

# JTTRI-AIRO Logistics Symposium - Part 2

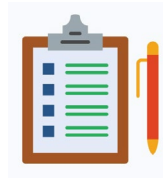
## Aiming For Sustainable Logistics in Thailand

by

**Bhanumas Srisukh**

**Board of Trade of Thailand**





1. **Overview of Thailand Current Position in Transport Infrastructure**
  - Thailand Current Position in Transport Infrastructure
  - Modal Split
2. **Pain Points and Suggestion**
  - Infrastructure Utilization
  - Connectivity between rail and water with other modes
  - High accident rates in road transport
  - Difficulties in Cross Border Transport
  - Process management
3. **Competitiveness**
  - LPI (2014-2023)
  - SWOT Analysis

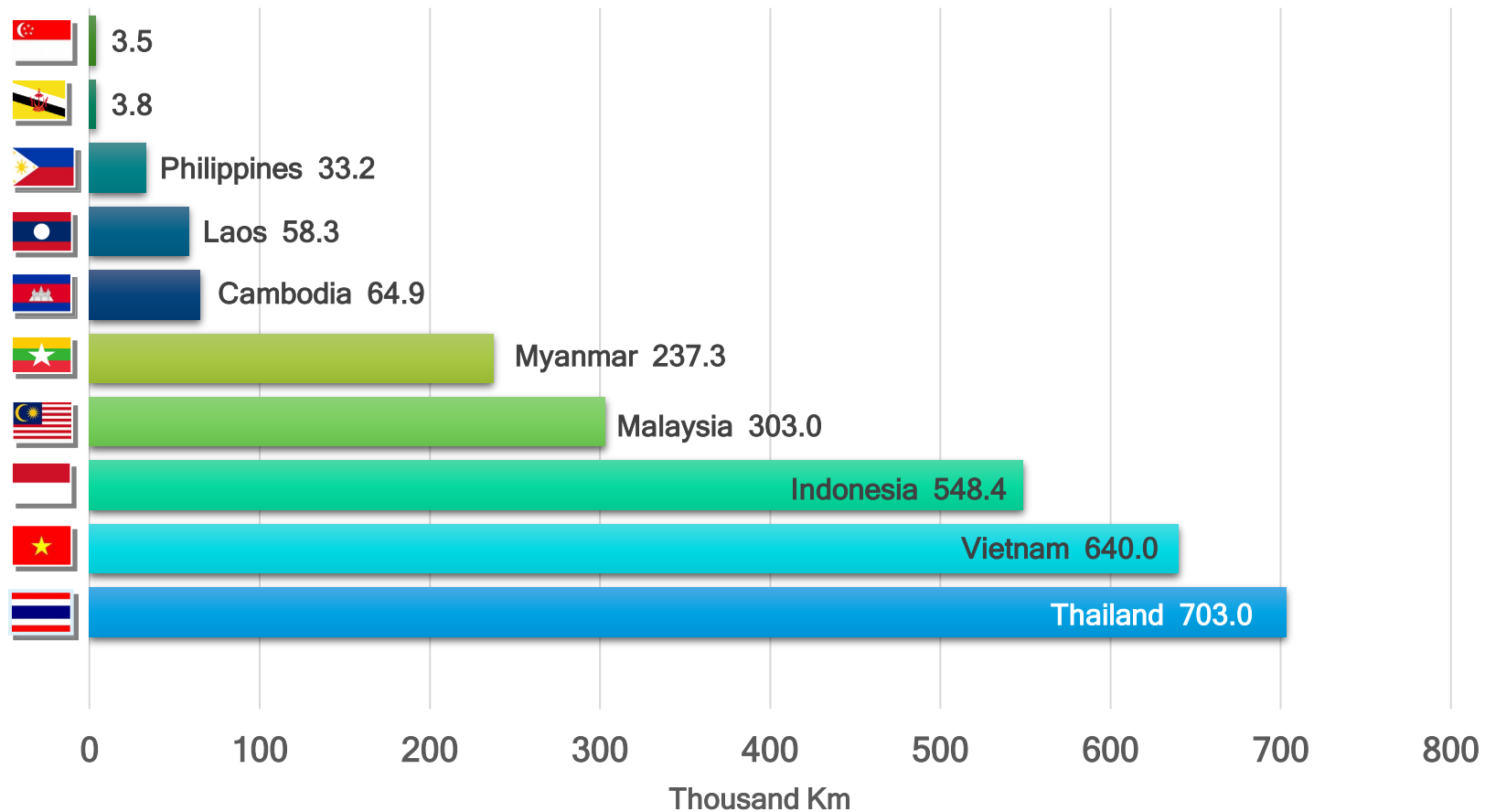
# Overview of Thailand's Transport Infrastructure



# Thailand Important Gateways

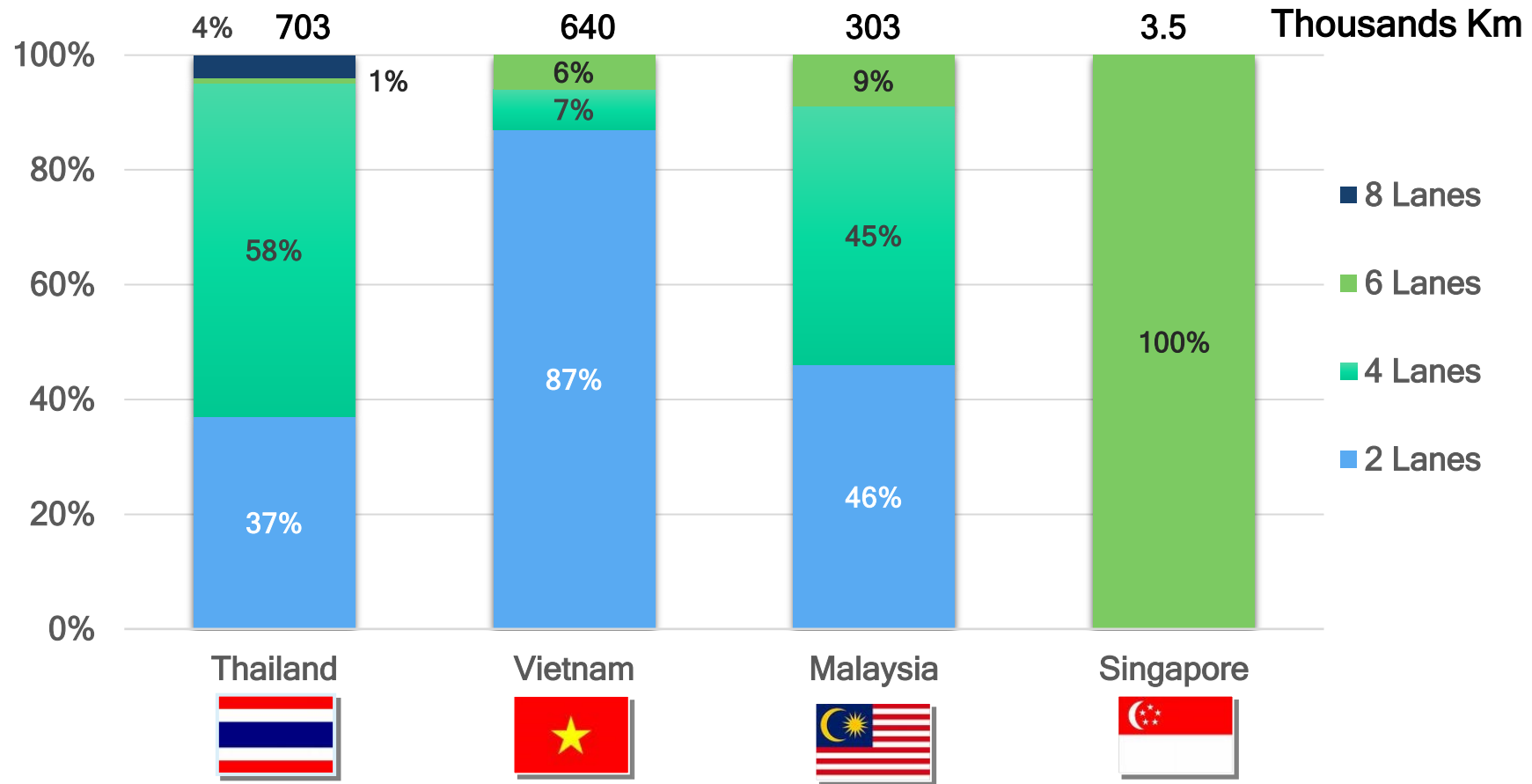


# Total Road Length (Thousand Km), 2021



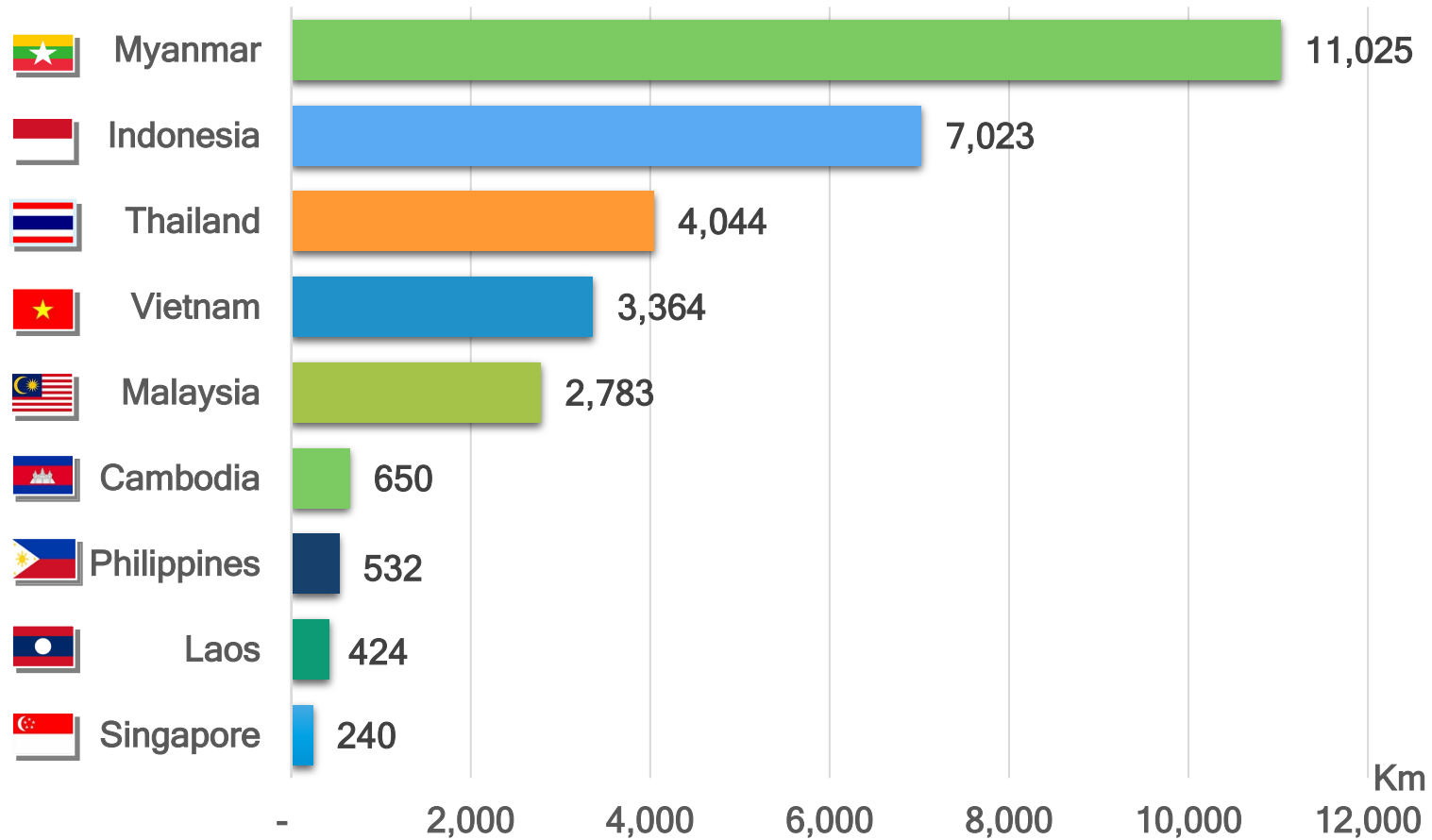
Source: ASEAN Secretariat, ASEANstats database  
The latest available data for Lao PDR, Myanmar, and Viet Nam is 2020

