

ASEAN Maritime Connectivity: Overview and Insights



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Conference on “Logistics and Maritime Studies on One Belt One Road”

The Hong Kong Polytechnic University

Hong Kong, 10 May 2016

Outline

Maritime Connectivity in MPAC

Maritime activities in South East Asia

Challenges and Opportunities

ASEAN Maritime Connectivity

MARITIME CONNECTIVITY IN THE MASTER PLAN OF ASEAN CONNECTIVITY

MPAC 2015 Priority

Prioritised developments:

- Completion of the ASEAN Highway Network (AHN) missing links and upgrade of Transit Transport Routes (TTRs);
- Completion of the Singapore Kunming Rail Link (SKRL) missing links;
- Establish an ASEAN Broadband Corridor (ABC);
- Melaka-Pekan Baru Interconnection (IMT-GT: Indonesia);
- West Kalimantan-Sarawak Interconnection (BIMP-EAGA: Indonesia);
- **Study on the Roll-on/roll-off (RoRo) network and short-sea shipping;**
- Developing and operationalising mutual recognition arrangements (MRAs) for prioritised and selected industries;
- Establishing common rules for standards and conformity assessment procedures;
- **Operationalise all National Single Windows (NSWs) by 2012;**
- Options for a framework/modality towards the phased reduction and elimination of scheduled investment restrictions/impediments;
- Operationalisation of the ASEAN Agreements on transport facilitation;
- Easing visa requirements for ASEAN nationals;
- Development of ASEAN Virtual Learning Resources Centres (AVLRC);
- Develop ICT skill standards; and
- ASEAN Community building programme.

ASEAN Transport Strategic Plan for 2015-2025

General strategies:

- Air Transport: Strengthen the ASEAN Single Aviation Market for a more competitive and resilient ASEAN
- Land Transport: Establish an efficient, safe and integrated regional land transport network within ASEAN and with the neighbouring countries to support the development of trade and tourism
- Maritime Transport: Establish an ASEAN Single Shipping Market and promote maritime safety, security and strategic economic corridors within ASEAN
- Sustainable Transport: Formulate a regional policy framework to support sustainable transport which includes low carbon modes of transport, energy efficiency and user-friendly transport initiatives, integration of transport and land use planning
- Transport Facilitation: Establish an integrated, efficient and globally competitive logistics and multimodal transportation system, for seamless movement of passengers by road vehicles and cargos within and beyond ASEAN

ASTP 2015: 47 Regional ports are targeted to improve performance and capacity of their international terminals / calls



ASEAN Transport Strategic Plan for 2015-2025

Specific goals and actions for Maritime Transportation:

- Realise the ASEAN Single Shipping Market through the implementation of the agreed strategies and measures
- Realise the RO-RO shipping network operation in ASEAN
- Develop an efficient and integrated inland waterway transport (IWT) network
- Formulate necessary policy initiatives and recommendations to develop strategic maritime transport logistics between ASEAN and Dialogue Partners
- Intensify regional cooperation in improving transport safety
- Strengthen ASEAN Search and Rescue (SAR) cooperation to ensure effective and coordinated aeronautical and maritime SAR operations in the region

ASEAN Connectivity

- The foundations for an ASEAN Economic Community have been developed around four pillars: developing a single market and production base, raising competitiveness, supporting equitable development and integrating ASEAN into the global economy.
- Modest achievement in Connectivity
 - There are still many underdeveloped connections: roads, railways, waterways, airlines.
 - Domestic connectivity is still big **issues** in many AMS with Singapore and perhaps Brunei as exception.
 - Archipelagic countries have serious **challenges** in maritime connectivity.
- MPAC focus: land transportation, esp. Mekong area.
- Challenges:
 - Different development stages, different interests
 - Lack of both public and private funding
 - Regulatory
 - Lack of good project pipeline

