ASSOCIATION OF SOUTHEAST ASIAN NATIONS

Final Report
Summary

ASEAN Maritime Transport Development Study

November 2002

ALMEC
ALMEC CORPORATION

ASEAN Maritime Transport Development Study

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Summary

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1 INTRODUCTION

Project Background and Objectives

1. The necessity of this project was first stipulated in the Hanoi Plan of Action at the 6th ASEAN Summit in December 1998. Thus, the project is listed in the Successor Plan of Action in Transport 1999-2004. The primary objective of the project is to formulate a medium-term policy and development framework for the ASEAN maritime transport sector covering ports and shipping, which will serve as the guiding document for ASEAN cooperation for the period 2003-2008.

2. The policy and development framework plan as final output of the project will contain the proposed objectives, strategies and short- and medium-term programs and activities for the following maritime components:

(a) Port infrastructure development and operational needs for the ASEAN port network, consisting of 46 designated national ports;
(b) Shipping fleet development and modernization requirements covering ship technology, shipbuilding and repair, ship inspection, ship ownership, management and operations, etc.;
(c) Human resource development covering education and training of seafarers, shore-based maritime and safety personnel, etc.;
(d) Maritime safety and environmental protection covering aids to navigation, search and rescue (SAR), port state control (PSC), and oil spill preparedness and contingency;
(e) Integrated transport and logistics development needs, particularly for harnessing the potentials of multimodal transport operations, e-commerce and Internet for freight transportation and improving inland transit transport services and access (mainly roads, inland waterways, river transport, and railway) as part of the maritime transport intermodal chain; and,
(f) Possible institutional and regulatory reforms for a synergistic and competitive maritime transport environment in ASEAN.

Project Implementation

3. The Study of ten-month's duration started in February 2002 and was finished in September 2002. All the activities stated in the project TOR were already undertaken. The monthly milestones are as follows:

- Convening of the Inception Meeting on 8 February 2002 in Jakarta with 19 participants
- Conduct of research missions in ten member countries from March to April
- Convening of the Consultation Meeting on 24-25 June, Manila, with eight participants
- Convening of the Regional Workshop on 29-30 July, Bangkok, with 60 participants
- Finalization of the Study Report by June 2003

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2 SECTORAL ACHIEVEMENTS

Trade and Traffic

4. In terms of exports in FOB prices, ASEAN trade increased its share in the global trade from US$ 142 billion or 4.1% in 1990 to US$ 354 billion or 6.5% in 1999. Since ASEAN's contribution to the world economy is as yet limited at 2.8% in terms of gross domestic product (GDP), the ASEAN economy relies much on external trade than individual domestic trade. It is closely linked with the advanced economies of North and Northeast Asia, the United States of America and the European Union. However, despite its initial efforts at regional economic integration, intra-ASEAN trade has continuously maintained its share of less than 30%. Today, about two thirds of ASEAN trade is done within East Asia (Northeast Asia + ASEAN).

5. All ASEAN ports handled 1,120.0 million tons in foreign trade and 317.2 million tons in domestic trade (Table 2.1). The traffic increase rates from the 1996 data were 9.6% for foreign trade and 7.2% for domestic trade. The rates were moderate because regional ports handled more valuable cargo than sizeable bulk cargo. During the same period, ASEAN trade expanded by 1.35 times in value.

6. In regard to container cargo, the ports in the region handled 22.1 million TEU in 1996 and 31.7 million TEU in 2000. Containerization was also a phenomenon in the region during the period, although it was still in its early stage, increasing from 17% to 22% only.

7. In comparison with the world shipping traffic, the ASEAN overseas shipping traffic accounted for 20.6% of the world traffic (5.37 billion tons in 2000) and 17.1% of the world container traffic (185 million TEU in 2000).

Table 2.1 ASEAN Seaborne Traffic by Country

('000 tons)

Country	Foreign Trade		Domestic Trade	
	Year 1996	Year 2000	Year 1996	Year 2000
Brunei Darussalam	2,379	2,074	n.a.	n.a.
Cambodia	860*	1,859	n.a.	n.a.
Indonesia	328,439	364,000	170,133	180,229
Malaysia	161,956*	174,078	21,689*	16,091
Myanmar	1,373	1,975	100	153
Philippines**	67,516	72,181	71,956	77,655
Singapore	314,164	325,591	-	-
Thailand	106,400	126,166	24,661	21,970
Vietnam	38,468*	52,128	7,261*	21,119
ASEAN	1,021,555	1,120,052	295,800	317,217

Source: *Documents received during the Research Missions,*
Note: ** Year 1997 figures; ** PPA ports only*

Shipping Industry

8. The ASEAN flag merchant fleet size grew at a much higher rate than the world fleet. It expanded by 3.4 times since 1980. The ASEAN share in the world tonnage thus increased from 3.0% in 1980 to 7.6% in 2000. In recent years, Cambodian flagged fleet has shown tremendous increase since it provides an open registry to foreign vessels.

9. Today, each member country's fleet has distinguishable features. Singapore's fleet is outstanding compared with others, since it is the largest in average vessel size and the youngest in average vessel age.

10. A few ASEAN-based shipping lines are currently engaged in trans-Pacific and Asia-Europe trunk operations such as NOL and MISC. Others focus on intra-Asian trade. The economic crisis of 1997 and the still weak freight rates that prevailed in 2000 have tested the ability of several regional carriers to meet their financial obligations, and creditors' consent has been crucial in their continued operation.

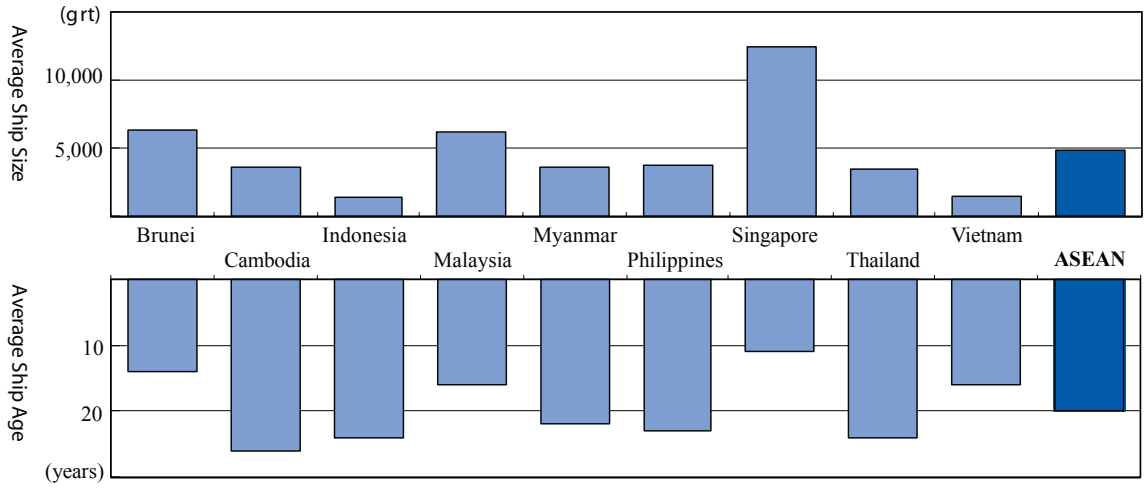
Table 2.2 Merchant Fleets by ASEAN Flag 1980 – 2000

(unit: 000 GRT)

	1980	1990	1995	2000	Annual Change (%)		
					1980-1990	1990-1995	1995-2000
ASEAN	**12,427**	**22,609**	**31,800**	**42,407**	**6.1**	**7.1**	**5.9**
Brunei	-	358	366	362	-	0.4	- 0.2
Cambodia	-	-	60	1,447	-	-	189.0
Indonesia	1,412	2,179	2,771	3,384	4.4	4.9	4.1
Malaysia	702	1,718	3,283	5,328	9.4	13.8	10.2
Myanmar	88	827	523	446	25.1	-8.8	0.9
Philippines	1,928	8,515	8,744	7,002	16.0	0.5	-3.1
Singapore	7,664	7,928	13,611	21,491	0.3	11.4	9.6
Thailand	392	615	1,743	1,945	4.6	23.2	2.2
Vietnam	241	470	700	1,002	6.9	8.3	7.4
World Total	**419,911**	**423,627**	**490,662**	**558,054**	**0.1**	**3.0**	**3.3**

Source: Lloyd's Register of Shipping, Statistical Tables (London), various issues.

Figure 2.1 Countrywide Fleet Characteristics in ASEAN



Port Development

11. The administration, management and operation of ports are primarily the functions of government. In ASEAN, these functions are mostly entrusted to the port authority (PA) that is attached to any of the ministries or departments of transport, communications, public works and transport, and transportation and communications. ASEAN, however, differs on matters such as:

- The number of PAs in the country, whether single or multiple, e.g. a single PA in Myanmar and multiple PAs in Indonesia;
- The number of ports under each PA, whether single or multiple;
- The role of the PA, whether as regulator or as operator and regulator; and,
- Whether or not the PA is financially autonomous.

12. In recent years, the active participation of the private sector in almost all government undertakings has led to the realization of many vital infrastructure projects, including port development. This is being made possible, among other things, by the Government's enactment of specific laws and regulations that precisely define the terms and climate for public-private partnership.

13. The key players in the port are the government / PA and the private sector, which mainly involve the (a) port terminal operators (PTOs) and (b) shipping lines. The three PTOs (PSA Corporation, Hutchison Port Holdings [HPH] and International Container Terminal Services, Inc. [ICTSI]) are doing business all over the world. In fact, they operate in all ASEAN ports except in Vietnam and Cambodia.

14. Containerization continues to strongly impact on the development of ports in the region as new container vessels of higher TEU capacities are introduced to main and feeder service routes. Until the mid-1990s Singapore enjoyed solo hub status in the regional port system. Today, there are 11 ASEAN ports handling over 0.5 million TEU and six ports handling over 2 million TEU, all of which are intensely battling for regional transshipment cargo.

(1) Singapore: 15.6 million TEU in 2001

(2) Port Klang: 3.2 million TEU in 2000

(3) Tanjung Priok: 2.5 million TEU in 2000

(4) Laem Chabang: 2.4 million TEU in 2001

(5) Manila: 2.3 million TEU in 2001

(6) Tanjung Pelepas: 2.1 million TEU in 2001

(7) Bangkok: 1.1 million TEU in 2001

(8) Tanjung Perak: 0.9 million TEU in 2001

(9) HCMC: 0.9 million TEU in 2000

(10) Johor: 0.7 million TEU in 2000

(11) Penang: 0.6 million TEU in 2000

Logistics Development

15. Freight forwarders in developed countries provide extensive logistical and supply chain management services. These services go beyond integrated transport; they cater to the needs of exporters and importers for all logistics requirements from the point of origin of the raw material, through themanufacturing process to the delivery to the final consumer. This is because customers require that services offered by freight forwarders should add value to their goods and make the customers themselves more competitive. In contrast, freight forwarders in ASEAN countries are faced with many physical and non-physical barriers, such as inadequate banking practices, documentation and insurance, before they can provide full logistical services.

16. Progress in the availability and development of logistics management expertise varies widely across countries in ASEAN. The development of logistics services reflect up to a certain extent the economic development achieved by individual member countries. In Brunei, Indonesia, Malaysia, Philippines, Singapore, Thailand, and, up to a certain extent, Vietnam, freight forwarders are able to provide integrated transport operations as well as varying levels of logistics services, while in Cambodia, Lao PDR and Myanmar, the freight forwarding industry is still in its infancy.

