

Enhancement of Maritime Connectivity in ASEAN

Case Study of Cambodia, Vietnam, and Thailand



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Outline of Presentation

- Introduction
- Current Situation of International and Connectivity of Selected Countries
- Development of Maritime Transport Connectivity
- Policy Recommendation to Enhance Maritime Transport Connectivity



Introduction

- ASEAN countries have attempted to drive the maritime transport as a key instrument to integrate regional economy and established the roadmap containing series of initiatives involving port infrastructure and accessibility, search and rescue, unify shipping market, maritime transport sustainability, and improving connectivity among ports and key overseas market.
- Maritime connectivity, as a priority of UN, can be referred to the performance of shipping transport networks and how well a country or a port is connected to the global shipping network.
- Objectives are to
 - examine current status and challenges for developing maritime connectivity mainly on regular containerised cargoes carriage services of Cambodia, Vietnam, and Thailand
 - propose recommendations



Current Situation of International and Connectivity of Selected Countries: Cambodia, Vietnam, Thailand

- International maritime liner activities of Cambodia, Vietnam, and Thailand (CVL) are formed into 2 groups
 - + **International medium and long sea liner shipping** connecting CVL with major trading partners in other non-ASEAN region such as countries in North America, East Asia, Europe, South Asia, and Oceania which is dominated by global mega carriers;
 - + **Coastal or short sea liner shipping** moving goods along a coast without crossing an ocean such as transporting goods between CVL countries which traditionally conducted by local shipping lines and others from Asian economies such as Indonesia, Korea, and Taiwan.



Trade Flow of Cambodia's Export

- Cambodia's export base remains narrow and heavily concentrated in apparel and clothing which accounted for over 46% of total exports in 2021, other consumer goods such as leather product and footwear were responsible for 17% of total export.
- Cambodia's largest export market is the United States, Canada, and China
- Almost all top ten export products were carried by feeder services operated by container liner shipping products calling Sihanoukville port
- while a few cargoes exporting to overseas destination are carried from port in Phnom Penh by river barge services to ports in Ho Chi Minh – Vietnam as well as transited overland by cross border trucking to ports in Vietnam and Thailand to gain better maritime connectivity.

Top 10 Export Products	% of Total Export by Value	Major Destination	Major Transportation Mode
1. Knitted or crocheted apparel and clothing accessories	33	USA (38%)	Container Liner Shipping
		Canada (10%)	Container Liner Shipping
		Germany (8%)	Container Liner Shipping
2. Not knitted or crocheted apparel and clothing accessories	13	USA (35%)	Container Liner Shipping
		Japan (17%)	Container Liner Shipping
		Canada (6%)	Container Liner Shipping
3. Leather products	9	USA (80%)	Container Liner Shipping
		Netherlands (4%)	Container Liner Shipping
4. Footwear products	8	USA (36%)	Container Liner Shipping
		Germany (7%)	Container Liner Shipping
		Japan (6%)	Container Liner Shipping
5. Electrical machinery and parts	6	USA (51%)	Container Liner Shipping
		Thailand (14%)	Cross Border Trucking
		Japan (12%)	Container Liner Shipping
6. Furniture products	5	USA (95%)	Container Liner Shipping
		Canada (2%)	Container Liner Shipping
7. Vehicles and parts	4	USA (39%)	Container Liner Shipping
		Germany (17%)	Container Liner Shipping
		Belgium (10%)	Container Liner Shipping
8. Fur skins	3	China (85%)	Container Liner Shipping
		Hong Kong (15%)	Container Liner Shipping
9. Cereals	2	China (43%)	Tramp Shipping
		France (12%)	Tramp Shipping
10. Rubbers	2	Vietnam (68%)	Cross Border Trucking
		Taiwan (9%)	Container Liner Shipping
Total	85	USA, Canada, China	Container Liner Shipping

Trade Flow of Cambodia's Import

- structure of Cambodia's imports is less concentrated than exports.
- Large import product are fabrics which used to make apparel and clothing and carried by liner shipping.
- Fuel and oil products was carried by tramp services from Vietnam, Thailand, and Indonesia calling ports in Sihanouville area.
- in the case of importing non- fuel and oil products such as vehicles, machinery, electrical machinery, and paper from neighbouring countries, the carriage mostly undertaken by cross border trucking.
- Criteria for selecting proper mode depend on product characteristics, origin and destination, logistics cost and time, and shipper's preferences.

