Table 4.11: Selected internal ASEAN transport statistics

	Cambodia	**Lao PDR**	**Malaysia**	**Myanmar**	**Singapore**	**Thailand**	**Vietnam**
Total length (km)	35,769	22,323	46,260 (b)	28,570	3,073	225,623	93,300
Length of Paved Network (km)	4,165	9,673	39,647 (c)	9,837	2,988	62,985	23,418
Expressways (km)	-	-	989	80	148	75.6	-
Cargo ('000 tons) (a)	100	4,000	1,417,000	880,000	4,760,000	1,522,198	103,584
Trucks & Buses	9,005	6,020	618,066	48,599	128,115	566,794	8,114

Source: Compiled from ASEAN Secretariat (1999) & Britannica World Annual Data 2000

(a) Metric ton-km

(b) Excluding Sabah and Sarawak (16,266km)

(c) Excluding Sabah and Sarawak (6,422 km)

Table 4.12: Selected ASEAN rail transport statistics

	Cambodia	Lao PDR	Malaysia	Myanmar	Singapore	Thailand	Vietnam
Route length (km)	603	-	1,798 (a)	4,118	83 (b)	4,623	2,835 (c)
Freight ('000 tons)	Not Available	-	5,405	3,165	-	8,763	4,396
Freight/km	Not Available	-	1,417 (a)	930	-	3,286	1,679

Source: Compiled from ASEAN Secretariat (1999)

(a) Excluding Sabah (138 km)

(b) Including 67 km of mass transit system with 42 stations

(c) There are 224 km not restored to service after war damage

Table 4.13: Selected ASEAN air transport statistics

	Cambodia	Lao PDR	Malaysia	Myanmar	Singapore	Thailand	Vietnam
No. of Airports	20	52	115	80	9	107	48
Airports-with paved runways	7	9	32	11	9	56	36
Freight Traffic ('000 tons)	Not Available	Not Available	518	12.51	1,190	690	52.5

Source: Compiled from ASEAN Secretariat (1999)

Table 4.14: Selected ASEAN maritime transport statistics

	Cambodia	**Lao PDR**	**Malaysia**	**Myanmar**	**Singapore**	**Thailand**	**Vietnam**
No. of ports & harbours	4	14 (b)	20	10	1	7	7
Inland Waterways (km)	3,700(a)	4,587	7,296 (c)	12,800 (d)	-	3,999 (e)	17,702 (f)
Merchant Marine (1000 GRT or over)	141 ships	1 ship	378 ships	41 ships	875 ships	293 ships	123 ships

Source: Compiled from ASEAN Secretariat (1999)

(a) 282 km navigable to craft drawing 1.8 metre

(b) Inland waterway ports

(c) Of which, Peninsular Malaysia 3,209km, Sabah 1,569 km, and Sarawak 2,518 km

(d) 3,200 km navigable by large sea going vessels

(e) 3,701 km with navigable depths of 0.9 m or more throughout the year

(f) 5,149 km navigable at all times by vessel up to 1.8 metre draft

Consistent regional trade statistics in terms of weight and volume remain an unachievable goal (ESCAP, 1994a). As in some parts of the world, trade data is preserved only in value terms. However some Customs departments in this region do tabulate trans-border flows at individual crossing points in terms of both value and volume. This provides some indication of the volume of regional trans-border movement by land. Cross border trade, in South East Asia, is generally undertaken in two forms: formal and informal. Formal border trade refers to trade transactions conducted through appropriate Customs procedures at the border in accordance with rules, regulations and agreements of the Governments involved. Where applicable, Customs tariffs are collected. Informal cross border trade involves transactions that bypass or evade appropriate customs procedures (ESCAP, 1997a).

At most border points, statistics on the movement of vehicle across the border provides a basis for an estimate of cargo movement. Estimates of Continental SEA trans-border flows vary somewhat, but in 1994 and 1995 they were estimated by UN-ESCAP[1] as follows:

Table 4.15: Trans-border trade volumes in South East Asia

Singapore-Malaysia	15-20 millions of tonnes annually
Malaysia-Thailand	0.6-1 million of tonnes annually
Thailand-Cambodia	20,000-30,000 tonnes annually
Thailand-Lao PDR	0.5 million of tonnes annually
Lao PDR-Vietnam	0.1 million of tonnes annually
Vietnam-Cambodia	15,000-20,000 tonnes annually

Source: Adapted from ESCAP (1994a & 1995a)

[1] United Nations-Economic and Social Commission for Asia and the Pacific

Most of these statistics are usually very difficult to obtain, as access to information is restricted in South East Asia. Myanmar trans-border flows have not been estimated by UN-ESCAP as the country forbids border crossing by commercial vehicles. The economic crisis that hit the region in 1997 would lead to the conclusion that, apart from movement into/out of Singapore, these figures are still a reasonable reflection of the true levels of current trade (Beresford, 1999b).

4.4.3 Freight movement between Singapore and Malaysia

The land movement between Malaysia and Singapore is done across two links: the Causeway linking Woodlands in Singapore with Johor Bahru Town in Malaysia and the Second Link[2] linking Tuas in Singapore with Tanjung Kupang in Johor Bahru in Malaysia (see map in Appendix B1). Tolls are collected for usage of these two links (see Table 4.16). Heavy vehicles transporting dangerous goods between Johor and Singapore are restricted to using the Second Link[3]; plans have also been made to force all lorries to use the Second Link by September 1998.

Singapore's Woodlands Customs station has capacity limitation, as there is no readily available area for expansion. Facilities are manned 24 hours per day, 7 days per week but the Malaysian post of Johor Bahru handles commercial traffic only between 06:00 and 21:00. Queues for commercial vehicles can become quite long as Singapore Authorities give priority to passengers during "rush hours". The Johor Bahru Customs post has separate facilities for goods and is therefore less subject to congestion during peak periods. Nonetheless, during the month of September 1998, Johor Customs imposed stringent checks on lorries carrying goods to and from Singapore, which resulted in massive traffic jams across the Causeway. The traffic congestion tends to be mostly into Singapore. Local Malaysian freight forwarders and business associations have interpreted the move as an attempt to encourage

[2] The Second Link was open to the public on January 2, 1998.

[3] "Heavy vehicles must cross via Second Link", in: *The Star Online*, 19 November 1997, Internet Edition.

Malaysian traders to use local ports instead[4]. These stringent checks are done on an "on-off" basis depending on the level of bilateral relation between both countries.

Nonetheless both Governments are also very keen to divert traffic from the Causeway to the Second Link as traffic was allowed free for two months after the opening but the toll rates implemented for the Second Link is defeating its purpose of reducing congestion on the Causeway. The Malaysian Government has also imposed tolls along the roads leading to the Second Link to and from Johor Bahru Town[5]. These expressway tolls are levied in both directions and increase road transport cost by 10 USD for a return trip from Johor to Singapore for road hauliers. According to Mr Er Sui See[6], in an interview given to the Straits Times, lorry drivers must pay a USD 52 levy to the Malaysian Authorities when they drive to Singapore with goods and a USD 26 levy when they return to Malaysia with goods[7]. One of the main reasons for the under-utilisation of the Second Link, apart from high toll fees, is the inadequate number of Customs and Immigration officers stationed in Tanjung Kupang (Malaysia) as this creates congestion[8]. Transport companies have also complained that the Second Link does not have facilities for quick Customs clearance and the parking area had a capacity of only 60 vehicles[9]. In 1999, a year after the opening of the Malaysia Singapore Second Link, there were still traffic congestion at the Johor Bahru checkpoint because motorist prefers to put up with congestion on the Causeway[10]. It seemed that the majority of road users did not mind waiting for three hours on the Causeway[11]. Only 10% of the 100,000 lorries belonging to members of the Pan-Malaysian Lorry Owners Association (PMLOA) have made use of the Second Link in

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[4] "Ports are complementary", in: *The Straits Times Interactive*, 10 September 1998, Internet Edition.