Growing markets, huge opportunity

GDP per capita in 2018 in extended East Asian countries

GDP / capita (USD)	2000	2005	2010	2018 Estimate
Singapore	22,791	28,498	44,697	57,134
Brunei	18,477	26,587	31,982	43,537
Malaysia	3,992	5,421	8,634	14,567
Thailand	1,983	2,825	4,992	9,284
Indonesia	800	1,291	2,986	5,569
Philippines	1,055	1,209	2,155	4,191
Vietnam	402	637	1,174	2,474
Lao PDR	308	474	1,105	2,354
Cambodia	288	455	753	1,583
Myanmar	178	216	742	1,218
Australia	20,734	35,570	56,220	74,635
Japan	37,304	35,781	42,917	47,281
New Zealand	13,833	27,118	32,455	44,527
South Korea	11,347	17,551	20,540	33,644
China	946	1,726	4,423	10,711
India	465	727	1,356	2,249

Source: World Economic Outlook, International Monetary Fund.

Notes: grey indicates GDP per capita ≤ USD 1,000; yellow indicates USD 1,000 < GDP per capita ≤ USD 3,000; light orange indicates USD 3,000 < GDP per capita ≤ USD 10,000; green indicates GDP per capita ≥ USD 10,000.

ASEAN Maritime Connectivity

MARITIME ACTIVITIES IN SOUTH EAST ASIA

Global Shipping Role of ASEAN

- By 2015, more than 9% of freight around the world registered as ASEAN member states, almost 20% of ships from ASEAN (UNCTADSTAT)
- Almost 19% of world oil tanker ships,
- 7.5% of world bulk carriers ships,
- 25% of general cargo around the world
- Almost 15% of world container ships
- Almost 21 % of other types of ship in the world

Ownership of the world fleet, (1 Jan 2015)

Rank (dwt)	Country Ownership	Number of Vessels			Dead-weight tonnage				
		National Flag	Foreign Flag	Total	National Flag	Foreign Flag	Total	Foreign Flag as a % of total	Total as a % of world
1	Greece	796	3,221	4,017	70,425,265	209,004,526	279,429,791	74.80%	16.11%
2	Japan	769	3,217	3,986	19,497,605	211,177,574	230,675,179	91.55%	13.30%
3	China	2,970	1,996	4,966	73,810,769	83,746,441	157,557,210	53.15%	9.08%
4	Germany	283	3,249	3,532	12,543,258	109,492,374	122,035,632	89.72%	7.04%
5	Singapore	1,336	1,020	2,356	48,983,688	35,038,564	84,022,252	41.70%	4.84%
6	ROK	775	843	1,618	16,032,807	64,148,678	80,181,485	80.00%	4.62%
7	Hong Kong, China	727	531	1,258	56,122,972	19,198,299	75,321,271	25.49%	4.34%
8	US	789	1,183	1,972	8,731,781	51,531,743	60,263,524	85.51%	3.47%
9	UK	477	750	1,227	12,477,513	35,904,386	48,381,899	74.21%	2.79%
10	Norway	848	1,009	1,857	17,066,669	29,303,873	46,370,542	63.20%	2.67%
17	India	697	147	844	14,546,706	7,268,449	21,815,155	33.32%	1.26%
23	Indonesia	1,504	153	1,657	12,908,577	4,120,935	17,029,512	24.20%	0.98%
25	Malaysia	466	142	608	8,430,359	7,707,526	16,137,885	47.76%	0.93%
30	Vietnam	786	92	878	6,527,639	1,510,645	8,038,284	18.79%	0.46%

Source: UNCTAD (2015)

Marine Services

For the last decade:

- Increasing container capacity by triple
- Decreasing number of marine services companies by 29%
- As ships get bigger, players become fewer

Marine Services

- The importance of developing world seaborne trade is increasing, whilst the developed one is decreasing
- The trend also shows developing Asia as a major market of seaborne goods. Developing the capacity of port is crucial.
- The amount of seaborne trades share to the world (UNCTADSTAT):
 - Developing Asia:
 - Total goods loaded: 40% in 2006, 39% in 2014
 - Total goods unloaded: 37% in 2006, 50% in 2014
 - Developed Asia:
 - Total goods loaded: 2% in 2006, 2% in 2014
 - Total goods unloaded: 11% in 2006, 9% in 2014

