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Towards Integrated Port Management Systems along Malacca Straits

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ABSTRACT

Paperless transaction offers various comforts that have made the world borderless. However, the finalization of international trade needs the goods to be delivered to certain destinations. Although carriage of goods by air guarantees less time, 90% of international trades are still carried out through the oceans. The strategic location of Indonesia in a cross-road position (*posisi silang*), that is between two land-masses of the world, Australia and Asia and between two great waters of the Indian and the Pacific Oceans has made Indonesia a centre of international trade routes. This way, the existance of a well-developed and efficiently run port sector is crucial. However, from the user's perspective, Indonesia does not have a port system which performs well enough to compete with the demand of international markets. Previous research has showed that the lack of competitiveness in Indonesia's ports is underpinned by the existence of too many insufficient and inefficient ports, which are rooted in limited private sector participation and competition in the port system. This is mostly due to the deficiencies in the legal as well as regulatory environments in the port management system, which leads to tight competition both within and between ports. This research seeks to analyse the Indonesian legal framework concerning the Ports Management System. While the current Indonesian Act 17/2008 on Shipping has provided the foundation for port system reform, much remains to be done. One of the implementation strategies of the National Ports Master Plan ((NPMP) envisaged within the draft of NPMP is integrated port planning. The draft further divides strategic ports into six economic corridors; and since this research focuses in ports located along the Malacca Straits, only the Sumatran economic corridor will be considered. This paper proposes the integrated planning model in the ports located in the Sumatran economic corridor.

Keywords: Competitiveness, efficiency, intergrated, management, malacca straits, port performance

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INTRODUCTION

As the biggest archipelagic state in the world, Indonesia is located in a cross-road position *(posisi silang)*, that is between two land-masses of the world, Australia and Asia and between two great waters of the Indian and the Pacific Oceans. Such a strategic location has made Indonesia the centre of international trade routes. Not surprisingly, one of Indonesia's important sectors lies in port sector performance. International as well as national markets competition, the efficiency of national distribution and economic integrity are influenced by the existence of a well-developed port sector, including its management system. The Port Management System is a complex matter which requires detailed regulatory as well as technical frameworks. While Indonesia has so many ports, the absence of a clear and systematic port management regulatory framework has led to the inefficeintly run port sector. Currently, Indonesia has approximately 1,700 ports that vary in its infrastructure. About 111 ports, including the 25 main strategic ports are controlled by the four state-owned companies known as PT. Pelindo or Indonesian Port Controls (IPCs). In addition to that, there are approximatelly 614 non-commercial ports of little strategic value and about 1,000 ports dedicated for individual companies. However, from the user's perspective, Indonesia does not have a port system which performs well enough to compete with the demands of international markets. It is reported that the performance of most of Indonesian ports is still considered low and inefficient. This is mostly caused by technical and operational mechanisms, for instance, berth occupancy rates as well as working time is still below international standards causing vessels too much time at berth or in queues outside ports. Besides the technical problems and port operational mechanisms, there is a geographical problem of Indonesian ports beings usually located at shallow seas. In addition to that, the location of ports which is within internal waters such as along rivers, can be another problem for port performance. I addition, Kurnia (2012) states that other factors that contribute to lower port performance include inappropriate infrastructure, especially containers, container yards and crane availability as well as ports safety and security. However, it is argued that the fundamental reasons underpinning Indonesian ports' inefficiency and low performance is rooted in the limited private sector participation and competition in the port system. Such limited participation is mostly due to the deficiencies in legal matters as well as the regulatory environment in the port management system, which leads to tight competition both within and between ports. The existence of regulatory deficiencies lead to the policy vacuum as to the private sector's confusion of what processes should be pursued, what approvals as well as permits must be obtained from which agencies, in order to participate actively in the port system. In addition to this, the legislated monopoly enjoyed by the IPCs over the main commercial ports, has also made the private sector reluctant to participate increaingly in the port management system.

This research seeks to analyse the Indonesian legal framework concerning the Ports Management System. While the current Indonesian Act 17/2008 on Shipping has provided the foundation for port system reform, much remains to be done. Significant development of port management systems provided by Act 17/2008 was the National Ports Master Plan ((NPMP). While NPMP was planned to be finished by 2009, to date, NPMP is still in the form of a draft with no further progress yet. However, one of implementation strategies of NPMP was the integrated ports planning. The draft further divided strategic ports into six economic corridors; and since this research focuses in ports located along Malacca Straits, only the Sumatra economic corridor will be considered. This paper proposes the integrated planning model in ports located in the Sumatran economic corridor.

MATERIALS AND METHOD

Research Method

This research applies documents of legal instruments relating to Indonesian port regulations and management. In particular, Indonesian Shipping Law, Act no 17/2008 and in specific, provisions regarding ports management system were analiysed. It used the juridical normative method and furthermore also looks at the implementation of the port management system. This paper will highlight ports located along the Malacca Straits as a rough example of proposed intergated port management systems which can be considered. Certain articles in mass media, as well as academic papers articles are also extensively used.

Indonesian ports' officials as well as shipping companies were interviewed to capture their opinions, thoughts and feelings on specific issues. The analysis of ports regulations and national act as well as regulations and their implementation will make a significant contribution towards formulating a proposal to integrate the port management system which will increase a port's performance and competitiveness.