[5] The Malaysian Government has justified this toll by a study claiming Malaysia has the lowest toll rates in the region at just USD 0.02/km (The Star Online, 29 January 1999, Internet Edition).

[6] Deputy President of the Pan Malaysian Lorry Owners' Association

[7] "Highway toll fees will jack up total Second Link charges", in: *The Straits Times Interactive*, 6 March 1998, Internet Edition.

[8] "KL to deploy more officers to ease congestion at 2nd Link", in: *The Straits Times Interactive*, 13 January 1998, Internet Edition.

[9] "Federation of Malaysian Manufacturers bemoans forced use of Second Link", in: *The Star Online*, 16 June 1998, Internet Edition.

[10] "Motorist prefers Causeway jams to Second Link", in: *The Straits Times Interactive*, 13 January 1999, Internet Edition.

[11] "KL to study ways to boost traffic at Second Link", in: *The Straits Times Interactive*, 27 January 1999, Internet Edition.

1998 and those who used the Second Link to transport goods were willing to do so because the shippers paid toll[12]. Currently, the situation is unchanged with the Causeway maintaining its dominant position.

Another difficulty is the fact that Malaysian land transport authorities do not permit Singapore or other countries' registered commercial vehicles to operate on Malaysian roads. Container haulage use to be restricted to five operators[13] but the Malaysian government has agreed to increase the number to thirteen by issuing an additional eight containers haulage licence on the 23rd of February 2000[14].

Table 4.16: Toll rate between Singapore and Malaysia

Single Toll Rate (as of 17/3/98)	**Causeway**	**Second Link**
Van & small lorry	1.6 USD	6.0 USD
Lorry & trailer	2.1 USD	12.1 USD
Return Toll Rate (as of 17/3/98)		
Van & small lorry	3.2 USD	12 USD
Lorry & trailer	4.2 USD	24.2 USD

Source: Compiled from the Straits Times Interactive (Singapore) and The Star Online (Malaysia)

There are currently two freight trains running daily in each directions and the Johor Lorry Operator's Association has tried to negotiate with Malaysian Railways (KTMB) to use its rail service to more transport goods to Tanjung Pagar rail station in Singapore[15]. Tanjung Pagar rail station is in Singapore but is operated by Malaysia[16]. On the 1st of August 1998, Singapore decided to move its Customs, Immigration and

[12] "Link used only when toll is absorbed", in: *The Star Online*, 1 February 1999, Internet Edition.

[13] They are: Kontena Nasional, Diperdana Corporation, Konsortium Logistik, MISC Haulage Services and Multimodal Freight. Together they are known as the Container Hauliers' Association of Malaysia or CHAM.

[14] "CHAM against liberalisation move", in: *The Star Online*, 6 March 2000, Internet Edition.

[15] "Lorry operators want Singapore rail link", in: *The Straits Times Interactive*, 24 August 1998, Internet Edition.

Quarantine checkpoint from Tanjung Pagar to the Woodlands railway station while Malaysia's rail checkpoint remains at Tanjung Pagar[17]. This has led Malaysia bound trains to leave Tanjung Pagar 20 minutes earlier in order to make up for the delay at Woodlands Immigration and Customs checks[18].

Malaysia's trade with Singapore accounts for 17% of Malaysia's total trade (Malaysia Ministry of Finance, 1998). Major exports from Malaysia consist of machinery and transport equipment, electronic and electrical goods, and primary commodities while exports from Singapore to Malaysia include intermediate goods for manufacturing, mineral fuels and lubricants. The total value of exports from Malaysia in 1998 was calculated at 18 billion USD while the value of imports from Singapore was calculated at 7.3 billion USD. Trade is conducted either in Singapore dollar, Malaysian ringgit or USD for larger sums.

Transit traffic rules for goods moving through Malaysia between Thailand and Singapore have been relaxed since September 24, 1998. Thai exporters are allowed to ship perishable goods with no limits by road through Malaysia to Singapore. Malaysia has also agreed to lift a ceiling of 30,000 tonnes of perishable goods a year, which it had imposed in 1979. In return Thailand has agreed to allow Malaysia to increase the number of truck operators providing this transit service from three to four. The new operator is allowed to have a maximum of ten trucks. Two of the operators are Thai: the Cold Storage Organisation (CSO) and the Express Transport Organisation (ETO). Both Thai and Malaysian trucks are allowed to use the Second Link in order to prevent traffic congestion on the Causeway[19]. Trucks entering Malaysia on route between Thailand and Singapore will call at the entry Customs post to receive a Customs seal and a lock is applied. This Malaysian Customs seal will be verified at the exit Customs post and the lock will be removed. Cargo inspection is rare.

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[16] According to an interview published in the Straits Times Interactive (10 September 1998), Malaysia's Deputy Transport Minister, Datuk Mohamed Ali Rustam declared that Malaysia had 999 years to operate at Tanjung Pagar rail station in Singapore.

[17] Woodlands railway station belongs and is operated by Singapore.

[18] "Ling dispel talk that Tanjung Pagar has been sold", in: *The Star Online*, 12 October 1998, Internet Edition.

[19] “Malaysia relaxes road shipment rules”, in: *Bangkok Post*, 25 September 1998, Internet Edition.

4.4.4 Freight movement between Malaysia and Thailand

Malaysia does not permit foreign owned and registered vehicles into Malaysia. This restriction of entry of foreign vehicles in Malaysia means that any goods imported in Malaysia, which are initially loaded on a Thai or foreign truck must be transhipped onto a Malaysian truck at the border[20]. There are however some exceptions. Firstly, a Memorandum of Understanding, signed in 1979 and revised in 1998, allows around 50 to 55 vehicles to carry cargo through Malaysia between Thailand and Singapore. These vehicles must have dual registration in Thailand and Malaysia. Singapore has no such restriction. Secondly, according to ESCAP (1994a), a large number of vehicles are owned by couples that between them have both Thai and Malaysian nationalities. These vehicles are then registered in Thailand by the Thai partner and in Malaysia by the Malaysian partner, and carry dual license plates[21].

Malaysia is the largest border trade partner of Thailand in value terms[22]. The majority of border trade between Thailand and Malaysia takes place in Songkhla Province. Songkhla accounts for more than 90% of exports and 60% of imports. Principal exports of Thailand to Malaysia are natural rubber, fish, canned food, fresh vegetables and fruits. Principal imports from Malaysia include sawn wood, frozen fish, fertiliser and pesticides, machinery, containers, etc., (TDRI, 1997). The traditional currency for border trade between Thailand and Malaysia is the Malaysian ringgit. Table 4.17 shows border trade figures between Thailand and Malaysia.

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[20] In order to facilitate these transhipment activities, Malaysia has provided facilities not far from the Bukit Kayu Hitam in order to exchange loads with vehicles transiting cargo in either direction.

[21] Thailand only allows foreign registered vehicles to pick up and deliver cargo within a certain radius of the Thai border. In this case, the radius is the Province of Songkhla in Southern Thailand.

[22] "Shipment to and from four neighbours up 138% this year", in: *Bangkok Post*, 9 June 1998, Internet Edition.