17. Apart from Brunei, Cambodia, Lao PDR, and Myanmar, all the countries in ASEAN have established national forwarders' associations to improve and standardize the level of services offered by forwarders in their respective countries[1]. In 1991, the ASEAN Federation of Forwarders Associations (AFFA) was formed to pursue all measures to improve the quality, standard and professionalism of freight forwarders as well as to assist and support the establishment of other national forwarders' associations in other ASEAN member countries.

Table 2.3 Freight Forwarder Status in ASEAN

Country	Legal Status	Recognized by Customs	Recognized by Port Authority	House Manifest for Cargo Submission	EDI
Brunei	Yes	Yes	Yes	Yes	Yes
Cambodia	No	No	No	No	Manual
Indonesia	Yes	Yes	Yes	Yes	Yes
Lao PDR	No	No	No	No	Manual
Malaysia	Yes	Yes	Yes	Yes	Yes
Myanmar	No	No	No	No	Manual
Philippines	Yes	Yes	Yes	Yes	Yes
Thailand	No	No	No	No	Yes
Singapore	Yes	Yes	Yes	Yes	Yes
Vietnam	Yes	Yes	Yes	Yes	Manual

Source: TIFFA

Maritime Safety, Environment and Security

18. In line with the enforcement of a number of international conventions, ocean-going shipping has subsequently improved navigational conditions. This may be indicated by the decrease in the number of totally lost vessels of more than 100 GRT from 337 in 1967 to only 132 in 1998.

19. In ASEAN, maritime accident data vary among countries due mainly to different reporting and insurance systems. A analysis may work from the aspect of human loss. In terms of results, Indonesia, Philippines and Vietnam are the countries suffering from frequent maritime accidents, recording over 100 fatalities on average in recent years. The three countries have a similar shipping industry structure: active interisland and coastal shipping and weak national shipping lines in foreign trade (Figures 2.2 and 2.3).

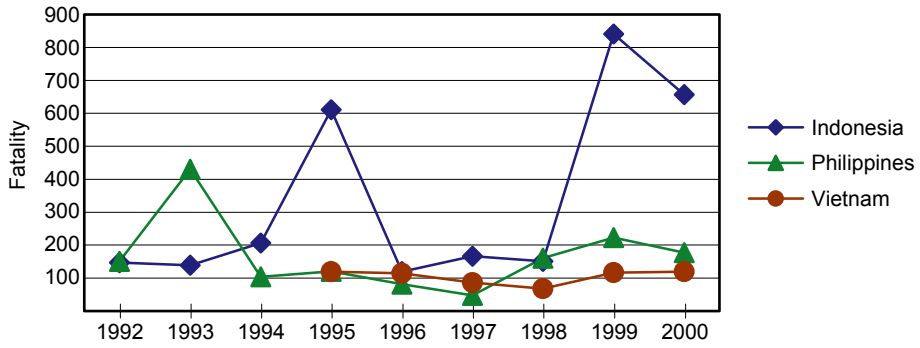
1 Cambodia, Lao PDR and Myanmar are currently in the process of establishing their own freight forwarders 'associations.

20. For many years the quantity of oil spill from ships was strongly correlated to the quantity of oil carried by ships. The change in this trend occurred in the 1980s when oil increasing quantity of oil carried. This trend reversal coincided with a number of significant events that positively affected ship safety and environmental protection. In recent years there have been numerous oil spills in the ASEAN region, of which the latest and most disastrous was the MV Evoikos accident in 1997 which spilled 28,500 tons of oil in Singapore.

21. Maritime security presently defines as spillages began to decline despite the piracy unlawful acts against the safety of navigation, threatening the safety of ships and the security of their passengers, crew on board and even their cargo. Piracy started thousands of years ago and continues to plague modern-day shipping industry.

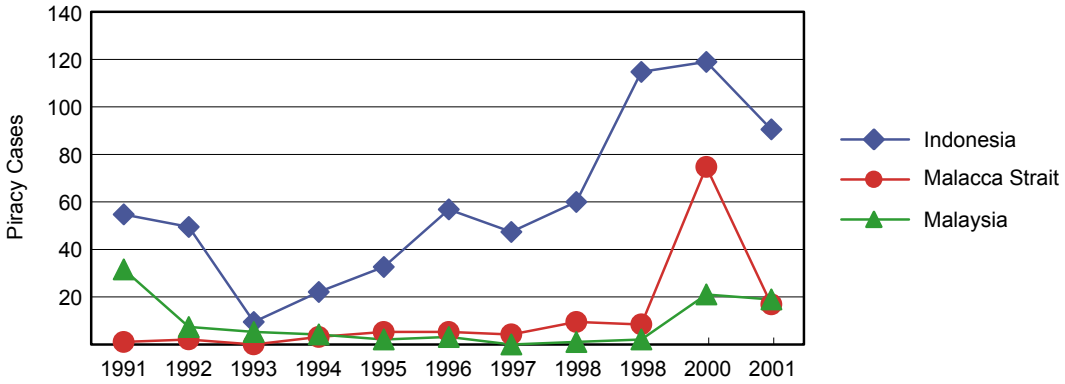
22. The IMB reports that attacks on ships were down by 27% to 335 worldwide in 2001. Nearly half of the global piracy incidents or 167 cases occurred in the ASEAN region. A staggering 91 cases happened on Indonesian waters, followed by Malaysian waters (19 cases) and the Malacca Strait (17 cases).

Figure 2.2 Change in Maritime Fatality Tolls among Some ASEAN Countries



Source: Country Reports compiled by the Study

Figure 2.3 Trend in Piracy Incidents at Some ASEAN Waters



Source: IMB

Seaferers' Education

23. According to the BIMCO/IMF periodic survey, the worldwide supply of seafarers in 2000 was estimated to be 404,000 officers and 823,000 ratings. The OECD countries (North America, Western Europe, Japan, etc.) remain the most important source of officers, but ASEAN has increased its share (84,000 or 20.8% for officers and 329,000 or 40.0% for ratings).

24. The comparison between current supply and demand shows a modest theoretical shortfall of 16,000 officers or 4% of the total workforce required to man the world fleet. For ratings there continues to be a significant overall surplus, although there are doubts about the extent to which large numbers of these ratings are qualified for international service.

25. There are more than 130 maritime education institutions in the ASEAN region, educating more than 35,000 maritime students. Of the ten ASEAN nations, three do not have any maritime education institutions, namely Lao PDR, Brunei and Cambodia. Table 2.4 describes the scale of maritime education institutions in the region. The Philippines has an overwhelming percentage of the number of maritime education institutions in the region.

Table 2.4 Schools, Students and Teachers/Staff (2001) in ASEAN Countries/4

Country	Schools	Students		Instructors/5	Academic Staff/5
		Enrollees	Graduates		
Indonesia/1	7	3,106		214	751
Malaysia	1	12,151	130/7	55	N/A
Philippines/2	118		20,073	N/A	N/A
Myanmar	1	9,577		61	12/3
Thailand	1	160/7	7,780/9	23	18
Vietnam/6	3	19,520		142	1059
Singapore	1	1,300		13	56

/1 excl. Pendidikan dan Latihan Pelayaran
/2 School Year 1996-97
/3 Not including administrative staff
/4 No maritime schools in Cambodia, Lao and Brunei
/5 Typically, around 20% of teaching staff are holders of a Master's Degree or higher and around 50% are Bachelor degree holders. Moreover, around 30% of the teaching staff holds certificate of competence of Master
/6 Not including VIMASES I
/7 Not including short course graduates
/8 Diploma graduates in Jan. 2002
/9 Includes short course graduates only

ASEAN Cooperation in Maritime Transport Sector

26. ASEAN has a long history of cooperation in maritime transport. However until 1998, there were limited cooperation areas. The first regional agreement was made in 1975 to coordinate SAR activities, ie the Agreement on the Facilitation of Search for ships in Distress and Rescue of Survivors of collective measures that promote and strengthen ASEAN self-reliance and cooperation in shipping and accelerate the improvement and development of ASEAN Ship Accidents. Another is an ASEAN Resolution on Shipping and Trade adopted in the 10th AEM in 1980. This resolution, as reaffirmed at the 11th AEM in 1981, recognized the importance of shipping and ports to the development and expansion of ASEAN trade and economy through ports. Another valuable event was the establishment of the ASEAN Ports Association (APA).

27. The 5th ATM in 1999 adopted the Successor Plan of Action in Transport(SPAT) 1999-2004 consisting of 55 proposed projects, 15 of which are on maritime transport. Of the 15, three projects seeking external fund (MT Nos. 4, 11 and 14) are under preparation. Seven are ongoing (MT Nos. 2, 7, 8, 9, 10, 12, and 15) and five are already completed (MT Nos. 1, 3, 5, 6, and 13). The SPAT also includes one carryover project from the ASEAN Plan of Action in Transport 1996-1998 and five new ones.

Table 2.5 Implementation Status of the Successor Plan of Action in Maritime Transport for 1999-2004

Programs/Projects/Activities		Implementation Status
MT1	Development of the priority ASEAN port system, which will address technological advances in containerization and vessel design, and the opportunities for multimodal transport, interstate ferries / ro-ro services and cruise tourism development	Completed
MT2	Development of a regional policy and development framework for a competitive maritime transport system in the ASEAN region and beyond	Ongoing
MT3	Engagement of effective cooperation, dialogue and partnership among authorities, shipowners, freight forwarders and shippers' councils in mutually beneficial areas to develop and expand ASEAN shipping and trade	Completed
MT4	Development of a port EDI network among ASEAN ports and the global port community	.Under preparation
MT5	Simplification and harmonization of port documentation and procedures on vessel and cargo movements	Ongoing
MT6	Promotion of regional cruise tourism (through the ASEAN Cruise Working Group)	Completed
MT7	Progressive implementation and/or adoption of IMO conventions	Ongoing
MT8	Common ASEAN near-coastal voyages	Ongoing
MT9	Intensified cooperation on port state control (PSC) activities for substandard ships and errant shipmasters, among others	Ongoing
MT10	Cooperation in transboundary oil spill prevention and preparedness	Ongoing
MT11	Development of an EDP-based information system for dangerous goods in selected ASEAN ports	Under preparation
MT12	Strengthening of regional capacity for maritime search-and-rescue (SAR) operations	Ongoing
MT13	Networking of maritime training centers and educational institutions	Completed
MT14	Training of trainers for seafarers' academies in ASEAN member countries (STCW95/ISM Code)	Under preparation
MT15	Reciprocal recognition of seafarer's licenses and certificates	Ongoing
Carry-over	Establishment of ASEAN Inland Waterways and Ferries Training Centre-Palembang	Ongoing
New	Enhancement of ASEAN transport security cooperation	Ongoing
New	Training project for vessel masters, chief engineers and safety administrative personnel on the Lancang-Mekong River (Phase I)	Ongoing
New	Training course on maritime information processing and application	Under preparation
New	Familiarization and safety training courses for seafarers	Under preparation
New	Training and development program for electronic navigational charts (ENC) within ASEAN-China sea lanes	Under preparation

Source: The ASEAN Secretariat (as of February 15, 2002

3 ANALYSIS OF THE FUTURE MARITIME TRANSPORT SYSTEM

Competitive ASEAN Maritime Transport System

28. The ASEAN Transport Cooperation Framework Plan worked out the development framework for a competitive ASEAN maritime transport system towards the year 2020 (Figure 3.1). To make the regional maritime transport system competitive with others, the development framework has three key strategies, namely unitization services, seamless services and high-speed services. This section reviews this long-term framework to identify mid-term policy directions in the region.

