

Logistics and Supply Chain Development in CLMV : Cross Border Trade and International Logistics



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Understanding: Cross Border

- Brainstorming and Discussion of Cross Border Systems/ Cross Border Trade Development/ and Major Cross Border Trade Factors



Cross Border and Logistics Development

MAGA TRENDS



INDUSTRY 1.0



Agricultural

INDUSTRY 2.0



Industry

INDUSTRY 3.0



Heavy Industry

B 2 B



Urbanisation

B 2 C

Supply Chain Re-design



Supply Chain Re-design

- **SMART City/Smart Border**
- **E-Commerce**
- **City Logistics**
- **Good Governance**



Border Trade

INDUSTRY/THAILAND 4.0



**Industry Innovation
Business Analytics**

Customer Oriented
-LEANGILE

Cost Oriented

Border City: Urbanization

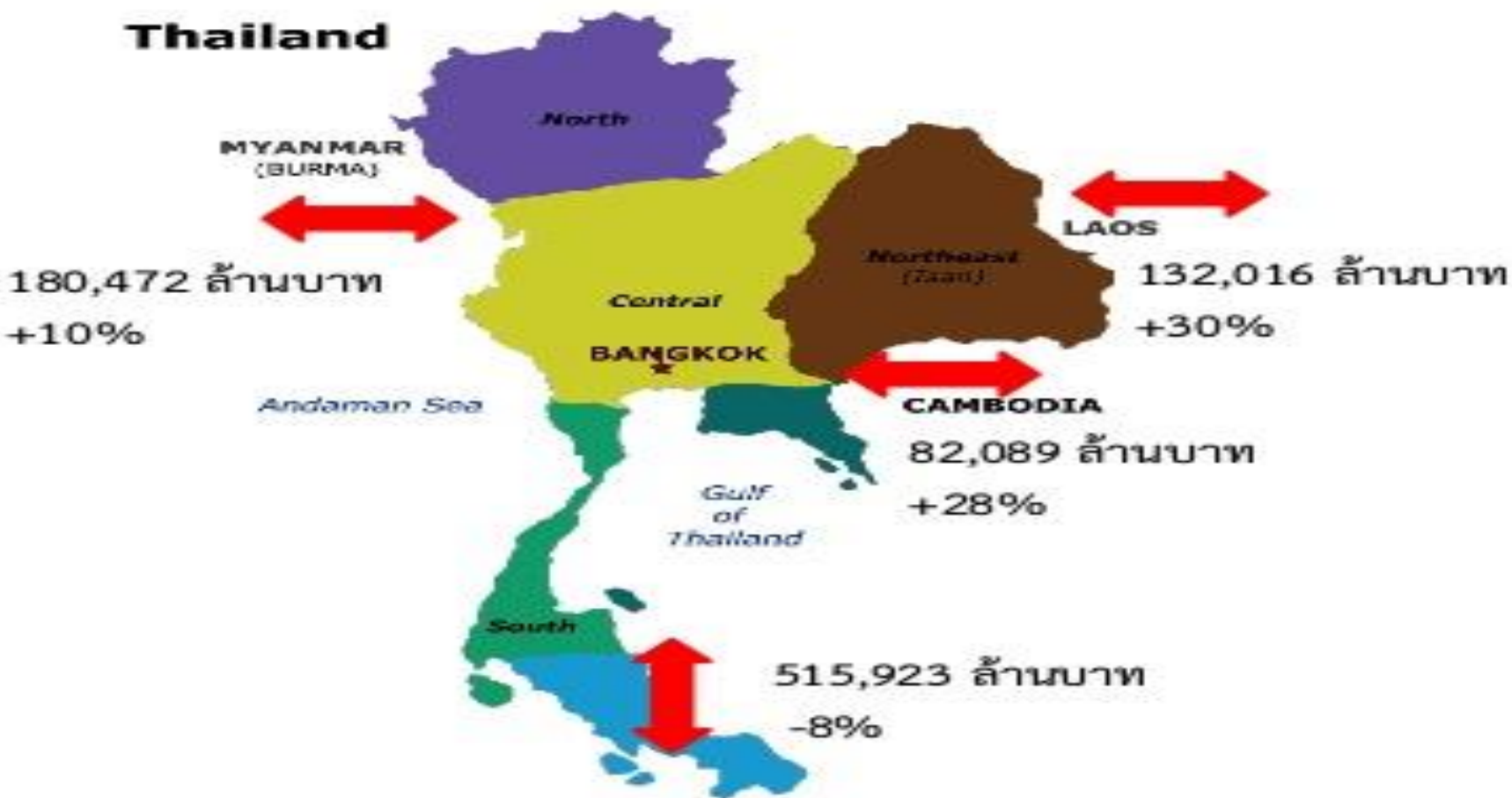
- Urbanization – Change from rural to urban
- Infrastructure Development (Domestic and International)
- Development of Trade Facilitation → One Stop Services
- Development of Institution ((Domestic and International)
- Development of Human Resource in the city/
country/other countries



Border Trade/Business Re-design → Change from B-B to B-C
BORDER SMART CITY → Big DATA, IOT

Demand Pull/Demand Oriented → Customer Satisfaction

Border Trade Situation



ฉบับที่ 7 เดือนตุลาคม 2557

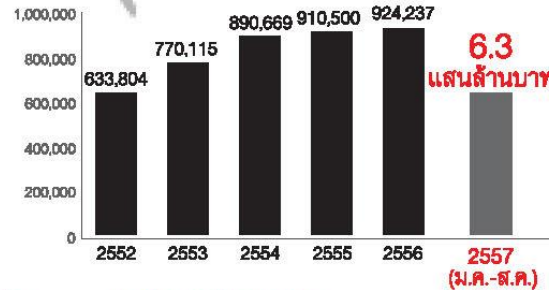
การค้าชายแดน กับอนาคตเศรษฐกิจไทย

- การค้าชายแดน มีสัดส่วน 68% ของมูลค่าการค้ารวมไทย
- เกี่ยวข้องกับธุรกิจหลายประเภท ทั้งภาคการค้าและบริการ
- ตัวเลขการค้าชายแดนยังเติบโตต่อเนื่อง ม.ค.-ส.ค. 57 ขยายตัวเพิ่มขึ้น 4.3% จากช่วงเดียวกันของปีก่อน
- การรายงานตัวเลขนักท่องเที่ยวที่แท้จริง (ผ่านด่าน) ยังประสบปัญหา เนื่องจากผู้เข้าเมืองไม่ระบุประเภทที่ชัดเจน

| | ปี 2556 (ม.ค.-ส.ค.) | ปี 2557 (ม.ค.-ส.ค.) | อัตราการขยายตัว ต่อการค้าชายแดนรวม |
|-----------|------------------------|------------------------|---------------------------------------|
| มูลค่ารวม | 606,546.76 | 632,639.25 | 4.30% |
| ส่งออก | 368,306.73 | 390,034.70 | 5.90% |
| นำเข้า | 238,240.03 | 242,604.55 | 1.83% |
| ดุลการค้า | 130,066.70 | 147,430.15 | |

หน่วย : ล้านบาท

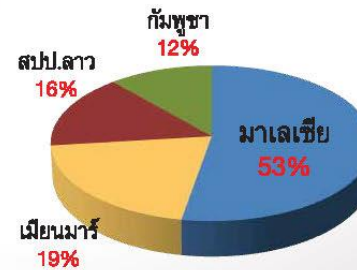
ที่มา : กรมการค้าต่างประเทศ



มูลค่าการค้าชายแดน

หน่วย : ล้านบาท

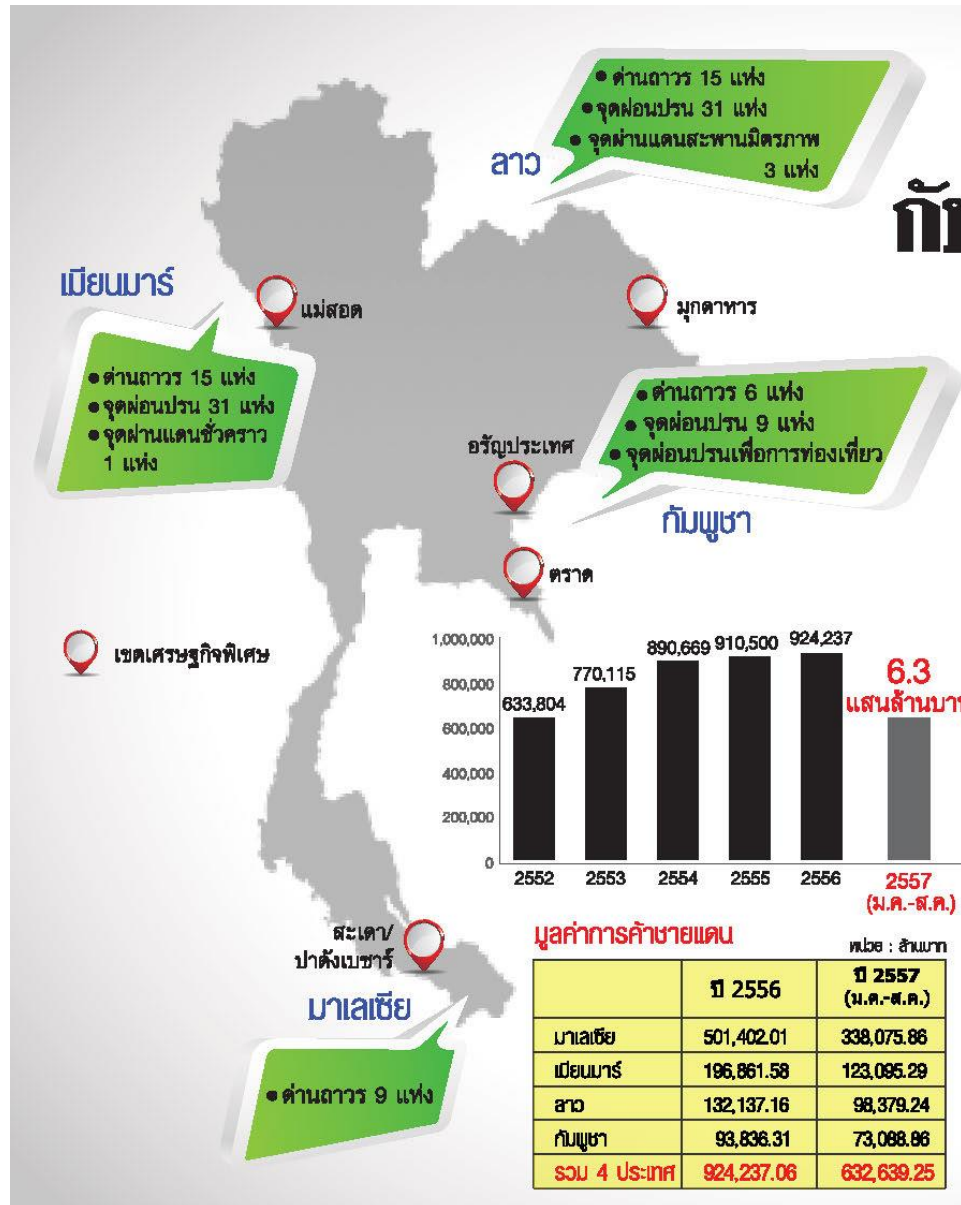
| | ปี 2556 | ปี 2557 (ม.ค.-ส.ค.) |
|--------------|------------|------------------------|
| มาเลเซีย | 501,402.01 | 338,075.86 |
| เมียนมาร์ | 196,861.58 | 123,085.29 |
| ลาว | 132,137.16 | 98,379.24 |
| กัมพูชา | 93,836.31 | 73,088.86 |
| รวม 4 ประเทศ | 924,237.06 | 632,639.25 |



สัดส่วนการค้าชายแดน
กับประเทศเพื่อนบ้าน



กรมการค้าต่างประเทศ
ศูนย์บริการจัดการข้อมูล



Informal Cross- Border Trade (ICBT)

- ◆ A significant proportion of cross-ASEAN border trade.
- ◆ Despite efforts to promote trade integration among ASEAN Partners, formal trade links is still facing several constraints.
- ◆ Some of these constraints push traders to ICBT but there are also exclusive incentives/ advantages that promote existence of ICBT.
- ◆ While it may be relatively easy to eliminate constraints to formal trading, the same may not provide better incentives for traders in the informal sector to turn to formal trading.



A case study

Source Country

“Push” Factors

famine
poverty
low wages
unemployment
crowding
high taxes
discrimination
religious persecution
civil war
violence and crime
forced military service
social immobility

“Stay” factors

family ties
friendships
social status
cultural familiarity
employment
property
familiarity
certainty
political privileges



Immigrants

Costs of Moving

transport costs
dangers of the voyage
time of travel
lost income during move

Formal Exit Barriers

Exit Visa
Exit Tax
Prohibition
Imprisonment
Penalties on Family

Formal Entry Barriers

Entry Visa
Quota
Prohibition
Imprisonment
Fines

Destination Country

“Pull” factors

higher wages
employment
property rights
personal freedom
economic freedom
civil rights
law and order
peace
religious freedom
educational opportunity
social mobility
lower taxes

“Stay away” factors

language barriers
cultural barriers
discrimination
low social status
unemployment
low wages
lack of political rights
unfamiliarity
uncertainty
war
crime

Push/Pull Factors for ICBT Growth

1. Lack of knowledge of benefits of trading within ASEAN and information on existing trading opportunities.
2. Lack of written (or non-transparency in) rules, meaning difficulty for trader to know their rights.
3. Payment of customs duties on goods that are not supposed to attract duties because of lack of knowledge.
4. Complicated documents that have to be filled in and complicated processes of filling them.

Push/Pull Factors for ICBT Growth

5. Some traders lack proper documents to enable them benefit from paying little or no customs duty.
6. Payment of bribes (in the name of ‘facilitation payments’) to some corrupt customs and border officials.
7. High transaction and compliance costs
8. Hard to acquire certificates of origin issued away from border stations
9. Poor infrastructure to official border posts push traders to other better roads with no official border-crossing posts

Push/Pull Factors for ICBT Growth

10. Difficulties in getting entry permits.
11. Non-recognition of partner state's trade documents where documents have not been harmonised regionally;
12. Delays in processing of tax refunds is a disincentive to doing formal trade.
13. Fear of robbery, loss of goods and no safe affordable accommodation in border towns.

Push/Pull Factors for ICBT Growth

14. Lack of jobs in the formal sector.
15. Increase in rural-urban migration in search of non-existent employment.
16. Retrenchments, low pay in formal jobs, inflation and currency devaluations all create pressures on real wages and search for informal income supplements.
17. Lack of proper education making some traders timid of seeking apt information.

