



Kingdom of the Netherlands

PORT DEVELOPMENT IN MALAYSIA

AN INTRODUCTION TO THE COUNTRY'S EVOLVING PORT LANDSCAPE



© PORT OF TANJUNG PELEPAS



CONTENTS

MARKET OPPORTUNITIES	ii
MARITIME GIANT MALAYSIA	2
GATEWAY TO SOUTHEAST ASIA.....	3
GLOBAL PORT ENVIRONMENT	4
PORTS OF MALAYSIA	5
MMC CORPORATION BERHAD.....	7
PORT POLICY	7
PORT KLANG	8
WESTPORTS	9
NORTHPORT	10
JOHOR PORT	11
PORT OF TANJUNG PELEPAS	12
JOHOR PORT AT PASIR GUDANG	13
PENANG PORT	14
BUTTERWORTH & PRAI WHARF	15
SWETTENHAM CRUISE PIER.....	15
BINTULU PORT	16
SABAH PORTS	17
OTHER PORTS	19
KUANTAN PORT.....	19
MALACCA PORT.....	19
KEMAMAN PORT	19
LABUAN PORT	19
SIPITANG	19
KUCHING	20
MIRI	20
RAJANG.....	20
PRIVATE PORTS	20
OFFSHORE SUPPLY	20
SHIPBUILDING.....	20



MARKET OPPORTUNITIES

Large, established port and maritime market.



The vast size of the maritime and port industry generates a constant demand to tap on to for Dutch port and maritime service providers and technology suppliers, including all on dock cargo handling related activities, tugging, ship supply, maintenance and repair, as well as manufacturers of port related and cargo handling transport equipment, warehousing and other support activities for transportation.

Expanding container transshipment hub.



As a large and expanding transshipment hub, Malaysia can greatly benefit from Dutch innovators in the field of container handling and terminal design as to increase efficiency and capacity both for existing and new terminals in a sustainable way.

The preferred gateway to Southeast Asia.



With affordable land available within free commercial zones around the major ports, Malaysia is an attractive location for Dutch companies to establish an regional distribution centre to serve the growing Southeast Asian market.

Untapped market for smart port development.



Malaysian ports need to innovate and modernize their operating facilities through digitalization and automation. There is much room for Dutch expertise to meet Malaysia's prioritized demand for smart-port development, including integrated port community systems and related digital solutions.

Huge scale port expansion and land development plans.



With a broad range of port expansion and land development plans around the major ports and urban coastal centres, Malaysia is an interesting market for the Dutch port development industry with opportunities for dredgers, engineers, port operators, constructors, project developers, architects, consultants and investors.



One of world's main palm oil exporters.



A solid cargo base is generated by the oil palm, timber and other agricultural produce industries. In this regard, specialized Dutch port developers, industrial engineers and project developers can find a promising market for the construction and expansion of new small sized ports in Sabah and Sarawak.

Oil & gas producing and trading hub.



Demand for specialized (private) port facilities to serve the vast Malaysian oil & gas industry remains high, leaving a market for Dutch producers and suppliers of specialized industrial equipment, machinery and services in this industry.

Offshore supply & maintenance base.



Malaysia serves the large offshore industry through its ports on the east coast. Dutch offshore equipment suppliers, constructors and transporters can remain an important player in this market.

Growing cruise destination.



As a popular tourist destination surrounded by sea, global rise in cruise tourism will spark demand for extended cruise ports in Malaysia. Dutch cruise supporting businesses can help Malaysia to accommodate the increase in cruise calls.



MARITIME GIANT MALAYSIA

The rapid growth and development of the Malaysian economy over the past decades cannot be seen a part from the country's location alongside world's most important trade routes. The Straits of Malacca have been a strategic waterway in global trade for centuries. Today that is no different. Malaysia is a real maritime nation and home to some of the world's largest ports.

According to the United Nations Conference on Trade and Development (UNCTAD), Malaysia is the world's fifth best connected country in terms of shipping line connectivity, ahead of the Netherlands and the United States. Malaysia is a container transshipment hub in the region and a market leader in handling and exporting oil and gas products.

Over the last ten years Malaysian ports have recorded an average growth of 3% in compound cargo throughput. Following a drop in 2017 due to a change in the shipping line market and overall lows in global seaborne trade, cargo throughput recovered in 2018 totalling at 568 million tonnes.

About 70% of the cargo is containerized. With a total throughput of 24.9 million TEUs in 2018, Malaysian ports handled almost as many containers as the ports of Rotterdam and Antwerp combined. While the majority is transshipment, cargo that does not enter the country, Malaysian exports and imports

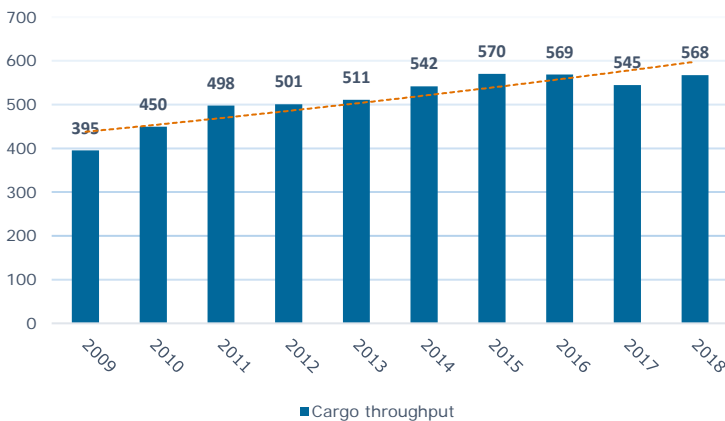
accounted for respectively 4.5 and 4.4 million TEUs in throughput.

Last but not least, as one of world's largest liquefied natural gas (LNG) exporters, Malaysia is home to the first floating LNG port facility and the largest palm oil terminal in the world.

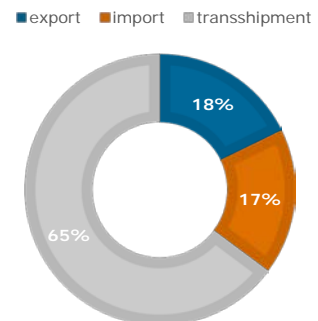
UNCTAD MARITIME CONNECTIVITY INDEX

Best connected countries and/or territories	Rank
1. China	1
2. Singapore	2
3. Korea, Rep.	3
4. Hong Kong (China)	4
5. Malaysia	5
6. Netherlands	6
7. Germany	7
8. United States	8
9. United Kingdom	9
10. Belgium	10

TREND IN CARGO THROUGHPUT BY MALAYSIAN PORTS (million tonnes)



24.9 MILLION TEUS IN 2018



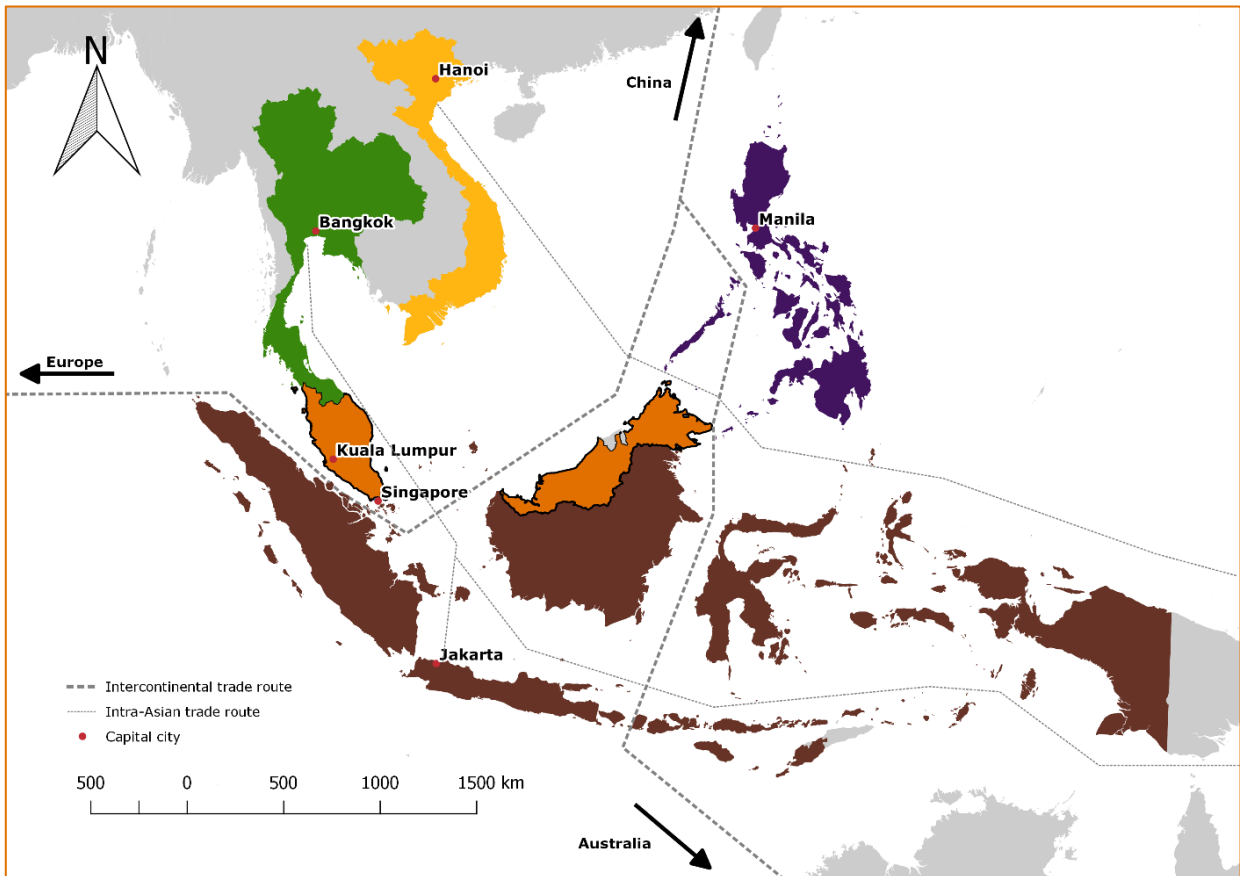
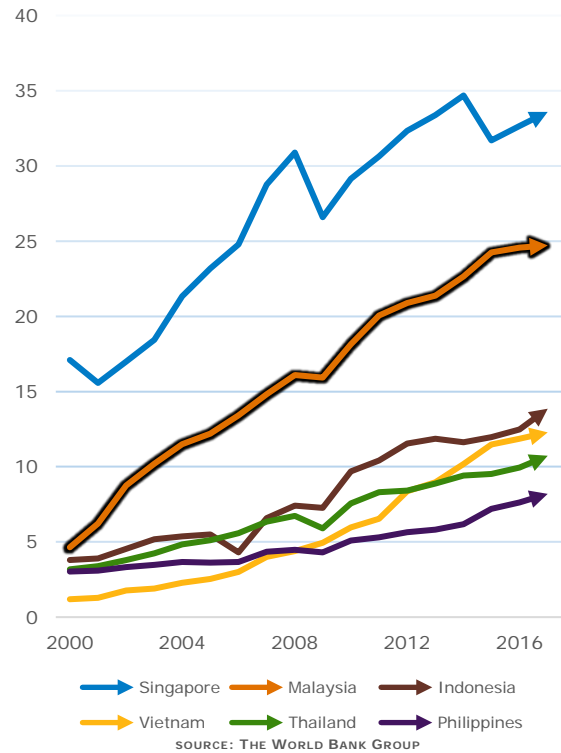