29. Firstly, ***unitization services***, such as containerization and palletization, have been increasingly adopted by ASEAN ports. After the regional economic crisis of 1997, container traffic has grown at a high pace of over 8% annually, resulting in increased activities in container ports and feeder lines in the region. A prime container port is generally defined as a port handling over 2 million TEU per annum. It is remarkable that ASEAN has produced five new prime ports since 1998 besides the outstanding hub of Singapore. They are Port Klang, Tanjung Priok, Laem Chabang, Manila, and Tanjung Pelepas. In the regional shipping scene, feeder container lines have been expanding their business scale besides global megacarriers. In 2000, two ASEAN-based feeder lines were ranked 4th and 5th largest feeders in the world, i.e. Thailand-based Regional Container Line (carrying 1.5 million TEU) and Singapore-based Samudera Shipping Line (carrying 1.2 million TEU).

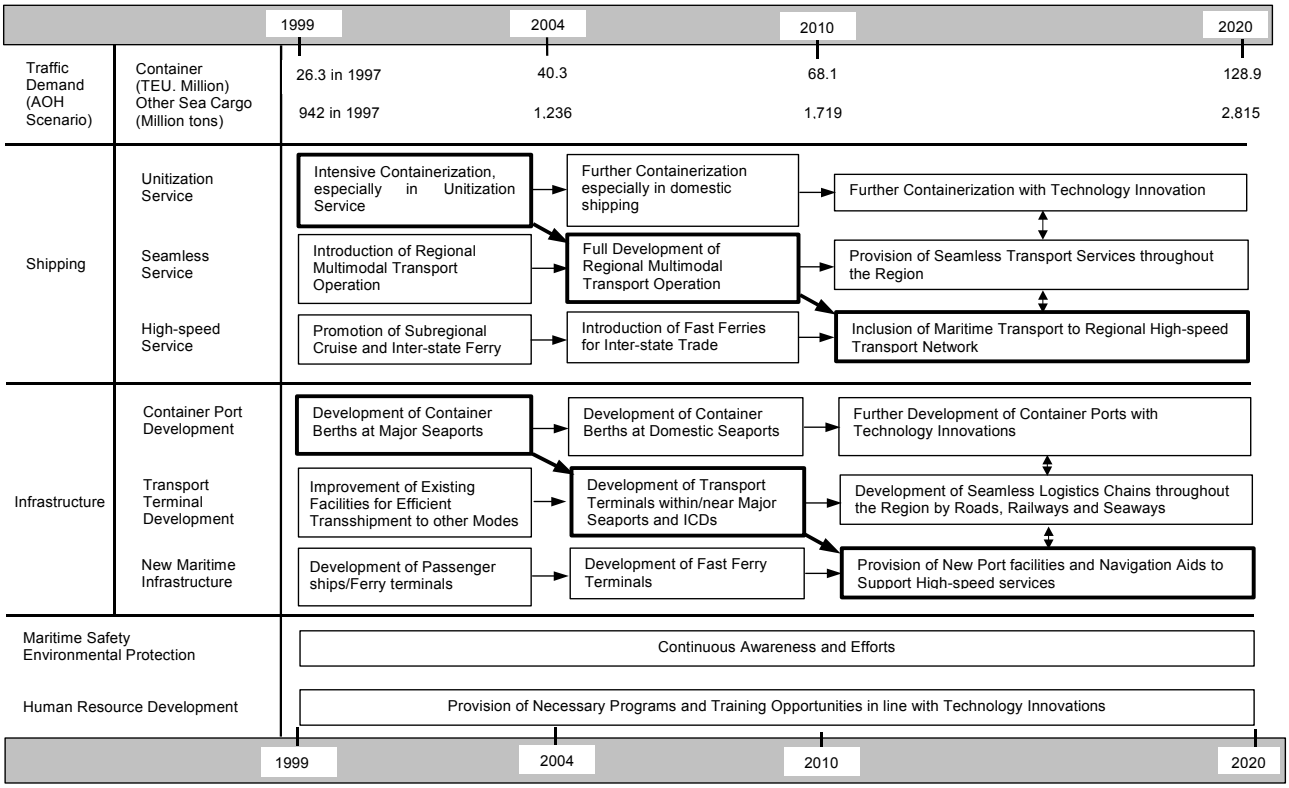
30. In the mid-term perspective, this trend is expected to continue. Secondary ports, such as HCMC, Surabaya, Cebu, and Penang, will handle over 1 million TEU and container traffic will increase even on domestic shipping routes particularly between national gateway ports or prime ASEAN container ports and their secondary ports. Container liner services will extend their regional scope in terms of network and frequency accordingly.

31. ***Seamless service*** is a value-added service where carriers/agents provide long-distance port-to-port and ultimately door-to-door services. Shippers need not be bothered with documentation, and carriers/agents will switch to multimodal operators. This Study has concluded that multimodal transport in ASEAN is still in its early stage, particularly international multimodal transport. But ASEAN has already started promoting it by institutionalizing regional framework agreements on goods in transit, interstate transport and multimodal transport, and promoting the ASEAN Highway Network Project and the Singapore-Kunming Rail Link (SKRL) Project. Therefore, full development of regional multimodal transport operation can be expected in the mid-term.

32. ***High-speed service*** is also regarded as a value-added service particularly in transporting valuable goods and passengers. Fast craft ferry services (approx. 35 knots and over) can be seen at the Visayan Sea of the Philippines and the Malacca and Singapore straits. Fast container ship is in its experimental stage between Japan and China and along the US coast. According to the project feasibility study [2], 40% of airfreight shippers may transfer to fast container shipping between Kobe and Shanghai. Such fast shipping service in Asia will start between Japan and its neighbors and then ASEAN fast ship will come into reality probably beyond the mid-term time frame.

2 The Feasibility Study on Techno Super Liner in International Shipping, 2001, Ministry of Land, Infrastructure and Transport of Japan

Figure 3.1 Development Framework for a Competitive ASEAN Maritime Transport System



Fleet Requirements

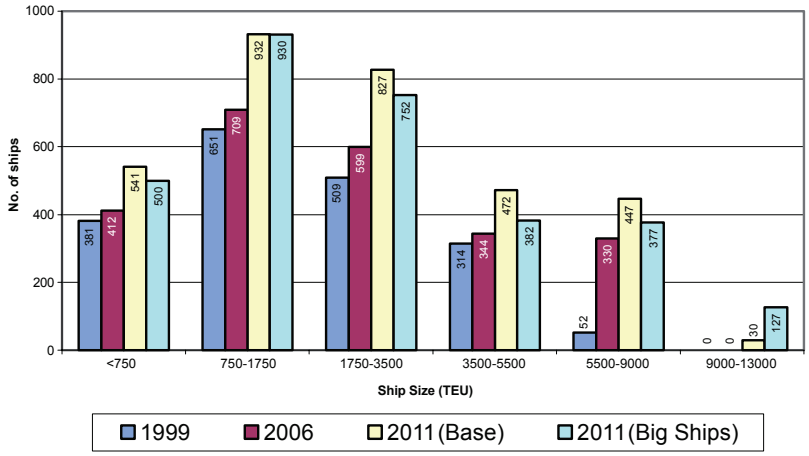
Container Ships

33. Since there are still many arguments on future container ships, the ESCAP study prepared two scenarios: the base case and the big ships scenario. The base case explores a relatively conservative hypothesis in which the growing demand for the carriage of containerized cargoes will be met by a continuation of the slow 'creep' in ship size similar to that which characterized the 1970s and 1980s, allowing for an increase in scale of the largest vessels in service up to 8,000 TEU in 2006 and 12,000 TEU in 2011. Under this base case scenario, it has been projected that by 2011 there will be around 950 vessels with capacity of more than 3,500 TEU, of which only 30 ships are in the range of 9,000-13,000 TEU capacity, for the trans-Pacific, Far East-Europe and North American Atlantic Coast services.

34. The 'big ships' scenario starts from a different assumption, that the major carriers will attempt to exploit further economies of scale and deploy vessels of 9,000-13,000 TEU on major trade lanes, which will be radically simplified, calling at only one or two ports in Asia.

35. As main line ships become larger and faster, some feeder ships will follow this track. Thus, container services within Asia will split into major and minor feedering services. But small ships with around 500 TEU will not disappear unless all ASEAN ports handle considerable containers in a high efficiency.

Figure 3.2 Required Number of Container Ships by Size



Source: UN ESCAP 2001 'Globalization and Integration of Transport: Regional Shipping and Port Development Strategies'

Bulk Shipping Fleet

36. The world bulk fleets have undergone steady growth in the 1990s, with a rise from 456 to 560 million DWT or an annual increase of 2.1%. The average age of all the bulk fleet is about 15 years while the larger ships over 150,000 DWT are significantly younger at 8.3 years. This reflects the revival in building new tanker. This stable trend will continue in the 2000s.

37. It was true for oil tanker operators and bulk operators to expand their ship size to capture high productivity during the three decades from the 1950s to the 1970s. Further enlargement is technically possible but it may reduce cost-productivity due to limited operation opportunities and insufficient port infrastructure. For example, Japanese shipyards can build oil tanker over 1 million DWT but the most optimized oil tanker is only 280,000 DWT and is plying between Japan and the Middle East.

Table 3.1 Record of Largest and Average Vessel Sizes in the International Bulk Shipping

('000 DWT)

Year	Oil Tanker		Bulker	
	Largest Size	Average Size	Largest Size	Average Size
1950	n.a.	n.a.	25	n.a.
1955	55	n.a.	75	10
1960	55	21	100	18
1965	132	28	100	22
1970	209	43	180	31
1975	483	75	228	41
1980	563	106	248	42
1985	563	100	248	44
1990	563	93	365	47
1995	563	98	365	49

Source: Fearnley's Review, NYK

Container Port Infrastructure Requirements

38. A port needs to be properly planned, designed and constructed, equipped with the right combination of cargo handling equipment, installed with state-of-the-art port operating systems and run by highly trained and motivated personnel to attract business and satisfy its clientele. In general, the port markets or promotes itself and attains a certain role or status by the level of its infrastructures.

39. In ASEAN, most of the dry and liquid bulk facilities are specialized or dedicated and are operated primarily by the private sector, and in many cases, in private ports. This section focuses its discussion on the physical requirements of the ASEAN container terminals in terms of the number of berths needed to handle the projected traffic shown in Table 3.2.

40. On a series of assumptions which include design vessel, total berth length and TEU per berth-meter, it is estimated that some 56 berths will be required both in 2006 and 2011 as shown in Table 3.3. The most notable results of this exercise are those showing that Vietnam will require 16 berths in 2006 while Cambodia and Myanmar will require no additional berths in 2006 and 2011. Thailand will also not require additional berths in 2006.