Table 4.17: Thailand's border trade with Malaysia (in Million of USD)

Year	Export to Malaysia	Import from Malaysia	Total	Trade Balance
1995	829.526	191.024	1,020.55	638.502
1998[(e)]	3,237.54	927.48	4,165.02	2,310.06

Source: adapted from the Thai Ministry of Commerce web site

[(e)] Estimate

The 1997 Asian economic crisis had increased border trade between Thailand and Malaysia. There are two major border crossings between Malaysia and Thailand (see map in Appendix B2). The major North-South corridors is served by:

(1) A highway crossing between Bukit Kayu Hitam (Kedah State, Malaysia) and Sadao (Songkhla province, Thailand) on Asia Highway No.2.

The Malaysian Customs post of Bukit Kayu Hitam is open to commercial traffic between 08:00 and 19:00, except on Friday which is a rest day in Kedah. A fixed fee is payable for vehicle operators who request in advance for clearance outside regular hours. This facility has separate sections to handle commercial traffic. If the goods are loaded on Malaysian vehicles, they will be able to proceed on Malaysia's road network but if the goods are on a Thai vehicle, the Thai vehicle will have to proceed to the transfer facilities under Malaysian Customs escort.

Sadao Customs post is the main gateway for road traffics and break-bulk cargo to and from Malaysia. Malaysian vehicles are permitted to enter Thailand as far north as Hat Yai (in Songkhla Province), which is one hour by road from Sadao. Most 'dual registration' vehicles utilise this gateway. Transit cargo through Malaysia to and from Singapore must use this border crossing. Official opening hours of the Sadao Customs post is from 05:00 to 18:00[23]. A fee can be negotiated for clearance outside regular hours.

[23] Effective since 24 January 1993.

(2) A crossing between Padang Besar (Perlis State, Malaysia) and Thungmo (Songkhla Province, Thailand).

The Padang Besar Customs post includes three main components. Firstly, a facility for handling road vehicles. Secondly, a railway station, and finally an expanded container yard and stuffing terminal. The operating time of this Customs post is the same as with Bukit Kayu Hitam. The only difference is that the transit facilities for transhipment are located on the Thai side of the border by Thungmo Custom post. The volume of cargo at this border crossing is about 300,000 tonnes a year for rail and 1.5 million tonnes by trucks[24].

4.4.5 Freight movement between Thailand and Lao PDR

The main border crossing for trade between Thailand and Lao PDR is at Nongkhai (Northeast Thailand) and Thanaleng (Lao PDR). There exist four other officials crossing points:

Thailand	**Lao PDR**
• Chiang Klang	• Houey Xay
• Nakhon Phanom	• Ta Khek
• Mukdahan	• Savannakhet
• Chong Mek	• Wang Tao

All of the borders crossing points are on opposite sides of the Mekong River apart from the Chong Mek-Wang Tao crossing point (see map in Appendix B3). Nongkhai is the most important province in Thai-Lao PDR border-trade and is the largest exporter to Lao PDR. Major imports from Lao PDR are wood and natural resources while major exports from Thailand consist of motor vehicles and parts, machinery,

[24] According to Voravuth Mala, Chief of freight marketing for the State Railway of Thailand.

electrical appliances, textile fabrics, medical, pharmaceutical products, foodstuff and clothing. The traditional currency for border trade between Thailand and Lao PDR is the Thai baht. Table 4.18 illustrates the volume of trade between Thailand and Lao PDR.

Table 4.18: Thailand's border trade with Lao PDR (in Million of USD)

Year	**Export to Lao PDR**	**Import from Lao PDR**	**Total**	**Trade Balance**
1995	2,150.52	555.79	2,706.31	1,594.73
1998[e]	3,515.06	303.15	3,818.21	3,211.91

Source: adapted from the Thai Ministry of Commerce web site

[e] Estimate

An Australian-built bridge (known as the Friendship Bridge) links the Nongkhai-Thanaleng border crossing across the Mekong River. This bridge was officially opened in April 1994. The border crossing is open from 06:00 to 20:00, 7 days a week on both side of the border. This harmonisation was only agreed in February 1999. Before the harmonisation, congestion would occur on both sides of the border due to the discrepancies between operating hours. Thai officials would work from 08:30 16:00 while Lao officials would be working from 07:30 to 11:30 and 14:00 to 19:00. These Customs post would operate from Monday to Friday with Saturday morning for Lao officials. To cross the Bridge a toll is imposed on both sides. The present toll rate is around USD 5 for a ten-wheel truck and around USD 8 per trailer.

Carriage of goods across the border can only be done through designated and licensed road hauliers. Currently there are 5 licensed operators for transit cargo, they include Express Transport Organisation (ETO), Ubonsahatham, Regional Container Line (RCL), TL Enterprises (the only Lao operator) and State Railway of Thailand (SRT). Import from Lao PDR to Thailand can move in any Thai registered vehicle, or in Lao registered vehicle for delivery within Nongkhai province. It is probable that the 1997 economic crisis had an effect on the expansion of operators for Thai-Lao border trade.

The movement of goods in transit between Thailand and Lao PDR is based on an *Agreement on Transit Trade*, signed on June 1, 1978. The purpose of this Agreement is to facilitate each other's exports and imports in transit, to and from a third country in accordance with the Convention and Statute of Freedom of Transit, Barcelona, 20th April 1921. The Agreement also provided the framework for Thailand and Lao PDR to select transport companies eligible to carry transit trade, with each country holding an equal number of licences (i.e., five each). This Agreement is renewed automatically every year unless a termination notice is submitted by either party three month before the annual expiration date of June 1.

4.4.6 Freight movement between Thailand and Cambodia

Border trade with Cambodia takes place mostly in Sa Keo province (see map in Appendix B4). The main border crossing is Klong Lueg (Thailand) and Poi Pet (Cambodia). Major exports from Thailand are motor vehicles and parts, construction materials, garments, foodstuff and shoes while Cambodia primary export is wood, and wildlife products. Table 4.19 illustrates the volume of trade between the two countries.

Table 4.19: Thailand's border trade with Cambodia (in Million of USD)

Year	Export to Cambodia	Import from Cambodia	Total	Trade Balance
1995	842.37	841.31	1,683.68	1.06
1998[(e)]	4,799.21	1,730.52	6,529.73	3,068.69

Source: adapted from the Thai Ministry of Commerce web site

[(e)] Estimate

Presently the Klong Lueg-Poi Pet border crossing is the only highway crossing between Cambodia and Thailand. The crossing is open from 8:00 to 16:00 every day. The traditional currency for border trade between Thailand and Cambodia is the Thai baht. The route to and from this border crossing is not considered secure on the Cambodian side (ESCAP, 1995a). Delays are reported from un-official 'checkpoints'

along the route. This is regarded as little more than a nuisance to local truckers. It is interesting to note that more than fifty civil servants, police and army officers have been arrested and charged with setting illegal roadblocks and extortion[25]. There is no institutional framework on rules relating to cross border traffic between Thailand and Cambodia. This is probably due to the level of political instability in Cambodia with pockets of Khmer rouge resistance using roadblocks to fund their activities.

4.4.7 Freight movement between Thailand and Myanmar

Border trade between Thailand and Myanmar is conducted through three official entry points (see map in Appendix B5). These entry points have been periodically affected by political and security problems, which has caused the occasional closing of borders. The three border posts are:

Border Post	**Thailand**	**Myanmar**
1	• Mae Sot	• Myawaddy
2	• Mae Sai	• Tachilek
3	• Ranong	• Kaw Thaun

Source: ESCAP (1996a)

Major exports from Thailand are construction materials, textile fabric, monosodium glutamate (MSG), fuel, medical and pharmaceutical products while export from Myanmar to Thailand consist mainly of wood, logs and gems. . Table 4.20 illustrates the volume of trade between the two countries.

[25] "Roadblock arrest", in: *South China Morning Post*, 13 March 2000, Internet Edition.

