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Kingdom of Thailand

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Aid Programs in Thailand



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General Reference

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Nov. 4, 1971

PROGRAMME FOR MR. McNAMARA & PARTY

NOVEMBER 8-12, 1971

Monday, November 8, 1971

| | |
|---|---|
| 1455 | Arrive Bangkok (JAL 713). Met at plane by Khunying Suparb, Mr. Chanchai, & protocol officer. |
| 1525 | Meet M.R. Thongthang Thongthaem, Deputy Minister of Finance, and Khunying Chitra, in Reception Room. |
| 1545 - 1735 | Fly to Chiengmai by private plane, overflying Bhumiphol Dam.<br>In flight briefing on:<br>1. Family Planning Programme by Dr. Chitt & Dr. Rosenfield.<br>2. Northern Region Plan by Mr. Wiezman. |
| 1740 | Meet the Hon. & Mrs. Bisudhi Nimmanheminda, Governor, Bank of Thailand, at Chiengmai Airport. |
| 1745 - 1800 | Drive to and around Chiengmai University Campus. |
| 1800 - 1830 | Arrive at Dean's Office, briefing by Dr. Boonsom Martin. |
| 1830 - 1900 | Visit Hill Tribes Center in Chiengmai University Campus, briefing by Mr. Wanat |
| 1915 - 1945 | Visit Family Planning Clinic, briefing by Dr. Chitt. |
| 2000 | Check in at Rincome Hotel. |
| 2030 | Meet Mr. Visit Chaiyaporn, Governor of Chiengmai.<br>Dinner hosted by Governor Bisudhi (& Mrs.) |
| Overnight | Rincome Hotel. |

Tuesday, November 9, 1971

| | |
|---|---|
| Breakfast | Rincome Hotel at own leisure. |
| 0715 | Depart Hotel for Chiengmai Airport. |
| 0730 - 1000 | Fly to Khon Kaen, circulating Sirikit Dam, flying along right bank of Mekong River, circulating Pa Mong Dam, overflying Nongkhai-Vientiene Barrage, and circulating Lam Pao and Nong Wai Dams.<br>In flight briefing on :<br>1. Mekong Project by Dr. Boonrod and Mr. Van der Oord.<br>2. Northeast Development Plan by Mr. Renoo and Dr. Sanoh<br>3. Accelerated Rural Development Programme by Mr. Prasong. |
| 1000 | Depart from Airport for Khon Kaen University. |
| 1015 - 1100 | Visit Khon Kaen University, briefing by Mr. Pimol Kolakich. |
| ~~1115~~ - ~~1200~~ | Visit Agricultural Research Station, briefing by Drs. Bhakdi & Pinkerton & Mr. Borisuthi on rain fed agriculture and by Mr. Eytan Uriely of the UNDP Kalasin Station on irrigated agriculture. |
| ~~1215~~ - ~~1245~~ | Visit Family Planning Clinic, briefing by Dr. Chitt and Dr. Rosenfield. |
| ~~1245~~ - 1300 | Meet Deputy Governor B.O.T., Chalong Pungtrakul, at B.O.T. Khon Kaen Branch. |
| 1300 - 1400 | Lunch hosted by Mr. & Mrs. Chalong Pungtrakul, Deputy Governor B.O.T. at B.O.T. Branch Office. |
| 1400 | Depart for Khon Kaen Airport. |
| 1410 - 1500 | Fly to Chainat.<br>In flight briefing on :<br>1. Control and uses of rivers in Central Basin by Messrs. Charin and Sunthorn.<br>2. Agricultural Development plans for Central Plain by Dr. Bhakdi. |

| | |
|---|---|
| 1510 | Arrive Chainat (Takli Airbase) |
| 1515 - 1600* | Drive to Multipurpose Cooperative, in car. Briefing on Chainat Agricultural Research Stations by Mr. Manee. |
| 1600 - 1700* | Visit Multipurpose Cooperative. |
| 1700 | Drive to Takli Airbase. |
| 1730 | Fly to Bangkok. |
| 1800 | Arrive Don Muang (Bangkok) Airport. |
| 1820 | Drive to Erawan Hotel. |
| 1850 | Arrive at Erawan Hotel and check in. |
| 1930 - 2000 | Meet Lt. General Chalermchai Charuvastr, Director, Tourist Organization of Thailand, at Erawan, in 4th Floor Conference Room. |
| Dinner | Open. |

---

* Other members of the party who are not concerned with the Research Stations or the Multipurpose Cooperative are requested to proceed to Chao Phya Hotel for tea.

Wednesday, November 10,1971

0700 Breakfast

0740 Depart Erawan.

0800 - ~~0850~~ 0900 National Economic Development Board provides briefing on Third Five-Year Plan. Discussions with NEDB Secretary General, Khun Renoo, on Thailand 's development problems and needs.

~~0900~~ 0910 - ~~0940~~ 1000 Ministry of Agriculture, to meet Pol.Lt.Gen. Pichai Kullvanijaya, Deputy Minister and Dr. Thalerng, Deputy Under-Secretary.

~~0945~~ 1005 - ~~1015~~ 1055 Ministry of Education, to meet H.E. Sukich Nimmanheminda, Minister, and Dr. Prasert Na Nakorn, Acting Secretary General, National Education Council.

~~1030~~ 1115 - until terminated by His magesties Royal Audience.

1245 - 1400 Lunch at Burapha Room, President Hotel with:

Bankers

1. Mr. Chalerm Prachuabmoh,
2. Mr. Bancha Lamsam,
3. Mr. Sukum Navapan,

Industrialists

1. Major Gen. Pramarn Adireksarn,
2. Mr. Charoon Siboonruang,
3. Sqd. Leader Prakaipetch Intusopon.

1400 Drive to Kasetsart University

1430 - 1500 Visit Kasetsart University, briefing on Unversity expansion programme by Dr. James H. Jensen.

1500 Leave Kasetsart University for National Research Council

1510 - 1615 Joint briefing session by National research Council and Applied Scientific Research Corporation on nutrition policy, earth resource, satellite environment, sewerage conversion, and other ongoing research.

1615 Drive back to Erawan.

1645 - 1730 Meet IFCT General Manger, Khun Sommai, at Erawan Conference Room 4th Floor.

1745 - 1830 Meet Canadian Ambassador and UNDP, Mr. Power at Erawan Conference Room 4th Floor.

| | |
|---|---|
| 1845 - 1945 | Meet young professor at Erawan Conference Room 4th Floor comprising : |
| | 1. Mr. Seneh Chamarik |
| | 2. Dr. Neon Snidbongs |
| | 3. Dr. Amara Raksasataya |
| | 4. Dr. Wichit Srisaan |
| | 5. Dr. Chetana Nagavajara |
| Dinner | Open. |

Thursday, November 11, 1971

| | |
|---|---|
| 0745 | Drive to AIT |
| 0800 - 0840 | Visit Asian Institute of Technology, discussions with Dr. Milton Bender. |
| 0900 - 0945 | Ministry of Foreign Affairs. Meet H.E. Thanat Khoman, Minister. |
| 0945 | Drive to Klong Toey Port.<br>Briefing in car on Bangkok Traffic Study by Professor Aroon |
| 1030 | Arrive Klong Toey Port |
| 1030 - 1100 | Briefing on Port Development by Captian Lapo Israngkul. |
| 1100 | Embark for boat trip provided by the Bank of Thailand.<br>Lunch on the river hosted by the B.O.T.<br>Briefing on :<br>1. Urban Development by Mr. Chaiya<br>2. Grain handling facilities by Mr. Chare<br>3. Temples and historic buildings<br>On boat meet Directors of<br>1. EGAT, Kasame Chatikavanij<br>2. RID, Sawang Bhulsuk<br>3. Highway, Chaleo Vajrabukka<br>4. SRT, Ahna Ramyananda |
| 1400 | Disembark, B.O.T. Wharf |
| 1415 | Drive to Prime Minister's Office |
| 1430 - 1530 | Meet Prime Minister, Deputy Prime Ministers, Minister of Finance, and Lt. General Sawaeng. |
| 1530 | Drive to the Ministry of Finance, accompanied by the Minister of Finance. |
| 1545 | Signing EGAT Loan and Guarantee Agreements. |
| 1600 | Final Discussions with Minister of Finance, Under-Secretary of State for Finance, and Governor B.O.T. |
| 1700 | Drive to Erawan. |
| 1930 | Leave Erawan for Dinner |
| 2000 | Small informal dinner given by the Prime Minister at Thakolsuk House (Prime Minister's residence) |