GATEWAY TO SOUTHEAST ASIA

The strategic location and good connectivity make Malaysia one of the preferred countries to enter the Southeast Asian market. Over the last decades Malaysia saw an impressive increase in container traffic through its ports, leaving behind other emerging economies in the region. Since 2000 Malaysia recorded a 400% growth in container throughput, now taking up almost a quarter of all containers handled in the region. Twenty years ago this was still 10%.

This is no surprise. Malaysia is right at the heart of the region where intercontinental and intra-Asian sea trade routes meet each other. Singapore remains the leading port in the region, but has little space to expand and fewer connections over land. With plenty of affordable land available, well maintained infrastructure and a flourishing economy, Malaysia will only strengthen its already strong position as the doorstep of the region, and benefit from rising container traffic in Southeast Asia.

TOTAL CONTAINER THROUGHPUT BY PORTS IN SELECTED SOUTHEAST ASIAN COUNTRIES (million TEUs)





GLOBAL PORT ENVIRONMENT

Global seaborne trade increased by 4% in 2017, the fastest growth in five years. It is estimated that this trend has continued into 2018 with UNCTAD forecasting a compound annual growth of 3.8% until 2023.

Global economic and geo-political developments cause both challenges and opportunities for the Malaysian maritime and port sector. Yet it is expected that Southeast Asia will remain a promising market with increasing interests from (overseas) investors and manufacturers, sparking growth in flows of goods, expanding trade and keeping up demand for port activity and expansion.

The role of China

A global rise in protectionism and reoccurring trade disputes between China and the United States (US) might temper growth in Chinese exports to the West, which can have its effect on seaborne trade and the transshipment function of Malaysia.

However, now that labour costs in China are rising and Beijing is forced to focus more and more on feeding and serving its domestic market, export manufacturers are looking elsewhere and often move activities to Vietnam, Malaysia, Indonesia and Thailand. With its comprehensive and well maintained infrastructure, relatively low labour costs, English speaking workforce and affordable land available, Malaysia might well be the first choice in the region for foreign businesses to settle.

Likewise, China itself has increased interest in Malaysia and is doing major investments in infrastructure projects through its global development strategy known as the belt-and-road initiative (BRI). On the east coast of Peninsular Malaysia, facing the South China Sea, port development is mainly incited by Chinese investment.

Shipping line alliances

Following the reshuffle of alliances in 2016, Malaysia saw a substantial drop in cargo throughput. Consolidation of shipping lines into major alliances increases their bargaining power when negotiating port calls and terminal operations. In combination with the ever growing vessel size and the tendency to concentrate activities in several large ports along the main trading routes, it is a trend that is expected to continue and form a serious challenge for the fragmented Malaysian port landscape. Decisions of the liner shipping alliances can make or break the financial year of a port. Yet, the same counts for competing ports in the region. With the right investments and a strategy that recognizes these developments, the established ports of choice in the region can be challenged as well.

Modernization & Digitalization

As in any industry, ports are required to implement advanced technologies, digitalize processes and adopt innovative working methods to improve efficiency, reduce costs and therefore stay ahead of competitors. The future port is a smart port, fully automated with a single integrated port community system. Safety and (cyber-)security concerns as well as the impact on the jobs of port workers cause some reluctance in adopting full scale automation. Nevertheless, to keep up with the most advanced ports, Malaysia recognizes the urgency of modernization, automating and digitalizing port operating activities in the country.

Cruise tourism

As an already popular tourist destination, Malaysian ports will benefit from growth in the cruise tourism market. Established cruise ports in Penang and Port Klang will have to keep up with the growing size of cruise ships and improve their connectivity with touristic hotspots near the ports. New cruise port development is initiated around Port Dickson and the historical city of Malacca.



PORTS OF MALAYSIA

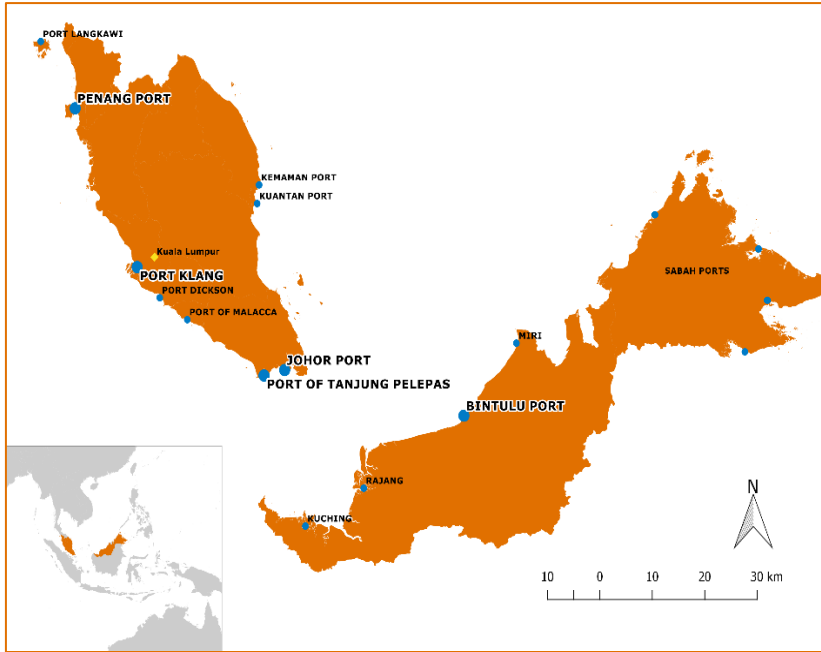
The Malaysian port landscape is fragmented into different specialized ports spread over the country, coordinated by government assigned authorities and operated by private parties. The main container handling ports are located at the west-coast of peninsular Malaysia, while the major bulk handling ports are on the east-coast and in Sabah and Sarawak (Borneo).

The fundamentals for the current outlook of the port sector in Malaysia were laid in 1963 when the Port Authorities Act was adopted, establishing most port authorities and their function. Following the Port Privatization Act in 1990, the port authorities have been transferring the operating activities to private parties, hereby establishing their own role as facilitator, regulator and owner of the designated port area. Today Malaysia counts 8 federal administrated ports, which are

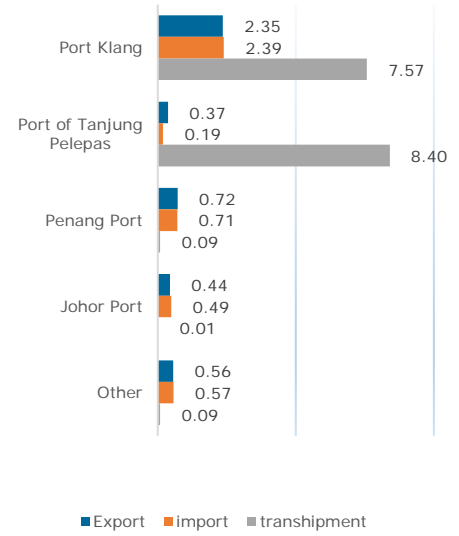
respectively: Port Klang, Port of Tanjung Pelepas, Johor Port, Penang Port, Bintulu Port, Malacca Port, Kuantan Port and Kemaman Port.

Furthermore there are ports administrated by the state governments in Sabah and Sarawak and several private owned port facilities and jetties across the country, including in Port Dickson and Lumut, mainly for the benefit of the mining and oil and gas industries.

