

Accelerating Port Connectivity



DOWNLOAD THE E-MAGAZINE WITH THE QR CODE ABOVE



## **OBJECTIVE**

To become the first port of choice in the region while ensuring sustainable human capital development and creating a knowledge sharing platform for all interested parties in the port, maritime, shipping and other related sector.

## MISSION

- To coordinate and develop current programs from various related agencies and meet the future needs of the industry
- · Promote activities conducted by PCOE
- Invite other agencies and assist in the dissemination of information and training



Kindly contact us for more details at : 07-2534073/4076 (MS. NURULHUDA / MS. JULIANA) or Email : juliana@lpj.gov.my | huda@lpj.gov.my | Visit us : www.lpj.gov.my

PORT CENTRE OF EXCELLENCE RZ Accelerating Port Connectivity BORNELING THE B-MACAZONE WITH THE DR COME ANOUT

Lembaga Pelabuhan Johor Jalan Mawar Merah 2, Pusat Perdagangan Pasir Gudang 2, 81700 Pasir Gudang, Johor

+607-253-4000

https://www.lpj.gov.my

JPA'S LOG	
Achievements, Memorable Events & Opportunities	
ON THE COVER	
Enhancing Port Connectivity Through Strategic Indicators	1
COMPANY SPOTLIGHT	
The Pengerang Story	
PERSONALITY	
Mr. Md Derick Basir Chief Executive Officer of Johor Port Berhad	2
COMMENTARY	
The Geography Of Ports Sustainability In The Global Supply Chain	2
THE BACK PAGE	
Ships Manning On The Ship	3

33

Visit to JPA

## DONATION GIVING PROGRAM TO ONE STOP COVID-19 ASSESSMENT CENTRE (OSCAC) PASIR GUDANG

**25 FEBRUARY 2021, PASIR GUDANG –** Concern in helping to control the spread of COVID-19, Johor Port Authority (JPA) together with Johor Port Berhad (JPB) have collaborated in giving the contribution of basic needs to One Stop COVID-19 Assessment Center (OSCAC) Pasir Gudang Stadium. The items donated were fan, Pulse Oxymeter, Blood Pressure Digital Set, face mask, liquid disinfectant, printer, freezer, plastic rack and mineral water. JPA and JPB have delivered the goods to the representative of MOH, Encik Norizam bin Othman, Assistant Medical Officer.



## JPA AND PTP DONATED NEEDY GOODS AT ONE STOP COVID ASSESSMENT CENTRE (OSCAC) TAMAN BUKIT INDAH, JOHOR BAHRU

26 FEBRUARY 2021, JOHOR BAHRU - Johor Port Authority (JPA) with the cooperation of Port of Tanjung Pelepas (PTP) have taken initiative to organize CSR program of LPJ CARES by donating basic needs to One Stop COVID-19 Assessment Centre (OSCAC) Taman Bukit Indah, Johor Bahru. The objective of this CSR program is to assist the new operated OSCAC which requires many urgent equipment. Apart of that, it is to encourage the positive attitude of helping one another among the port and the community, and also to support the government to end the outbreak of COVID-19. The donation was presented by the representative from JPA and PTP to the officer in charge, Dr. Nurazimah binti Mohd Aris, Medical Officer of Quality & Training Unit / Environmental Health Unit. With the donation through this CSR program, it reduces the burden of Ministry of Health Malaysia in preparing necessary equipment at this OSCAC.

## LPJ CARES: RIVER CONSERVATION PROGRAM

**10 MARCH 2021, PASIR GUDANG** – Disaster from chemical waste pollution of Sungai Kim Kim Pasir Gudang in 2009 has become a starting point to create awareness to many parties on the importance to sustain the river. Johor Port Authority (JPA), Majlis Bandaraya Pasir Gudang (MBPG) and Environmental Department (JAS) have organized few series of discussions to identify the best approach to conserve the river from being polluted. As a start, JPA and MBPG have taken initiative to organise a program to place mudball in two rivers which are Sungai Perambi and Sungai Buloh. Both rivers have been chosen because they are located in the area of Port of Pasir Gudang.

Mudball is clay with microoganism to treat polluted water due to sewage waste, decayed organic material and deposits. By using mudball, benefited microorganism will act to decompose the materials which create pollution to water. Mudball is mixture between soil, effective microorganism (EM), bakashi (organic material) and molasses.

One of the objectives of this program is to help conserving the river by reducing level of river pollution and to instill public awareness that sustaining the river water quality is a shared responsibility. As a responsibled agency in monitoring the port, JPA has always concerned via its strategy and implementation to support the environmental care.





## JOHOR PORT AUTHORITY DISTRIBUTED FOOD SUPPLY IN CONJUNCTION OF RAMADAN 2021

**7 APRIL 2021, PASIR GUDANG** – Johor Port Authority (JPA) has distributed 100 food boxes through Program Jalinan Kasih Ramadhan. A total of 100 people has received the donation worth RM150 which consists of food supplies such as rice, flour, sugar, instant ketupat, milk, canned food, *kuih raya* and many others. The recipients were among the needy,orphanage children and single mothers who lived in Pasir Gudang area and also Asrama Kebajikan Ar-Rayyan located in Kempas, Johor.

Tuan Hj Rosnan bin Fathlal, Chairman of Johor Port Authority with the officers from Johor Port Authority have distributed the donation to the Head of Kampung Kuala Sungai Masai, Mr Mohamed Alhad bin Ngadimon. The Chairman has also visited several houses at Kampung Kuala Masai and Asrama Kebajian Ar-Rayyan which was organised on the same day at the office of Persatuan Insani Darul Takzim, Taman Tampoi Utama.

Through this corporate social responsibility, JPA always cares towards those who are less fortunate and it is hoped that this contribution can at least cheer them up in this blessed of Ramadan.







## JOHOR PORT AUTHORITY CELEBRATES AND SHARES CHEERFUL AIDILFITRI WITH THE NEEDY



**6 MAY 2021, PASIR GUDANG** – In conjunction of Hari Raya Aidilfitri's celebration, Johor Port Authority (JPA) has organised 'Santunan Aidilfitri 2021.' This program aims to celebrate the unfortunates including the orphanage, single mother and asnaf. A total of 100 recipients have received the benefits from this program which amounted of RM15,000 consists of food supplies and cash.

The distribution of donation was organised by the JPA's volunteers at designated location. Tuan Hj, Rosnan bin Fathlal, the Chairman of JPA together with the members of JPA's Board of Directors and the General Manager, Encik Kamaruzaman Hj Munasir participated in the program to distribute the donations to several houses at Taman Air Biru, Kg Desa Bakti, Seri Alam and Kg Masjid Bandar Masai.

It is hoped that this effort can reduce the burden of the needy and at the same time make them more cheerful to celebrate Aidilfitri.





