

## **THE EXPANSION OF SOUTHEAST ASIAN PORTS: PROSPECTS AND CHALLENGES<sup>1</sup>**

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### **INTRODUCTION**

Throughout the 20<sup>th</sup> century, Southeast Asia has led the world in terms of economic growth, outstripping the rates posted by several others developed and larger regions. The region has become the fastest growth economic region in the world and has contributed to the sharp rise in the share of trade. In view of the rapid export-led growth of the economies in the region, it is not surprising to see that the facilities and capacities of Southeast Asian ports have been expanding at similarly rate.

In light of the expected expansion and growth of the economy in the years ahead, the ports in the region are expected to handle an increasing volume of cargo, including more container traffic. Consistent increase in their throughputs, for instance, ports in Malaysia, Singapore, Thailand, Indonesia and Philippines posted dramatic increase in container handling. Therefore, the prospects and opportunities for the growth of ports in Southeast Asia are vast.

According to the International Association of Ports and Harbors (IAPH) at their recent meeting in Kuala Lumpur, there are five challenges the world port's including the Southeast Asian ports will face in the new millennium. Firstly, to provide expensive infrastructures in a timely fashion in the context of fierce competition, secondly, to increase environmental concerns and regulations, thirdly, to enhance port's role as facilitators in order to bring about consences among the various players impacting on the performance of the gateways, fourth, to deal with increasing business concentration in the number of shipping lines, railways and trucking companies and finally, to compete in land use for port property.

### **THE SOUTHEAST ASIAN ECONOMIES**

The Southeast Asian economies performed very well in the 1990 s' (prior to the economy down turn in 1997) with strong growth in gross domestic product (GDP), low inflation and improving current account balances in most countries. The growth has also been fostered by various strategies adopted by the countries in the region. For instance, the structural transformation of the Malaysian economy from commodity-based economy into a manufacturing sectors has created strong de-

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mand for container handling services. Moreover, 95 percent of Malaysia's exports goes out by sea.

The development of the growth triangles in the region also contributed to the expansion of the Southeast Asian economies. Among the major growth triangles in the region are the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT), Indonesia-Malaysia-Singapore Growth Triangle (IMS-GT), and the Brunei-Indonesia, Malaysia-the Philippines East Asean Growth Area (BIMP-EAGA). The overall goal of the growth triangles are to accelerate private sector-led economic growth and facilitate the economic development of the subregions by exploiting underlying economic advantages, enhancing sub regional competitiveness for investment and exports, lowering transport and transaction costs arising from geographical proximity and reducing production and distribution cost through greater economies of scale.

A profound impact of the development of the growth triangles will on the region's maritime transport. The expansion of the maritime transport within the growth triangle and between other areas will bring into focus the need for suitable ports to serve the expanding trade. Thus, major ports which are geographically located within the growth triangle areas, have been identified to play a regional sub-hub role. Smaller ports within the region are expected to served as spokes and feed the major ports.

For instance, there are enormous potential investment opportunities in the IMT-GT area (consist of the two Indonesian provinces, namely North Sumatra and Aceh, the four northern Malaysian states of Kedah, namely Penang, Perak and Perlis and five provinces of southern Thailand, namely Narathiwat, Pattani, Satun, Songkhla and Yala) that would be realized if policy and infra structural impediments to cross-border investment were eased and overall competitiveness enhanced.

In terms of maritime shipping in the area, most local ports in the Indonesian subregion of the IMT-GT are somewhat restricted either in terms of capacity or access, although there are adequate for current demand levels. The controlling depths at Belawan Port (6-10 meter) limit ship sizes to less than 15,000 deadweight tons (DWT), hence cargo for Europe and North America must be transhipped via Singapore. In southern Thailand, Songkhla port also offers limited ship service, and would still be regarded as a feeder port because of its severe draft limitations (8.23 meter). As for Penang Port in northern Malaysia, the port may face increasingly serious congestion, especially for container and bulk cargo, if the current port expansion plans are not implemented as scheduled.