Table 3.2 Forecast of Port Container Throughput by Country

('000 TEU)

Economies	2006	2011
Brunei Darussalam	188	300
Cambodia	64	103
Indonesia	4,582	6,145
Malaysia	8,444	14,556
Myanmar	182	270
Philippines	2,716	3,761
Singapore	23,393	30,940
Thailand	4,328	5,808
Vietnam	2,580	3,500

Source: ESCAP and JICA study reports

Table 3.3 Calculated Number of Berths in ASEAN Container Terminals

Country or Economy	2006	2011	Berth Type (draft x length)
Brunei Darussalam	1	1	DV4 (12.3m x 249m)
Cambodia	0	0	
Indonesia	10	8	DV3 (11.0m x 228m)
Malaysia	7	16	DV6 (14.5m x 366m)
Myanmar	0	0	
Philippines	4	4	DV6 (14.5m x 366m)
Singapore	18	15	DV6 (14.5m x 366m)
Thailand	0	3	DV6 (14.5m x 366m)
Vietnam	16	9	DV3 (11.0m x 228m)
Total	56	56	

Estimated by the Consultant Team

4 DEVELOPMENT AND FURTHER LIBERALIZATION OF ASEAN SHIPPING

Liberalization of Maritime Transport Services

Overseas Shipping

41. The liberalization of trade in service may be defined as a process to expand market access and to diminish any discrimination in competition. Expanding market access means that foreign providers and consumers are free to choose any modes of service deliveries to meet demand. Diminishing discrimination means that foreign service providers are treated like local providers on a level playing field. The expected benefits of these liberalization measures can be summarized into three: (i) more investment (secured through guaranteed conditions of access for investors), (ii) introduction of state-of-the-art technologies and management and (iii) more competition thus offering better services and lower prices for the consumer.

42. Historically, the maritime transport sector has shown a mosaic of liberalization initiatives and protectionist measures. These measures have some historical rationales on both sides and therefore they have to be reviewed carefully. Since the late 1980s, many developing countries accepted the pace of liberalization of maritime services and there was a recognition that:

(a) Cargo reservation schemes were restricting the shipping opportunities available to exporters and thus were hampering the expansion of trade.

(b) Relatively high freight rates charged by national shipping lines operating in a protected market were adding to the costs of shipment.

(c) National shipping lines were not being subjected to the forces of outside competition and technological change and therefore became outmoded and operationally inefficient.

(d) In many cases, state-owned national shipping lines were losing and were requiring subsidies instead of becoming revenue-earners for the state.

43. Globalization of markets accelerated by the establishment of WTO and requirements to further open up market access and abolish barriers in trade are profoundly affecting the maritime transport policy in the ASEAN region and its neighbors. The WTO Ministerial Conference in Doha in 2001 decided to launch a new round of negotiations, called the "Doha Development Agenda" which included maritime transport[3].

44. The objectives of the ASEAN Framework Agreement on Services (AFAS) are to enhance cooperation in services among member countries and to eliminate substantial restrictions to trade in services. The ultimate target is "free flow of services" adopted in the ASEAN Vision 2020. The first round of negotiations which included seven services, maritime transport services included, began in January 1996. Until today three packages of commitments have been concluded. Expanding the depth and the scope of liberalization beyond those undertaken by the member states under GATS is considered necessary to realize a free trade area in services.

Domestic Shipping

45. Cabotage is widely practiced in the ASEAN. Some practices can be observed to flexibly manage cabotage rights such as in Malaysia and Indonesia. The cabotage debate, i.e. whether cabotage should be retained or eliminated, is most vigorous in countries where the cost of national shipping is high relative to the world fleet and where

3 The negotiation schedule includes (i) submission of initial requests by 30 June 2002, (ii) submission of initial offers by 31 March 2003 and (iii) conclusion not later than 1 January 2005.

domestic shippers can perceive an economic advantage from access to cheaper shipping services. Under the new AFTA regime, costly domestic products may be substituted for imported but cheaper ones in line with removing trade barriers.

46. However, both the negotiations under WTO-GATS and AFAS exclude domestic maritime services. Thus, a concrete ASEAN policy is not required to deal with cabotage transport. In other words, there is a need to develop strategies on how to apply cabotage regime and how to partly or occasionally expand it to enhance regional economic competitiveness.

Strengthening of ASEAN Shipping Lines

47. Countries in ASEAN are well aware of the importance of competitive, reliable and efficient shipping services for their development. Despite the accessibility of satisfactory overseas shipping services, these countries wish to maintain their national fleets. When a country prefers to hold and upgrade its national fleet, this policy may be justified by some representative logic such as (i) for the stable carriage of goods, (ii) for strategic defense support, (iii) to safeguard the marine environment, (iv) for balance of payment, and (v) for the accumulation of maritime related industries.

48. During the 1970s up to the early 1980s many developing countries adopted protectionist measures to develop their national fleets against liner shipping conferences. At present, there are a variety of policy tools to achieve the same policy objective of improving national shipping capabilities where conventional protectionism measures are strictly reviewed and there is a growing concern on how to motivate and give pressure to their shipping industries. The following paragraphs describe the available policy tools in the region.

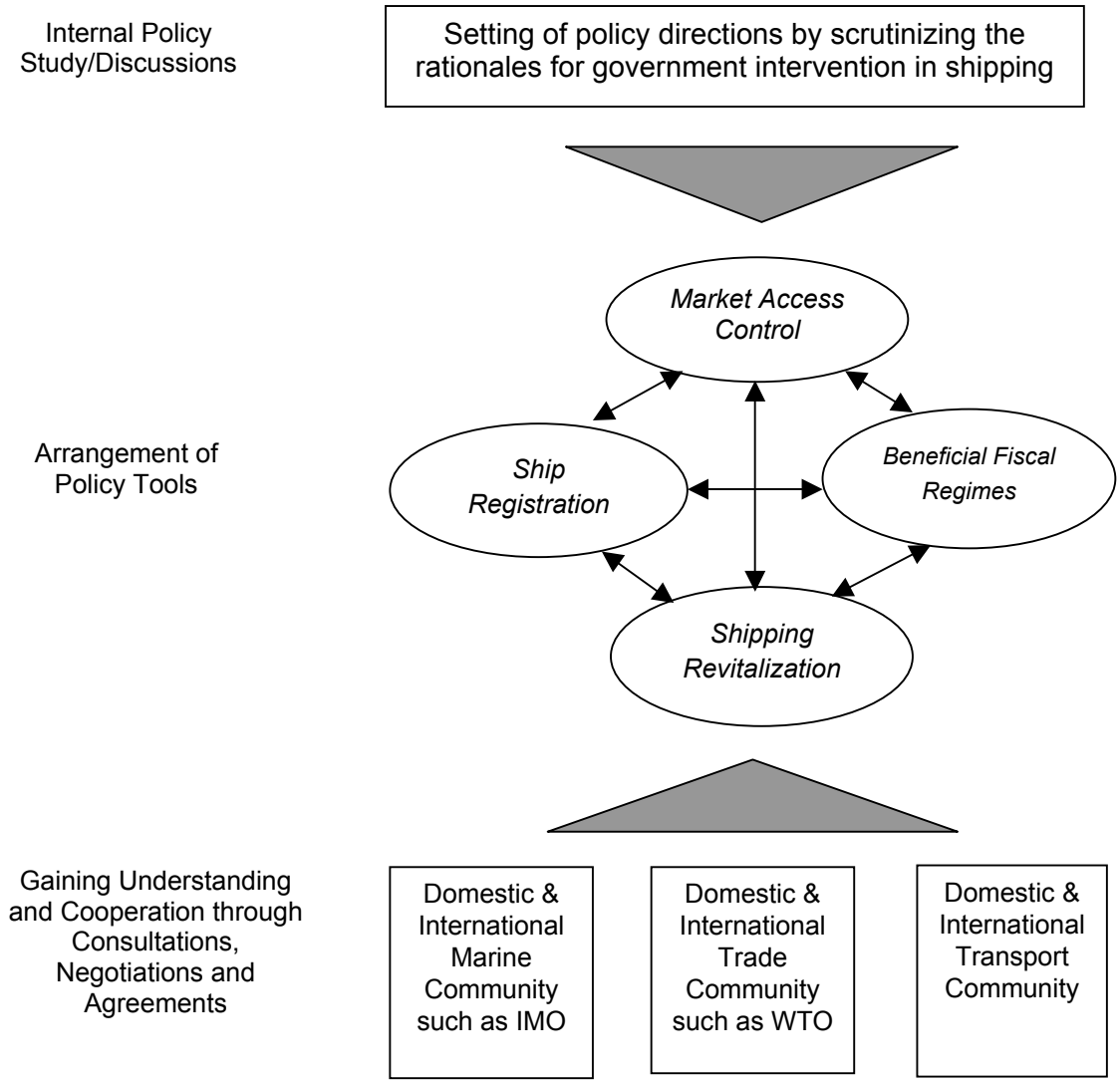
49. ***Market Access Control.*** Market access control is regarded as a typical protectionist measure that includes bilateral cargo reservation, preferential policies for national fleet and deferential pricing regime against foreign ships.

50. ***Ship Registration.*** Any country that wishes to acquire and develop a national fleet needs to establish a shipping register. Registration, nationality and the right to fly a flag are three interlinked concepts that are essential to the owning of and operating a shipping fleet. In the modern shipping world, ship registers can be classified into three, namely (i) conventional national registers, (ii) open registers to attract foreign vessels with incentives and (iii) second registers to stem the tide of flagging out by national ship owners to open registers. Therefore, the ship registration system can be regarded as a policy tool that could enhance sustainability and competitiveness of the national fleets.

51. ***Beneficial Fiscal Regime.*** Fiscal support measures can be best exemplified with the acquisition of tonnage and to the operation of such tonnage. Some ASEAN countries have adopted those measures such as the Shipping Fund in Malaysia, the Caraka Jaya Project in Indonesia and the Domestic Shipping Modernization Program in the Philippines. Favorable taxation schemes such as corporate income tax, seafarers' income tax and import duties would also assist national fleets to become internationally competitive.

52. ***Shipping Revitalization.*** Introducing commercialization and competition is another key factor in the revitalization of national shipping lines. For instance, the Malaysian International Shipping Corporation (MISC) was incorporated as a public company in 1968 and was listed on the KLSE in 1997. The Vietnam National Shipping Lines (VINALINES) has promoted equitization among its member shipping companies since its establishment in 1996.

Figure 4.1 Process of Shipping Policy Formulation



53. The development of the national shipping policy is the prerogative of government. Well-developed shipping policies reflect the circumstances under which they were made. There is a strong need to conduct an internal policy study to explore rationales for national fleet development.

54. A unilateral approach is not an adequate strategy in the orchestration of these various policy tools to best fit a country. It is necessary to take a participatory approach among shipping stakeholders. There is also an emerging importance to consult with relevant international communities in the field of overseas shipping.

5 DEVELOPMENT OF THE ASEAN-WIDE PORT SYSTEM

PORT SYSTEM DEVELOPMENT

55. Every country has its own national transport system which includes the maritime sector. A national port system (NPS) is important as it does not only classify ports according to location (sea or river) or role (hub or spoke), but also sets the direction in port development as well as the allocation of resources. This NPS, however, has to link with ports in the region and to the whole world in support of trade and commerce.

56. The ASEAN-wide Port System was initially proposed in the ASEAN Transport Cooperation Framework Plan in 1999 where 33 ports were preliminarily identified for inclusion in the trans-ASEAN transportation network. The 1st Maritime Transport Working Group Meeting in February 2000 finalized the ASEAN-wide port network of 46 designated ports. The 9th STOM in April 2000 adopted it.

57. At the present time, some of these designated ports are performing an interregional role as in the case of Singapore, Port Klang, Laem Chabang and Tanjung Pelepas. Coming closely to such role are the ports of Manila and Tanjung Priok. Others are major ports that are actively handling intra-ASEAN traffic. These present roles, however, can always shift from one to the other, during the period under consideration (2003-2008), depending on the growth of the world trade carried in containers, the shipping pattern, the bargaining powers of the major port users and port service providers, as well as competition itself in the region.

58. Figure 5.1 shows the Proposed ASEAN Port Network System consisting of 47 ports, which are considered critical to the development and integration of the region. To implement this ASEAN-wide Port System plan on a sustainable basis, respective ASEAN governments or port authorities should consider any or all of the following:

(a) Undertake port Reform Rehabilitation (see discussion on Improvement of Port Management and Operation).

