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## The Prospects of the Kra Canal

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UNIVERSITY OF RHODE ISLAND

THE PROSPECTS OF THE KRA CANAL

A MAJOR PAPER SUBMITTED TO  
THE FACULTY OF THE DEPARTMENT OF  
GEOGRAPHY AND MARINE AFFAIRS  
IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF  
MASTER OF MARINE AFFAIRS

BY

PANNARAI CHUAPIBUL

KINGSTON, RHODE ISLAND

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## FOREWORD

The controversies over the prospects of the Kra Canal persuade me to write my major paper about it. Ever since the Thai government rejected the proposals for construction of the canal, the press has criticized that the actual reason why the government rejected the canal proposals was because of its fear of the irredentist movement with complete disregard of the enormous benefits of raising our balance of payments and standard of living. Nevertheless, there must be other important reasons. My opinions, which do not reflect those of the Thai government are based on problems of sources of capital, advantages and disadvantages as the important points.

The main sources of this paper are in Thai, and the estimated expenditure is rather old, since there has been no official committee to consider this project since 1972. Within the last decade, proposals reviewing this project have been limited to the private sector.

Finally, my great experience at the University of Rhode Island will never be forgotten and I would like to express my gratitude to all the professors in the Marine Affairs Program for sharing knowledge and friendship.

June 1984

## THE PROSPECTS OF THE KRA CANAL

Thailand is on the Malay Peninsula which is 1,210 km. long. It serves as a barrier between the Indian Ocean and South China Sea. The narrowest part of this peninsula, called the Kra Isthmus is in the South of Thailand and is 120 km. wide.

On November 16, 1971, the governments of Indonesia and Malaysia declared jointly that the Strait of Malacca was not an international waterway, although they fully recognized its use for international shipping 'in accordance with the principle of innocent passage'. An alternative and shorter navigational route to link the Indian Ocean with the South China Sea might be a canal across the Isthmus of Kra or somewhere across the South of Thailand (Figure 1). There, however, has been an interest in cutting this canal since its first consideration during the reign of King Rama I, Chakri Dynasty, when it was proposed for strategic maneuver against the Burmese in 1793. In 1858 the British government proposed a canal to King Rama IV because of economic reasons of maritime trade between India and China. At that time India and Burma were British colonies, but Singapore had not yet become a British colony. However, the British government found it could not afford this project and there were no alternative sources of financing. After Monsieur de Lesseps succeeded in construction of the Suez Canal, he asked for the permission of King

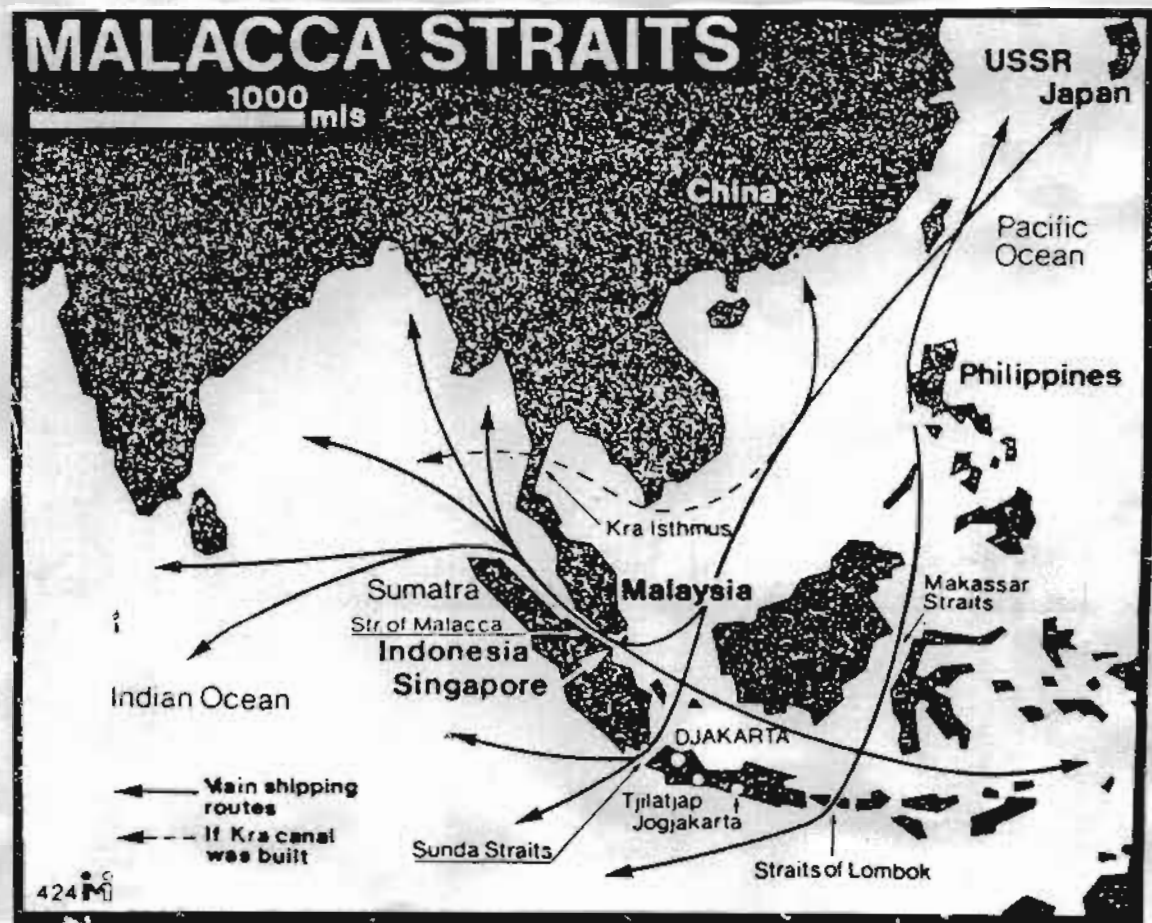


FIGURE 1

Rama V to survey a proposed canal area in 1881. The French, however, were not allowed to cut the canal because they demanded full control over the canal. The existence of a canal would endanger our sovereignty with the threat of French and British colonialism prevalent at that time.

Before WWII, the Japanese were keenly interested in construction of the canal but were not able to pursue that interest because the Isthmus was within the British sphere of influence. During the war Japanese used the Isthmus of Kra for strategic maneuvers to attack Burma, Malaysia and Singapore. After the war, in 1946, there was a peace treaty between Thailand, or Siam at that time, and Britain which discouraged the building of the canal. Through Article 7 of the treaty, Britain imposed upon the Siamese government a clause in a formal agreement by which the Siamese agreed not to cut any canal across the territory of Siam to connect the Indian Ocean and the Gulf of Siam without first obtaining the consent of the Government of Great Britain.