## DONATION OF POWERED AIR PURIFYING RESPIRATOR (PAPR) TO FORENSIC DEPARTMENT, HOSPITAL SULTANAH AMINAH (HSA)

**13 JUNE 2021, JOHOR BAHRU** – Johor Port Authority (JPA) has organised Corporate Social Responsibility by giving donation of Powered Air Purifying Respirator (PAPR), breathing aid device to filter virus to Forensic Department which involved in forensic management of COVID-19 deceased at Forensic Department Hospital Sultanah Aminah.

JPA is concern on the current situation at the hospital due to the increasing number of total death resulted from the outbreak of COVID-19. Therefore, RM8,000.00 was donated by JPA for an equipment of PAPR to Forensic Department, HSA. The hand-over was performed by the JPA General Manager, Mr Kamaruzaman Bin Hj Munasir to Dr Mohamad Aznool Haidy Bin Haji Ahsorori, the Head of Forensic Department, Johor. This donation is the first donation from Johor Port Authority to Forensic Department, HSA to ease the process of managing the decendents. During the visit, JPA was given detailed information on the current situation of Forensic Department. On another note, JPA has been informed about the usage of PAPR and its neccessity to the Forensic Department.



## LPJ CARES: FOOD DONATION FOR COVID-19 QUARANTINE AND TREATMENT CENTRE PASIR GUDANG

**PASIR GUDANG, 17 JUNE 2021 –** Johor Port Authority (JPA) today has delivered the donation to COVID-19 Quarantine and Treatment Center (PKRC) in Pasir Gudang. The donation inclusive of dried foods was given by the General Manager of JPA, Mr Kamaruzaman Hj. Munasir to the Director of PKRC Pasir Gudang Dr Mohd Fathi Zaki Mohd Zakaria. This donation will be channelled to 700 current patients of COVID-19 at the center Pasir Gudang. Apart of that, the food such as biscuit, instant noodle, instant drink, mix-drink and snack food, face masks, face shield and hand sanitizer were also provided. PKRC Pasir Gudang is able to occupy 1200 patients at one time and donations on dried foods for the



patients are needed. In addition, the increment of COVID-19 cases in Johor has made PKRC Pasir Gudang almost reaching its maximum capacity. JPA is always committed to support the effort and to assist frontliners to fight COVID-19, especially in Johor.

## **ROADBLOCK TENT DONATION BY JOHOR PORT AUTHORITY FOR THE USAGE OF FRONTLINER**

**20 JUNE 2021, JOHOR BAHRU** – After the government announced that Movement Control Order 3.0 for the whole country will start from 21 May 2021, the authority has set up roadblocks at several locations in Johor involving the district and state border. This is to control the movement of public and vehicle, and at the same time to ensure that public will not break the SOP which has been set up during MCO. This control is 24 hours a day which involves Royal Malaysia Police with the cooperation of Royal Malaysia Army in order to ensure the SOP is followed at all time during MCO.

As a step to support the government to confront the increasing of Pandemic COVID-19, JPA has taken the

intiative to contribute 4 units of tents to be used by the frontliners for roadblock purposes.

JPA has organised the donation session of tent for the roadblock purposes at the location near to PULADA, Jalan Hulu Tiram, Johor. The donation was given by the General Manager of JPA, Mr Kamaruzaman Bin Haji Munasir, to the representative of PDRM, Supt Mohd. Sohaimi Bin Ishak, Seri Alam Police Chief.

It is hoped that with this donation, JPA could help the govenment to ensure the successfullness of MCO 3.0 to combat the spreading of COVID-19.



## **80 FAMILIES OF TAXI DRIVER RECEIVED HELPS FROM LPJ CARES**

**18 JULY 2021, PASIR GUDANG –** The outbreak of COVID-19 pandemic has given negative impacts to the land public transport industry especially taxi driver. When Movement Control Order (MCO) was implemented, all country borders were closed to curb the outbreak of the pandemic which has effected the income of taxi drivers. There was no more tourist came to Malaysia and local people were not allowed to cross state or district without permission.

LPJ CARES with its concern has taken step to channel the helps to the effected taxi drivers. A total of 80 families among the taxi drivers in Pasir Gudang, Johor has received the donation of daily supplies such as rice, sugar, wheat flour, cooking oil, detergent and others. The donation was given by Mr Kamaruzaman bin Haji Munasir, General Manager of Johor Port Authority (JPA) via drive-through method accompanied by Tn Hj Mohd Abdul Rahman bin Arif, the president of Taxi Driver Pasir Gudang at JPA Headquarter, Pasir Gudang, Johor.



676

## JOHOR PORT AUTHORITY AND PORT OF TANJUNG PELEPAS COLLABORATE TO OPEN PPVIN FOR MARITIME AND LOGISTICS INDUSTRY WORKERS IN JOHOR



**3 AUGUST 2021, GELANG PATAH –** Johor Port Authority (JPA) and Port of Tanjung Pelepas (PTP), a member of MMC Group have set up Industry Vaccination Centre (PPVIN) for maritime and logistics sector workers, in support of the national COVID-19 immunisation programme (PICK).

The programme is a joint initiative by the Ministry of Transport (MOT) together with the Ministry of Science, Technology, and Innovation (MOSTI) and Ministry of Health (KKM) with JPA and PTP to act as the co-host of the PPVIN.

Open daily from 8.30 am to 5.00 pm, the PPVIN located at Wisma B, PTP will operate from 3rd August 2021, today until 11 October 2021. The centre is set to accommodate up to 1,000 capacity daily and approximately 27,000 vaccine recipients until end of the programme.

The new PPVIN had earlier visited by YB Datuk Seri Ir. Dr Wee Ka Siong, Transport Minister. Also present during the walkabout session were YB Datuk Haji Hasbi bin Haji Habibollah, Deputy Minister of Transport, Tuan Haji Rosnan Bin Fathlal, JPA Chairman and other Federal and State government officials.

Transport Minister Datuk Seri Ir. Dr Wee Ka Siong said the purpose of this centre and other PPVINs all over the country is to help the National COVID-19 Immunisation Programme (PICK) and ensure that frontline workers in the maritime and logistics sector, specifically in Johor are vaccinated as quickly as possible.

"JPA and PTP readiness, proactive drive in ensuring the success of this effort as well as PTP's strategic location surrounded by industrial locality have definitely helped us to decide and made further coordination with the relevant parties to quickly reduce the impact of COVID-19 pandemic."

"The PPVIN will not only benefit the economic frontliners including employees, contractors, customers, stakeholders and other industry players in Johor but also to further expedite efficient delivery and safe movement of goods to further spur the nation's economic wellbeing," added him.