However, the recent development of the port of Tanjung Pelepas (PTP) in Malaysia has given a tremendous impact on the economy development of the Singapore-Malaysia and Indonesia growth triangle. The Port of Tanjung Pelepas which began operations on Jan 1, 2000, has set this year as the first step towards establishing itself as the region's premier transshipment hub.

## **THE EXPANSION OF SOUTHEAST ASIAN PORTS**

In line with the significant growth of the Southeast Asia economies, for instance ports in the region posted 147.71 % increase in throughput between 1990 and 1996, which witnessed their combined container throughput rising dramatically from 4.3 million TEUs to 10.7 million TEUs. Major ports in Southeast Asian countries, namely Port Klang in Malaysia, Laem Chabang in Thailand, Tanjung Priok in Indonesia and Manila in the Philippines moved up in the league of world ports as a result of the higher volume of containers handled. (See Table 1) This explains the strong demand for container handling as reflected in the expansion of container terminals, the fleet expansion by container hauliers, consolidation services, development of inland container depots and the widening network of container shipping services at these ports.

The rapid expansion of the Southeast Asian economies in the years ahead will give opportunities for the growing and expansion of the ports in the region. There must be enormous scope for long-term development of port facilities to meet changing requirements of trade and shipping. The port operating environment needs to be supply-driven and also there is a need for the ports in the region to be efficient and offer a state-of-the-art facilities, similar to those available at world-class ports.

As the Asia's economy bounced back, the port's operational activities went back to its previous height. The emergence of a new generation of vessels, known as "Malacca-max" which have capacities for beyond 8,000 TEUs are also in the drawing board and could be a reality in the near future. These vessels are directly determining the trend of major ports and Southeast Asian ports towards handling the lucrative business of transshipment. The increases in cargo flow to and from the port together with ship calls necessitated adequate port facilities to develop and expand. After examine the present Southeast Asian trend in ports, it is clear that ports are undergoing expansion programmes and countries are finding new areas and locations to build new ports. An area of concern is how much can existing and established ports built decades ago expand. In the case of Indonesia, major ports namely Port of Tanjung Priok, Port of Belawan and Port of Panjang has undergone tremendous transformation in shape and size as much as in terms of the mechanism of its running.

In most of the Southeast Asian countries, the Government's willingness to take into partnership and confidence role-playing by private enterprise in matters of ownership and management of port facilities and services has begun to bear fruit. Malaysia and Singapore are among the Southeast Asian countries that had adopted the privatization policy since mid 1980s. In 1992, Indonesia has taken a major step in privatizing the management and operation of the ports through the creation of the four Indonesian Port Corporations namely Indonesian Port Corporations I, II, III and IV.

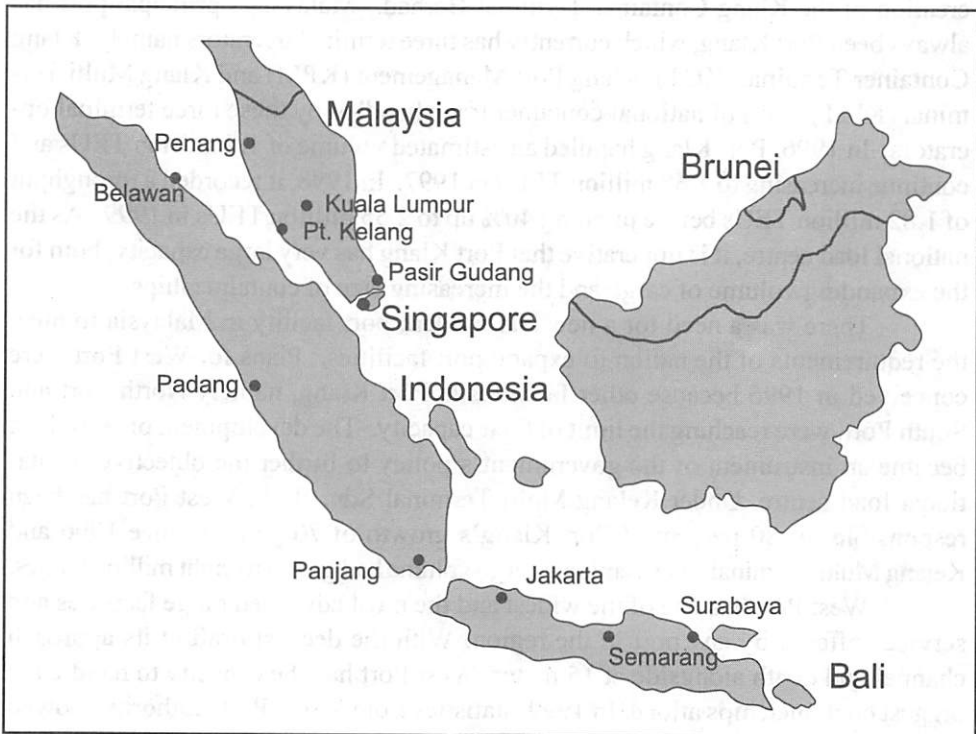
Under the Indonesian Port Corporation II, massive project has been planned to expand the facilities at the Port of Tanjung Priok which is the prime and largest