Friday November 12, 1971

| | |
|---|---|
| Morning | Free |
| 1030 | Check out Erawan, and drive to Airport |
| 1100 | Arrive Reception Room, Don Muang Airport. |
| 1130 | Board KL 863 seen off by Minister of Finance. |
| 1140 | Plane leaves for Manila. |

# ITINERARY FOR VISIT TO JAPAN, THAILAND, PHILIPPINES, SINGAPORE AND MALAYSIA, NOVEMBER 2-19, 1971

| DATE | TIME | GMT | | REMARKS |
|---|---|---|---|---|
| Nov. 2 Tues. | 1755 | 2255 | Depart Washington--Dulles | AA75(B747) non-stop |
| | 2021 | 0421 | Arrive Los Angeles | |
| | 2100 | 0500 | Depart Los Angeles | TW743 (B320) non-stop |
| Nov. 3 Wed. | 0035 | 1035 | Arrive Honolulu | Kahala Hilton Hotel |
| | 1230 | 2230 | Depart Honolulu | JL071(B747)non-stop |
| Nov. 4 Thurs. | 1605 | 0705 | Arrive Tokyo | |
| | 1805 | 0905 | Depart Tokyo | JL123 |
| | 1900 | 1000 | Arrive Osaka | Royal Hotel,Osaka |
| | | | Evening free | |
| Nov. 5 Fri. | 0830 | | Breakfast meeting with business leaders (chaired by Mr. Saeki, Pres. Osaka Chamber of Commerce) | |
| | 1015 | | Meeting with Mr. K. Matsushita (Pres. of Matsushita Electric Company) | |
| | 1100 | | Depart Osaka | by car |
| | 1130 | | Arrive Kyoto | |
| | 1200 | | Private lunch with Amb. ~~and Mrs.~~ Kiraa | |
| | 1330 | | Visit Katsura Detached Palace and Kyoto Castle (accompanied by Professor Mori --expert on Japanese culture) | |
| | 1630 | | Briefing on Japanese education and its impact on economic development | |
| | 1900 | | Dinner hosted by President of Japan Development Bank and Mrs. Ishihara | Miyako Hotel,Kyoto |
| Nov. 6 Sat. | 0644 | | Depart Kyoto (accompanied by Mr. Sawaki Director General, Bureau of Economic Cooperation /AID/ Foreign Ministry | (+ his asst UKAWA) by express train |
| | 0935 | | Arrive Tokyo | |
| | 1000 | | Meeting with Governor of Bank of Japan, Mr. Sasaki | |
| | 1045 - 11:30 | | Meeting on Japan's current economic problems (Mr. Miyazawa, Former Minister of Economic Planning Agency) | |
| | ~~1130~~ | | ~~Meeting with Prime Minister~~ | |
| | 1300-1500 | | Lunch with Japanese business leaders-- KEIDANREN (Japanese Federation of Economic Organizations) | |
| | 1515 | | Meeting with Aid Advisory Group to Prime Minister (including Dr. Okita) | |
| | 1800 | | Meeting with Mr. Ishida, President Japan Ex-ImBank | |
| | ~~1830~~ 11:45/12:45 | | Meeting with Mr. Takasugi, President, Overseas Economic Cooperation Foundation (concessionary aid) | |
| | | | Evening free | Okura Hotel |

| | | | | |
|---|---|---|---|---|
| | 0930-1010 | | Meeting with Prime Minister | |
| Nov. 7 Sun. | 0900 | | Briefing on Tokyo-Peking problems | |
| | 1015 | | Briefing on Japanese agriculture and land reform | |
| | 1130-1240 | | Meeting with Minister of Forein Affairs, Mr. Fukuda | |
| | 1230-1430 | | Luncheon hosted by Minister ~~and Mrs. Fukuda~~ | |
| | 1430 | | Briefing on Japanese economic performance | |
| | ~~1730~~ | | ~~Minister of Finance, Mr. Mizuta~~ | |
| | 2000 | | Dinner hosted by Minister and Mrs. ~~Mizuta~~ Fukuda | |
| Nov. 8 Mon. | 0900 | 0000 | Depart Tokyo | JL713 via Hong Kong(DC8 |
| | 1455 | 0755 | Arrive Bangkok | |
| | 1545 | | Depart Bangkok | by plane--inflight brie on Northern Region Plan Family Planning Program |
| | 1715 | | Arrive Chieng Mai | |
| | 1730 | | Visit Chieng Mai University | |
| From Bangkok | 1815 | | Briefing on Hill Tribes | |
| | 1900 | | Visit Family Planning Clinic | |
| | 2030 | | Dinner hosted by Governor, Bank of Thailand | Rincome Hotel |
| Nov. 9 Tues. | 0800 | | Depart Chieng Mai | by plane along Mekong R Inflight briefings on M Program and North East development program (NE |
| | 0945 | | Arrive Khon Kaen | |
| | 1000 | | Visit Khon Kaen University. Briefing on accelerated rural development program | |
| | 1100 | | Depart for UNDP Experimental Station Kalasin | by helicopter |
| | 1215 | | Return to Khon Kaen | |
| | 1300 | | Informal lunch given by Bank of Thailand | |
| | 1400 | | Depart Khon Kaen | by plane |
| | 1500 | | Arrive Chainat (Takli Airbase) | |
| | 1515 | | Visit Agricultural Research Station and multipurpose cooperative | |
| | 1745 | | Depart Chainat | |
| | 1815 | | Arrive Bangkok | |
| abt 1930 | 1930 | | Meeting with General Chalermchai, Director General, Tourist Organization of Thailand (at hotel) | |
| | | | Evening free | Erawan Hotel |
| Nov. 10 Wed. | 0800 | | Briefing on Third National Development Plan | |
| | 0940 | | Minister of Education | |
| | 1030 | | H.R.H. The King of Thailand | |
| | 1145 | | Minister of Agriculture | |
| | 1245 | | Small informal luncheon with distinguished industrialists and bankers (six) | |
| | 1430 | | Visit Kasetsart University | |
| | 1510 | | Joint briefing meeting with National Research Council and Applied Scientific Research Corporation on nutrition policy and on-going research | |

| | | | | |
|---|---|---|---|---|
| | 1645 | | Meeting with International Finance Corporation of Thailand (at hotel) | |
| | 1745 | | Meeting with Canadian Ambassador and UNDP ResRep (at hotel) | |
| | 1845 | | Meeting with young professors (at hotel) Evening free | |
| Nov. 11 Thurs. | 0745 | | Depart hotel | by car |
| | 0815 | | Meeting with ECAFE | |
| | 0900 | | Minister of Foreign Affairs | |
| | 1030 | | Briefing on port development | |
| | 1100 | | Boat trip, including briefings on urban development (informal lunch on-board) | |
| | 1330 | | Boat trip ends | |
| | 1400 | | Meeting with Prime Minister and aides | |
| | 1600 | | Signing of EGAT loan at Ministry of Finance | |
| | 2000 | | Small informal dinner hosted by Prime Minister | |
| Nov. 12 Fri. | | | Morning free | |
| | 1140 | 0440 | Depart Bangkok | KL863(B747)non-stop |
| | 1530 | 0730 | Arrive Manila | |
| | 1630 | | Meeting with Executive Secretary Melchor and Secretary of Finance Virata (at hotel) | |
| | 1900 | | Dinner for Mr. and Mrs. McNamara at Development Bank of the Philippines hosted by Sec of Fin Virata | Stay at Savoy Hotel |
| Nov. 13 Sat. | 0900-1200 | | Meeting on Philippines general economic situation, Four-Year Development Plan and social development programs (chaired by President Marcos) | |
| | 1200 | | Private lunch hosted by Pres. and Mrs. Marcos | |
| | 1500 | | Meeting with Congressional leaders (at hotel | |
| | 1630 | | Meeting with prominent business leaders (at hotel) | |
| | 1800 | | Meeting with Ford Foundation representatives (at hotel) Evening free | |
| Nov. 14 Sun. | 0800 | | Depart hotel accompanied by Secretary of Agriculture, Mr. Tanco | by car |
| | 0930 | | Arrive Los Banos | |
| | 0930 | | Visit International Rice Research Institute | |
| | 1100 | | Visit College of Agriculture | |
| | 1200 | | Informal lunch at Student Union hosted by Mr. Tanco | |
| | 1330 | | Informal meeting with small group of students | |
| | 1400 | | Depart Los Banos | by car |
| | 1530 | | Arrive Manila | |
| | 1600 | | Meeting with UNDP ResRep (at hotel) | |
| | 1700 | | Meeting with Mr. Watanabe (at his residence) | |
| | 1930 | | Dinner hosted by Mr. Melchor | |