# Land Transport In Some ASEAN Countries



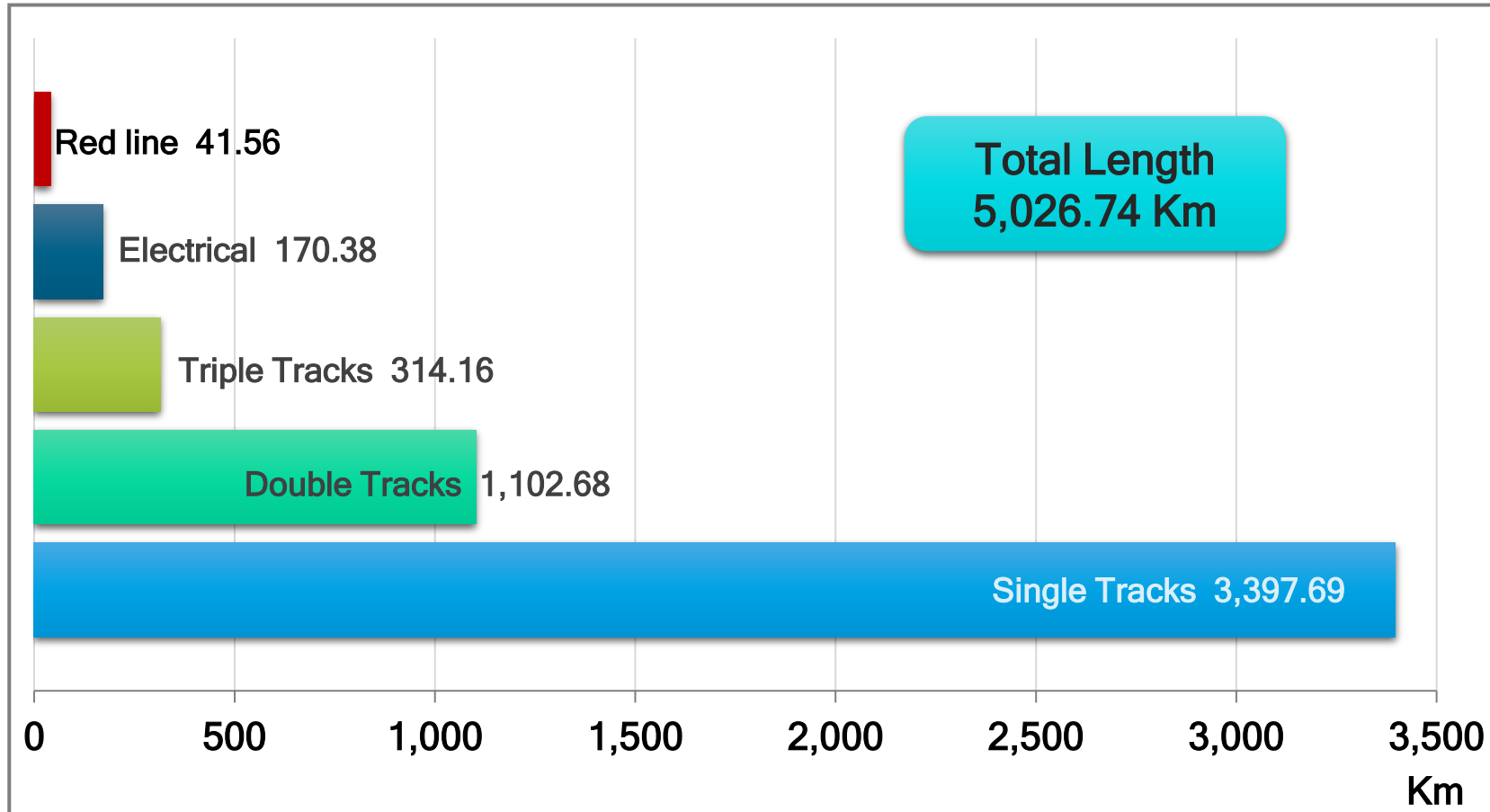
Source: JETRO, ASEAN Logistics Network 2008

# Rail Network size (Km)



Source: Wikipedia

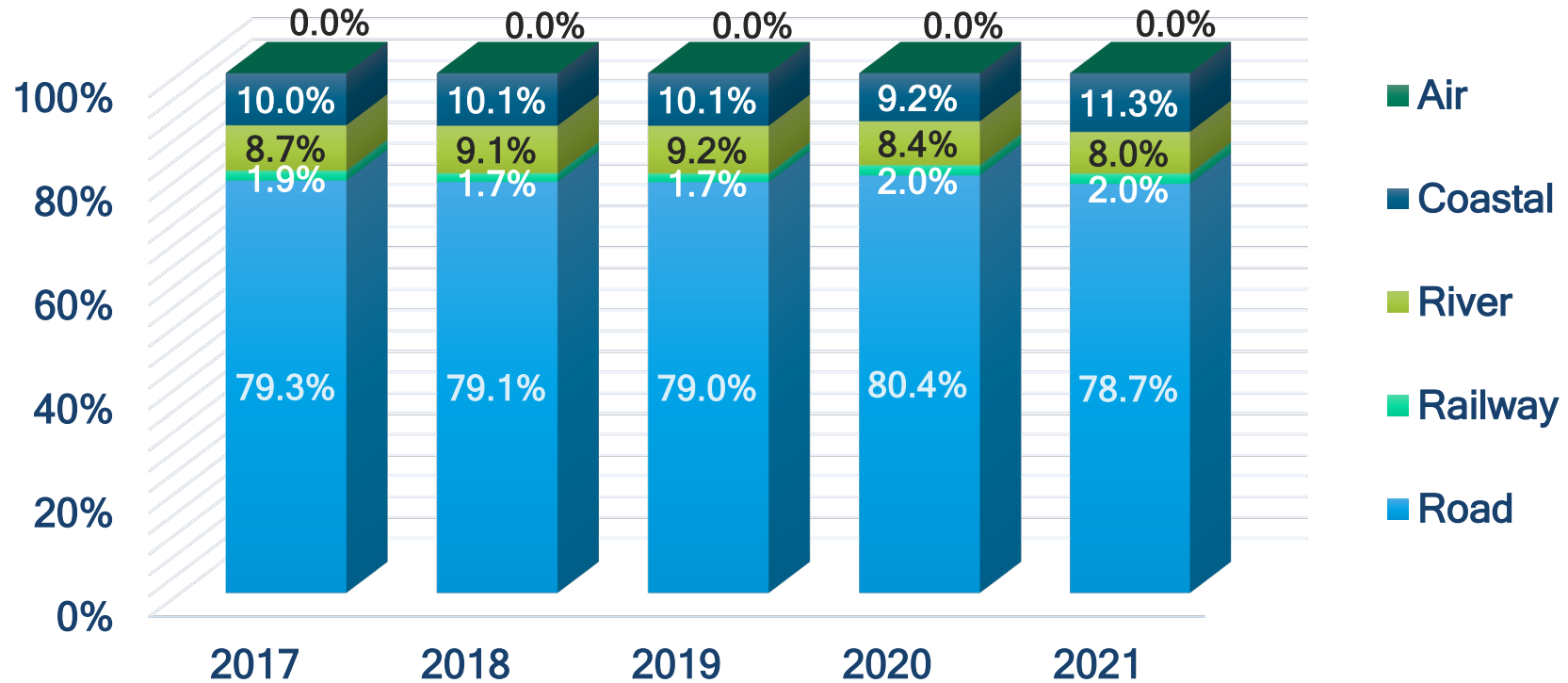
# Thailand Rail Network, 2021



Source: The Office of Transport and Traffic Policy and Planning (OTP)

