



PORT KLANG

THE SIGNIFICANCE OF MARITIME TRANSPORT IN GEOGRAPHY OF TRADE

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23th November 2022

Importance Of *Maritime Transport*

Transport and logistics is the means to physically move trade from one place to another

SEA
80%

LAND
13%

AIR
7%

Importance
— Core Route
— Secondary Route

Choke Point
● Primary
● Secondary

Major Global Trade Routes

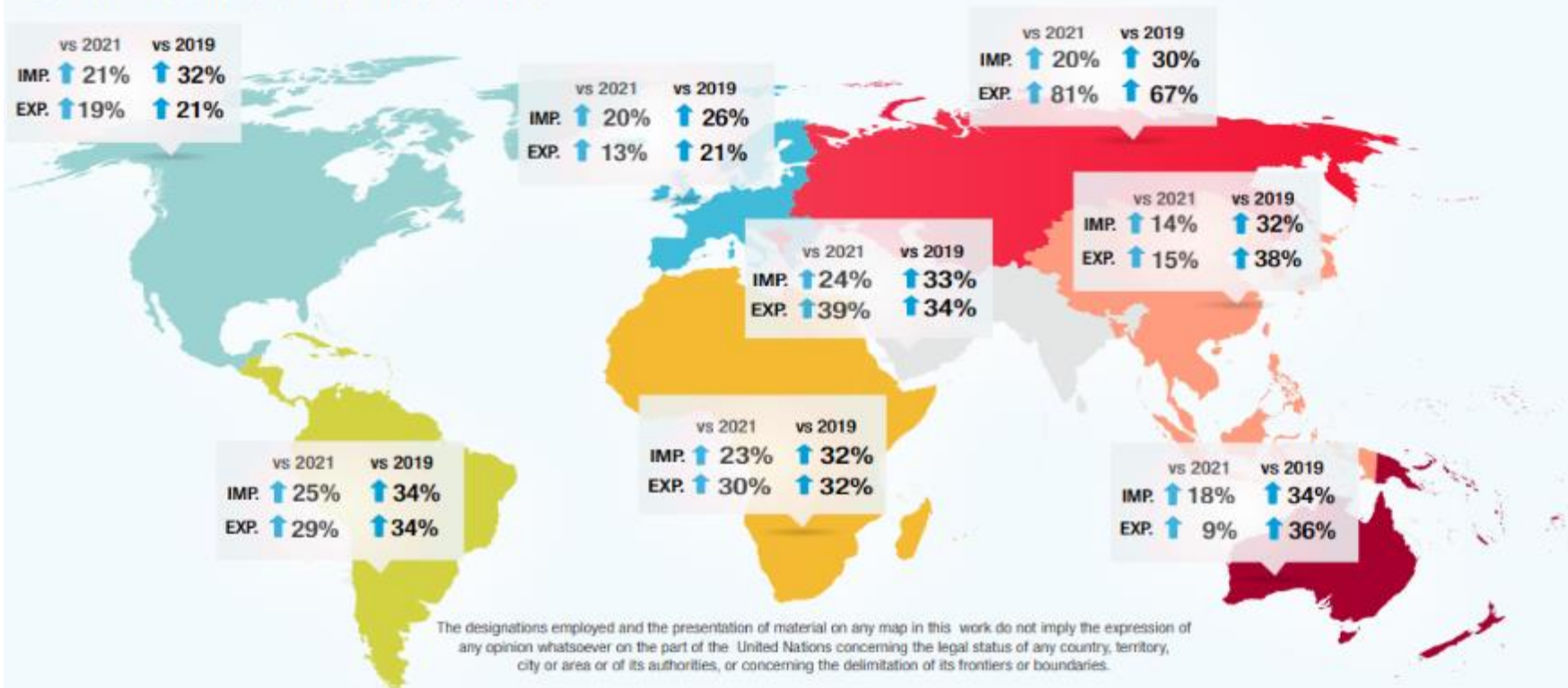
GLOBAL CONTAINER VOLUME 2021
849 MILLION TEUs

GLOBAL TRADE VOLUME 2021
USD 28.5 TRILLION

6 Geographical Regions & Trade Trend

- Africa ● Europe ● America, Central and South ● America, North
- Asia, South East and Oceania ● Asia, South/West, East and Middle East

Trade continues to increase in all regions, but less so in the East Asia and Pacific regions
Q1 2022 relative to Q1 2021 and Q1 2019



Source: UNCTAD estimates based on national statistics.

Note: Changes are year-over year. Data excludes intra-EU trade. Data does not include trade in services.