This treaty was invalidated by Thailand and Great Britain on January 14, 1954. The scheme to cut this canal was then reviewed in 1959 by the Japanese for the transshipment of oil from the Persian Gulf to Japan. In 1971 two Japanese survey teams with the approval of the Thai National Executive Council surveyed three possible routes for an oil pipeline as an alternative to a canal. It was determined that it would cost 500 million dollars to construct an oil pipeline able to

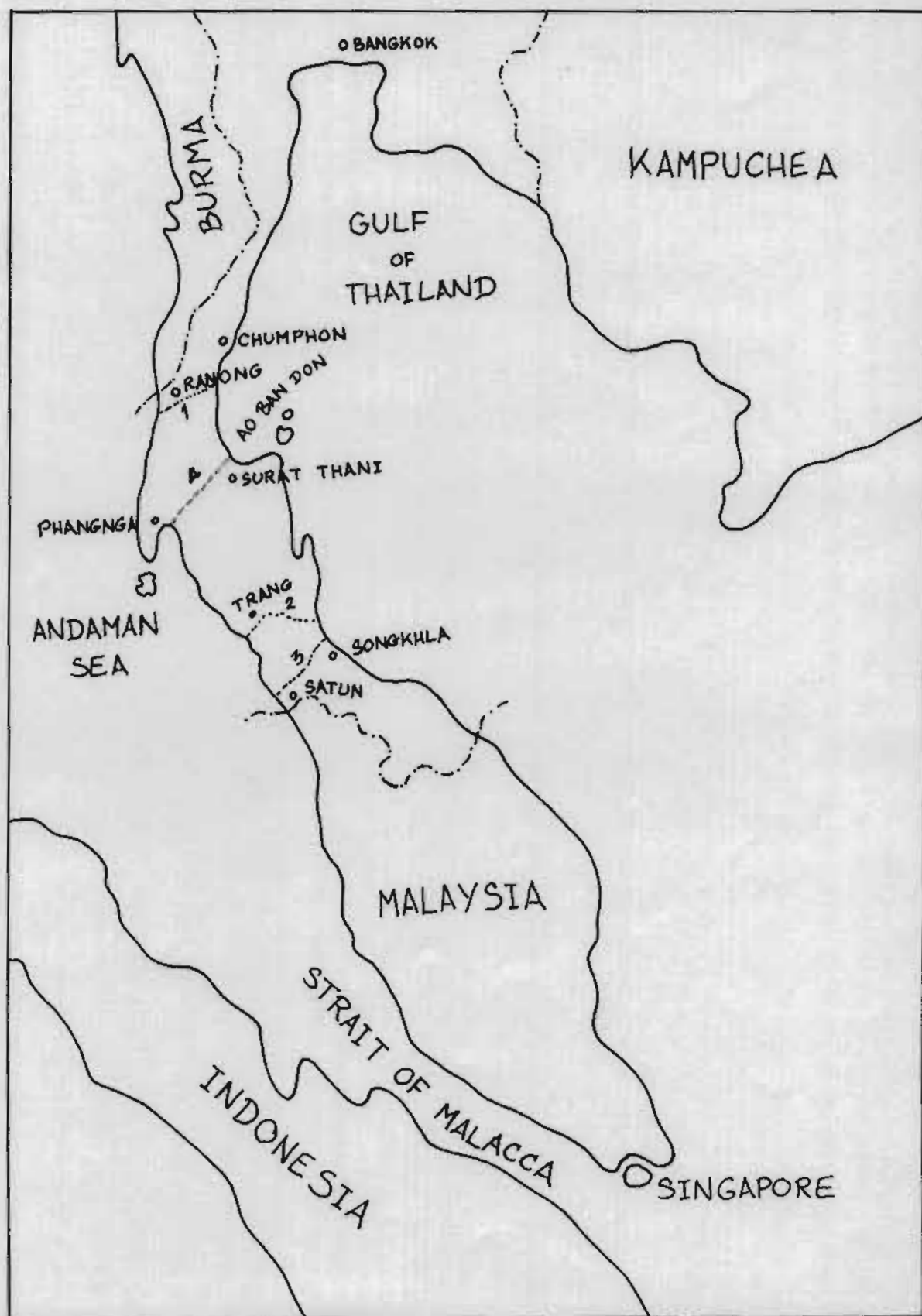


transport 150 million tons per year and 35 cents per ton to transport it across Thailand, based on 1972 prices. Because of these astronomical costs, this plan was not feasible. So the only option was cutting a canal through the Isthmus.

In 1972 the Thai National Energy Authority completed its study of four different routes to build the canal. The routes were: (Figure 2)

1. between Ranong Province and Lang Suan, Chumphon Province which would pass through the Isthmus of Kra. This route would be 120 km. long through an area with a relief of 220 meters. It was, however, not feasible because:
  - 1.1. the area is rich in ores, for example tin.
  - 1.2. the cost of removing the excessive rocks was too high.
  - 1.3. at least 15 locks would be required to raise the water level and too much time would be required to navigate through the canal.
  - 1.4. Ranong is close to Burma-Thailand border. The canal might cause disputes between these two countries.
2. between Sikao, Trang Province and Ranot, Songkhla Province. It would be 180 km. long but the relief is 200 meters and also imposed excessive cost of excavation of rock and both mouths of the proposed canal were not appropriate for construction of

FIGURE 2





wharves or berths.

3. between Satun Province, along Rat ta Phum, and Lake Songkhla, Songkhla Province. It would be 155 km. long and pass through area with a relief of 90 meters. Satun, however, is adjacent to Thailand-Malaysia border.
4. between Phangnga Province and Ao Ban Don, Tha Chang District. This was the most appropriate route because the relief is only 65 meters and the route would be 200 km. long.

The National Energy Authority decided that the route Phangnga and Ao Ban Don was the most suitable one. Based on 1972 prices and U.S. \$ = 20 Baht, the construction expenses for 100,000 d.w.t. vessel would be:

1. the improvement of channel entrances in the sea:

Ao Phangnga 20 km.	U.S. \$	15.0 mil.
Ao Ban Don 40 km.	U.S. \$	<u>47.0</u> mil.
	U.S. \$	<u>62.0</u> mil.
2. canal conventional excavation

100 km.	U.S. \$	<u>112.5</u> mil.
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3. construction of a lake for navigation

Pak Lao Dam	U.S. \$	32.0 mil.
Cha-Un Dam	U.S. \$	3.3 mil.
construction of a linkage canal	U.S. \$	<u>24.7</u> mil.
	U.S. \$	<u>60.0</u> mil.

4. construction of a reservoir	U.S. \$ <u>3.75</u> mil.
5. five locks	U.S. \$ <u>45.0</u> mil.
6. deep sea port and equipment only Phangnga side	U.S. \$ <u>50.0</u> mil.
7. mooring buoys or anchorages, berths, and oil transfer equip- ment	U.S. \$ <u>51.25</u> mil.
8. engineering designs and ad- ministration cost	U.S. \$ <u>8.0</u> mil.
9. land and property compensation	U.S. \$ <u>15.0</u> mil.
10. ancillary 10%	U.S. \$ <u>42.5</u> mil.
TOTAL	U.S. \$ <u>450.0</u> mil.