Legal Materials

Legal materials applied in this paper include primary sources and secondary sources as well as tertiary sources, as follows:

1. Primary sources include
    a. International Maritime Organization Convention 1948
    b. United Nations Convention on the Law of the Sea 1982
    c. International Ship and Port Security Code and SOLAS Amandment 2002
    d. International Safety Management, IMO Resolution A.741(18) as amended by MSC.104(73), MSC.179(79), MSC.195(80) and MSC.273(85)
    e. Indonesian Act No. 21/1992 revised by Indonesian Act No. 17/2008 on Navigation
    f. Government Regulation No. 61/2009 concerning Ports Management

g. Local Government Regulation/ Perda No. 12/2011 cencerning Ports in Batam

h. Presidentian Regulation No. 13/2012 concerning Development Planning of Sumatra Island

i. *Kitab Undang-Undang Hukum Dagang (KUHD)* or Indonesian Commercial Law which is also known as Wet Boek Van Koop Handel

2. Secondary Sources, which can explain and support primary source analyses, include:

a. Explanatory Section of Kitab Undang-Undang Hukum Dagang (KUHD)

b. Explanatory Section of Indonesian Act No. 21/1992 jo Indonesian Act No. 17/2008 on Navigation

c. Explanatory Section of Presidentian Regulation No. 13/2012 concerning Development Planning of Sumatra Island

d. Explanatory Section of Government Regulation No. 61/2009 concerning Ports Management

e. International Customary Law concering Ports Management

f. International Law Principles on Ports Management as well as Ports safety and security

g. Experties Opinion on relevant matters

h. Interview with relevant officers and other parties implementing ISPS and ISM Code as well as Port Management System

i. Draft on National Port Master Plan

3. Tertiary Sources, which can guide and explain both primary as well as secondary sources include:

a. Black's Law Dictionary

b. Encyclopedia of International Law

RESULTS AND DISCUSSION

Indonesian Ports at Glance

As the biggest archipelagic state in the world, Indonesia consists of approximately 1,700 ports. As many as 111 ports, including 25 main strategic ports, which are considered as commercial ports fall within the control of four geographic coverages of the IPCs as described in table 1. In addition there are approximately 614 non-commercial ports that tend to be unprofitable and are of little strategic value (Ministry of Transport: 2006). There are also approximately 1000 'special purpose' or private ports that serve the needs of individual companies (both private and state-owned) in a number of industries including mining, oil and gas, fishing, forestry etc. Some of these ports have facilities that are appropriate for only one or a group of commodities (e.g. chemicals) and have limited capacity for the accommodation of third party cargo. Others, however, have facilities appropriate for a broad range of commodities, including in some cases, containerized cargo.

Indonesia's ports are curently regulated under the new Act, that is Indonesian Act No. 17/2008 (Act 17/2008) (Indonesia State Gazette No. 64/2008), which replaced the previous Act on the same subject matter, Act No. 21/1992. With regard to the ports management system, the provisions of Act 17/2008 has its significance by providing radical transformation in Indonesian port management system since the removal of IPCs legisated monopoly over major commercial ports. However, such transformation is taking sometime to be put into in place as in reality it is reported that somehow the IPCs' legislated monopoly is only in paper. This is because most sufficient major ports are still under the control of the IPCs, which are divided into four areas of operations, namely: Pelindo I, II, III dan IV. Table 1 shows that areas of operations.

It can be seen from the above table that the removal of the legislated monopoly of IPCs by Act 17/2008 does not change the IPCs' geographical coverage over main commercial ports. Major Indonesian Ports are still under the regulatory of IPCs. Hence, existing port infrastructure is currently still being used by the incumbent IPCs. In addition, while the role of IPCs under Act 17/2008 is significantly reduced to being a mere operator, it is questionable how the newly planned regulator, known as port authorities will interact with the incumbent IPCs. Most civil servants who aree port authority staff will obviously have historical, institutional and even personal relationships with IPCs, and therefore there are concerns about possible discriminative treatment against new investors. Hence, it is questionable whether the role of IPCs as a mere operator will actually be implemented in practice. Further discussion on port authority will be elaborated later in this paper.