Sea Ports in Indonesia

Infrastructure quality in Selected Asia Countries, 2014/2015

	Singapore	Malaysia	Thailand	Philippines	China	India	Indonesia
Road	6.1	5.6	4.5	3.6	4.6	3.8	3.9
Railroad	-	5.0	2.4	2.3	4.8	4.2	3.7
Seaport	6.7	5.6	4.5	3.5	4.6	4.0	4.0
Air transport	6.8	5.7	5.3	3.6	4.7	4.3	4.5

Source: WEF 2015

	Manado	Makassar	Medan	Surabaya	Jakarta
Dwelling time (days)	5.00	6.39	5.51	6.64	5.22
Draft (m)	9 - 12	9.7 - 16	6 - 10	9.6 - 10.5	13.5
BOR (%)	64.47	68.23	65.05	66.51 / 41.99	45.36
YOR (%)	70.00	70.47	42.62	50.8 / 206.4	50.21

Source: Indonesia's Customs

Selected ASEAN Ports

Country	Cabotage	Port Authority	Major freight types	Container Throughput 2013 mil TEUs)	Connectivity index
Indonesia	Y	PA agency under Min of Transport (de jure)	Bulk (approx. 70%)	10.8	weak both to intra- and extra-ASEAN
Malaysia	Y	Independent PA corporation for every port	Containerized (77%)	10.9 (PK) + 8.2 (TP)*	strong with China and Hong Kong
Philippines	Y, Relaxed in July 2015	PPA (state corporation under Dep of Transport & Communication)	Bulk (70%), Containerized (23%)	5.9	weak both to intra- and extra-ASEAN
Thailand	Y	PAT (state corporation)	Containerized (93%)	7.7	strong with China, HK, Malaysia and Singapore
Singapore	N	MPA statutory board under Min of Transport	Containerized (58%), Bulk (37%)	33.9*	strong with China, HK, and Malaysia

Connectivity of main port of intra- and extra-ASEAN (with China, Hong Kong, USA) has increased significantly (VN) but many still have weak liner connection