| | | | | |
|---|---|---|---|---|
| Nov. 15 Mon. | 0750 | 2350 | Depart Manila | PR501 DC8 non-stop |
| | 1030 | 0300 | Arrive Singapore ✓ MIN. OF FINANCE | |
| | 1130 | | ✓ Briefing by Secretary of Finance<br>Lunch free | |
| | 1300 | | ✓ Meeting with Chairman of Housing Board (at hotel) followed by visit to Housing Estate | |
| | 1500 | | ✓ Visit to Jurong Town Corporation | |
| | 1900 | | ✓ Meeting and dinner hosted by Prime Minister + MIN. OF DEF. ACTING | Stay at Goodwood Park H |
| Nov. 16 Tues. | 0830-1200 | | Individual meetings at hotel with:<br>no Minister of Science and Vice Chancellor University of Singapore; Head of Family Planning Board; and others | |
| | 1235 | 0505 | Depart Singapore | ML568 (B737) non-stop |
| | 1320 | 0550 | Arrive Kuala Lumpur<br>Lunch free | |
| | 1600 | | General briefing with Chief Secretary and senior governing officials | |
| | 1735 | | Return to Hotel | |
| | 1830 | | Meeting with Ford Foundation representative, Mr. Kennedy | |
| | 1945 | | Courtesy call on Prime Minister at Sri Taman | |
| | 2000 | | Dinner hosted by Prime Minister, including senior ministers | |
| Nov. 17 Wed. | 0830 | | Depart Kuala Lumpur | by executive jet |
| | 0900 | | Arrive Kuantan<br>Fly over Jengka Triangle | by helicopter |
| | 1030 | | Visit to FLDA Land Settlement Scheme | |
| | 1230 | | Informal lunch at project site | |
| | 1430 | | Visit to SJSB Forestry Project | |
| | 1610 | | Depart Project area | by helicopter |
| | 1630 | | Arrive Kuantan | |
| | 1645 | | Depart Kuantan | by executive jet |
| | 1715 | | Arrive Kuala Lumpur<br>Evening free | |
| Nov. 18 Thurs. | 0900 | | UNDP ResRep (at hotel) | |
| | 1000 | | Meeting with Minister of Finance | |
| | 1045-1145 | | Meeting with Prime Minister and senior ministers | |
| | 1300 | | Lunch hosted by Minister of Finance | |
| | 1445 | | Meeting with Governor of Bank Negara | |
| | 1600 | | Meeting with Chairman of PERNAS and representatives of Chambers of Commerce | |
| | 1700 | | Courtesy call on His Royal Highness, the Agong (King of Malaysia)<br>Evening free | |
| | 2140 | 1340 | Depart Kuala Lumpur | Aeroflot 558, via Delhi and Moscow |
| Nov. 19 Fri. | 0820 | 0820 | Arrive London | |
| | 1130 | 1130 | Depart London | PA107 (B747) non-stop |
| | 1435 | 1935 | Arrive Washington--Dulles | |

LEC
Revised Nov. 2, 1971

Draft Material for a Possible "Reply to a Toast" in Thailand

Mr. Prime Minister, Ladies and Gentlemen:

I very much appreciate your kind remarks, and for the warm hospitality you have accorded us all during our visit.

My discussions with you, Mr. Prime Minister, and with the many officials connected with particular aspects of development throughout the country, have been very rewarding. I am especially happy to have been able to see at first-hand a broad spectrum of projects that are in progress.

The history of this ancient and graceful land demonstrates that there are immense resources of imagination and determination among the people of Thailand: imagination in the face of difficult problems; and the determination to solve them.

That you have preserved your independence from colonial domination is rightly a matter of great pride among your people. But you have realized that national independence must be buttressed by social and economic progress: progress that is designed to reach and enhance the lives of all of the citizenry.

Your concern with the issues of education, of rural development, of family planning, and a more equitable distribution of income will be of great importance in the years immediately ahead. For these are questions that touch the lives of individuals and families in directly beneficial ways. The social dimensions of development are no less important than the economic ones.

Mr. Prime Minister, we in the World Bank are gratified that we can play a supportive role in assisting Thailand to reach the development objectives

incorporated in the Third National Economic Development Plan. Our discussions during this visit, as well as the continuing contact between the Bank and your Government, are all directed to the same end: to help Thailand in its efforts to improve the quality of life for all its people.

In the overall picture, the World Bank's role in this great work is a modest one. It is the Government and people of Thailand themselves who are accomplishing the task. We are pleased to join our efforts with yours to help build for a better future.

Thank you again, Mr. Prime Minister, for all that you have done to make our visit such a useful and pleasant one.

# COUNTRY DATA

| | |
|---|---|
| Area | 514,000 km$^2$ |
| **Population** | |
| Total (mid-1970 estimate) | 36.2 million |
| Growth rate | 3.1 % per annum |
| Density | 70 per km$^2$ |
| **Gross National Product** | |
| Total (1970 1/) | ₱135.7 billion |
| Growth rate, constant prices (1966-1970) | 8.5 % per annum |
| Per capita, current prices (1970) | US$180 2/ |

| Industrial Origin of Gross Domestic Product | Annual Growth 1966-1970 (%) | Share in 1970 (%) |
|---|---|---|
| Agriculture | 5.4 | 29.6 |
| Manufacturing | 9.9 | 14.9 |
| Trade | 8.8 | 17.2 |
| All other sectors | 10.3 | 38.3 |

| Expenditure on Gross Domestic Product | Annual Growth 1965-1969 (%) | Share in 1969 (%) |
|---|---|---|
| Consumption | 8.5 | 78.7 |
| Private | ( 8.0) | (67.6) |
| Public | (12.0) | (11.1) |
| Fixed capital formation | 14.6 | 23.3 |
| Private | (15.0) | (16.0) |
| Public | (13.9) | ( 7.3) |
| Change in stocks | 35.7 | 2.4 |
| Net imports of goods and non-factor services | 53.2 | -4.3 |
| Expenditure on GDP | 8.6 | 100.0 |
| Gross national savings | 9.2 | 21.5 |
| Marginal savings rate (1965-1969) | 20 % | |
| Resource gap as % of investment (1969) | 16.7 | |

| Internal Financial Situation | Annual Growth 1966-1970 (%) | End of 1970 (₱ billion) |
|---|---|---|
| Total money supply | 8.5 | 19.45 |
| Time and savings deposits | 21.9 | 26.72 |
| Bank credit to the central government, net | 60.0 | 11.50 |
| Bank credit to the private sector | 17.3 | 27.84 |
| Consumer price index (1962 = 100) | 2.4 | 117 |

## Social Indicators

### Population:

| | | 1961-1970 |
|---|---|---|
| Urban population growth rate (% p.a.) | | 4.7 |
| | | 1967 |
| Crude birth rate (%) | | 4.2 |
| | | 1970 |
| Family planning acceptors (Acceptors, % of child-bearing population) | | 7.1 |

### Education:

| | | 1969 |
|---|---|---|
| School enrollment primary & secondary (% of school-age population) | | 58 |
| | | 1960 |
| Literacy rate (% of population over 10 years) | Male | 81 |
| | Female | 61 |

### Health:

| | 1969 |
|---|---|
| Population per hospital bed (number) | 1,691 |

| Labor Force and Unemployment: | 1969 |
|---|---|
| Labor force (in thousands) | 17,196 |
| Unemployed as percentage of labor force at peak farming season | 0.2 |

---

1/ Preliminary.
2/ Converted from baht at the par rate of 20.80 per dollar.
3/ The Thai fiscal year runs from October 1 to September 30.
4/ Excluding military imports, including non-monetary gold.
5/ Including transfer payments.
6/ Equivalent to 6.3 months' imports of goods and services.
7/ Debt with maturity of over one year.
8/ Goods and services.