TABEL 1
Areas of Operation of PT. Pelindo

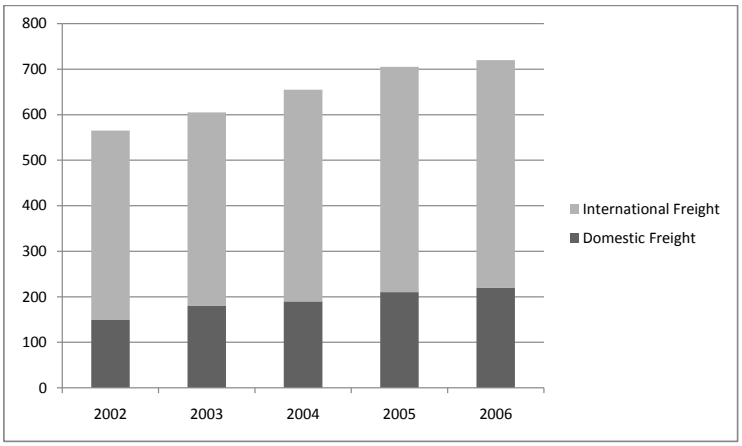
PT. PELINDO	Province	Managed Ports
Pelindo I	NAD, Sumatra Utara, Riau	Belawan, Pekanbaru, Dumai, Tanjung Pinang, Lhokseumawe
Pelindo II	Sumatra Barat, Jambi, Sumatra Selatan, Bengkulu, Lampung, Bangka Belitung, Banten, DKI Jakarta, Jawa Barat, Kalimantan Barat	Teluk Bayur, Jambi, Palembang, Bengkulu, Panjang, Tanjung Pandan, Pangkal Balam, Banten, Sunda Kelapa, Tanjung Priok, Cirebon, Pontianak
Pelindo III	Jawa Timur, Jawa Tengah Kalimantan Selatan, Kalimantan Tengah, Bali, NTB, NTT	Tanjung Perak dan Gresik, Banyuwangi, Tanjung Emas, Tanjung Intan, Banjarmasin Kotabaru, Sampit, Benoa Lembar, Tenau/ Kupang
Pelindo IV	Sulawesi, Maluku, Papua	Makassar, Balikpapan, Samarinda Bitung, Ambon, Sorong, Biak Jayapura

source: www.indonesiaport.co.id

Indonesian Ports Performance

As an archipelagic state having important navigational routes, it is reasonable for Indonesia to have appropriate and competitive ports. However, it cannot be denied that managing ports involves a complex and wide range of factors to be accomodated. Although port commercialisation does not require active business activities, since every vessel will come to available ports, port performance is crucial for Indonesia's national economy. While Ray (2003) explained that major Indonesian ports performance are still low, it is argued that the key to Indonesia's poor ports performance is competitiveness. There are at least three factors involved in such incompetitiveness. These include: complex geographical port conditions and poor management systems as well as infrastructure. These factors lead to higher handling costs. Indonesia has very few natural deep-water harbours and a river system prone to serious saltation that restricts port depth. Therefore, dredging is often not feasible. Therefore, vessels have to wait until high tide to enter port. This results in extra costs for vessels. Congested traffic in land is another problem. Since most ports in Indonesia are located near large urban areas, access to port is similarly difficult and takes much time.

In determining the efficiency as well as competitiveness of ports, it is important to describe port traffic and how much cargo is handled by Indonesian ports. However, obtaining this data is not an easy task. Such data take at least 6 to 7 years time to be updated. The latest available data on Indonesian port performance is data from the year 2006. To show Indonesian port efficiency and competitiveness, Fig.1 illustrates total port traffic handled by Indonesian ports (Indonesia Infrastructure Initiative, 2012), whereas Table 2 shows container volumes handled by Indonesia's main ports (Ports and Dredging Directorate, Ministry of Transport, 2007). In addition,



Source: Indonesia Infrastructure Initiative (2012)

Fig.1: Total port traffic handled by Indonesian Ports (million tons)

the performance data for Indonesian Ports can be seen from table 3 (Ministry of Transport, 2006).

Almost 90 per cent of Indonesia's trade isdone via sea. While Indonesia does not have its own transhipment ports, yet the data shown above presents the fact that there were significant growths of the total tonnage handled by Indonesian ports. The tonnage grew by approximately 154 million between 2002 to 2004 (from 582 million in 2002 to 736 million in 2006). In the other words, the tonnage grew at an avarage annual rateof 6 per cent. It can also be seen from the table above that over the period of 4 years domestic freight grew at a rate of 11.5 per cent per annum, whereas international freight grew at a rate of 4.1 per cent. This way domestic freight grew nearly three times the rate for international freight. Furthermore, Table 2 shows container volumes handled by 11 main ports. It shows that container volumes increased by 1 million TEUs between 2005 and 2007. Thus an average annual growth rate of approximately 12 per cent is evident. While

TABLE 2
Container volumes handled by main ports

CONTAINER PORT	UNIT	YEAR		
		2005	2006	2007
Belawan (Medan)	Box	217, 629	237, 703	251, 144
	TEUs	281,106	304, 002	320, 515
Palembang	Box	60, 805	65, 648	76, 803
	TEUs	65, 879	70, 388	82, 546
Panjang	Box	82, 994	70, 586	67, 825
	TEUs	93, 164	81, 545	79, 767
MTI (Jakarta)	Box	192, 005	151, 842	96, 888
	TEUs	295, 477	222, 762	135, 019
JICT (Jakarta)	Box	994, 352	1, 085, 977	1, 212, 564
	TEUs	1, 470, 467	1, 619, 495	1, 821, 292
Koja (Jakarta)	Box	382, 004	391, 582	478, 907
	TEUs	573, 410	583, 065	702, 199
Pontianak	Box	125, 033	129, 375	134, 619
	TEUs	132, 273	138, 991	143, 443
Tanjung Perak (Surabaya)	Box	762, 143	743, 445	799, 966
	TEUs	1, 073, 385	1, 051, 960	1, 113, 478
Tanjung Emas (Semarang)	Box	211, 443	219, 965	233, 582
	TEus	353, 675	370, 108	385, 095
Makassar	Box	-	-	-
	TEUs	238, 394	255, 998	302, 043
Bitung	Box	-	-	-
	TEUs	-	44, 958	55, 623
11 Port Total	TEUs	4, 061, 161	4, 698, 264	5, 085, 397
Annual Growth			15.7%	8.2%