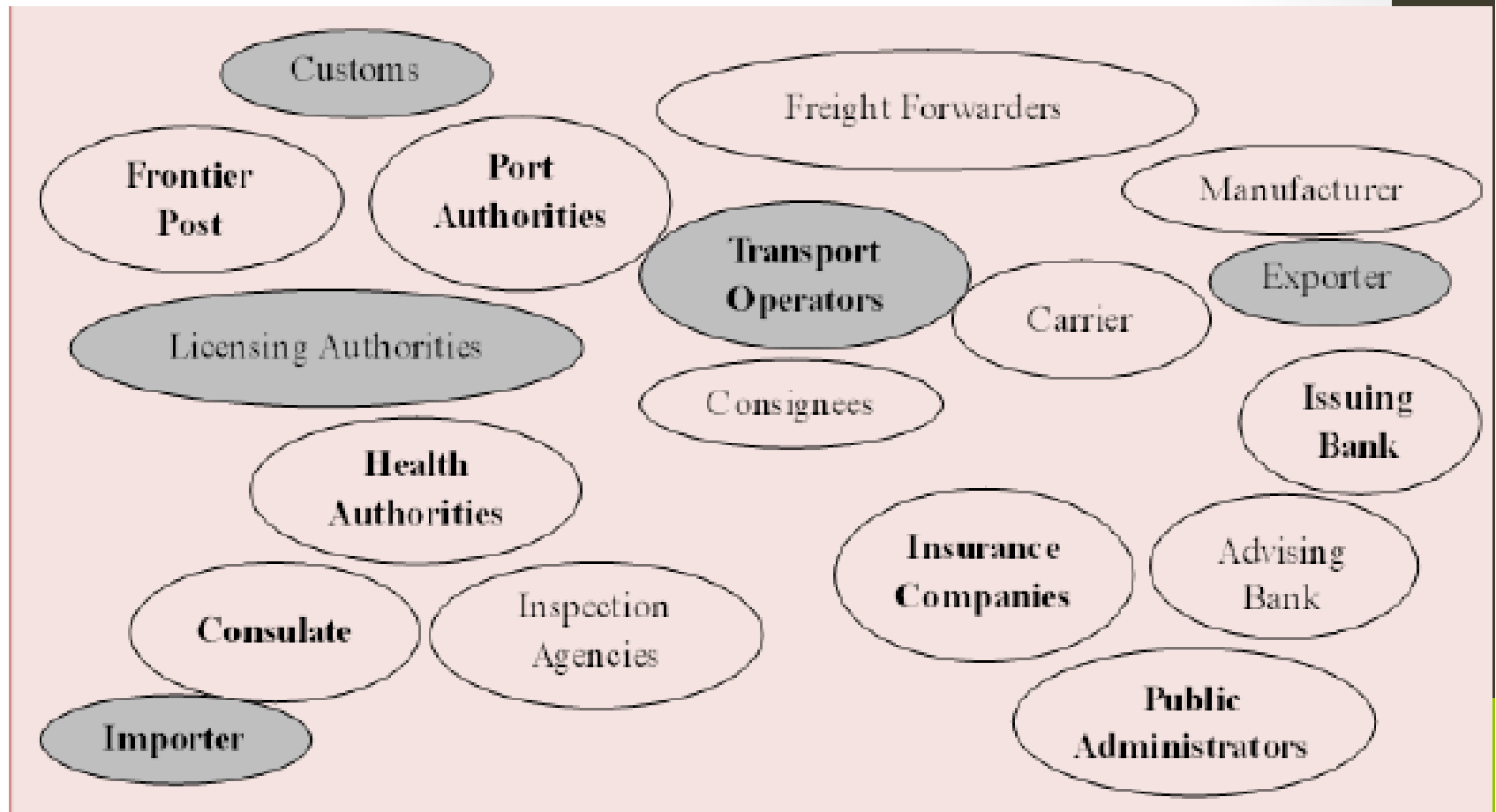
Push/Pull Factors for ICBT Growth

18. Ease of entry into the ICBT.
19. Certain ICBT activities are profitable and viable only to small businesses.
20. Currency depreciation e.g., depreciation somewhat expensive thereby raising pressure for informal trade.
21. Tariff and cross-border price differentials
22. Political stability and economic recovery in neighbouring economies

Cross Border and Transport Management: Case Study: Chiang Rai Borders



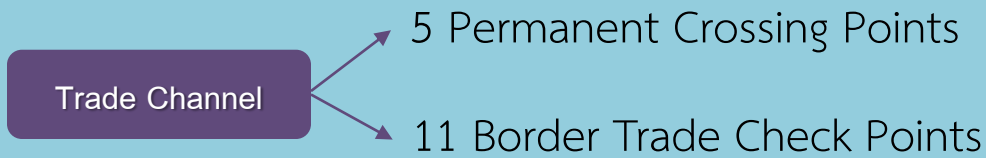
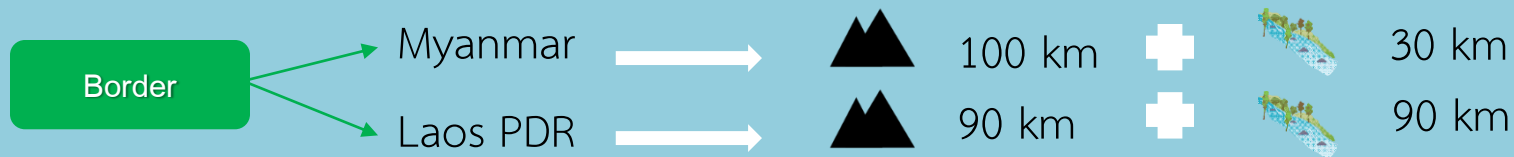
Related Stakeholders of International Customs and Trade Logistics



CHIANG RAI BORDER CITY TO ASEAN ECONOMIC COMMUNITY



Chiang Rai Border Trade



Channel of Cross Border Trade

To Myanmar



1

Chiang Sean District

2 Permanent Crossing Points
2 Border Trade Check Points

2

Chiang Khong District

1 Permanent Crossing Point
1 Border Trade Check Point

4

Thoeng District

1 Border Trade Check Point

3

Wieng Kean District

2 Border Trade Check Points

To Laos PDR



1

Mae Sai District

2 Permanent Crossing Points
4 Border Trade Check Points

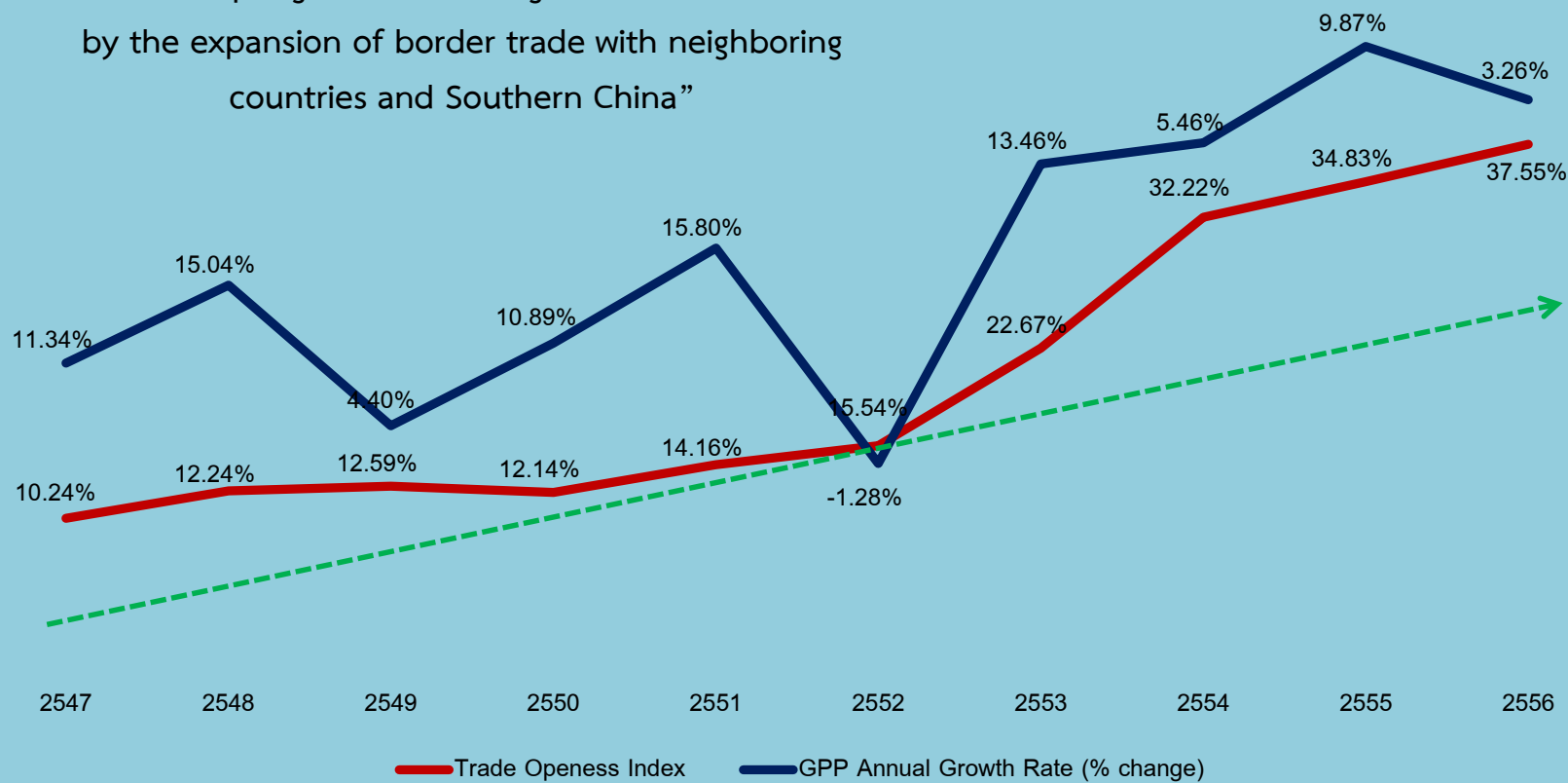
2

Chiang Sean District

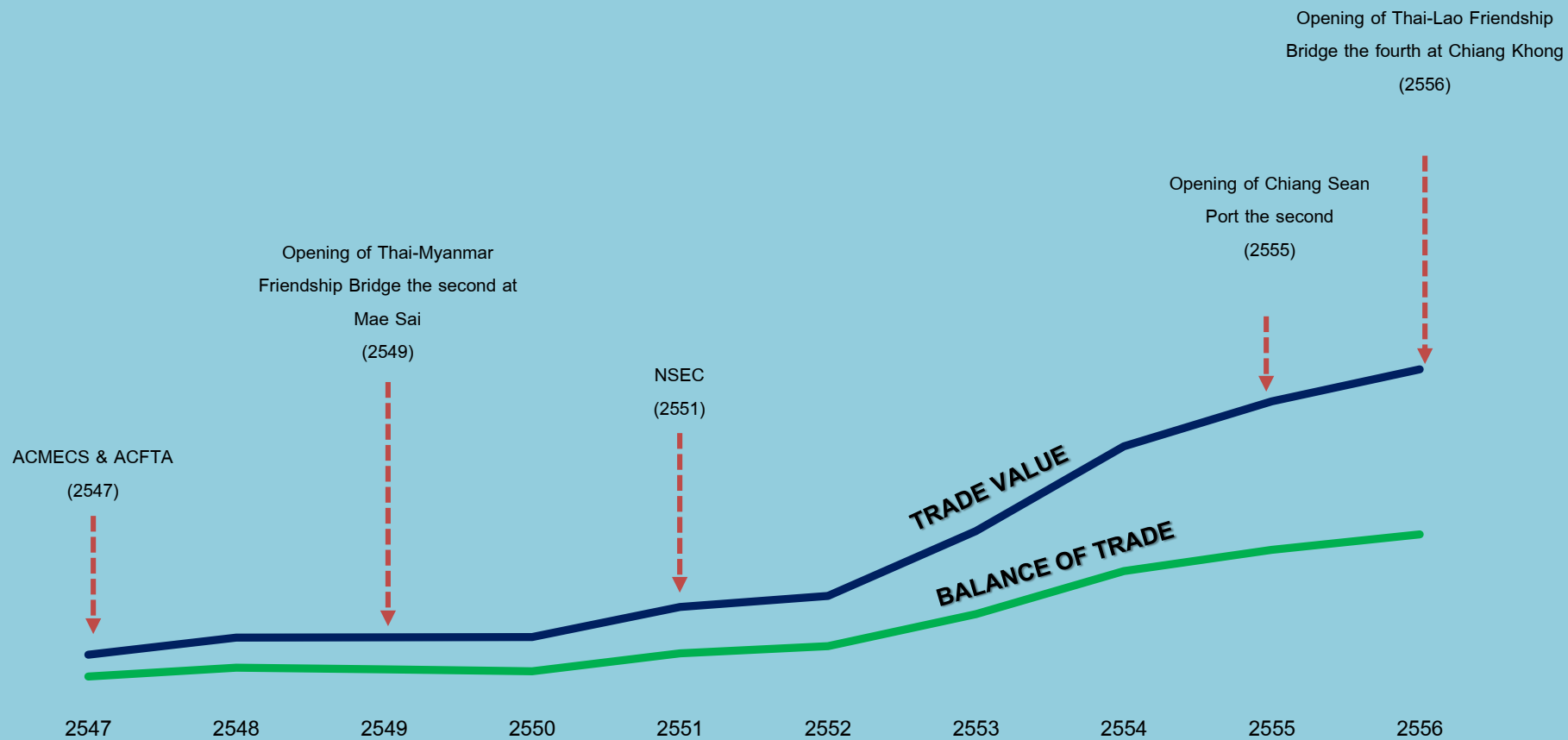
1 Border Trade Check Point

Chiang Rai Border Trade Situation

“The rapid growth of Chiang Rai’s GPP is caused by the expansion of border trade with neighboring countries and Southern China”

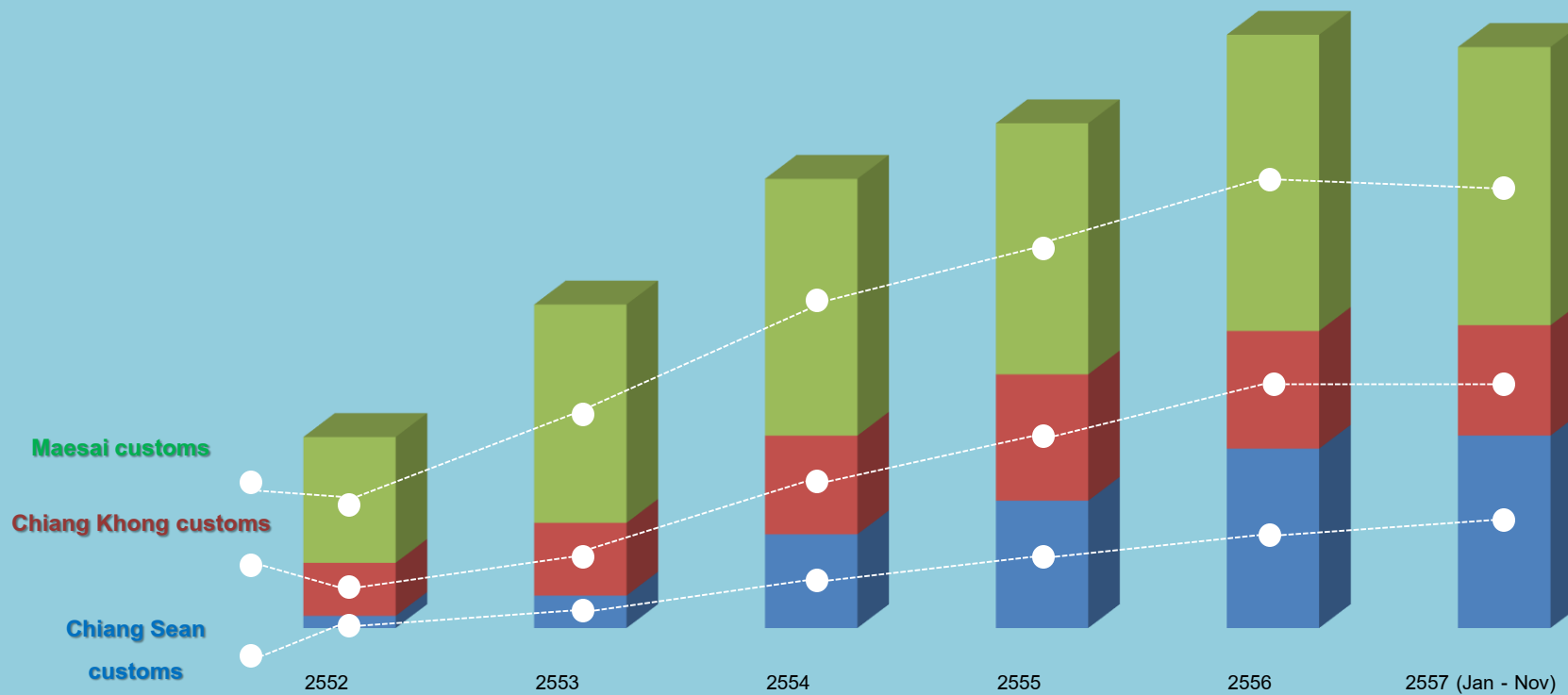


Chiang Rai Border Trade Situation



Source: Bank of Thailand, Office of Commercial Affairs Chiang Rai, Border Trade Center Service (Department of Foreign Trade)