2006

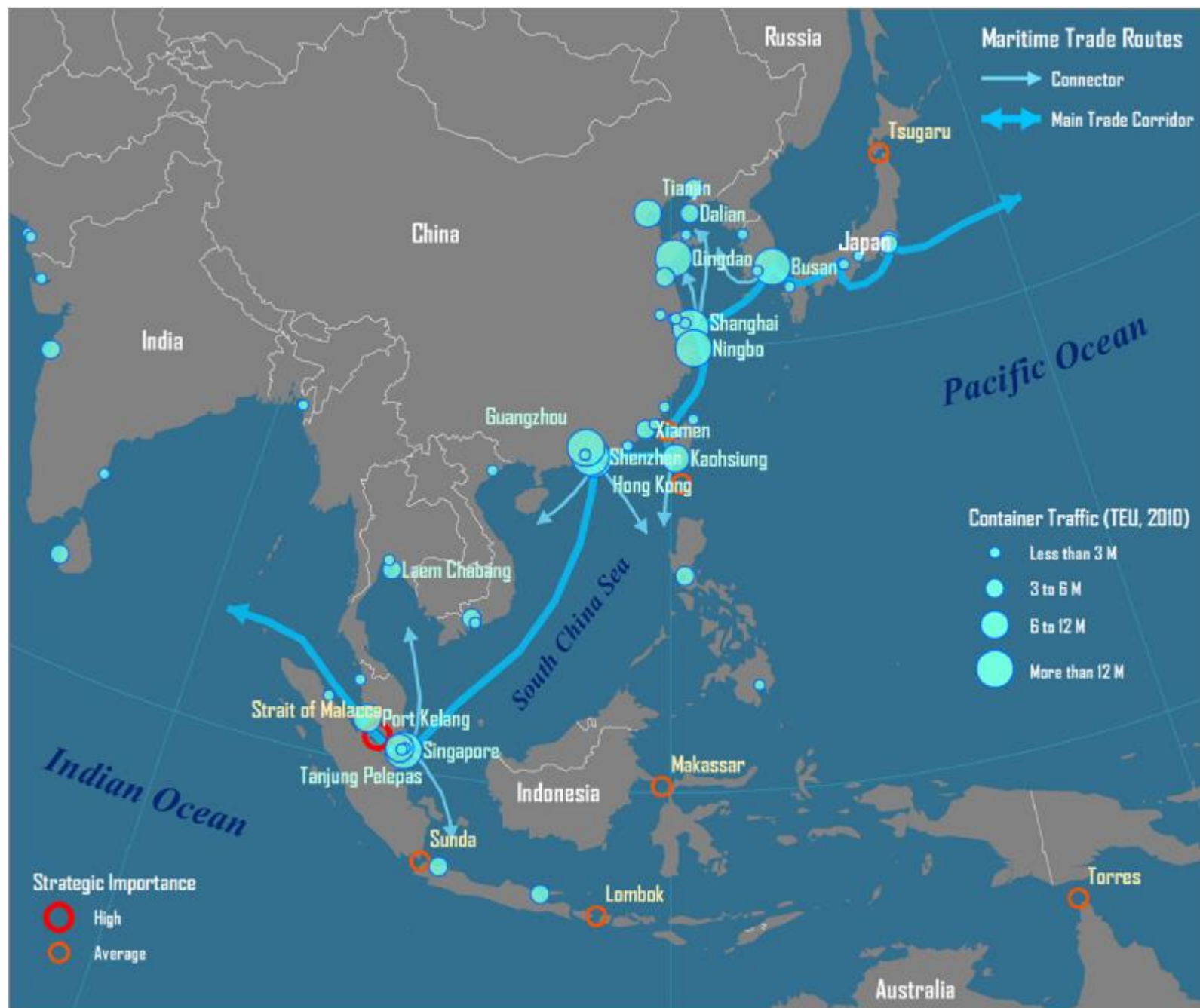
PARTNER ECONOMY	Brunei Dar	Cambodia	China	Hong Kong	Indonesia	Malaysia	Myanmar	Philippines	Singapore	Thailand	United Stat	Viet Nam
Brunei Darussalam	—	0.162405	0.248238	0.249089	0.18871	0.259912	0.158969	0.180853	0.259847	0.186284	0.200442	0.182065
Cambodia	0.162405	—	0.201042	0.263112	0.190461	0.259622	0.157551	0.180839	0.263156	0.250956	0.204829	0.243701
China	0.248238	0.201042	—	0.776179	0.445759	0.648673	0.17763	0.369202	0.692243	0.495496	0.665461	0.384026
China, Hong Kong SAR	0.249089	0.263112	0.776179	—	0.448524	0.647691	0.178232	0.372924	0.69791	0.500142	0.660501	0.351614
Indonesia	0.18871	0.190461	0.445759	0.448524	—	0.475717	0.171521	0.339419	0.507071	0.378462	0.422951	0.326595
Malaysia	0.259912	0.259622	0.648673	0.647691	0.475717	—	0.238339	0.33781	0.710711	0.458663	0.551599	0.365299
Myanmar	0.158969	0.157551	0.17763	0.178232	0.171521	0.238339	—	0.165965	0.240778	0.169805	0.179817	0.166823
Philippines	0.180853	0.180839	0.369202	0.372924	0.339419	0.33781	0.165965	—	0.351443	0.343468	0.340033	0.308035
Singapore	0.259847	0.263156	0.692243	0.69791	0.507071	0.710711	0.240778	0.351443	—	0.507678	0.583312	0.386249
Thailand	0.186284	0.250956	0.495496	0.500142	0.378462	0.458663	0.169805	0.343468	0.507678	—	0.470293	0.367004
United States	0.200442	0.204829	0.665461	0.660501	0.422951	0.551599	0.179817	0.340033	0.583312	0.470293	—	0.35012
Viet Nam	0.182065	0.243701	0.384026	0.351614	0.326595	0.365299	0.166823	0.308035	0.386249	0.367004	0.35012	—