Source: Ports and Dredging Directorate, Ministry of Transport (2007)

TABLE 3
19 Main Indonesian Main Ports Performance in Domestic Cargo

PORT	1999	2006	1999	2005/2006						
	BOR	BOR	TRT	TRT	WT	PT	AT	NOT	ET	IT
	%	%	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS
Belawan	62.7	52.4	77.9	72.6	1.4	16.6	1.7	22.4	29.8	0.9
Dumai	73.6	74.0	83.4	81.5	4.2	26.8	9.6	11.4	27.3	2.4
Lhokseumawe	43.2	22.4	88.8	62.7	0.8	5.8	1.3	25.8	27.4	1.6
Pekan Baru	59.2	51.3	109.9	96.5	1.4	14.5	11.4	45.4	22.5	1.2
Tanjung Pinang	82.9	90.3	84.4	82.9	0.0	2.3	2.0	58.4	16.0	4.2
Banten	41.6	39.1	57.9	65.1	1.0	0.8	7.8	34.5	21.1	0.0
Palembang	62.9	34.7	73.6	61.8	0.1	0.0	17.7	20.0	23.3	0.7
Banjarmasin	81.0	74.7	55.0	52.0	1.0	1.0	6.0	23.0	21.0	0.0
Benoa	60.1	56.0	22.0	137.0	0.0	0.0	1.0	122.0	14.0	0.0
Tenau/Kupang	74.4	65.7	79.0	167.0	10.0	1.0	6.0	65.0	85.0	0.0
Tanjung Emas	79.0	27.8	51.0	77.0	1.0	2.0	2.0	11.0	49.0	12.0
Tanjung Perak	63.0	69.0	99.0	38.0	0.0	5.0	4.0	9.0	20.0	0.0
Ambon	60.2	54.2	62.1	54.8	0.1	0.3	0.3	24.0	29.6	0.6
Biak	71.2	49.5	96.0	80.0	1.0	0.0	1.0	10.0	67.0	1.0
Bitung	65.1	70.2	95.6	60.5		0.6	0.4	28.0	31.6	0.0
Jayapura	65.2	70.9	164.5	103.5	0.4	0.1	0.5	23.7	33.9	44.6
Makassar	53.8	43.2	66.7	124.3	0.0	0.0	3.0	15.2	93.4	12.6
Samarinda	64.0	68.9	93.0	88.8	7.3	0.0	5.0	10.0	59.2	7.3
Sorong	72.4	80.0	38.3	50.0	6.0	0.0	1.0	20.0	22.0	1.0
Average	65.0	57.6	78.8	81.9	2.0	4.0	4.3	30.4	36.5	4.7

Note: BOR (Berth Occupacy Ratio), TRT (Turnaround Time), WT (Waiting Time), PT (Postpone Time) caused by Port Administration, AT (Approach Time), NOT (Down Time), ET (Effective Eorking Time) and IT (Idle Time)

Source: Ministry of Transport: 2006

Tanjung Priok Port accounted for about half of all containers, in 2007 total container volume for the four terminals in the port was just under 3 million TEUs. Thus, smaller regional ports will require deeper channel draft as well as basin depth and bigger and faster cranes to improve cargo handling.

Other factors accounted for Ports Performance are berth occupacy rate, turn around time, waiting time, idle time as well as effective working hours, which can be seen in table 3. It can be read from the above table that the berth occupacy rate for the above 19 ports was 57.6 per cent in 2006, which decreased from 65.00 per cent in 1999. The average turnaround time also showed poor port performance since there was no increase between 1996 and 2006. While in 1999, vessels required an average of 79 hours, in 2006 the average time s worsened to 82 hours. In sum, the table above presents the description that the

TABLE 4
Indicative Funding Requirements by Private and Public Sector for Development of Port Facilities

No	Stage	Total		Government/Public Sector		Private Sector	
		US$ million	%	US$ million	%	US$million	%
1	2011-2015	12,212	100	5,202	42.6	7,010	57.4
2	2016-2020	12,389	100	3,423	27.6	8,965	72.4
3	2021-2030	22,464	100	6,281	28.0	16,183	72.0
	Total	47,064	100	14,906	31.7	32,158	68.3

Source: Draft of NPMP Indonesia Infrastructure Initiative (2012)

Indonesian cargo fleet has been spending too much time sitting idle or waiting in port. Although the data is several years out of date, it nevertheless illustrates low performance of Indonesian Ports. It can be noticed from the table that while the delivery of port services to users has been poor, there has only been little improvement since late 1990s. This can be seen from some key performance indicators, such as berth occupancy rates, vessel turnaround time and working time ratio.