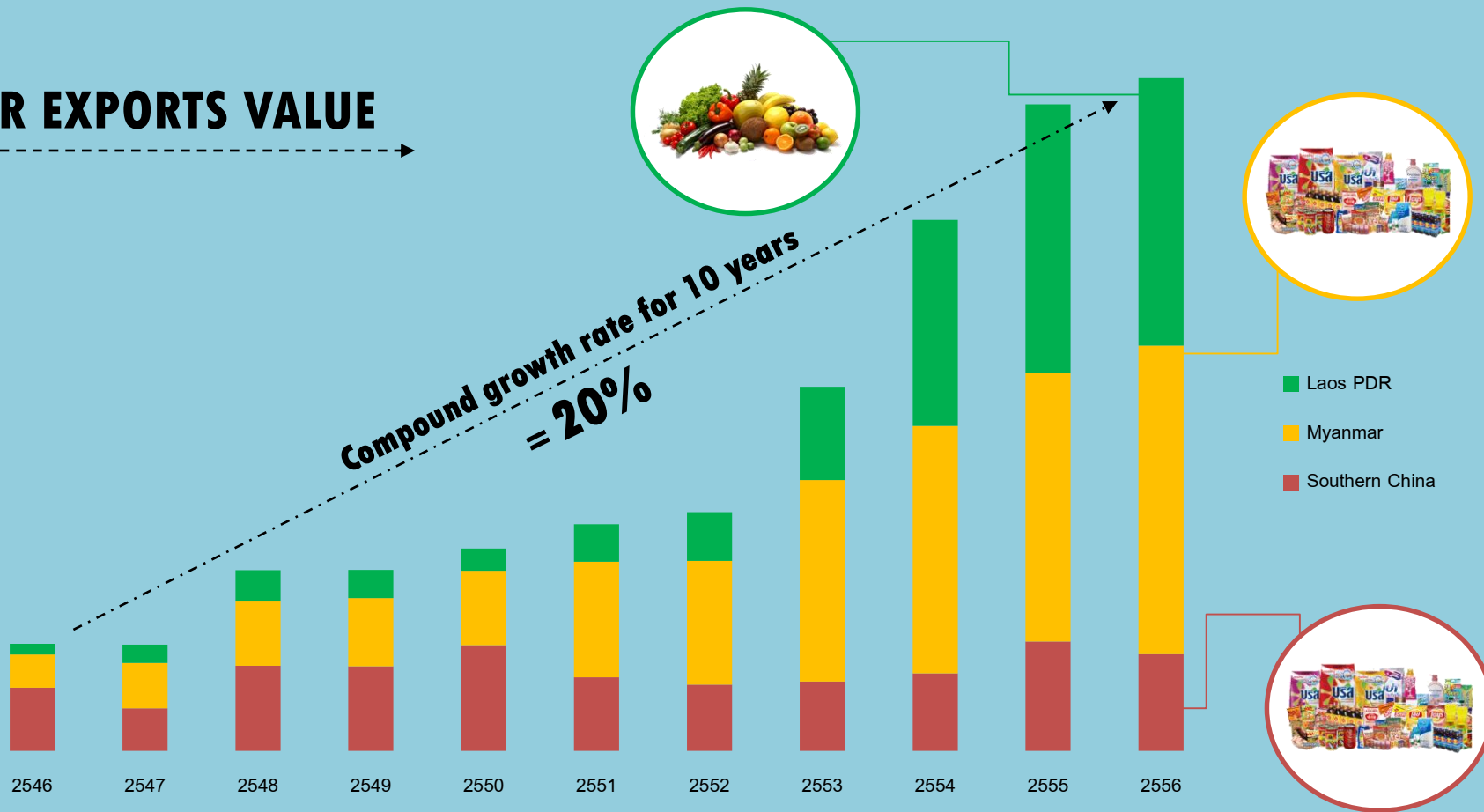
Chiang Rai Border Trade Situation



Source: Bank of Thailand, Office of Commercial Affairs Chiang Rai, Border Trade Center Service (Department of Foreign Trade)

Chiang Rai Border Trade Situation

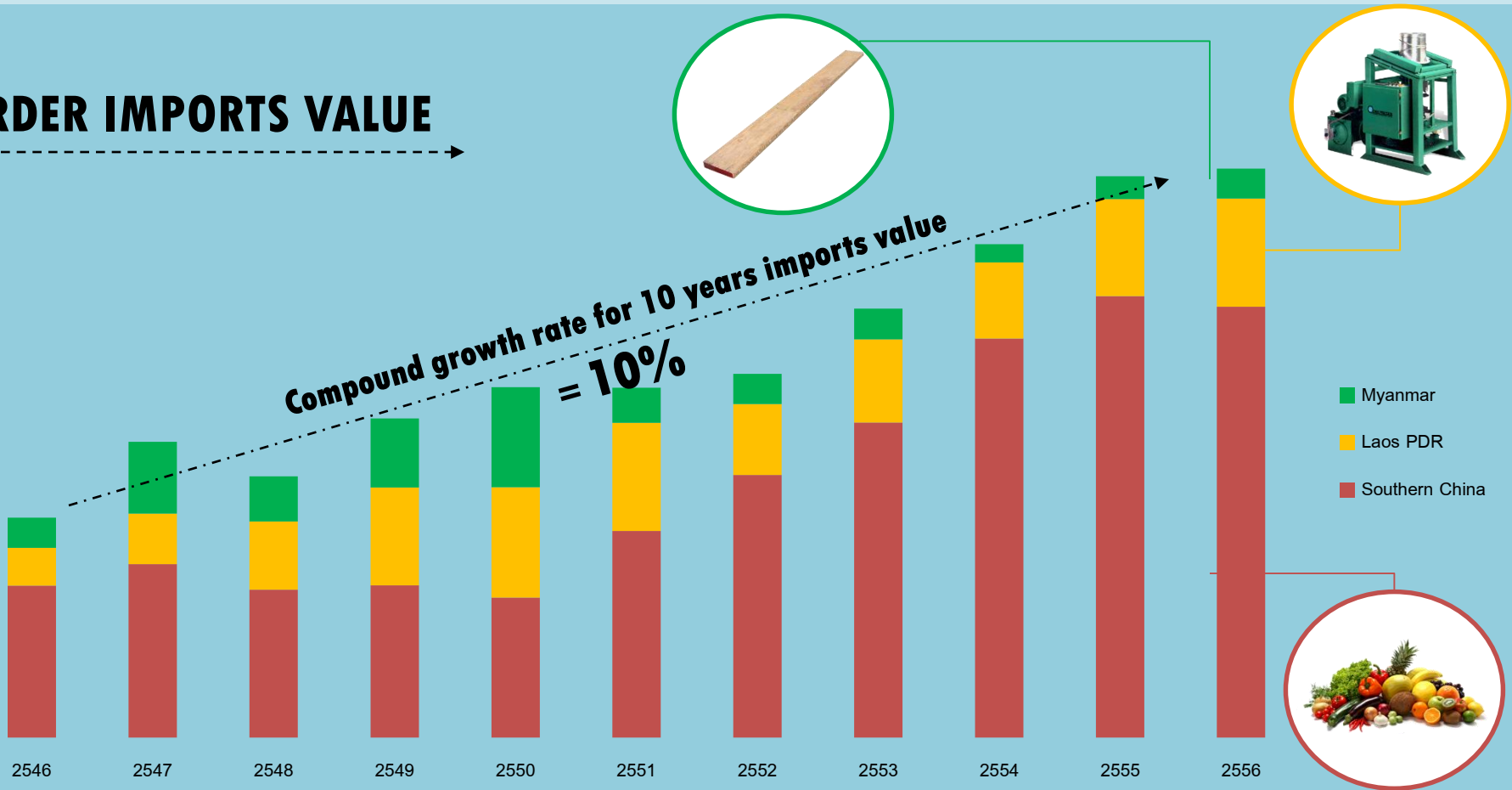
BORDER EXPORTS VALUE



Source: Office of Commercial Affairs Chiang Rai

Chiang Rai Border Trade Situation

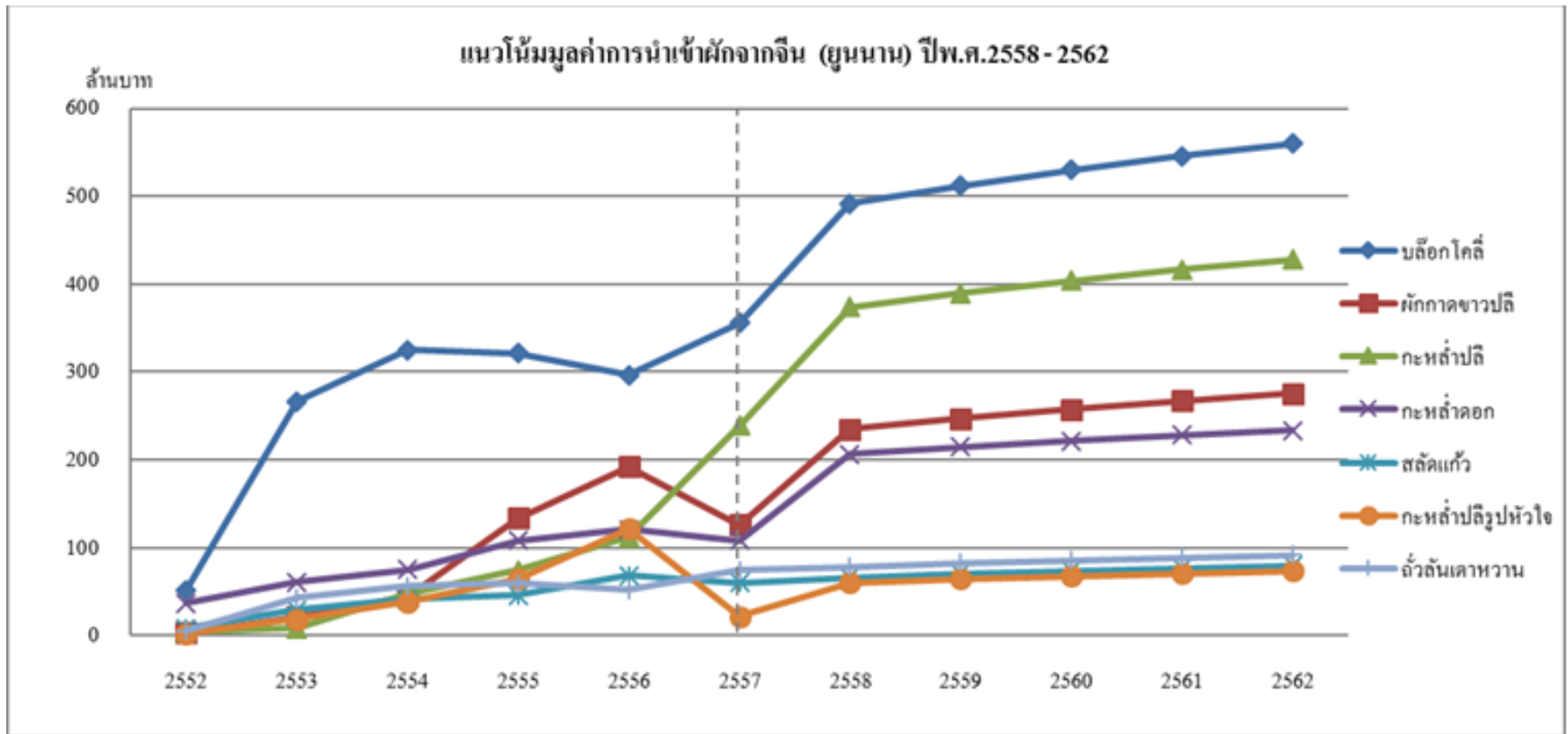
BORDER IMPORTS VALUE



Source: Office of Commercial Affairs Chiang Rai

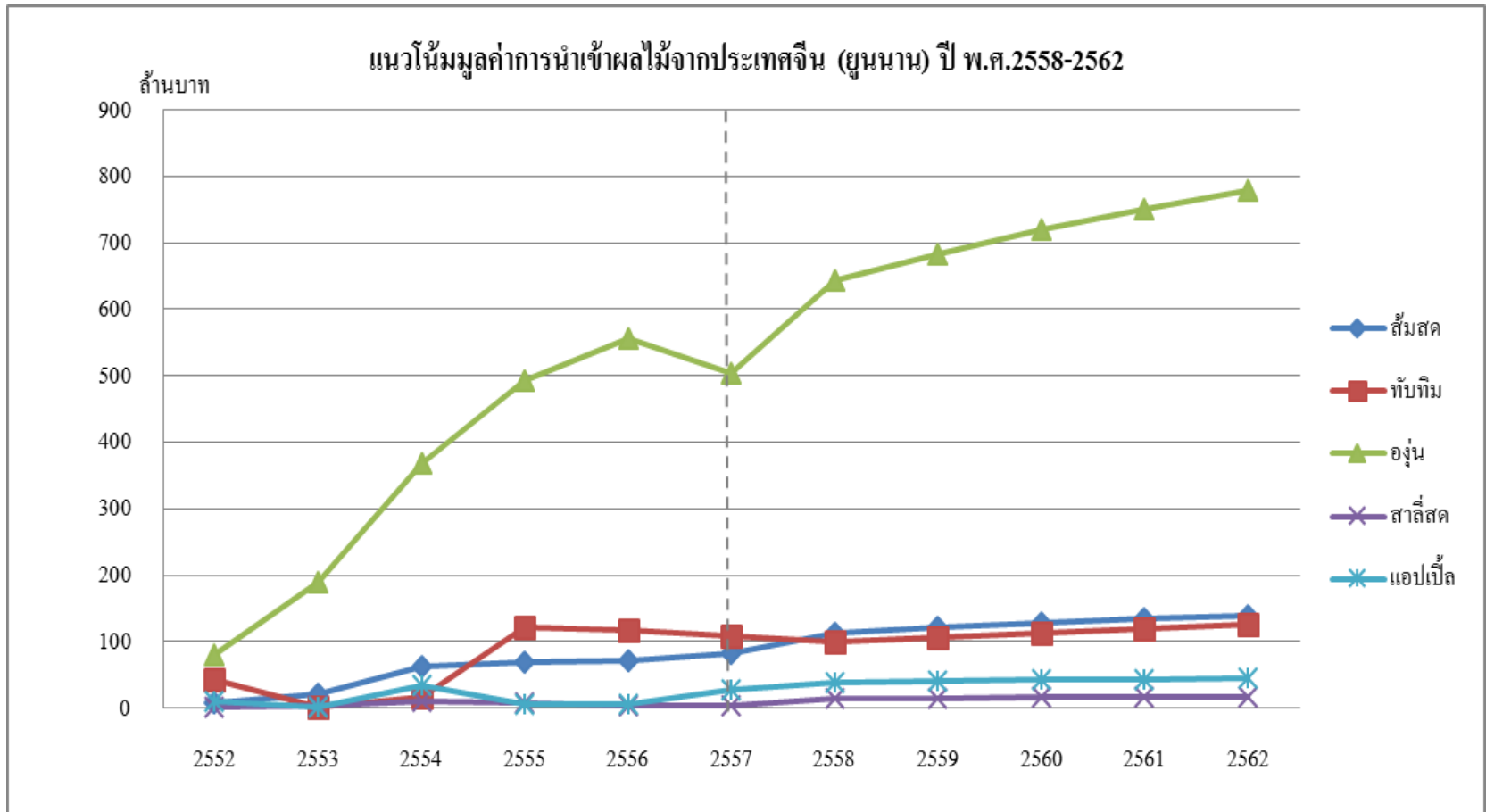
BORDER IMPORTS VALUE: Vegetables

แนวโน้มมูลค่าการนำเข้าผักจากประเทศจีน (ยูนนาน) ผ่านด่านชายแดน ณ ด่านเชียงของ ปี พ.ศ. 2558-2562