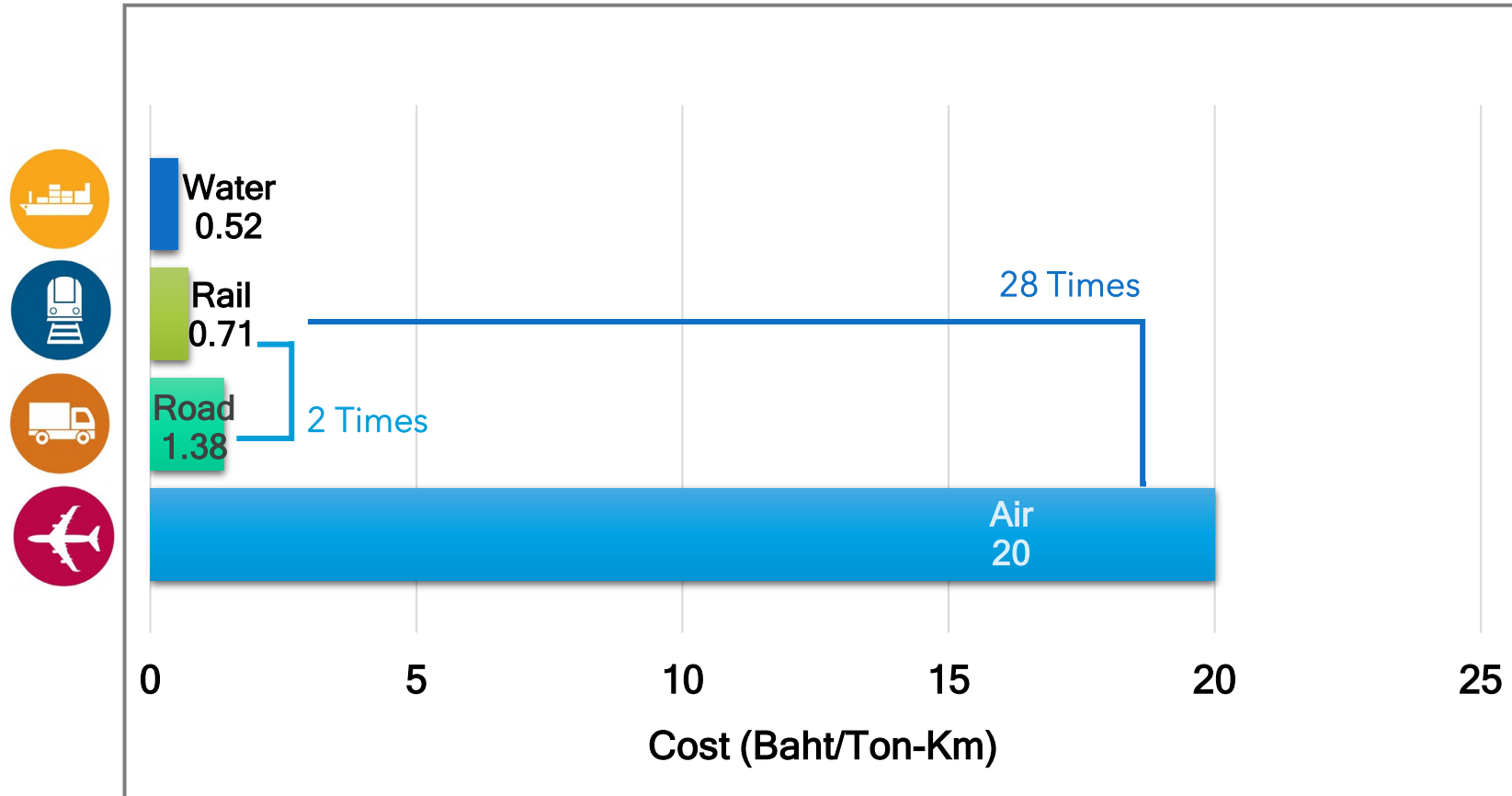


# Domestic Freight by Mode (2011-2021)



Source: Ministry of Transport

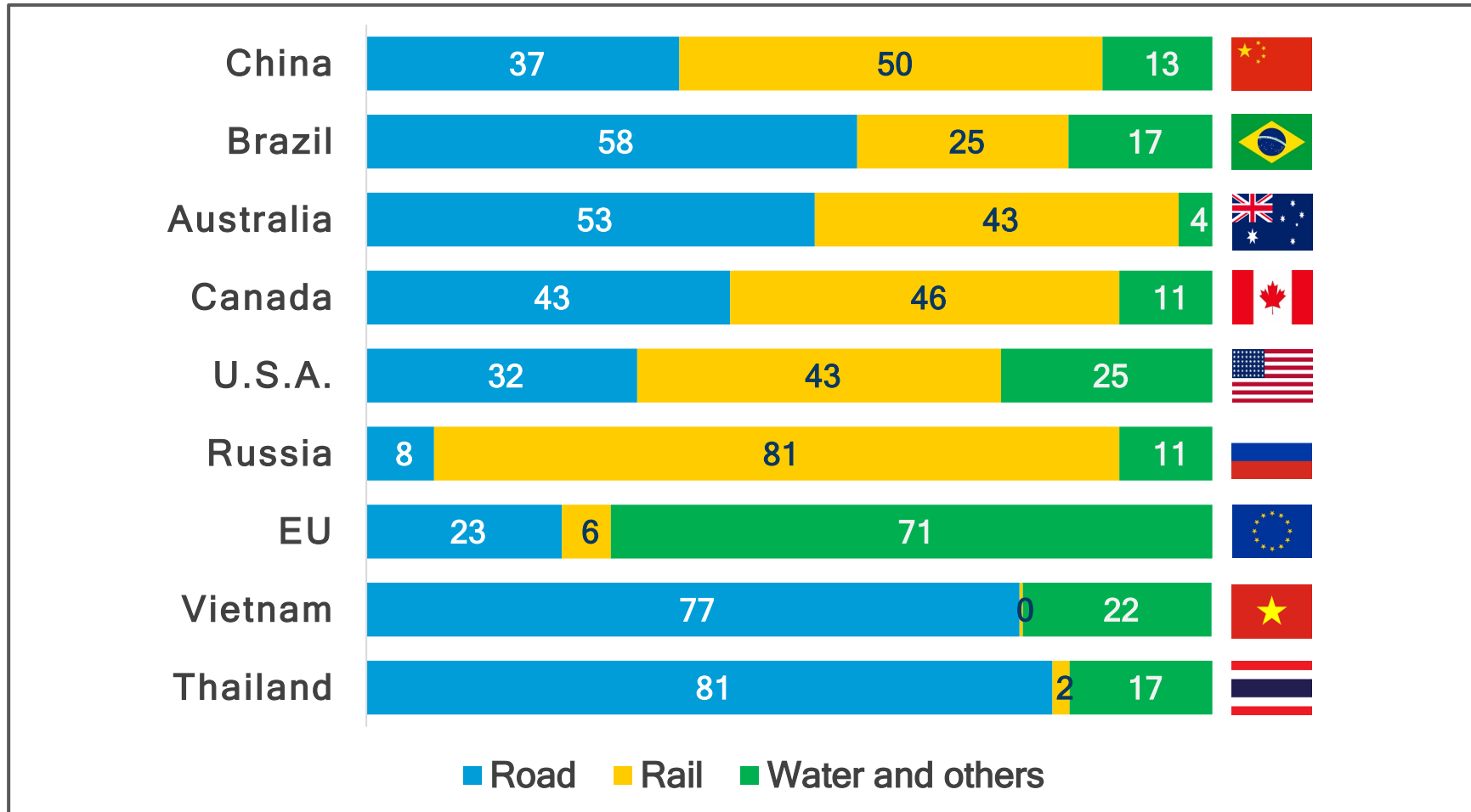
# Thailand Cost of Freight Transport by Mode-2019



Source: Ministry of Transport

# Modal Split Comparison-2017

## (Vietnam in 2016)

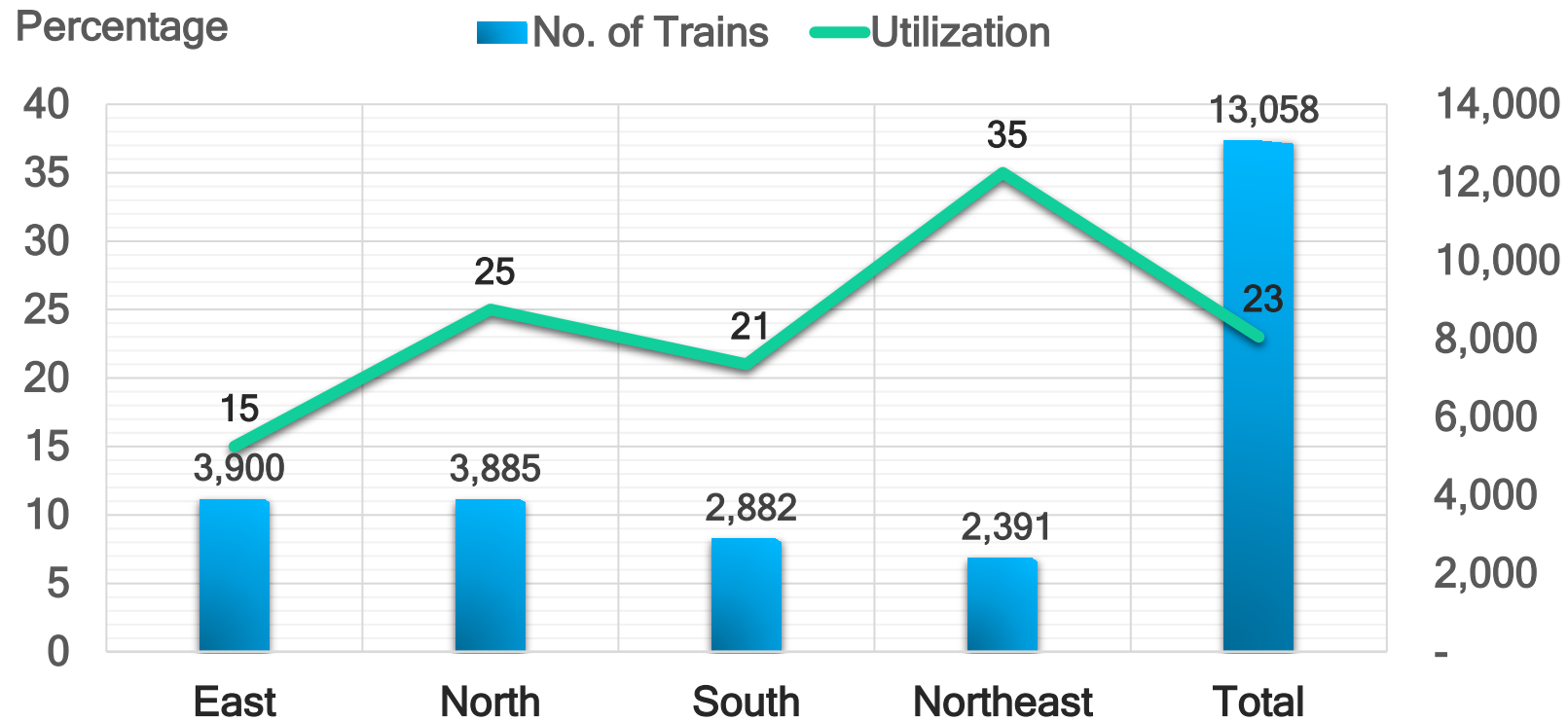


**Source:** Chulalongkorn University Transportation Institute, The research : Brazil Railway, Frederico& Cavenagh, 2017, Ministry of Transport, Review of Sustainable Transport Connectivity in Asia and the Pacific 2019, Eurostat

# Pain Points and Suggestions



# SRT Capacity Utilization-2022



Source: State Railway of Thailand and Transport Institute, Chulalongkorn University

# Infrastructure Utilization

## Rail



SRT is the only operator causing closed market and without competition.

SRT's KPIs should not focus on

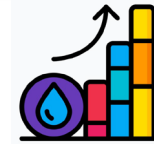


Instead, the focus should be on

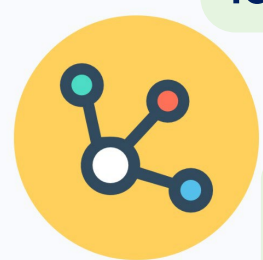
Operations

Efficiency

Utilization



Productivity



Modal share is not as important as the ability to utilize infrastructure.

Similar to principle of

*LowCost Airlines*

Operations

Volume

Utilization



# Infrastructure Utilization

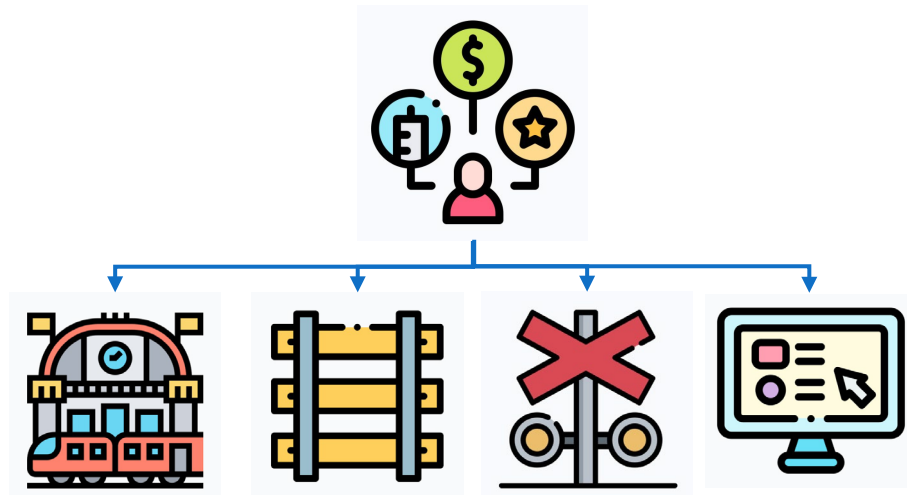
## Rail



SRT is the only operator causing closed market and without competition.

SRT should reduce its role to be the landlord of its infrastructure and the owner of the platform

Encouraging other players to come in rail transportation in order to reduce the cost of rail transport.



Service rates at the beginning should be low to motivate people to use the service.



# Infrastructure Utilization

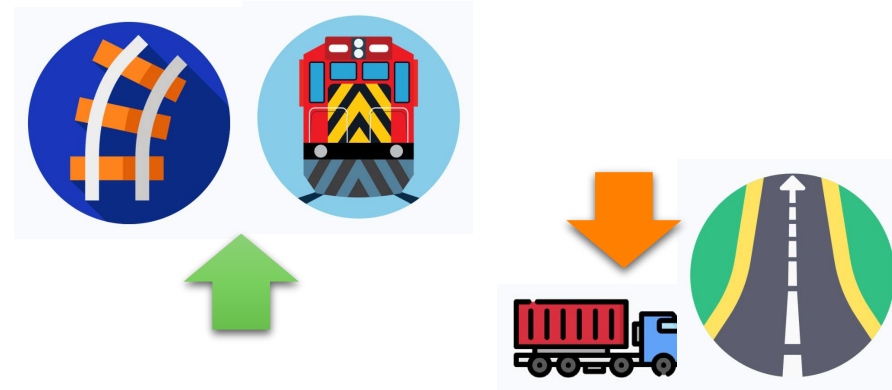
Rail



**SRT is the only operator** causing closed market and without competition.



To implement BCG, we should increase utilization of the rail transport and reduce road transport.

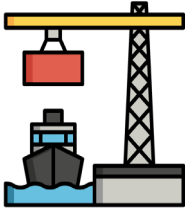


Source: <https://thaiembdc.org/>, <https://www.bcg.in.th/>



# Infrastructure Utilization

## Port



A few ports are **not** being utilized

### Ranong port



**Source:** <https://logistics-manager.com>  
<https://ww2.ayutthaya.go.th/>  
<https://andadugong.blogspot.com/>  
<http://www.unique.co.th/>

### River port at Salaloi, Tha Ruea District, Ayutthaya

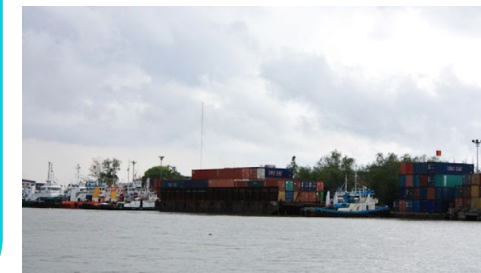


The **conditions of granting concessions** to operators who will operate state-owned ports **should be changed**, charging the lowest due instead of giving the highest return to the government, in order to reduce supply chain cost.

### Khlong Yai port, Trat.



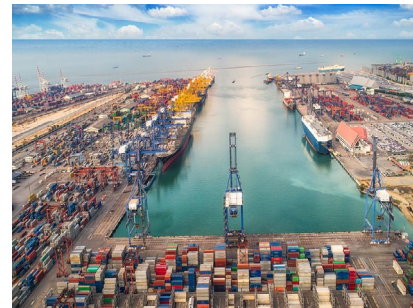
### Kantang port, Trang



# Transport Infrastructure

“Infrastructure is the first stage of transport development. When there is a transportation system, there will be vehicles coming in, and leading to traffic. The ultimate development stage is service. We build roads for motor-vehicles to drive on. We build ports for ships to dock on. We build rail tracks for trains to roll on, and airports for airplanes to land and take off. Transport volume is to be increased by the transport operators, not just Infrastructure, and transport services will bring along capacity.”