Changes & Evolution *In Maritime Trade*

Containerization

**Evolution of
Container Vessel Sizes**

**Evolution of the Cooperation
Between Shipping Companies**

**Increase in trade flows as a
result of liberalization and
globalization**

**Rationalization of Shipping Routes
Hub and Spoke Concept : Main Hub
Ports, Secondary Transshipment Ports**

Technological Changes

Role Of Ports

5th Generation (2010 onwards)

Ports focused on customers and the local community offering deep IT integration with various stakeholders.

4th Generation (2000 - 2010)

Global e-ports transferring information on a global scale, having global standards of cargo handling

3rd Generation (1980 - 2000)

Ports being a part of the supply chain, making use of bilateral electronic data exchange, i.e. exchanging data with the customers

2nd Generation (1960 - 1980)

Logistic ports providing various services including warehousing

1st Generation (till 1960)

Simple loading/unloading operations ports

- Ports now have evolved to be **Trade Gateways & Enablers of Trade**
- Ports are being developed as **Multimodal Strategic Hubs & Regional Distribution Centers (RDC) with Smart & Sustainable Port concepts**

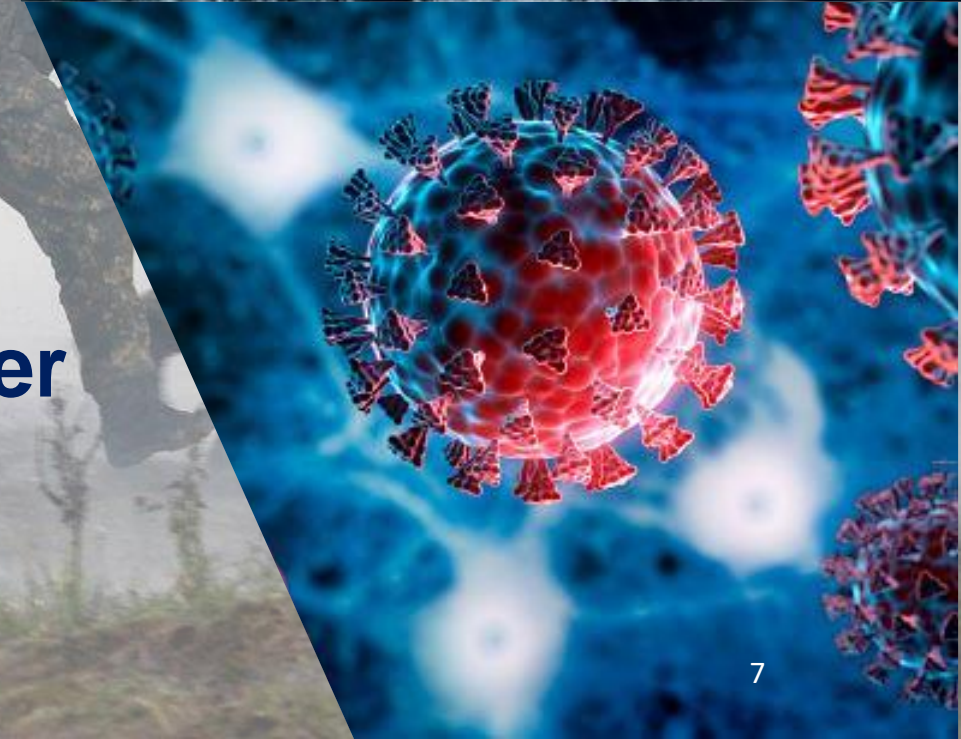
Significant & Important *Of Ports*

- Gateways for domestic and International trade
- Major Shipping Commodities such as Food Items, Crude petroleum and petroleum products, Chemicals, Raw Materials and etc.
- Homeland Security for cargo traffic passing through, with security measures to adequately monitor and protect the ports while still allowing an efficient flow of goods.
- Ports are sources of local employment
- Intermodal Transportation System that facilitate goods movement to businesses in local communities and worldwide markets

Current Challenges In Maritime Supply Chain

DISRUPTIONS :

- **Supply Chain Crisis/ Trade Imbalance**
 - Covid-19
 - Russia – Ukraine War
- **Energy Transition**
- **Political Instability**
- **Climate Change/ Extreme Weather**



Effects Of *Disruption*

EFFECT	IMPACT ON PORTS
Limited Slots – Higher Freight Rates	Port Congestion
Vessel Bunching	Impact on operations efficiency
Blank Sailings	Strain on Planning and Operations
Port Omissions	Hinterland Congestion

Current Challenges In *Maritime Supply Chain*

● Inadequate infrastructure to absorb and respond to shocks in demand and supply.