BORDER IMPORTS VALUE: Fruits

แนวโน้มมูลค่าการนำเข้าผลไม้จากประเทศจีน (ยูหนาน) ผ่านด่านชายแดน ณ ด่านเชียงของ ปีพ.ศ. 2558-2562

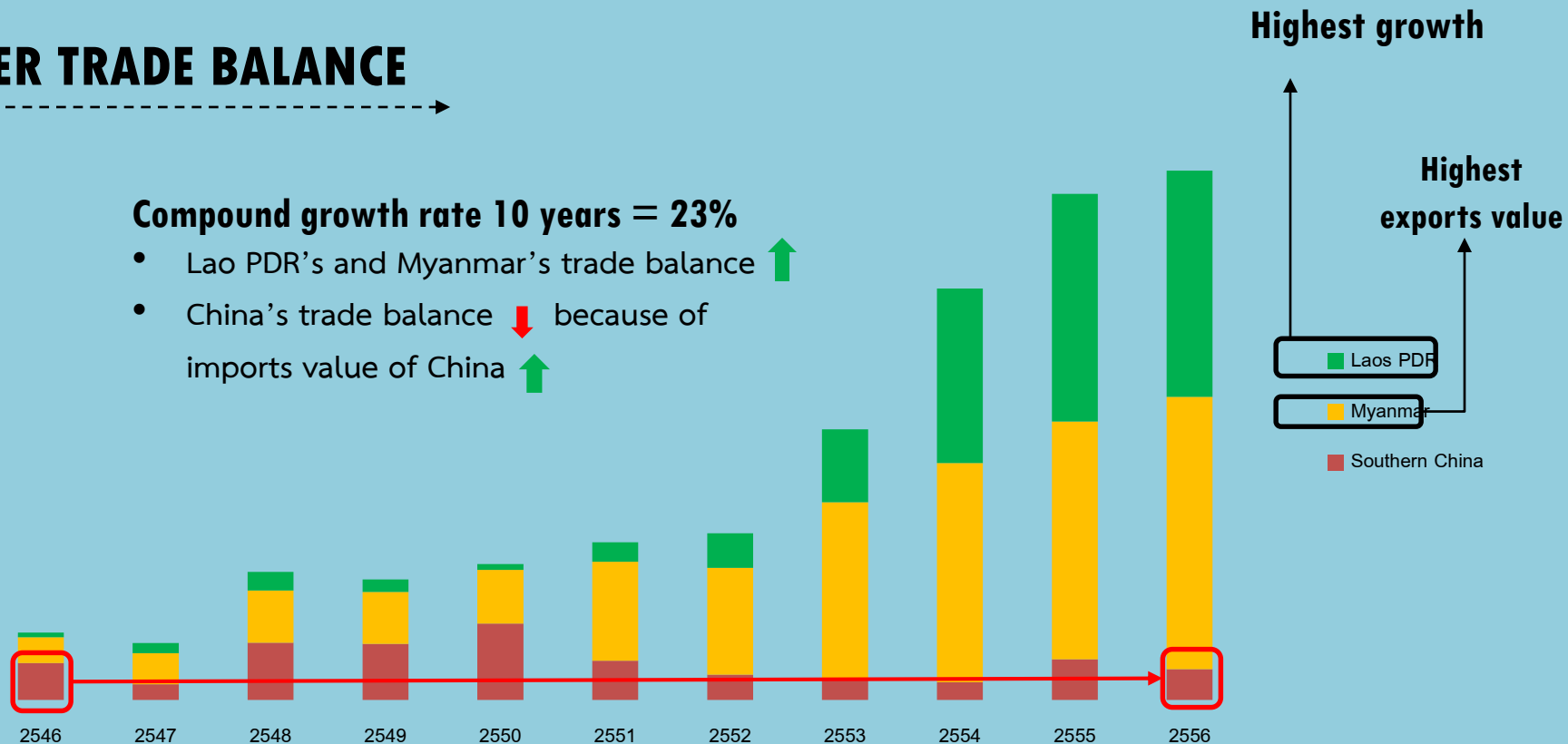


Chiang Rai Border Trade Situation

BORDER TRADE BALANCE

Compound growth rate 10 years = 23%

- Lao PDR's and Myanmar's trade balance 
- China's trade balance  because of imports value of China 



Potential Border City for Development

Mae Sai

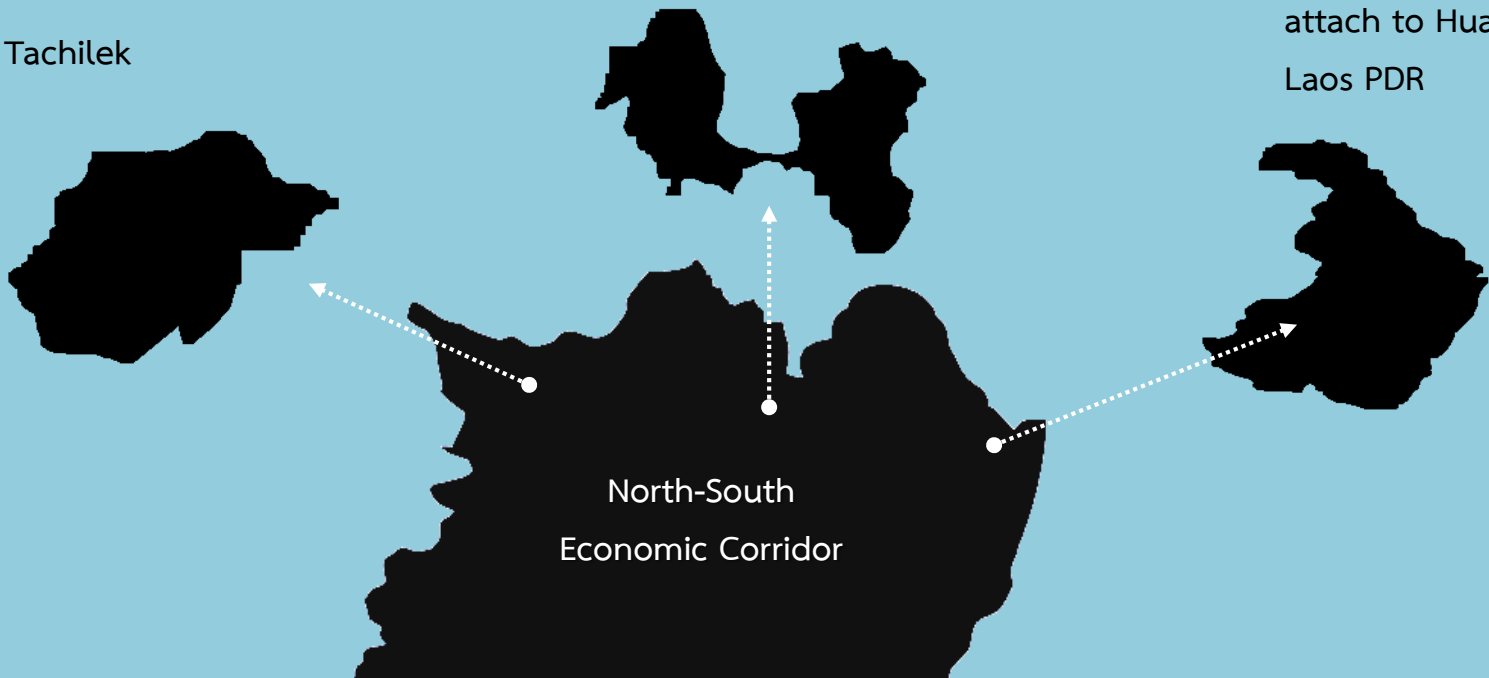
attach to Tachilek
Myanmar

Chiang Sean

attach to Ton Pheung
Laos PDR

Chiang Khong

attach to Huay Xai
Laos PDR



Special Economic Zone Plan



Mae Sai

- Trading City
- Emphasis on trading consumer goods tourism
- Rely on modern international financial services



Chiang Sean

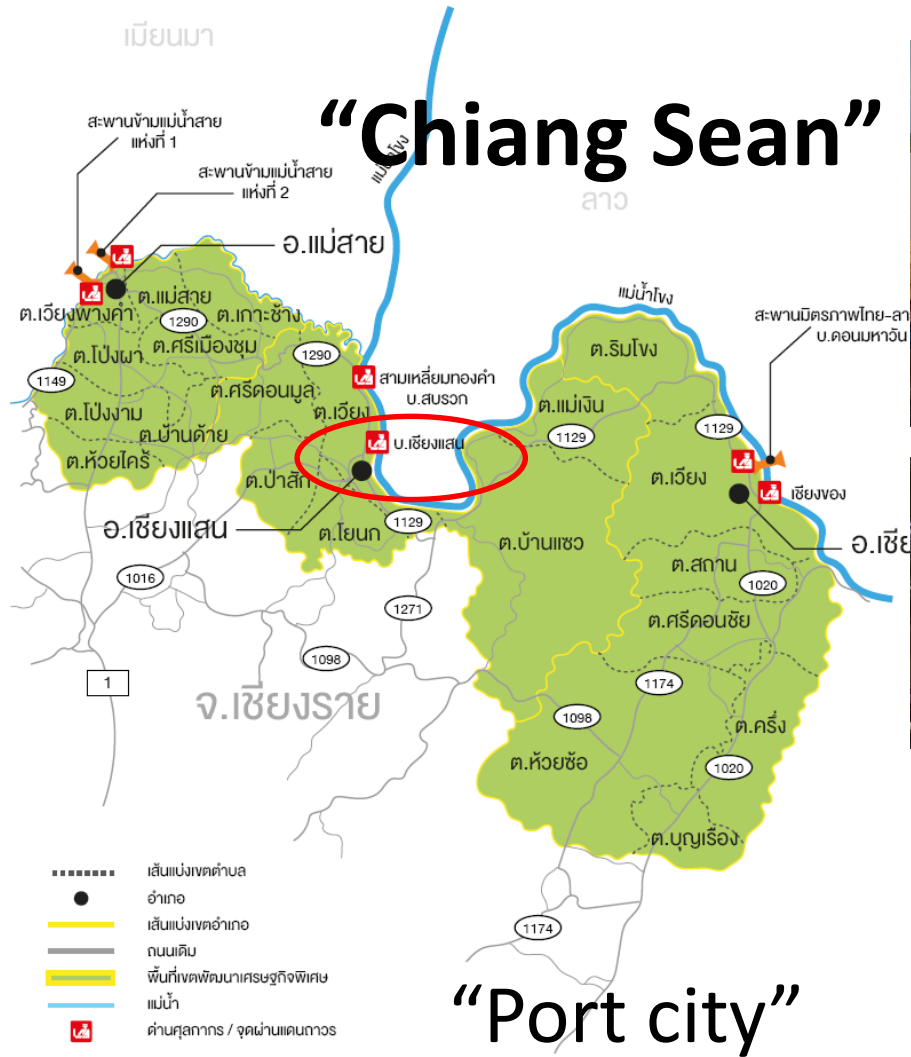
- GMS tourism and Port City
- Water transportation, trading and tourism
- Cultural heritage and Lanna civilization tour history



Chiang Khong

- Transshipment and distribution center in many forms (Logistics City)
- The site of bridge on the NSEC
- Tourism city and the way through to Luang Prabang, Laos PDR





3 FLOWS

- People
- Products
- Capital

- People-



Tourists

- People-



Lost in Thailand ทำตี-
หมายจีน อิตาลีไทย



เจาะท้าวจีนเที่ยวเชียงใหม่ สอง"Little China Town"
อิตไทยเอง-ไทยเร่งหลักสูตรโกตจีน

"เชียงใหม่" กลายเป็นจังหวัดยอดนิยมของนักท่องเที่ยวอย่างรวดเร็วซึ่งเหตุผลของการเดินทางมา มิใช่เพียงเพราะอานิสงส์ของภาพยนตร์จีน เรื่อง"Lost in Thailand" เท่านั้น แต่ยังมีปัจจัยอื่นที่เป็นแรงดึงดูด โดยเฉพาะความเป็นเมืองเก่าเป็นเมืองวัฒนธรรม มีแหล่งท่องเที่ยวที่หลากหลาย และค่าครองชีพถูก

- People-



สถิติรถ-คนจีนเข้าออกผ่านด่าน ตม. เชียงของ (สะพานมิตรภาพไทย-ลาว ข้ามน้ำโขงแห่งที่ 4 ที่เชื่อมกับเส้นทาง R3a) จากปี 56 มีรถจีนผ่านด่านฯ 1,487 คัน คน 21,631 คน ปี 57 เพิ่มขึ้นกว่าเท่าตัวเป็น 4,883 คัน 27,717 คน และปี 58 ที่ผ่านมาสถิติรถจีนผ่านด่านฯ พุ่งพรวดเป็น 9,248 คัน จำนวนนักท่องเที่ยวเพิ่มเป็น 43,555 คน

แต่สิ่งที่เกิดขึ้นตามมาจากขบวนรถนักท่องเที่ยวจีนที่ทะลักเข้ามาในภาคเหนือตอนบน ก็คือ ผลกระทบที่เกิดขึ้นกับคนท้องถิ่น ทั้งเรื่องปัญหาการจราจร อุบัติเหตุ รวมถึงความวิตกกังวลเรื่องผลกระทบจากกรรบ้าน ทั้งเรื่องความสะอาด สุขอนามัย

- People-

นทท.จีนแห่เที่ยววัดร่องขุน



นักท่องเที่ยวจีนแห่เที่ยววัดร่องขุนแน่นต่อเนื่อง แคมส่วนใหญ่มุ่งถ่ายรูปทั้งด้านหน้า-ใน “สุขาสีทอง” จุดเกิดเหตุฉาวตรึม ไกด์ยันชาวจีนพร้อมปฏิบัติตามคำแนะนำ แต่ที่เกิดเหตุเพราะ “ไม่รู้” บอกทุกคนเสียใจกับเรื่องที่เกิดขึ้น และจะเสียใจมากหากถูกห้ามเที่ยว “วัดร่องขุน”

- Products-

อนาคตสินค้าเกษตรไทย...ในกำมือจีน?