Chula Sukmanop, EEC-Secretary General



Source: [www.salika.co](http://www.salika.co) , [www.prachachat.net](http://www.prachachat.net), [mgronline.com](http://mgronline.com) , [www.thansettakij.com](http://www.thansettakij.com)

# Connectivity between rail and water with other modes

Rail



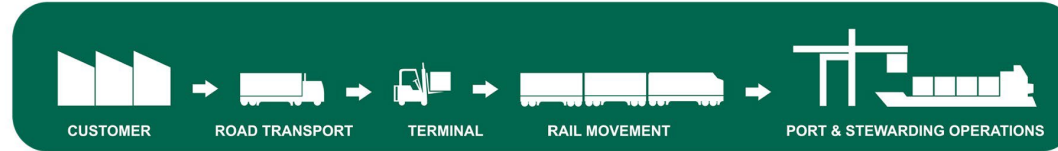
For door-to-door, total cost of rail transport cannot compete with road transport.



## DIRECT ROAD MOVEMENT TO PORT



## INTERMODAL/EXPORT



## INTERMODAL



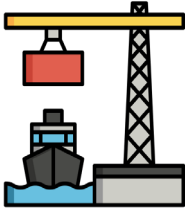
## INTERMODAL/DOMESTIC



Source: <https://www.cevalogistics.com/>, <https://www.qtlc.com.au/freight-sectors/intermodal/>

# Connectivity between rail and water with other modes

Port

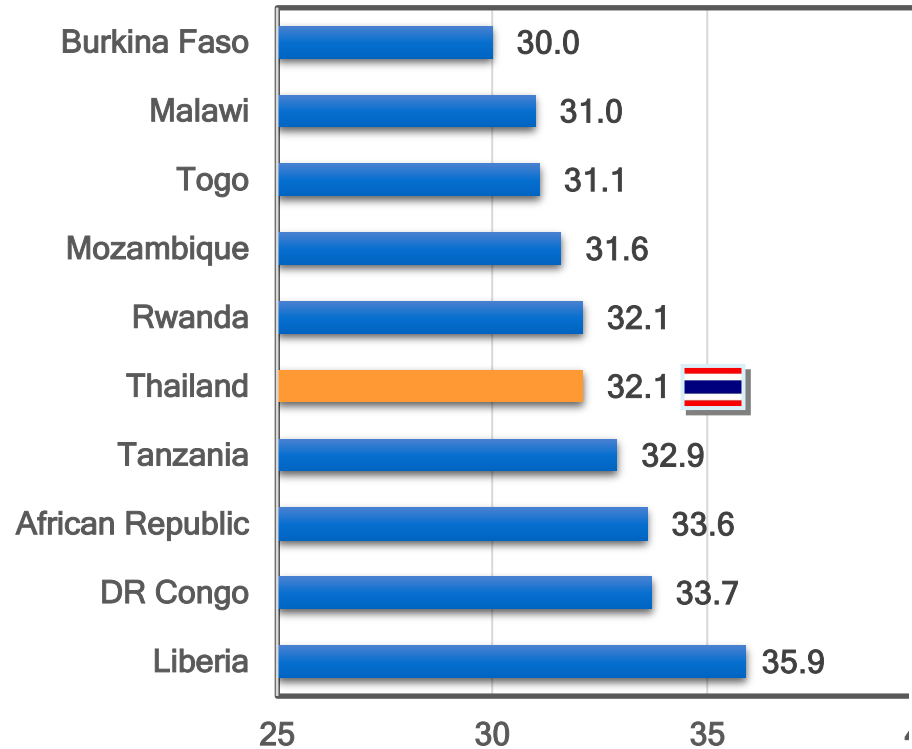


Water transport must be developed in a multi-modal form and to be pushed for Modal Shift.

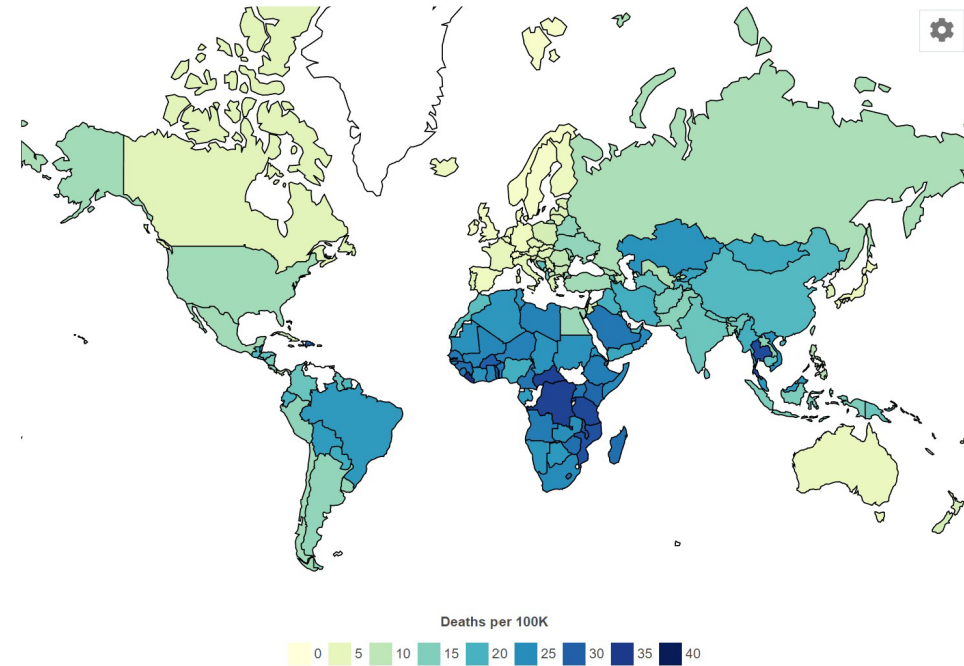


# Thailand's road transport has been ranked one of the highest accident rates in the world

Road Deaths By Country-2016  
(Per 100,000 People)



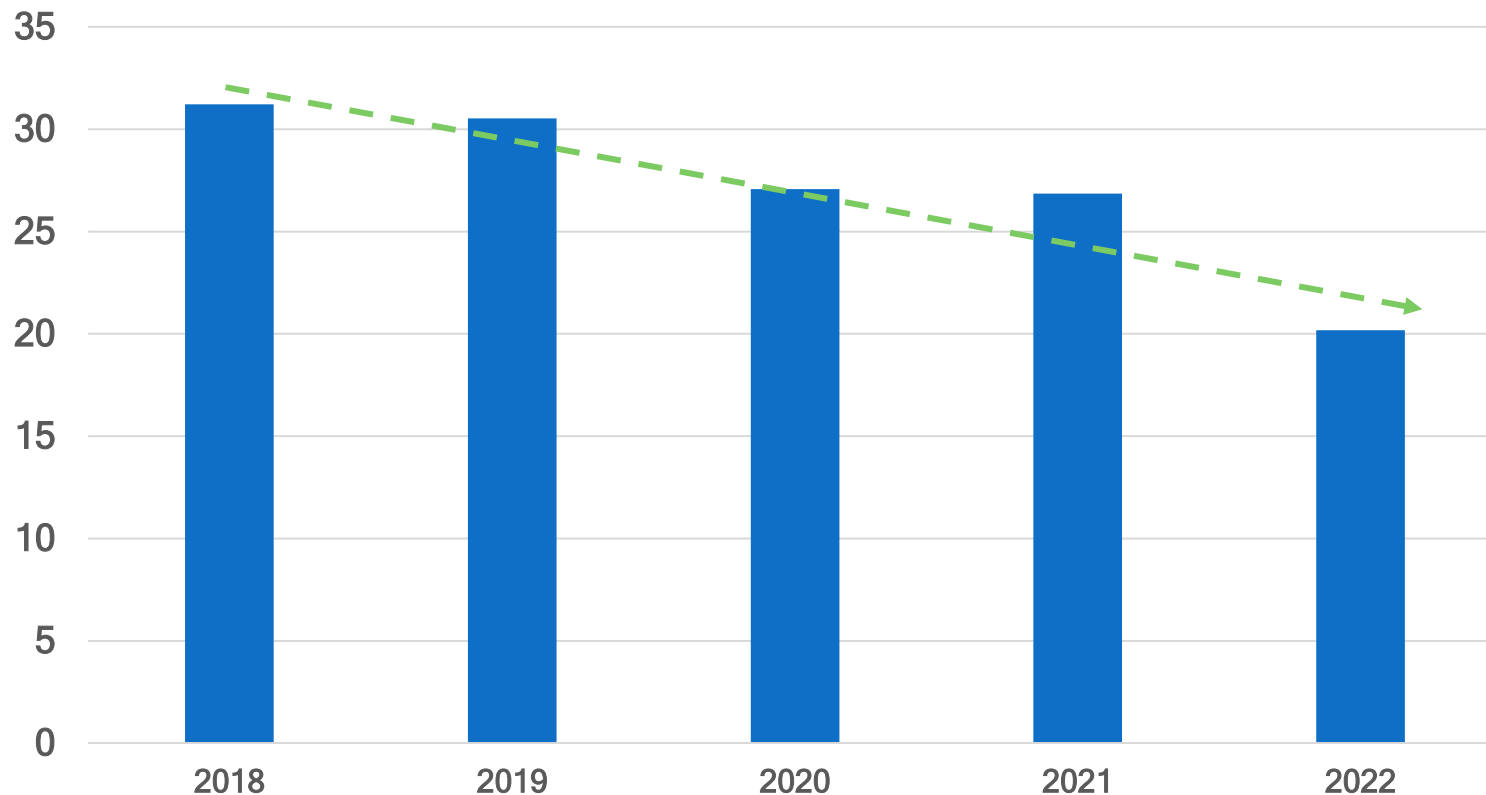
Road Deaths by Country 2023



Source: 2023 World Population Review, NESDC

# Thailand's road transport has been ranked one of the highest accident rates in the world

Thailand Death Rate from Road Accident, 2018-2022



Source: NESDC, Summary report on the implementation of the national strategy for the year 2022

# Difficulties in Cross Border Transport

There are a large number of trucks and buses at major border-checkpoints, causing a lot of traffic congestion at the checkpoint.

Mae Sot-Myawaddy



Aranyaprathet-Poi Pet



รถติดหนักด่านคลองลึกชายแดนไทย-กัมพูชา



Sadao- Bukit Kayu Hitam



Source: [www.bangkokbanksme.com](http://www.bangkokbanksme.com), [www.77kaoded.com](http://www.77kaoded.com), [www.bangkokbiznews.com](http://www.bangkokbiznews.com), <https://tna.mcot.net>, <https://www.thairath.co.th/>, <https://www.posttoday.com/>, <https://mgronline.com/>, <https://www.nationtv.tv/>

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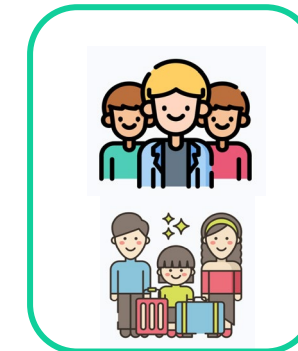


Sadao- Bukit Kayu Hitam



Separate the area between goods and tourists at important border crossing points to facilitate quick border crossings.

Source: [www.bangkokbanksme.com](http://www.bangkokbanksme.com), [www.77kaoded.com](http://www.77kaoded.com),  
[www.bangkokbiznews.com](http://www.bangkokbiznews.com), <https://tna.mcot.net>





# Difficulties in Cross Border Transport

- International transport agreements that suspended during the COVID-19 pandemic, cannot be resumed after borders reopened.
- For example, Lao PDR's new regulation for neighboring country trucks to be changed to Lao trucks or the goods must be taken down to the warehouse before continuing transport into Lao PDR area.
- These cause higher cost of border transport and hinder cross-border operations.



Source: <https://www.thansettakij.com/>, <https://www.dailynews.co.th/>, <https://www.bangkokbiznews.com/>, <https://www.prachachat.net/>, [https://twitter.com/can\\_nw/status/1486330653738422289/photo/1](https://twitter.com/can_nw/status/1486330653738422289/photo/1), <https://www.nationtv.tv/>

# Difficulties in Cross Border Transport

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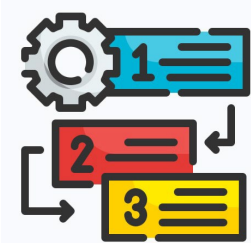
- ✓ Negotiate with neighboring countries to promote facilitation of international road transport agreements, based on the principle of equality
- ✓ Thai trucking companies must build strong alliances with those in neighboring countries



Source: <https://www.thansettakij.com/>, <https://www.dailynews.co.th/>, <https://www.bangkokbiznews.com/>, <https://www.prachachat.net/>, [https://twitter.com/can\\_nw/status/1486330653738422289/photo/1](https://twitter.com/can_nw/status/1486330653738422289/photo/1), <https://www.nationtv.tv/>

# Process Management

Realize the importance of process management in order to better utilize the country transport infrastructure.