Port	Authority	Operator
Port Klang	Port Klang Authority	Wesports Sdn Bhd (Hutchison Ports) Northpost Sdn Bhd (MMC Group)
Port of Tanjung Pelepas	Johor Port Authority	Port of Tanjung Pelepas Sdn Bhd (MMC Group & Maersk Group)
Johor Port	Johor Port Authority	Johor Port Sdn Bhd (MMC Group)
Penang Port	Penang Port Commission (established in 1955 by the Penang Port Commission Act)	Penang Port Sdn Bhd (MMC Group)
Bintulu Port	Bintulu Port Authority (established in 1981 by the Bintulu Port Authority Act)	Bintulu Port Sdn Bhd
Malacca Port	Malacca Port Authority	Tanjung Bruas Port Sdn Bhd (MMC Group)
Kuantan port	Kuantan Port Authority	Kuantan Port Consortium Sdn Bhd (IJM Corporation Bhd & Beibu Gulf Holding Co. Ltd)
Kemaman Port	Kemaman Port Authority	Konsortium Pelabuhan Kemaman Sdn Bhd (Eastern Pacific Industrial Corporation Bhd – EPIC)



CONTAINERIZED CARGO THROUGHPUT, 2018
(million TEUs)



Far ahead of the others, Port Klang and the Port of Tanjung Pelepas handle 64% of total cargo throughput by Malaysian ports in 2018. As the two main container ports this can be attributed for a huge part to transshipments, yet Port Klang is a main entry and leaving port for goods as well.

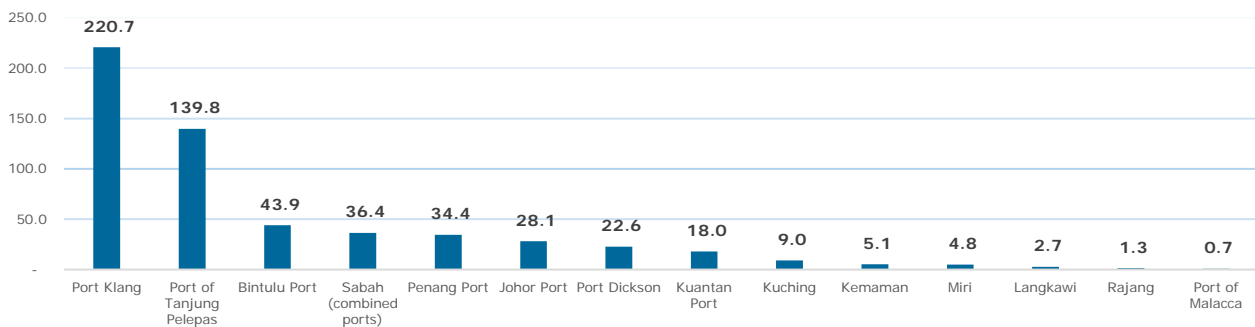
With little transshipment cargo, but a strong economic hinterland and good connections to Southern Thailand, Penang Port is doing very well as a regional import and export hub. Johor Port is an important port for the oil and gas industry and the deep-sea ports of Kuantan and Kemaman serve among others the mining industry in central and north

Malaysia and are a hub for offshore operators.

Bintulu is the main port of entry for Sarawak and is among world’s largest LNG trading hubs. Sapangar Bay port is the new vitalized gateway to Sabah, and serves together with the other ports in the state the trade of palm oil and related cargo.

The relatively high cargo throughput in Port Dickson can be attributed to Shell’s refinery that operates the port. Lumut jetty is operated by global mining leader Vale and used as a regional distribution and transshipment hub.

TOTAL CARGO THROUGHPUT BY PORT, 2018 (million tonnes)





MMC CORPORATION BERHAD

The main player in Malaysia's port sector is the Malaysian Mining Corporation or MMC Group; an utility and infrastructure conglomerate, with diversified business under three core divisions: Ports and Logistics, Energy and Utilities and Engineering. Through its Ports & Logistics division, MMC is a near monopolist in the market, holding Northport (Port Klang), Port of Tanjung Pelepas, Johor Port, Penang Port and the port of Tanjung Bruas (Malacca). As such it is among the world's 10 largest port operators with an annual throughput of almost 16 million TEUs, more than 60% of total TUEs handles by Malaysian ports in 2018. By holding one of the country's largest integrated logistics companies, Kontena Nasional Bhd, and the main provider of cargo transport by rail, KTMB MMC Cargo Sdn Bhd, MMC has a large stake in the port-hinterland connectivity as well. With MYR 3 billion revenue in 2018, the Ports and Logistics division accounted for 60% of the total revenue of the group.

PORT POLICY

In the Eleventh Malaysia Plan (a 2016-2020 spanning economic development plan by the Malaysian government) the following port strategy is formulated: *'Expanding port capacity, access, and operations through the National Port Policy, a port community system, and improving port accessibility and capacity.'* In the 2018 mid-term review, this strategy is slightly downgraded, stating that the government will not consider proposals for the construction of new ports, as the current ports are underutilized. Instead, focus will be on increasing efficiency of consisting ports, and expanding capacity by innovation (i.e. digitalization and automation) and the construction of new wharfs.

This strategy is among others translated into the National Shipping and Port Council (NSPC), that gathers all stakeholders in the sector to advise the Malaysian Ministry of

Transport on it's policy. The port related advisory subommittees in this council are on increasing Malaysia's attractiveness to shipping businesses; promoting innovation in and sustainable growth of maritime ancillary services; and improving the competitiveness and productivity of Malaysian ports.

It is indicated that the main challenges and opportunities for Malaysia includes increasing its cargo source and expanding bunker and other ship supply services. These are the two main factors that shipping liners look at in chosing their port of call. There is an opportunity for Malaysia to benefit from the upcoming IMO fuel sulphur regulation, as state owned PETRONAS is able to produce fuel that meets the new requirements.

In this regard, Port Klang is prioritized in Malaysia's transport and logisitcs agenda and designated to become the country's maritime centre and bunkering hub. To reach this goal the government has among others emphasized the urgency of improving last mile connectivity to Port Klang through investments in infrastructure around the port.

Free Commercial Zone

One of the strategies of the Malaysian government to generate more cargo for its ports is through establishing free commercial zones (FCZ) around the port areas. The status of this areas are regulated through the Customs Act 1967 and the Free Zone Act 1990, allowing goods and services to be brought into, produced, manufactured or provided in a free zone without payment of any customs duty, excise duty, sales tax or service tax. The main objective of creating this FCZs is to attract (foreign) businesses to choose Malaysia as their manufacturing and/or distribution base. This way the ports are guaranteed a flow of cargo. The main FCZs include the Port Klang Free Zone, Port of Tanjung Pelepas Free Zone, Pasir Gudang Free Trade Zone and the Bayan Lepas Free Industrial Zone in Penang.



Integrated Port Community System

As indicated before, Malaysian ports need to innovate in order to keep up with its competitors. Especially in terms of digitization and automation there is space for improvement. The Malaysian government has set the creation of a single integrated port community system as a priority in its port strategy. The main objective is to simplify and reduce the formalities, documentary requirements and procedures

on the arrival, stay and departure of ships in Malaysian ports. This system should streamline and integrate all the digital services of the terminal operators, shipping agents, depots, hauliers, merchants, forwarding agents, the customs and other services present. In the fragmented Malaysian port landscape this might well be the sector's biggest challenge and requires most expertise from outside.

PORT KLANG

Port Klang is the largest and most important port in Malaysia. It is situated on the west coast of the peninsular where the river Klang debouches into the Straits of Malacca, hereby connecting the capital city Kuala Lumpur (38 km upstream) to the sea. Port Klang is a multipurpose port with a total cargo throughput of 221 million tonnes in 2018, which is 39 per cent of all cargo handled by Malaysian Ports.

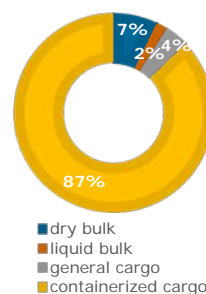
The Klang Valley is the country's economic and industrial heart. Centred in Kuala Lumpur, the urbanized area is home to over 8 million people. To serve this vast urban area, Port Klang is designated the national loading centre of Malaysia.

With a total container throughput of 12.32 million TEUs, Port Klang is ranked world's 13th busiest container port in 2018, just behind Rotterdam (12th). More than half of the containers in Port Klang are handled as transshipment, yet, 55% (2.39 million TUEs) of Malaysian containerized seaborne imports enter the country through the port and 53% (2.35 million TEUs) of all its sea transported containerized exports leave Malaysia through it. Over the last 5 years average growth in container throughput has been 3.6%, with an exceptional drop of 9% in 2017 due to a reshuffle in shipping line alliances that caused some major clients to move their activities to Singapore.

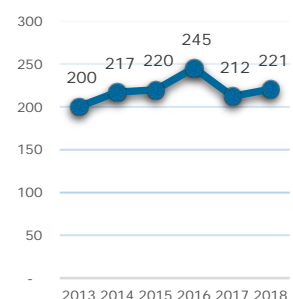
The port has its origins in the construction of the colonial Port Swettenham in 1901. The Port Klang Authority (PKA) was established in 1963, taking over the administration of Port Klang from the Malayan Railway Administration. In line with government policy, the port operating facilities have started to be privatized since 1986.