Kamaruzaman Bin Munasir, JPA General Manager during the PPVIN launching stated that given that the Transportation & Logistics Sector has been classified as essential by MOT and the National Security Council (NSC), it is imperative for the port authority to jointly collaborate with the port operator and other stakeholders in taking proactive measures to ensure that day to day activities are not affected. He expressed many thanks to the MOT who fully supported the application of JPA and PTP to open PPVIN in PTP and subsequently put forward this application to MOSTI and CITF for approval.



"The opening of this industry PPVIN is therefore a great example of synergy between the authority and port operators to work together in fighting the war against this global pandemic and provide safe working environment for those working in the sectors."

Marco Neelsen, PTP Chief Executive Officer remarked that PTP is very grateful that MOT, MOSTI, MOH, CITF and Johor State Government had given the nod to open a temporary PPVIN centre at its premise to aid for the massive maritime and logistics industry sector population in the fight against the pandemic.

"PTP fully embrace the opportunity to be involved in PICK and to be able to further serve the state of Johor and the nation. The strategic location of the port and with the modern state of the art facilities it provided make it easier and more comfortable in accommodating to vaccine recipients' diverse needs and requirements."

"The opening of the VVPIN will not only serve our commitment to serve the state of Johor and the nation in achieving herd immunity to end the pandemic but also to further extend our CSR reach towards the sustainability of our surrounding community with the proactive participation of our staff as volunteers of the PPVIN centre throughout the programme."

Speaking on the vaccine distribution, Marco Neelsen also explained that as Malaysia's leading Ports & Free Zone operator, PTP currently employ more than 5,000 employees with approximately another 1,000 to 3,000 contractors working in our terminal on a daily basis. On the other hand, PTP Pelepas Free Zone, situated adjacent to the terminal has also becoming such an important global and regional hub to Malaysia and specifically Johor that it houses more than 40 companies which employ 11,000 people in the vicinity.

"Therefore, we are very pleased that our request and offer to open PPVIN for this massive industry population and at the same time able to aid and accommodate to other related sector workers in Johor to get their much-needed vaccines accordingly," added him.



4 AUGUST 2021, PASIR GUDANG - Gerobok

Rezeki Program is a social corporate responsibility program which was organised as a medium to assist

the community by supplying daily goods. With the current pandemic of COVID-19, there are certain

groups which have been affected due to losing of job or being quarantined. Therefore, LPJ CARES

program has organised Gerobok Rezeki to help the effected groups by providing basic food supply in the

## JOHOR PORT AUTHORITY GEROBOK REZEKI PROGRAM



## JOHOR PORT AUTHORITY ORGANIZED INTERNATIONAL WEBINAR

Johor Port Authority (JPA) via the program of Port Centre of Excellent (PCOE) has organized a webinar on 24 September 2021 at 9.00 am (Malaysia time). This is the continuity from 'Port Week' program which was organized in 2015. The online seminar approach was organized because the COVID-19 pandemic effected the whole country. The webinar was organized in cooperation of Transport Event Management and fully sponsored by JPA with the theme The Roles of Ports & Logistics: Waves of Paradigm Shift. This webinar has been aired live for 1.5 hours via Zoom, YouTube, Facebook, LinkedIn and Twitter with more than 700 participants.

In this program, there were four invited speakers which are:

i. Dr Nazry Yahya, Head of Johor Port Skills Centre Johor Port Berhad

ii. Mr Marco Neelsen, Chief Executive Officer Port of Tg. Pelepas

iii. Mr James Wroe, Chief Operation, Maersk Asia Pacific, Singapore

iv. Mr Boo Wei Ching, Chief Executive Officer Terberg Tractors Malaysia

Meanwhile, Dr Mark Yong, Managing Director APAC & EMEA Blume Global has been appointed as the moderator for the program. Fourth Industrial Revolution (4IR) has changed the landscape of maritime industry

by adapting the existing of automated technology, Internet of Thing (IoT), digital asset and big data in tandem with digital transformation. This webinar has fulfilled the objective of organizing the forum which is to discuss the roles and principle of port and logistics sectors to overcome the challenges in this massive changes. Ports in Johor will optimize the benefit of digital transformation as to ensure us to stay competitive in supporting the drive to stabilize national economic growth.



## JOHOR PORT AUTHORITY PRESENTED LPJ CARES CHEQUE TO SULTAN IBRAHIM JOHOR FOUNDATION

Johor Port Authority (LPJ) under the program of LPJ CARES presented a cheque with a total of RM100,000.00 to Sultan Ibrahim Johor Foundation (YSIJ) to assist and support the community programs organised by YSIJ. Corporate Social Responsibility (CSR) program is the continuation of CSR programs organised previously which in line with the commitment of JPA in helping local community who have been impacted with COVID-19 pandemic in the districts of Johor.

The cheque presentation event was organised on 25th October 2021 at 10.00 am located at the office of JPA Pasir Gudang, Johor. The event was accomplished by Tuan Haji Rosnan bin Fathal, Chairman of JPA by presenting the replica of cheque worth RM 100,00.00 to the honourable Dato' Avinderjit Singh, the board of trustees of Sultan Ibrahim Johor Foundation. Among others presented at the event was Mr Kamaruzaman bin Hj Munasir, the General Manager of JPA, the Honourable Dato' Asman Shah bin Abd Rahman & Mr. Tang Nai Soon, JPA Board Member and also Mr Fadhly Suffian bin Laili, Chief Executive Officer of Sultan Ibrahim Johor Foundation and several senior officers from JPA and YSIJ.

JPA hopes that this initiative could benefit and reduce the burden of affected families and individuals who have lost their income due to pandemic of COVID-19. This initiative is a gesture of concern and assistance from JPA to CSR programs organised by YSIJ.







## LPJ CARES: FOOD PACKS DRIVES TO SAHABAT MERSING (SAME)



14 NOVEMBER 2021, MERSING - Johor Port Authority (JPA) has organised an activity of Corporate Social Responsibility under LPJ CARES in giving donation of food packs to Sahabat Mersing (SAME) which was held at Pejabat Pertubuhan Sahabat Mersing, Mersing. This NGO leads 16 NGO clubs in Mersing. Hence, the donation would be distributed to qualified receivers through club and NGO under Pertubuhan Sahabat Mersing. For this donation, 200 food packs with allocation of RM20,000.00 were distributed to the community at Mersing. The handover of donation was performed by Mr Ahmad Salhin Mustapa, Assistant General Manager of Corporate Service and Development Division to Vice Chairman of SAME, Mrs Siti Hazerina Gee and Secretary of SAME, Mr Mohd Rasul Khusairi.









## MALAYSIA'S SOUTHERN GATEWAY FLOOD RELIEF MISSION

**SELANGOR, 22 DECEMBER 2021** – Starting from the end of 2021, Malaysia has encountered several terrible and extra extraordinary flood incidents which effected some areas in Malaysia. Among the affected areas were Kuala Lumpur, Selangor, Pahang, Negeri Sembilan, Melaka, Kelantan, Perak, Johor, Sabah, Sarawak and Terengganu.