Do process improvement and bring along the IT



Source: <https://thainews.prd.go.th/>, <https://www.prachachat.net/>

# Process Management



Outdated transport rules and regulations should be reformed to make infrastructure utilization more flexible, easy to access, and continuously developed. In improving performance and productivity, it is to focus on process improvement first, then bring along the IT system.



Strictly enforce traffic and transport laws. Officers have to be strict on both the drivers and transport operators.



Use technology to help with road safety, e.g., GPS systems and AI cameras to monitor driving behavior. Use past data and information for prevention before the accident would occur.



Logistics  
Command  
Center



Telematics  
Solutions

Source: SCGJWD

# Technology Transfer



Rail Technology Research  
and Development Agency

## Vision

“RTRDA becomes key rail technology R&D institute to integrate expertises and resources from all stakeholders in order to upgrade technological capabilities and to build rail industry & supply chain”

Source: [www.rtrda.or.th](http://www.rtrda.or.th)

Rail Technology Research and Development Agency (RTRDA), collaborating between government agencies, and private sectors, both domestically and internationally, in research and innovation, and accepting, exchanging, transferring and developing rail technology as well as rail personnel and providing training to certify knowledge and skills.

## Our Partners



ALSTOM

egis

PDMA

SYSTRA

vossloh

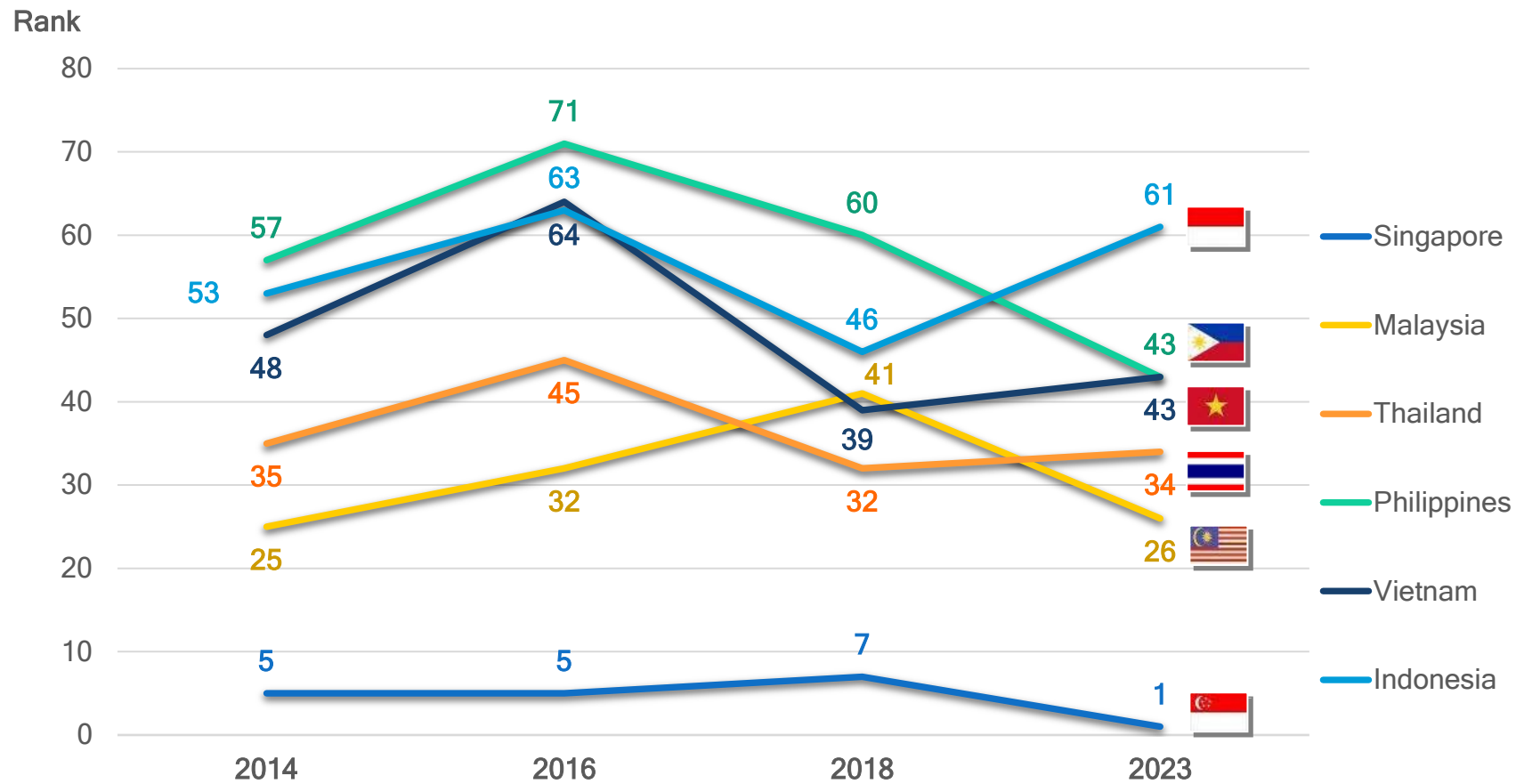
HUAWEI

NSTDA

# Competitiveness

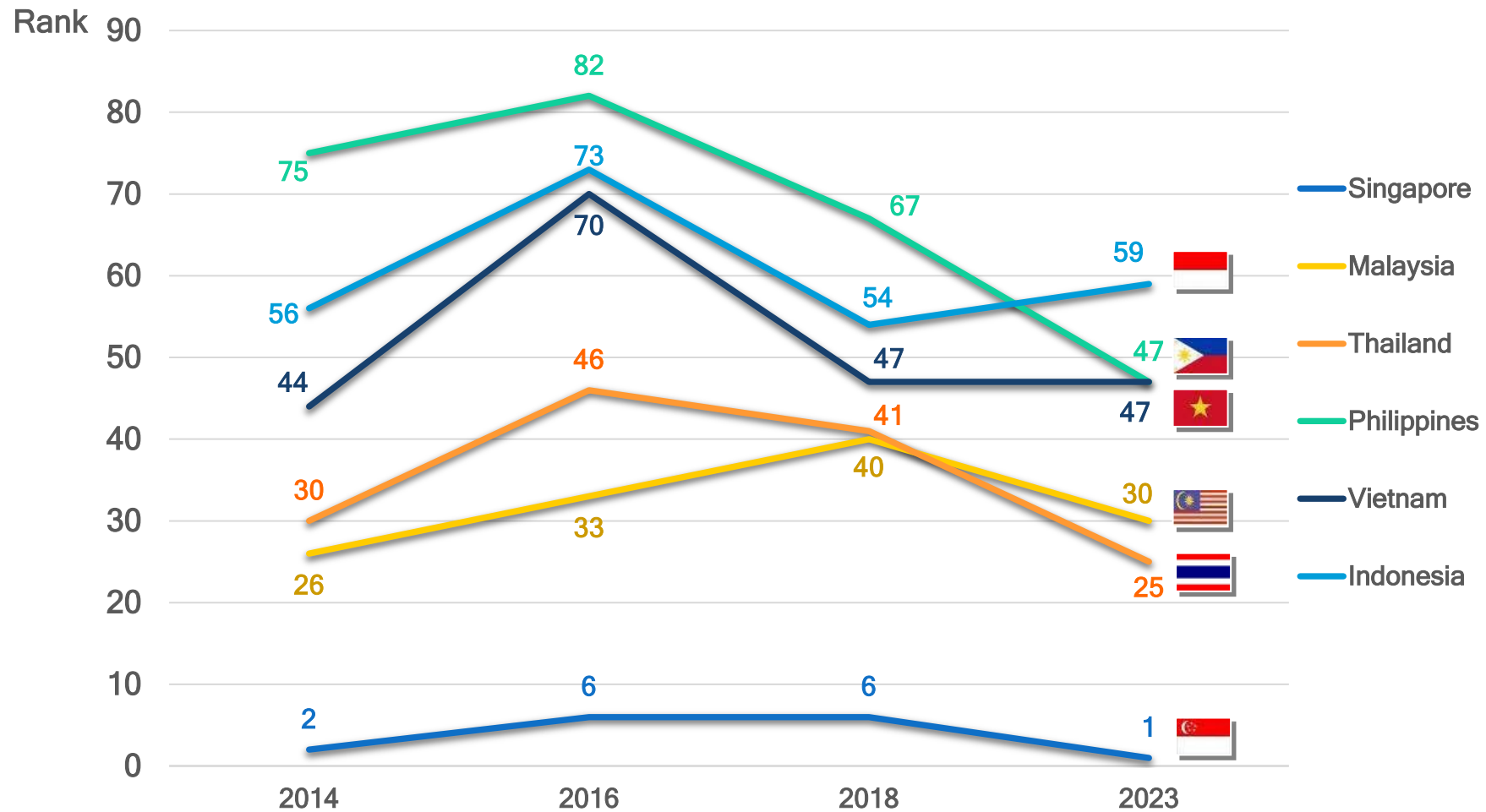


# Logistics Performance Index (LPI) 2014-2023



Source: World Bank, Logistics Performance Index (LPI), <http://www.tpso.moc.go.th/>

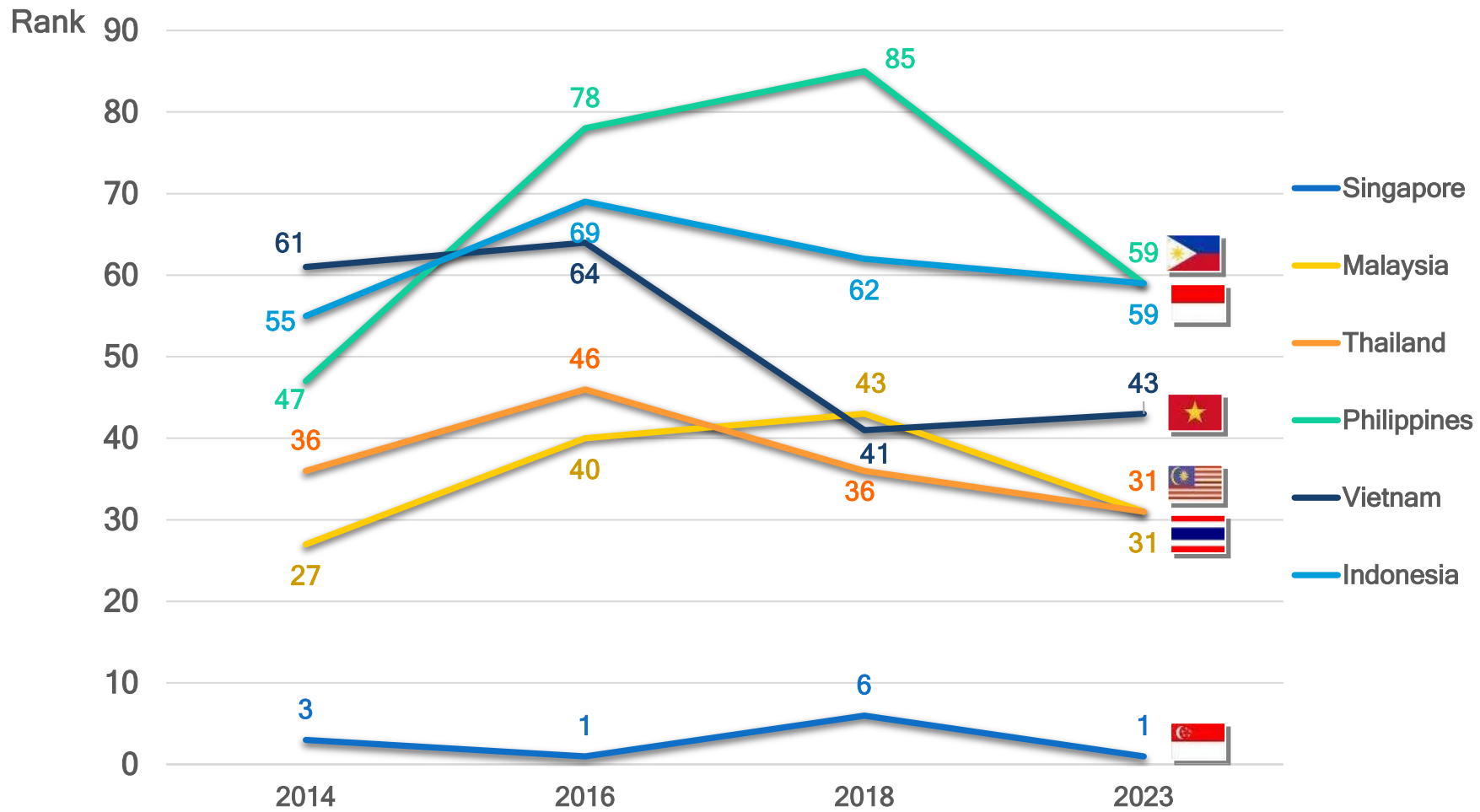
# LPI- Infrastructure 2014-2023



Source: World Bank, Logistics Performance Index (LPI)