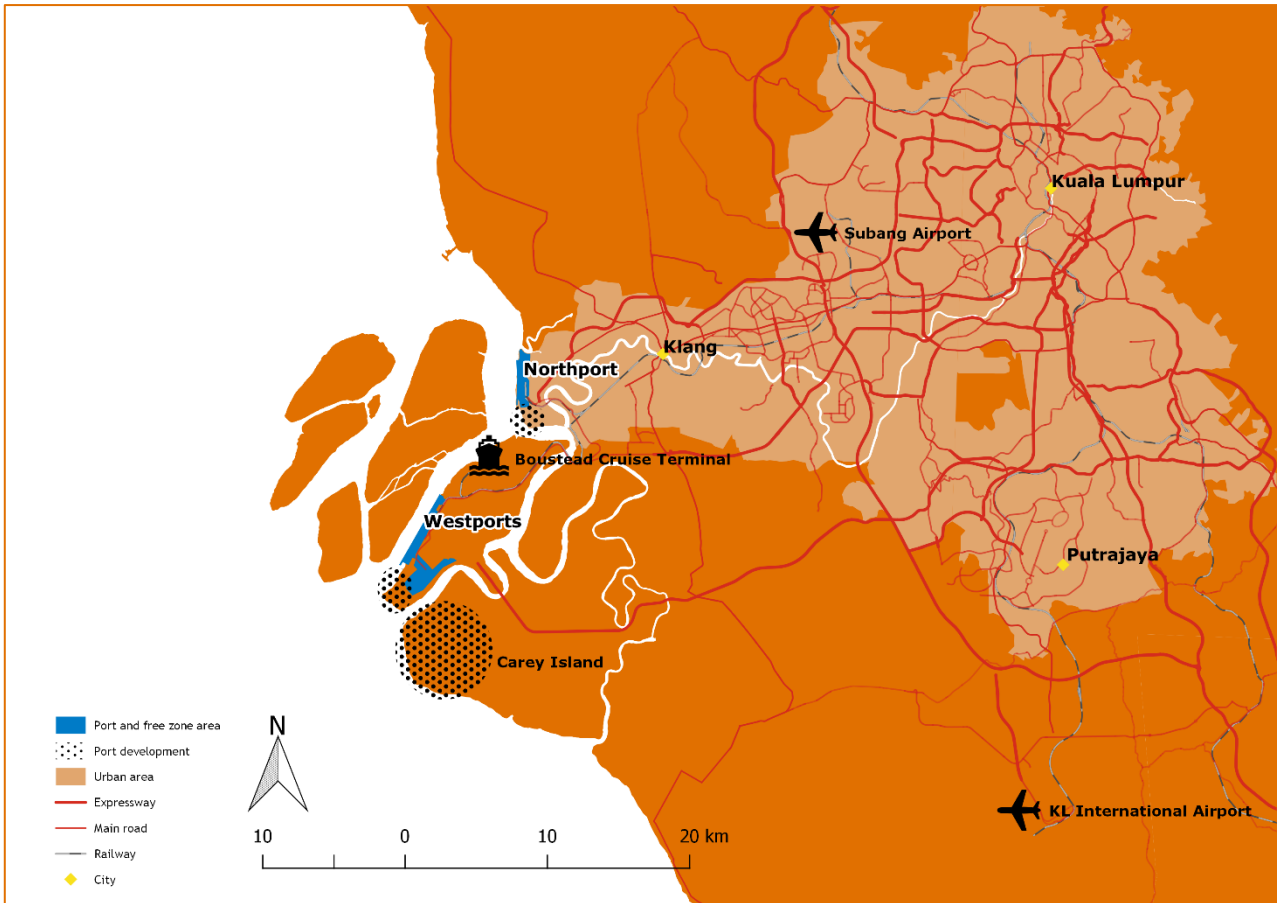
Today the terminals are operated by Northport Malaysia Bhd and Westports Holdings Bhd. The free commercial zone is operated by Port Klang Free Zone (PKFZ).

CARGO THROUGHPUT PORT KLANG BY TYPE (%)



CARGO THROUGHPUT PORT KLANG, 2018 (million tonnes)





WESTPORTS

West Port is the newest port area in Port Klang, located southwest of the town on the Indah Island (Pulau Indah). The port is operated by Wesports Malaysia Sdn Bhd, member of Hong Kong based Hutchison Ports that holds a 30% share.

Westports accounts for 77% of all cargo handled in Port Klang. The port has 9 container terminals spread over a quay length of 5.8 km alongside a 15-17.5 meters depth, allowing world's largest container vessels to berth. With 20 berths and 67 ship-to-shore cranes it handled about 9.5 million TUEs in 2018 and welcomed a total of 8,550 ships. With the current facilities this can grow up to 14 million TUEs per annum. In 2018 Westports booked a net profit of MYR 533 million.

Besides containers, Westports handles conventional cargoes. The liquid bulk terminal counts 5 berths with a total length

of 1.3 km. The dry bulk terminal has 4 berths with a length of 850 meters, and accommodates a 1 berth cement jetty with a total length of 285 meters. The break bulk terminal handles steel and general cargo over 3 berths with an aggregate length of 600 meters. In 2018 it handled 10.7 million tonnes of conventional cargo.

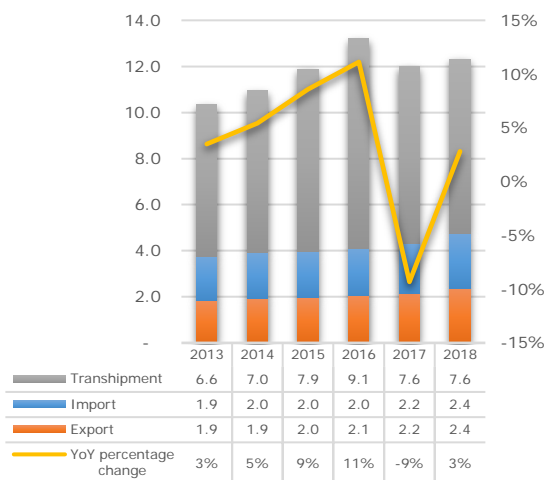
Both the container and conventional cargo terminals provide ancillary services including, storage, on-dock depot, bunkering and distribution facilities.

Expansion & modernization

Westports plans to increase its capacity by 50 per cent to 30 million TEUs per annum by 2040. After it received an approval-in-principle by the Malaysian government, a feasibility study on the development of container terminals 10 to 19 is expected to be finished by the end of 2019. For the new



CONTAINER THROUGHPUT PORT KLANG (million TEUs)



terminals Westports is exploring new designs and automation options.

Next to developing new terminals to grow its capacity, Westports is looking into ways to increase efficiency and lower handling costs through the (semi-)automation of its existing terminals, including transportation. Digital and innovative solutions that increase cargo handling speed and improve overall terminal activities are welcome.

Westports furthermore envisaged to be self-sufficient in its energy supply and is looking for ways to generate power within its port limits. This offers opportunities for innovative and experimental solutions.

NORTHPORT

Northport Malaysia Bhd operates Port Klang's oldest port areas and positions itself today as an intra-Asian transhipment and regional trading hub. It serves the domestic and coastal trade routes, linking Port Klang to ports in Sabah, Sarawak and Brunei as well as short-sea port destinations in Indonesia, Thailand and Vietnam.

Northport is a member of the MMC Group, and functions as a multi-purpose port equipped with facilities and services to handle containers and conventional cargoes (liquid and dry bulk). Northport was granted

a 30-year extension of its port concession and recorded a net profit of MYR 61 million in 2018.

Container services are spread over four terminals with a combined quay length of over 3 km and a depth alongside of 11.5 up to 17 meters, allowing vessels with a deadweight tonnage up to 200,000 to berth. In 2018 Northport handled 2.8 million TEU's.

In terms of conventional cargo, Northport handles break bulk such as iron, steel, timber, plywood, machineries, roll-on-roll-off (RORO) and livestock, as well as dry bulk cargo such as grain, maize, coal, marine salt and fertilizer. In 2018 Northport handled a total of 8.6 million tonnes conventional cargo. Especially RORO cargo recorded growth in recent years with Northport becoming a regional car distribution centre following the lifting of government approval permits required to tranship cars.

Northport is focused on intra-Asian trade, and is the main port of choice for small and medium sized loads entering Malaysia. It has extended downstream on-dock supporting facilities such as re-packaging, warehousing, distribution and freight forwarding services, and is within Port Klang best connected to the Malaysian expressways network. In this function it complements Westports as the main port of choice for huge scale intercontinental cargo.

Expansion & Carey Island

Through its Halal Silk Route initiative, Northport tries to bandwagon on the growing halal market, by providing an integrated halal value chain within its port boundaries. The first halal shipments to China have left the port, and, supported by the Malaysian government, Northport is looking for new halal trade links to Europe and the Middle East.

Northport, furthermore, targets to generate an additional 2 million tonnes of cargo through its new established biomass processing hub in the Southpoint area. In collaboration with several industry partners



and supported by the National Biomass Strategy 2020, the hub is set up to process waste products from the oil palm and timber industry.

Sparked by a high demand for warehousing and distribution activities, Northport is seeking to expand its current terminals, port and free zone area.

In addition, Northport envisages the development of a third port on the Carey Island (Pulau Carey). In July 2018 Transport Minister Loke announced that the government will conduct a study to determine the feasibility of the proposed MYR 200 billion port and maritime city project on Carey Island. As the study supervisor, the Port Klang Authority selects consultants to conduct the study in 2019.