**Table 1: Container Throughput In The South East Asia ('000teus)**

Years	1990	1991	1992	1993	1994	1995	1996
Singapore	5,133.8	6,245.3	7,398.6	8,876.9	10,400.3	11,846.0	12,944.5
Philippines	1,411.8	1,492.7	1,644.5	1,798.2	2,138.1	2,412.6	2,729.0
Indonesia	923.7	1,098	1,396.6	1,656.1	1,930.5	2,151.0	3,130.1
Thailand	1,078.3	1,242.7	1,437.0	1,672.4	1,930.5	2,151.0	2,271.3
Malaysia	901.3	1,093.6	1,261.2	1,443.6	1,787.6	2,112.9	2,559.2
Vietnam	57.6	67.7	153.5	263.0	424.7	650.0	775.0
Myanmar	-	-	-	-	10.0	60.0	100.0
<b>Total</b>	<b>9,506.5</b>	<b>11,240.6</b>	<b>13,291.4</b>	<b>15,709.2</b>	<b>18,621.4</b>	<b>22,069.9</b>	<b>24,509</b>

Source: Various Sources

Map 1: Indonesia, Malaysia and Singapore Ports



port in Indonesia. Plans including making preparation for berth with the depth of -15 meter and at the same time carrying out a study on the preparation of land area for facility development in passenger terminal, bulk terminal and container terminal by way of reclamation.

One of the priority areas in the development policy of Indonesian ports is the establishment of major container ports with services to the inter-Asian trade and also to offer an alternative safe sailing route via the Sunda Straits and Sumatra for the shipping lines because the Strait of Malacca is congested.

As for Malaysia, the privatization of the port begins in 1986 through the creation of the Klang Container Terminal Berhad. Malaysia's principal port has always been Port Klang, which currently has three terminal operators namely, Klang Container Terminal (KCT), Klang Port Management (KPM) and Klang Multi Terminal (KMT). 55% of national container trade handled by these three terminal operators. In 1996, Port Klang handled an estimated volume of 1.4 million TEUs and continue increasing to 1.68 million TEUs in 1997. In 1998, it recorded a throughput of 1.82 million TEUs before jumping 40% up to 2.55 million TEUs in 1999. As the national load centre, it is imperative that Port Klang has very large capacity, both for the expanding volume of cargo and the increasing size of containerships.

There was a need for a new and modern port facility in Malaysia to meet the requirements of the nation to expand port facilities. Plans for West Port were conceived in 1996 because other facilities at Port Klang, namely North Port and South Port, were reaching the limit of their capacity. The development of West Port became an instrument of the government's policy to further the objectives of national load centre. Under Kelang Multi Terminal Sdn. Bhd., West Port has been responsible for 80 percent of Port Klang's growth of 70 percent since 1996 and Kelang Multi Terminal's conventional cargo volume had grown to eight million tonnes.