(b) Improve personnel capabilities through human resource development.

(c) Enhance access to IT resources for quick and interactive information exchange.

(d) Organize a Port Study and Monitoring Team, which will ensure the conduct of vital studies as well as proper and timely feedback of study results to top management for decision-making. Discussion on the progress of the Implementation of the ASEAN Ports Network System shall be included as a regular Agenda in APA / ASEAN Secretariat Meetings.

(e) Provide or include a budget (like a Port Study Fund) purposely for the conduct of necessary studies. At the least, up-to-date pre-feasibility or pre-investment studies should always be available.

(f) Be motivated always by the ASEAN spirit of mutual understanding and cooperation and engage only in healthy competition. Remember that not all ports can be hubs. However, whether a port is a hub or spoke on the national or regional level, that port shall not be the "weakest link" in the overall transport chain.

(g) Encourage ASEAN to organize a Committee to study and prepare a sort of minimum port standards to implement the ASEAN-wide Port System. This Committee can be organized similar to that of the ASEAN highway or railway network.

Figure 5.1 Proposed ASEAN Port Network System

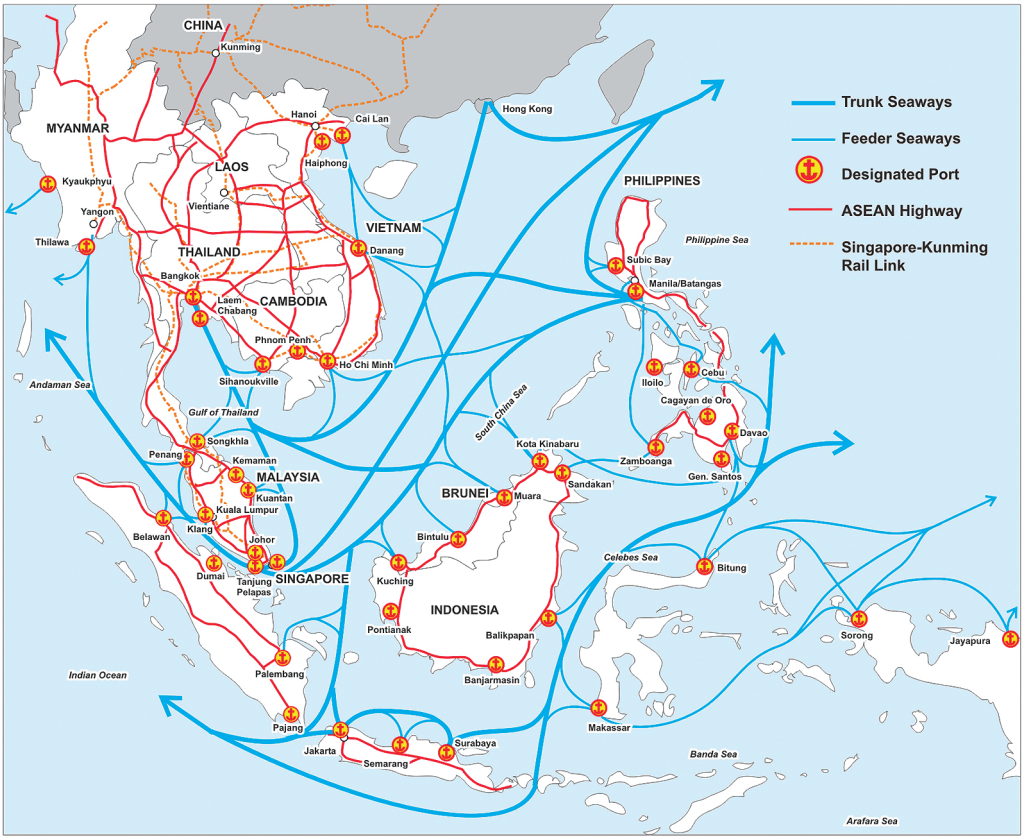


Table 5.1 ASEAN Designated Ports

Country	Designated Ports
Brunei Darussalam	Muara
Cambodia	Phnom Penh and Sihanoukville
Indonesia	Belawan, Dumai, Tanjung Priok, Palembang, Panjang, Pontianak, Tanjung Perak, Tanjung Emas, Makassar, Balikpapan, Bitung, Jayapura, Sorong, and Banjarmasin.
Malaysia	Port Klang, Penang, Johore, Tanjung Pelepas, Kuantan, Kemaman, Bintulu, Kuching, Sandakan, and Kota Kinabalu.
Myanmar	Yangon, Thilawa, and Kyaukphyu
Philippines	Manila, Batangas, Subic Bay, Cebu, Iloilo, Cagayan de Oro, Davao, General Santos, and Zamboanga.
Singapore	Singapore
Thailand	Bangkok, Laem Chabang and Songhkla.
Vietnam	Saigon, Haiphong, Danang, and Cailan.

Improvement of Port Management and Operation

59. The Government has been looking more and more on the active participation of the private sector in the realization of its infrastructure program. In spite of the differences in the legal framework and investment climate, as well as other obstacles in project implementation of this nature, some 22 of the 47 ASEAN ports are presently under public-private partnership (PPP) arrangement through contracts entered between port authorities and port terminal operators.

60. Given these scenarios, one may conclude that given these success stories on port privatization in ASEAN ports, these undertakings are free from problems and thus there is no more need for port reform. Conversely, changes taking place today in the port sector present more difficult challenges to port authorities, terminal operators and other port service providers. These changes, however, also present opportunities for new ways of doing business and create openings for new players within the very vast range of port activities.

61. To improve port management and operations in the ASEAN, the respective port authorities shall continue to have a full understanding of the port dynamics that increasingly bring these radical changes and intense global competition, as follows:

(a) Globalizing production: Through vertical specialization, focused manufacturing or other methods, it has given ports a unique opportunity to become value-adding entities such as the distriparks in ports like Singapore, Tanjung Pelapas, Laem Chabang and Subic Bay.

(b) Changing technology: The economics of container ship operations are critically dependent on port productivity. The increasing containerization of world trade brings major technology changes in both shipping and port.

(c) Shifting bargaining power: As reported during country missions, there is a growing trend of carriers owning and managing their own port and inland terminals, in addition to the small number of global container terminal operators. At the height of rivalry among these competitors, the Government or port authority shall have to exercise its regulatory powers to attain a sort of "win-win" situation.

(d) Changing distribution patterns: Distribution patterns have increasingly evolved into a hub and spoke network. Hubs compete in a highly competitive market segment where customers have options to use other facilities and pricing.

(e) Increasing environmental and safety concerns: Port authorities are increasingly faced with the need to provide adequate reception facilities in the port in compliance with IMO MARPOL Convention 1973/78. These environmental and safety facilities, despite their usually limited commercial value, become necessary and significant investments that port authorities have to provide.

6 ASEAN LOGISTICS DEVELOPMENT

Multimodal Transport Connectivity

62. At present, there is no integrated transport or logistics system in place in ASEAN despite the presence of a number of physical multimodal transport corridors available to users in the regional transport network. The smooth flow of freight within an integrated transport corridor will determine its success.

63. The level of infrastructure and nodal

links in ASEAN for multimodal transport are adequate in the six (6) original member countries. In CLMV, however, infrastructure remains an impediment to the development of integrated transport. Road transport is the dominant mode of transport within the ASEAN while sea transport continues to be the most popular mode of transport for intra-ASEAN trade.

64. ASEAN has some 51,000 km of navigable rivers transporting 369 million passengers and 74 million tons. However, key waterways are underutilized. The Mekong River needs to be developed to better integrate it with the land infrastructure. Other fluvial corridors will need to be promoted and integrated into the current transport network to enhance intermodal transfers of containers among the various modes of transport.

65. The expansion of Inland Clearance Depots (ICDs), which has been successful in ASEAN, needs further promotion and development. This is one of the prerequisites for the development of an efficient integrated transport system. Still hindering the ASEAN transport network's efficiency is multimodal transport, documentation, customs procedures and data exchange which needs to be simplified and harmonized. The use of Multimodal Transport Document (MTD) should be expanded, as well as the liability insurance for service providers.

66. The only international rail links are those joining Malaysia with Singapore, and with Thailand. There are no differences in track and loading gauges. Hence, there is no need for rail transshipment at frontiers. Greater use of rail transport (partly through the ICD concept) should be encouraged in line with the SKRL Project. The trans-ASEAN railway may be an option but the focus on freight must be explicit. Competition among transport modes will benefit the users of the ASEAN transport network.

Necessary Regional Software to Logistics Development

67. There are three transport facilitation related ASEAN framework agreements stated in the Hanoi Plan of Action 1999-2004. Each preparation status can be reported as follows:

(a) The framework agreement on **the facilitation of goods in transit**: It was signed in December 1998 but it is still non-enforceable as there are still difficulties regarding the negotiation of certain protocols.

(b) The framework agreement on **the facilitation of interstate transport** is in the pipeline. Nine (9) member countries have agreed to the revised final draft of the Framework Agreement as of April 2003.

(c) The framework agreement on **multimodal transport** will lay down the broad principles on minimum standard of registration and liability limits for ASEAN multimodal transport operators.

68. The ASEAN economic relationships among member countries have been viewed to be more competitive than co-operative, with the concept of national interest still more dominant over that of regional interest. However, the full implementation of the three ASEAN framework agreements is a precondition to the development of integrated logistics.

69. It is therefore critical for ASEAN member states to accede, at soonest possible time, to all the framework agreements and protocol for the development of efficient logistical services in the region. Any delays will result in higher logistics and operating costs in the ASEAN which in turn translates to a loss in their trade competitiveness.

70. Information technology is a very important catalyst in logistics development. The level of information technology dissemination in ASEAN countries varies considerably depending on their respective levels of economic development. If the level of dissemination is low, as the case in

CLMV, the available logistics system will be hindered by the lack of information flow and control. On the other hand, if the level of information dissemination is high, information technology will be able to facilitate trade and fully develop logistics services. In order therefore to develop an integrated regional network, there is a need to achieve similar standards in information technology across the region. If this happens, logistics development in the ASEAN will be greatly facilitated.

Table 6.1 EDI Benefits and Barriers

EDI benefits	EDI barriers
• Quick access to information • Better customer service • Reduced paperwork • Better communications • Increased productivity • Improved tracing and expediting • Cost efficiency • Stays ahead of competitors • Accurate • Improved billing	• High setup costs • Incompatible hardware/software • Lack of standard formats • Lack of customer sophistication • Lack of awareness of EDI benefits • Customer education/training • Customer resistance • Corporate culture

So*urce: Consultant Team*

Education and Training for Logistics Management

71. One of the major constraints to the development of logistics services identified by member countries in ASEAN is their respective manpower's inadequate skills and expertise in transport and logistics. Education and training will benefit individuals and organizations.

72. The Study recommends a range of flexible professional qualifications, among which is the opportunity to develop and enhance careers in logistics and transport by establishing an ASEAN Centre of Excellence for Logistics & Transport (ASEAN-CELT).

7 CONTEMPORARY ISSUES OF SUSTAINABLE SECTOR DEVELOPMENT

Maritime Safety

73. It is widely acknowledged that IMO's international conventions on maritime safety have been gradually contributing to the safe environment of international shipping. Hence, the ratification and effective implementation of such conventions are recognized as necessities in the maritime community together with the role of the IMO. It is however obvious that many countries have not complied yet to many conventions.