This project was to use this canal to transship oil from 500,000 d.w.t. vessels at Phangnga to 100,000 d.w.t. vessels, then reship to 500,000 d.w.t. at Ao Ban Don to Japan. The expenditure and benefits were estimated with regard to:

1. the U.S. \$450 million construction would be provided through U.S. \$100 million from Thai budget and loans of U.S. \$350 million at a 6% interest rate.
2. life span of this canal would be 50 years.
3. the maintenance and management expenses would be 3% of the total expenditures.
4. oil transshipment would be 200 mil. ton annually and the toll would be 25 cents per ton.
5. cargo transfer would be 50 mil. ton per annum and the toll would be 35 cents per ton.

Therefore, the annual expenses would be:

1. loan payments towards U.S. \$350 mil.	
principal at 6% interest rate	U.S. \$ 21.0 mil.
2. depreciation	U.S. \$ 9.0 mil.
3. maintenance and management expenses	U.S. \$ <u>13.5</u> mil.
TOTAL	U.S. \$ <u>43.5</u> mil.

Annual benefits would be:

1. the 25 cent toll per ton of 200 mil. ton oil transshipment	U.S. \$ 50.0 mil.
2. the 35 cent toll per ton of 50 mil. ton cargo transfer	U.S. \$ <u>17.5</u> mil.
TOTAL	U.S. \$ <u>67.5</u> mil.

Therefore, the profits would be U.S. \$24.0 million annually.

In September 1973 Tippetts-Abbett-McCarthy-Stratton (TAMS) and Lawrence Livermore Laboratory (LLL), of the U.S. private sector, suggested an alternative method to the Thai government. This "Project Plowshare" would entail cutting the canal by nuclear construction methods in some parts to shorten the time and reduce the costs of construction. (Table 1)

In 1957, the U.S. Atomic Energy Commission (AEC) initiated a program, Project Plowshare, to develop nuclear excavation methods. Although it is impossible to avoid extremely small amounts of radiation in Plowshare applications, it

EXPENSES AND TIME IN EXCAVATION

(By American Company based on 1973 prices)

1. For 500,000 dwt. vessel

	CONVENTIONAL EXCAVATION		NUCLEAR EXCAVATION	
	One Way	Two Way	One Way	Two Way
EXPENSES (U.S. \$)	5,650 mil	11,100 mil	3,540 mil	6,220 mil
TIME (Yrs.)	12	14	10	12

2. For 250,000 dwt. vessel

EXPENSES (U.S. \$)	4,250 mil	8,350 mil	2,730 mil	4,450 mil
TIME (Yrs.)	11	13	9	11

TABLE 1

appears possible that they can be reduced to concentrations typical of those found in nature, even below the dosages which can be tolerated in certain continuous industrial activities.

The original Project Plowshare served as a test of cratering techniques which could be applicable to canal digging along with conventional method. In "Projects Sedan and Danny Boy", two phases of Project Plowshare, 100 and 420 kiloton nuclear explosions proved that craters large enough for a canal could be made if the detonation occurs at the proper depth underground.<sup>1</sup>

According to the 1973 canal construction proposal of Chow Chowkwanyuen, Thai-Chinese entrepreneur, it was estimated that excavation for two lanes for 500,000 d.w.t. vessels about 102 km. long and 33.5 m. deep, the Satun-Songkhla Route would require 136, 0.8-megaton nuclear explosions. The power of these explosions would be approximately equivalent to 5,250 times the nuclear bombs that destroyed Hiroshima.

Because of the astronomical costs, an uncertain world economic situation and the unstable political atmosphere both in Thailand and worldwide, it is very important to carefully weigh advantages and disadvantages before entrepreneurs and planners decide whether to construct the canal.

#### Problems of sources of capital

##### 1. Concession

First of all we must study the experience of the

construction of the Suez Canal.

In 1858, Ferdinand de Lesseps, the owner of the concession, organized a construction company which required capital of 200 million francs, divided into 400,000 shares of 500 francs each. The cost of the work was estimated at 160,000,000 francs, and to this was added 40,000,000 francs, for interest during construction. It was then expected that the canal would take nine years to complete. De Lesseps decided to undertake the project by himself and succeeded in persuading subscribers to purchase for the issue. In the end it was the savings of the French people that furnished most of the capital, for they purchased 207,111 shares out of a total of 400,000. The Ottoman Empire, including the personal subscription of Mohammed Said, the Viceroy of Egypt, took 96,517 shares. After making allowance for various small subscriptions from other countries, there remained a bloc of 85,506 shares which the Company had reserved for England, the U.S., Austria, and Russia, but they all abstained. So Mohammed Said, who was a great gambler, took the whole bloc for his own account, and thus became the principal shareholder. Later this accumulation of shares in the possession of the Viceroy was further augmented until it amounted to almost half the capital. It was this bloc that Disraeli, the British Prime Minister, bought in 1875 for Great Britain.

The profits were to be divided in the proportion of 15 per cent to the Egyptian government, 10 per cent to the



founders, and 75 per cent to the shareholders.

In January 1863 Mohammed Said, the faithful supporter during all the early days, disappeared. His successor, the Khedive Ishmail was not an adversary to the French, for he maintained that he was 'as much of a canalist as de Lesseps himself,' but still he was not a friend in the true sense of the word. Nubar, his Foreign Minister, however, was a British agent.<sup>2</sup> At the instigation of the English, Nubar obtained authority from the Porte, the canal authority, to reduce the number of forced laborers to only 6,000 and to compel the Company to return all the lands that had been granted to it. A violent moral campaign against forced labor was raged through England. Finally, an injunction was sent to the Company ordering it to suspend work, and it had to comply. The conflict between the Company and the British influenced Egyptian government was brought to Napoleon III for arbitration.

On July 6, 1864, Napoleon III gave his verdict, in which he revised the original contract in several essential points. The Company lost the right to employ labor requisitioned from Egypt. It was compelled to give back over 150,000 acres of land which it held under the original concession. And it forfeited the ownership of the fresh water canal, although it still had the right to use it. In compensation it received an indemnity of 84 million francs, and most importantly, the concession was declared to be valid. The inauguration of the Suez Canal took place on November 17, 1869.

On December 1, 1875, the Khedive Ismail, who was a great spendthrift, found himself faced with a maturing debt of some 80 to 100 million francs. As the value of the Suez Canal shares was now beginning to be recognized, it was suggested that he should sell them. The bloc in his possession came from the initial subscription of Mohammed Said, plus various later purchases. It amounted to 177,000 shares of a total of 400,000, or almost half the total capital of the Company. In fact, in 1869, being already short of cash, he had detached and sold back to the Company the dividend coupons for the next 25 years, and consequently lost the right to vote during that period, though a friendly agreement allowed him to delegate his voting power at the general meetings to the president of the Company. Nevertheless, his shares, even without coupons and voting rights, still had a certain commercial value.