Table 4.20: Thailand's border trade with Myanmar (in Million of USD)

Year	Export to Myanmar	Import from Myanmar	Total	Trade Balance
1995	125.11	30.31	155.42	94.8
1998[(e)]	173.05	17.13	190.18	155.92

Source: adapted from the Thai Ministry of Commerce web site

[(e)] Estimate

Border trade with Myanmar has remained stable, while Thailand's border trade with its other neighbours has seen an impressive increase of Thai exports and imports. This is because some border checkpoints are closed quite regularly as well as the requirement for Burmese exports to be paid in USD. The traditional currency for border trade between Thailand and Myanmar is the Thai baht. There is no cross border traffic as Myanmar forbids foreign registered vehicles to utilise their road network. Road infrastructure from Burmese border posts to Yangon (the capital) is poor and impossible to use during the 'wet' season that runs from July to September. Before the goods arrive at the border, the Burmese importer must obtain an import license from the Burmese Ministry of Trade. A fee is charged ranging from 2.5 to 5% of the CIF (Yangon) value of the goods (ESCAP, 1996a). Myanmar is also the only country in the region to levy transit duty. This duty is levied by Burmese Customs at 2.5% of the CIF value of the goods. A transit permit is also needed from the Ministry of Trade, for which a fee is payable and a bond required.

4.4.8 Freight movement between Lao PDR and Vietnam

Trade between Lao PDR and Vietnam can cross at eight designated points under a 1991 Agreement between the two countries (see map in Appendix B6). These border posts are:

Border post	Lao PDR	Vietnam
1	• Dae Chang (Route 42)	• Sob Houn
2	• Pa Hang (Route 43)	• Sob Bo
3	• Na Mao (Route 279	• Ban Leung
4	• Kao Cheo (Route 8)	• Keo Neua
5	• Nam Kan (Route 7)	• Nam Kan
6	• Cha Lo (Route 12)	• Rung Khane
7	• Lao Bao (Route 9)	• Houei Kaki
8	• Bai (Route 18)	• Yang Yeun

Source: ESCAP (1994a)

It was impossible to find the volume of trade between the two countries. This might be because statistical data collection procedures in both countries are still at an early stage[26]. Trade between the two countries can move on from any origin or destination in either country to the other, on vehicles of either country. The Lao Bao-Houey Khaki crossing has been designated as the border crossing for goods in transit through Vietnam to and from a third country. Such movements are subject to prior authorisation of each shipment by the Vietnamese Ministry of Trade. The transit permit is issued on application by Lao Freight Forwarder, a state enterprise, through the Lao Ministry of Commerce. The issuance of the transit permit may take several weeks while the actual movement of goods from the nearest seaport (Danang) takes three days. Cargo arriving from other Vietnamese ports requires a Customs escort through Vietnam. Usually, there is a service fee on transit cargo levied by Vietnamese Customs and Lao Customs has been known to ask for transit duty. All these fees are collected without the issuance of receipts.

[26] It must also not be forgotten that these two countries have centrally planned economies and are slowly opening their economies to market forces.

4.4.9 Freight movement between Vietnam and Cambodia

Trade volume statistics between Cambodia and Vietnam were unavailable. Nonetheless, transit traffic for Cambodia passing through Vietnam is done through six official border posts (see map in Appendix B7):

Border point	**Cambodia**	**Vietnam**
1	Bavet (Say Ring Province)	Moc Bai (Tay Ninth Province)
2	O Rang (Mondolkiri Province)	Bu Porang (Dac Lac Province)
3	Andaung Puch (Ratanakiri Province)	La Thanh (Giai Lai Province)
4	Smuol (Kratie Province)	Bo Nue (Song Be Province)
5	Mekong River (Kandal/Prey Vong Provinces)	Kua Long River/Tien River (An Giang/Dong Thap Provinces)
6	Phnom Den (Ta Keo Province)	Tinh Bien (Am Giang Province)

Source: Adapted from ESCAP (1995a)

Under the term of the Cambodian-Vietnamese Agreement for Goods in Transit of 1994, all goods moving through Vietnam to or from Cambodia requires a Transit Permit issued by the Vietnamese Ministry of Trade. These documents are issued in Hanoi and routeing the documents to the appropriate Vietnamese point of entry can take several weeks. Navigation of the Mekong by ocean going vessel in transit to Cambodia is possible. The main port of entry is the port of Vung Tau in Southern Vietnam on the Mekong delta. Vietnam requires a Vietnamese river pilot, a Customs officer and two immigration officers to accompany the vessel to the Cambodian border from Vung Tau while only a Cambodian pilot takes charge from the border to Phnom Penh port.

4.5 MULTIMODAL TRANSPORT SYSTEMS IN SOUTH EAST ASIA

In South East Asia, multimodal transport systems converge to hub-centres such as Singapore, Port Klang in Malaysia or Bangkok in Thailand. Modal interaction is dependent upon the hub's modal structure; maritime, fluvial, land, and air corridors. In order to appraise South East Asia's multimodal transport systems, it is of vital important to know the infrastructure or "hardware" configuration of the region. This "hardware" must also be combined with an understanding of the "software" aspects of multimodal transport. The "software" aspect relates to policy framework and rules of commerce governing cross-border and regional trade. The countries of Continental SEA offer various levels of infrastructure development. Singapore has the best infrastructure in the region. Malaysia and Thailand offers adequate infrastructure but Lao PDR, Cambodia, Myanmar and Vietnam infrastructure quality is generally poor to fair, and unable to support massive growth in traffic volumes.

4.5.1 Regional "Hardware": Infrastructure Configuration

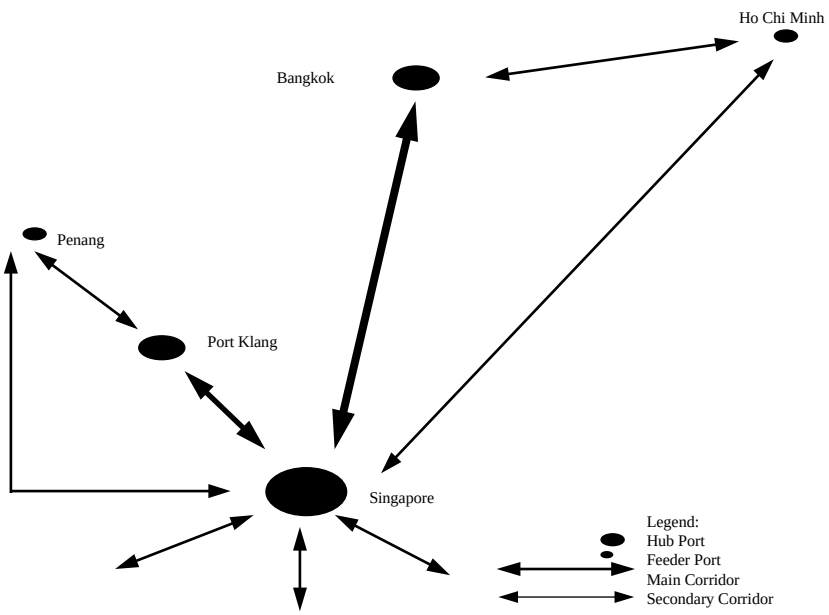
- *Maritime Corridors and seaports*

The ASEAN region has become a system of shipping networks in which individual ports are linked into intricate patterns of dependency in hub/feeder relationships as well as into end-to-end shipping linkages that reflect the increasing trade dependencies between regional economies (Robinson, 1998).