74. Another regional issue is non-convention sized ships, defined as ships less than 500 gross tonnage and 24 meters, which are used extensively for the movement of goods and people in the ASEAN region. A harmonized set of rules and regulations are required to ensure safety not only to the ships but also to the environments where the ships are trading.

75. As a port state, the Port State Control (PSC) is effective in its role of inspecting foreign ships in national ports. Based on experience, the regional monitoring approach is more effective in ensuring that substandard ships and operators have fewer places to hide. This is clearly demonstrated by existing regional Memoranda of Understanding on PSC such as the Tokyo MOU and the Paris MOU.

76. The Tokyo MOU has six contracting parties (or so-called Authorities) from the ASEAN, namely Singapore, Indonesia, Malaysia, Thailand, Philippines, and Vietnam. Setting aside the case of Lao PDR being a land-locked country, Brunei Darussalam, Cambodia and Myanmar have not joined this MOU. Such lack of participation is a regional disadvantage since a harmonized inspection regime does not cover all ASEAN ports. Another weakness is the low inspection rates of less than 2% except Singapore.

77. A country that regulates ships under its registration is a flag state. According to UN Convention on the Law of the Sea 1982, the flag state has the responsibility and obligation to "exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag, these include maintaining a register of ships, their masters, officers and crews and taking the necessary steps to ensure safety at sea, including regular surveys".

78. It is worth to note that in the last three years (1998-2000), PSC statistics, show that Cambodia (25.7%), Indonesia (22.6%), Vietnam (18.7%), Malaysia (10.6%), and Thailand (9.8%) are the countries which always the highest ship detention rate.

Table 7.1 PSC Inspections by Authority

Authority	No. of Inspection	No. of Detention	Inspection Rate (%)
Singapore	1,023	130	6.38
Indonesia	685	6	4.27
Malaysia	235	7	1.47
Thailand	227	99	1.42
Vietnam	225	19	1.40
Philippines	175	16	1.09
All Authorities of Tokyo MOU	16,034	1101	6.87

Source: Annual Report 2000, the Tokyo MOU Secretariat

Table 7.2 PSC Inspections by Flag

Flag	No. of Inspection	No. of Detention	Detention Rate (%)
Indonesia	123	47	38.21
Vietnam	79	22	27.85
Cambodia	527	112	21.25
Malaysia	302	46	15.23
Thailand	191	21	10.99
Myanmar	38	2	5.26
Philippines	418	22	5.26
Singapore	693	34	4.91
Brunei	2	0	0

Source: Annual Report 2000, the Tokyo MOU Secretariat

Maritime Security

79. Among piracy and armed robbery "hot spots" around the world, it is worth noting that almost half of these piracy incidents happened in ASEAN waters. A more systematic regional action is therefore necessary to fight against and eventually prevent piracy and to punish pirates engaged in such activities to discourage further incidents. It is still uncertain whether these pirates or the alleged offenders of a country's nationality should be either prosecuted under the laws of the country where the piracy incident was recorded, or extradited to the flag state of the vessel.

80. ASEAN governments that have not yet ratified the IMO's 1988 Rome Convention on the Suppression of Unlawful Acts against the Safety of Maritime Navigation (SUA convention) are being encouraged to do so. Article 10 of the SUA convention empowers law enforcement agencies to investigate and prosecute even when the criminal act has occurred in the waters of another country. It seeks to remove the problem of jurisdiction in piracy cases, which has often prevented states from prosecuting pirates that enter their territorial waters after committing piracy in the jurisdiction of another country. In short, ratification will make it easier for governments to prosecute pirates.

81. Today, the ASEAN regional cooperation mechanism is very keen on this regional issue. Taking account of its cross-sectional and transnational crime nature, the Special ASEAN Ministerial Meeting on Terrorism that was held in Kuala Lumpur in May 2002 adopted the Work Programme on Terrorism to Implement the ASEAN Plan of Action to Combat Transnational Crime. The Work Programme includes sea piracy with a comprehensive regional cooperation scope covering information exchange, legal matters, law enforcement, training, institutional capacity building, and extra-regional cooperation.

Marine Environment

82. Environmental protection nowadays is continuously raising global concerns and calling for proactive measures since environmental pollution, especially since marine pollution from ships at seas and land discharges have tragic impacts on life as well as threaten the living environment of future generations.

83. In ASEAN, this issue is worth receiving more notice from governmental level due to the following facts:

- ASEAN is a sensitive area where many oil exploitation activities are going on, such as in Brunei, Indonesia, Malaysia, and Vietnam.
- Due to geographical location, ASEAN is affected by cyclones and typhoons.
- ASEAN lies on one of the most crowded maritime traffic lanes of the world.
- ASEAN has many precious marine species still exist and many of the world's wonders such as Vietnam's Ha Long Bay.

84. In parallel with the accession to relevant conventions, the Study suggests the following regional actions:

(a) All ASEAN countries should work out a map of areas sensitive to oil spills (with the later establishment of an ASEAN oil sensitive map).

(b) It is suggested that in all congested waters and important straits in the ASEAN region the provision of VTS and TSS should be made available.

(c) It is recommended that ASEAN member countries conduct annual joint oil spill combating drills. The ASEAN OSRAP is required to replenish the latest information and operational procedures in the document after its formulation in 1992.

Table 7.3 Oil Spill Preparedness by Member Country

Country	National Oil Spill Contingency Plan	Response Arrangement	Equipment Arrangement	Regional Agreement
Brunei	Yes	Tiered response	Public (few) Private (mainly)	ASEAN-OSRAP
Indonesia	Yes	Tiered response	Mainly private	ASEAN-OSRAP
Malaysia	Yes	Tiered response	Public (few) Private (mainly)	ASEAN-OSRAP
Philippines	Yes	Tiered response	Public (few) Private (mainly)	ASEAN-OSRAP
Singapore	Yes	Centralized (MPA)	Public (few) Private (mainly)	ASEAN-OSRAP
Thailand	Yes	Tiered response	Public (few) Private (mainly)	ASEAN-OSRAP
Vietnam	Yes (draft)	Tiered response	Public (few) Private (mainly)	Nil

Source: compiled from International Tanker Owners Pollution Federation, http://www.itopf.com

Seafarers' Education

85. The data in the following table shows that this translates into a modest theoretical shortfall of officers required to man the world fleet of 16,000 or 4% of the total workforce. For ratings, there continues to be a significant overall surplus.

86. The global balance between supply and demand in 2010 is projected with the assumption that there will be a modest increase both in the number of ships in the world fleet of around 1.0% per annum. The result shows that the current moderate shortage for officers will worsen unless training is increased or measures are taken to address the rate at which seafarers leave the industry. Adversely, the surplus in rating will be further exacerbated.

87. In certain ASEAN countries, such as the Philippines and Indonesia, consideration might possibly be given to upgrading training for ratings with the necessary education and aptitude to allow them promotion to officer grades. This will address both issues of improving career prospects and of increasing the supply of qualified officers. Active ASEAN officers also need to improve their capabilities.

Table 7.4 Supply and Demand Balances

(Unit: '000)

	Year 2000				Year 2010	
	Supply	Demand	Balance	%	Balance	%
Officers	404	420	-16	-4	-46	-12
Ratings	823	599	+224	+27	+255	+30

Source: BIMCO/ISF 2000

8 POLICY AND DEVELOPMENT FRAMEWORK PLAN 2003-2008

Method of Framework Formulation adopted in the Study

88. The ASEAN Vision 2020 adopted in 1997 provides overall vision and policy directions to the development of the ASEAN region. Regional integration and cooperation are the bases to make the region competitive in the global economy and to promote a more balanced socio-economic development.

89. Consistent with the goals and priority agenda set forth in the ASEAN Vision 2020 and the Hanoi Plan of Action 1999-2004, the ASEAN Transport Cooperation Framework Plan (target year 2020) provides the overall policy and development framework for steering regional cooperation in the transport sector. Based on updated information, the maritime transport section of the ASEAN Transport Cooperation Framework Plan is reviewed in this chapter to clarify the role and scope of a mid-term policy and development framework within the long-term plan.

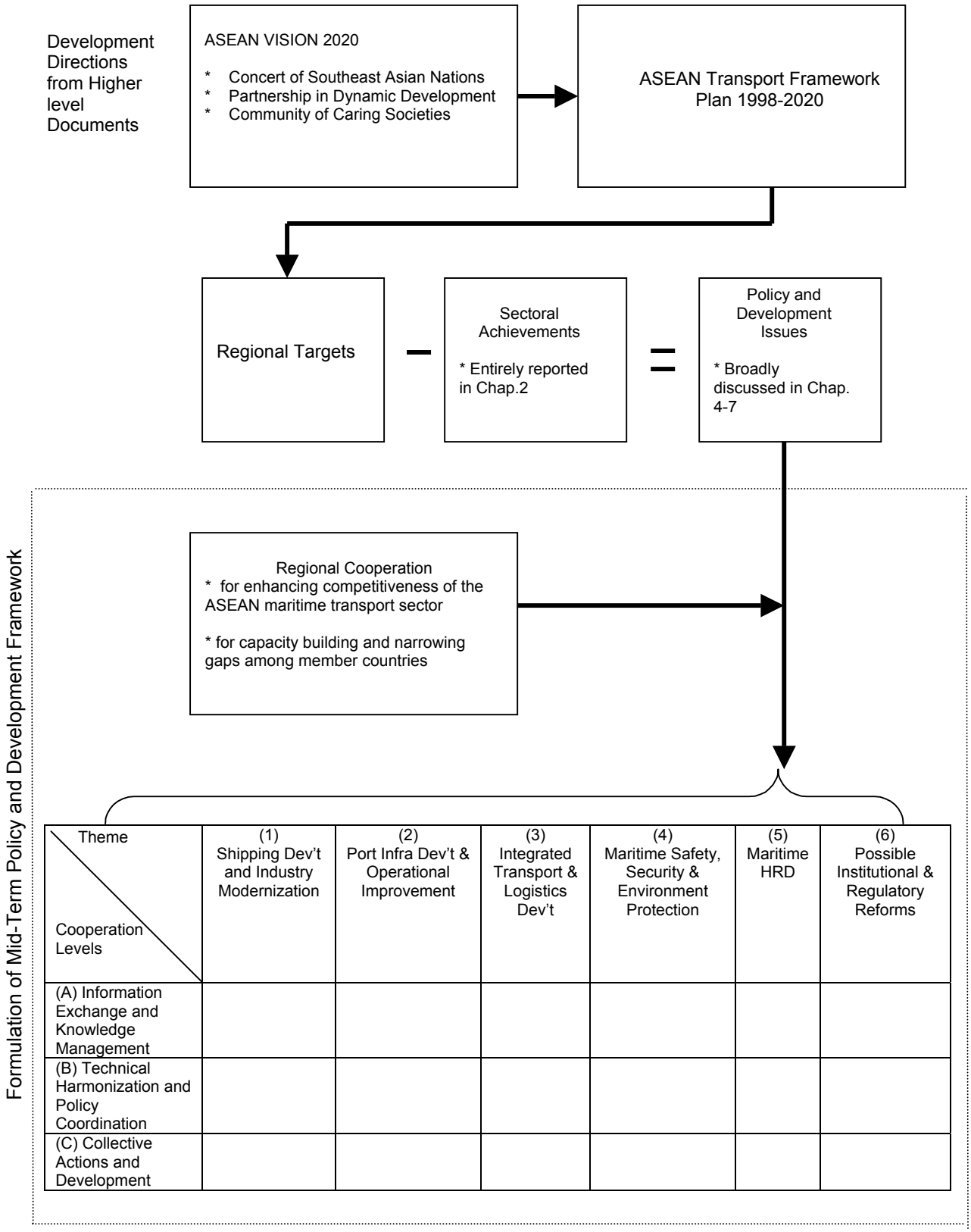
90. Based on the Study TOR and as elaborated at the Inception Meeting, the six themes that need policy and development frameworks are (1) shipping development and industry modernization, (2) port infrastructure development and operations improvement, (3) integrated transport and logistics development, (4) maritime safety/ security and environmental protection, (5) maritime human resource development, and (6) possible institutional and regulatory frameworks.