2015

PARTNER ECONOMY	Brunei Dar	Cambodia	China	Hong Kong	Indonesia	Malaysia	Myanmar	Philippines	Singapore	Thailand	United Stat	Viet Nam
Brunei Darussalam	—	0.180101	0.270996	0.270996	0.19976	0.284466	0.176258	0.194465	0.27583	0.203946	0.223337	0.204642
Cambodia	0.180101	—	0.302661	0.3051	0.216415	0.301157	0.169146	0.275226	0.307241	0.29059	0.248958	0.289049
China	0.270996	0.302661	—	0.879639	0.451326	0.851142	0.229164	0.440261	0.832202	0.576986	0.763507	0.594248
China, Hong Kong SAR	0.270996	0.3051	0.879639	—	0.44157	0.821268	0.229164	0.422022	0.802831	0.560914	0.751312	0.594248
Indonesia	0.19976	0.216415	0.451326	0.44157	—	0.470536	0.211379	0.354772	0.486556	0.397204	0.375369	0.381979
Malaysia	0.284466	0.301157	0.851142	0.821268	0.470536	—	0.289668	0.377051	0.858991	0.538861	0.704654	0.544127
Myanmar	0.176258	0.169146	0.229164	0.229164	0.211379	0.289668	—	0.203721	0.297747	0.216902	0.232735	0.21747
Philippines	0.194465	0.275226	0.440261	0.422022	0.354772	0.377051	0.203721	—	0.415707	0.37628	0.35948	0.376346
Singapore	0.27583	0.307241	0.832202	0.802831	0.486556	0.858991	0.297747	0.415707	—	0.576057	0.69415	0.576231
Thailand	0.203946	0.29059	0.576986	0.560914	0.397204	0.538861	0.216902	0.37628	0.576057	—	0.524428	0.510311
United States	0.223337	0.248958	0.763507	0.751312	0.375369	0.704654	0.232735	0.35948	0.69415	0.524428	—	0.562251
Viet Nam	0.204642	0.289049	0.594248	0.594248	0.381979	0.544127	0.21747	0.376346	0.576231	0.510311	0.562251	—

yellow box: Intra-ASEAN liner index >0.5 (very good connectivity)

Green box: Extra-ASEAN liner index >0.5 (very good connectivity)



ASEAN Maritime Connectivity

CHALLENGES AND OPPORTUNITIES

Challenges

- Why do we should pay attention to Indonesia and Philippines?
 - Indonesia and Philippines are located outside the major international shipping lines
 - Under utilization of potential activities
 - Indonesia as the largest archipelagic country: uneven distribution of population and economic activities, long distance shipping route
 - Jakarta-centric economic activities
 - Backhaul issues especially in eastern route of Indonesia
- Liners businesses are demand-driven

Typical problems in surveyed ports

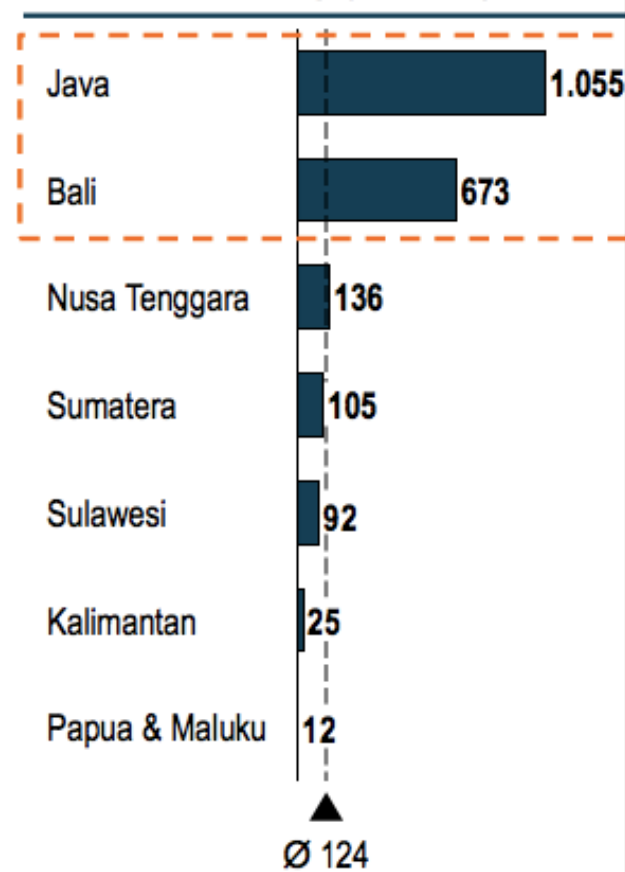
- Poor congestion management (stevedoring rate is generally high)
- Inefficient handling equipment
 - If loading time and berth management could be improved, total cost of logistics for CPO from Kalimantan to Jakarta would reduce 34% (due to long waiting time in Sampit and Priok) (McKinsey, 2013)
- Regulatory burden/red tapes
- Fragmented port operation: different operation hours, disconnected services inside ports, no leading mechanism, less competitive service.
- Non-sterile ports (issues of security, safety, and causing process delays)