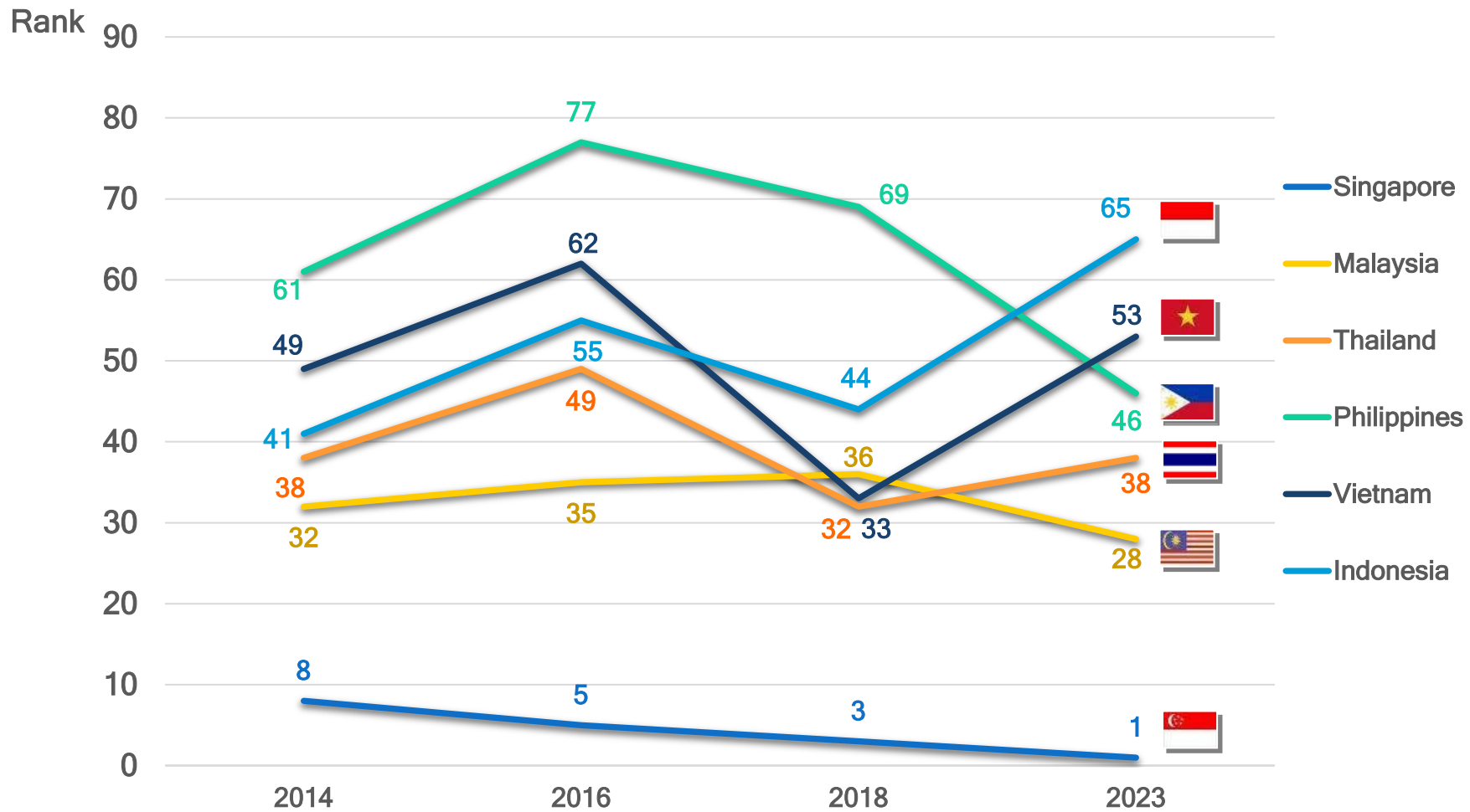


# LPI-Customs 2014-2023



Source: World Bank, Logistics Performance Index (LPI), <http://www.tpso.moc.go.th/>

# LPI- Logistics Competence and Quality 2014-2023



Source: World Bank, Logistics Performance Index (LPI), <http://www.tpso.moc.go.th/>

# SWOT Analysis

## Strengths

- Centrally geographical location
- Extensive road network
- 2-sided coastline

## Opportunities

- Significantly increasing in economic & international trade with neighboring countries
- Potential to link up road and rail network to China

## Weaknesses

- Inefficiency of port & rail Management
- Inappropriate inter-modal linkages
- Inadequate skilled human resources

## Threats

- Increasing health & safety regulations for export products
- Increasing global environmental regulations
- High energy dependence
- Geopolitical stability

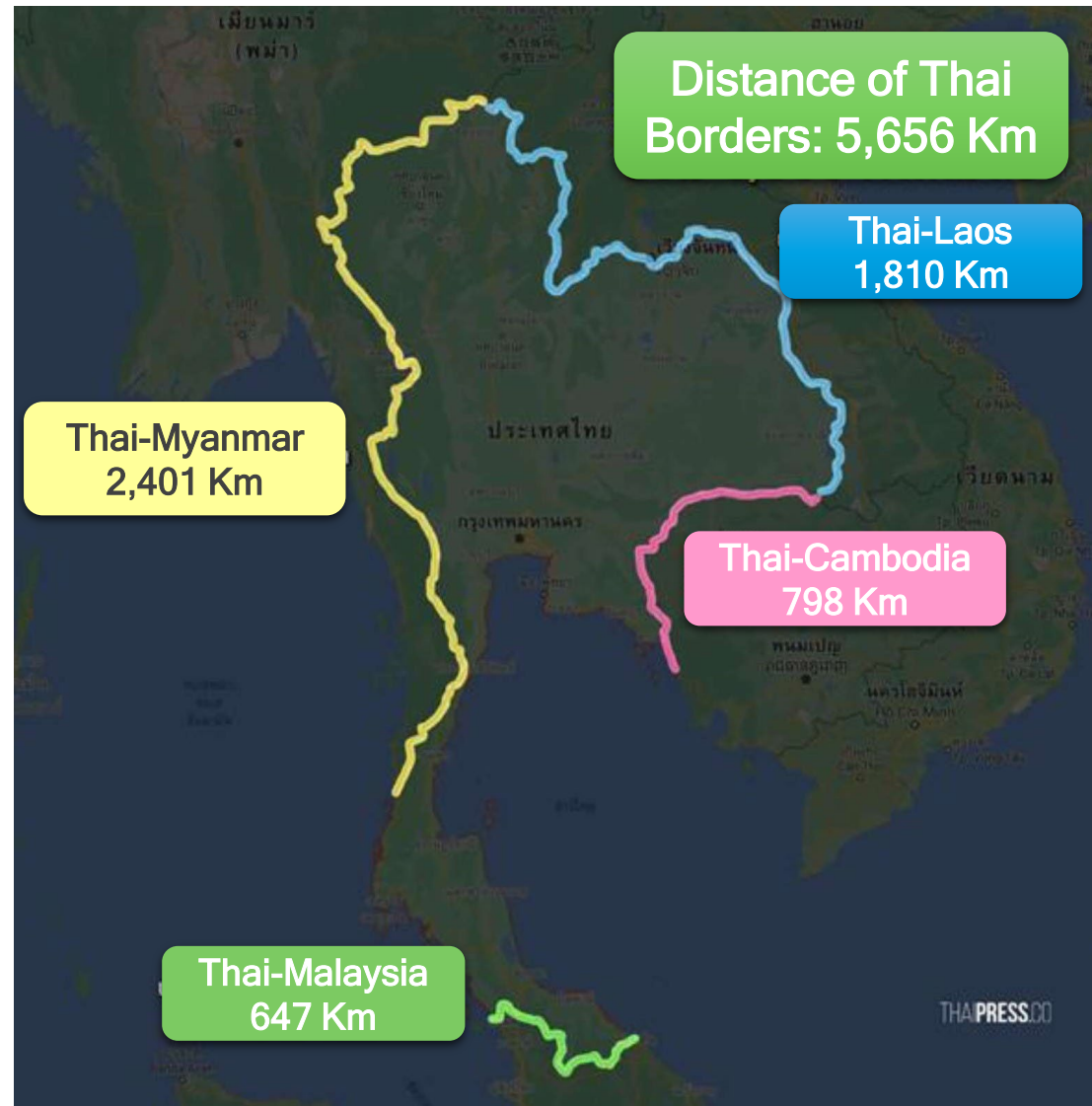
# Strengths

## Centrally geographical location



# Strengths

## Centrally geographical location



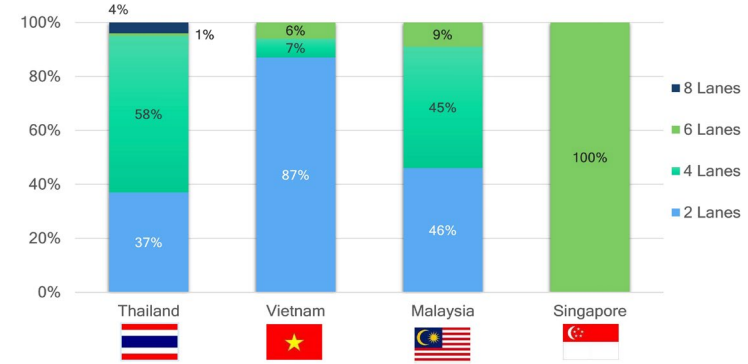
Source:  
<https://www.facebook.com/ThaiPress.com>