Top 10 Import Products	% of Total Import by Value	Major Origin of Import	Major Transportation Mode
1. Gold and precious stones	21	Singapore (77%)	Aviation
		Switzerland (16%)	Aviation
2. Knitted or crocheted fabrics	10	China (61%)	Container Liner Shipping
		Vietnam (19%)	Cross Border Trucking
		Taiwan (8%)	Container Liner Shipping
3. Fuel and oil products	8	Thailand (35%)	Tramp Shipping
		Vietnam (30%)	Tramp Shipping
		Indonesia (9%)	Tramp Shipping
4. Vehicles and parts	7	Thailand (33%)	Cross Border Trucking
		Japan (18%)	RoRo / Container Liner Shipping
		China (12%)	Container Liner Shipping
5. Machinery and mechanical appliance	5	China (55%)	Container Liner Shipping
		Thailand (19%)	Cross Border Trucking
		Japan (6%)	Container Liner Shipping
6. Electrical machinery and parts	4	China (62%)	Container Liner Shipping
		Thailand (18%)	Cross Border Trucking
7. Plastic product	4	China (52%)	Container Liner Shipping
		Taiwan (14%)	Container Liner Shipping
8. Staple fibers	4	China (77%)	Container Liner Shipping
		Taiwan (9%)	Container Liner Shipping
9. Paper products	2	China (35%)	Container Liner Shipping
		Vietnam (22%)	Cross Border Trucking
10. Steel articles	2	China (46%)	Container Liner Shipping
		Vietnam (43%)	Cross Border Trucking / Container Liner Shipping
Total	67	China Singapore Thailand / Vietnam	Container Liner Shipping Aviation Cross border trucking

Trade Flow of Vietnam's Export

- Export mix between high technology and labour intensive products
- Large portion were occupied by high technology products
- Largest export market is the USA, China, Korea, and Japan which demand the medium and long haul transport.
- Export products mainly carried by container liner shipping calling ports in Ho Chi Minh and Vang Tau region in the southern part and port in Haiphong.

Top 10 Export Products	% of Total Export by Value	Major Destination	Major Transportation Mode
1. Electrical machinery and parts	43	China (31%)	Container Liner Shipping
		USA (20%)	Container Liner Shipping
		Hong Kong (6%)	Container Liner Shipping
2. Machinery and mechanical appliance	8	USA (33%)	Container Liner Shipping
		China (14%)	Container Liner Shipping
		Korea (8%)	Container Liner Shipping
3. Footwear products	6	USA (31%)	Container Liner Shipping
		China (10%)	Container Liner Shipping
		Germany (8%)	Container Liner Shipping
4. Furniture products	5	USA (74%)	Container Liner Shipping
		Japan (5%)	Container Liner Shipping
5. Knitted or crocheted apparel and clothing accessories	4	USA (51%)	Container Liner Shipping
		Japan (10%)	Container Liner Shipping
		Korea (7%)	Container Liner Shipping
6. Not knitted or crocheted apparel and clothing accessories	4	USA (38%)	Container Liner Shipping
		Korea (13%)	Container Liner Shipping
		Japan (10%)	Container Liner Shipping
7. Steel articles	2	China (18%)	Tramp services / Container Liner Shipping
		USA (10%)	Tramp services / Container Liner Shipping
8. Plastic products	2	USA (29%)	Container Liner Shipping
		Japan (12%)	Container Liner Shipping
		China (8%)	Container Liner Shipping
9. Wood products	2	China (31%)	Tramp Services
		Japan (22%)	Tramp Services
		USA (19%)	Container Liner Shipping
10. Toys	1	USA (51%)	Container Liner Shipping
		Japan (9%)	Container Liner Shipping
Total	77	USA, China, Korea, Japan	Container Liner Shipping

Trade Flow of Vietnam's Import

- China and other Far East Asian economies including Republic of Korea, Japan, and Taiwan supplied more than half of total import.
- Structure of Vietnam's import is dominated by intermediate goods mainly electronic products
- Top ten import products were rely on container liner shipping except the import of fuel and oil products including coal which were conducted by tramp services from Australia, Malaysia, and Korea.
- Major import was concentrated in ports in Ho Chi Minh and Vang Tau region and Haiphong.

