because it runs across a National Park.

The routes in Thailand along the GMS economic corridors run through Special Economic Development Zones such as those in Tak, Mukdahan, Sa Kaeo, Trat, Nong Khai, Chiang Rai, Nakhon Phanom, and Kanchanaburi. The objectives of establishing SEZs nationwide are: (i) to promote and support progress in the rural areas to reduce income inequality; (ii) enhance connectivity with other GMS countries; and (iii) improve the well-being and quality of life of people living in border areas. To achieve these objectives, it is necessary to accelerate efforts to facilitate the cross-border movement of people, goods, and vehicles, including those under the GMS Cross-Border Transport Facilitation Agreement and the ASEAN Single Window. To promote complementary investment, it is important to establish the

One Stop Service for investment in the Special Economic Development Zones, including reviewing the criteria for qualification of those who intend to set up bonded warehouses and duty-free areas in these Zones.

### A. East–West Economic Corridor

The East–West Economic Corridor in Thailand between Mukdahan and Tak runs through Asian Highway No. 16 (AH16) in eight provinces: Mukdahan, Kalasin, Khon Kaen, Chaiyaphum, Phetchabun, Phitsanulok, and Tak. This covers a distance of 756.6 km. The road classification in all sections is Class I. The road surface is good and smooth along the whole sections. The whole route is equipped with traffic signs; road marks; complete, undamaged safety equipment, with curved guide posts; and complete guard rail in good condition.

However, the field survey reveals there is a bottleneck on EWEC at one section between Lom Sak district to Khon San district, with a distance of 43 km. It has two lanes and partly runs through Nam Nao National Park, Nam Nao district, Phetchabun Province. Currently, the route cannot be expanded into four lanes as it is in the National Park. Accordingly, the road shoulders on both sides have been enlarged instead.

## B. North–South Economic Corridor

The roads along the North–South Economic Corridor in Thailand have four lanes, and all sections are classified as Class I. The road surface is smooth along the whole sections. The road is safe; and is equipped with traffic signs; road marks; and complete, undamaged safety equipment, with curved guide posts; and complete guard rail in good condition. No bottleneck was found along the route.

Major ongoing projects in the NSEC are mostly projects to construct roads, expand traffic lanes, repair roads, and construct fast track lanes. The projects improve convenience and speed in travelling, reduce traffic congestion, and increase safety in transport and communications. The construction of fast track lanes increases route potential; connects trade and investment networks along the border; and enhances safety for travel, transport of goods, and tourism.

## C. Southern Economic Corridor

Overall, the roads along Southern Economic Corridor (SEC) in Thailand are Class I. The road surface is good and smooth along whole sections. The road is equipped with traffic signs; road marks; complete, undamaged safety equipment, with curved guide posts; and complete guard rail in good condition.

However, the field survey revealed three bottlenecks in SEC in three sections.

- The road section from Ban Phu Nam Ron Permanent Checkpoint to Htikhi Checkpoint is covered with red earth. The road surface in these sections is rough, and the road is classified as Class III.
- Intercity motorway No. 7 from the intersection entering Suvarnabhumi airport to Bang Pa In intersection (5 km) experiences traffic congestion during the morning and evening rush hours as the route runs through business centers and industrial estates. The project adding two more lanes in the congested section along this route is expected to be completed at the end of 2017.

Highway No. 3 Trat–Ban Hat Lek section 3 Laem Klud–intersection to enter Ban Mai Rood (km 31+800–km 55+300) with a distance of approximately 23.50 km; and section 4 intersection to enter Ban Mai Rood–Khlong Chak (km 55+300–km 78+750) with a distance of approximately 23.45 km have only two lanes and are increasingly becoming congested every year as they are linked to Khlong Yai Customs Checkpoint. There are residential areas, community areas, saltwater fishery processing factories, and forests on both sides of the road along the border between Thailand and Cambodia.

## **About the Assessment of Greater Mekong Subregion Economic Corridors**

The transformation of transport corridors into economic corridors has been at the center of the Greater Mekong Subregion (GMS) Economic Cooperation Program since 1998. The Asian Development Bank (ADB) conducted this Assessment to guide future investments and provide benchmarks for improving the GMS economic corridors. This Assessment reviews the state of the GMS economic corridors, focusing on transport infrastructure, particularly road transport, cross-border transport and trade, and economic potential. This assessment consists of six country reports and an integrative report initially presented in June 2018 at the GMS Subregional Transport Forum.

## **About the Greater Mekong Subregion Economic Cooperation Program**

The GMS consists of Cambodia, the Lao People's Democratic Republic, Myanmar, the People's Republic of China (specifically Yunnan Province and Guangxi Zhuang Autonomous Region), Thailand, and Viet Nam. In 1992, with assistance from the Asian Development Bank and building on their shared histories and cultures, the six countries of the GMS launched the GMS Program, a program of subregional economic cooperation. The program's nine priority sectors are agriculture, energy, environment, human resource development, investment, telecommunications, tourism, transport infrastructure, and transport and trade facilitation.

## **About the Asian Development Bank**

ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 67 members—48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

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