| Public Sector Operations 3/ | Annual Growth FY1966-1970 (%) | FY 1970 (฿ billion) |
|---|---|---|
| Current revenue | 10.8 | 18.72 |
| Current expenditure | 14.0 | 16.61 |
| Surplus | -4.3 | 2.11 |
| Capital expenditure | 13.5 | 6.46 |
| Net external assistance | 1.4 | 1.05 |

| Balance of Payments | Annual Growth 1966-1970 (%) | 1970 1/2/ (US$ million) |
|---|---|---|
| Merchandise exports, f.o.b. | 2.4 | 685.4 |
| Rice | (-10.3) | (120.9) |
| Rubber | ( 2.2) | (107.3) |
| Maize | ( 13.9) | ( 89.3) |
| Tin | ( 6.8) | ( 77.8) |
| Merchandise imports, c.i.f. 4/ | 11.7 | 1,274.7 |
| Net services | 30.4 | 262.2 |
| Net goods and services 4/ | 43.6 | -327.1 |
| Net private capital inflow 5/ | 9.1 | 113.8 |
| Net public capital inflow 5/ | -4.4 | 36.1 |
| Foreign exchange reserves (end of period) | 1.7 | 766.5 6/ |

| External Debt 7/ | | |
|---|---|---|
| Amount disbursed and outstanding | 11.9 | 801.3 |
| Private sector | (17.5) | (454.3) |
| Public sector | ( 6.4) | (347.0) |
| Debt service payments | 20.2 | 182.1 |
| Private sector | (28.1) | (138.3) |
| Public sector | ( 6.2) | ( 43.8) |
| Debt service as % of exports 8/ (1970) | | 15.9 |
| Private sector | | ( 12.1) |
| Public sector | | ( 3.8) |

| Bank Position | June 30, 1971 (US$ million) |
|---|---|
| IBRD loans outstanding, excluding undisbursed | 154.1 |
| IBRD loans outstanding, including undisbursed | 241.7 |

Currency Equivalents

Currency Unit - Baht

US$1:00 = ฿ 20.80

DEPARTMENT OF STATE NOVEMBER 1970

# KINGDOM OF THAILAND

## BACKGROUND NOTES

Population: 35 million (1970 est.)
Capital: Bangkok

The Kingdom of Thailand, formerly known as Siam, is located in the heart of mainland Southeast Asia. It has an area of approximately 200,000 square miles—about the size of Wyoming and Colorado combined. Thailand has common boundaries with Burma on the west and north, Laos on the north and east, Cambodia on the southeast, and Malaysia on the south. The shape of the country has often been compared to the head of an elephant with its trunk extending down the Malay Peninsula. South of the main portion of the country and east of peninsular Thailand lies the Gulf of Siam.

Thailand's topography is diversified. There are four main geographic regions—central, northeast, north, and south:

- The central region is dominated by Thailand's most important river, the Chao Phraya. The land is rich in alluvium and watered by an extensive network of canals and irrigation projects.
- The northeastern region, a large plateau rising about 1,000 feet above the central plain, comprises roughly one-third of the country. A great deal of this land is poor and suffers from occasional droughts or floods depending on the season. The topography of the plateau makes irrigation difficult, but planned irrigation and flood control projects on the Mekong River, which forms much of the border with Laos, should improve agricultural potential. Completion of these projects, however, is not expected for some years.
- Northern Thailand is primarily a region of mountains and valleys and comprises about one-quarter of the nation. The mountains, running north and south are forested, and the valleys between them are narrow but fertile.
- The southern region, a long sliver of land extending from central Thailand south to Malaysia, is covered in great part by rain forest.

Thailand is a tropical land, high in temperature and humidity. The climate of much of the country is dominated by monsoons. In most regions there are three seasons: rainy (June-October), cool (November-February), and hot (March-May). Rainfall varies but is generally heaviest in the south and lightest in the northeast.

Thailand's flag is comprised of two red stripes, top and bottom; two white inner stripes; and a wider blue center band. The blue represents royalty, the white Buddhism, and the red stands for Thailand itself, whose name means "Free Nation."

## THE PEOPLE

Thailand's population of 35 million is composed primarily of people of Thai stock. The principal minority groups are an estimated 2 million ethnic Chinese located in the larger urban areas, most of whom have integrated into the Thai society; about 800,000 Malay-speaking Moslems in the southernmost provinces; the various hill tribes in the north, estimated at about 286,000; and 45,000 Vietnamese, mostly in the northeast. Thai society is predominantly rural in nature and is most heavily concentrated in the valleys and plains of the north, northeast, and central regions. The population density for the country as a whole is about 190 persons per square mile. The population growth rate is approximately 3.3 percent a year. Bangkok, the capital, has about 2.8 million inhabitants (1970 estimate).

The language of the country is Thai, of which there are a number of regional dialects. English serves as the second language among the educated and official elements of society.

For some years universal education through the fourth grade has been offered in all parts of the Kingdom, and the Government is currently seeking to extend this to the seventh grade. There are universities in the capital, in the northern city of Chiang Mai, in the northeastern city of Khon Kaen, and in the south, where a new university is being established with colleges in Songkhla, Yala, and Pattani. Thailand's literacy rate is approximately 70 percent.

Buddhism of the Theravada school is the religion of more than 90 percent of the Thai, but the Government permits religious freedom and a great number of other religions are represented throughout the country.

## HISTORY

More than 1,000 years ago the ancestors of the Thai began migrating from southern China, where an independent Thai kingdom formerly existed. This process was greatly accelerated when southern China was overrun by the Mongols under Kublai Khan in the 13th century. During that century what was to become modern Thailand had its beginnings in a kingdom with a capital at Sukothai in the north. In the 14th century the capital was transferred to Ayutthaya on the Chao


THAILAND
International boundary
National capital
Railroad
Road
Trail
0 50 100 150 Miles
0 50 100 150 Kilometers
BOUNDARY REPRESENTATION IS NOT NECESSARILY AUTHORITATIVE
76186 5-69
BURMA
LAOS
CAMBODIA
NORTH VIETNAM
SOUTH VIETNAM
GULF OF TONKIN
GULF OF SIAM
ANDAMAN SEA
MERGUI ARCHIPELAGO
STRAIT OF MALACCA
MALAYSIA
SUMATRA (Indonesia)
PENANG
DAO PHU QUOC (Vietnam)
MUI BAI BUNG
Mekong
Mae Nam Ping
Mae Nam Chao Phraya
Mae Nam Pa Sak
Nam Phong
Mae Nam Mun
Tonle Sap
Samneua
Nam Dinh
Louangphrabang
Xiangkhoang
Vinh
Chiang Rai
Chiang Mai
Nan
Lampang
Phrae
VIENTIANE
Nong Khai
Loei
Udon Thani
Khammouane
Nakhon Phanom
Sakon Nakhon
Tak
Phitsanulok
Khon Kaen
Mukdahan
Séno
Savannakhet
Moulmein
Phetchabun
Maha Sarakham
Nakhon Sawan
Ubon Ratchathani
Warin Chamrap
Pakse
Ye
Nakhon Ratchasima
Surin
Phra Nakhon Si Ayutthaya
Kanchanaburi
Tavoy
BANGKOK
Chachoengsao
Sisophon
Samut Prakan
Samut Songkhram
Kompong Thom
Rayong
Trat
Mergui
Prachuap Khiri Khan
PHNOM PENH
Sihanoukville
Chumphon
Ranong
Surat Thani
Quan Long
Nakhon Si Thammarat
Krabi
Phuket
Trang
Rattani
Satun
Butterworth
Pinang
98
102
106
18
14
10
6

Phraya River, a few miles north of Bangkok. This kingdom had some contact with the West, beginning with the Portuguese in the 16th century, but until the 19th century its relations with its neighbors in Southeast Asia were of primary importance.

Toward the end of the 18th century Burmese armies overwhelmed the kingdom. Rama I, founder of the present ruling dynasty, was one of the leaders who eventually drove out the Burmese. He established the capital at its present location, Bangkok, in 1782. His successors, especially after the British victory over Burma in 1826, were to find themselves increasingly preoccupied by a new threat, that of European colonialism.