Another factor contributing to port incompetitivenes is infrastructure problems, which exists in Indonesian ports. This is mostly related to the availability of container facilities, which include the lack of space for container storage and stuffing, as well as cranes. Only 16 of 111 commercial ports in Indonesia have container-handling equipment. Such equipment is very crucial to assure non-existence of delays. The example of the importance of relevant equipment happened in Panjang, Lampung when it was reported that a damaged crane caused delays up to a day and a half in May 2008. Another example was long delays that happened in Belawan caused by the breakdown of key-port side equipment, namely gantry cranes. Poor infrastructure can be noticed from the amount of funding that is required to develop ports having sufficient infrastructure. The draft of NPMP 2011-2030 (Indonesia Infrastructure Initiative: 2012) forecast the funding requirement needed to improve port infrastructure. While port infrastructure improvement is crucial, the funding requirements becomes quite high , as can be seen in table 4, which illustrates funding requirements for developing Indonesian ports.

Another factor that could lead to the increase of costs is port security. It is submitted that poor port security will increase costs. It is further submitted that cargo shipments to and from Indonesia are attracting insurance premiums of 40% higher than Singapore destinations. While the Malacca Straits is well-known for its piracy as well as armed robbery at sea, port-based activities of organized crime groups add to the concerns. This is why nowdays main ports involved in import-export operations must comply with the International Ship and Port Facility Security Code (ISPS Code) produced by IMO. While all three ports located along Malacca Straits have already been given ISPS Code

Certificate, the implementation of such certificaion is still far from satisfactory. This is because of a lack of suitable infrastructure for implementation as well as human resources availability and competency.

Indonesian Act No. 17/2008 on Shipping

Act 17/2008 also known also as Shipping Law released in April 2008, consisting of 355 articles is a very general act covering a broad-range of maritime issues, among any others such as shipping, navigation, environmental protection, sailor welfare, maritime accidents, human resource development, community involvement and the creation of coast guards. Important provisions which are considered as having impact on reforming Indonesian port management systems is provisions regarding cabbotage. According to the cabbotage rules, domestic carriage is limited to only those of Indonesia flagged vessels, which is the reaffirmation of pre-esisting regulations, Presidential Instruction (Inpres) No. 5/2005. While this rule might increase domestically flagged vessels operating in Indonesian waters and replace foreign-flagged ships on domestic routes, it does not resolve vessel problems concerning the proportion of working time queueing outside the ports; or berthed at the congested port. In fact the rule of cabbotage does not contribute anything with regard to port performance. It is submitted that cabbotage rule was evidence of strong lobbying skills by certain groups, that is Indonesian Shipowners Associstion (INSA), who insist on reducing foreign-flagged vessels navigating through Indonesian waters.

While cabbotage rules until recently remain as rules facing difficult implementation, Act No. 17/2008, in fact, has its significance in providing radical transformation in Indonesian port management systems since it removed IPCs legisated monopoly over major commercial ports. According to this act, most regulatory port authority at the port level will be vested in newly formed port authorities. This way, the IPC's role is reduced substantially to one of being amere operator. However, many shipping companies argue that the IPC's role as an operator is only "on paper" since in reality the IPC's scope of operation is still more than a mere operator. This is because it cannot be denied that the IPC is still the only state-owned company having a complete infrastructure in most port handling.

Chapter VII of Shipping Act, furthermore opens ports up to participations by other operators, including those from the private sector as well regional governments. This act also distinguishes clearly between operator (operating port) and regulator (landlord port), as envisaged by article 69. Article 70 divides type of ports into two categories, namely port land and port waters. It also recognizes hierarchy of ports as follows: (i) main ports, (ii) collector ports and (iii) feeder ports. Based on this delination, the new model of port management system provided by the Shipping Act envisages what is known as "landlord port". Such a model sees the government, represented by

port authority, own, provide and regulate access to port land and port waters as well as basic port infrasturcture such as breakwaters, sea channels and navigational aids. Port operators then lease these facilities and provide port services under a long-term contract or concession.

Further innovation of the Act 17/2008 is the development of Port Authorities to supervise and manage commercial operations within each port. Their primary responsibility will be to regulate, decide the price and supervise access to basic port infrastructure and services including port land and waters, navigation tools, pilotage, breakwaters, port basins, sea channels (dredging) and port road networks. In addition, the port authority will also be responsible for developing and implementing the port master-plan (including determining land and sea areas of control) as well as ensuring port orderliness, security and environmental sustainability. Port operators on the other hand, can participate in providing cargo handling, passenger facilities, mooring services, refueling and water supply, towage as well as storage and other superstructure, amongst others. In a landlord port setting, such arrangements or divisions across the public and private sector are common (Asian Development Bank: 2000, World Bank: 2001). While the arrangements may vary across countries, it is submitted that in a place where there are public interest or natural monopoly considerations, like Indonesia, such functions are best provided by the government. However, the important thing which should be considered is whether Indonesia's port authorities will have the requisite technical and financial capacity to effectively carry out these functions. In addition, regarding staffing, while it is expected that port authorities might recruit professional staff with higher salary, such as retired shippers, the Transport Ministry has made it clear that they expect the port authorities to be staffed by a combination of Ministry officials from the Sea Communications Directorate and Port Administration (Adpel) offices (Kholik Kirom: 2008). Another concern that has been elaborated in the beginning of this paper is the interaction between planned port authorities and incumbent IPCs which might lead to bias. While the IPCs is the only port operator having the best sufficient infrastructure, there is a need to develop new terminals as well as operator facilities which will be of an advantage to IPC with their ready to use equipment. It is therefore critical that the port authorities have the capacity to generate their own sources of funding, and not be entirely dependant upon transfers from the central government.