West Port has one of the widest and the most advanced range facilities and services offered by any port in the region. With the deepest draft at its approach channel and depth alongside at 15 meter, West Port has the capacity to handle the biggest containerships afloat. In 1999, statistics from Klang Port Authority showed that of the 2.55 million twenty equivalent foot (TEUs) handled, a total of 801,056 TEUs handled by West Port while KCT handled 938,924 TEUs and a total of 810,439 TEUs handled by KPM. West Port, which has 13 main lines calling at its terminal, will see an additional three lines by the end of this year in helping the port to achieve its 1.2 million TEUs target this year.

Recent development of West Port will involve foreign interest in developing the port. West port is close to signing a deal with Hutchison International Terminal Ltd (HIT), a unit of Li Ka-shing's Hong Kong based Hutchison Whampoa Group which plans to buy a 30 percent stake in Kelang Multi Terminal. If the sale is approved, HIT will pay more than RM 300 million for the stake in West Port. The interest in Kelang Multi Terminal largely stem from its potential to attract regional transshipment boxes from the South Asia and Southeast Asia production centres.

Following closely in the foodstep of the rapid development of West Port is

the Port of Tanjung Pelepas in Johor Bahru which began its operation in October 1999. The naturally-sheltered port is located on the southwestern tip of the peninsula, at the mouth of Pulau River. The site chosen for the port is adjacent to the Second Link, connecting Malaysia and Singapore across the Johor Straits. The port's strategic location at the confluence of the world's busiest international shipping lanes-trans-Pacific, Far East-Europe, intra-Asia and Southeast Asia-Australia, is a distinct advantage. Division times from these main trade lanes is about 45 minutes.

The development of the Port of Tanjung Pelepas is a key feature of the Malaysian government's attempts to combat the fact that an estimated two thirds of Malaysian container traffic still flows through Singapore. In its expansion plans, the Port of Tanjung Pelepas forecast handling some 6.25 million TEUs of containers by the year 2005 from 450,000 TEUs this year.

Transshipment currently accounts for 8 percent of the 200,000 TEUs throughput while import and export containers make up 8 and 4 percent respectively. Most transshipment cargo will come from Maersk Sealand which has 30 percent stake in Port of Tanjung Pelepas while 70 percent stake will come from other clients namely Mitsui OSK Line and APL-NOL. In the first six months of 2000, the port handled a total of 48,668 TEUs, with a first quarter of 18,921 TEUs. The total ship calls in the first six months was 188, including a large number of Maersk "S" class and "K" class vessels. The classes, with a length of 347 meters and 318 meters respectively, are the largest container vessels in the world. Many advantages had contributed to the rapid expansion of the Port of Tanjung Pelepas as listed in Table 2.

In the case of Thailand, in recent years, the Thai economy has developed very rapidly. The volume of cargoes has increased tremendously especially containerized cargoes and has in fact exceeded the capacity which the Bangkok Port can conveniently handle. This has resulted in congestion at the port, which has had an impact on the economy as a whole. In 1961, the Royal Thai Government started its effort to construct a new deep-sea port at Laem Chabang, Chonburi to accommodate larger vessels which could not enter the Bangkok Port. However, due to economic recession, the project was suspended.

Laem Chabang Port (LCP) is a deep-sea commercial port under the management of The Port Authority of Thailand (PAT), and located at the Eastern shore of the upper Gulf of Thailand. It is a new modernized business port in Southeast Asia and becomes the most efficient gateway port of Thailand. The Port of Laem Chabang has an unique position to be the destination port for the Asia-North American route and Asia-Europe route and also could be a hub port to distribute the cargoes to neighboring countries of Indochina and inner land of South China.

In 1991, the port was officially opened its first multi-purpose terminal under the privatisation program of container terminals in Phase 1 of its development. In 1996, the port handles total cargo volume of 8 million matric tons which B2, B3 and B4 container terminals handled a total of 730,000 TEU's. In 1997, the Laem Chabang port hit the target of 1 million TEU and became Thailand's major port.