Rama III began the process of accommodating to Western power with the negotiation of a treaty of amity and commerce with the British in 1826. More important steps in this direction were made by Rama IV, known in the West as King Mongkut, and by Rama V (King Chulalongkorn), who carried out a virtual revolution of modernization in the Thai Government during the last quarter of the 19th century. These great monarchs combined diplomatic skill with recognition of the need to modernize the state structure and thus made it possible for Thailand to survive as an independent state, the only country in South and Southeast Asia which was never colonized by a European power.

European predominance in Southeast Asia was challenged in the 20th century by the Japanese. When Japan struck at the Philippines and Malaya in December 1941, it also invaded Thailand. Faced with overwhelming Japanese power, which quickly caused the collapse of Western forces in the area, Thailand acceded to Japanese demands. Although nominally an ally of Japan during World War II, Thailand was in effect an occupied country.

The defeat of Japan was followed by an era of increasingly close relations with the United States, which had extended assistance to Thailand in the immediate postwar period. Thailand saw a threat to its independence by the victory of the Communist forces on mainland China in 1949 and has been an active participant, along with the United States, in efforts to check Communist expansion in Southeast Asia.

## GOVERNMENT

Thailand is a constitutional monarchy, which functions through a cabinet, parliament, and a highly centralized administrative system. The King (Chief of State), although technically with little direct power, is the popular symbol of national unity and identity. A Privy Council is appointed by the King from among members of the nobility and elder statesmen to advise him and, under certain conditions, to appoint a regency to exercise royal powers. The Privy Council provides a link between the throne and the Government and, on occasion, has demonstrated some influence over governmental decisions.

Under the 1968 Constitution the executive branch of the Government is vested in the Council of Ministers (cabinet), headed by the Prime Minister (Head of Government). The King appoints as Prime Minister the leader of the political party which wins the most seats in the parliamentary election. Other Ministers are appointed by the King, and the cabinet as a whole is responsible to Parliament. Ministers can be removed from office at any time by a vote of no-confidence by the two Houses of Parliament voting together. The Council of Ministers frames and implements all important national policies and is the center around which the entire political system revolves.

Thailand's bicameral Parliament consists of a Senate (upper house) and a House of Representatives (lower house). The membership of the latter is 219, based on one popularly elected Representative for every 150,000 persons, with each Province receiving at least one Representative regardless of its population. Representatives are elected to 4-year terms. The Senate is three-fourths the size of the House of Representatives; there are now 164 Senators. They are appointed for 6-year terms by the Council of Ministers with the King's approval.

The present judicial system evolved from a combination of customary and Western-based laws. The highest court in Thailand is the Supreme Court whose justices are appointed by the King.

Thailand's most important administrative divisions are the 71 Provinces. Each Province is headed by a Governor, appointed by the Minister of Interior. Elected provincial assemblies enact local government ordinances.

## POLITICAL CONDITIONS

A limited constitutional monarchy was established in 1932, following a revolution which ended the absolute monarchy. Since then Thailand has had eight constitutions and nine nationwide elections. These events have reflected the widespread acceptance by Thailand's educated elite of the desirability of representative government. However, such governmental changes were innovations for the Thai people and were complicated by stresses related to World War II. There was much political confusion—before and after the war—and the Government was controlled most of the time by military regimes which seized power in a series of almost-bloodless coups. The last such coup took place in 1958 when Field Marshal SARIT Thanarat took power. He banned political parties, imposed martial law, and appointed a Constituent Assembly to draft a new constitution. After Marshal Sarit's death in December 1963, leadership of the ruling group passed smoothly to his Deputy Prime Minister, Field Marshal THANOM Kittikachorn.

Prime Minister Thanom reiterated Marshal Sarit's assurances that a new constitution would be promulgated—one that would restore a parliamentary system of government and allow some popular participation through an elected lower house. In February 1968 the Constituent Assembly

approved Thailand's present Constitution, and it was promulgated by the King on June 20, 1968, at which time elections were set for February 1969.

Elections for provincial and municipal assemblies had been held in 1967-68 but candidates had not been permitted to form political parties and had to base their campaigns on local issues. In October 1968, with the passage of the Political Parties Act, parties were officially permitted to organize, and candidates could begin campaigning for the national elections.

The pro-Government United Thai People's Party (Saha Pracha Thai—SPT) and the opposition Democrat Party contested the elections on a nationwide scale, but a large portion of the candidates ran as independents. The SPT, Prime Minister Thanom's party, won 75 seats in Parliament and was later joined by 25 independents. The Democratic Party won 57 seats, while the remaining 62 seats were evenly divided between independents and members of smaller parties. In the intervening months additional independent parliamentary Representatives have joined or otherwise aligned themselves with the SPT, so that it enjoys an effective majority, although some members have, on occasion, voted against the Government.

## Internal Security

Thailand is a stable, largely peaceful nation which has been spared much of the turmoil experienced by other Southeast Asian countries since World War II. The relative stability and tranquility enjoyed by Thailand stem from a number of factors: a strong sense of national identity among the Thai people; respect for the institution of the monarchy and for the King and Queen; absence of large, disaffected ethnic minorities; relatively good economic conditions; and a long history of independence. The revolutionary appeals of anticolonialism and communism have thus had little impact on Thailand as contrasted with most of its neighbors.

The Communist Party of Thailand (CPT) was established in 1942, although Communist organizations in Thailand date to the 1920's. The leadership of the Communist movement in Thailand has been largely Chinese or Sino-Thai, and the CPT has closely followed the Peking line. Communist propaganda is beamed to Thailand by a clandestine radio station established in 1962, the "Voice of the People of Thailand" (VOPT). The VOPT has since announced the establishment of two Communist front organizations: the Thailand Independence Movement—TIM (December 1964) and the Thailand Patriotic Front—TPF (January 1965).

The Communists have also attempted to establish typical front groups of farmers, women, youth, and so forth, but none of these has taken root among the Thai population.

## Recent Internal Security Developments

Communist infiltration and subversion, which had begun secretly as early as 1959, was brought into the open in 1965 with armed insurgent attacks on Thai security forces and systematic assassinations of loyal village leaders in northeast Thailand, the country's poorest region. To meet this challenge the Thai Government—with U.S. advice and material assistance—embarked on an accelerated program of economic and social development.

During 1966 and 1967 the Communist insurgents maintained a steady rate of assassinations of loyal villagers and held meetings in which villagers were forced to listen at gunpoint to anti-Government propaganda. In 1967 insurgency broke out in the far north where Communist agents had begun recruitment among Meo hill tribesmen to receive training as insurgents as early as 1959. By 1968 the Government's counterinsurgency efforts seemed to have stalemated the guerrillas in the northeast. However, in 1970 incidents of Communist terrorism and sabotage, some serious, increased in both areas.

It is estimated that during the past 10 years more than 1,500 village youths and tribesmen have been taken from Thailand to North Viet-Nam, Communist China, and Communist-controlled areas of Laos to be trained as insurgents. These efforts have not succeeded, however, in enlisting any mass following in rural areas in Thailand, and the continuing emphasis on terroristic methods reflects the failure of subversive agents to win over and indoctrinate any significant proportion of Thai villagers.

In the far south, along the Malaysian border, insurgents under the direction of the Communist Party of Malaya took refuge in Thailand after having been driven out of Malaysia in the late 1950's. Although their objective remains Malaysia, these Communist insurgents maintain bases in the southernmost provinces of Thailand where they gather recruits, funds, and supplies. Recent months have seen an increase in the level of conflict between the Communist terrorists and the Thai and Malaysian security authorities, who are cooperating against the terrorists.

North of this area, but still in peninsular Thailand, a group of several hundred Thai insurgents under the control of the Communist Party of Thailand are actively engaged in terrorism and anti-government propaganda.

## ECONOMY

The Thai economy is both fast-developing (8 percent average annual gross national product growth rate since 1960) and stable, an unusual combination. Thailand has shunned excessive deficit financing, built up comfortable foreign exchange reserves, and created a stable currency readily convertible at free market rates (about 21 baht = U.S. $1.00). These conditions, created by

conscious Thai efforts, have facilitated development and attracted foreign investment.