# Strengths

## Extensive road network

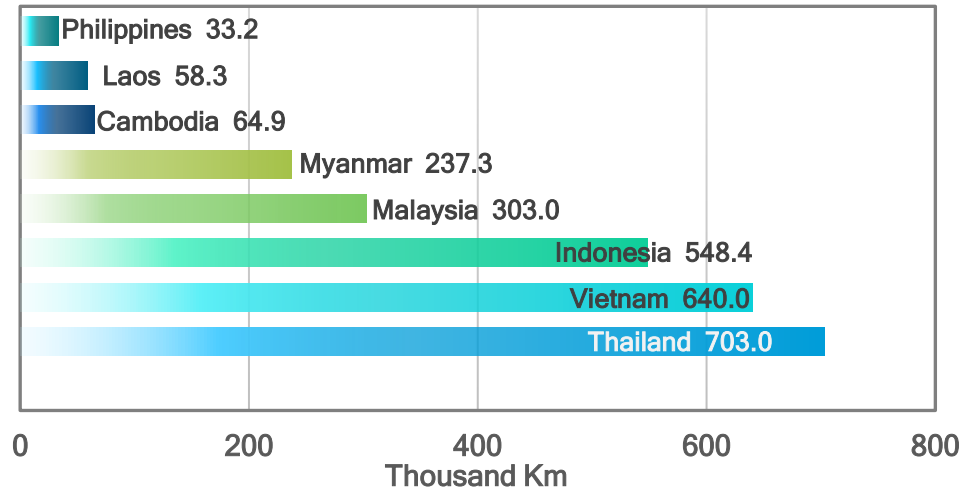


Land Transport In Some ASEAN Countries



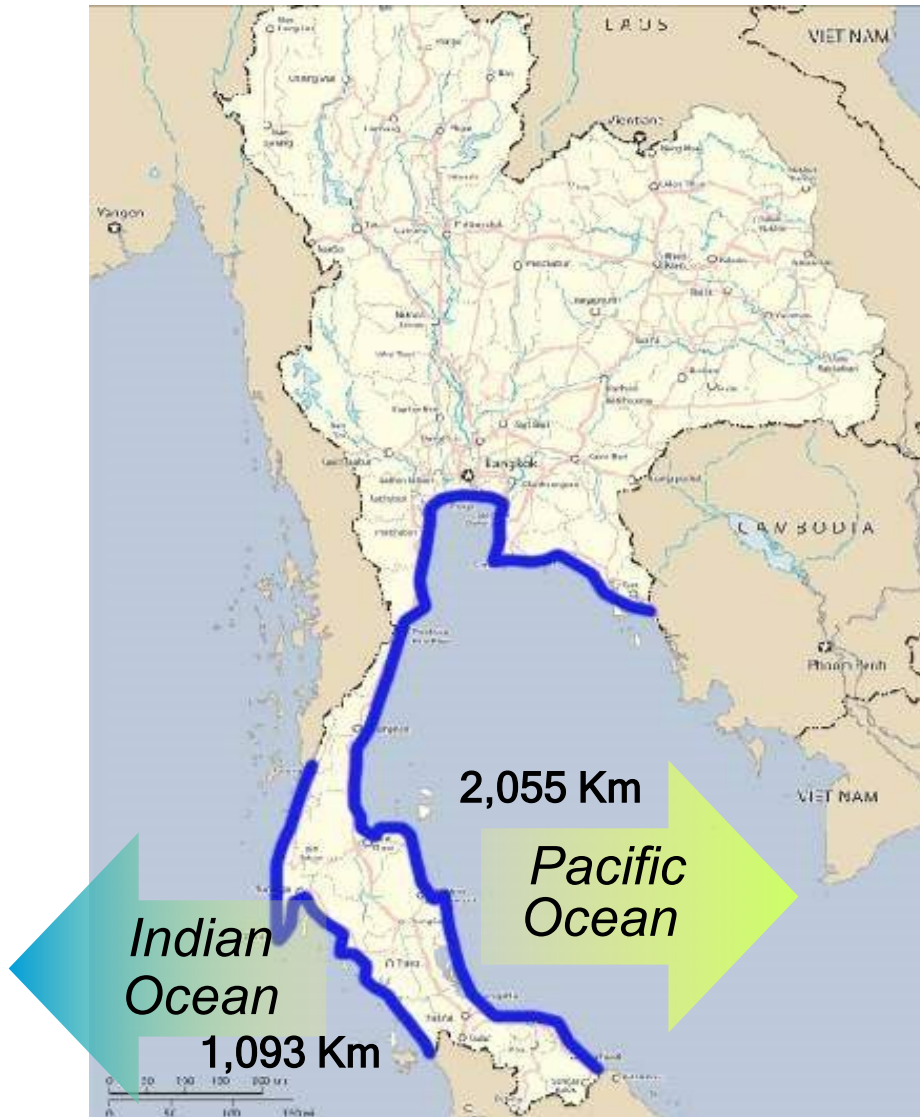
Source: JETRO, ASEAN Logistics Network 2008

Road Network Size



# Strengths

## 2-Sided Coastline

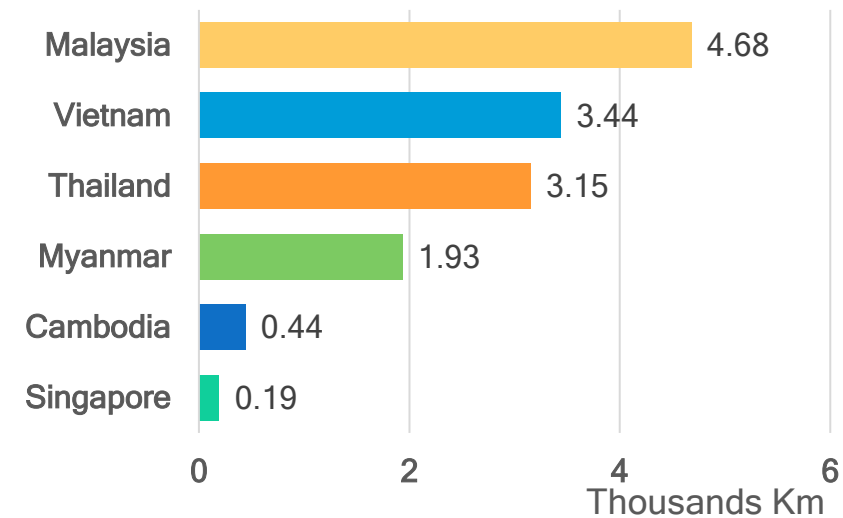


Total of 3,148 km. coast line,  
covered areas in 24 provinces

- 2,055 km. on Gulf of Thailand
- 1,093 km. on Andaman sea

Source: Department of Marine and Coastal Resources

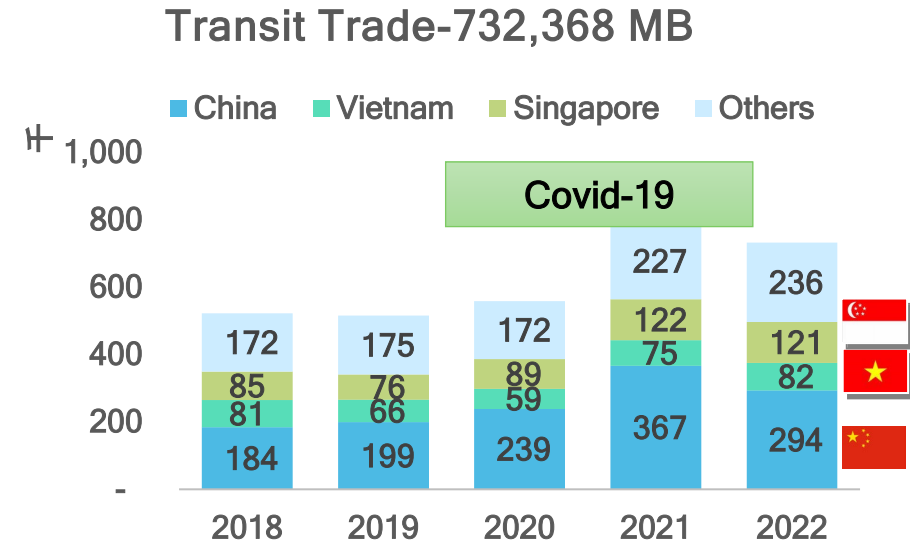
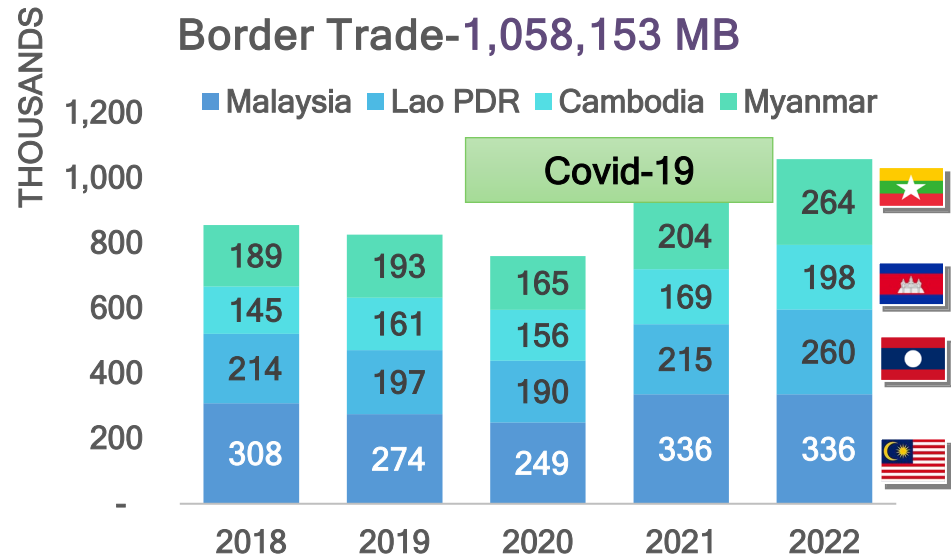
### Coastline Coverage, 2023



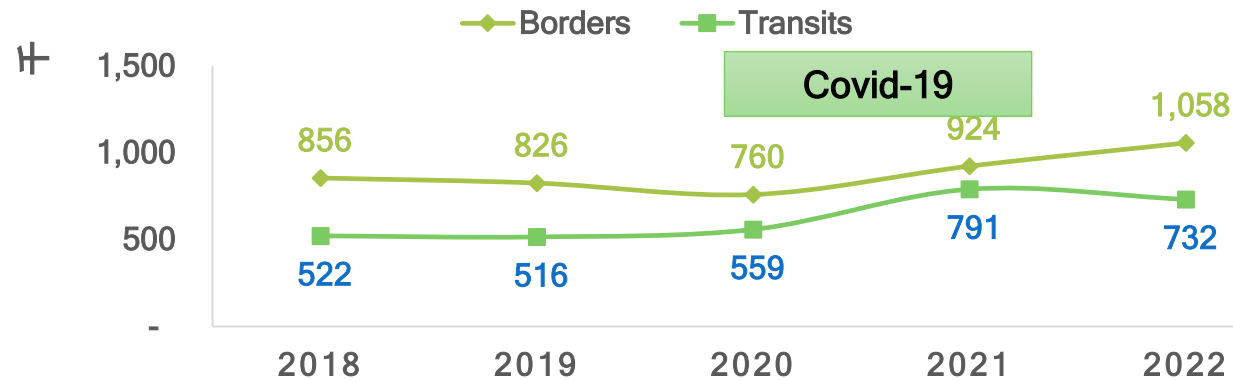
Source: Statista, Department of Marine and Coastal Resources