A new model concerning port authority was introduced by the regional government of Batam, which established Batam Authority *(Otorita Batam)* under Local Regulation No 12/2011 which revised Local Regulation No. 1/2008 cencerning ports management in Batam. While nowhere in the Act 17/2008 is suggested that port management be regulated under regional autonomy, it is argued that the establishment of the Batam Authority can be seen as

a tendency to direct port management towards the concept of decentralization. However, Djalal (2011) argued that the movement of port management toward autonomy should be considered carefully. This is because the port's asset is not only a national asset, but it involves international aspects, especially those of compliance with the International Maritime Organisations (IMO). The International Convention on the Life at Sea 1974 (SOLAS 1974), established under the auspices of International Maritime Organization (IMO), provides two regimes that are topical and outstanding in the current maritime mileu, namely International Safety Management (ISM) and International Ship and Port Facility Security (ISPS). Both regimes serve as Codes that world-wide ports should comply with. While most major ports in Indonesia already have both ISPS and ISM code, infrastructure gaps exist between those three ports making the implementation of such codes difficult.

National Ports Masterplan

As with many Indonesian laws, in particular those sponsored by the Transport Ministry, Act 17/2008 is very general and important details will be provided in the implementing of regulations and other supporting documents. Another port management transformation provided within Act No. 17/2008 is the introduction of National Ports Master Plan (NPMP), as stated in article 71-78 of the Act. According to this Act, the government should draw NPMP, which consists of national port policy, port location plan and port hierarchy (Article 2 Draft NPMP 2011). Similar to Act 17/2008 the Draft on NPMP stated that the sea port consists of three level of hiererchies, which include main port, collector port and feeder port (Article 6 Draft NPMP 2011). At the port level, port authorities are responsible for individual port masterplans covering such matters as geographic (land and water) working areas, the provision of basic infrastructure and the regulation of port operator access to facilities. Furthermore, Article 73 envisages that every port should have its own port masterplan, which should not be contrary to NPMP. Such a masterplan will determine the locations, functions and hierarchies of Indonesia's ports. The Transport Minister is responsible for this document which has a shelf-life of 20 years. Changes can be made every 5 years or more frequently if emergency circumstances require. However, unfortunately, NPMP will not be articulated within the law, instead, it will remain as a separate supporting document. The Transport Ministry planned to complete NPMP by April 2009. However, to date, such a masterplan is still in draft form, known as Draft on National Ports Masterplan 2011-2030, with no significant progress. Hence, investors are unable to progress with their investment plans until necessary implementing regulations, planning documents and supporting institutions are developed. Fig.2 provides a simple schematic mapping out of the governance structure of the national ports system under the Act 17/2008.

It can be seen from the illustrated scheme above that while such masterplans

will determine both current and planned ports, in terms of locations and hierarchy (function), it is not clear whether there will be a dedicated port An authority for each single port (comprising multiple terminals), or other port authorities will oversee multiple ports. While NPMP can be seen as a turning point in Indonesia's ports reform, which might overcome the deficiency in regulatory environment, the non-progressive Draft NPMP might lead to obscurity of regulatory as well as institutional frameworks in a port system. For an investor, it means the existence of a policy vacuum, where they are unsure of what process must be pursued and what approvals and permits must be obtained from which agencies, to be able to participate more in a port system. It is submitted that the clarity of regulatory frameworks in a port system will eliminate the hesistation of investors or the private sector to participate. T would include the formality of NPMP, since NPMP provides clear national port policy and plan. With more private sector participation, the amount of insufficient and ineffective ports can be reduced and therefore might increase the port's competitiveness.

Port Privatization and Rasionalization

Although NPMP will not articulated in the law, NPMP is expected to implement the long-held plan of the Ministry to reduce the number of ports with direct international links. While private participation is crucial, port rationalization is seen as another way to accelerate the port reform system. Currently there are over 100 ports allowed to have direct international connections. This is expected to be reduced to approximately 25 (*Bisnis Indonesia*, 25 March 2008). NPMP was designed to achieve the target of reducing ports having direct international