Internally, the Thai economy continues to rest largely on an agricultural base, with rice the major crop. In 1964 Thailand was the largest rice exporter in the world, but, although rice continues to be the major Thai export, the market for this commodity is declining. The 1960's saw a dramatic diversification of Thai agriculture. This has been reflected in the increasing importance of new exports, notably corn, tapioca, and kenaf (a fiber used in ropemaking). Rubber continues to be the second most important foreign exchange earner, while corn now competes with tin for third place. In 1969 Thai exports amounted to about U.S. $710 million, the bulk of which went to its major export partners, Japan, the United States, Malaysia, Singapore, and Hong Kong.

Imports into Thailand for 1969 amounted to $1.3 billion, excluding U.S. military equipment. The major import items included machinery and transportation equipment, petroleum products, metal manufactures, textiles, and chemicals. These imports came, for the most part, from Japan, the United States, the Federal Republic of Germany, and the United Kingdom.

Despite the manifest economic progress which Thailand has experienced in the last 10 years, per capita income is still only about $180 per year. The benefit of the increase in gross national product (GNP) to $6.3 billion in 1969 has been partially offset by the yearly population increase of more than 3 percent.

The Thai Government has embarked on a concerted effort to broaden the base of the nation's economy. A large part of the national budget goes to education and economic development. Efforts in the latter category are largely concentrated on basic irrigation, transportation, communications, and power facilities.

The Thai economy is relatively free of controls and relies primarily on private rather than public enterprise. The Government is interested in industrialization and is receptive to prospective private foreign investment. The present good health of the Thai economy has enabled the country to depend increasingly on international lending institutions for foreign capital for economic development projects. The International Bank for Reconstruction and Development (IBRD) has played a major role by financing the Chao Phraya irrigation project, railway rehabilitation, port development, highway construction, and the combined irrigation and hydroelectric project (the Bhumibol Dam) at Yanhee in northern Thailand. Another project of great significance for Thailand and neighboring countries is the Mekong River Development Program, which includes power and irrigation dams in Laos and Cambodia as well as in Thailand.

Tourism, which also contributes to the nation's economic well-being, has increased dramatically in recent years. The number of tourists visiting Thailand in 1969 was approximately 450,000; about 30 percent of these were U.S. citizens.

Public transportation in Thailand now reaches most larger towns by rail, all-weather highways, and air. Highways have been greatly improved in the last decade. Numerous feeder roads are now being built which will connect many rural areas that were accessible only by foot, oxcart, or elephant-back a decade or two ago. One of the most noted of the new roads is the Friendship Highway, built with U.S. aid, that connects Bangkok with the northeastern plateau and with Nong Khai on the Lao border near Vientiane. The Thai Government is participating in international plans for the Asian Highway; that part of it in Thailand is nearly completed.

Telephone service reaches the major towns, with more than 100,000 telephones in use throughout the country. Television programs are now accessible to the more populated locations in Thailand, with an estimated 350,000 TV sets now in use. Two black-and-white channels and one color channel can now be received in Bangkok.

Thailand has joined the International Telecommunications Satellite Consortium (INTELSAT) and has had a receiving station for the communications satellite in operation over the Pacific Ocean since 1967. The volume of communications traffic in the first year was five times what had been predicted. A second antenna is now under construction. It is to be aimed at the satellite which will be sent up over the Indian Ocean to provide communication links with South Asia, Africa, and Europe.

In the development sphere, Thailand cooperates with a number of international agencies concerned with stimulating economic development.

## FOREIGN RELATIONS

Thailand's history of freedom from Western domination sets the country apart from its neighbors. Preservation of the nation's independence continues to be the keystone of government policy. Thailand has been a consistent supporter of free world viewpoints in international conferences. It is an active member of international and regional organizations, some of which include: the United Nations and several of its specialized agencies; the Economic Commission for Asia and the Far East (ECAFE), whose secretariat is at Bangkok; the Asian Development Bank (ADB); the Association of Southeast Asian Nations (ASEAN); and the Asian and Pacific Council (ASPAC). Thailand has developed increasingly close ties with most other Southeast Asian countries. It cooperates with Malaysia, Laos, and Cambodia in dealing with mutual security problems.

Since Thailand's post-World War II foreign policy has been based on collective security and support of the United Nations, it was the first country to offer ground forces to join those of the United States under the U.N. Command to resist Communist aggression in Korea, where

the Thai battalion served with distinction. In 1954 Thailand became a charter member of the Southeast Asia Treaty Organization (SEATO), which has its headquarters at Bangkok.

Thailand has considered North Viet-Nam's dispatch of some 40,000 troops to Laos and several hundred thousand to South Viet-Nam as threats to its own security. In 1965 it began sending armed forces units to assist South Viet-Nam, and by February 1969 these forces had reached a total of more than 11,000 combat troops (the "Black Leopards") plus small air and naval units. In 1970 it was announced that Thai forces would be withdrawn from Viet-Nam.

As part of its contribution to collective security in the area, Thailand has permitted the U.S. Air Force to use certain Thai bases to carry out operations in connection with the Viet-Nam war. U.S. forces in Thailand for this purpose totaled more than 40,000 as of mid-1970.

The following statements by Foreign Minister Thanat highlight some of Thailand's basic foreign policy objectives:

"...a nation must primarily rely on its own resources to combat subversion and guerrilla warfare within its own territory, while at the same time concentrating on developing its economic and social strength as the best long-term guarantee against the so-called 'revolutionary war' which is as much 'political' as 'military'.... small nations threatened with the expansionistic policy of a great neighboring power must learn to cooperate with like-minded nations in the same area to forge regional solidarity and cooperation so as to augment their own individual and collective strength in political, economic, and social fields, and to form a power base whereby they can, through the method of 'collective political defense,' better face the threat confronting them." (January 1, 1970)

"(For the smaller nonnuclear states) salvation lies in redoubling their national efforts and in working closely and systematically with those like-minded nations which share the same stake in the peace and secure well-being of the area. This will require novel methods of consultation, cooperation, and coordination between themselves in the first place and also with those outside powers which show an interest in the task of peace-building. Thus, the true spirit of regionalism will have to be based not so much on formal treaties but on practical joint undertakings which will bind the parties through joint concrete interest rather than ideological consideration." (February 24, 1970)

"The nations in this area should also be able to combine into a cohesive grouping and forge a new sense of solidarity and work together for mutual benefit. This new form of partnership on an equal footing, if successful, can preserve and maintain peace and prosperity in this area. That is the policy in which Thailand has been very much attached to and has been playing an active role in promoting regional cooperation and regional sense of solidarity. This seems, in our opinion, the future policy." (May 28, 1970)

## U. S. -THAI RELATIONS

Official U.S.-Thai relations date from 1835 when the two countries signed a treaty of amity and commerce, the first United States treaty with an Asian country. Since the end of World War II cooperation between the two countries has become much closer in the face of the Communist threat to the peace and security of Southeast Asia.

Thailand is of importance to the United States because it is a stable, friendly nation, strategically located in an area of major interest to the United States. Furthermore, the United States and Thailand share a common viewpoint on many world problems. They are among the signatories of the 1954 SEATO treaty. Article IV(1) of this treaty provides that, in the event of armed attack in the treaty area (which includes Thailand), each member would "act to meet the common danger in accordance with its constitutional processes." In a communique issued by Secretary of State Rusk and Thai Foreign Minister Thanat on March 6, 1962, the Secretary reaffirmed that in the event of Communist armed attack against Thailand, the SEATO obligation of the United States is "individual as well as collective." On May 20, 1969, Secretary of State Rogers endorsed the Rusk-Thanat communique as a valid restatement of the responsibilities set forth in article IV (1) of the treaty.

Internal security and defense considerations require larger expenditures for modernization and maintenance of the military and police than the Thai budget can sustain. At the same time Thailand faces an urgent need for economic and social progress for which large expenditures are required. Thailand's security is inextricably related to its continued economic progress.

As a staunch ally of the United States, Thailand received more than $700 million worth of military assistance during the 1946-69 period. Military aid consists of equipment, essential supplies, and assistance in the construction and improvement of key facilities and installations. U.S. military advisory personnel in Thailand oversee the delivery of equipment to the Thai Armed Forces and the training of Thai military personnel in its use and maintenance.

U.S. grant assistance to Thailand under various economic assistance programs totaled $472.8 million during the fiscal period 1946-69 inclusive. Loans under U.S. economic assistance programs during the same period totaled $125.6 million, of which about $63 million in principle and interest has been repaid. In addition to these amounts, Thailand, as a participant in a number of regional projects, has received substantial grant and loan assistance from regional aid funds. Economic assistance has been extended in a number of fields, including rural development and security, health, family planning, and improvement of government

services. There are approximately 250 Peace Corps volunteers in Thailand, almost half of whom teach English. The rest are engaged in the rural development and health programs.