Disraeli, the British Prime Minister, arranged to purchase these shares for 100 million francs equivalent to ~~£~~ 3,976,582 sterling. The British government now found that it was the sole proprietor of 177,000 shares. Some change in the canal management appeared inevitable. The British government was allowed to vote at the Assembly of Shareholders, in accordance with Article 51 of the statutes of the Company, which specified that every owner of 25 shares should have one vote, and that no single shareholder could have more than ten votes. The British were given three seats on the board. Although she

was acquiring a substantial financial interest as a shareholder, the political value of the transaction was considerably greater.

Economists and critics who claim that the construction of the Kra Canal will be the solution to economic problems in Thailand must study the experience of the construction of the Suez Canal and make the following applications to the Kra Canal project.

1. Naturally, the competing companies usually propose lower cost estimates by underestimating the high cost of the mechanical equipment, labor, which are highly sensitive to global economic conditions, etc. After the construction begins more capital will be required. If the Kra Canal project is recognized as valuable, financial aid will be offered from other countries who stand to benefit from a canal. However, if the foreign supporters of the project lose interest, the Thai government would have to bear the entire cost which would put us 'in perpetuity' in deficit.

2. The concessionaire did not completely succeed in persuading subscribers to purchase all the shares and such countries as England, the U.S.A., Austria and Russia were not interested in subscribing to the bloc reserved for them. In my opinion, the solutions for these problems which apply to a Kra Canal concession are:

- 2.1. the Thai government has to purchase all the rest of the shares in order to maintain the principles

of neutrality and innocent passage over the canal. Thailand, however, is a developing country and much capital is needed to implement existing economic and social development plans. If the budget is divided to subsidize the canal concession, the plans cannot be fulfilled.

2.2. in order to maintain the right over this waterway in Thai hands, it is more appropriate for the Thai private sector to purchase all the rest of the shares. It could, however, bring the canal under the family-control policy similar to other businesses and firms in Thailand. If they hold the majority of the shares, they will have more seats on the board of concession to participate in the canal policy-making and management which could allow monopolies to grow.

2.3. if other countries or foreign investors are allowed to purchase the remaining shares, it is obvious that the Japanese will be eager to buy them because this cross-country canal will substitute for the present Japanese line from the Middle East to Japan. If the Japanese are the major shareholders, they can gain control over the canal. Thus, the Thai economy could be easily annexed with the Japanese economy and Japan could exercise absolute economic and political control in Thailand. In fact, Thailand is already in enormous debt to Japan.

3. There must be assurances that navigation through the Kra Canal is in accordance with the principles of neutrality and innocent passage. Therefore, in order to prevent any single power from gaining control over the canal, the concessionaire should divest shares to the point at which no single shareholder can own more than a specific bloc of shares. Nevertheless, problems will be raised if the shares are not completely sold out.

4. The country which realizes that it will lose the benefits in this region because of the building of the Kra Canal or one who cannot be a concessionaire as he wishes may try to intervene in this project. One means of intervention would be to encourage the labor force to demand higher wages which will cause delays and increase the required capital.

In 1856, Palmerston, the British Foreign Minister, invoked the argument, namely that the principal and only motive which had caused him to advise the Turkish government not to accept the proposed plan, had been the possible damage to Turkey, not the damage to England. He felt, in fact, that the proposed canal was an attack on the integrity of the Ottoman Empire.

Thus, the British statesmen kept the real reasons for their attitude in the background. It was not a question of protecting some gullible capitalist, nor even the integrity of the Ottoman Empire, but in reality the safeguarding of England's lines of communication. Their preoccupation was



essentially imperial. The route to India by the Cape of Good Hope was long undoubtedly, but it was safe, and England could easily control it. The passage by Suez certainly was direct, but if Egypt, which was the key-piece, should fall into the hands of some European power, there could no longer be any question of British control. Now it was France that was proposing to construct the canal.

As a result of diplomatic conversations, the governments of England and France finally agreed not to interfere with any decisions made by Turkey and Egypt, but to leave the whole affairs to follow its industrial and commercial course. British hostility, however, persisted and could not be ignored.<sup>3</sup>

5. Egypt had neglected to consider the problems associated with financing the Suez Canal and had to bear the burden of financially irresponsible leaders. The country's damaged financial economic stability caused by overextension of the economy allowed other powerful countries to exploit the Suez Canal.

6. To compensate for probable losses to Thailand's economic stability, the profits of the Kra Canal to the government must be much higher than the profits of the Suez Canal to the Egyptian government which was only 15 per cent.

## 2. Loans

Foreign loans comprise the greatest source of Thailand's development budget. In the eyes of multilateral lending



agencies such as the World Bank or private international banks, Thailand has enjoyed a remarkably high credit rating. A stable and increasingly diversified economic base, coupled with a fiscally conservative regime, have contributed to make the country a good risk. However, the adverse impact on the country's balance of payments caused by the second oil crisis in 1979 has led to burgeoning external debt. Although this is still generally considered to be at a manageable level, there is now a growing awareness within both official and private policy-making quarters that the government should exercise extreme caution in overseas borrowings. The favorable credit rating must be maintained in order to sustain longer-term economic development objectives.

Thailand's total external debt, both long and short term, was estimated at approximately U.S. \$11 billion (including U.S. \$7 billion incurred by the public sector and U.S. \$4 billion by the private sector) at the end of 1983. The funding required for the government's Eastern Seaboard Development Programme increases a cautious attitude towards Thailand's foreign-debt position. The purpose of the Eastern Seaboard Development Programme is to develop gas-based heavy industries on the country's eastern coast where offshore gas in the Gulf of Thailand is piped onshore. This programme will develop a petrochemical complex estimated to cost more than U.S. \$800 million and a chemical-fertilizer complex, projected to cost more than U.S. \$700 million on a full-scale commercial-financing

basis.<sup>4</sup> The development of two deep-water ports on the east coast are included in the program as well. The completion of the first phase of both projects is scheduled by 1988.

If the Thai government accepts the Kra Canal project as one of its development programs, a much more astronomical foreign-debt will be inevitably introduced. The government must reduce their foreign-debt first and ensure that the lending agencies have been repaid so that Thailand's credit rating can be maintained. However, by the time the Thai's balance of payments allows the possibility of the new risk of foreign-debt, the Kra Canal project may be considered as a extravagant and worthless project.