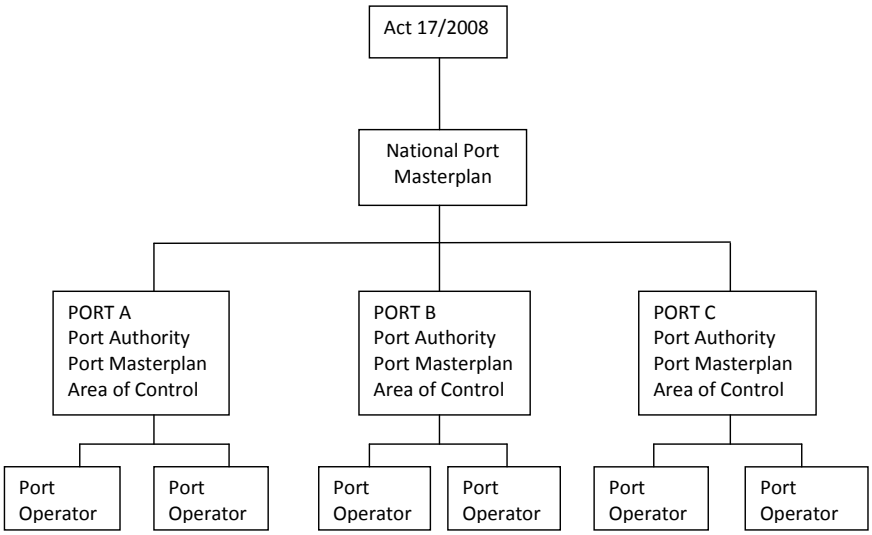


Fig.2: Governance Structure of Port under Act 17/2008: National Port Masterplan

links. Currently there are at least 100 ports allowed to have direct international connections. This number is to be reduced to 25 ports. Port rationalization has its merits. While having a large number of porst might lower per unit cargo-handling as well as freight costs, recent international practice suggets that there is considerable efficiency obtained by using larger vessels visiting deeper harbours ports with more developed cargo-handling infrastructure. It is very costly allowing less developed ports having direct international connections, since, as explained previously, that incapability of cargo-handling would only cause inefficiency as vessels have to wait in long queues to enter into porst. In addition to this, insufficient cargo-handling equipment would only cost more for shipping companies. Port rationalisation will also make it easier for Indonesian ports to comply with ISPS Standards since as until now Indonesia is still struggling to meet those standards. Other benefits of port rationalisation are to support the implementation of the cabotage principle as well as addressing smuggling. Batubara (2008) submitted that reducing the number of ports having direct international links will increase the demand for feeder ports and this can benefit domestic shipping companies. However, on the other hand, port rationalisation would scrutinise exporters and importers as it will cost them higher transport costs.

Another consideration that should be taken into account is the possible effects of rationalization on interport competition. Until now, Indonesia has not been able to enjoy the advantages of ports competing in the same hinterland cargo due to the regulatory and management structures governing the IPCs. According to Act 17/2008, competition is possible also between ports, not only within ports (that is, between competing terminals). However, with the development of NPMP, there are concerns that decisions on port location, functions and hierarchy will be made in such a way as to reduce competitive presures on the incumbent IPCs. While the IPCs have concerna about such competitive pressures, another IPCs concern on port management is the idea of privatization. Harahap (2005) argued that a port's privatization cannot be denied. Since the reason underpinning poor port performance and competitiveness is mostly infrastructure, port privatization has been seen as the most feasible means to develop port infrastructure. While most ports in Indonesia, including Lhokseumawe, Belawan and Dumai Port have cooperation with the private sector, either by a simple outsourcing system to full divestiture, business performance of this port is still relatively low. Since the selection of such private sector participation depends on trafic volume, port function, competition level, economic growth, local conditions as well as local regulations, port privatization needs the readiness of local government to join with the private sector. While port privatization would scrutinize IPCs to some extent, local governments, empowered by the decentralization process have been able to challenge IPCs in their retaining

port privatization. However, the central government has managed to keep a tight rein on this issue to preven competition with IPCs.

Integrated Ports Master Plan

The Draft of NPMP (Indonesia Infrastructure Initiative: 2012) has divided strategic ports into different economic corridors, which include: the Sumatrna economic corridor, Java economic corridor, Kalimantan economic corridor, Bali-Nusa Tenggara economic corridor, Sulawesi economic corridor and Papua economic corridor. Since this paper focuses only in ports located along Malacca Straits, only the Sumatran economic corridor will be considered. Fig.3 illustrates the Sumatran economic corridor. The division of ports according to its economic corridor has some merits by allowing ports located along the same economic corridor to cooperate in order to provide the best port services. It is submitted that port planning must respond to the growing requirements of economic activity and integrate these developments in the development of their master plans. In addition, port development must also be coordinated with national transportation planning and planning decisions cannot be made in isolation of the communities where ports operate; port plans must therefore be in conformity with local land use plans. Ports located along the Malacca Straits fall within Sumatran economic corridor, which include Lhokseumawe, Belawan and Dumai. Leifer (1978) stated that the strategic value of the Malacca Straits is obvious but the challenging situation for Indonesian ports along the Malacca Straits, is when they are faced with the capacity and capability of Singaporean as well as Malaysian ports. Of these, the port of Singapore is preeminent among them and is the world's busiest port as well as the second largest container port, handling some 12 million TEUs of containers in 1995. By contrast, Port Kelang handled about 1 million TEUs, while Penang port and Pasir Gudang in the Johor Straits loaded and unloaded some 300,000 TEUs each. On the Sumatran side, the largest port is the Belawan port in Medan. It handles about less than 325,000 TEUs.[1] In providing port services for quite heavy traffic like the one in the Malacca Straits, it is argued that the development of the three ports, Lhokseumawe, Belawan and Dumai should be done together. This means, the efficiency among those three ports should minimally be similar to each other. To achieve this, it is proposed to have integrated port planning among those ports beside the integration with the local land use plan. Since the exisence of an integrated port masterplan could lead to the integrated management system, the following section will discuss the nature of the integrated management.