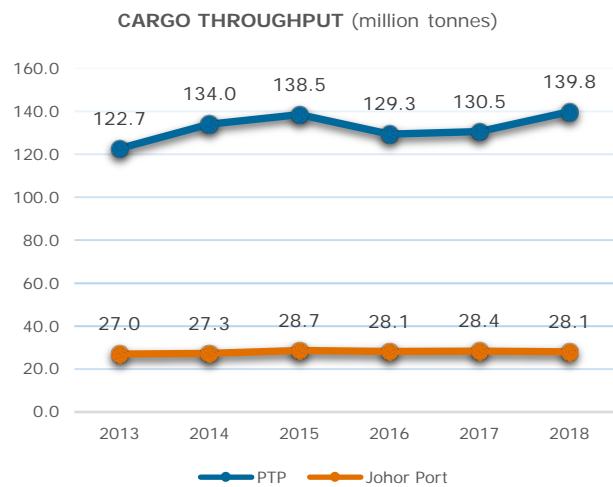
JOHOR PORT

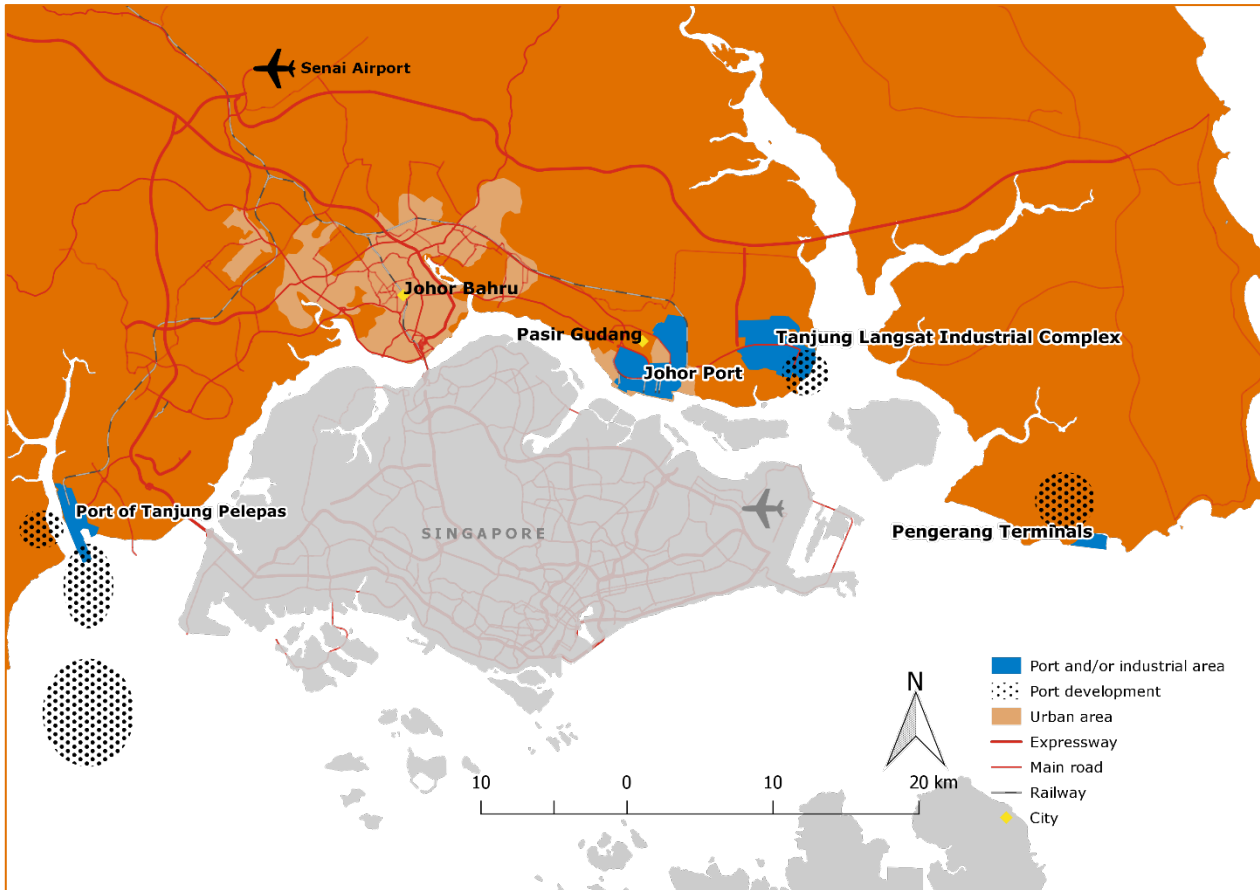
Compassing the most southern part of the Malaysian peninsular, the state of Johor is separated from Singapore by just a narrow waterway, bridged by two highways and a railway connection. Two of Malaysian major ports are located in the state: Port of Tanjung Pelepas (PTP) and Johor Port at Pasir Gudang. Combined, these ports handled 167.9 million tonnes of cargo in 2018. Over the last decades the region has proved to be a serious competitor for Singapore with a very promising outlook.

Johor's economy is centred around its state capital city Johor Bahru, which is just opposite of the Johor-Singapore causeway linking Singapore to Malaysia. Home to 1.6 million people, Johor Bahru is Malaysia's third largest and fastest growing metropolitan area. Its proximity to Singapore has had great impact on the development of the region with both Malaysian workers commuting into Singapore during weekdays, and Singaporean tourists floating into Johor during the weekends.

This strategic location next to the economic powerhouse of Singapore in combination with the availability of affordable landmass has made it an attractive region for port and industrial development. Since 1963 the Johor Port Authority facilitates and regulates the federal administrated ports in the state. Today both PTP and Johor Port are operated through subsidiaries of the MMC Group.

In addition, in March 2019 Malaysian KA Petra and Hong Kong based Hutchison Ports have established a joint venture with the intention to develop world's largest oil and gas ship-to-ship transshipment hub in Malaysian waters out of Johor's coast.





PORT OF TANJUNG PELEPAS

PTP is operated by Port of Tanjung Pelepas Bhd, a joint venture of MMC Group and Mearsk Group. The latter obtained a 30% stake in the port in 2000. As part of the APM Terminals Network, PTP has made shipping liner giants Maersk, MSC and Evergreen to move their transshipment hub activities from Singapore to PTP.

Since operations started in 2000, PTP has recorded an annual average growth of 12%, making it world's 18th busiest container port with a throughput of about 140 million tonnes in 2018, equivalent to 8.9 million TEUs.

PTP is a single purpose port, allowing only containerized cargo to be handled. With 14 berths alongside a 5 km long quay and a draft depth of 18 metres, the port is equipped to welcome and serve world's largest vessels. In this regard it was the world's first port to load a vessel with more than 19,000 TUEs. PTP closed its 2018 financial year recording a net profit of MYR 135 million.

Expansion plans

Although transshipment (94% of total throughput) is the core business of PTP, it is actively seeking to create its own based-load hinterland through the PTP free zone. Currently the free zone encompasses 495 acres generating almost 300 thousand TUEs annually. With over 40 companies present and among them a broad range of multinationals, the free zone has reached its limits, and PTP is targeting to double the size by 2025.

At the same time PTP has extended terminal expansion plans, and is currently developing a new berth that will add 3.5 million TEUs to its capacity by 2025. Across the channel at Tanjung Bin, facing the current terminals, PTP has obtained new land to convert into port area. Upon completion the new 1.4 km quay length terminal would provide an additional 3.8 million TUEs to its capacity.

On the longer term, while staying within its current port limits, PTP can extend its pier in



phases up to 10 km with a maximum handling capacity of 52.1 TUEs per annum.

This promising outlook and fast developments over the last decades show that PTP is a serious challenger of Singapore as the main port of choice in the region. In fact by utilizing its prime advantage of having affordable land available and projecting itself as an alternative to Singapore for (regional) distribution centres, there is little in the way for PTP to attract more cargo from Singapore in the future. On the longer term, the development of Johor as an attractive region with an high quality of life and improved connectivity between its industrial areas and Singapore is vital for PTP's future. In this regard a rising demand for expertise in integrated area development and urban planning in the region is expected, not in the last place to facilitate the growth of Iskandar Puteri city.

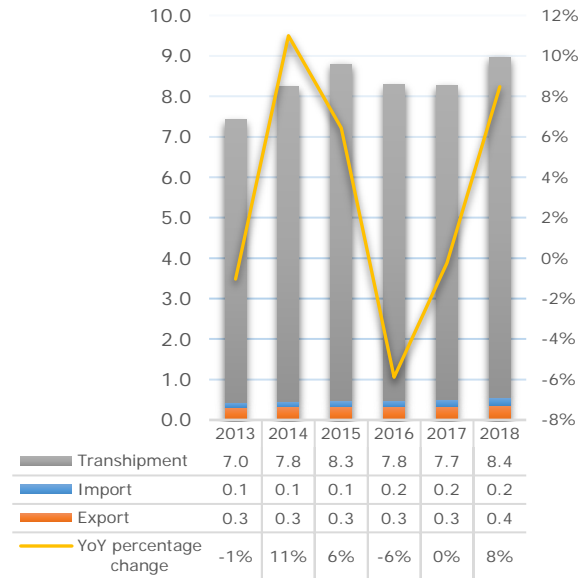
JOHOR PORT AT PASIR GUDANG

East of Johor Bahru and about 60 km away from PTP, Johor's oldest port is located at Pasir Gudang. Operated by Johor Port Bhd, a member of the MMC Group, the port commenced operations in 1977. As the designated Southern Gateway Multi-Purpose Port of Malaysia it was the country's first port to be assigned a free zone status.

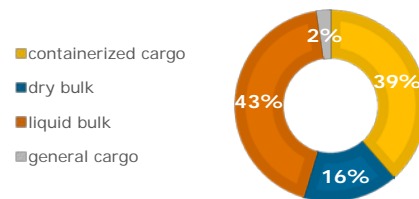
With a steady throughput of about 28 million tonnes a year, and just below a million TUEs handled annually, Johor Port is not the transshipment giant that PTP is. Instead, the cargo handled at Pasir Gudang is predominately import and export, generated by the vast industry around the port that is lacking around PTP. Especially in terms of handling liquid bulk the port is leading with an annual throughput of 12 million tonnes and world's largest palm oil storage facility within its port limits. The port has 24 berths alongside a 4.75 km long quay, spread over a 1,000 acres, of which 660 acres are assigned free zone area.

Following the designation as an approved London Metal Exchange (LME) location in

CONTAINER THROUGHPUT PTP (million TEUs)



CARGO THROUGHPUT JOHOR PORT PASIR GUDANG BY TYPE (%)



2004, Johor Port furthermore has become one of the largest Non-Ferrous Metals trading hubs. In addition it is also an important entry point for rice and cocoa into Malaysia and an hub for offshore inspection, maintenance and repair and other marine services. In 2018 Johor Port closed the financial year with a profit before tax of MYR 80 million.