Among other things, the obligations between the Thai government and the lending agencies, especially the World Bank, as a requirement of the loans present some problems. For example, utility price reforms were required as part of the conditions attached to the World Bank's first structural adjustment loan, of U.S. \$150 million, granted early in 1982. In late 1982, a cabinet decision by Prime Minister Prem Tinsulanond's third coalition to raise the price of tap water, nationwide railfares and telephone charges, as well as Bangkok bus fares was stalled by political opposition. The widely publicised January 3, 1983 cabinet action prompted strong reaction from the Labour Congress of Thailand (LCT) and the Thai Labour Unions Confederation--two of the country's three major labor-union groupings. Threatening a general strike,

an LCT leader was quoted as saying that workers would "declare war" on the government if the dissolution plans were implemented.<sup>5</sup>

With Thailand's relatively good credit rating, the country can easily borrow from other sources and possibly at an interest rate lower than that charged by the World Bank, such as American banks. Yet, because they are still fresh from their traumatic experiences with problem loans in Latin America and the Philippines, these banks may not be willing lenders. In comparison, the Japanese are more flexible and one of the only four items in the draft budget for fiscal 1984-85 that show significant increases year-on-year is economic cooperation, or foreign aid which is scheduled to increase by 6.1 per cent.<sup>6</sup> Questions are raised here, however, whether Japan uses its Official Development Assistance through the Overseas Economic Cooperation Fund (OECF) to exploit developing countries such as Thailand or genuinely intends to contribute to their economic development. Because only consultants from Japan and developing countries are eligible to provide engineering services, a condition which obviously gives Japanese firms a clear edge, and Japanese nationalism would encourage recommendation in favor of Japanese contractors and discrimination against others. For example, Samak Sundaravej, the Communications Minister said that a Taiwan firm submitting the lowest bid for Bangkok airport's first-phase expansion was disqualified in favor of a Japanese/Thai

consortium, which bid higher. A Thai firm offering a lower price for the airport's fourth-phase expansion was also disqualified for not meeting certain specifications. These subsequently led to protests by the affected parties.<sup>7</sup>

Besides the loans from the U.S.A. and Japan, other countries such as West Germany, Canada, Australia usually provide financial aid, in fact, they always provide subsidization without repayment and interest.

### 3. Private Entrepreneur

There are some private entrepreneurs interested in cutting the Kra Canal, especially a well-known Thai-Chinese industrialist, Chow Chowkwanyuen. He first proposed this project in 1963, at that time with the Overseas Technical Consultants Ltd. of Japan. His project would be a sea level canal so that two 500,000 d.w.t. vessels can navigate through the waterway easily. The route would be Satun-Songkhla which was 102 km. long and 33.5 m. deep, the excavation method would be the nuclear method using 136 0.8-megaton nuclear bombs. The construction capital would all be provided by the private sector and would need no government guarantees. After the construction is completed, estimated to take no less than 10 years, it will be reverted to the government under the management of his company. Under the proposed agreement with his company the Thai government would be required to meet a schedule of repayment for at least 50 years and would receive the

remaining profit from the canal.

However, both foreign and Thai economists, bankers, businessmen, and engineers suggested that the Thai government should accept this project as a national project in order to encourage foreign investors to join the project. Therefore, the government's involvement in this risky business would serve only to fulfill this private entrepreneur's aim. Otherwise, most of the capital will be provided by foreign sources which means that the concession of Mr. Chowkwanyuen's company would actually be the concession of a foreign company. Then the same problems as discussed in "Problems of sources of capital: concession" which the Thai Government should try to avoid will be raised again. The government must first slow down foreign-debt so that the economic and financial stability will not be endangered. In a speech made on December 7, 1983, Amnuay Viravan, a widely respected former long-serving Ministry of Finance official, said, "The government must resist the easy options to borrow abroad, or to encourage the private sector to over-borrow in order to cover domestic revenue shortfalls, or to rush into capital-intensive projects with questionable economic feasibility."<sup>8</sup>

According to the proposal of Mr. Chowkwanyuen, the Thai government will, theoretically, gain enormous benefits in this cross-country canal. In reality, if the canal can make profits, the company will have the first priority. Only some benefits will be delivered to the government, but the



government must take absolute responsibility for the canal in case of its failure. The Thai Oil Refinery (TORC) which was founded in 1961 by Mr. Chow Chowkwanyuen, as well, began operating the first 35,000-barrels-a-day refinery in 1964 as part of a long-term concession granted by the Thai government. TORC has performed relatively well in recent years amid the sharply fluctuating world energy and financial markets. Net profit in 1981 was U.S. \$5.6 million, the second highest in the company's history -- though this fell to U.S. \$3.3 million in 1982. Under the concession agreements, ownership of the refinery reverted to the Thai government (specifically the Industry Ministry) in late 1981, but the company was immediately granted another 20-year operating lease.<sup>9</sup>

#### Advantages of the Kra Canal

##### 1. Strategic maneuver

To protect Thailand's territorial water, bordering the eastern shore, the Gulf of Thailand as well as the Andaman Sea, on the western shore the Royal Thai Navy Fleet must navigate through the Malacca Strait which is not an international waterway and warships may be prohibited. The Kra Canal could fulfill the Thai strategic values so that the fleet can maneuver between the east and west coast at any time.

2. If the Kra Canal is fully utilized as a substitute for the Malacca Strait, that means:



- 2.1. the goal of decentralization of development from Bangkok is satisfied as well.
- 2.2. more jobs will be provided.
- 2.3. the government will gain more revenues and profits to support other economic and social development plans.

3. Development of distant water fisheries would be encouraged as transfer from the overexploited Gulf of Thailand to the Andaman Sea and beyond, easily participating in joint-ventures with other countries, for example Bangladesh.

4. There will be a new port of call which would stimulate local economic development, particularly the tourism industry in southern Thailand.

5. Port development which would occur at either or both mouths of the canal would create a new center of cargo transfer in the South of Thailand. However, port facilities and infrastructure must be designed to be competitive with other ports in Southeast Asia.

#### Disadvantages

1. The first and fundamental reason is geographical in that the Malay Peninsula is not an Africa or South America. Ships sailing through the Kra Canal to Japan would have their journey shortened by about 500 miles and save at the most only one day's sailing time.<sup>10</sup> The few hours saved would have to be offset against the time required to pass through the canal,

for example, a ship sailing through the canal at 8 knots will take almost 14 hours, if it sails in the sea with a 15-knot speed it will take about 7 hours, so that about 7 hours could be lost sailing through the canal.

2. Ships sailing through the Kra Canal will have to pay a toll to the Thai government or company to defray capital, maintenance, and other costs without necessarily benefiting from a port facility. An elaborate port infrastructure and other facilities, however, are available in Singapore but there is no cost to navigate through the Malacca Strait.

3. This short cut navigational route will mainly serve Japanese VLCC (Very Large Crude Carrier) between the Persian Gulf and Japan. Since the first world oil crisis in 1973 and the second one in 1979, the Middle East Oil consumers, including Japan, have been searching for new sources of energy.

Japan, the biggest importer of LNG (liquefied natural gas) in the world today is now receiving more than 20 million tons per annum and it is predicted that this will have risen to more than twice this amount before the end of this decade. Sources for this vital energy are Brunei, Abu Dhabi, Sarawak and Indonesia. Altogether there are 27 large LNG carriers in service on these routes. So far, all the long term contracts for the supply of gas have been on a CIF basis and the ships employed have all been of foreign registry, with British, Norwegian and Liberian tonnage predominating. The trade has been proven safe, clean and efficient with few incidents

occurring during the several years in which these projects have been running.