INTEGRATED MANAGEMENT

Dalling (2007) defined integrated management as "the understanding and effective direction of every aspect of

[1] See Table 4 of this paper.

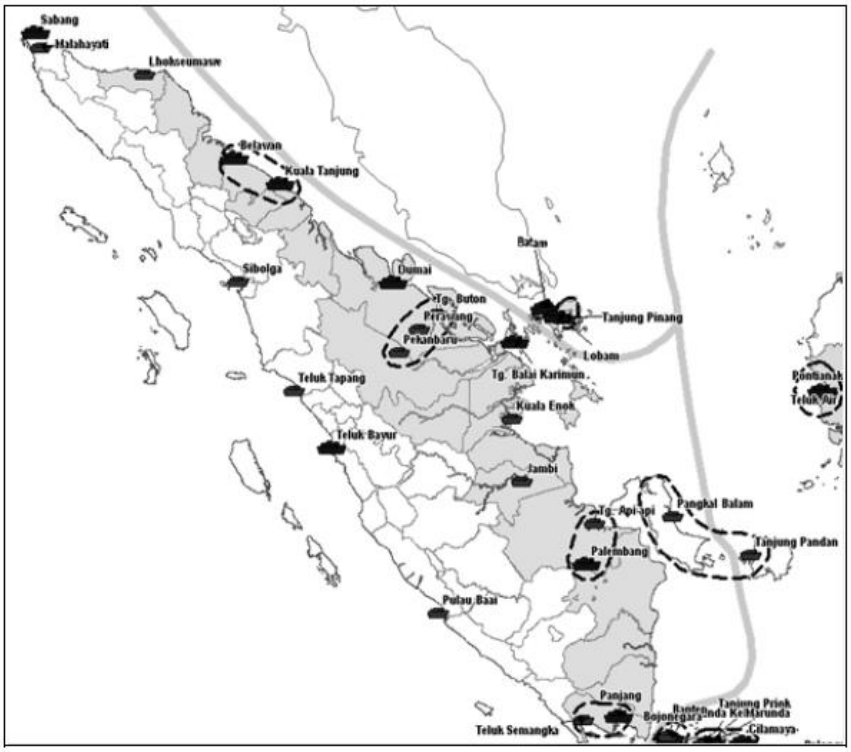


Fig.3: Strategic Ports within Sumatra Economic Corridor

an organisation so that the needs and expectation of all stakeholders are equitably satisfied by the best use of all resources." He further listed the principal characteristics of integrated management, which include: (i) making no distinction in its general approach to managing potential gain and potential loss; (ii) implementation leading to optimal efficiency and effectiveness; (iii) adressing totally the stakeholder's needs and aspirations in an equitable way; (iv) value added purposes in all aspecst and (v) adressing all aspects that contribute to the organization's performance.

With regards to ports located along the Malacca Starits, namely Lhokseumawe, Belawan and Dumai, the most appropriate port which is considered capable and meets international standars as in the criteria of the infrastructure is the Belawan port. Among these three ports, it is to be noted that there is a gap between those three ports concerning the berth occupacy rate, turnover time, waiting time, idle time as well as effective working time. Chapter VIII of the Indonesian Transportation Ministry Regulation No 60/2011 (PerMenhub 60/2011) provides class categorisation of Indonesian ports according to its infrastructure and coverage, which includes main port, port class I, II, III, IV and V. While Lhokseumawe and Dumai are categorized as port class II and I, respectivelly, Belawan is categorized as a main port.

As explained previously, port performance also depends on the local government's commitment. Therefore, it is argued that to provide better services on ports for navigation along Malacca Straits, integrated management system of ports is needed for Indonesian ports located along Malacca Straits, especially for international links. While it is not neccessary to have decentralized management of ports, all these three ports should be centred on the Belawan Port within an integrated management system. In this way, there will be only one developed port serving bigger vessels in depeer waters.

CONCLUSION AND RECOMMENDATION

This research has analysed the Indonesian legal framework concerning the Ports Management System. While the current Indonesian Act 17/2008 on Shipping has provided the foundation for port system reform, much remains to be done, since transforming the Indonesian port system is deemed to be a long and arduous process. It is argued that limited private sector participation contributes much in ineffeciency of Indonesian ports, which lead to incompetitiveness. The existence of the regulatory framework completed with planning documents is crucial since this will assure the private sector of the relevant mechanism that should be followed in order to participate in a port system. While Act 17/2008 requires the government to draw up theNational Ports Master Plan ((NPMP), unfortunately such a document is still in draft form with no further developments. One of the implementation strategies of NPMP envisaged within the draft of NPMP is integrated port planning. It is submitted that with regard to the Malacca Straits, it is important for Indonesia to have efficient and competitive ports to serve the international market demand. While the capacity of Lhokseumawe, Belawan and Dumai is varied, it is proposed that these three ports should be developed into an integrated port planning both between ports as well as with local land use plan. Such integrated planning would probably move towards integrated management which would provide a clear mechanism for private sector participation. This could lead to the injection of much needed competition, leading towards the improvement of port services.

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