Top 10 Import Products	% of Total Import by Value	Major Origin of Import	Major Transportation Mode
1. Electrical machinery and parts	34	China (40%)	Container Liner Shipping
		Korea (29%)	Container Liner Shipping
2. Machinery and mechanical appliance	9	China (49%)	Container Liner Shipping
		Korea (9%)	Container Liner Shipping
		Japan (8%)	Container Liner Shipping
3. Plastic products	6	China (36%)	Container Liner Shipping
		Korea (20%)	Container Liner Shipping
		Taiwan (10%)	Container Liner Shipping
4. Iron and Steel	4	China (35%)	Container Liner Shipping / Tramp Services
		Japan (18%)	Container Liner Shipping
		Korea (11%)	Container Liner Shipping
5. Optical and Precision products	3	China (43%)	Container Liner Shipping
		China (23%)	Container Liner Shipping
		Japan (8%)	Container Liner Shipping
6. Fuel and oil products	3	Australia (19%)	Tramp Services
		Malaysia (14%)	Tramp Services
		Korea (12%)	Tramp Services
7. Vehicles and parts	3	China (32%)	Container Liner Shipping
		Thailand (20%)	Container Liner Shipping / RoRo
		Korea (17%)	Container Liner Shipping
8. Knitted or crocheted fabrics	2	China (64%)	Container Liner Shipping
		Taiwan (12%)	Container Liner Shipping
		Hong Kong (12%)	Container Liner Shipping
9. Organic chemicals	2	China (36%)	Container Liner Shipping
		Taiwan (18%)	Container Liner Shipping
		Thailand (7%)	Container Liner Shipping
10. Cotton	2	China (33%)	Container Liner Shipping
		USA (20%)	Container Liner Shipping
		Australia (12%)	Container Liner Shipping
Total	68	China, Korea, Japan	Container Liner Shipping

Trade Flow of Thailand's Export

- Thailand's international trade flows show the growing importance of China and ASEAN as its main regional markets and suppliers, although USA, EU, and Japan are still among its top trading partners.
- Export continue to be dominated by industrial products including machinery and mechanical appliances, electrical machinery and part, vehicle and parts, rubber products and plastic products.
- Top ten export products, except gold and jewellery, were predominantly carried by container shipping.