Expansion & revitalization

Initial plans to relocate the 8,000 acres encompassing industrial area in Pasir Gudang to PTP have been waived. Instead, Johor Port has gained renewed interest from its owners with demand expected to grow up to 62 million tonnes in 2020 and 86 million tonnes in 2030. Expansion is required as the current maximum capacity is limited to 40 million tonnes annually.



Through upgrading current facilities and by improving the efficiency of land use and overall port operations, the port aims to catch up with the demand initially. Furthermore it targets to develop two satellite terminals of which one will be at the Tanjung Langsat industrial zone.

Market and government confidence in the port remains unabated high as Johor Port has been granted a 25 year concession to operate the terminal of the Pengerang Integrated Petrochemical Complex (PIPC), which is

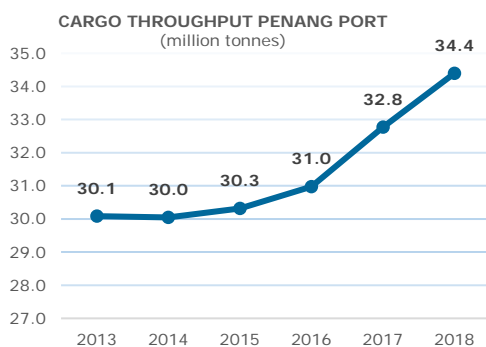
currently under construction and expected to be opened by the state owned oil and gas giant PETRONAS in 2019. This billion dollar investment includes the Refinery and Petrochemical Integrated Development Project (RAPID) in which Dutch Royal Vopak holds a 25% share. In a joint venture with Dialog Group, Vopak furthermore holds and plans to expand its independent terminals at Pengerang as well, underlining the promising outlook of Johor as a world class oil & gas trading hub.

PENANG PORT

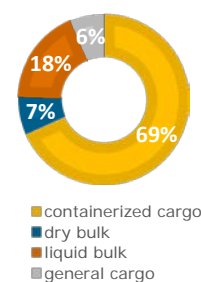
Malaysia's third busiest container port can be found up north at the west coast of peninsular Malaysia and the island of Penang. It is the oldest port in the country and provides access to the northern states of Malaysia and the southern provinces of Thailand. In 2018 the port handled 34 million tonnes of cargo, including 1.5 million TUEs. In addition Penang is an increasing popular destination for cruise tourism.

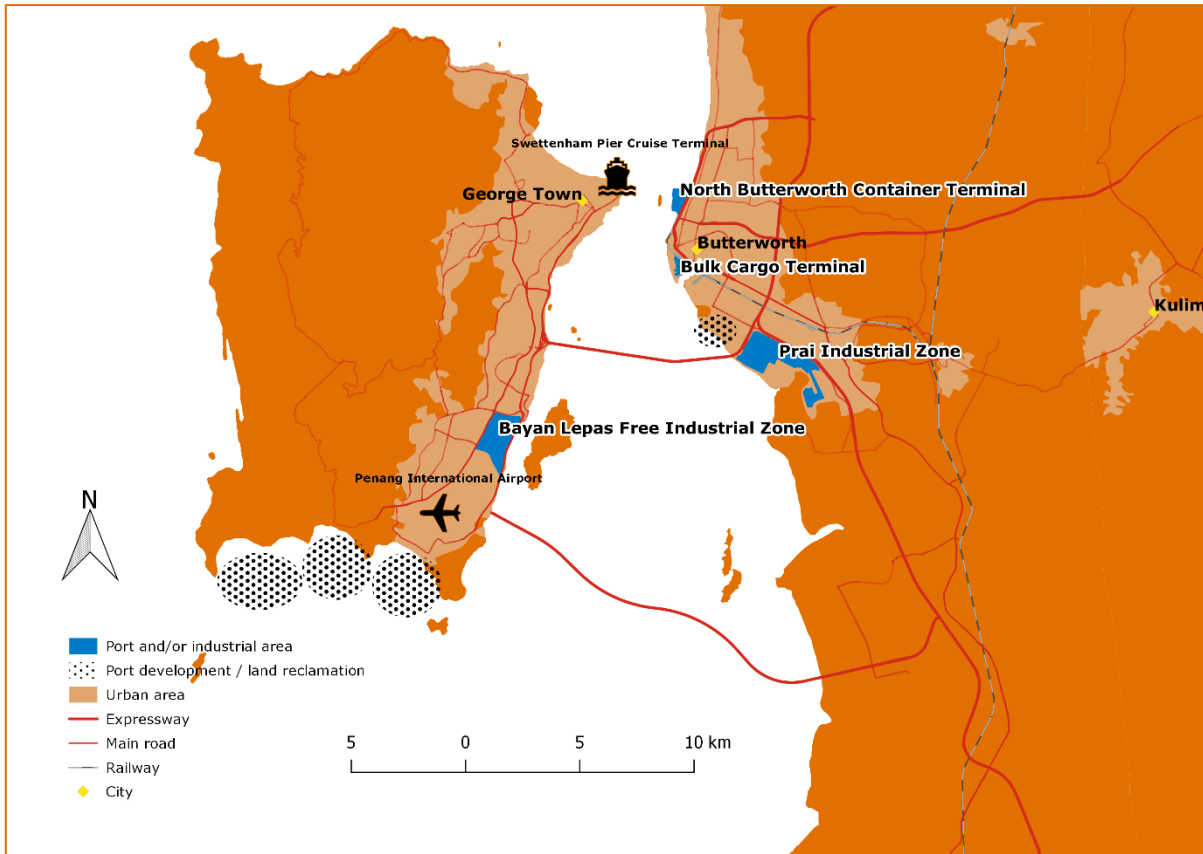
Malaysia's second largest city and state capital George Town is the economic and cultural centre of the northern region. The state is among the most densely populated areas in the country and contributes significantly to Malaysia's economic output through, among others, its large electrical and electronics (E&E) industry, partly clustered in Bayan Lepas Free Industrial Zone. Indeed, when leaving out transshipment in measuring containerized cargo throughput, Penang Port surpasses the Port of Tanjung Pelepas as Malaysia's second busiest container port.

In other words, Penang Port has a solid cargo base to build upon and is well connected to and integrated in its economic flourishing hinterland. Nonetheless, over the last decade it has not recorded the growth one could expect giving its supporting environmental circumstances. Only since it was taken over partly by MMC Group in 2014, the port has found its path upwards again. Following the acquisition of the remaining 51% in 2018, Penang Port Sdn is now fully owned by the MMC Group, and enjoys prioritized interest from the Malaysian government.



CARGO THROUGHPUT BY TYPE (%)





BUTTERWORTH & PRAI WHARF

Within the existing port, the North Butterworth Container Terminal (NBCT) is the main location for container handling. It has 6 berths alongside a 1.5 km quay with a depth variety of 7 to 13 meters, allowing a berth capacity of 2 million TEUs per annum. In 2018 the net operating profit rose to MYR 197 million.

Expansion plans

In January 2018 Penang Port announced that it anticipates to spend MYR 1.8 billion on the NBCT over the next 10 years, adding 2.8 million TUEs by 2023, and eventually aiming at a capacity of 7 million TUEs per annum. Furthermore it is planning to re-develop the old Prai wharf into a fully dedicated modern bulk terminal to handle lime stones, iron ore and cement clinkers. The amount of investment is expected to be MYR 224 million. In addition NBCT is waiting for the ministry to gazette the expansion of its free commercial zone area. In their quest to revitalize Penang Port, MMC is furthermore

developing 180 acres of freehold industrial area in Kulim, east of Penang.

As part of the Penang Transport Master Plan, the Penang state government is planning to develop new land south of Penang Island, as to facilitate new port activities, commercial space, housing and recreation areas. These projects are still in the preliminary phase but will require expertise in land reclamation and port (area) development.

SWETTENHAM CRUISE PIER

Growth in the global cruise market has increased interest in Malaysia from cruise shipping companies. With its pier right next to George Town's UNESCO world heritage site, Penang is one of the ports that will benefit most from the rise in cruise tourism. The joint venture agreement between MMC and Royal Caribbean Cruises Ltd signed in 2018 is anticipating on this growth with a proposed MYR 155 million terminal expansion to accommodate larger cruise ships.