● Breakdowns in hinterland storage capacity & intermodal connectivity of end-to-end supply chains

● Financing from private sector for future port expansions as public sector funding will no longer suffice

● Continued reliance on trucks is impacting supply chain fluidity

● Lack of Data Collaboration

● Efforts to improve port efficiency through automation and labor skillsets

● Lack of Transparency & Efficiency Of Clearance Procedures And Transparency In Data Availability & Exchange

● Nearshoring
Due to disruption, it's possible that business supply chains will become shorter, as companies want alternative to the longer Asia-based supply chains

Future Challenges In *Maritime Supply Chain*



01 Protectionism and trade restrictions



**02 Digitalization & Automation
(Cyber Security)**



**03 Energy Transition
(Decarbonization)**



04 Financing
(Port expansion, Multimodal Strategic Hub & Regional Distribution Centre)



Climate & Energy

- Sharing of best practices
- Dash boarding the status of port implementations
- Pilot projects bunkering infrastructure
- Onshore power
- Port call optimization
- Just-in-time arrival of vessels.



Data Collaboration

- Assess the industry status of digitalization.
- Incentivize and encourage ports and their stakeholders to commit to required change management.
- Public-private partnership actions for capacity building at ports.



Risk & Resilience

- Guidelines for ports setting out their business continuity strategy.
- A global port resilience tracker which will serve as a long-term successor to the COVID-19 economic impact barometer.
- A database of best practices structured by risk and resilience categories.
- Collaboration with PIANC on steps Navigating a Changing Climate.

Ports *Action Plans*

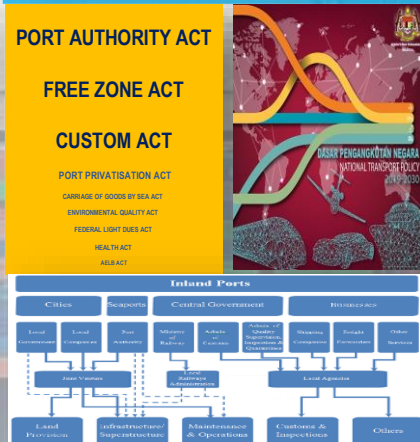
INFRASTRUCTURE / CAPACITY BUILDING

- CONTINUOUS CAPACITY BUILDING
- CHANNEL & WHARF DREDGING
- HINTERLAND INFRASTRUCTURE DEVELOPMENT
- AUTOMATION



REGULATORY GOVERNANCE

- INSTITUTIONAL FRAMEWORK
- LAW & LEGISLATION / POLICY & STRATEGY
- GUIDELINES & SOP



DIGITIZATION & DIGITALIZATION

- PORTS & LOGISTICS COMMUNITY SYSTEM & SINGLE MARITIME WINDOW
- BIG DATA ANALYSIS FOR FORECASTING & FUTURE PLANNING
- EFFICIENT PORT & HINTERLAND MOVEMENTS



TRANSFORMATION OF WORKFORCE

- UPSKILLING & RESKILLING EMPLOYEES
- IN-HOUSE TRAINING & CERTIFICATION
- COLLABORATIONS WITH HIGHER LEARNING INSTITUTIONS



DECARBONIZATION

- EMISSION & GHG REDUCTION
- ALTERNATE FUEL
- E-EQUIPMENT RTG, QUAY CRANE
- LED LIGHTING / SOLAR POWER
- ONSHORE POWER SUPPLY
- GREENING ENVIRONMENT



INTERNATIONAL & REGIONAL COLLABORATIONS

COOPERATION



1

International Maritime Organization (IMO) is to promote safe, secure, environmentally sound, efficient and sustainable shipping through cooperation.



2

APSN is to promote economically and environmentally sustainable ports by strengthening cooperation, developing best practices and guidelines, enhancing supply chain effectiveness, building capacity and stimulating information and personnel exchange.



3

World Customs Organization (WCO) promotes certainty, predictability and security of the international movement of goods and people accompanying goods by establishing clear and precise standards.



4

International Organization for Standardization (ISO) is a worldwide federation that collaborate in the development and promotion of international standards for technology, scientific testing processes, working conditions, societal issues & etc.



5

The Global Maritime Forum is an international NGO committed to shaping the future of global seaborne trade to increase sustainable long-term economic development and human wellbeing.

Conclusion

Policymakers should focus on the following components due to uncertainties, rising transportation costs, and increased volatility in the near future:

**Systematic resilience
building in maritime
transport and
seaports.**

1

**Trade facilitation and
digitalization**

2

**Competition and options
for diversification**

3

**Regional trade agreements
and logistics**

4



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