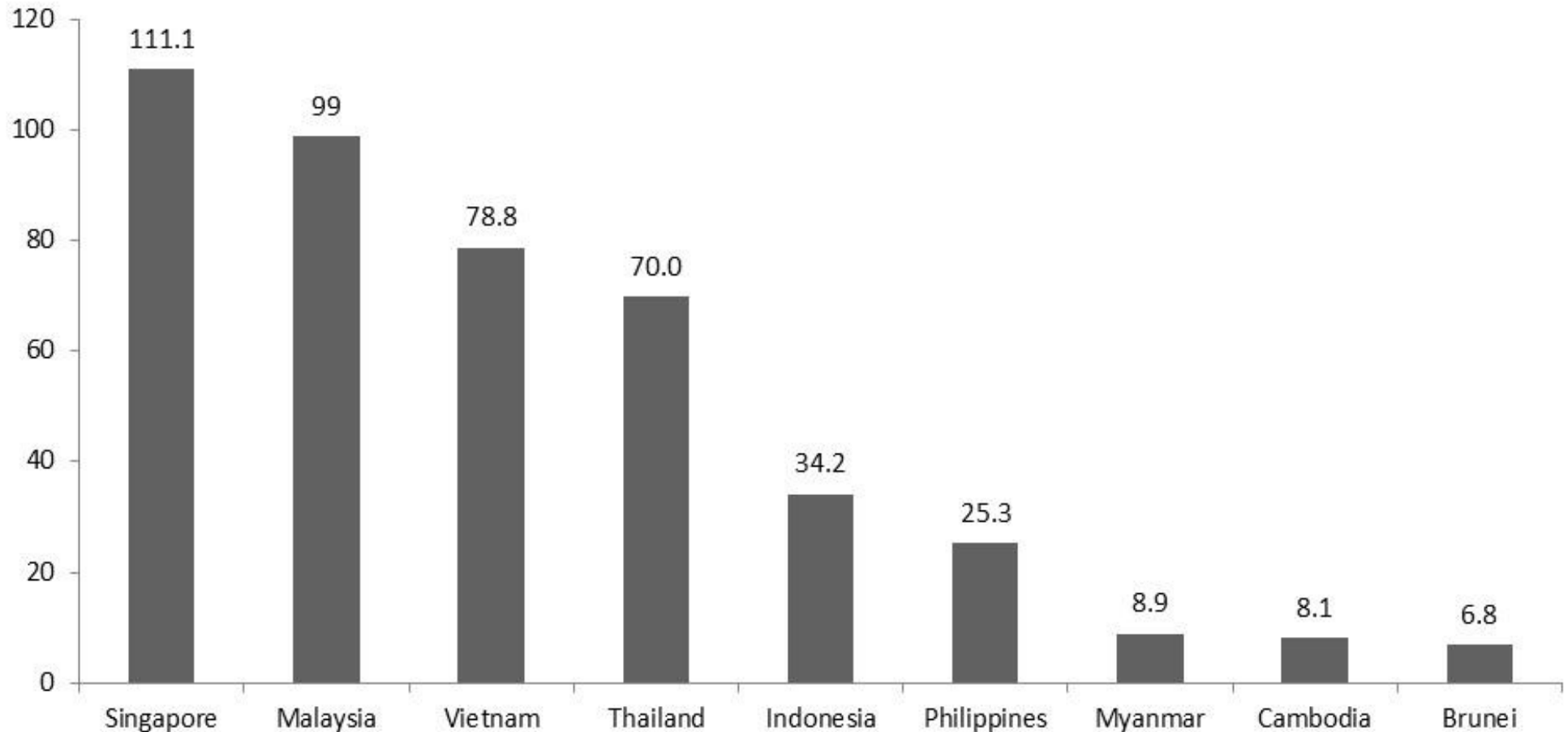
Top 10 Export Products	% of Total Export by Value	Major Destination	Major Transportation Mode
1. Machinery and mechanical appliance	17	USA (22%)	Container Liner Shipping
		China (9%)	Container Liner Shipping
		Hong Kong (8%)	Container Liner Shipping
2. Electrical machinery and parts	15	USA (24%)	Container Liner Shipping
		Japan (13%)	Container Liner Shipping
		Hong Kong (10%)	Container Liner Shipping
3. Vehicles and parts	12	Australia (18%)	RoRo/ Container Liner Shipping
		Japan (7%)	Container Liner Shipping
		USA (6%)	Container Liner Shipping
		Philippines (6%)	RoRo
4. Rubber products	7	USA (27%)	Container Liner Shipping
		China (24%)	Container Liner Shipping
		Malaysia (6%)	Cross border trucking
5. Plastic products	6	China (23%)	Container Liner Shipping
		Japan (10%)	Container Liner Shipping
		Vietnam (8%)	Container Liner Shipping
6. Gold, precious stones and Jewelry	4	Singapore (18%)	Aviation
		USA (16%)	Aviation
		Hong Kong (13%)	Aviation
7. Fuel and oil products	4	Cambodia	Tramp Services
		Singapore	Tramp Services
		Malaysia	Tramp Services
		Vietnam	Tramp Services
8. Fruits	2	China (81%)	Cross border truck
		Vietnam (3%)	Cross border truck
9. Processed foods	2	Japan (35%)	Container Liner Shipping
		USA (15%)	Container Liner Shipping
		UK (9%)	Container Liner Shipping
10. Organic chemicals	2	China (33%)	Container Liner Shipping
		India (13%)	Container Liner Shipping

Trade Flow of Thailand's Import

- Majority of Thailand's import is capital goods, raw materials, and semi-finished goods including electrical machinery, fuel, machinery and mechanical appliances, flat rolled of iron and steel.
- Maritime transportation, especially container liner shipping, remains the most important transportation modes
- Top import partners are in ASEAN and Asia Pacific except fuel and oil products which are imported by Middle East and carried by tanker tramp services from fuel distribution centre in Singapore