91. Policy and development issues were identified through a comparison of regional targets and sectoral achievements by theme. Identified issues were translated into an operational and practical framework taking account of regional cooperation strategies (Figure 8.1).

92. There are two broad policy and development goals in ASEAN maritime transport. These are (1) enhancing competitiveness of the regional maritime transport system and (2) building capacity and narrowing gaps among member countries. The former is geared towards increasing regional benefit in developing ASEAN maritime transport, while the latter towards emphasizing fundamental capacity building or narrowing gaps between member countries to ensure that development benefits will be equally distributed over the region.

93. The Study also puts forward three levels of regional cooperation. The first level is ***"information exchange and knowledge management"*** which, although viewed to be the easiest to implement, is also the most important as it will lay the foundation for fostering mutual understanding among member countries. The second level is ***"technical harmonization and policy coordination"*** which may take some time to achieve but its regionwide implementation will substantially change business environments for ASEAN maritime transport for the better. The third level is ***"collective action and development"*** under one regional goal. To successfully reach this level, necessary human and financial resources must be effectively tapped in addition to information exchange and knowledge management (Level 1) and technical harmonization and policy coordination (Level 2).

Figure 8.1 Method in Formulating Mid-term Policy and Development Framework



Theme / Cooperation Levels	(1) Shipping Dev't and Industry Modernization	(2) Port Infra Dev't & Operational Improvement	(3) Integrated Transport & Logistics Dev't	(4) Maritime Safety, Security & Environment Protection	(5) Maritime HRD	(6) Possible Institutional & Regulatory Reforms
(A) Information Exchange and Knowledge Management						
(B) Technical Harmonization and Policy Coordination						
(C) Collective Actions and Development						

Theme 1: Shipping Development and Industry Modernization

94. The ASEAN fleet under ASEAN flags has a share of 8% in the world fleet. The figures are, however, still low because ASEAN ports handle 1.2 billion tons of international cargo (21% of the world seaborne traffic) and 29 million TEU (16% of the world container traffic). There is a strong need to expand and modernize the ASEAN fleet.

95. Today, intra-ASEAN feeder shipping is struggling to overcome a poor reputation, i.e. it is costly, time-consuming and unreliable compared with reputable interregional megacarriers. The AFTA will stimulate intra-ASEAN trade flow by removing non-physical trade barriers to facilitate economic integration. The AFTA may also affect the structure of domestic shipping in many member countries since many domestic products that used to be protected by trade tariffs must compete with imported products.

Regional Targets

- Development of good quality ASEAN fleet which shall hold an adequate share of the global shipping market.
- Strengthening of ASEAN shipping lines' capability particularly in servicing between the designated ASEAN ports.
- Domestic feeder services to the ASEAN ports must be competitive under AFTA regime while other domestic services are sustainable.

Development Issues

- ASEAN shipping lines should be strengthened by internationally acceptable financial incentives rather than protection measures.
- As flag states, ship registers should be strengthened and coordinated in the region and should not allow substandard ships.
- Although it is an inherent right, cabotage transport sometimes needs flexible application.

Proposed Actions and Implementation Modalities

Proposed Action	Level 1	Level 2	Level 3
(1-1) Exchange of regional experiences in shipping policy tools such as fiscal support, privatization, tax, etc.	2003-05	2005 with TA	
(1-2) Promotion of information exchange and technical harmonization among ASEAN shipping registers	2003-05	2005 with TA	2006-08
(1-3) Strengthening of shipowners associations	2003-05		2003-05
(1-4) Flexible expansion of cabotage right, eg limited liberalization within subregional groups and near-coastal voyages	2006-08	2008 (if necessary)	

Note: TA- technical assistance

Theme 2: Port Infrastructure Development and Operational Improvement

96. From a national development viewpoint, each member country must have the flexibility to develop ports in a manner consistent with its economic objectives, including developing transshipment hubs and attracting potential shipping lines to their ports as part of their overall economic plans and targets. The use of port is determined by shipping lines; thus, it is better to leave it to dynamic market forces by maximizing the benefit of public-private partnership.

97. ASEAN ports vary in productivity. The competitiveness of a regional port system can be gauged by an efficient port network with attractive valuable services and reasonable basic services. Existence of a low productive port leads to weak shipping links which may undermine the competitiveness of a regional maritime transport system, particularly when coping with intraregional traffic. Therefore, ASEAN ports must be harmonized in development to meet the following regional targets:

Regional Targets

- Development of a dynamic regional port system.
- Development of minimum port standards, especially container terminals.
- Creation of an ASEAN port community through common IT application and harmonized procedures.
- Greater private sector participation in ASEAN ports.

Development Issues

- The ASEAN port system must address technological advances in containerization, future design of ships and opportunities for multimodal transport
- Since ASEAN ports are primary ports of member countries, each government must prepare long-term development plans with emphasis on port commercialization.

  ASEAN ports must establish closer communication ties to provide user-friendly services without excessive competition.

Proposed Actions and Implementation Modalities

Proposed Action	Level 1	Level 2	Level 3
(2-1) Periodic ports survey and monitoring	2003-08		
(2-2) Exchange of experiences about Public Private Partnership and Port Incentives	2003-05		
(2-3) Further harmonization in ASEAN port operation, e.g. port tariff structure, port EDI		2003-08	2006-08 with TA
(2-4) ASEAN-wide port development project			2003-08 with TA & FA
(2-5) Joint marketing of ASEAN ports			2003-08

Note: TA – technical assistance, FA – Financial Assistance

Theme 3: Integrated Transport and Logistics Development

98. To benefit all trade communities through competitive shipping services, port access transport must take on a vital role. Favored access transport can be obtained when the three equally important elements of infrastructure, industry and institution are developed simultaneously. Firstly, port accessibility must be accompanied with interstate infrastructure in good condition. Secondly, access transport providers must offer attractive services in terms of cost, time and reliability. More than two transport modes and/or access routes are desirable in their service options. Finally, such attractive access services must be provided based on a stable institutional framework particularly on international multimodal transport operation. These port access transport services can be considered as regional targets that will:

Regional Targets

- Ensure accessibility to competitive shipping services from anywhere in the region;
- Offer various port access services to shippers in terms of mode, time and cost; and,
- Establish a competitive multimodal transport regime.

Development Issues

- International transport infrastructure development particularly roads and rails under two ASEAN flagship projects: the ASEAN Highway Network Project and the SKRL Project;
- Upgrade of IWT services such as container haulage;
- Logistics development through institutional development and IT application; and
- Monitoring the progress of ASEAN logistics development on selective corridors.

Proposed Actions and Implementation Modalities

Proposed Action	Level 1	Level 2	Level 3
(3-1) Exchange of experiences of multimodal transport operations and IWT container services in ASEAN and other countries, e.g. EU	2003-05		
(3-2) Conduct of periodic surveys to check the progress of logistics corridor development	2003 with TA, 2006		
(3-3) Implementation of the 3 regional agreements: goods in transit, interstate, multimodal transport		2003-05	
(3-4) Development of ASEAN highway network and SKRL			2003-08 with TA & FA
(3-5) Extension of ASEAN port EDI to inland transports/nodes			2006-08

Note: TA – technical assistance, FA – Financial Assistance

Theme 4: Maritime Safety/Security and Environmental Protection

99. This theme is considered the easiest to advocate, since it benefits all except the competition. However, its implementation is difficult when absorbing the costs of necessary proactive measures into transport costs.

100. The first regional agreement on this theme was made in 1975, that is, coordinating maritime search and rescue (SAR) activities. As maritime environments have changed, ASEAN cooperation now needs to tackle new issues such as enforcing proactive safety measures, taking on responsibilities both as flag states and as port states, curbing piracy incidents, and protecting the seas.

101. This theme is fundamentally and strategically important for regional prosperity. For instance, when oil spill affects environmentally sensitive areas, the cost must be very large. Also, rampant piracy activities cannot be overlooked especially after the onset of the regional economic crisis which has adversely affected various economic activities.

Regional Targets

- Enhancement of maritime safety;
- Protection of marine environment;
- Curbing piracy incidents; and,
- Greater value for safety and environment in ASEAN marine communities

Development Issues

- Active participation in international conventions, regional MOUs and other cooperation opportunities;
- Conduct of strict PSC inspections and disallowing of substandard ships to hide in the region; and,
- Upgrading joint practice/operation schemes in the case of serious maritime accidents on the high seas and transboundary oil spill accidents.

Proposed Actions and Implementation Modalities

Proposed Action	Level 1	Level 2	Level 3
(4-1) Information exchange on 1) maritime accidents, 2) PSC inspections, 3) transport security, etc.	2003-08		
(4-2) Progressive accession to relevant conventions while reinforcing domestic legal framework		2003-08 with TA	
(4-3) Harmonization of safety and load line regulations for non-convention sized vessels	2003-05	2003-05	
(4-4) Joint practice/operation for maritime SAR and oil spill preparedness in compliance with continuous update of regional cooperation agreement and action plan		2003-05 with TA & FA	2003-2008
(4-5) Implementation of the "ASEAN Work Programme on Terrorism (May 2002) to combat sea piracy			2003-05 with TA & FA

Note: TA – technical assistance, FA – Financial Assistance

Theme 5: Maritime Human Resource Development

102. ASEAN seafarers show an outstanding contribution to the global shipping industry in terms of their occupancy rates, i.e. 21% in officers and 40% in ratings in 2000. There is a structural demand/supply gap in the seafarers' market, with a shortage of officers and oversupply of ratings. More competent ASEAN officers will be required to address not only the existing market structure but also a large number of aging OECD officers who will retire in the 2000s.

103. The ASEAN shipping industry has an advantage in utilizing ASEAN seafarers because it has easy accessibility to active/reserved personnel and better understanding of their capabilities and job/training experiences besides formal certificates. In addition to seafarers, land-based staff also need to improve their management capability by adopting new technologies and services. For the purpose of the ASEAN maritime transport sector, the following regional goals are set forth:

Regional Targets

- Foster sufficient and competent maritime human resources.
- Improve management skills and expertise in maritime transport and overall logistics.
- Recognize and utilize other ASEAN maritime personnel in a reciprocal manner

Policy and Development Issues

- Upgrading and expanding maritime training institutions particularly training more officers;
- Reducing human errors which may cause accidents;
- Expanding information exchange and networking among training and research institutions; and,
- Providing training opportunities at regional level to be competent with new technologies and services.

Proposed Actions and Implementation Modalities

Proposed Action	Level 1	Level 2	Level 3
(5-1) Provision of training programs at regional level such as 1) safety, 2) IWT and ferry, 3) ENC, 4) logistics, etc.	2003-05 with TA		
(5-2) Upgrading and expansion of training institutions and promotion of partnership such as joint onboard training			2006-08
(5-3) Development of an ASEAN center of excellence for logistics & transport			2003-2005 with TA & FA

Note: TA – technical assistance, FA – Financial Assistance

Theme 6: Possible Institutional and Regulatory Frameworks

104. The last decade saw great and rapid changes in the shipping and port industries. International maritime transport services became more competitive from conventional bilateral trading services to global network services. The driving force of their competitive advantage in the 2000s is their shift from large ships and hub ports to overall logistics management with institutional development and information technology. There is an urgent need for governments to review policies and implement more dynamic strategies if the public and private sectors in each of member country are to be successful in obtaining an efficient and competitive maritime transport services.