Ministry of Transport (MOT) has initiated the flood relief mission through its agencies including Johor Port Authority (JPA). This mission was organized with Johor Port Berhad (JPB) and Port of Tanjung Pelepas Sdn Bhd (PTPSB) under the name of Malaysia's Southern Gateway Volunteers. There are two sessions of flood relief mission conducted which were in Dengkil and Segamat. The first flood relief mission was conducted on 22 December 2021 at Taman Emas, Dengkil, Selangor with 34 volunteers from JPA, JPB and PTPSB. Cleaning activities for 6 houses has helped to expedite the cleaning process.

On 9 January 2022, this flood relief mission has continued in Segamat. The mission was organized for two days and it involved SMK Gemereh, Temporary Relief Shelter Sekolah Agama Gemereh, Kampung Jawa Buluh Kasap, Kampung Gemereh and Kampung Tok Badak. A total of 21 volunteers from JPA, JPB and PTPSB have involved in this mission. Both missions have achieved the objective to help the flood victims by giving them support, energy and basic needs.









## LPJ CARES: FOOD PACKS GIVING CEREMONY TO MAJLIS PENYAYANG (MAYANG) PASIR GUDANG FOR DISTRIBUTION TO THE COMMUNITY AT PASIR GUDANG PARLIAMENT AREA







**23 DECEMBER 2021, TAMAN RINTING** – Johor Port Authority (JPA) through Corporate Social Responsibility Program under LPJ CARES has organised a program of food packs drives program to Majlis Penyayang (MAYANG) Pasir Gudang to be distributed to community at Pasir Gudang Parliament area. This is due to COVID-19 pandemic which has affected 1000 people at Pasir Gudang parliament area. Due to that, JPA has donated 1000 food packs with the allocation of RM98,500.00. The donation giving ceremony was held at Dewan BZ Restoran Pengantin, Taman Rinting. The hand-over of food packs was performed by Mr Norazlin Yusop who has given the donation to Mr Razani bin Abd Rauf, the Secretary of MAYANG Pasir Gudang.



# ENHANCING PORT CONNECTIVITY THROUGH STRATEGIC INDICATORS



Assoc. Prof. Dr Harlina Suzana Jaafar Head

Centre for Halal Management and Business Innovation, Faculty of Business and Management, University Teknologi MARA 40450 Shah Alam

Vice Chairman, Chartered Institute of Logistics and Transport Malaysia (CILTM) Selangor Section

#### INTRODUCTION

The maritime industry contributes significantly to the global economy since it carries approximately 85% of the global commodity trade volume. In fact, seaports play an important role in the global shipping network, as they promote country's external trade and internal market exchange. The performance of ports drives the efficiency of a country's logistics chains as well as the international trade competitiveness.

Recently, ports played a significant role in shaping and transforming the spatial structure, since they are the main gateways of entry and exit of commodities in a territory. In a wider supply chain context, ports serve as nodes that need to determine its accessibility to the national hinterland such as dynamism of flows, the transport traffic between ports and hinterland and the spatial structure of port-hinterland relations in a country. This indicates that ports are now devoted to organizing the seamless flows of commodities in a broader spatial context. Particularly, the association between city and port reflects the fundamental relationship between places and flows, which can be viewed as an essential category in spatial planning.

#### IMPORTANCE OF PORT CONNECTIVITY

Port is the key point of the logistics chain and is essential for economic growth for countries and regions. It is generally agreed that ports drive the development of dry ports, cities and hinterland. Maritime connectivity refers to the performance of shipping transport networks comprising several indicators such as the number of destinations served, frequency of services and logistics costs. Thus, port connectivity has been one of the key indicators of port performance, which determines a given country's access to world markets, which access is largely enabled by liner shipping services for the import and export of manufactured goods. It also implies greater access to physical resources and paves the way for economies of scale and specialization by permitting producers to better exploit possibilities in domestic and foreign markets. In an increasingly globalized world,

improved connectivity plays an essential role in international trade and economic development. As such, it is becoming synonymous with national trade competitiveness. In turn, poor connectivity, demonstrated through inefficiencies in logistics and transport, will negatively effects trade and development due to increased voyage times and increased handling and delivery costs of goods. Thus, the higher the connectivity level of a port, the more attractive it will be in terms of facilitating the transportation of cargo and reducing transportation costs, which will result in it being more competitive than others and being more attractive to both carriers and shippers. Scientific measurement of port connectivity is thus relevant and important to port users, policymakers, port authorities, and other stakeholders.

#### STRATEGIC MEASURES / INDICATORS OF PORT CONNECTIVITY

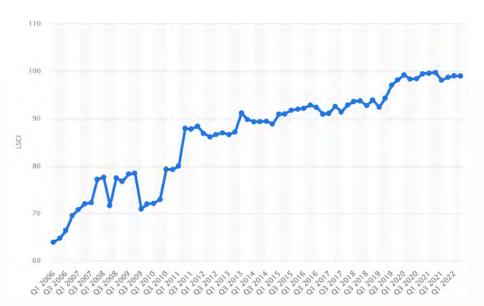
Port performance and the position of ports in the global logistics chain reflect a country's trade competitiveness. The economic globalization has also contributed significantly to the rapid growth of the shipping industry and stimulated the development of port connectivity measurement. In the shipping industry, the Liner Shipping Connectivity Index (LSCI), developed by the United Nations Conference on Trade and Development (UNCTAD) has been the main reference that widely used, in which it indicates how connected a country's economy is to the global liner shipping network.

The Liner Shipping Connectivity Index (LSCI) aims at capturing the level of integration into the existing liner shipping network by measuring liner shipping connectivity. The computational complexity of LSCI is relatively low, thus easy to implement. It can be calculated at the country and the port level. LSCI can be considered as a proxy for accessibility to global trade through the shipping network. The higher the index, the easier it is to access a high capacity and frequency of global maritime freight transport system and effectively participate in international trade. Therefore, LSCI can be jointly considered as a measure of connectivity to maritime shipping and as a measure of trade facilitation. The LSCI comprises six elements namely: (1) fleet deployment, (2) carrying capacity, (3) liner companies, (4) liner services, (5) maximum vessel size, and (6) connected countries. The country or port that received the highest score in the reference year is assigned a value of 100,

which serves as a benchmark to assign value to other ports and countries. In 2019, UNCTAD upgraded the LSCI to a port-level index system, covering more than 900 ports and applying the same methodology as for the country level LSCI. The LSCI incorporates four further variables, notably 1) the size of the largest container ship, 2) the number of services, 3) the total deployed carrying capacity, and 4) the number of services.