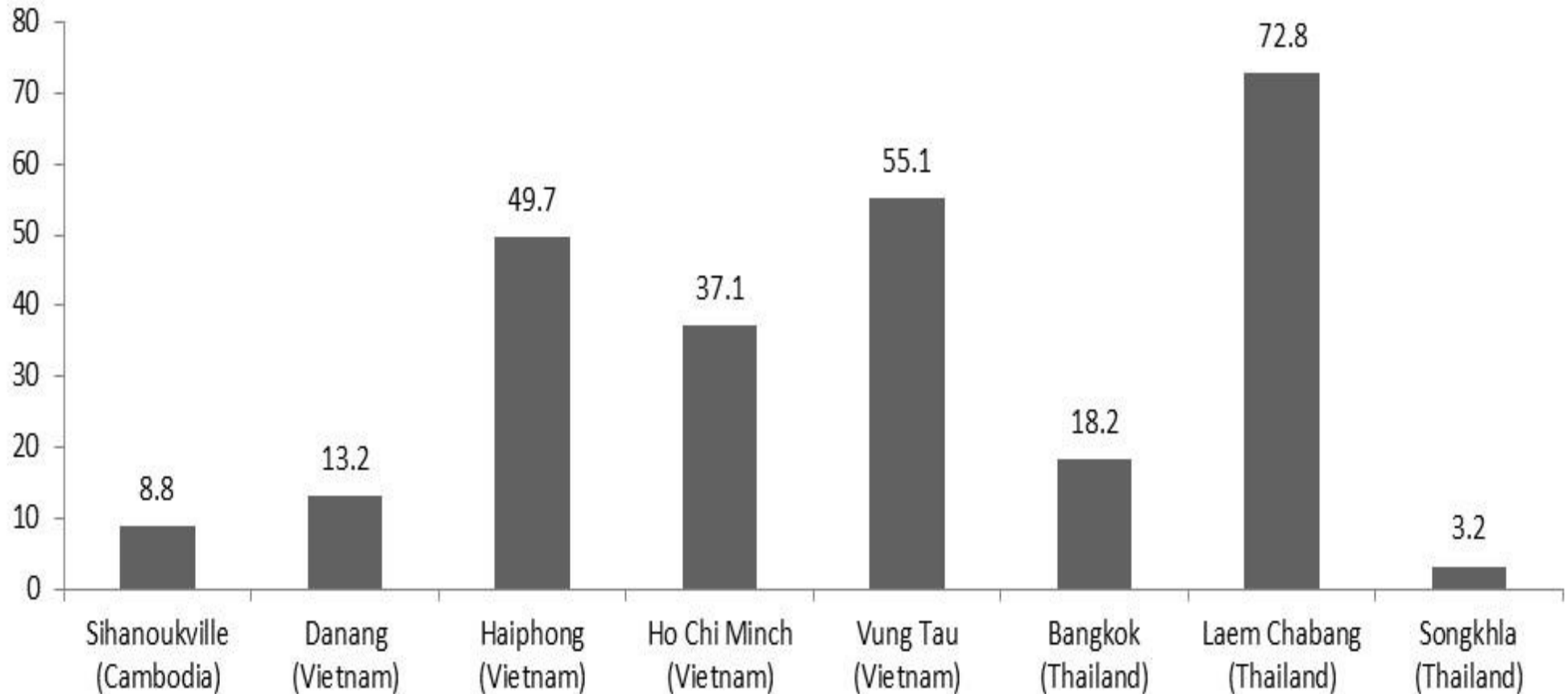
Top 10 Import Products	% of Total Import	Major Origin of Import	Major Transportation Mode
1. Electrical machinery and parts	20	China (38%)	Container Liner Shipping
		Japan (13%)	Container Liner Shipping
		Taiwan (11%)	Container Liner Shipping
		Malaysia (7%)	Cross Border Trucking
2. Fuel and oil products	15	UAE (21%)	Tramp Services
		Saudi Arabia (11%)	Tramp Services
		Qatar (7%)	Tramp Services
3. Machinery and mechanical appliance	11	China (39%)	Container Liner Shipping
		Japan (20%)	Container Liner Shipping
		USA (5%)	Container Liner Shipping / Aviation
4. Flat Rolled Product of Iron and Steel	6	Japan (35%)	Container Liner Shipping / Tramp Services
		China (24%)	Container Liner Shipping / Tramp Services
5. Gold and precious stones	5	Switzerland (31%)	Aviation
		Hong Kong (18%)	Aviation
		India (11%)	Aviation
6. Plastic products	4	China (32%)	Container Liner Shipping
		Japan (18%)	Container Liner Shipping
		Korea (8%)	Container Liner Shipping
7. Vehicles and parts	4	Japan (32%)	Container Liner Shipping
		China (18%)	Container Liner Shipping
		USA (8%)	Container Liner Shipping
9. Articles of Iron or Steel	3	China (36%)	Container Liner Shipping
		Japan (22%)	Container Liner Shipping
		Malaysia (4%)	Cross Border Trucking
8. Copper products	2	Japan (24%)	Container Liner Shipping
		China (21%)	Container Liner Shipping
		Indonesia (7%)	Container Liner Shipping
9. Optical and Precision products	2	Japan (24%)	Container Liner Shipping
		China (23%)	Container Liner Shipping
		USA (10%)	Aviation
10. Chemical products	2	China (28%)	Container Liner Shipping
		Singapore (10%)	Container Liner Shipping
		Japan (9%)	Container Liner Shipping