This current year has seen the beginning of new expanded contracts with Indonesian suppliers, this time providing for shipment on a FOB basis and which has enabled Japanese flag tonnage to participate in the carriage for the first time. Seven large 125,000 cu. m. vessels are built or under construction for the two separate projects, three ships serving the Badak expansion project with a further four being destined to service the Arun expansion project. Long term contracts for twenty years have been signed between the Indonesian suppliers and the Japanese utilities which will consume the cargoes.<sup>11</sup> (Figure 3). Furthermore, other Japanese power utilities will consume LNG from a refinery on Canada's west coast. If this project is deferred or cancelled, the Japanese say that they can turn to Indonesia and Australia.<sup>12</sup>

However, Japan still imports 58 per cent of its oil from the Persian Gulf.<sup>13</sup> As the result of the intense Iran-Iraq war, Iraq is threatening tanker traffic, in hopes that it can prevent Iran from financing its war effort with oil revenues. Although Iran is probably incapable of closing the Strait of Hormuz to world shipping by military means, it certainly has the capacity to make travel within the Gulf so hazardous and costly that shipping companies would be reluctant to send their tankers into the war zone. Lloyd's of London increased rates on vessels using the Gulf, this time more than doubling the fee (from 3% to 7.5% of value) for ships sailing to Kharg

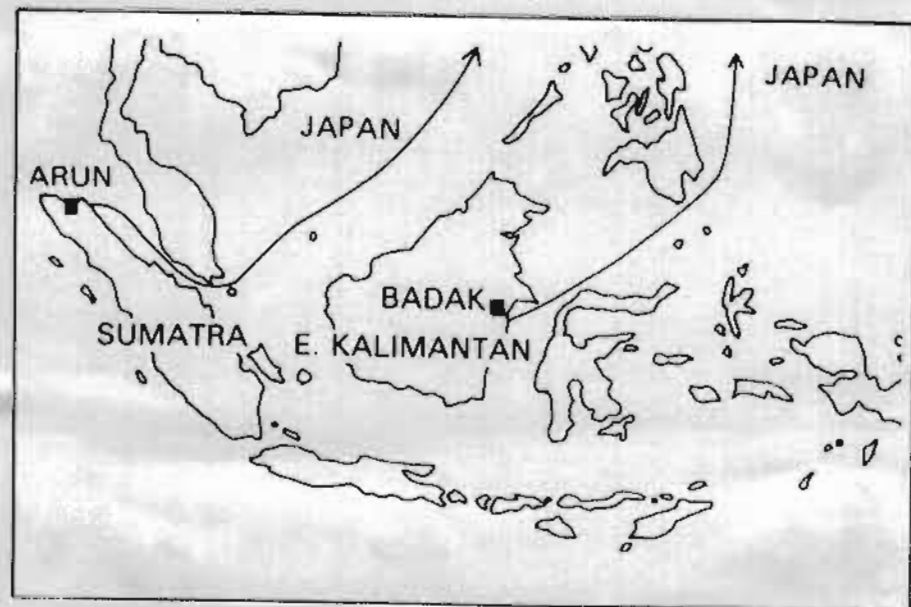


FIGURE 3

Island (Figure 4). The Arab foreign ministers also asked Japan to reduce its Iranian purchases. The Japanese, who are using leased vessels for picking up Iranian oil, refused, though Japanese shipowners later decided to curtail the traffic of their own ships to Kuwaiti and northern Saudi ports.<sup>14</sup> This harmful war will compel the Japanese to search for new more friendly and peaceful sources of energy and the importance of the Persian Gulf as Japan's primary oil producer will be diminished. Therefore, the need of this short cut waterway will become less and less important as well.

4. Most of the capital of the canal construction will be provided by foreign lending agencies which, of course, would request control over and profits from the canal in return. For instance, when the Japanese offered to improve safety in the Malacca Strait there was suspicion that Japan might be seeking to gain some control over their use. This apparently was the case in 1970 when Japan reportedly tried to establish itself as an equal partner with the three coastal states which were Malaysia, Indonesia and Singapore, in negotiating agreement on hydrographic survey work.<sup>15</sup>

5. Singapore is one of the largest ports and its commercial port facilities subdivided into six areas for serving different kinds of vessels and cargoes, for example, Keppel wharves--used for handling conventional cargo vessels, coastal ships and ro/ros; the container terminal--providing five large containership berths, one feeder and one cross berth; Jurong





FIGURE 4



port is the bulk handling terminal in Singapore and offers accommodation for nine oceangoing vessels; and Sembawang wharves provide five berths for conventional cargo vessels including one priority berth for container ships, this facility is used particularly for the handling of timber. Hence, vessels which wish to take advantage of the convenience of Singapore port facilities find it necessary to navigate through the Malacca Strait. In order to compete with Singapore and encourage the use of the Kra Canal by cargo carriers as well as Japanese tankers, higher technologies and facilities must be provided. However, compare both countries' political climate and bureaucratic processes, Singapore has quicker development than Thailand. For example, while the Thai government was still deciding whether to build a new airport or only improve and expand the old one, Singapore had finished construction of a new one.

#### 6. Environmental impacts

There are adverse environmental impacts of this cross-country canal project that must be considered. For instance, alteration of the configuration of the coastline may modify water circulation and change patterns of sediment erosion or deposition. Dredging and placement of the fill material may release suspended sediment in the water column, degrading water quality and possibly smothering communities of benthic organisms with a blanket of silt. And increase in pollutants and decrease in dissolved oxygen may accompany turbidity,

making the area hazardous for aquatic life. Dredging and filling may also harm spawning, breeding, or feeding areas for fish, birds, and terrestrial animals.

If the nuclear excavation methods are used whether through the whole route or in some parts, the severity of the outcome cannot be predicted.

7. The Kra Canal will physically separate some southern provinces from the north and encourage the irredentist movement composed of the Communist Party of Malaya (CPM) and its Marxist-Leninist breakaway faction, the CPM-ML; Muslim separatists; Communist Party of Thailand (CPT), etc. The overpass or tunnel connecting these two divided parts of Thailand must be strictly guarded in order to protect the military supply route which prohibits this movement. However, there is the Thai campaign against the CPM, Peaceful South, which apparently achieved some success in persuading guerillas to surrender. Malaysia is not entirely satisfied that Thailand's emphasis on defections from the irredentist group, not military operations, will be effective.

A major Malaysian complaint about Thai military operations against the CPM is that rarely are any guerillas killed. The Thais reply that capturing CPM camps in remote parts of the jungle and a number of camps have been seized by Thai troops over the past year is a painstaking exercise. The Thai policy appears to emphasize persuading the communists to surrender while making life uncomfortable for them by means of military

operations. Once guerillas have defected, the Thais tend to allow them to live in peace. The Malaysian attitude, by contrast, is more "once a communist, always a communist."<sup>16</sup>

8. The experience of the Suez Canal and the Panama Canal<sup>17</sup> causes some to fear that the Kra Canal would cause a super-powerplay so that the neutral policy over the canal could not be maintained. In my opinion, this policy would never be maintained because of Thailand's position as the frontline state of the Association of Southeast Asian Nations (ASEAN) which requires considerable political and material support from the U.S.A. to maintain a non-communist position.