U.S. military and economic aid programs have the common goal of strengthening Thailand as an independent country which will be a stabilizing force in Southeast Asia and a deterrent to further Communist aggression and subversion in that area.

American forces are not and have not been engaged in combat in Thailand. With respect to defense against Communist aggression through subversion or in any way other than armed attack, Thailand and the United States agree that U.S. assistance should take the form of military and economic assistance programs. Such programs enhance Thailand's ability to prevent and counter externally-supported subversion and at the same time to continue economic development. During his visit to the United States in 1968, Prime Minister Thanom stressed that although it would accept foreign assistance in the form of training, equipment, and advice, the Royal Thai Government regarded defeating the insurgency as a Thai responsibility to be carried out by its own forces. Thus, although there are U.S. military personnel in Thailand engaged in training Thai personnel, these Americans are not allowed to accompany Thai forces in combat activities.

In 1969 U.S. and Thai leaders agreed that there should be consultations leading to a gradual reduction in the level of U.S. forces in Thailand. (There were at the time about 48,000 personnel in Thailand, mostly U.S. Air Force, the great majority in connection with the war in Viet-Nam.) Following talks at Bangkok and New York between U.S. and Thai representatives, President Nixon and Prime Minister Thanom announced on September 30, 1969, that the two Governments had agreed that 6,000 U.S. military personnel would be withdrawn from Thailand by July 1, 1970. (This withdrawal was carried out on schedule.) It was also announced that the two Governments would continue to evaluate the level of U.S. Armed Forces in Thailand in light of their assessment of developments in the Viet-Nam conflict. Conversations in the summer of 1970 led to a decision that an additional 9,800 U.S. military personnel would be withdrawn by July 1, 1971.

Thailand, as an important U.S. ally in East Asia, is especially affected by the Nixon Doctrine. As enunciated at Guam in the summer of 1969 and subsequently elaborated on by the administration, the doctrine states that: (1) the United States will honor its commitments (e.g., the SEATO pact) by providing a shield for the freedom of an ally; (2) conventional defense is the responsibility of the country directly concerned, with the United States assisting where it will make a difference and where U.S. interests are involved; (3) insurgencies are best handled by threatened governments with police, paramilitary action, and economic and social reforms; and (4) new commitments by the United States will be viewed in the light of careful assessment of U.S. national interests, specific threats to those interests, and U.S. capacity to contain those threats at an acceptable risk and cost.

In a statement at Bangkok on July 28, 1969, President Nixon said, "What we seek for Asia is a community of free nations able to go their own way and seek their own destiny with whatever cooperation we can provide—a community of independent Asian countries, each maintaining its own traditions and yet each developing through mutual cooperation. In such an arrangement, we stand ready to play a responsible role in accordance with our commitments and basic interests."

## PRINCIPAL GOVERNMENT OFFICIALS

Chief of State—King BHUMIBOL Adulyadej
President, Privy Council—Prince DHANI Niwat (Krommum Bidyalabh Prutiyakon)
Prime Minister; Minister of Defense—Field Marshal THANOM Kittikachorn
Minister in the Prime Minister's Office—Lt. Gen. SAWAENG Senanarong
Deputy Prime Minister; Minister of Interior—Gen. PRAPHAT Charusathien
Deputy Prime Minister; Minister of National Development—POTE Sarasin
Minister of Foreign Affairs—THANAT Khoman
Minister of Justice—Luang CHAMROON Nittisat
Minister of Economic Affairs—BUNCHANA Atthakor
Minister of Agriculture—M. R. CHAKTHONG Thongyai
Minister of Industry—PONG Punnakan
Minister of Public Health—PRASERT Ruchirawong
Minister of Education—SUKIT Nimmanhaemind
Minister of Finance—SERM Vinicchayakul
Minister of Communications—Air Chief Marshal DAWEE Chulasap
Ambassador to the U.S.—SUNTHORN Hongladarom
Ambassador to the U.N.—ANAND Panyarachun

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## PRINCIPAL U. S. OFFICIALS

Ambassador—Leonard Unger
Deputy Chief of Mission—George S. Newman
Counselor for Political Affairs—Lawrence G. Pickering
Counselor for Economic Affairs—Konrad Bekker
Director, U.S. AID Mission—Rey M. Hill
Chief, Joint U.S. Military Assistance Advisory Group—Maj. Gen. Louis T. Seith, USAF
Counselor for Public Affairs (USIS)—Keith Adamson

The U.S. Embassy in Thailand is located at 95 Wireless Road, Bangkok. There are also Consulates at Chiang Mai, Songkhla, and Udorn.

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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

REPORT AND RECOMMENDATION OF THE PRESIDENT
TO THE EXECUTIVE DIRECTORS ON A PROPOSED LOAN
TO THE ELECTRICITY GENERATING AUTHORITY OF THAILAND

1. I submit the following report and recommendation on a proposed loan to the Electricity Generating Authority of Thailand (EGAT) with the guarantee of the Kingdom of Thailand for the equivalent of US$ 27 million to help finance a project for the addition of a 4th thermal unit to the South Bangkok Generating Station of EGAT. The loan would have a term of 20 years, including 5 years of grace, with interest at 7¼% per annum.

## PART I - INTRODUCTION

2. The Bank has extended 22 loans but no IDA credits to Thailand. Total Bank lending amounts to $393.9 million equivalent, of which $32.2 million has been cancelled. The greater part of Bank assistance to Thailand has been for transportation ($154 million), irrigation ($69 million), power ($64 million), and for a multipurpose power/irrigation project ($66 million). Other loans have been made for education and industry. A summary statement of Bank loans to Thailand is at Annex I. Generally, Bank-financed projects have been carried out well, particularly in the power sector. As a result of unsatisfactory bidding for tools and scientific equipment when these items were first tendered, the Closing Date of Loan 471-TH (Vocational Education Project) has been postponed a second time to allow for rebidding; the first postponement was necessary due to delays in appointing experts under bilateral assistance. The Closing Date of Loan 455-TH (Second Highway Project) has recently been postponed to allow the Department of Highways to settle contractor's claims and to continue paying for the services of engineering advisers pending the Bank's consideration of a proposed fifth highway loan. The Third and Fourth Highway Projects being financed under Loans 535-TH and 626-TH are proceeding satisfactorily. Construction of the Sirikit Dam Project (Loan 514-TH) is on schedule. There have been no significant disbursements under Loan 655-TH (South Bangkok Unit No. 3 and Sirikit Dam Units No. 1 and 2) pending the shipment of equipment. Disbursements under Loan 702-TH (Third Bangkok Port Project) of August, 1970, have been slow to begin due to delays in awarding the main civil works contract; the contract is expected to be let this month.

3. Kasetsart University and the Government have been invited to negotiate a proposed loan for the expansion and improvement of the University's facilities but a date has not yet been agreed. Appraisal of the fifth highway project is now being completed. Consideration of these two projects by the Executive Directors is dependent on the Govern-

ment obtaining legislative authority to continue borrowing from the Bank (as distinct from guaranteeing Bank loans, which presents no problem). This legislation is unlikely to be enacted by Parliament before the end of this year. A telecommunications project, for which ADB may provide part of the financing required, is expected to be appraised in March 1972.

4. Thailand became a member of IFC in 1956. IFC has made two equity investments in the Industrial Finance Corporation of Thailand (IFCT). The first for $193,108 was made in 1964 when the Bank and IFC assisted in the reorganization and strengthening of IFCT and the second in February, 1971, when IFC exercised its rights to a new share issue for $191,388. IFC continues to hold all its shares in IFCT. In 1959, IFC made a loan of $300,000 to Concrete Products and Aggregate, Ltd. which has since been sold and in 1969 IFC participated in the expansion program of the Siam Cement Group of companies. The six companies in the Group are Thailand's largest producers of building materials. IFC's investment took the form of an $18 million long-term loan and an equity participation of about $4 million. IFC has since sold loan and equity participations totalling about $15.9 million, and $223,500 has been repaid. Currently, IFC has no projects under active consideration in Thailand, although preliminary consideration is being given to a steel project. However, in the longer term the prospects for new IFC investments appear to be moderately good.