Development of Maritime Connectivity



UNCTAD Liner Shipping Connectivity Index of Q2 of 2022

Development of Maritime Connectivity



UNCTAD Port Liner Connectivity Index of Q2 of 2022

Development of Maritime Connectivity

- The well connected ports to global container shipping lines are ports in Vietnam including Ports in Haiphong and Ports in Ho Chi Minh and Vang Tau lied in the South of Vietnam and annexed to largest industrial and commercial area, Ports in Laem Chabang area in the eastern part of Thailand nearby to national largest industrial zone and Port in Bangkok which is adjacent to capital and largest commercial area.
- Rented vessels operated under the control of global shipping lines are common for providing services to and from low density ports like Sihanoukville of Cambodia, Quang Ninh port of Vietnam, and Songkhla port in the South of Thailand

Ports	Top 20 Global Container Shipping Lines	Regional Container Shipping Lines / Short Sea Container Shipping
Cambodia		
Sihanoukville Port	CMA CGM (France) COSCO (China) Evergreen (Taiwan) HMM (Korea) Maersk (Denmark) PIL (Singapore) SITC (Hong Kong) Yang Ming (Taiwan)	HATS (Vietnam) Heung A (Korea) RCL (Thailand) Nam Yuen Yong Shipping (Thailand) Samudera (Indonesia) TS Line (Hong Kong)

Cambodia's Challenges

- low land and maritime transport connectivity
- High operating costs and lower efficiency of total shipping and logistics system
- huge imbalance of international transport volume,
- Lack of Cambodian flag vessels
- most of manufacturing and consumers are based in Phnom Penh which is far from port in Sihanoukville
- Railway transport connecting to ports and major cities remained of limited availability
- inadequate infrastructure
- Shortage of available trucks and drivers
- Management of current inland and international maritime transport services is not meet consumer expectation, especially exporting apparel and clothing from Cambodia to overseas countries which need short lead time as fashion change very fast.



Ports	Top 20 Global Container Shipping Lines	Regional Container Shipping Lines / Short Sea Container Shipping
Vietnam		
Ports in Haiphong (Haiphong Port)	CMA CGM (France) COSCO (China) Evergreen (Taiwan) Hapag-Lloyd (Germany) HMM (Korea) KMTC (Korea) ONE PIL (Singapore) SITC (Hong Kong) TS Line (Taiwan) ZIM (Israel) Wan Hai (Taiwan)	Dongjin Shipping (Korea) Gold Star (Hong Kong) Inter Asia (Taiwan) HATS (Vietnam) Heung A (Korea) RCL (Thailand) Samudera (Indonesia) Sinokor (Korea) SM Line (Korea) VIMC (Vietnam) Vinafco Shipping (Vietnam) NYK RoRo (RoRo Services)
Ports in Quang Nhin (Cai Lan Port)	COSCO (China) Maersk (Denmark)	VIMC (Vietnam)
Ports in Danang (Danang Port)	CMA CGM (France) COSCO (China) Evergreen (Taiwan) PIL (Singapore) SITC (Hong Kong) Wan Hai (Taiwan) Yang Ming (Taiwan)	HATS (Vietnam) Heung A (Korea) Samudera (Indonesia) VIMC (Vietnam) Vinafco Shipping (Vietnam)
Ports in Ho Chi Minh and Vang Tau (Ho Chi Minh City, Saigon New Port, Cat Lai Terminal, Cai Mep)	CMA CGM (France) COSCO (China) Evergreen (Taiwan) Hapag-Lloyd (Germany) HMM (Korea) KMTC (Korea) Maersk (Denmark) ONE PIL (Singapore) SITC (Hong Kong) TS Line (Taiwan) Wan Hai (Taiwan) Yang Ming (Taiwan) ZIM (Israel)	CK Line (Korea) HATS (Vietnam) Heung A (Korea) Inter Asia (Taiwan) Orient Asia Lines (Thailand) (General cargo) RCL (Thailand) Samudera (Indonesia) Sinokor (Korea) SM Line (Korea) VIMC (Vietnam) Vinafco Shipping (Vietnam) NYK RoRo (RoRo Services)