# Opportunities

## Border & Transit Trade Growth



**Border Trade VS Transit Trade (Thousand MB)**

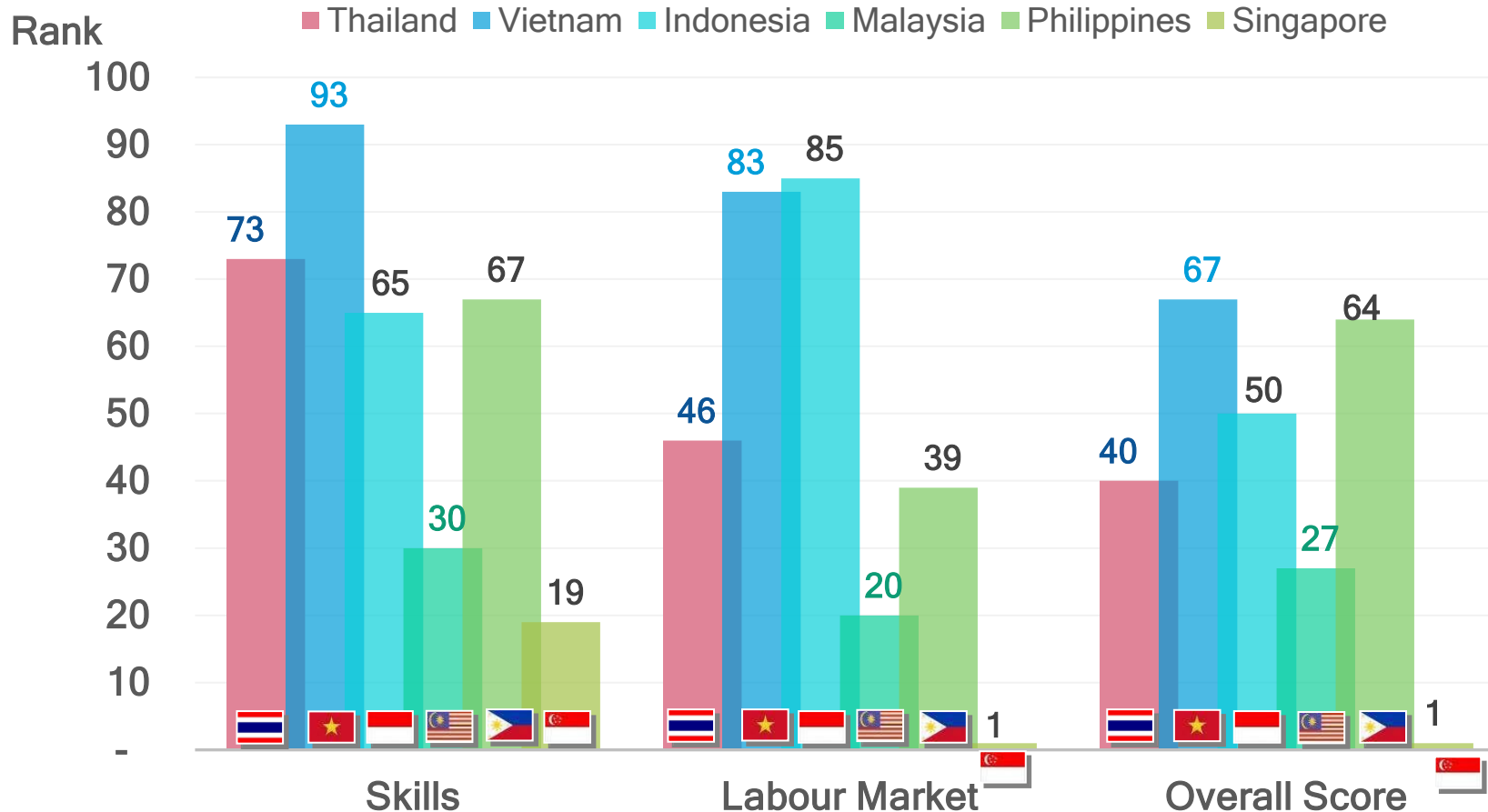


Source: Department of Foreign Trade



# Weaknesses

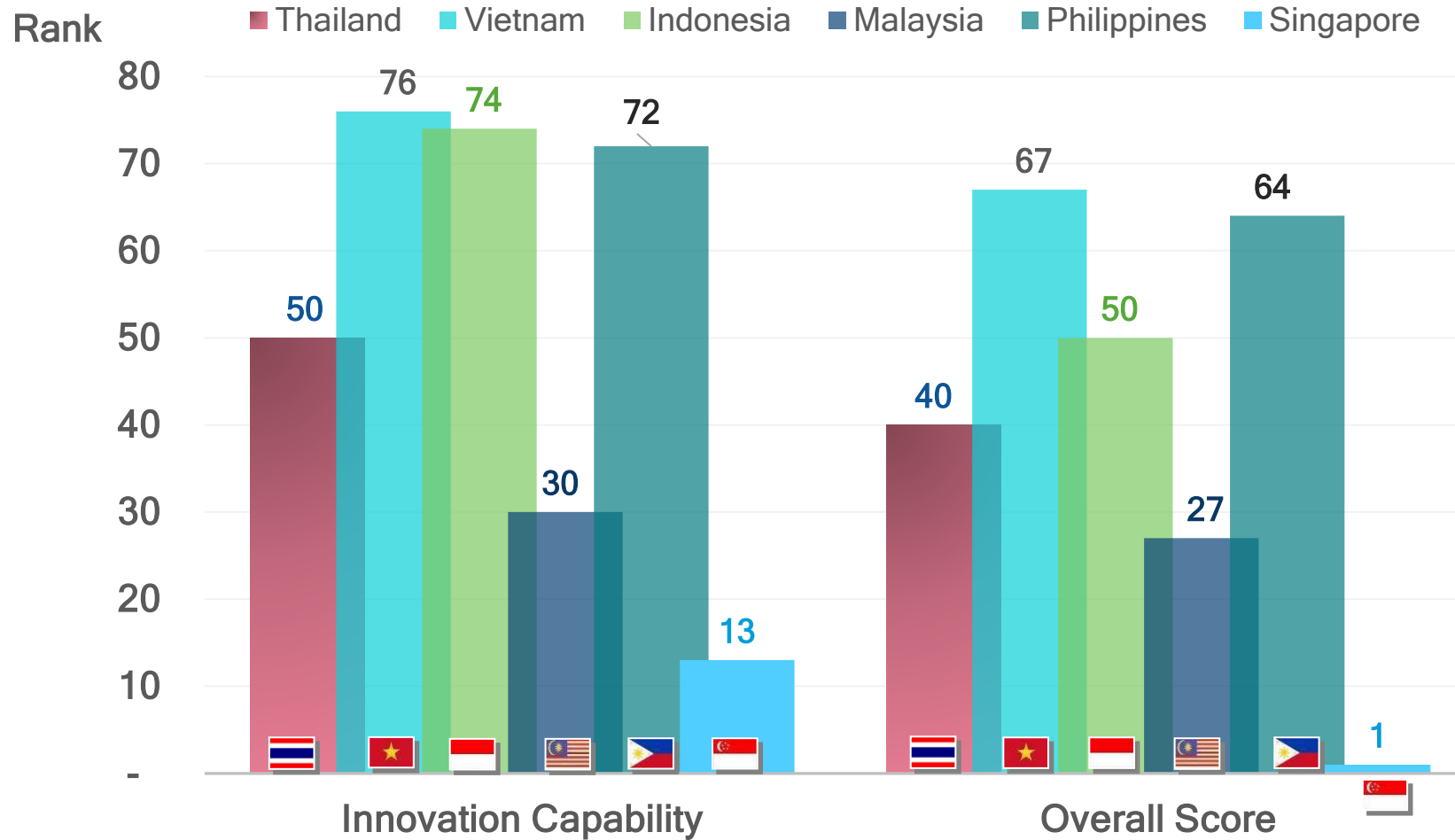
## Inadequate skilled human resources



Source: World Economic Forum, The Global Competitiveness Report 2019

# Weaknesses

## Innovation Capability, 2019



Source: World Economic Forum

# Threats

## Increased health & safety regulations for export products



### International Health Regulations

*Building international public health security*



Source: <https://www.foodsafety.gov/>, <https://www.publichealthnotes.com/>, <https://ddc.moph.go.th/>

# Threats

## Increased global environmental regulations



(Credit: Canva Pro)

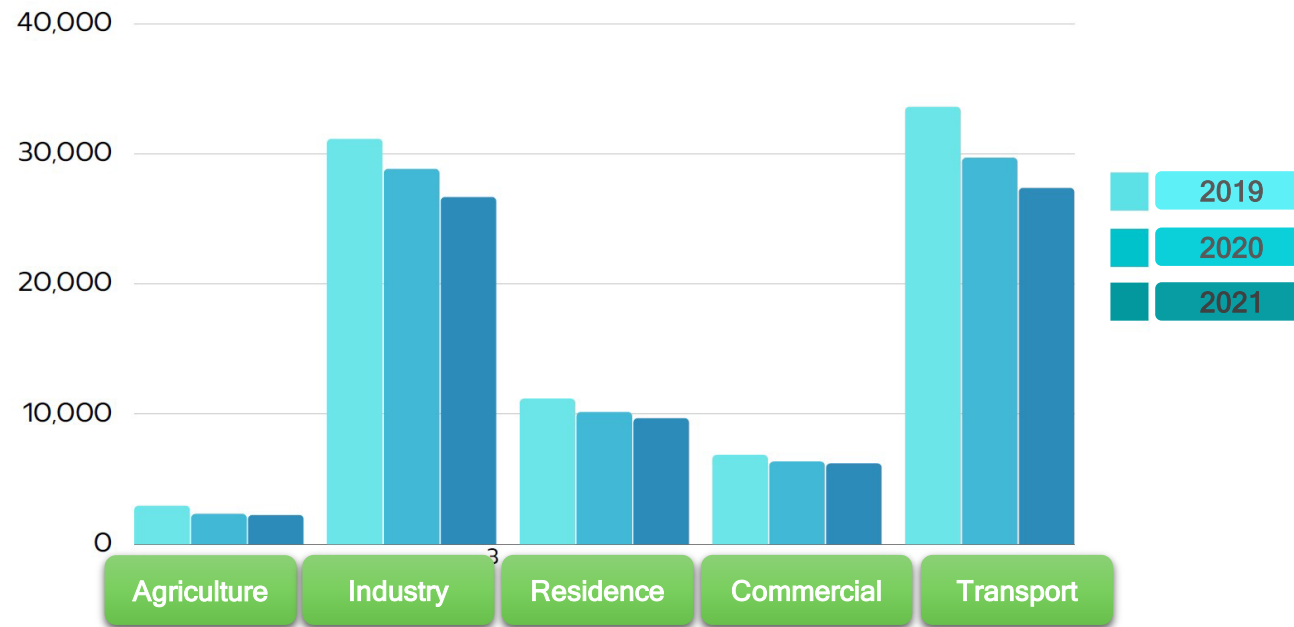
Source: <https://www.environmentalleader.com/>, <https://www.scg.com/>

# Threats

## High energy dependence

### Energy Consumption by Sector, 2020-2022

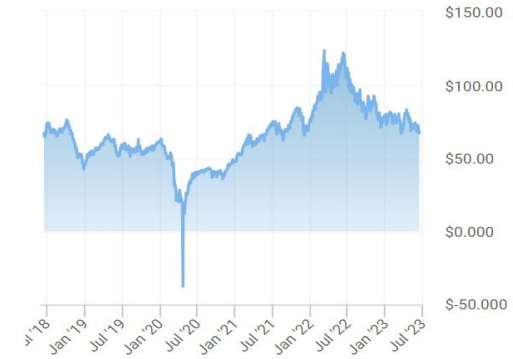
Thousand Tons in Crude Oil



04:58 am CDT 13/06/2023

Technicals

WTI Crude (July Contract)  
68.04 +1.37%



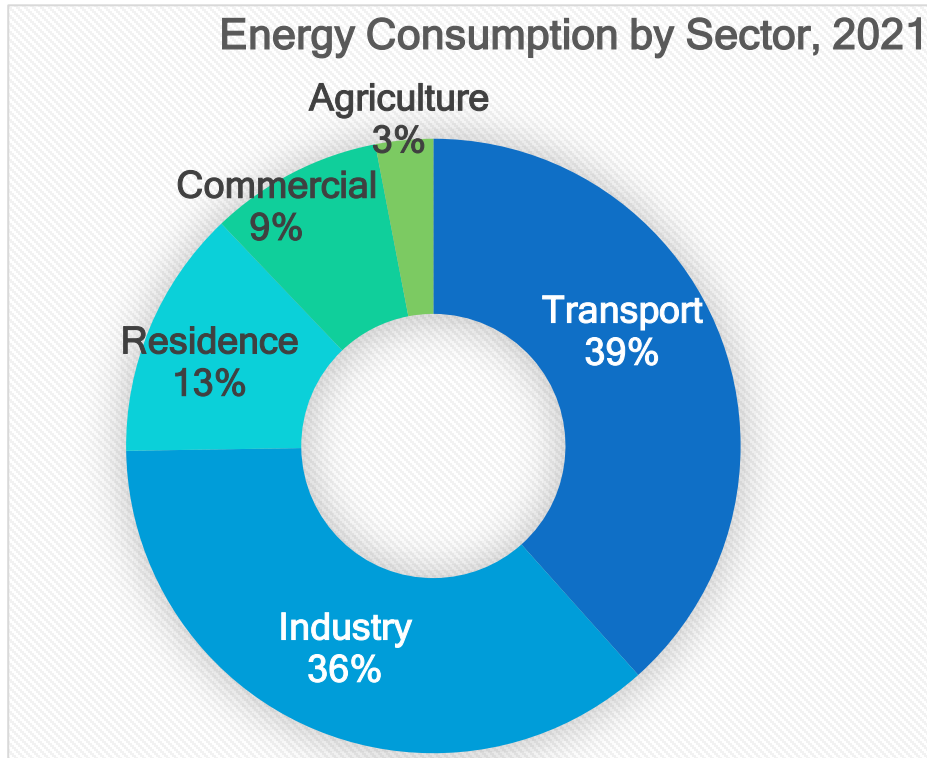
1D | 1WK | 1M | 1YR | Max Copy Share

Oil Price

Source: Energy Policy and Planning office (EPPO), Ministry of Energy, <https://oilprice.com/>

# Threats

## High energy dependence



Source: Energy Policy and Planning office (EPPO), Ministry of Energy, <https://oilprice.com/>

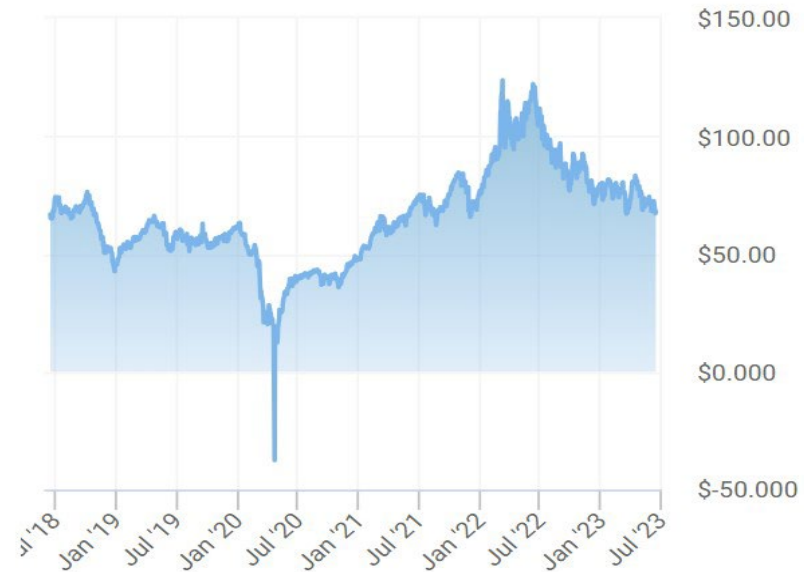
04:58 am CDT 13/06/2023

Technicals

WTI Crude

(July Contract)

68.04 +1.37%



1D | 1WK | 1M | 1YR | Max

Copy

Share

# Threats

## Geopolitical stability



Source: <https://www.atlanticcouncil.org/>, Iranian Institute For European and American Studies, <https://asiasociety.org/>, <https://www.cbsnews.com/>

**Thank you for your kind attention**