At present, Laem Chabang port operates 11 terminals to accommodate various type of vessels container ships, bulk carriers, pure car carriers and passenger carriers. Among of them, five are container terminals, namely B1 to B5. More than 80 percent of seaborne cargo handled by this port are containerized. In order to meet the future cargo demands until year 2008, the port of Laem Chabang has set out a Master Plan including the Phase 2 and Phase 3 development.

As for the Philippines, because of its geographical configuration, composed more than 7,000 islands, the country is dependent on efficient water transport for its trade and commerce. Almost 98 percent of materials and products imported and exported by the Philippines are handled by the ports. The vital role of the Philippine ports as the essential interface between land and sea transport makes them catalyst of economic growth.

**Table 2: Perceived Advantages of Port of Tanjung Pelepas**

<p>Dedicated berthing arrangements</p> <p>Approximately 30 percent lower costs than Singapore</p> <p>A minimum diversion time from the confluence of the international shipping lanes, which have helped make rival Singapore the world's leading port.</p> <p>On volume breakdown, 69 percent of the total throughput in the first six months of 2000 was transshipment cargo, with the remaining 31 percent comprising import and export cargo. This demonstrates PTP's strength in attracting transshipment cargo.</p> <p>At the doorstep of Johor's development.</p> <p>Easily accessible via a network of highway and rail links to Peninsular Malaysia, Singapore and Thailand.</p> <p>Ample space for continuous development well into the century</p> <p>Natural deep water with draft of 15 meters</p> <p>PTP is licensed as a container haulier. It was among the 15 new hauliers licensed by the government this year, and it has been awarded 20 licences to offer haulage services at its own cost to shippers in Johor.</p>
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Source: Asia Times: A New Era in Asian Shipping, 23/10/2000.

The demand for container handling at the Philippine's port is increasing tremendously since the arrival of a few thousand foreign containers in the Port of Manila in 1971 and corresponding cargo volume of less than 100,000 tons. Since then, TEU traffic ballooned to about 3 million in 1997, carrying about 34 millions tons of cargo. Currently, the extensive development of the Philippine ports are centered on 42 ports nationwide. Under the Philippine Ports Authority (PPA), ports in the Philippines are moving towards privatisation following an executive order for the modernisation and development of government ports.



At present, the following hub ports namely North Harbor, South Harbor, Manila International Container Terminal (MITC), Batangas, Cebu (which is under the Cebu Port Authority), Cagayan de Oro, General Santos and Davao are the seats of port operations mainly because they account for the greater bulk of foreign and domestic cargoes, vessels and passengers. Therefore, these ports are priority ports for modernization and development in partnership with the private sectors.

Until the year 1999, the PPA has successfully privatised the management and operation of the Manila International Container Terminal and Manila's South Harbor. Under the PPA Port Modernisation Programme, the following ports namely Manila's North Port Harbor, Cagayan de Oro, Davao and General Santos shall undergo upgrading and expansion work.

Finally, the Port of Singapore was also involved in massive expansion of its container port. Singapore will inevitably face increased competition from ports in neighboring countries, such as Malaysia's Port Klang and Thailand's Laem Chabang. In 1993, the Port of Singapore Authority (PSA) began construction of a new container terminal at Pasir Panjang which once fully completed in 2009, will raise Singapore's annual container handling capacity by 18 million TEUs from 15 million TEUs this year.

These clearly demonstrate that established port like Singapore has to ensure their viability over the long-run and the only way in towards continuous expansion.

## **CONCLUSION**

In the last decade, the character of trade and the shipping industry have changed significantly. The beginning of the 21<sup>st</sup> century witnessed the expansion of technological developments and evolution of vessels. Ship sizes will continue to increase, especially as regards RO-RO (roll on-roll off) vessels and trans-ocean container carriers. These will bring new challenges for the expansion of ports facilities in the region. Therefore, as a consequences of trade expansion and globalisation of the economy, major ports in Southeast Asia will continue playing an increasingly vital role in the world economy.

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