สาเหตุจากแรงกดดันภาษีสินค้าผลไม้ไทย-จีน (FTA) ภายใต้กรอบ Early Harvest หรือการเปิดเสรีล่วงหน้าของความตกลงเขตการค้าเสรีอาเซียน-จีน ในสินค้าพิกัดศุลกากร 07 และ 08 คือผลไม้ มีผลให้ภาชนะนำเข้าระหว่างไทย-จีน เป็น 0%

- Capital-



อุตสาหกรรมการปลูกกล้วยหอมสงจีน ในพื้นที่ลุ่มน้ำอิง จ.เชียงราย



CASE STUDY

ระบบโลจิสติกส์การส่งออกยางพาราในเขตภาคเหนือตอนบน (จังหวัดเชียงราย) สู่อู่ประเทศจีน (ตอนใต้)
โรงงานอุตสาหกรรมการแปรรูปเป็นยางพาราอัดแท่งของผู้ประกอบการจีน ใน สปป.ลาว



โรงงานอุตสาหกรรม Yunnan Natural Rubber Industrial Co. Ltd.,



CASE STUDY

การขนส่งโคเนื้อจากไทย – ลาว – จีน (เส้นทาง R3A)



CASE STUDY



International Economic Cooperation and Logistics Linkages

1. Great Mekong Sub-Region

- GMS Economic Corridors consists of 6 members, including Thailand, China, Vietnam, Cambodia, Laos and Myanmar
- Chiang Rai area is located on North-South Economic Corridor which has a start point on Kunming (China) and split the end point on Thailand and Vietnam.
- R3 route is divided into sub-path through Lao PDR on east and through Myanmar on west
- R3W route is start from Bangkok to Mae Sai, Chiang Rai province which is complete, but some route from Bangkok to Chiang Khong or R3W is incomplete such as route from Chiang Rai to Chiang Khong still a 2 lane road
- R3 route will encourage the role of border trade especially in specific area such as “square emerald” (Thailand-Myanmar-Laos PDR-China)



Source: <http://www.siamintelligence.com>



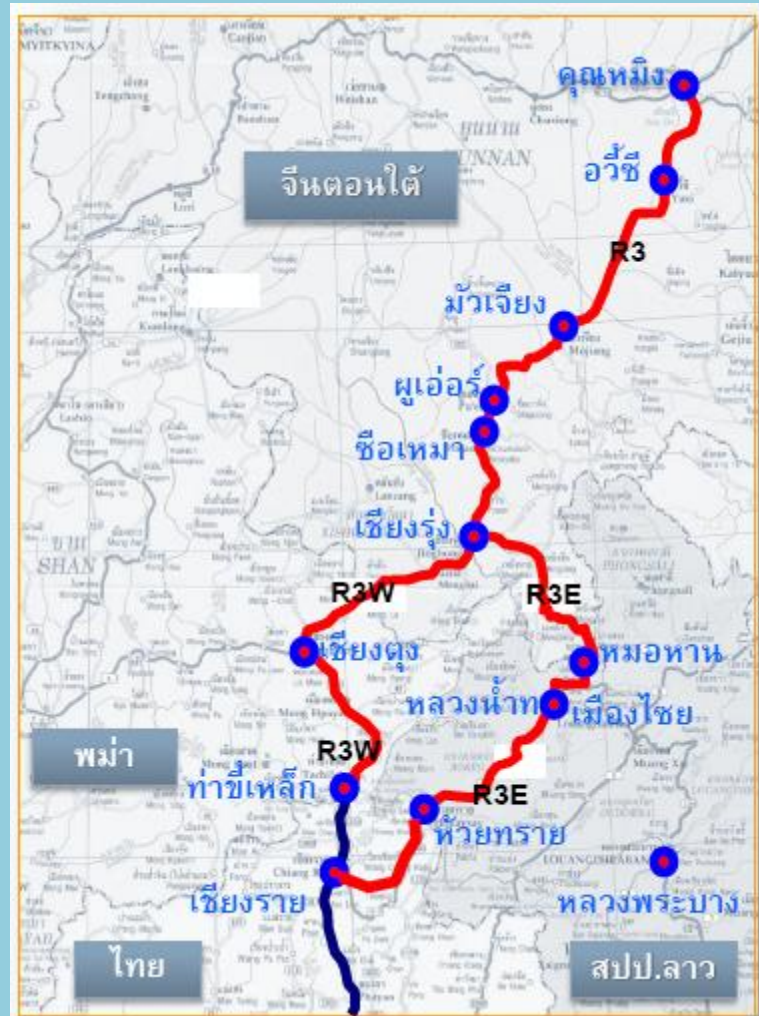
GMS Economic Corridor

- Northern Corridor
- North-South Corridor
- Western Corridor
- North-Eastern Corridor
- East-West Corridor
- Eastern Corridor
- Central Corridor
- Southern Corridor
- Southern Coastal Corridor

GMS North-South Economic Corridor

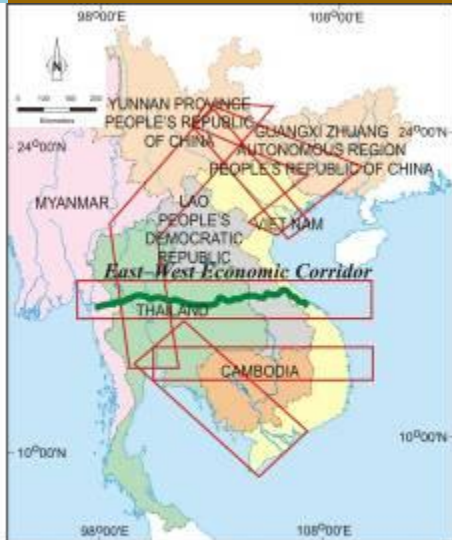


GMS North-South Economic Corridor



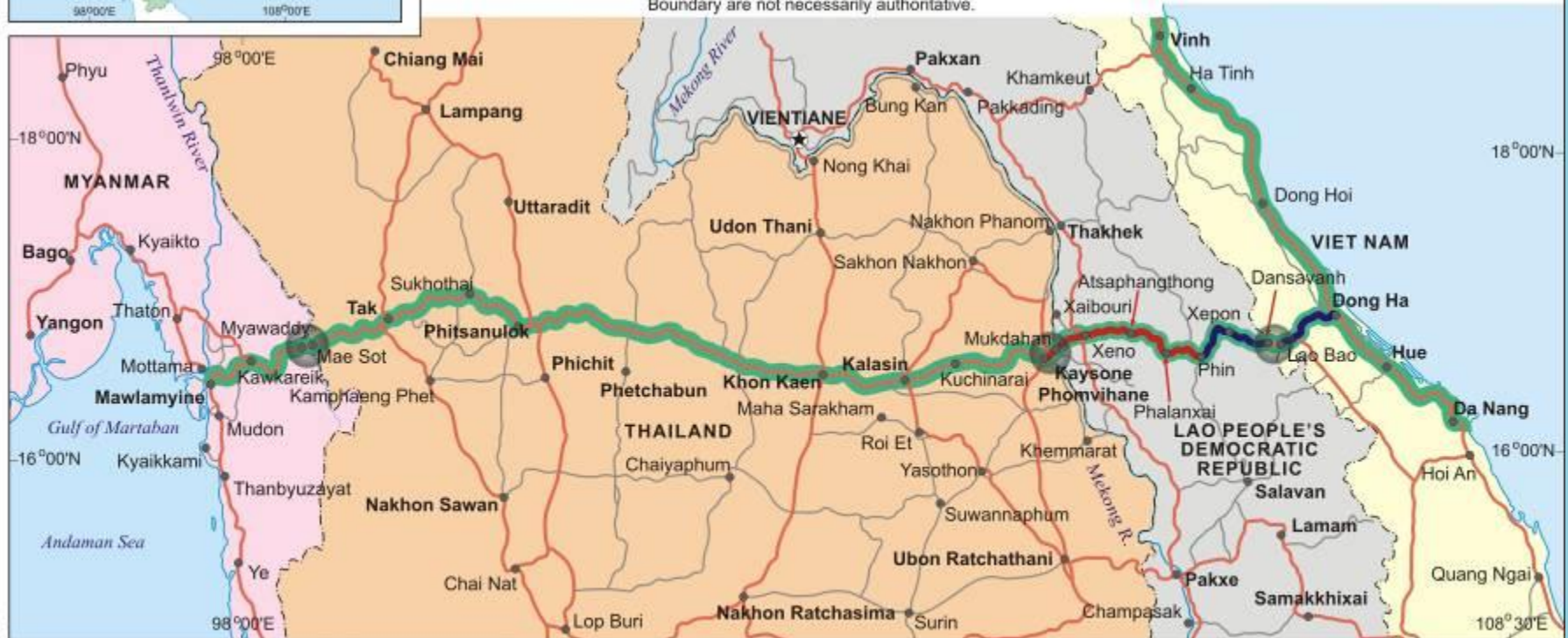
**NSEC from Kunming-BKK (R3A)
= 1887 km.**

GMS East-West Transport Corridor

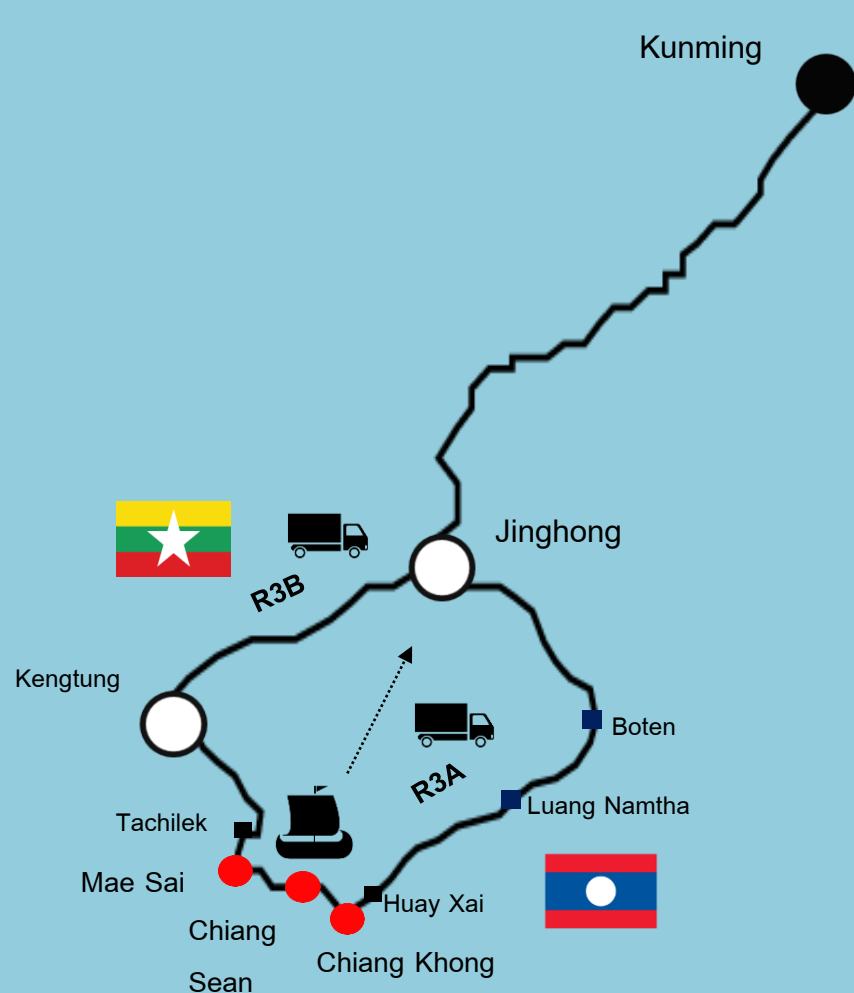


GREATER MEKONG SUBREGION EAST-WEST TRANSPORT CORRIDOR PROJECT

- ★ National Capital
 - City/Town
 - Border Crossing Point
 - ADB-financed Project Road
 - Government of Japan-financed Project Road
 - National Road
 - Provincial Road
 - East-West Economic Corridor
 - River
 - International Boundary
- Boundary are not necessarily authoritative.



Border City on North-South Economic Corridor

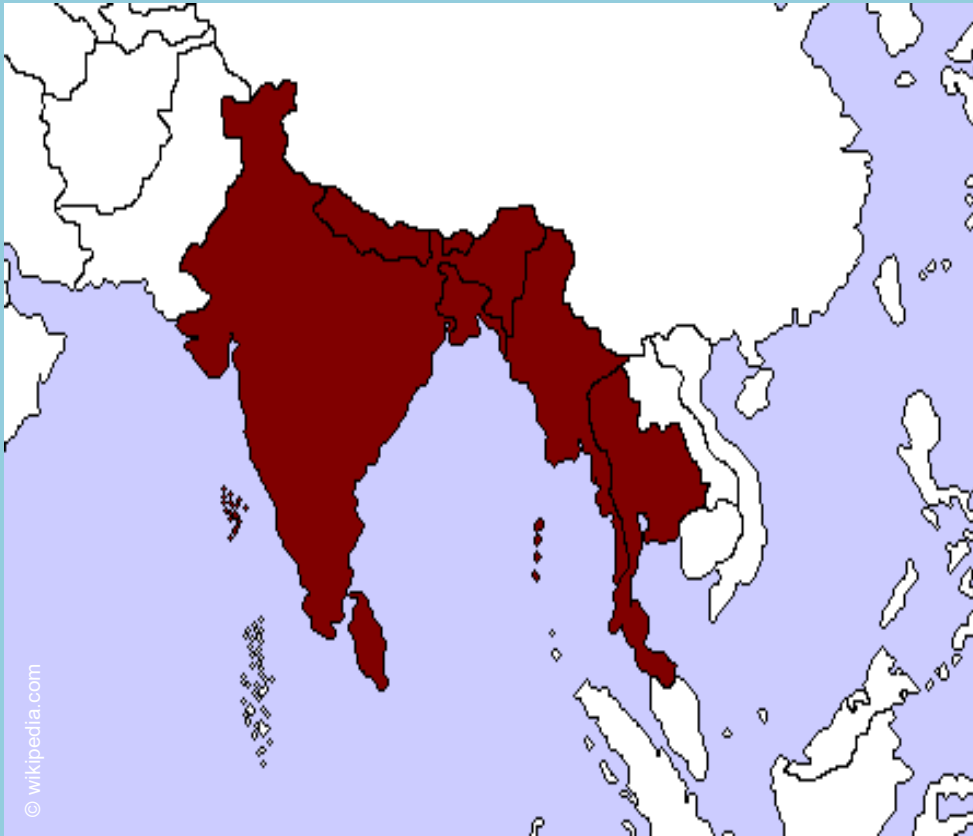


Three possible routes link from Thailand to Southern China

1. Through Myanmar is Mae Sai - Tachilek - Kengtung - Tahluo - Jinghong - Kunming about 393 km
2. Through Laos PDR is Chiang Khong - Huay Xai - Luang Namtha - Boten - Jinghong - Kunming about 322 km
3. Maritime commerce from Chiang Khong to Jinghong about 344 km