In terms of the distribution of the port, LSCI reveals a high concentration level among a small group of highly connected ports that are the gateways and hubs of global trade. The countries that have the highest LSCI values are actively involved in international trade. Namely, the export-oriented economies of China and Hong Kong rank first, with the Singapore transshipment hub ranking third. Large traders such as the United Kingdom, Germany, South Korea, the United States, and Japan rank among the top 15. Countries such as Malaysia, Spain, the United Arab Emirates, Egypt, and Oman also rank high because of the major transshipment function their ports perform. Thus, in general, the LSCI focuses more on traffic volume of ports.

Throughout 2006 to 2022, Malaysia's shipping connectivity index (LSCI) increased steadily, from 63.92 in 2006 to 99 in 2022.



Liner shipping connectivity index (LSCI) of Malaysia from Q1 2006 to Q2 2022

In academic research, various studies have been conducted on port connectivity measurement. Generally, these studies can be broadly classified into port-perspective measurement and networkperspective measurement. Port-perspective indicators evaluate each port individually. These indicators measure connectivity from a local perspective, including the traffic volume and how well a port connects to other places (i.e., regions, countries, or ports); this is normally done by using count statistics, such as port calls and connected places. Network perspective indicators evaluate ports as a network and measure the role of a specific port plays within the system. Port perspective indicators are a simple but useful way to reflect connectivity; but, in a system that emphasizes only port-perspective indicators-especially traffic volume indicators-mega container ports often rank at the top. Alternatively, network-perspective indicators can measure the connectivity from a more holistic point of view but may lose important information reflected directly in the count statistics.

A recent study by Bai et al (2022) suggested that ports should focus more on their accessibility, strategic position in the local region, and role in the global network other than simply pursuing more traffic volume. For example, they may improve the diversity of its liner service by accommodating routes with a broader scope of origins and destinations. The ports can also build up deep-water terminals or improve hinterland transportation, to attract more long-haul services.

In a regional context, a study on the development of the China-ASEAN port connectivity indicator system found three categories of indicators namely (refer to Table 1): (1) International connectivity represents to the degree of connectivity between different countries and the related connectivity effect, which is mainly manifested in the liner shipping connectivity indicator and bilateral trade volume.

(2) Port operation capacity implies to the port operation effect brought by the port's hardware and software conditions, which is mainly manifested in the quality of port infrastructure, the efficiency of customs procedures and the throughput of container terminals.

(3) Hinterland connectivity refers to the connectivity effect brought by the hinterland linear transportation, which is mainly manifested in highway and railway quality of services as well as GDP of the country.

This study was conducted from the perspective of a complete port system, in which the port is a node in the supply chain, and not the end of the transportation route.

In a study on container seaport-hinterland connectivity that was conducted locally in 2016 highlighted that most Malaysian seaports are connected to inland freight facilities such as dry ports and ICDs, which are positioned as transit points to help connect exporters and importers in the hinterlands to seaports as well as facilitating regional and cross border trades. However, several issues need to be resolved to ensure greater hinterland connectivity of Malaysian container seaports namely, extreme imbalanced of modal split, insufficient rail capacity and limited train services, increasing road congestion and the limitations of space restriction in some inland facilities.

First-level Indicator	Secondary Level Indicator	Description	Data Sources
International connectivity	Liner shipping connectivity	Liner shipping connectivity indicator	UNCTAD
	Bilateral trade level	Bilateral trade volume	UNCTAD
Port operation capacity	Port i nfrastructure level	Port infrastructure quality	Global Competitiveness report
	Efficiency of customs procedures	Burden of customs procedures	Global Competitiveness report
	Container terminal operations capacity	Container terminal throughput	UNCTAD
Hinterland connectivity	Highway level	Highway quality	Global Competitiveness report
	Railway level	Railway quality	Global Competitiveness report
	National economic development	Gross Domestic Product	Belt and Road Initiative official website

Table 1 : The China-ASEAN Port Connectivity Evaluation Indicator System

#### CONCLUSION

UNCTAD (2019) has emphasized the key role of efficient and well-connected ports in minimizing transport costs, linking supply chains, and supporting international trade. Thus, it is crucial that ports play its role as crucial nodes between sea and land to increase port performance that are critical in driving competitiveness. The port efficiency would then benefit the port community such as ports, carriers and shippers in terms of cost saving. Indeed, the relevance of maritime connectivity for port choice decision to and from specific hinterland locations is also vital. Thus, modernized port operations, efficient and modern seaports are important for reducing delays and emphasize the role of physical infrastructure in accommodating increased numbers of vessels. Accordingly, the port connectivity measures/ indicators highlighted above should form the foundation for strategic development of port performance.

#### REFERENCES

1. Bai, X., Cheng, L., Yang, D., Cai, O. (2022) Does traffic the traffic volume of a port determine connectivity? Revisiting port connectivity measures with high-frequency satellite data, Journal of Transport Geography, Vol.102, 103385.

2. Chen, S., Jeevan, J. and Cahoon, S. (2016) Malaysian Container Seaport-Hinterland Connectivity: Status, Challenges and Strategies, The Asian Journal of Shipping and Logistics, 32(3) pp. 127-137.

3. Dadashpoor, H. and Arasteh, M. (2020) Core-port connectivity: Towards shaping a national hinterland in a West-Asia country, Transport Policy 88, pp. 57-68.

4. Hoffmann, J., Wilmsmeier, G., Lun, Y.V. (2017) Connecting the world through global shipping networks. Journal Shipping Trade, Vol. 2, https://doi. org/10.1186/s41072-017-0020-z.

5. Ji, Y. and Lu, J. (2021) Analysis of Influencing Factors of China-ASEAN Port Connectivity based on BP-DANP Method, Proceedings of 33rd Chinese Control and Decision Conference (CCDC), ISBN: 978-1-6654-4089, DOI: 10.1109/CCDCS52312.2021.960472.

6. Tovar, B. and Wall, A. (2022) The relationship between port-level maritime connectivity and efficiency, Journal of Transport Geography, Vol 98.

#### **COMPANY SPOTLIGHT** The Pengerang Story

# **ENDERATION OF STORY**

#### **OVERVIEW**

In 2007, DIALOG identified Pengerang as a suitable location to develop a deep water petroleum terminal capable of handling Very Large Crude Carriers ("VLCC") to capture Asia Pacific demand growth in the next 30 years.