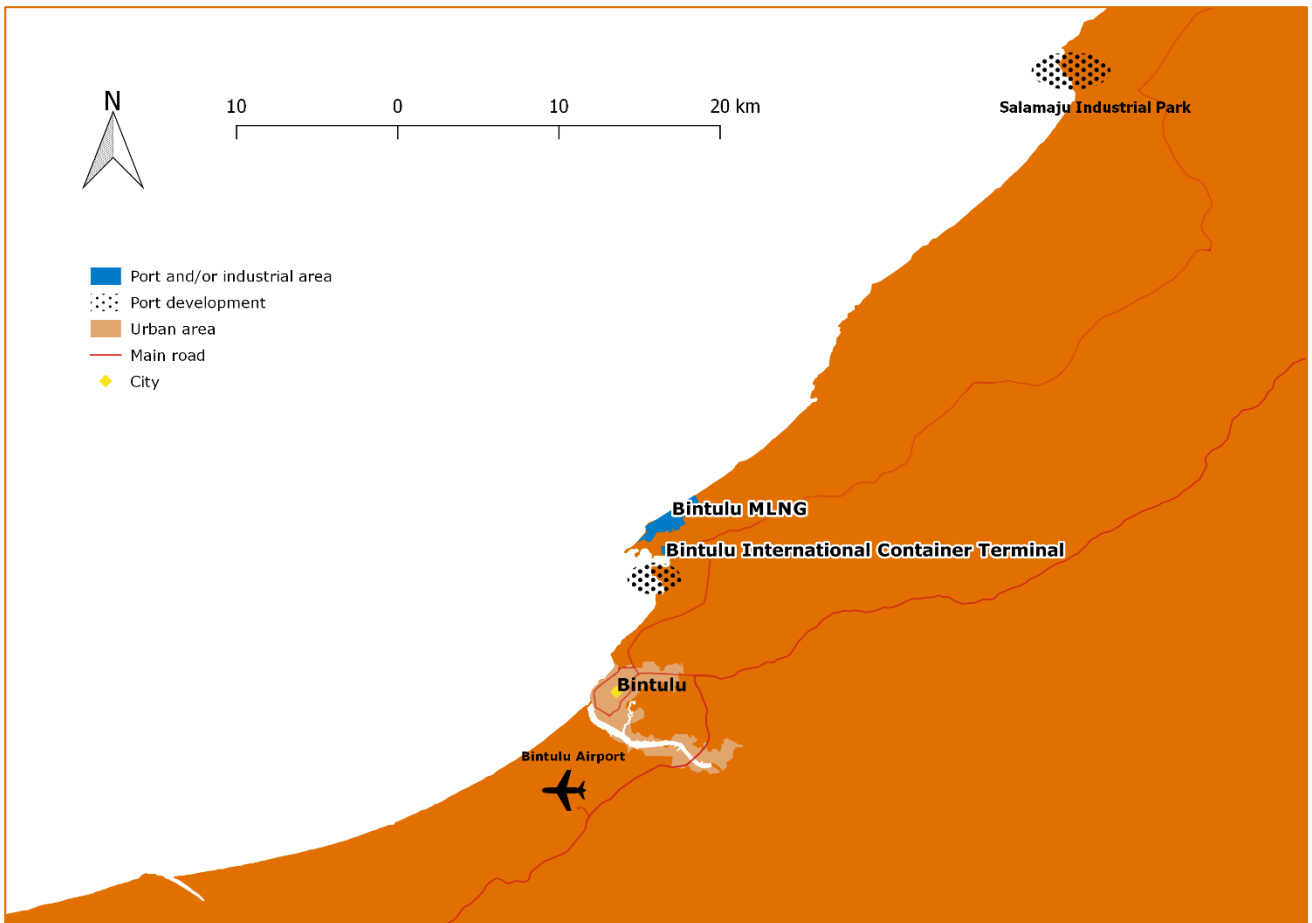
BINTULU PORT

Turning eastwards, Bintulu Port is the main gateway to Malaysian Borneo and has with an annual 44 million tonnes the country's third highest throughput. Neighbouring one of world's largest LNG manufacturing, liquid bulk is with 77% the main type of cargo handled by the port. Yet, for three consecutive years, the port recorded double digit growth in container throughput totalling at 349 thousand TEUs in 2018.

Bintulu Port is a multipurpose port accommodating three general cargo wharfs, a bulk cargo wharf, several LNG jetties and a container terminal. Current maximum capacity is around 70 million tonnes and 400 TUEs per annum. The Bintulu Port Authority was established in 1981 leaving the operating activities to Bintulu Port Holding

Bhd. In 2018 it recorded a net profit of MYR 142 million.

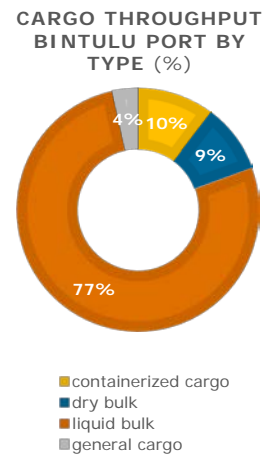
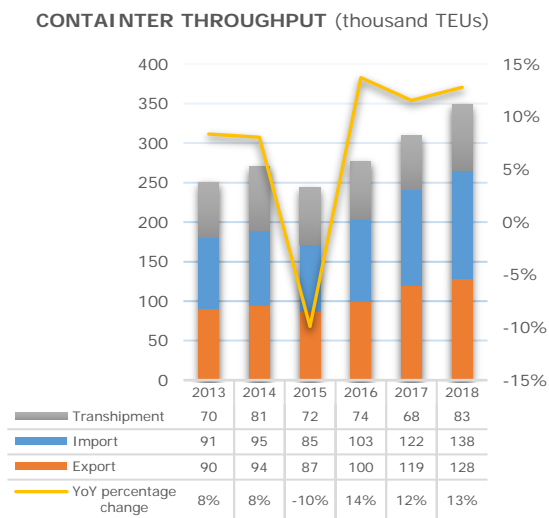
Strategically located along some of the major intra-Asian sea trade routes and well-connected overland by the pan-Borneo-highway, the port envisages to become a main trading hub within the Brunei, Indonesia, Malaysia, Philippines East ASEAN





Growth Area (BIMP-EAGA). In combination with expected growth in cargo, generated through one of the five Malaysian regional development strategies, the Sarawak Corridor for Renewable Energy (SCORE), the port has commenced on a feasibility study to expand its international container terminal. Given the outlook of its hinterland industry, growth in cargo is foremost expected to come from the palm oil plantations, downstream timber products and other agro-based produces.

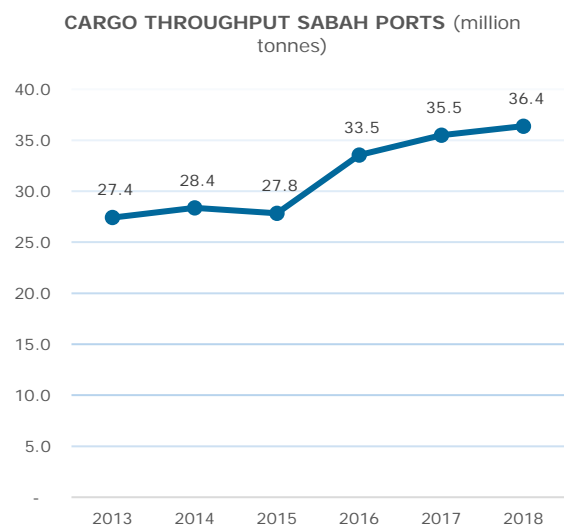
Anticipating on this expansion in cargo, Bintulu Port holds land south of its current port that is ready to be developed into port area. Through its subsidiary Biport Bulkera Sdn Bhd, it furthermore improves its capacity to storage and ship vegetable oils such as palm oil. About seventy kilometres up north, the port holds the Salamaju Industrial Park terminal where it develops port facilities to serve the nearby energy and heavy industries



SABAH PORTS

The northern state of Malaysian Borneo, Sabah, is home to eight ports that together have a throughput of almost 35 million tonnes and about 370 thousand TEUs annually. With some of the country's largest palm oil plantations and a vast timber and agricultural based industry, the ports enjoy a solid cargo base from their hinterland that is expected to grow and spark the revitalization and development of ports in the state.

The ports of Sabah are operated by a subsidiary of Suria Capital Holdings Bhd, Sabah Ports Sdn Bhd (SPSB), that took over this role from the Sabah Ports Authority in



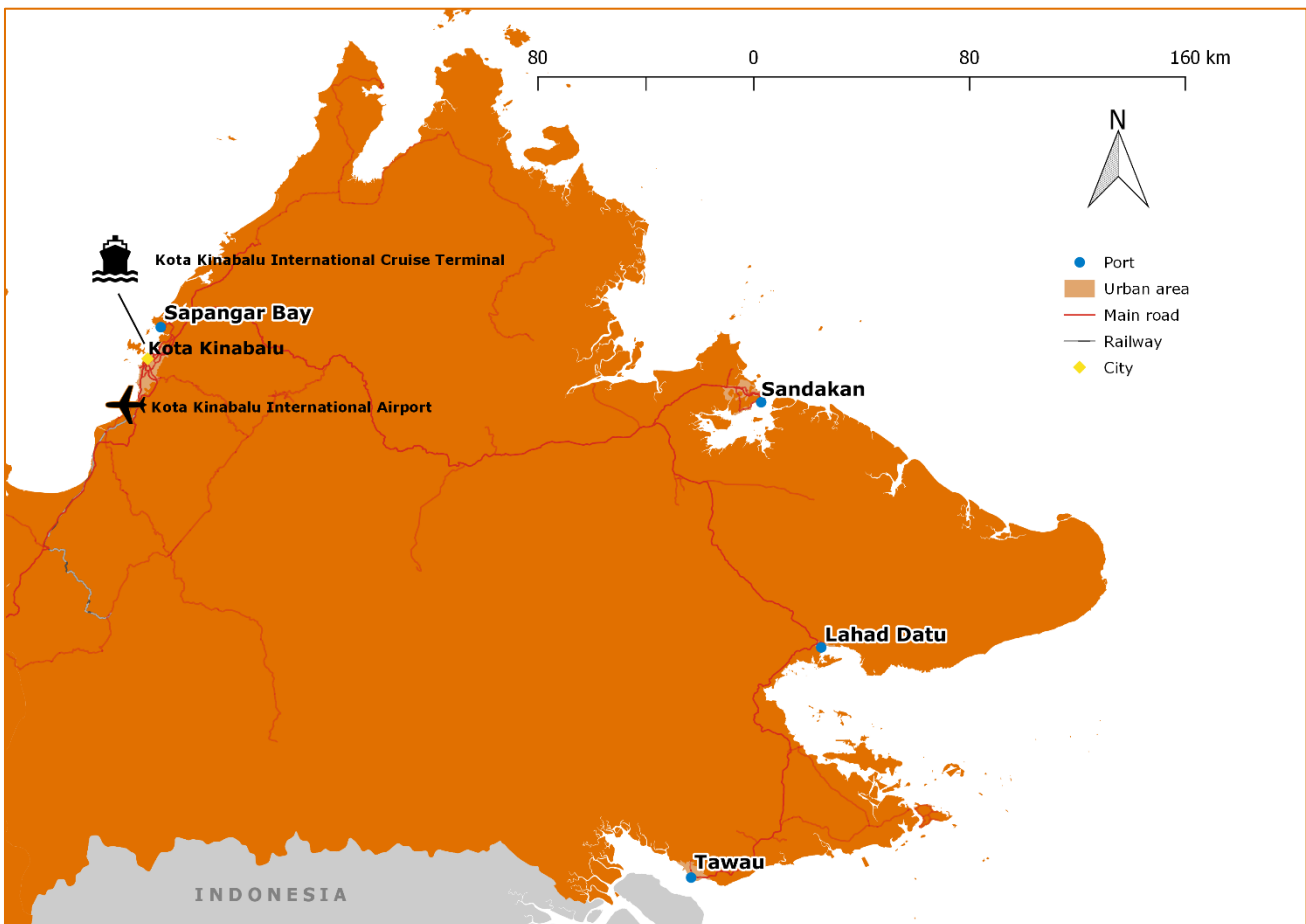


2004. The ports in Sabah are, unlike the other main ports in Malaysia, administrated by the state instead of the federal government.