International Economic Cooperation

2. Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation

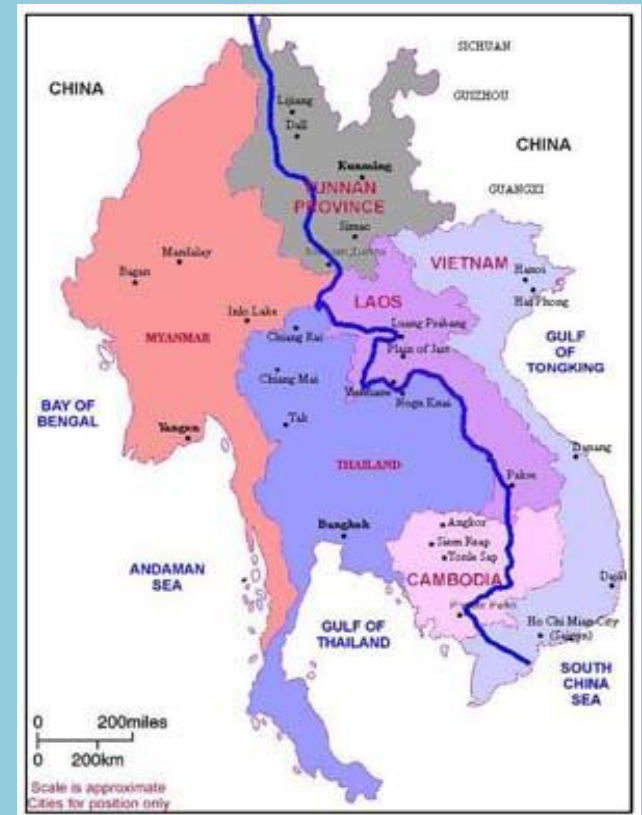


- BIMSTEC is a technical and economic cooperation between 7 countries in the Bay of Bengal, consists of Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka and Thailand
- Aims to emphasize the potential of the region to take advantage of new opportunities and challenges and accelerate the implementation of existing cooperation in the field
- It also focus on free trade negotiations as well as transnational issues and facilitate travel among the parties such as BIMSTEC Business Travel Card and BIMSTEC Visa.

International Economic Cooperation

3. Aeyawadee-Chaopraya-Mekong Economic Cooperation

- ACMECS is a business cooperation and agreement between Thailand, Myanmar, Laos PDR, Cambodia and Vietnam
- A framework for economic cooperation in the region is set up to take advantage of the strength and diversity of the 5 member countries to promote the balance of development
- Currently, ACMECS cooperated in 8 areas; trade facilitation, investment, agriculture, industry and energy, transportation, tourism, human resource development, health and environment



International Economic Cooperation



- R48 route (Koh Kong – Srae Ambel)
- R67 (Choam –Anlong-Veng-Siem Reap)



- Improvement of Wattay International Airport
- Uttaradit-Pak Lai, Saiyaburi route
- Hueang River Bridge
- R3 route (Huay Xai – Luang Namtha)
- Huai Koan – Pak beng route
- Mekong River Bridge the third (Kakhon Panom – Commuan)
- Mekong River Bridge the fourth (Chiang Khong – Huay Xai)
- Nongkhai-Thanaleng-Vientiane



- Mekong River Bridge the second
- Mae Sot-Myawaddy-Kawkareik railway

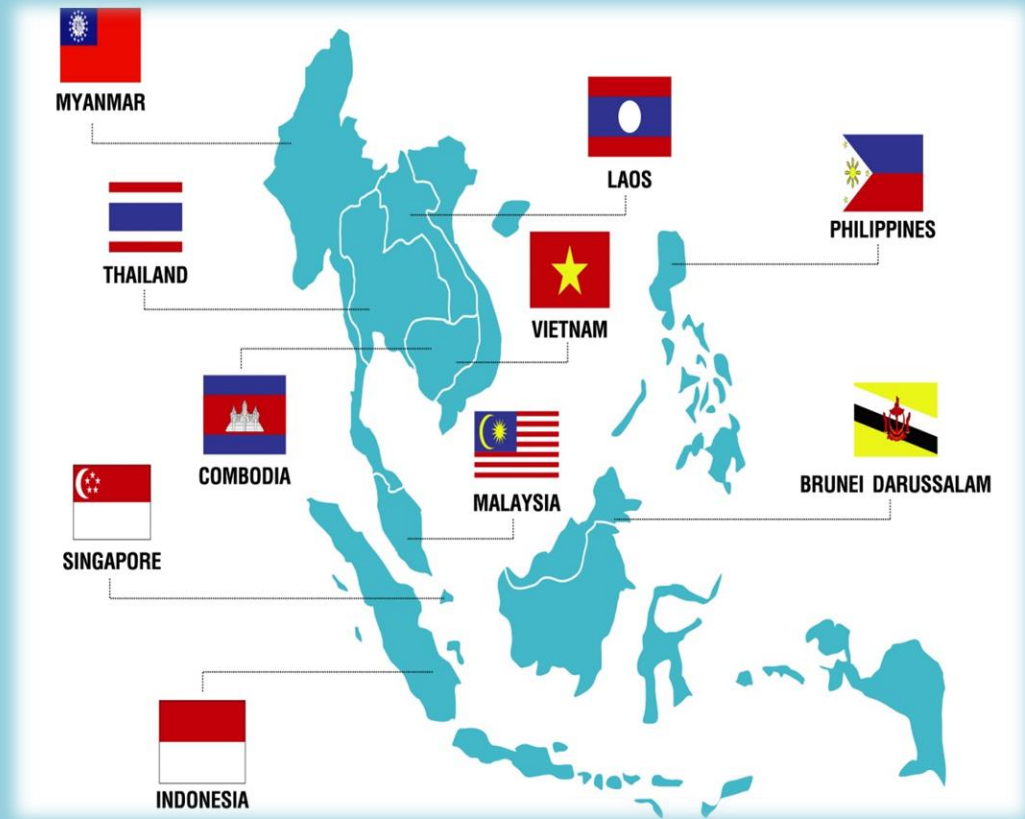
Example of ACMECS project

- Promoting the use of local currencies in border trade, Elevating and establishment of the twin border cities (Sister Cities)
- Training and seminars for college scholarships to members ACMECS
- ACMECS Single Visa
- Contract-farming investment project between neighboring countries
- Communicable diseases prevention and health care quality improvement assistant

International Economic Cooperation

4. Asean Economics Community

- AEC is the integration of the 10 countries consist of Thailand, Myanmar, Laos, Cambodia, Vietnam, Malaysia, Singapore, Indonesia, Philippines and Brunei Darussalam
- Aims to provide mutual economic interests according to 4 blueprints
 1. Single market
 2. Highly competitive
 3. Equally economic development
 4. Global economic integration



ASEAN - China Free Trade Agreement

EARLY HARVEST PROGRAM



NORMAL
PRODUCTS > 90%

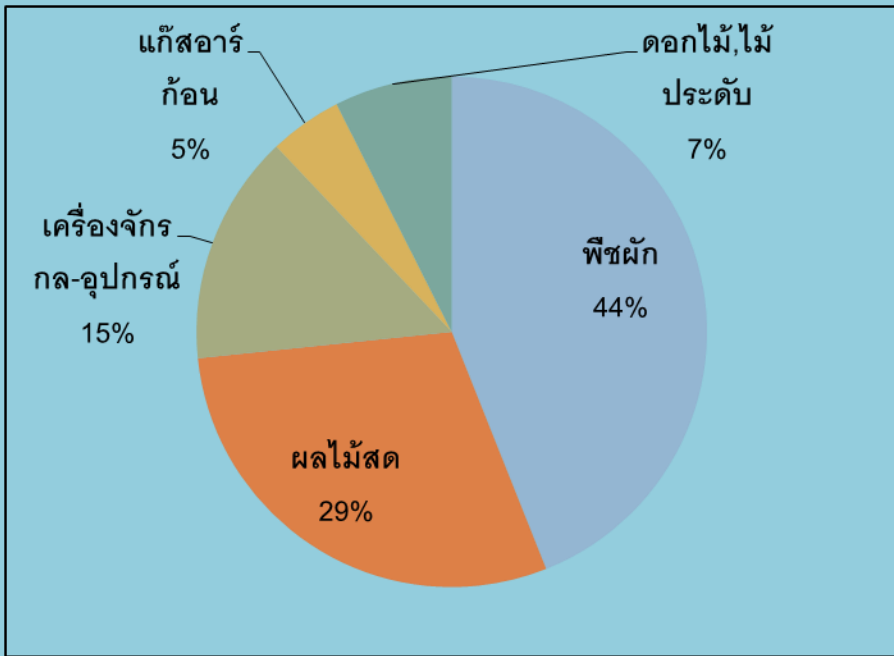
0% Import Tariff



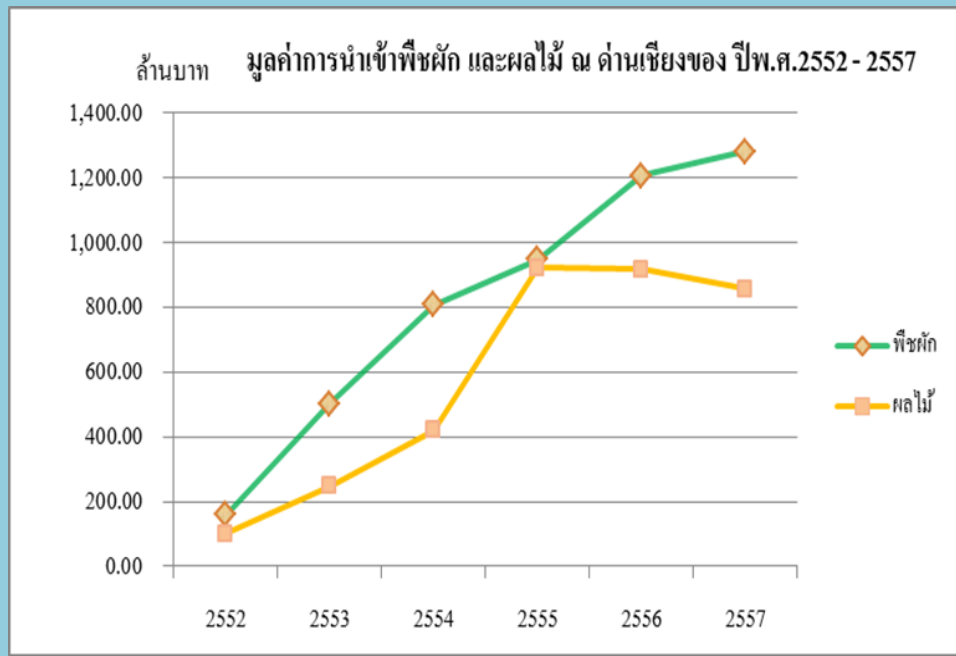
FRUITS & VEGETABLES

Border Trade Situation of Chiang Khong Customs

Share of top 5 imports products



Imports of vegetables and fruits statistics



Cross Border and Transport Management:

Development Potential of the International Shipping on the Lancang-Mekong River in China, Laos, Myanmar and Thailand



Overview of Transportation on Mekong River



The Lancang river and flows through the Tibetan Autonomous Region and then southeast into Yunnan Province. It meets the **tripoint of China, Myanmar and Laos.**

The border of Myanmar and Laos for approximately 400 km until the **Golden Triangle tripoint of Myanmar, Laos and Thailand** then turns east into Laos before meeting the border with Thailand.

Background

- Since the opening of this international shipping route on the Lancang-Mekong river, trade and investment along the river (transportation of goods and peoples have been significantly increased. Economic growth)
- The Agreement has officially opened the international shipping route on the section of the river from Simao of China to Luang Prabang of Laos
- After the signing of this Agreement, China has initiated a program of dredging and removal of rapids, reefs and shoals in conjunction with plans for construction of a cascade of hydroelectric dams in Yunnan Province,



Background

- Myanmar and Laos have also ramped up efforts to benefit from increased river trade. Myanmar's Wan Seng and Wan Pong ports are already entry points for Chinese goods.
- Laos has also modernized Houxay and Xiengkok ports to facilitate shipments of oils and tropical agricultural products to China.
- Thailand has also responded to increased river trade by improving facilities at Chiang Khong and construction of a new port at Chiang Saen, now known as Chiang Saen 2
- Therefore, the Lancang-Mekong international shipping facilities are vital to the freer and better movement of people, goods, and services in this sub-region



Transported Goods on Mekong River



Major Ports

- China – 4 ports, i.e., Simao, Jinghong, Menghan and Guanlei
- Laos – 6 ports, i.e., Ban Sai, Xiengkok, Muangmom, Ban Khouane, Huayxai and Luang Prabang
- Myanmar – 3 ports, i.e., Solei, Wan Seng and Wan Pong
- Thailand – 2 ports, i.e., Chiang Saen and Chiang Kong

Most of products are consumer products and agricultural products that transportation on Mekong River

Existing Transportation on Mekong River

Travel Time and Cost

| Items | Origin-Destination | Distance/Travel Time |
|----------------------|--|--------------------------------------|
| 1. Distance | Chiang Kong Port – Chiang Saen Port | 70 km |
| | Chiang Saen Port – Jinghong Port | 380 km |
| | Jinghong Port – Simao Port | 90 km |
| 2.Travel Time | Chiang Saen Port – Jinghong/Guanlei Port | 3 days (upstream) |
| | Jinghong/Guanlei Port - Chiang Saen Port | 2 days (downstream) |

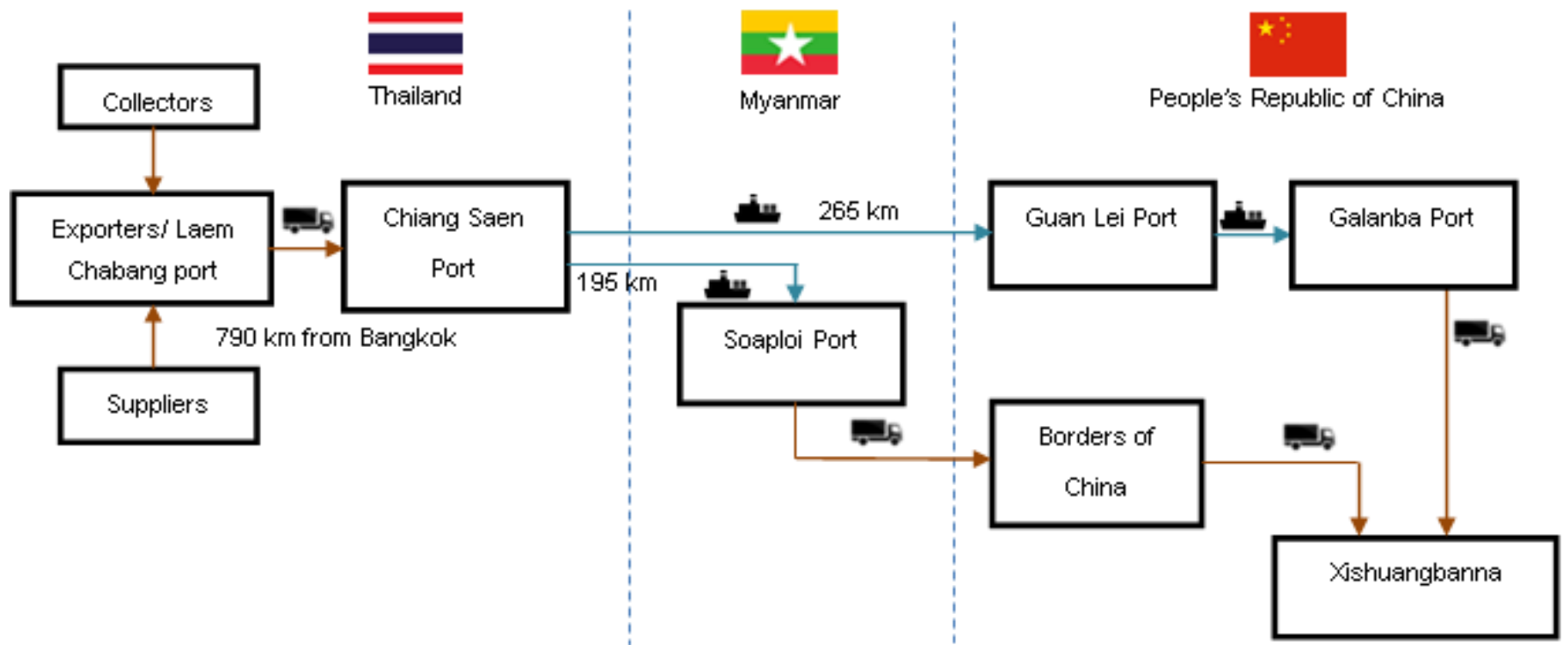
The **cost** of transport varies **depending on type of goods and season**

In some season, with less transportation demand, cheaper cost can be negotiated.