The rapid growth of some of Continental SEA's ports provides the necessary cargo threshold conditions for inclusion in new or existing feeder or mainline networks. Ports, such as Laem Chabang in Thailand or Penang and Tanjung Pelepas in Malaysia, provide new options for maritime corridor development. But in a competitive regional environment, inclusion in shipping networks has underlined the need for efficiency as well as growth; and these conditions have impacted on, and will

continue to impact on shipping companies strategies in the South East Asia (Hawkins & Gray, 1999). The economic crisis of 1997 reduced intra-Asia trading volumes and increased imbalances in inbound and outbound cargo flows to and from other areas of the world[27]. Shipping companies engaged in the regional feeder market have also come under intense financial pressure as profit margins decreased significantly[28]. This is due to the Asian crisis but also to the fact that mainline operators were pressurising feeder companies to lower their rates. Figure 4.2 provides a schematic representation of the main maritime corridors in the ASEAN region and Table 4.21 illustrates containerised intra-ASEAN trade.

Figure 4.2: Maritime Corridors in ASEAN



Source: The Author

[27] "ASEAN swings", in: *Containerisation International*, July 1999, pp. 73-75.

[28] Only Thong Soon Shipping Lines, of Singapore, a specialist in the Singapore/Malaysia and Singapore/Indonesia local trades, has filed for bankruptcy in Singapore.

Table 4.21: Intra-ASEAN containerised traffic (1995-2000)

Year	Intra-ASEAN Trade (all figures in '000 TEU)
1994-1995 % change	909 -11.00%
1995-1996 % change	989 8.80%
1996-1997 % change	1,096 10.82%
1997-1998 (e) % change	1,103 0.64%
1998-1999 (e) % change	1,126 2.09%
1999-2000 (e) % change	1,191 5.77%

Source: Adapted from Containerisation International, October 1998, p. 58

(e) Estimate

Seaports handle most of the region's international trade. They are of vital importance as port congestion can have paralysing effect on economic activities. The main seaports in the region are listed below:

- **<u>Singapore</u>**

Singapore is considered the central location for port, transport and logistics[29] activities both within South East Asia and between South East Asia and the rest of the world. The port of Singapore (PSA) is a major stop along the main shipping routes in the region[30]. According to Lewis (1998), most container ship operators prefer to send vessels from a main port in Europe or North America non-stop to Singapore, from where a good percentage of the cargo is transferred to smaller feeder ships capable of getting onto the physically restricted ports in countries such as Thailand, Malaysia and Indonesia (See Table 4.22).

[29] "Schenker develops Asian gateway", in*: Containerisation International*, November 1998, pp. 35.

[30] Singapore is a major port of call for 320 shipping lines from more than 738 ports worldwide.

Table 4.22: Major sailing destinations at PSA

Country/region	No. of shipping lines	Average No. of daily sailings
Europe	59	5
West Asia	45	3
South Asia	66	5
Africa	58	3
Central & South America	27	2
Australasia	62	2
US	42	3
China	62	4
Hong Kong	67	8
Japan	55	4
Korea	56	4
Taiwan	57	6
Indonesia	146	8
Malaysia	99	10
Philippines	31	1
Thailand	62	3

Source: www.psa.com.sg/mktg/container/index.html

PSA claims direct shipping connections to no less than 235 other port in Asia. PSA is also the world's busiest container port as well as the biggest port in the number of ship movement. PSA's container throughput has seen a tremendous growth since the advent of containerisation in Singapore in 1972. In 1972, the port handled a total throughput of 24, 515 containers while today the port handles on average 40, 000 containers a day (PSA, 1999). In 1998, Singapore port overtook Hong Kong port in order to take the number one spot in terms of container handling (Ion, 1999a). Table 4.23 illustrates the growth in Singapore's container throughput.

Table 4.23: Total container throughput (in TEU)

Period		Total
1997		**14,135,900**
1998		**15,135,600**
1999		**15,944,800**
2000	January	1,333,900
	February	1,383,000
	March	1,512,400

Source: http://www.mpa.gov.sg/homepage/portstats.htm

Singapore is becoming a 'one-stop' maritime hub serving the needs of the shipping community across Asia and the Pacific. The port offers dedicated terminals and a range of incentive to carrier as a way of ensuring loyalty. In 1999, PSA has offered USD 15.1 million in rebate to help local businesses survive the current economic turmoil afflicting South East Asia[31]. The package of discounts average 10% and applies to tenants operating in PSA's Keppel[32] distripark; wharf handling, local cargo storage, lift-on/lift-off charges, etc. It is PSA's belief that they are the ideal hub location for the region as shipping lines can maximise slot utilisation on their mother vessels though the choice of feeders to numerous trade routes. This comprehensive connectivity to numerous ports also means that shipping lines can help their customers move goods to markets quicker and at lower inventory costs.

- **<u>Malaysia</u>**

There are four major container ports in peninsular Malaysia: (1) Port Klang, (2) Penang Port, (3) Pasir Gudang Port and (4) Port of Tanjung Pelepas.

(1) Port Klang is located on the West coast of peninsular Malaysia, at about 40 km from the capital, Kuala Lumpur. Port Klang is currently the most important port in

[31] "PSA offers discount to local users", in: *Containerisation International*, January 1999, pp. 31.

[32] Keppel Distripark (KD) is an ultra modern cargo distribution complex, which provides extensive warehousing facilities within a Free Trade Zone. KD has 41 warehousing modules totalling 111,000 square metres (www.psa.com.sg)

Malaysia in terms of container throughput and liner calls. In 1999, Port Klang handled just over 2.5 million TEU[33] while being in 8th position in ranking among world container ports by liner calls with 2,135 calls per annum[34]. All major trade lanes are now served out of Port Klang. Port Klang has also been designated as the national Malaysian load centre since 1993[35]. This is part of the Malaysian government policy to entice its traders to use local ports instead of Singapore[36]. Even the local media has been urged to promote Port Klang as the national load centre and regional hub[37]. In order to achieve regional hub status, the Malaysian government is considering special rebates and incentives to be offered to regional operators[38]. Nonetheless, in 1998, around 40% of Malaysian exports in cargo containers are transiting through Singapore[39]. In 1999, even though this figure fell to 32%[40], it was still considered very high. Table 4.25 lists the various incentives taken to promote Port Klang.

Table 4.25: List of incentives offered by the Malaysian government

Measures taken to promote Port Klang
• advance clearance of cargo/immigration documentation
• round-the-clock port and Customs services
• end of overtime charge for Customs
• relaxation of cabotage policy
• reduction of container transhipment charges
• increased (28 days) free storage period for containers
• incentive for feeder operators trading in pre-determined routes
• removal of Inter-Terminal Transfer charges
• incentives for international procurement centres
• application of EDI
Proposed incentives for regional feeders
• simplification of customs procedures

Source: Lloyd's List Maritime Asia (1999)

[33] "Rise in ranking expected", in: *The Star Maritime*, 13 December 1999, Internet Edition.
[34] "Port Klang ranks No. 8", in: *The Star Maritime*, 29 November 1999, Internet Edition.
[35] "A measure of success", in: *Lloyd's List Maritime Asia*, March 1999, p. 12-14.
[36] "Malaysia shippers prefer Singapore", in*: Containerisation International*, October 1998, p. 21.
[37] "Promote Port Klang", in: *The Star Online*, 22 September 1998, Internet Edition.
[38] "Manufacturing a hub port-the Malaysian way", in: *Lloyd's List Maritime Asia*, March 1999, p. 11.
[39] "Malaysian ports still losing out to Singapore", in: *The Straits Times Interactive*, 24 September 1998, Internet Edition.
[40] ASIA INC. (1999) *Malaysian Edition*, Markus Limited, Hong Kong, May 1999.

(2) The Port of Penang is located in the country's Northwest. It is a medium size port with a throughput of 506,863 TEU in 1997. The port is also a transhipment hub for cargo originating to and from the South of Thailand. Thai exports are containerised at Padang Besar. The port has dedicated daily feeder connections with Port Klang and Singapore.