SPSB's main port is located in Sapangar Bay, just up north from the state capital Kota Kinabalu. The bay accommodates a container dedicated terminal that like its counterpart in Bintulu targets to become a main transshipment hub for the Brunei, Indonesia, Malaysia, Philippines East ASEAN Growth Area (BIMP-EAGA). With a 12 meter depth alongside 4 berths, the port can welcome ships with a deadweight tonnage of up to 45,000. The dedicated oil terminal handles several sorts of liquid bulk including refined petroleum products. The port at Sapangar Bay has taken over the role of the main

gateway to Sabah from Kinabalu Port, which will retain a small conventional cargo terminal but is being transformed into a leisure destination for the remaining part, including an operating cruise terminal.

On the other side of the state at the east coast, the ports of Sandakan and Tawau are respectively Sabah's second and third busiest multipurpose ports, both handling containerized and conventional cargo, yet serving the palm oil industry for most of the part. In light of the development of the Palm Oil Industrial Cluster (POIC), Sabah Port has prioritized Lahad Datu Port to become a central hub for the import of bulk fertilizer. The remaining ports in Sabah are smaller sized palm oil and timber handling ports.





OTHER PORTS

KUANTAN PORT

Kuantan Port is the main port at the east coast of peninsular Malaysia, facing the South China Sea. It is operated by Kuantan Port Consortium Sdn. Bhd. (KPC), a joint venture between IJM Corporation Bhd. and Hong Kong based Beibu Gulf Holding Co. Ltd. Current handling capacity is at 600 thousand TUEs per annum. In 2018 the port handled almost 25 million tonnes of cargo, 62% of which is dry bulk, mainly ore and minerals including bauxite.

Recently, KPC finished the first phase of its expansion project in form of a new deep water port as to welcome bigger ships up to 18,000 TUEs. The next phase to be developed includes a basin depth of 16 meters consisting of 600 meters berth and 22.5 hectares dry bulk yard. On the longer term expansion plans include a 1 km berth extension with a 18 meters water depth and a 47 hectares container terminal.

Spurred by Chinese investments in the Malaysia-China Kuantan Industrial Park (MCKIP) and the construction of the east coast rail line (ECRL), connecting Kuantan Port to Kuala Lumpur and Port Klang, the region is expected to enjoy increased industrial activity and growth in demand for port operations.

MALACCA PORT

Halfway between Kuala Lumpur and Johor, the historical city of Malacca is home to a small yet growing port. The Port of Tanjung Bruas is operated by MMC Group, and currently expanding port facilities to allow containerized cargo to be handled.

Within the framework of ASEAN integration, a new roll-on-roll-off ferry connection between Malacca and Indonesia has been established. Although it involves some customs related challenges, with motorized

vehicles crossing the border, the connection seems to be promising as Malaysia is a popular medical tourism destination in the region, especially for Indonesians.

Furtermore, since 2014, KAJ Development Sdn Bhd (KAJD) is developing one of the country's largest development projects out of the coast of Malacca, named the Melaka Gateway Project. Incited by Chinese investments, the initial project plan encompassed three reclaimed islands and one natural one, with a total of 1,366 acres. However, for the time being, only a license for the development of one island for the purpose of accommodating cruise facilities will be granted, as tourism is a promising market in Malacca. Approval for the other islands is to be decided on later.

KEMAMAN PORT

Kemaman Port is a deep sea port in the northeast of Peninsular Malaysia, handling mostly conventional cargo, bauxite, iron and chemicals. In 2018 cargo throughput totalled at 5.1 million tonnes. The port is operated by a subsidiary of Eastern Pacific Industrial Corporation Bhd.

LABUAN PORT

North of the Brunei Bay out of the coast of Sabah, Labuan Island is set to become another important federal administrated port with an extended free commercial zone. This long term plan is currently being studied. In the near future the present Liberty Port will be upgraded to allow more vessels to berth.

SIPITANG

Strategically located next to Brunei and Labuan port and well connected to the economic centres of Sabah and Sarawak, the Sabah state owned Sipitang Oil & Gas



Industrial Parc (SOGIP) is part of an economic master plan to attract investment and stimulate port development.

KUCHING

As the state's capital and commercial centre, Kuching is home to Sarawak's second busiest port after Bintulu. The port is operated by the state owned Kuching Port Authority (KPA) and had an annual cargo throughput of 9 million tonnes in 2018, including 246 thousand TEUs. Cargo is generated by several industrial areas around the city including the Sama Jaya Free Industrial Zone that serves the hi-tech and electronics industry. Due to its inland location along the Sarawak river, access is restricted by a relatively low draught of 7.5 meters.

MIRI

Sarawak's second largest city has a thriving oil and gas industry with multinational companies holding office. The port is operated by the Miri Port Authority (MPA) and commenced operations in 1983. It is a multipurpose port with a cargo throughput of 4.7 million tonnes in 2018. Miri is furthermore home to some established shipbuilding wharfs.

RAJANG

Located along Malaysia's longest river in the state of Sarawak, the five Rajang ports combined handled 1.3 million tonnes of cargo in 2018, serving mostly the palm oil and agricultural industry.

PRIVATE PORTS

The heavy oil and gas industry, as well as mining related activities generate cargo that often requires specialized port facilities. Several private ports are operated in Malaysia, including Port Dickson and Lumut. In Sabah and Sarawak, where vast sources of potential cargo in forms of palm oil, timber and other agricultural produce is available, potential demand for private port development is expected.

OFFSHORE SUPPLY

Large oil and gas companies are active in the country and although this industry is under strain, the main source of income is expected to shift from oil to gas, making offshore an active and relevant market still. Especially the east coast of Peninsular Malaysia, with Johor Port ahead, is a leading supply and maintenance base for the offshore industry.

Within this field, Malaysia could greatly profit from expertise in offshore support and the transport and placement of offshore structures.

SHIPBUILDING

The ship building and repair industry in Malaysia involves designing, building, construction, repair, maintenance and updating. The industry consists of over a hundred small-sized shipyards and some non-shipyards, making for a bit of a fragmented sector.

The boat building industry, like the country, is divided into two clusters. The shipyards in the peninsular of Malaysia are mostly focusing on building steel and aluminium vessels for government as well as oil and gas companies. Shipyards along Malaysian shore of Borneo, in Sarawak and Sabah, are typically working on steel vessels for offshore supply, tug, barge and river ferries. This makes the shipyards in East Malaysia more competitive and innovative when it comes down to design, process and material, compared to the shipyards on peninsular Malaysia, where big projects are government dependent.



This report is written by **Egide van der Heide** on behalf of the Embassy of the Kingdom of the Netherlands in Malaysia.

For support, questions or comments, please contact the Economic Officer in charge.

(m) kl-ea@minbuza.nl
(t) (+60) 3 2168 6200



In preparing this report the following sources have been consulted:

Organizational websites

- Bintulu Port - <http://www.bintuluport.com.my>
- Johor Port - <http://www.johorport.com.my>
- Johor Port Authority - <http://www.lpj.gov.my>
- Kuantan Port - <http://www.kuantanport.com.my>
- Kuching Port Authority - <https://www.kpa.gov.my>
- Maritime Institute of Malaysia - <http://www.mima.gov.my>
- Ministry of Transport - <http://www.mot.gov.my/en/maritime>
- Miri Port Authority - <http://www.miriport.gov.my>
- MMC Group - <https://www.mmc.com.my>
- Northport - <https://www.northport.com.my>
- Penang Port - <http://penangport.com.my>
- Penang Port Commission - <https://penangport.gov.my>
- Port Klang Authority - <http://www.pka.gov.my>
- Port Klang Free Zone - <http://www.pkfz.com>
- Port of Tanjung Pelepas - <http://www.ptp.com.my>
- Sabah Ports - <https://www.spsb.com.my>
- Westports - <http://www.westportsmalaysia.com>

Reports

- Eleventh Malaysia Plan 2016-2020
- Logistics and Trade Facilitation Masterplan (2015-2020)
- Mid-term Review of the Eleventh Malaysia Plan 2016-2020
- Ministry of Transport Malaysia Statistics
- MMC Group Annual Report 2018
- Port Klang Authority Annual Report 2017
- UNCTAD Review Maritime Transport 2018
- Westports Annual Report 2018
- Penang Transport Masterplan

Meetings

- Embassy attendance at 2nd NSPC-National Shipping and Port Council
- Embassy meeting with Port of Rotterdam International
- Embassy meeting with MIMA - Maritime Institute of Malaysia
- Embassy meeting with Westports Malaysia Holdings Sdn Bhd
- Embassy meeting with Northport Malaysia Sdn Bhd
- Embassy meeting with MMC Ports & Logistics
- Embassy meeting with Port of Tanjung Pelepas
- Embassy meeting with Malaysian Ministry of Transport

Maps

All maps are created with QGIS open source software using Open Street Map (OSM) and Natural Earth data.