Indonesia's maritime logistics: west-east corridor challenges

Geographical distance per major cities (km)



Population density (per km²)



Indonesia's maritime logistics: west-east corridor challenges

	Ln(Volume)				
Ln(TransCost)	0.324**		0.322**	0.367*	
	(0.132)		(0.133)	(0.132)	
Ln(GRPOrigin)	-0.246	-0.300*	-0.223		
	(0.156)	(0.163)	(0.159)		
Ln(GRPDestination)	0.340**	0.329*	0.435**	0.369***	0.382**
	(0.142)	(0.181)	(0.179)	(0.142)	(0.182)
Ln(Distance)		0.312	0.297		0.425
		(0.355)	(0.340)		(0.357)
Constant	-3.651	0.225	-7.084	-8.140**	-5.411
	(4.259)	(5.175)	(5.804)	(3.194)	(4.257)
R-squared	0.204	0.129	0.216	0.168	0.074
Adj R-squared	0.160	0.081	0.156	0.138	0.041
Obs	58	58	58	58	58

How to improve connectivity from Indonesia to Asia continent?

- Domestic connectivity should be efficient, or at least between subregions (western, central, eastern and with Philippines and Sarawak)
- International hubs should be designed such that to reach economies of scale and are connected with the most effective international ports outside the country.
- Relaxing restrictions within subregional agreement, to push up activities.
- Connectivity with hinterland.

Trends that shape future demand

- New regulations: green technologies (emissions, waste, water treatment, energy efficiency).
- Cost and time efficiency
- Security
- Value added services: financial, repairment, logistics for the ship, integrated trucking system, regulatory-related services, etc.

Way Forward: Indonesia, Philippines, Thailand

- Port modernization:
 - Separate cargo and passengers terminals
 - Approaching congestion problems with market mechanism
 - Increase berth and terminal capacities in main international ports (deep sea ports: Indonesia: Kali Baru and Kuala Tanjung)
 - Simplify organizational structure in port management and use modern soft infrastructure to increase efficiency, real time approach, transparency, and accountability.
- Any industrial zones should have efficient connection with (proper) port → hinterland connectivity.
- Current port – land connectivity is still suffered from congestion and expensive cost → integrate currently separated port system into national supply chain system.
- Some regions outside Java and have potentials in specific commodities (oil, gas, minerals, agriculture products, chemicals, etc.) require ports that can accommodate them.
- Setting some levels of service and performance standards for ports

Way Forward: Regional connectivity

- Establish a networked economies in subregions to increase supply-demand. Privileges can be applied within this cluster.
- Removing cabotage can improve connectivity and competitiveness in maritime services. At least within subregional network.
- Build value added services to anticipate future demand
- Modernization:
 - Improve hard infrastructure in current ports: berth length, handling equipment, trucking, inventory.
 - Replace old and outdated vessels with modern/new ones.
- Invest in human resources capacity building especially to produce new qualified mariners and programs to level stakeholders capacity.
- Linking major shipping lines (ports of Japan, HK, China, Singapore, Malaysia) with archipelago.



THANK YOU

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