The Panama concession owned by the French Company, again set up by Ferdinand de Lesseps, was valid only until 1893. If work were then stopped the Republic of Colombia would have the right to cancel the contract, and take possession of everything so far accomplished and all materials and plant found on the spot. The security holders were naturally worried about the danger of losing the concession in this way, and so they kept up an agitation in the hope of refloating the business, and getting the work started again. The liquidator's one hope was to take all possible measures to prevent the concession from lapsing. He therefore began by appointing a technical committee, and they stated that the equipment was in good condition. This committee adopted the final plan of the Old Company, and estimated that eight years and about 900 million francs would be needed to complete the canal. On

October 24, 1894, the New Company was incorporated to meet the emergency. It was entitled the Compagnie Nouvelle du Canal de Panama, and had 60 million francs capital. The chief subscribers were directors and others who had collaborated in the work of the original company, as well as a few banks; but the public abstained entirely. With such limited means there obviously could be no question of completing the canal. The moment it was issued an offer of sale was sent to the President of the United States.

The Americans received this French proposal rather coolly, although the canal had become for them a matter of immediate concern. The war with Spain had just been concluded, and as the U.S.A. now included Puerto Rico, Cuba and the Philippines among its possessions, it would rank henceforth as a first class Power, not merely in the Caribbean zone but also in the Pacific. Interoceanic communications therefore were a pressing problem. The cruiser 'Oregon', which had been lying in San Francisco harbour, had been obliged to spend ninety days rounding the Horn in order to take part in the Battle of Santiago de Cuba. This exploit had aroused the enthusiasm of the public, but it had also revealed the extreme weakness of the communications between the two oceans. The necessity of constructing a canal across the isthmus now became an urgent matter. Ever since the American Civil War, the U.S. had become increasingly taken with the idea of an American canal, on American territory, built and managed by the American

government. According to the Hay-Pauncefote Treaty on November 18, 1901, the treaty between Britain and the U.S., it was agreed that the U.S. alone should construct and administer the canal, which nevertheless was to be available on equal terms to the merchant vessels and warships of all nations. The canal was to be neutral, or at least was to be governed according to the general principles laid down for the Suez Canal by the International Convention of 1888.<sup>18</sup> There were two significant omissions, however, and these were to limit considerably the importance of this treaty later on. The words 'in case of war' did not appear anywhere in the text; this literally meant that in case of war the Americans could close the isthmus. Further, fortifications were not specifically forbidden, hence the conclusion that the builders of the canal could fortify it and maintain there a force of military police. The U.S. was to be the sole guarantors of this new maritime route, and was to receive the equivalent of a mandate from Britain.

Having settled with Great Britain, the Americans had now to come to terms with Colombia, for the transfer of the French concession had to be approved by the State that had originally granted it. According to the Hay-Herran Treaty on January 22, 1903, the New Company was authorized to transfer all its rights, privileges, properties and concessions, as well as the Panama Railroad to the U.S.; Colombia, the concessionary country, was not to interfere. Colombia in turn was to cede



in the isthmus a strip of land six miles wide, and although maintaining theoretical sovereignty, the concessionaire was to have the right to administer and police this zone, as well as set up special law courts. By way of indemnity the Colombian government was to receive U.S. \$10,000,000 at once, and nine years after ratification an annual sum of U.S. \$250,000. The Colombians were highly indignant over this treaty that their sovereignty over the canal zone was to be limited, and more particularly over the establishment of special courts. This ill will was not merely a question of self-interest. It also reflected the old Latin-American hostility towards the Anglo-Saxon race, more especially at this time when they felt that the isthmus was passing into the hand of the latter. When President Roosevelt learned of the Colombian's refusal, he responded not as a diplomat, but as a man of action. If Panama did not revolt, he planned to occupy the isthmus and undertake to finish the canal himself. Now the temptation for the Province of Panama to secede was so natural. The revolution was proclaimed on November 3, 1903, which officially the U.S. government knew nothing. The 'Hay-Bunau-Varilla Treaty' was signed on November 18, 1903. By the treaty the U.S. government received all the sovereign rights, the extended over a strip of territory ten miles wide called the canal zone. The treaty also authorized the Americans to requisition such ground or water surfaces as the canal might require. In exchange the U.S. guaranteed the independence of the Republic of Panama, which was also to receive an indemnity

of U.S. \$10,000,000 and at the end of nine years an annual indemnity of U.S. \$250,000 was to be added.

9. Although the Kra Canal is of internal interest, the relationship to other countries in ASEAN will also be affected especially Malaysia, Indonesia and Singapore. The joint ventures between Thailand and these countries may be delayed.

10. If the canal constructed to serve not only VLCC but also ULCC (Ultra Large Crude Carrier), the Malaysian and Indonesian governments may cooperate to dredge the Malacca Strait in order to compete for ULCC traffic.

Furthermore, there are other miscellaneous problems to consider in this project, for instance, the influence of monsoons, the displacement of people from the construction area, the danger of oil spills, etc.

#### CONCLUSIONS

In my opinion, the country that will gain most benefit in construction of the Kra Canal will be Japan, for this canal will be a short cut for tankers from the Persian Gulf to Japan. Because of high capital, whether the government or private sector take responsibility in cutting the canal, foreign lending agencies will be the only sources which can provide such an enormous amount. Although colonialism has been fading, with increasing foreign-debt, we will lose our national economic sovereignty. Then, of course, we will be economically colonized. Furthermore, compared with other development

projects, especially the Eastern Seaboard Development Programme, the Kra Canal project does not fulfill any of our national economic and social development plans. The benefits from the canal are not worth any investment. Some may argue that this waterway will implement the new port development plans under the industrial complexes phases of the Eastern Seaboard Development Programme as well as other new port privatisation policy program. The new ports other than the two already existing at Sattahip on the eastern seaboard and Surat Thani in southern Thailand are two small coastal ports at Krabi and Pattani in southern Thailand due to be operational in 1984; two medium sized deep-water ports at Songkhla and Phuket, also in southern Thailand, scheduled for completion in 1986; two large deep-water ports, the commercial port at Laem Chabang; and the industrial port at Map Ta Pud, on the eastern seaboard due to be operational in 1988; plus some small inland ports at Nakhon Sawan and Phichit in central Thailand, (Figure 5). Yet after consideration of problems of sources of loans, advantages and disadvantages, I still have a skeptical mind. Among other things there are some procedural problems, for instance, rigid government regulations, unprofessional administrators and bureaucratic red tape to politically motivated and sometimes unrealistic government policies, that will defer any development plans. Because such a long time period will be required for the canal project, it will be ensured that these problems in addition to the problems with the private

sector or foreign lending agencies will interfere in the construction which is intensely critical to the economic and financial status of Thailand.