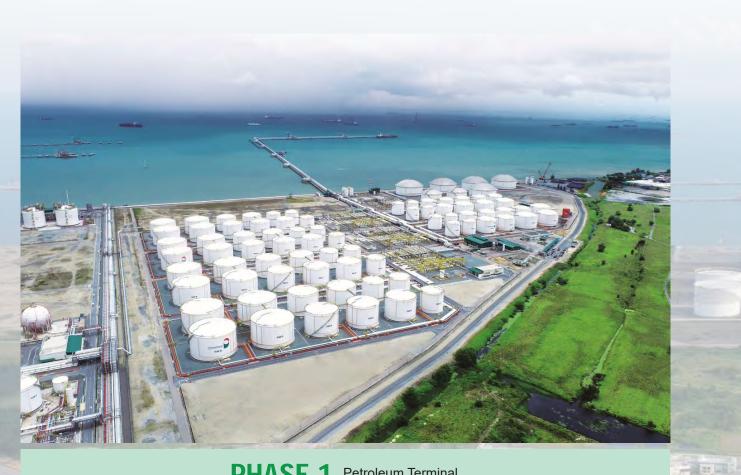
Why Pengerang was a perfect location:

- · Next to international shipping lanes
- · Deepwater (up to 24 metres) jetty facilities
- Naturally sheltered harbour
- All-weather port
- · Proximity to Singapore existing major refining and petrochemical hub

The development was launched in June 2009 when DIALOG signed the Memorandum of Understanding ("MOU") with the State Government of Johor Darul Ta'zim. The Pengerang Deepwater Terminals ("PDT") has attracted both domestic and international investors and catalyzed the growth of the Pengerang Integrated Petroleum Complex ("PIPC"), with investments totaling over RM100 billion to date.

With continuous support from the Malaysian Government, what begin as a dream in 2007 has now become reality for DIALOG and its partners. And the Pengerang Story is still unfolding.

#### The Pengerang Story COMPANY SPOTLIGHT



 PHASE 1
 Petroleum Terminal

 1.7 million m³
 2014

 Current Storage Capacity
 Commenced Operations

An independent terminal which commenced operations in April 2014 with an oil storage capacity of 1.7 million m3 complete with a dedicated deep water jetty facility.

#### COMPANY SPOTLIGHT The Pengerang Story



PHASE 2A Petroleum & Petrochemicals Terminal

1.3 million m<sup>3</sup> 2018/2019 **Current Storage Capacity** 

**Commenced Operations** 

2017

#### PHASE 2B LNG Terminal

400,000 m<sup>3</sup>

Storage Capacity

**Commenced Operations** 

For Phase 2A, construction of the dedicated petroleum and petrochemicals terminal with an estimated storage capacity of 1.3 million m3 commenced in 2015. Commercial operations commenced in 2018.

In Phase 2B, the Liquefied Natural Gas ("LNG") regasification facilities with two (2) units of 200,000 m3 LNG storage tanks commenced operations in November 2017.

#### 23

**COMPANY SPOTLIGHT** The Pengerang Story



#### PHASE 3A Clean Petroleum Terminal

## 430,000 m<sup>3</sup>

**March 2021** 

Storage Capacity

**Commenced Operations** 

The construction of Phase 3A, DIALOG Terminals Pengerang (5), which consists of storage tanks with a capacity of 430,000 m3 for clean petroleum products pursuant to the Long-Term Storage Agreement with bp Singapore Pte Limited has commenced operations in March 2021.

#### THE FUTURE OF PDT

The Group continues to actively pursue potential customers for Phase 3, which will consist of dedicated petroleum and petrochemical storage terminals for medium to long term clients, including refinery and petrochemical plants within the PIPC. The remaining 500 acres of land comprising reclaimed land and the buffer zone have already been earmarked for the further development of Phase 3 and future phases. Together with our partners, we are strongly committed to developing a vibrant petroleum downstream manufacturing center and realize our collective vision of transforming Pengerang into an international petroleum and petrochemical hub of the future.

# THE GEOGRAPHY OF PORTS SUSTAINABILITY IN THE GLOBAL SUPPLY CHAIN



**Dr Mohd Yazid bin Md Taib (CMILT)** CILT Johor Committee Member, University Kuala Lumpur Lecturer

#### **INTRODUCTION**

The shipping industry usually spearheads a civilized nation to become a great nation. The 21st century is known as the era of an ocean, directing economic developments to the sea and surrounding islands by venturing special attentions to exploitation of the sea. The development of new export & import processing zones with concentrated industrial parks, directly increases the production for export and domestic consumption, GDP growth and simultaneously better protecting the ecological environment.

Sustainability is a broad concept that touches on environmental, social and economic issues including management, processing and operation activities. In 2018, it was reported that 80% of the world's commodities were transported through water, hence making ports and sea water transportations are the pillars of global economy.

Unforeseen events like the war between an invading Russia towards its western neighbor Ukraine has

disrupted the world chain of grain movements. The war holds back tons of wheat and barley from leaving the Odessa Port in Ukraine. Historically Russia and Ukraine exports about a third of the world production of wheat and barley. Both countries produce almost 70% of the world needs for sunflower and corn. The war eventually causes foods prices to become more expensive, threatening to food shortages, hunger and many developing countries will be chaotic with the political instability.

Another crucial aspect in seaports operation is the security of the ports itself. The law exists to safeguard ports from terrorist attacks, sabotages and other unlawful activities. The port security deals directly with maritime security such as marine trade areas, coast and beaches lines. In 2002, the United Nation's marine security and Malaysian port comes under watch list of *International Maritime Organization (IMO)* and *International Ship and Port Facility Security Code* as part of *Safety of Life at Sea (SOLAS)* convention.

#### THE IMPORTANCE OF SEAPORTS

Seaports allows the interfaces between the land transport and water with the component of freight movement for the entrance of raw materials, merchandize and passenger's entry and exist of a particular country. The seaports too are popular exit door to various exports to global market as illustrated in **Figure 1** below.

Industrialized democratic nations such as G7 (USA, Canada, France, Germany, Italy and the United Kingdom) meets annually to discuss issues on energy policy, international security and global economic. They also discuss current issue like Russia attacking Ukraine, which causes massive disruption of oil and gas supply to western Europe.

Ports are functioning as a gateway for trading. Additionally, ports attract commercial infrastructure inclusive of industrial activity, agencies and banks which brings prosperity such as Hong Kong, Rotterdam, Shanghai, Singapore and Pasir Gudang. Ports also serve as a central point in preventing maritime accident. As a new standard operating procedure, ports are supplying both protection and safety for varieties of cargos inclusive of whole services necessary for goods/merchandize as customs and health examination.

Most ports are also offering repair services thus allowing ship owners to plan the ship's maintenance and repair at any ports of his or her convenience. Ports processing of documentations and physical activities of import & exports are incurring the highest cost contribution to delays which actually is a part of the essential and unavoidable activities.

Ports in Peninsula Malaysia is well known as a gateway for trading in import/export goods. The Malaysia ports connects with Indian Oceans, Malacca Straits and South China, to inland waterway transport, land, rail and road.