Regional Targets

- Further liberalization of maritime transport services covering international shipping, maritime auxiliary services, port services, and multimodal transport; and
- Necessary reforms covering legal and administrative systems in the maritime industry.

Development Issues

- Enjoying liberalization benefits through progressive commitments with establishing a clear regulatory regime to safeguard a fair and competitive domestic market;
- Expanding the depth and the scope of liberalization under the AFAS beyond those undertaken under the WTO-GATS in order to realize an advanced free trade area in services in the region; and
- Creating modern maritime transport administration which has both policy implementability and market responsiveness.

Proposed Actions and Implementation Modalities

Proposed Action	Level 1	Level 2	Level 3
(6-1) Information exchange about maritime legal and administrative systems and their restructuring experiences	2003-05	2005 with TA	
(6-2) Further negotiations under AFAS and WTO-GATS		2003-05	

Note: TA – technical assistance

ANNEX CASE STUDY: ACCESS TO MARITIME TRANSPORT IN LAO PDR

Methodology

The costs presented in this case study are based on quotes that were obtained during interviews with logistics and transport service providers, which operate on the Lao PDR import and export routes. This data is not publicly available. Prices quoted concern the shipment of 1 TEU on a Freight All Kind (FAK) basis. However, depending on the quantity of goods transported, lower quotes may be possible. Transit time data was also obtained from the same group of respondents, from the transit times offered for each route to the variation in delays at critical nodal links.

The model that is presented to illustrate the costs is based on the premise that unit costs of transport vary between modes, with the steepness of the cost curves reflecting the fact that, for volume movements, sea transport should be the cheapest per ton-km, road transport should normally be the most expensive (at least over a certain distance), and waterway and rail costs should be intermediate. At ports and inland terminals, a freight handling charge is levied without any material progress being made along the logistics system; a vertical "step" in the cost curve therefore represents the costs incurred here. The height of the step is proportionate to the level of the charge. Depending on the route chosen, the combination of modes and cost will be different. The purpose is to find the most competitive route cost-wise.

A confidence rating is also introduced for each route, modes of transport and nodal links. This confidence rating is based on data collected through interviews with the various stakeholders. It must not be forgotten that this rating is subjective. The rating is based on a five point type scale: (1) = Almost no confidence; (2) = Not very confident; (3) = Fairly confident; (4) = Confident, and (5) = Very Confident. It is also assumed that the shipment is leaving the point of origin on Monday (or day 1).

Table A.1 Route Alternatives for Freight Between Vientiane and Singapore

Route	*Origin*	*Mode*	*Border*	*Mode*	*Transload*	*Mode*	*Destination*
A	Vientiane	Road	Lao Bao-Houey Khaki	Road	Danang (Vietnam)	Sea	Singapore
B	Vientiane	Road	Thanaleng-Nongkhai	Road	Bangkok (Thailand)	Road	Singapore
C	Vientiane	Road	Thanaleng-Nongkhai	Rail	Lad Krabang (Thailand)	Rail	Singapore
D	Vientiane	Road	Thanaleng-Nongkhai	Road	Laem Chabang (Thailand)	Sea	Singapore

Source: Compiled from industry sources

Survey Results

Figure A.1 Vientiane-Lao Bao-Houey Khaki-Danang-Singapore

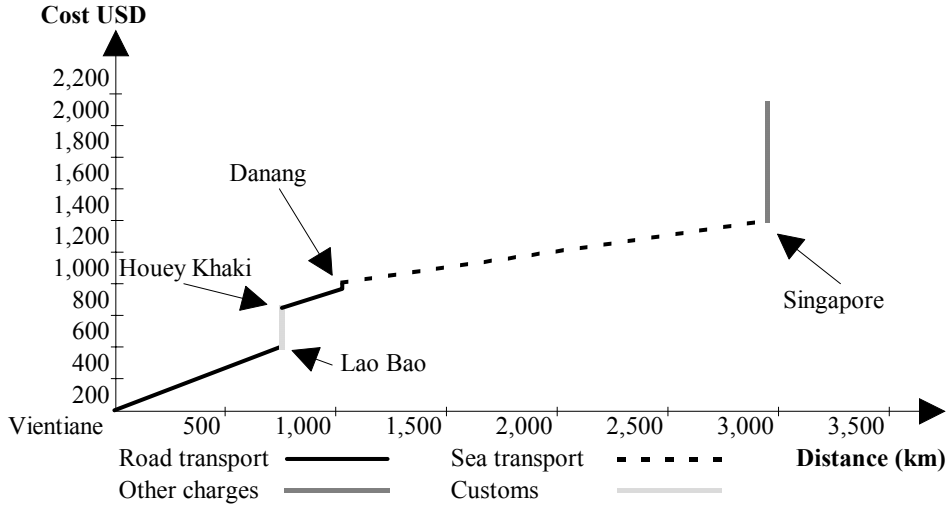


Figure A.2 Vientiane-Bangkok-Singapore

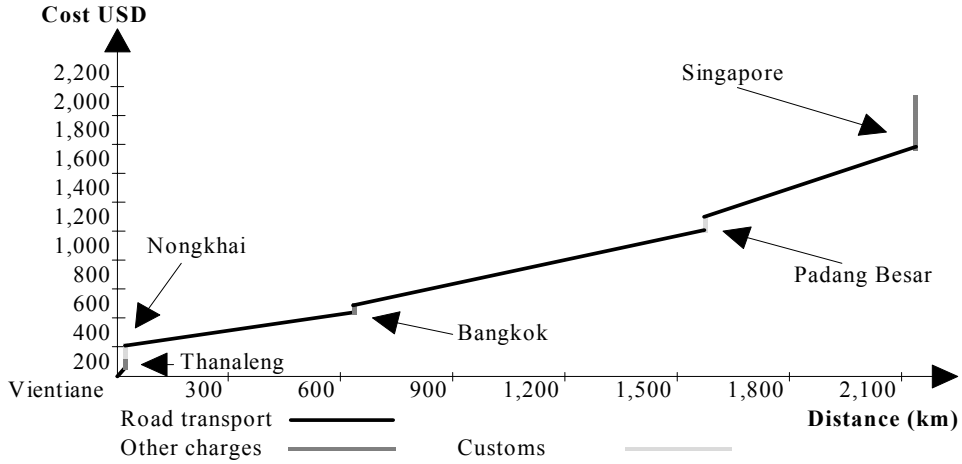


Figure A.3 Vientiane-Bangkok Port-Singapore

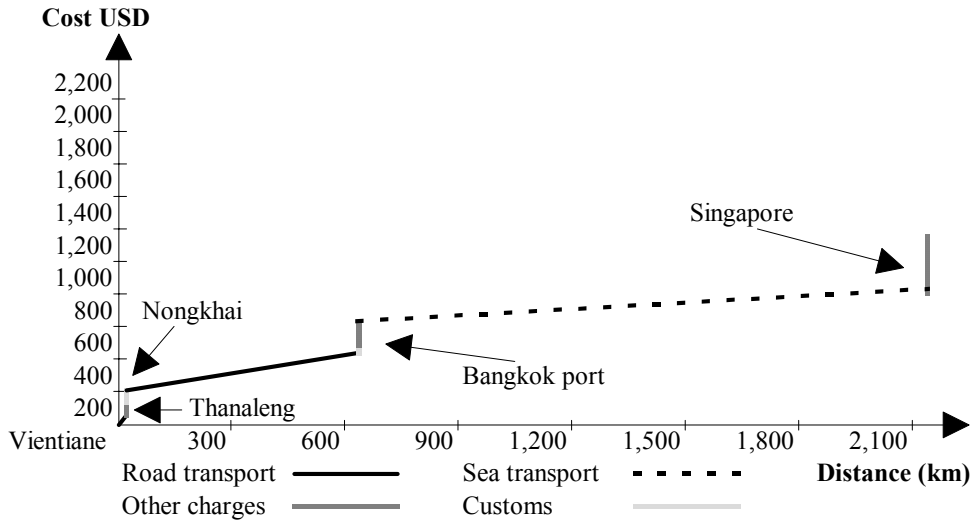
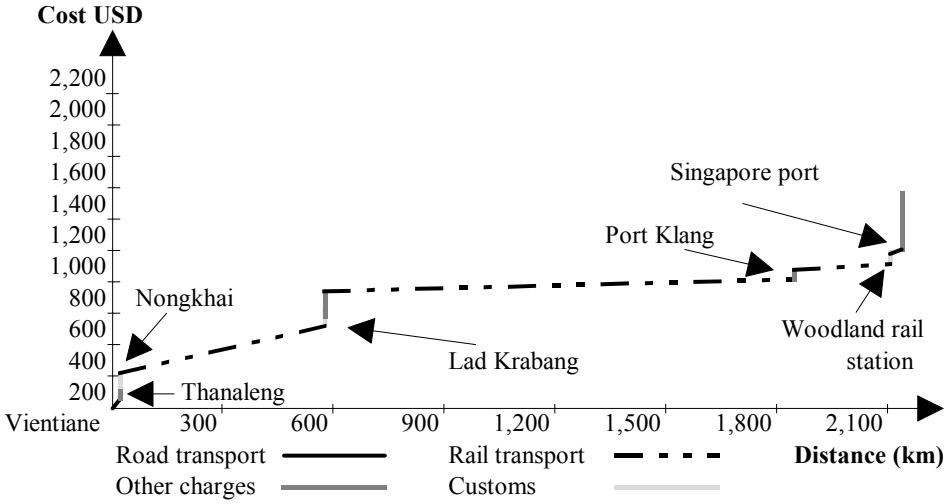


Figure A.4 Vientiane-Lad Krabang ICD-Singapore



Conclusion

The Vientiane-Singapore corridor has been taken as an illustrative case study of a range of transport and logistics issues that need to be addressed by multimodal transport operators operating in Southeast Asia. This Vientiane-to-Singapore corridor offers a selection of alternatives relating to modal choice and combination of modes of transport. The all-road option gives the fastest transit time, the road-sea combination via Bangkok port offers the cheapest transport cost and the road-rail solution has the highest confidence index (Table A.2). Currently, almost all of the goods carried from Vientiane to Singapore are done with a road-sea combination through Bangkok port.

Singapore, in itself, is not the main destination for Lao cargo but it is a very important transshipment point for main line mother-vessel connections to the rest of the world.

The combination of total transport cost, total transit time and confidence index factors does explain to a certain extent why the road-sea combination via Bangkok port is the most favored route. Nonetheless, the road-rail-road option via Lad Krabang to Singapore needs to be further explored because of its higher confidence index. If the volume of cargo increases in the near future, it might be possible that the freight rates will become more competitive.

Table A.2 Cost of Freight, Transit Time and Confidence Index

Vientiane-Singapore	Total Transport Cost	Total Transit Time	Confidence Index
A: via Danang (road-sea)	2,150/TEU	9/10 days	2.37
B: via Bangkok (all-road)	2,139/TEU	4/5 days	2.76
C: via Bangkok (road-sea)	1,214.8/TEU	6/7 days	2.76
D: via Lad Krabang (road-rail-road)	1,549.5/TEU	7/8 days	2.82

Source: The Consultant Team