(3) In 1999, Pasir Gudang Port in Johor handled on average 45,763 TEU monthly. This figure has led to Johor Port becoming the second most important container handling facility behind Port Klang in 1999. But this position is expected to fall with the opening of the Port of Tanjung Pelepas, which is also located in Johor. Officially the new port will complement services offered at Pasir Gudang.

(4) The Port of Tanjung Pelepas (PTP) was officially opened on March 13, 2000[41]. This new port is located in Johor and is connected to Singapore via the Second Link. This new port sees itself as a viable alternative to Singapore, which is located across the straits from PTP[42]. It is said that the strategy of PTP is not to threaten the national load centre status of Port Klang[43]. PTP is officially designed to be "South East Asia's premier transhipment hub" with an expected annual throughput of 3.8 million TEU, and it is theoretically not supposed to compete with other Malaysian ports[44]. It is hoped that this will be done by offering consolidated marine charges and other financial incentives to port users[45]. PTP is also poised to play a dual role of transhipment and hinterland port upo0n completion of a 31.5 km rail link connecting the port to the Malay national railway grid by the end of 2000[46].

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[41] "PTP opening today", in: *The Star Maritime*, 13 March 2000, Internet Edition.
[42] "Uproar in Singapore over APL's signing with PTP", in: *The Star Maritime*, 26 June 2000, Internet Edition.
[43] "More benefit than threat", in*: The Star Maritime*, 19 June 2000, Internet Edition.
[44] "PTP offers 30% savings", in: *The Star Maritime*, 26 June 2000, Internet Edition.
[45] All port charges including towage, port dues, pilotage and dockage are consolidated into one single charge.
[46] "Dual role for Tanjung Pelepas", in: *The Star Maritime*, 20 March 2000, Internet Edition.

PTP main success to date has been the defection of Maersk-Sealand from Singapore port to PTP. Maersk-Sealand, the world largest container line, agreed to transfer the bulk of its 1.8 million TEU to PTP. PSA have said that the lost of Maersk-Sealand business accounts to more than 10% of Singapore port current annual throughput[47]. Nonetheless according to Mak and Tai (1999) the establishment and aggressive promotion of PTP does seem to contradict the national port policy of making Port Klang the national Malaysian load centre and regional hub.

- **Thailand**

There are two major ports in Thailand: (1) Bangkok Port and (2) Laem Chabang Port.

(1) Bangkok Port is located 26-km inland on the Chao Phaya River, in the heart of Bangkok metropolis. This central location has created congestion problems to and from the port, and the port is also unable to service large ocean going sea vessels, during low tide, draught is at 15 feet while during high tide draught is at 27 feet. Bangkok Port is operated by a government agency, the Port Authority of Thailand (PAT). Under governmental regulations, Bangkok Port container handling capacity has been restricted to no more than one million TEU annually.
(2) Laem Chabang deep-sea port is located more than 100 km from Bangkok. Its purpose is to relieve the congestion of container traffic at Bangkok Port, as well as to diminish heavy industrial concentration around the metropolis. Laem Chabang is operated under concession, by private operators, from the PAT.

Both ports offers daily connections to Singapore, Hong Kong, and Japan while Laem Chabang also offer weekly sailing to the American West Coast. Laem Chabang can be considered a minor transhipment port for Indochina. Table 4.26 represents Thailand's containerised sea borne trade.

[47] "New port paradigm for Southeast Asia", in: *Lloyd's List Maritime Asia*, September 2000, pp. 6-7.

Table 4.26: Thailand containerised sea borne trade (in TEU)

	Import	**Export**	**Total**
Bangkok Port 1998	531,693	582,063	***1,113,756***
Laem Chabang 1998	188,129	632,406	***820,475***
Total 1998	***719,822***	***1,214,469***	***1,934,231***
Bangkok Port 1999	498,867	553,699	***1,052,566***
Laem Chabang 1999	843,471	940,851	***1,784,322***
Total 1999	***1,342,338***	***1,494,550***	***2,836,888***

Source: Thailand Shipping Statistics 1998-1999

- **Myanmar**

The Port of Yangon is the major port in Myanmar, situated on the Yangon River 32-km inland from the sea. Entry to the inner harbour and the container terminal is limited to daylight hours. The port of Yangon handles almost all imports and 90% of exports to and from Myanmar[48]. It includes 14 berths, workshops, rice and coal wharves and warehouses, all under the control of the Myanmar Port Authority (MPA). The twist in the river, the shallow draught of 7 metres and tidal flows currently restricts vessel size and length that can call at Yangon Port. Yangon Port has suffered from chronic congestion, which forced certain vessels to wait up to a month for a berth during 1995-1997.

The port of Thilawa has been designed to handle the medium to long-term growth of Yangon Port; this port is situated 16 km downstream from the existing Yangon Port[49]. Thilawa port is managed by Hutchinson Port Holdings, the largest private port operator in the world. Thilawa port is expected to be able to cope with the gradual growth in container cargo volume as illustrated in table 4.27 as its annual capacity is estimated at one million TEU.

[48] "Congestion, politics dog port hopes", in: *Lloyd's List Maritime Asia*, March 2000, pp. 20-21.
[49] "Myanmar in the box", in: *Cargo Systems*, January 1998.

Currently, there are two feeder services calling at Thilawa, the first service offers a capacity of 400 TEU every five days to Singapore, Port Klang and PTP while the other uses a 500TEU vessel calling every ten day to Singapore. Freight rates from Thilawa to Singapore cost an average USD 350/TEU for outbound containers and USD 500/TEU for inbound containers. Port tariffs are set by the MPA and vary between USD 60-100 per box[50].

Table 4.27: Container handling in Yangon Port 1991-1999 (in TEU)

Year	Export	Import	Total
1991	2,694	4,250	6,944
1992	4,612	4,329	8,941
1993	7,247	7,877	15,124
1994	11,888	14,079	25,967
1995	20,963	23,826	44,789
1996	35,899	37,666	73,565
1997	47,141	43,936	91,077
1998	48,176	48,887	97,063
1999(e)	54,372	54,323	108,695

Source: Myanmar Port Authority (1999)

(e) Estimate

- **<u>Cambodia</u>**

There are two main ports in Cambodia: Phnom Penh Port and Sihanoukville Port. The port of Phnom Penh is a river port, 332-km inland from the sea, on the Mekong River where access by sea going vessel is possible. This river access is subject to draught restrictions, especially during the "dry season". Sihanoukville Port is the only deep sea in Cambodia with feeder links to Singapore and Thailand. The volume of cargo is still marginal compared to other ports in the region. Table 4.28 describes the import and export volume at both ports.

[50] "Hutchinson Thilawa box terminal makes steady progress", in: *Lloyd's List Maritime Asia*, April 2000, p.21.

Table 4.28: Import/Export Volume

	1995	1996	1997	1998
Sihanoukville Port				
• **Imports**				
Break bulk (tons)	345,446	362,959	381,831	427,270
Containers (TEU)	20,429	28,734	30,732	37,250
• **Exports**				
Break bulk (tons)	133,622	68,053	54,831	40,037
Containers (TEU)	19,513	26,805	30,258	34,339
• **Total**				
Break bulk (tons)	479,413	363,027	436,662	467,307
Containers (TEU)	39,942	55,734	60,990	71,589
Phnom Penh Port				
• **Imports**				
Break bulk (tons)	479,854	516,115	485,300	420,332
Containers (TEU)	129	7	-	-
• **Exports**				
Break bulk (tons)	60,194	40,365	151,147	181,026
Containers (TEU)	-	-	-	-
• **Total**				
Break bulk (tons)	540,048	556,480	636,447	601,358
Containers (TEU)	129	7	-	-

Source: Cambodia Ministry of Public Works and Transport (1999)

- **<u>Vietnam</u>**

Three general cargo ports (see Table 4.29) primarily serve Vietnam. Haiphong Port is located near Hanoi in North Vietnam with mostly feeder connections to Hong Kong, Korea and Japan. This port is currently undergoing rehabilitation and is expected to raise its cargo throughput to 250,000 TEU annually by the end of 2000[51]. Danang Port in central Vietnam has four sailing per week to Singapore and is the preferred port for transit cargo to and from Lao PDR.