Existing Transportation on Mekong River

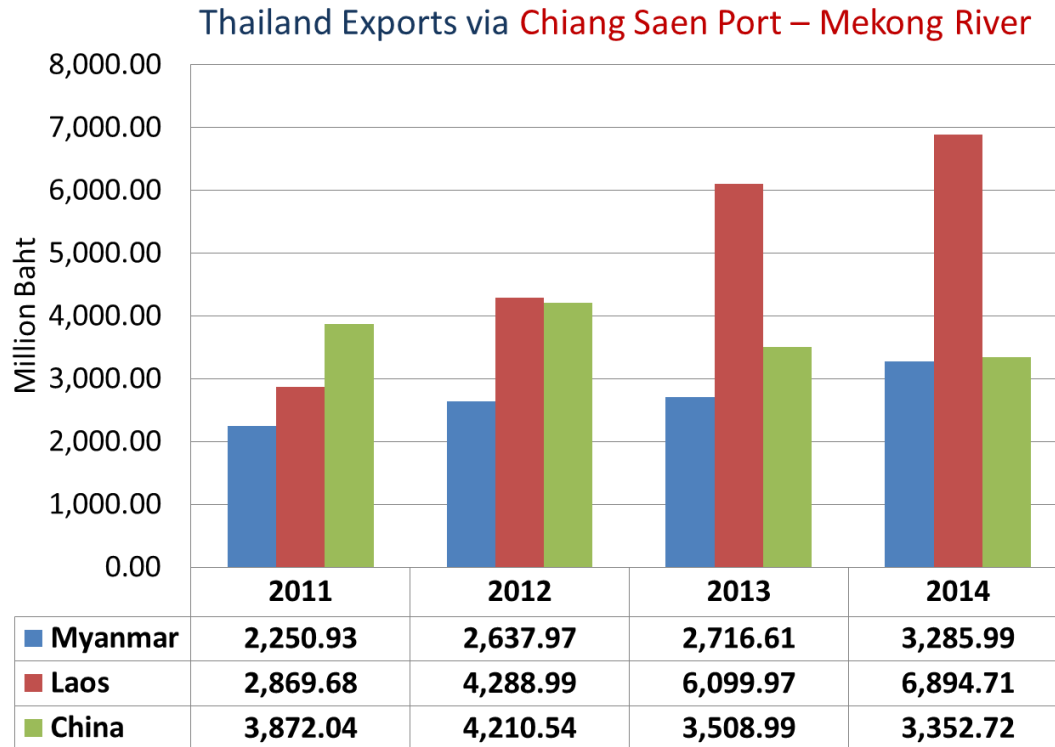
Travel Time and Cost (Based on Fresh Fruits and Vegetables Case Study)

| R3A route | Distance (Kilometers) | Times (hours) | Transportation cost per Container | Lan Cang – Mekong River Route | Distance (Kilometers) | Times (Upstream – Downstream) | Transpiration cost per ship |
|--|-----------------------|---------------|-----------------------------------|--|-----------------------|-------------------------------|---------------------------------|
| R3A route | 1,858 | 35 | 86,245-113,00 Baht | Chiang Saen port (Thailand) – Guanlei port (China) | 220 | 12-8 | 85,430 - 138,000 Baht |
| Bangkok – Chang Rai | 830 | 12 | 25,670-40,150 Baht | Chiang Saen port (Thailand) – Jinghong port (China) | 300 | 12-16 | |
| Chang Rai –Chang Kong | 110 | 2 | 43,850-60,050 Baht | Jinghong port (China) – Simao port (China) | 80 | 3-1.5 | |
| ChangKong–Boten (Laos/Mo Han (China)) | 228 | 7 | | | | | |
| Mo Han -Kunming | 690 | 12 | | | | | |



Existing Transportation on Mekong River

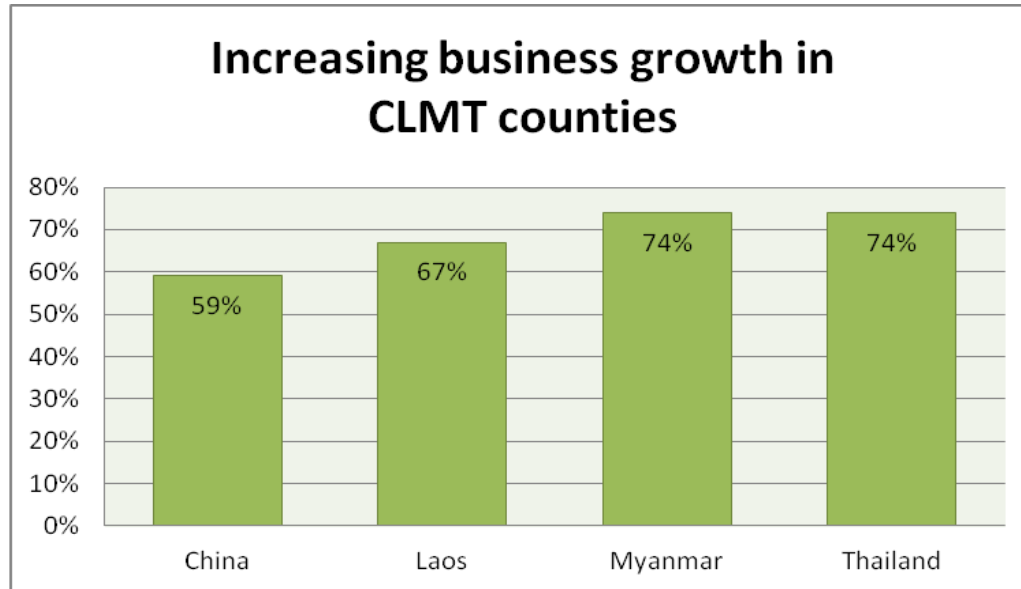
Recent Trade Values



The value of trade was **increased** from **2,869.68** to **4,288.99**, and **6,099.97**, then **6,894.71** in million Baht in the year 2011, 2012, 2013 and 2014

Existing Transportation on Mekong River

Assessing the Logistics System in CLMT countries



- it was found that the perception of **increasing percentage demonstrates the confidence of level**
- that **all four sectors in CLMT counties believe the businesses along the Lan Cang – Mekong River will grow in the future.**

Existing Transportation on Mekong River

Assessing the Logistics System in CLMT countries

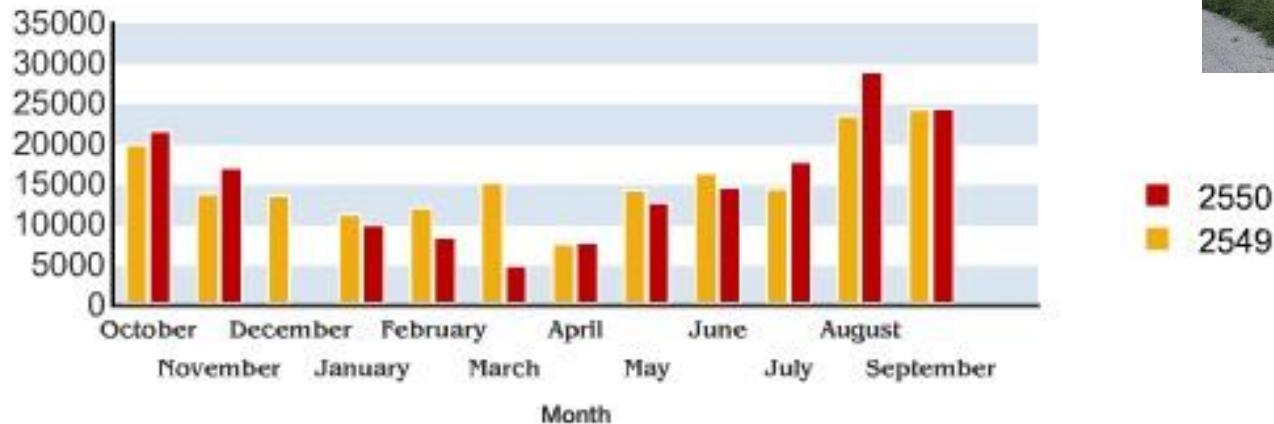
| Index | China | Laos | Myanmar | Thailand |
|--------------------------------------|----------------------------------|---------------------------|-------------------------|----------------------------------|
| Transportation Cost | 4.3 <i>(Excellent)</i> | 4.2 <i>(Excellent)</i> | 3.4 <i>(Good)</i> | 2.0 <i>(Average)</i> |
| Quality of transportation | 3.8 <i>(Good)</i> | 3 <i>(Good)</i> | 2.8 <i>(Average)</i> | 3.1 <i>(Good)</i> |
| Custom service and Inspection | 4.1 <i>(Excellent)</i> | 2.5 <i>(Average)</i> | 3.0 <i>(Good)</i> | 4.5 <i>(Excellent)</i> |
| Risk Assessment | 3.8 <i>(Good)</i> | 2.7 <i>(Average)</i> | 2.8 <i>(Average)</i> | 3.5 <i>(Good)</i> |
| Regulations /Agreement | 4.0 <i>(Excellent)</i> | 3.2 <i>(Good)</i> | 2.5 <i>(Average)</i> | 3.5 <i>(Good)</i> |
| Trade facilitation | 3.8 <i>(Good)</i> | 4.0 <i>(Excellent)</i> | 2.9 <i>(Average)</i> | 3.2 <i>(Good)</i> |
| Linkage to consumer/ market | 4.4 <i>(Excellent)</i> | 3.9 <i>(Good)</i> | 3.0 <i>(Good)</i> | 3.8 <i>(Good)</i> |

Challenge and Obstacles

Physical Challenges



Cargo Through Chiang Saen Port And Chiang Khong Port
Metric Ton



water level challenges

- **During low Season** (January-April), the depth of Mekong River is in the range of 1.5-2.0 meters. (Only small ship with less than 80 cargo tons can pass through)
- **During high season** (July-September), the depth of Mekong River is above 7.0 meters. Large ship with 120-150 cargo tons can pass through.
- **In other season** (May-June & November-December), the depth of Mekong River is in the range between 2.0-4.0 meters.

Challenge and Obstacles

Non-physical Challenges

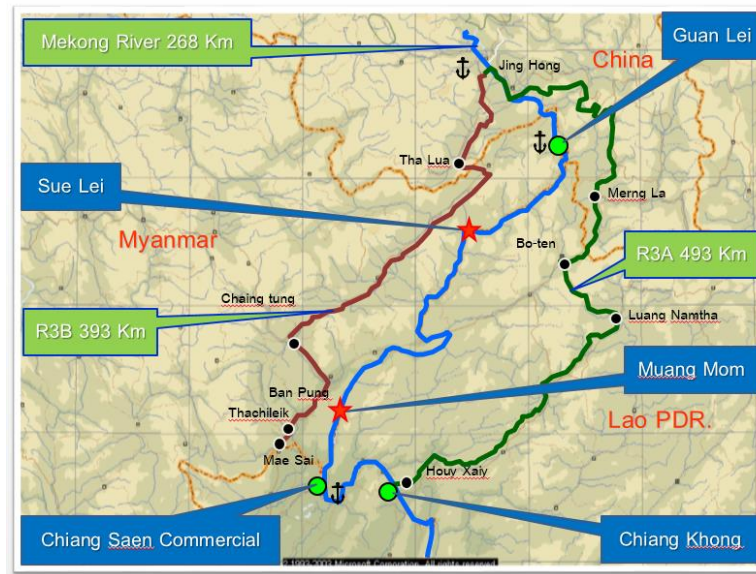
| Country | Imports (Thousand Baht) | | | | | Exports (Thousand Baht) | | | | |
|---------|-------------------------|-----------|-----------|-----------|-----------|-------------------------|-----------|-----------|-----------|-----------|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2010 | 2011 | 2012 | 2013 | 2014 |
| Myanmar | - | - | - | - | - | 95,837 | 21,490 | 587,188 | 404,280 | 444,377 |
| Laos | 546,921 | 486,291 | 613,876 | 613,663 | 215,430 | 2,087,220 | 3,064,026 | 4,069,573 | 3,970,457 | 4,220,286 |
| China | 1,184,362 | 1,782,020 | 2,446,670 | 2,730,324 | 3,070,295 | 1,023,778 | 2,845,627 | 4,796,926 | 5,924,139 | 7,325,265 |

Currently the entrepreneurs choose the R3A route

Because minimize the **transportation cost, convenient, flexible, and minimize their delivering time.**
when comparing with the vessel mode of transportation

Transportation Development Plan

•Thailand



Dual-track railway project to Chiang Khong

The Office of Transport and Traffic Policy and Planning (OTP) has launched a feasibility study into two dual-track railway projects in October 2014.

Logistics Park and Industrial Estate at Chiang Khong

Due to high trade volume across the 4th Friendship Bridge and the trade is expected to reach 15 billion THB in 2014. up to 13.6 billion Baht before opening the 4th Friendship Bridge,

Port Authority of Thailand (PAT) is trying to link each port and searching for the potential route for international shipping

Transportation Development Plan

•Laos PDR



Laos Railway Project

In August 2014, China foreign minister and Lao deputy prime minister had a meeting in Myanmar to discuss about China's finance of \$7.2 billion high-speed railway project planned

Tonpheung International Airport

The construction of international airport in Tonpheung district of Bokeo province is expected to start by the beginning of 2015

Aimed to develop local infrastructure and the infrastructure of Golden Triangle Special Economic Zone (SEZ) in Bokeo province.

Transportation Development Plan

•Myanmar



Lao - Myanmar Friendship Bridge

The first bridge crossing Mekong from Myanmar to Laos.