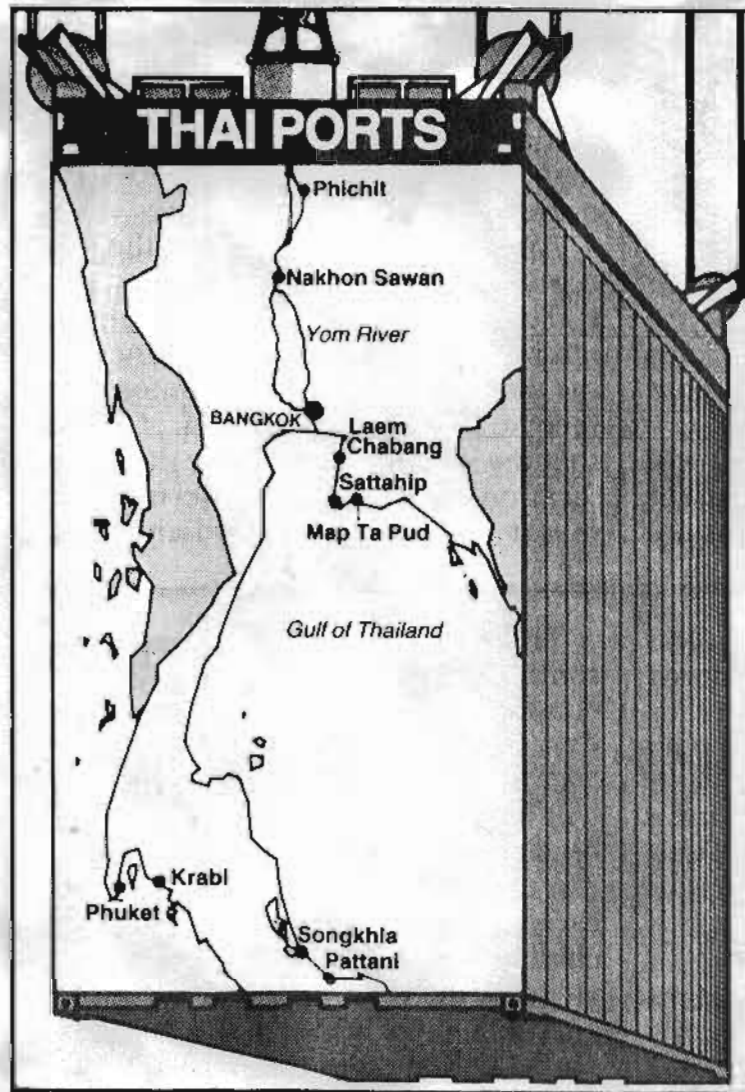


FIGURE 5

## NOTES

- <sup>1</sup>Immanuel J. Klette, From Atlantic to Pacific, pp. 44-45.
- <sup>2</sup>André Siegfried, Suez and Panama, p. 73.
- <sup>3</sup>Ibid., pp. 68-69.
- <sup>4</sup>Paisal Sricharatchanya, Far Eastern Economic Review, December 22, 1983, p. 97.
- <sup>5</sup>Paisal Sricharatchanya, Far Eastern Economic Review, January 19, 1984, p. 94.
- <sup>6</sup>Mike Tharp, Far Eastern Economic Review, February 2, 1984, p. 44.
- <sup>7</sup>Paisal Sricharatchanya, Far Eastern Economic Review, February 2, 1984, pp. 55-56.
- <sup>8</sup>Paisal Sricharatchanya, Far Eastern Economic Review, December 22, 1984, p. 97.
- <sup>9</sup>Paisal Sricharatchanya, Far Eastern Economic Review, January 12, 1984, p. 51.
- <sup>10</sup>Lee Yong Leng, Southeast Asia and the Law of the Sea, p. 27.
- <sup>11</sup>Fairplay, November 3, 1983, p. 42.
- <sup>12</sup>Ron Richardson, Far Eastern Economic Review, April 19, 1984, p. 60.

"Japanese power utilities have set a final deadline for the go-ahead of a planned liquefied natural gas (LNG) plant on Canada's west coast after recurring delays in putting all the pieces of the deal together pushed the project well behind schedule. Chubu Electric Power Co., which is scheduled to take more than half of the 2.9 million tons a year of LNG contracted over 20 years by five power utilities from Dome Petroleum, has set 31 October as the latest date by which the Canadian company must have all the major components of the deal finalized.



If the project is deferred or cancelled, the Japanese say they can turn to Indonesia and Australia to supply additional imports of LNG in the late 1980s. Indonesia will have surplus production available on the spot market until Australia's North West Shelf project comes on stream in 1988 or 1989."

- <sup>13</sup>William E. Smith, Time, May 28, 1984, p. 51.
- <sup>14</sup>William E. Smith, Time, June 4, 1984, pp. 30-31.
- <sup>15</sup>Peter Polomka, Ocean Politics in Southeast Asia, p. 43.
- <sup>16</sup>Rodney Tasker, Far Eastern Economic Review, November 10, 1983, p. 32.
- <sup>17</sup>André Siegfried, Suez and Panama, pp. 284-298.
- <sup>18</sup>Harry Browne, Suez and Sinai, pp. 3-4.

The 1888 Convention governing the Suez Canal--  
Constantinople, 19 October 1888.

In the name of Almighty God, Her Majesty the Queen of the United Kingdom of Great Britain and Ireland, Empress of India; His Majesty the Emperor of Germany, King of Prussia; His Majesty the Emperor of Austria, King of Bohemia etc., and Apostolic King of Hungary; His Majesty the King of Spain, and in His name the Queen Regent of the Kingdom; the President of the French Republic; His Majesty the King of Italy; His Majesty the King of the Netherlands, Grand Duke of Luxembourg, etc., His Majesty the Emperor of the Russians; and His Majesty the Emperor of the Ottomans;

Wishing to establish, by a Conventional Act, a definite system destined to guarantee at all times and for all the Powers, the free use of the Suez Maritime Canal, and thus to complete the system under which the navigation of this Canal has been placed by the Firman of his Imperial Majesty the Sultan dated the 22 February 1866, and sanctioning the Concessions of His Highness the Khedive,

Have agreed upon the following Articles:

Article 1. The Suez Maritime Canal shall always be free and open, in time of war as in time of peace, to every vessel of commerce or of war, without distinction of flag.

Consequently the High Contracting Parties agree not in any way to interfere with the free use of the

Canal, in time of war as in time of peace.

The Canal shall never be subjected to the exercise of the right of blockade.

Article 2. The High Contracting Parties, recognising that the Fresh-Water Canal is indispensable to the Maritime Canal, take note of the engagements of His Highness the Khedive towards the Universal Suez Canal Company as regards the Fresh-Water Canal; which engagements are stipulated in a Convention bearing the date of 18 March 1863, containing an expose and four Articles.

They undertake not to interfere in any way with the security of that Canal and its branches, the working of which shall not be exposed to any attempt at obstruction.

Article 3. The High Contracting Parties likewise undertake to respect the plant, establishments, buildings and works of the Maritime Canal and of the Fresh-Water Canal.

Article 4. The Maritime Canal remaining open in time of war as a free passage, even to the ships of war of belligerents, according to the terms of Article 1 of the present Treaty, the High Contracting Parties agree that no right of war, no act of hostility, nor any act having for its object to obstruct the free navigation of the Canal shall be committed in the Canal and its ports of access, as well as within a radius of three marine miles from those parts, even though the Ottoman Empire should be one of the belligerent Powers.

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