Ho Chi Minh ports have daily sailing with Singapore and weekly sailing with Laem Chabang in Thailand. Currently, Ho Chi Minh ports are designed to handle an annual

[51] "Vietnam's maritime industry at the crossroads of change", in: *Lloyd's List Maritime Asia*, April 2000, p. 22.

cargo throughput of 170,000 TEU but the ports in the Ho Chi Minh area is expected to raise its annual capacity to 600,000TEUs in the next 5 years. There are six ports along the Saigon River, they are: Nha Rong, Khanh Hoi, Tan Thuan, Ho Chi Minh City port and Vietnam International Container Terminal (VICT). The depth of the Saigon River varies between 8 to 13 metres. Ports in the Ho Chi Minh area handle nearly 70% of Vietnam's total cargo volume[52]. VICT is the country's first majority foreign-owned terminal and the first dedicated container terminal in Vietnam with one stop service on a 24-hour basis.

Table 4.29: Cargo volume of main Vietnamese seaports (in tonnes)

Ports	**1995**	**1996**	**1997**
Ho Chi Minh	7,212,000	7,340,000	6,820,000
Haiphong	4,515,000	4,809,000	4,588,000
Danang	830,200	847,900	822,200

Source: INLACO SAIGON (1999)

- *Fluvial corridors*

The inland water transport system in the region largely serves domestic traffic. Several industrial regions have emerged or are emerging along a major regional fluvial axe such as the Chao Phaya River axis in Thailand. Another emerging fluvial corridor is the Mekong River, which plays a growing role in the developing economies of China (Yunnan Province), Myanmar, Lao PDR, Thailand, Kampuchea and Vietnam[53]. Transportation along the Mekong River is still subject to constraints that includes rapids, shoals, sharp bends in certain places, insufficient navigation aids, a lack of recent hydrographic surveys, limited port facilities and port operations, and finally ageing river transport fleet. The Mekong River has also been chosen as a potential source of hydroelectricity with the focus of investments and studies directed at Lao PDR and Cambodia (Bakker, 1999).

[52] "Vietnam's box terminal think bigger", in*: Lloyd's List Maritime Asia*, March 2000, p. 41.

Inland water transport, a traditional mode of transport in most countries in the region, is often cost effective, especially for bulk commodities and those not requiring rapid delivery. The transport ministers of China, Lao PDR, Myanmar and Thailand have signed on the 20th of April 2000 a navigation agreement for the opening up of the Mekong River to trading ships. This agreement will largely benefit traders from Thailand and Yunnan province in Southern China as they have the two biggest markets in the Upper Mekong Basin[54].

- *Road infrastructure*

Countries in the region have, traditionally, accorded the highest priority to road projects as the dominant mode for freight transport. Roads are, according to the Asian Development Bank (ADB), a particularly appropriate means of linking countries in order to create regional economic co-operation. This co-operation in road projects could facilitate exchange and development within the region, reduce transport costs, and increase the efficiency in the movement of goods[55]. The ADB is also very keen on developing road projects that would facilitate access to deep-sea port for inland and land-locked areas (e.g., Southern Lao PDR-Sihanoukville, Cambodia Road Improvement Project). With the exception of Singapore, Malaysia and Thailand, the quality of road infrastructure in the region is usually poor. Typical problems include deficient carriageway and failing pavements, resulting in un-acceptable high levels of road roughness. The rough, narrow roads common to Lao PDR, Cambodia, Myanmar and Vietnam were mostly built in the 1940-1960 period and were designed to accommodate the commercial vehicles of that era. Some of the worst sections are also un-usable during the wet season[56]. Compounding the problem is the large number of bridges that needs to be replaced or extensively repaired. This is especially the case in the Indochina countries and Myanmar. Drainage protection is also a serious problem in Indochina.

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[53] The grouping of these six countries is also known as the Greater Mekong Sub-region (GMS).
[54] "Navigation pact opens up a whole new vista", in: *Bangkok Post*, 29 April 2000, Internet Edition.
[55] "The road through SEA will soon be a reality", in: *The Nation*, 16 May 2000, Internet Edition.
[56] June to October

Road hub centres are crossroads where warehouses, truck yards and any land transportation structures are located. However, integration with other modes favour the convergence of regional roads transportation towards hub centres of other modes, notably ports such as Port Klang, Bangkok Port, Penang Port, Singapore, etc.

Links across international frontiers are numerous, though in some cases, for example in Myanmar, the existence of a physical link does not necessarily means that international traffic moves along it[57].

- *Railway system*

The railway networks of the ASEAN region tend to be branching rather than circular. The usual pattern is of a single major link with rather few branch lines. Even the apparently circular network linking Had Yai (Songkhla Province, Thailand) to the north of the Malay Peninsula with Singapore to the south is not really circular. The only international links are those joining Malaysia with Singapore, and with Thailand (via Padang Besar). There are no differences in track and loading gauges and hence there is no need for rail transshipment at frontiers. Singapore, Malaysia and Thailand are linked by a metre gauge network, which was also linked in the past to a metre gauge system in Cambodia. Royal Railways of Cambodia (RRC) is planning to upgrade its system by improving its track and investing in heavier duty equipment. RRC's strategy is to carry more containers and take part in the Trans Asia Railway (TAR) project[58]. This project is designed to integrate the rail networks of Cambodia, China, Lao PDR, Malaysia, Myanmar, Singapore, Thailand and Vietnam in order to provide theoretically seamless rail transport services in the region.

Strictly speaking, Lao PDR is not yet on the international system though the Thai system reaches Nongkhai on the banks of the Mekong River across from Vientiane,

[57] "Pan-Asia highway gets a nudge", in: The Nation, *25 April 2000*, Internet Edition.

the capital city. Hopefully, in the near future, the Lao Railway Corporation will establish a railway link as a joint venture has been agreed upon with Thai partners to connect Vientiane with Nongkhai in Thailand.

In June 1999, a rail link for containerised cargo between Thailand and Malaysia was established by the State Railways of Thailand and KTM, its Malaysian counterparts[59]. This service offers the convenience of no Customs examination at the Padang Besar border crossing for cargo moving from Bangkok to Port Klang in Malaysia. There is no trans-loading at the border, which prevents pilferage and double handling. Shipments are taking around 50 to 55 hours to arrive at destination. The frequency of this rail service is 14 times weekly with has a capacity of 50 to 60 TEU per trip. There are currently 6 operators and the landbridge is expected to handle 36,000TEUs by the end of 2000[60]. This rail service is subject to poor maintenance on Thailand's rail infrastructure[61&62].