Development of Maritime Connectivity

Vietnam's Challenges

- Traffic congestion around ports and along the connecting national highway
- Underdeveloped infrastructure and port facilities as well as several ports in the country are not able to operate at full capacity
- Monopoly in loading and pilotage services
- Low rate of participation of Vietnam national flag vessel in international trade to and from Vietnam while some of Vietnamese vessels do not meet safety
- Management of container flow, container availability, and condition on container free time is controlled by major shipping lines
- Many local ports employing workers with poor loading and unloading techniques resulting in loss of cargo
- increase of fee collection on seaport infrastructure will increase cost for shippers and shipping lines



Ports	Top 20 Global Container Shipping Lines	Regional Container Shipping Lines / Short Sea Container Shipping
Thailand		
Ports in Bangkok Area (Bangkok Port, BMTP, Sahathai Terminal, Bangkok Barge Terminal, Suksawat Terminal, Thai Connectivity Terminal, Unithai)	CMA CGM (France) COSCO (China) HMM (Korea) PIL (Singapore) SITC (Hong Kong) TS Line (Taiwan) Yang Ming (Taiwan) Wan Hai (Taiwan) ZIM (Israel)	Heung A (Korea) Inter Asia (Taiwan) Nam Yuen Yong Shipping (Thailand) NP Marine (Thailand) Patthara Marine (Thailand) RCL (Thailand) Samudera (Indonesia) Santad (Thailand) Sinokor (Korea) SM Line (Korea)
Ports in Laem Chabang Area (Laem Chabang Port, Kerry Siam Seaport and Siam Commercial Seaport)	CMA CGM (France) COSCO (China) Evergreen (Taiwan) Hapag-Lloyd (Germany) HMM (Korea) KMTC (Korea) Maersk (Denmark) MSC (Switzerland) ONE PIL (Singapore) SITC (Hong Kong) TS Line (Taiwan) Yang Ming (Taiwan) ZIM (Israel) Wan Hai (Taiwan)	Gold Star (Hong Kong) Inter Asia (Taiwan) Nam Yuen Yong Shipping (Thailand) NP Marine (Thailand) Patthara Marine (Thailand) RCL (Thailand) Samudera (Indonesia) Sinokor (Korea) SM Line (Korea) TS Line (Hong Kong) Uniglory (Taiwan) NYK RoRo (RoRo Services) Wilhelmsen (RoRo services)
Port in Songkhla (Songkhla Deep Sea Port and private ports in Songkhla)	Maersk (Denmark) PIL (Singapore)	Harin Navee (Thailand) Orient Asia Lines (Thailand) (General cargo) RCL (Thailand) Samudera (Indonesia)

Development of Maritime Connectivity

Thailand's Challenges

- ◆ Environmental concern and the invasion of local community in major port territories
- ◆ Lack of efficient rail transport and handling facilities connecting major ports
- ◆ Transfer of cargoes between coastal shipping and international shipping requires numerous procedures that make an increase in cost and time
- ◆ Management of container flow and condition on container free time is controlled by major shipping lines
- ◆ Operations of large deep seaports, container terminal handling, inland container depot, and dry ports owned by government agencies or state enterprises are required to comply with public private partnership (PPP) which consumes more time and cost while less flexibility for the concessionaires
- ◆ Rise of shipping freight causes many shippers to change mode of transport
- ◆ Changing Government policies related to transport infrastructure development effect the decision of investment stakeholders



Recommendations

Institutional Dimension

- Establishing Working Group on Improving National Maritime Transport Connectivity
- Attracting the participation of major global and regional shipping lines
- Strengthening capacity of national flag carriers or national shipping lines
- Applying the preferential port tariffs and charges
- Exploring possibilities to facilitate more flexible pilotage and loading at selected ports
- Changing regulations imposed on the transfer of cargoes between coastal shipping and international shipping in the same port territory

Physical Dimension

- Promoting the integration of railways transport system
- Maintaining the dredging and preparing facilities required for the navigation of vessels
- Constructing new ports or expanding capacity of existing ports

People Dimension

- Increasing the supply of qualified human resources in related industry
- Increasing capacity and skills of port marketing team





THANK YOU
for your
ATTENTION!

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