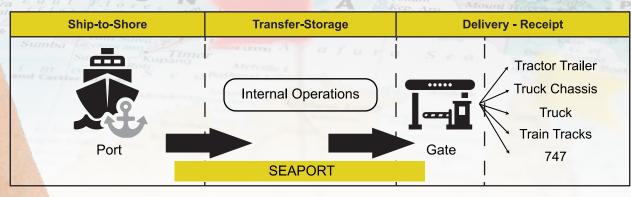


Figure 1: Seaport Logistics Portal

#### **GLOBAL PORTS ISSUES**

Besides the growth on the economy, ports are facing with the ongoing issues one of the major contributors of Carbon Dioxide  $(CO_2)$ 

The high emissions of Carbon Dioxide impact on the environment is very alarming. Fossil fuel are mainly used as the main source of energy for logistics activities. The sea vessels release carbon dioxide, greenhouse gas entering the atmosphere. The combination of Carbon Dioxide ( $CO_2$ ), methane ( $CH_4$ ), nitrous oxide ( $N_2O$ ), and hydrofluorocarbons (HFCs) is one of the major causes of global warming that we are experiencing today. **Figure 2** below shows the global composition of gases released by gas.

Shipping liners are facing constant problem with the port congestions as containerships idling while waiting to get space for berthing. Kuehne + Nagel a logistics giant, has developed a state-of- the art software known as Seaexplorer, which able to send Splash a map which shown super stress container port scene. For instance, on 24th July at 3.20 pm, there were 304 ships idling in front of the respective ports around the globe, with 116 ports reporting challenges, especially congestion (Refer to **Figure 3**; Sources: Seaexplorer). This is a real showcase of supply chain disruption, port congestions, long queue and higher freight. In another instance, one month ago (24th June 2022 at 320 pm), the data provider showed 304 ships idling in front of the respective ports and 101 ports reporting some kind of chain disruption.

The key noticeable bottleneck can be pointed to the backlog in Yantian port in South China. The bottleneck is causing doubling of ships waiting outside Asian transhipment (in Singapore) and directly effecting the twin ports of Los Angeles and Long Beach. The backlog was contributed by the COVID-19 pandemic in late May 2022 (China policy is zero tolerance towards COVID-19) and Yantian Port was closed for 4 weeks.

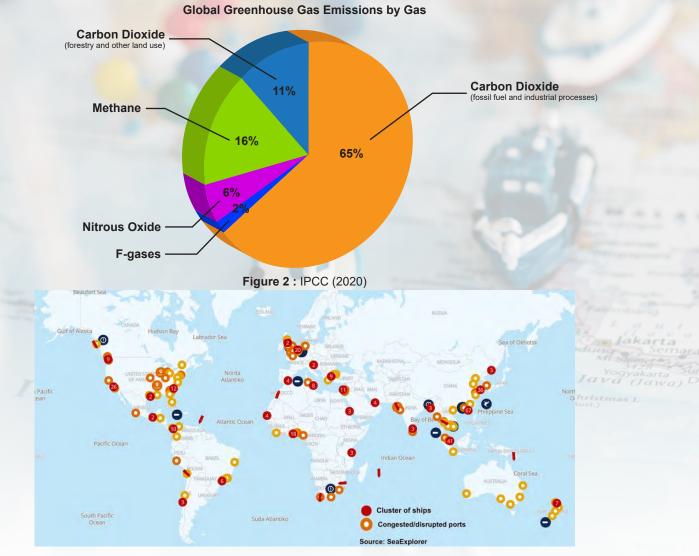


Figure 3 : Cluster of ships & Congested/disrupted ports

Interestingly very few articles can be found highlighting the congestion impact on a nation. Major health and environmental impacts of air pollutions from shipping activities are felt in Canada. Marine shipping has produced 4 million tonnes of greenhouse emission in 2015 which equivalent to 0.6% of total greenhouse emissions in Canada. The people in Canada sees the greenhouse emission as productivity lost, an increased in healthcare costs, decreasing in quality of life, crops, plants and trees stunted. Additionally, discoloured, damaged outdoor structures and materials- in all costing Canadians and her economy billions of dollars per year. According to companies, economists and shipping specialists, an ongoing new worldwide of COVID-19 blended with the natural disasters in China and Germany as well as a cyber-attack targeting key South African Ports are driving global supply chains towards a breaking point, thus threatening the already fragile flow of raw materials, foods, parts components and consumer goods.

The Delta variant of COVID-19 has devastated most parts of Asia. As a result, vessel Captains are unable to rotate tiring crews. It was reported about 100,000 sailors at sea are beyond their stints in a flashback starting 2020 and during the height of lockdowns.

#### SUSTAINABLE THE PORT CHALLENGES

Since the beginning of human existence, there are always calls to preserve mother nature. The growing population created demand for better healthcare, comfortable housings, good food, quality consumer products, access to cheap yet quality medicine and affordable transportation. These demands create business and on the other hands create toxic and leftover. Humans can't leave the toxic and leftover unintended.

Sustainable action as a reactive to pandemic, global warmings and guarantee to continuous supply. One of the major challenges is to keep port and gate operations to be continuously working 24/7. As production continuously picking up following the 24 months' shutdown in early 2020, any attempts to keep container vessels moving to ease congestion is not a final solution. By operating 24/7, ports will be able to spread out volume of trucks coming in and out of the ports.

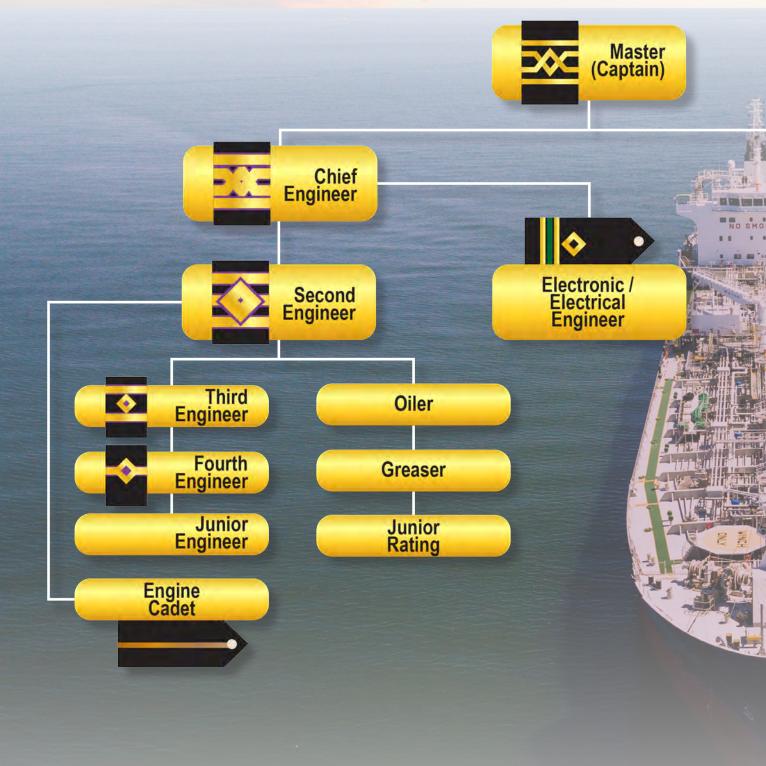
This comes with the demand to have sufficient port labour as well. Ports authorities requires more skilled and competent truck drivers to transport the cargo to its final destination. The port congestion issue is not likely to be addressed anytime soon. Again, for the sake of sustainability, it is falling back to transport provider and shippers to be creative in having the cargoes delivered to respective locations/ ports on time or keep on telling our dear customers that we do not know when their cargo will arrive. One of the other ideas is for the ports to plan way in advance. Forwarders need to ensure that the international shipping documents are in place before the vessel arrives at the port of destination. By doing this, we are able to plan for "express release" or a process that allows us to clear customs faster. There could also be possibilities that, the cargo will probably be released before it even entered the port.