This bridge is expected to boost more trades between Shan State and LuangNamtha province

Kyaukphyu-Kunming Railway Project

linking Rakhine's Kyaukphyu Township to Kunming. Chinese plans are proceeding which straddle the border with Myanmar and serve as the entry point to Yunnan Province and Kunming.

However, Myanmar Ministry of Rail Transportation official recently said it had been cancelled

Transportation Development Plan

- China



Lancang Airport

Lancang Airport is an airport scheduled for construction in LancangLahu Autonomous County in Pu'er, Yunnan province, southwest of China.

This project is expected to bolster economic development, the government has been extending enormous support to airport infrastructure projects

Summary of Impact and Relevance to Mekong Shipping

| Plan/Project | Range/Year | Type/Degree | Note |
|--|-------------------------|--|---|
| Dual-track railway project to Chiang Khong | Long-term (after 2020) | Affect Mekong shipping negatively since R3A would be more convenient and easier for rail transfer. | The development of Chiang Khong by both government and private sectors mean less development in Chiang Saen port or Chiang Saen area. |
| Logistics Park at Chiang Khong | Long-term (after 2015) | | |
| Laos Railway Project | Long-term (>5-10 years) | Affect Mekong shipping negatively since rail is more efficient for freight and containers shipping | This project is still on negotiation. It has lots of uncertainty esp. on financial deal. |
| Tonpheung International Airport | Long-term (after 2018) | Might not affect freight transport on Mekong since river transport is much cheaper for time-insensitive goods. | This project might slightly have negatively effect on Mekong cruise tourists since air travel from Kunming is faster |

Summary of Impact and Relevance to Mekong Shipping

| Plan/Project | Range/Year | Type/Degree | Note |
|-----------------------------------|--------------------------------|--|--|
| Lao - Burma Friendship Bridge | Long-term (after 2016) | Could affect freight volumes on Mekong for China-Myanmar trade. | This project paves a much easier connection from R3A to Myanmar (instead of rugged terrain R3B). Truck transport from China to Myanmar could use this route. |
| Kyaukphyu-Kunming Railway Project | Unlikely to happen before 2025 | If happens, would decrease China-Myanmar volumes on Mekong shipping significantly. | Due to minority problem in Myanmar and conflict with central government, this project is unlikely to happen in next five years. |

Summary of Impact and Relevance to Mekong Shipping

| Plan/Project | Range/Year | Type/Degree | Note |
|-------------------------------|---------------------------|---|---|
| Lancang Airport | Long-term (after 2018) | Might not affect freight transport on Mekong since river transport is cheaper for time-insensitive goods. | It would reduce tourists on Mekong and R3A route but no effect to freight transport |
| BCIM Corridor | Long-term (after 2020++) | If happens, would decrease China-Myanmar volumes on Mekong shipping significantly. | This project is at the start point and unlikely to the construction plan soon. , will affect to China-Myanmar |
| Mekong joint military patrols | Short-term | This ongoing project might make Mekong shipping a bit safer but it could add delay and cost to regular lawful ships due to a lot of patrol. | Due to large scale of Mekong, the patrol is very difficult to catch the pirate and illegal goods. At the same time, regular lawful ships might be delayed from lots of investigation. |

Preliminary Analysis

Competing Routes (R3A/R3E, R3B, other modes)

In fact, since railway projects are still uncertain in the near future, there are evidently three main ways of transport from Yunnan to Thailand as follows

R3A/R3E: Kunming-Menghan-Boten-Huayxai-Chiang Kong-Chiang Rai-Bangkok,

This route is quite popular among the shipments that require faster travel time to Thailand. Shipment from SipsongPanna and south Yunnan can reach Chiang Khong, Chiang Rai within one day with the distance around 400 km.

R3B: Chiang Tung-Thakilek(Myanmar)-Mae Sai-Chiang Rai-Bangkok. This highway connects with China at Daluo before joining R3A at Chiang Rung and continue to Kunming. However, this route is quite unusable due to poor road condition in Myanmar and unreliable

Air Transport: A new international air terminal at Kunming was recently opened in 2011 while Tonpheung International Airport and Lancang Airport are being constructed and open in the next five years. New available air transport routes in the Upper Mekong area are not expected to affect freight transport on Mekong River and R3A as much since goods shipped through air mode are very time-sensitive and expensive while goods shipped.

Advantage of Mekong Shipping

Disadvantage of Mekong Shipping

Already well-established

Many transport and logistics operators are located along China ports and can handle goods well and conveniently.

Required Experienced Navigation Skill

Navigate the vessel on Mekong River is not an easy task due to strong current and lots of bedrocks along the way

Less problems on cross-border issues

Mekong are large ones with legal government personnel from each country. Also, since most ships are registered in China and from the negotiation.

Risk from Drug Gangster rand Robbery

Area for Mekong shipping is the Golden Triangle area with past drug trade and Myanmar Government cannot control Shan State.

Generally cheaper for bulk items

Inland water transport takes much less fuel, less labor than road transport given the same volumes.

Unreliable Water Draft in Dry Season

it is unreliable for some periods when China needs to store water for hydroelectric plants or irrigation purpose during the dry season.

Access to Mekong Ports is difficult

The major China ports, i.e., Guanlei, Simao, are difficult to access from the main highway.

Summary and Issues to be Investigated and Summary

• Summary of Trend in Mekong Shipping

Keys from research investigation are as follows:

- Mekong Shipping is still expected to be popular due to lowest cost of transport comparing with other modes. However, market share is gradually decreasing to R3A after 2014.
- Most of the transportation developments among countries are not focusing on Mekong development as much as R3A development.
- International agreements (esp. AEC and GMS-CBTA) are likely to benefit both Mekong shipping route and R3A; however, R3A is likely to gain better edge since agreements are intended to reduce CIQ problems and hidden costs.

- Lots of air transport service and airport developments are recently initiated in the Upper Mekong area; however, it is not expected to draw Mekong shipping goods into air transport due to much higher cost
- Railway development is the latest trend in the upper Mekong region. If the railway project (passing Laos into Chiang Khong) is successful, it would negatively affect transport volumes on Mekong shipping. However, it is not expected to finish before 2020 or even begin construction in a few years due to lots of government involvement and high capital cost.

CLMV logistics development?

Key Success Factors

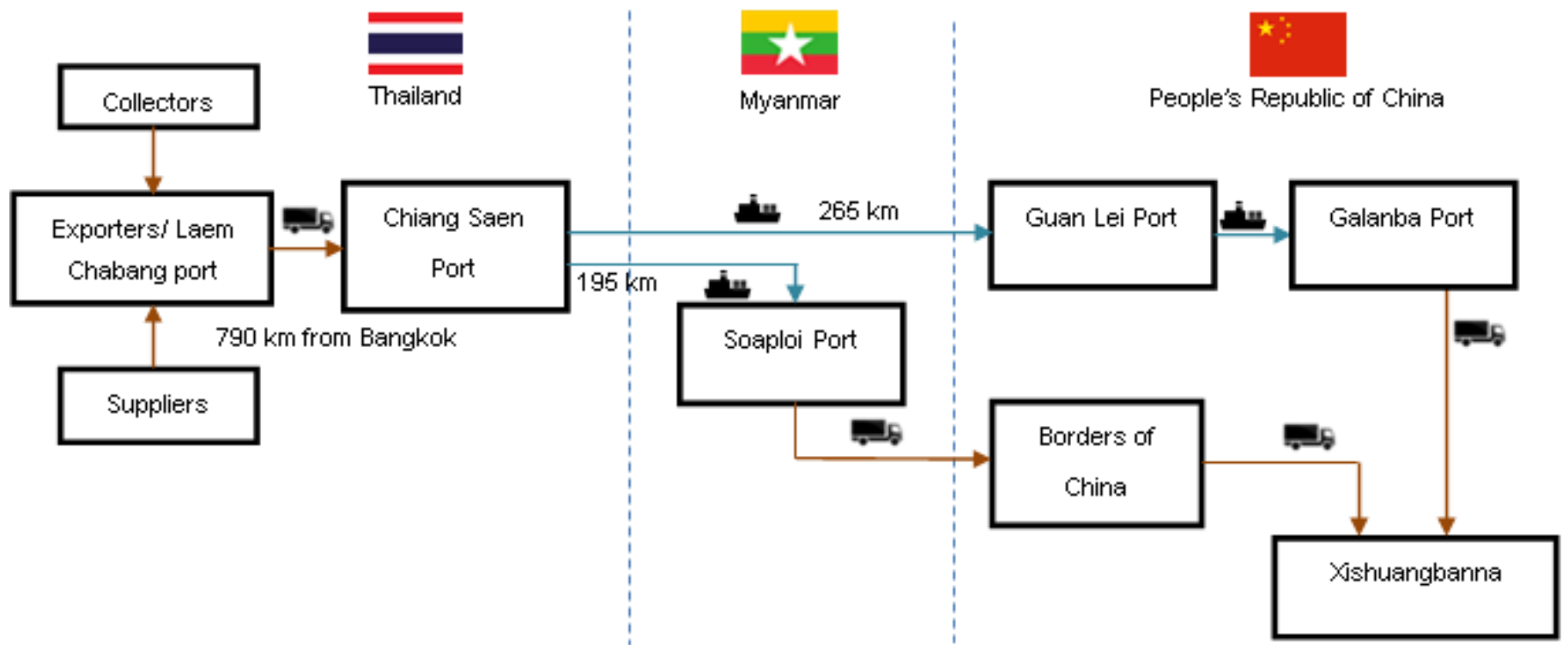
What should your company/organization do to contribute to the logistics development?

What should the government do to contribute to the logistics development?

Recommendation

A case study of frozen product from Thailand to Myanmar -> China

| Route | Type | Distance (Km.) | Time (Hrs) | Total cost (average 28-30 tons per container). | Cost/Kilogram | Notes |
|----------------------------|-------------------|----------------|------------|--|------------------------------|--|
| Bangkok – Chiang Rai | Truck | 790-820 | 10-12 | 42,000 - 60,000 Bath | Approximately 2 baht / kg | |
| Chiang Rai – Chiang Sean | Truck | 60 | 1 | | | |
| Chiang Saen – Sou Lei | refrigerated ship | 195 | 10-11 | 120,000-140,000 Bath | Approximately 4.66 baht / kg | Includes fright cost + insurance + implementation cost |
| Sou Lei - Borders of China | Truck | - | - | 20,000-30,000 Bath | Approximately 1 baht / kg | Implementation cost and average cost |
| Chiang Saen – Guan Lei | refrigerated ship | 265 | 12-13 | 130,000-155,000 Bath | Approximately 5.26 baht / kg | According to transport costs of fruit |







Summary and Issues to be Investigated and Summary

•Key Suggestions to Improve Mekong Shipping

| Main Objectives | Methods |
|-----------------------------------|--|
| 1. Reduce Physical Obstacles | <ul style="list-style-type: none">- Control water level on Mekong river through dams- Add more warning signs and lighting on bedrocks, shallow depth, shores |
| 2. Eliminate Gangster and Robbery | <ul style="list-style-type: none">- Negotiate with Shan State- Install river navy station in risky zone- Add more international patrol or checkpoint |
| 3. Ship Technology | <ul style="list-style-type: none">- Use a modern ship with faster and easier to navigate- Design a container ship specifically for Mekong river |

Summary and Issues to be Investigated and Summary

•Key Suggestions to Improve Mekong Shipping

| Main Objectives | Methods |
|-----------------------------------|---|
| 4. Port Improvement | <ul style="list-style-type: none">- Add more equipment at the port for safer and more efficient handling goods without using labor-intensive technique |
| 5. Area Development | <ul style="list-style-type: none">- Build the hinterland area of each Mekong port such that there are accessible highways to connect the industry zone or city to the port- Build more logistics facilities near the port, e.g., distribution center, logistics parks, and supportive infrastructure such as hospitals and retail areas. |
| 6. Reduce Cost of Mekong Shipping | <ul style="list-style-type: none">- Allow more ships to operate for pricing competition- Negotiate the port charges among countries- Open an international training school for navigation through Mekong River for increasing ship captains and controllers for safety reason |

Summary and Issues to be Investigated and Summary

•Key Suggestions to Improve Mekong Shipping

| Main Objectives | Methods |
|----------------------------------|--|
| 7. Logistics Performance | <ul style="list-style-type: none">- Type and quantity of products that we have to concern- Level of logistics performance |
| 8. Business Sector's perspective | <ul style="list-style-type: none">- Preferences and attitude of business sector on using Lancang-Mekong River |
| 9. Trade Facilitation | <ul style="list-style-type: none">- Trade Facilitation performance |

Summary and Issues to be Investigated and Summary

| Means | AVOID Strategy | SHIFT Strategy | IMPROVE Strategy |
|----------------------|--|--|---|
| <p>Technological</p> | <ul style="list-style-type: none"> - avoid modified boats with no standards | <ul style="list-style-type: none"> - Improve boats to meet standard requirements internationally - Construction of coastal region development axis and transport infrastructure - freight transport based (dry ports) | <ul style="list-style-type: none"> - Development of low emission vessels - Water management in China - Shift to electrically powered vessels - Improve tools in disseminating water management information to key stakeholders in CLMT countries accurately |

Summary and Issues to be Investigated and Summary

| Means | AVOID Strategy | SHIFT Strategy | IMPROVE Strategy |
|------------|---|---|--|
| Regulatory | <ul style="list-style-type: none"> - Regulations for location and development that are not based on waterway transport | <ul style="list-style-type: none"> - Liberalization of domestic waterway transport - Joint delivery - Promotion of waterway transport - Increased preference for "slow tourism" using waterway and multimodal transport | <ul style="list-style-type: none"> - set up policy on standard of Logistics Management in CLMT countries - Internationalization of waterway standard in Asia |

Summary and Issues to be Investigated and Summary

| Means | AVOID Strategy | SHIFT Strategy | IMPROVE Strategy |
|--|--|--|--|
| <p style="text-align: center;">Informational Economics</p> | <ul style="list-style-type: none"> - Use of videoconferencing - Education regarding high standard work styles - Fuel taxes/carbon taxes (domestic) - Emissions trading (international) | <ul style="list-style-type: none"> - Joint delivery | <ul style="list-style-type: none"> - Navigation systems - Labeling of vassel performance |
| | | <ul style="list-style-type: none"> - Fuel taxes/carbon taxes (domestic) | <ul style="list-style-type: none"> - Fuel taxes/carbon taxes (domestic) - Navigation systems |

Summary and Issues to be Investigated and Summary

AVOID

Formation of industrial corridors using a high standard waterway system

- Creation of arterial corridors for dedicated freight waterway
- Clustering of industries around the arterial and terminal connection hubs of dedicated freight waterway and also multimodal modes
- Establishment of institutions/regulation and systems to suppress transport demand

SHIFT

Establishment of an intermodal transport system incorporating land and water

- Development of based port to support international waterway transport
- Creation of infrastructures for waterway transport services (for import-export and also tourism businesses
- Establishment of institution/regulation to promote the use of waterway and multimodal transport modes

Summary and Issues to be Investigated and Summary

| IMPROVE | |
|--|---|
| <p>Reduction of cost and increasing performance of vessels</p> | <ul style="list-style-type: none">- Technological improvement to transport modes - Development of biofuels and promotion of their use - Optimization of the speed of waterway vessels |



Thank you for your kind attention