According to KTM, this landbridge link has been designed to help Port Klang expand its hinterland and become a regional transhipment hub. Port Klang is viewed as a cheaper international gateway for Thai shippers rather than using local port (Bangkok or Laem Chabang) and transhipment in Singapore[63]. Crew and locomotives for the rail service are interchanged at the border[64]. There are now 11 loading points for the landbridge service in Malaysia: Tanjung Pagar in Singapore, Tanjung Pelepas and Pasir Gudang in Johor, Segamat Inland port in Southern Malaysia, Nilai Inland port South West of Port Klang, Sungai Way ICD near Kuala Lumpur, North Port and West Port in Port Klang, Ipoh cargo terminal in central Malaysia, KNICD in Prai and

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[58] "Cambodia Rail looks to containers", in: *Containerisation International*, February 1998, p. 25.
[59] "Rail container a modest start", in: *Bangkok Post*, 23 June 1999, Internet Edition
[60] "Two more rail landbridge operators", in: *The Star Maritime*, 23 March 2000, Internet Edition.
[61] "Cargo train goes off track in Chumphon", in: *The Nation*, 11 April 2000, Internet Edition.
[62] "Derailment of freight train blocks the southern line", in: *Bangkok Post*, 4 May 2000, Internet Edition.
[63] Shippers in the South of Thailand may use Songkhla Port to feeder their boxes to Singapore but many prefer to use Penang Port in North Malaysia.
[64] "KTM starts new Malaysia/Thailand service", in: *Containerisation International*, July 1999, p. 25.

Butterworth Container terminal in Penang[65]. Also a new 34-km rail spur linking Port Klang's Westport cargo handling facilities with the Malaysian rail system is a good example of the integration of rail into national and regional transport systems. This rail link is expected to boost Westport's overall competitiveness, especially for shippers/consignees based in the outlying region of Port Klang's hinterland[66]. (i.e., north and south Malaysia). This strategy is designed to divert part of the traffic that currently moves via Singapore[67].

- *Air Transport*

The vitality of a regional air transportation hub is tied to its global accessibility, thus strengthening the role of airports in economic development. The region's physiography, a complex mix of mountain ranges, rivers, coast line and islands, have limited the development of efficient long distance road and rail corridors. This means that air transport is at the moment the only effective means of inter-city links (O'Connor, 1995). The remoteness of the region from major world markets in the United States and in Europe has made air transport an important ingredient in the development of export-oriented manufacturing (Bowen, 2000). Currently there are two major international airline hubs: Singapore and Bangkok.

According to Bowen (2000), Singapore has long been the region's premier air transportation hub; a status derived in part from the early development of Singapore's first airport under British colonial rule. By the late 1970s, Singapore was the focal point of the intra-regional air network. Singapore's intra-regional importance translated into a pivotal role in inter-regional air networks. Bangkok similarly captured substantial traffic as its more Northern position within Southeast Asia made it well positioned to handle traffic between Europe and North Asia. The Asian economic crisis of 1997 has affected the geography of air traffic within Southeast

[65] "Landbridge seen handling 21,000TEUs", in: *The Star Maritime*, 6 September 1999, Internet Edition.
[66] "Improve services to be competitive, Ling tells KTM", in: *The Star Maritime*, 7 April 2000, Internet Edition.
[67] "Rethink transport policy", in: *The Star Maritime*, 3 April 2000, Internet Edition.

Asia and between the region and other parts of the world with Singapore increasing its dominant position even if Bangkok is considered a better hub for traffic between Europe and Northeast Asia (Rimmer, 2000).

4.5.2 Regional "Software": The ASEAN Framework

The Economic Ministers of ASEAN signed on 16 December 1998 three agreements in line with the goal of the Hanoi Plan of Action to hasten the economic integration of the ASEAN member countries. Two of these, the Framework Agreement on Mutual Recognition Arrangements and the Framework Arrangement on the Facilitation of Goods and Services would make trade among ASEAN countries much easier and faster and thus supporting trade among themselves. The third document signed by the ASEAN Economic Ministers would make it easier for nationals of any ASEAN member to sell services in the other member countries. Liberalisation in trade in services is considered an important support for efforts to bolster trades in goods in the ASEAN countries.

With the signing of the Protocol to Implement the Second Package of Commitments under the ASEAN Framework Agreement on Services, the ASEAN countries now have two packages of commitments above and apart from their commitments to the General Agreement on Trade in Services (GATS). The two packages together cover air transport, business services, maritime transport, telecommunications and the tourism industry. The next task that is scheduled for the ASEAN countries is to launch a new round of negotiations that will be covering all sectors and all modes of suppliers of services.

The key objectives of the Framework Agreement on the Facilitation of Goods in Transit are:

1. To facilitate transportation of goods in transit, to support the implementation of the ASEAN Free Trade Area (AFTA), and to further integrate the region's economies;
2. To simplify and harmonise transport, trade and customs regulations and requirements for the purpose of facilitation of goods in transit; and
3. To establish an effective, efficient, integrated and harmonised transit transport system in ASEAN.

Multimodal transport within the ASEAN region will also be made possible through the ASEAN Framework Agreement on Multimodal Transport. This Agreement will lay down the broad principles on minimum standard of registration and liability limits for ASEAN multimodal transport operators. This Agreement is scheduled to be adopted at the end of 2000.

ASEAN has been considered one of the world's most successful regional organisations but the 1997 economic crisis has affected the implementation of the ASEAN Free Trade Area (AFTA). ASEAN economic relationships have been viewed more competitive than co-operative and the concept of national interest instead of regional interest continues to dominate. Even under AFTA, ASEAN countries can exclude goods and services from the scheme for alleged reasons of national security[68]. The political agenda of each member state does not facilitate the creation of economic co-operation and integration. Even with the Framework Agreement on the Facilitation of Goods in Transit in place, the member states have been unable to implement it; for example, Myanmar is unable to designate its transit routes[69].

4.6 SUMMARY

This chapter has described the South East Asian region with a particular emphasis on Cambodia, Lao PDR, Malaysia, Myanmar, Singapore, Thailand and Vietnam.

[68] "Is ASEAN a paper tiger?" in: *Bangkok Post*, 15 February 1998, Internet Edition.

Regional transport infrastructure and statistics are presented. There exist discrepancies in the level of economic development and infrastructure across the region. Singapore is the region's transhipment hub and the biggest container port in the world with an annual throughput of more than 15 million TEU compared to 2.5 million TEU for Port Klang in Malaysia, its nearest rival. Cambodia has the smallest volume of containers with less than 100,000 TEU annually and all its cargo must be feedered to and from Singapore or Thailand.

In South East Asia, Singapore port is such an important transport hub that it distorts trade flows, "bends" routeing itineraries and influences vessel rotations. Nevertheless, as with Hong Kong and its neighbouring ports, a two-tier port system is likely to emerge between Singapore and its neighbour, PTP, Port Klang, Laem Chabang and Bangkok port. This means that high-value cargo that needs the fastest transit times will use Singapore as a transhipment point because of its role as a true global liner hub, while lower price containerised cargo with a more flexible delivery schedule will probably migrate to the main regional ports of the region such as PTP, Port Klang, Laem Chabang and Bangkok port[70]. Links between Singapore and the other main regional ports are characterised by very high goods volume and daily connections whereas ports in the periphery of the main regional maritime corridors are subject to low goods volume and weekly connections with Singapore. The only exception is probably the ports in the Ho Chi Minh area, which are starting to integrate into the main regional maritime corridors.

Seaports and maritime corridors dominate multimodal transport systems in the region as land corridors are subject to physical and non-physical impediments. The region's rail corridor may provide a viable alternative to South East Asian maritime corridors in the near future when all the countries in "Continental South East Asia" are connected to the rail network.

The analysis of cross-border movement and trade volumes has highlighted a common problem in all the countries studied. There are too many cumbersome rules and

[69] According to U Kyaw Naing, Director of the Ministry of Transport, Myanmar, 19 November 1999.

regulations that hinder the free flow of goods. Even when there is a regional Agreement in place to facilitate the movement of goods in transit, national and bilateral rules usually takes precedence.

[70] "New port paradigm for Southeast Asia", in: *Lloyd's List Maritime Asia*, September 2000, pp. 6-7.