Making a pre-appointment with the port will allow shipper/buyer to have a location to temporary store the cargo. In that manner, importers too will not be scrambling to find storage space in a congested port. Technically, the pre-appointment will ensure the container in surface is ready to pick up. If the ports do offers pre-appointments, it will be great to the importer's advance planning. However, this not a perfect solution especially considering the congestion we're experiencing, but at least it's a step in the right direction to ensure our cargo gets out of the port whenever needed.

In tackling the environmental issues indirectly created by the shipping industry, the Port of Amsterdam is offering shore power for cruises. Expected to launch in 2025, this is energy transition for making the cruise business more sustainable. Shore power is expected to be able to reduce emissions from quay and improve the surrounding air quality.

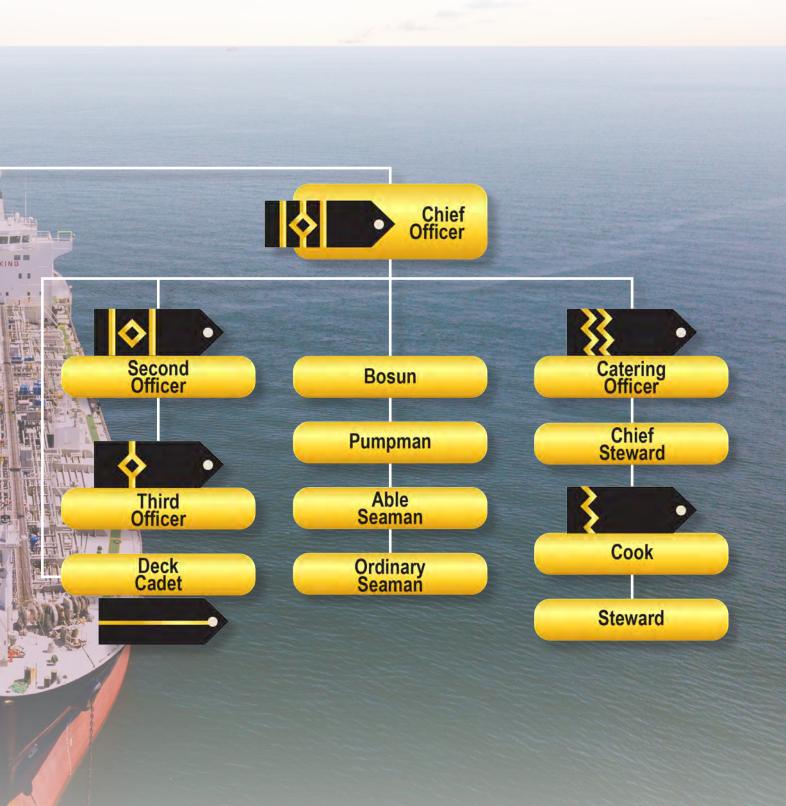
The other considerations that we can consider is the usage of e-methanol fuel cell. This system is said to be able to reduce up to 92% GHG emissions. Such an innovation will keep on the shipping industry in maintaining the continuous supply chain and sustainable operation globally.

# **SHIPS MANNING ONBOARD A SHIP**



- 1.1. The Captain
- 1.2. The Deck Department
- 1.3. Deck Rating (non-officers)
- 1.4. Chief Officer / First Mate
- 1.5. Second Officer / Mate
- 1.6. Third Officer / Mate
- 1.7. Deck Cadet
- 1.8. Bosun
- 1.9. Able Seaman
- 1.10. Ordinary Seaman

- 1.11. The Engine Department
- 1.12. Engine Room Rating
- 1.13. Chief Enginner
- 1.14. Second Engineer / First Assistant Engineer
- 1.15. Third Engineer / Second Assistant Engineer
- 1.16. Fourth Engineer / Third Assistant Engineer
- 1.17. Fifth Engineer / Engineering Cadet
- 1.18. The Catering Department
- 1.18.1. Chief Cook
- 1.18.2. Trainee Cook
- 1.18.3. Steward



# VISITS TO JOHOR PORT AUTHORITY



# PENERAJU SKIL SAFETY HEALTH OFFICER (SHO)

Full Funding\* For Bumiputera Final Year Students

Funder:

# AN

#### Programme Manager:



#### **Training Provider:**



## **Programme Overview**

The Safety & Health Officer programme is a ONE (1) - month professional training course at Universiti Kuala Lumpur -Malaysian Institute of Industrial Technology (UniKL MITEC) in Pasir Gudang, Johor. This programme is fully funded by Yayasan Peneraju Pendidikan Bumiputera.



## **Eligibility Requirement**

- Malaysian Bumiputera
- · Aged 19 25 years old
- Final year students for Diploma in any related fields

## Certifications

Construction Industry Development Board (CIDB) Green Card

Competency certification of first aid from Emergency Care Safety Institute (ECSI) - United States of America

Certificate of Safety & Health Officer from National Institute of Occupational Safety and Health (NIOSH)



Ir. Ts. Dr. Mohamad Ikbar Mr. Che Ahmad Fauzan

(012-786 8774) (018-3691844) **\*Terms & Conditions Apply** 



## PROFESSIONAL MASTER IN PORT MANAGEMENT

DAFTAR SEKARANG

DITAULIAHKAN OLEH UTM SPACE 🧹

PEMBELAJARAN BERSASAKAN MODUL

**T&L FASILITI BERKUALITI TINGGI DI UTM SPACE, SKUDAI** 

RM 16,800 : PELAJAR WARGANEGARA

**USD 6600: PELAJAR ANTARABANGSA** 

DIKENDALIKAN OLEH TENAGA PENGAJAR PROFESIONAL INDUSTRI YANG BERPENGALAMAN

PEMBELAJARAN BERASASKAN PROJEK DAN INTEGRASI KERJA

Untuk maklumat lanjut, sila layari:

🌐 www.johorport.com.my/jp-skills-centre

Untuk sebarang pertanyaan:

🍳 07-253 5888 🛛 🔀 jpsc@johorport.com.my