## PART II - THE ECONOMY

5. A report entitled "Current Economic Position and Prospects of Thailand" (EAP-15a, dated August 20, 1970) was distributed to the Executive Directors on September 4, 1970. An economic mission visited Thailand in July and August 1971 and reviewed the draft Third National Economic and Social Development Plan (1972-1976) which began on October 1, 1971. At the same time, sectoral missions assessed the current situation and prospects in agriculture, tourism and in the Northeast region. The mission's report is expected to be ready for distribution in December, 1971. Country data are at Annex II.

### Recent Economic Developments

6. During the 1960's Thailand achieved rapid economic growth, combined with surpluses in the balance of payments and a remarkable degree of price stability. Agricultural production increased in response to increasing external demand. There was a rapid expansion of manufacturing mainly for the domestic market, largely due to a dynamic private sector and from 1965 construction and services in particular were further stimulated by the high level of US military expenditures. GDP increased by over 8 percent annually between 1960 and 1969, reaching a per capita level of about $180 at present.

7. A period of adjustment to distinctly slower growth of foreign exchange receipts began in 1969. External demand for Thailand's main export, rice, weakened; prices fell, and sales abroad remained at around

one million tons. As a consequence, the income of rice farmers who are the vast majority of the Thai people, was reduced considerably. Simultaneously, US military spending in the country declined gradually from $254 million in 1968 to an estimated $167 million in 1971. The slowdown in actual and expected income growth due to these two factors led after some lag to a levelling off in private investment in 1970. As a result some unemployment has appeared in urban areas. GDP growth is estimated at 6 percent in 1970 and is expected to be similar in 1971. Import growth which had been rapid until 1969, declined sharply in 1970 under the effect of slower investment and production growth. But, this decline was not enough to prevent a further widening of the current account deficit to $327 million in 1970, compared to $108 million three years earlier. Foreign exchange reserves declined from $950 million in June 1968 to about $800 million in June 1971.

8. Thailand's traditionally cautious fiscal and monetary policies have come under pressure in recent years. Substantial increases in expenditures on external and domestic security, as well as on development, have been accompanied by slower growth of revenue and non-expansionary borrowing, so that the cash deficit financed by borrowing from the banking system increased considerably in 1971. Nevertheless, Thailand continued to enjoy remarkable price stability, thanks to expanding production and imports.

9. While the Government has taken a number of remedial measures, such as an increase in import duties and other indirect taxes and the removal of rice export taxes, fundamental problems of economic and social development remain to be solved. These are the focus of the Third Plan, which began on October 1, 1971.

Third Five-Year Economic and Social Development Plan

10. The major objective of the Third Plan is to achieve average GDP growth of 7 percent. The basic strategy is to diversify and accelerate exports of agricultural commodities and manufactured goods. To reach this target, major policy measures to stimulate diversification and export growth are required, and the Government would have to deal more effectively than in the past with the required structural changes.

11. The major constraint to economic development over the next five years will probably be the balance of payments. Given the structure of the current account and the expected further decline in US military expenditures, exports will have to increase at more than twice the rate of imports to prevent an unduly sharp increase in the current account deficit.

12. Nevertheless, the current account deficit is likely to increase considerably during the Third Plan period. Only a small part of the deficit can be financed by further drawdown on external reserves; thus a large increase in net capital inflow is required if development is not to be disrupted. In the past, Thailand relied heavily on private capital

particularly suppliers' credits, to finance most of the foreign exchange requirements of industrial investment and part of the infrastructural needs. While the Plan expects a further considerable increase in private credit, a slowdown in the growth of suppliers' credits seems to be called for within the framework of a more selective investment promotion policy.

13. Although Thailand has achieved a remarkable rate of national savings at about 22 percent of GDP, primarily generated in the private sector, there are not enough channels to mobilize private savings for public investment. Improvements are required in the revenue system on grounds of economic efficiency and social equity. The collection of customs, income and business taxes is lax and, if improved, could significantly raise revenues even at existing rates. For revenue purposes a number of excise taxes and import duties might be raised; and the Cabinet is presently considering new property and inheritance tax measures.

14. Although some 80 percent of the labor force is engaged in agriculture, it accounts for only about 30 percent of GDP - a measure of the imbalance in incomes between agriculture and the rest of the economy. From 1960 to 1969, the growth rate of agricultural output averaged nearly 5½ percent annually, largely through the cultivation of additional land areas. Rice, accounting for 31.2 percent of agricultural output in 1969, is the dominant commodity and Thailand's major export. Unfavorable world markets for rice have sharply reduced export volume and prices. Because of the unfavorable prospects for rice exports, the strategy for agricultural development in the Third Plan calls for the diversification of agriculture towards commodities with more favorable export potential. The target of the Plan is to increase the value of agricultural exports by some 33 percent. Maize alone, which developed rapidly in the 1960's, is expected to account for about one-third of the projected increase and together with rubber and tapioca would account for about two-thirds.

15. The export targets mentioned above emphasize the necessity of developing rainfed agriculture if the goals of the Plan are to be achieved. Multiple cropping under rainfed conditions has great potential; the crop season can be stretched out to take advantage of early rains and residual soil moisture after the main crop has been harvested. More important, however, is the need to increase crop productivity. Past increases in production have been obtained through the extension of cultivated areas with only minimal improvement in yields. Further encroachment on the large forest areas which are available will probably continue; but without higher yields, incomes of farmers will continue to be depressed. There are pressing needs for quality seeds which are responsive to fertilizers, and for a price policy which provides incentives to use fertilizer. There is also an urgent need to improve the marketing system, particularly for food grains. Up-country drying and storage facilities are inadequate and thus reduce prices to farmers - particularly at harvest time. Inadequate port facilities are an obstacle to efficient export marketing.

16. The manufacturing sector, which enjoys considerable protection, is mainly oriented towards import substitution. The rapid growth rate of

value added of nearly 11 percent annually during 1960-1969 slowed down to 7.5 percent in 1970. The Plan expects continued growth at an annual rate of 8 percent and a tripling of industrial exports from a low base to $165 million by 1976. Major increases would come from a number of industries concentrating on exports, including fruit and vegetable canning, watch parts, wood products, as well as some industries, such as textiles and cement, which produce both for the domestic and export markets. The planned production and export targets seem feasible if adequate export incentives are provided and if measures are taken to raise efficiency by reducing tariff protection.

17. Distance from markets, both domestic and foreign, unfavorable soil condition and problems of security have all held back development in the Northeast, where per capita income is one-half of the national average and only one-third of that of the Central Region (including metropolitan Bangkok). Over the last 18 months considerable bilateral assistance and Government resources have been devoted to the preparation of a Northeast regional development plan. The extent to which the Northeast plan will form the basis for Government policy and investment in the Northeast has not yet been decided. It is now recognized that a concentrated effort to raise per capita income in the Northeast will require more than the creation of infrastructure and the elimination of obvious marketing bottlenecks. In support of the national policy to diversify and increase exports, emphasis is expected to be given to increasing production and improving the quality of kenaf, cassava and ground nuts. However, the development of agro-business and manufacturing based on the region's own resources will also be required.

18. Family planning has made encouraging progress in Thailand. Although it was unofficially initiated only some years ago, acceptance rates in Bangkok and the provinces are already high. Family planning is now official policy of the Government and the Plan aims at reducing the population growth rate from 3.1 percent in 1970 to 2.5 percent in 1976. This target, while ambitious, appears attainable provided the family planning program receives the wholehearted support of the Government and the relatively modest funds required.

19. External gross capital requirements, official and private, are estimated at $2480 million in 1972-1976, compared to about $1740 million in 1967-1971. To avoid a heavy debt service burden, efforts are needed to increase steeply the official capital inflow. Major bilateral donors (as well as the Asian Development Bank) are willing to consider increasing lending to Thailand. However, a major constraint to achieving the considerably higher level of official capital inflows required to maintain an adequate level of growth is the shortage of suitable projects designed to implement the strategy of the Third Plan. A great deal of effort will be required to prepare projects in priority sectors such as agriculture (together with supporting services and infrastructure) and education, and possibly mining, industrial estates, urban development and provincial water supplies. Preparation of suitable projects will take time, particularly in the case of rainfed agriculture, in which the Bank is seeking ways to assist Thailand. In the meantime, the main emphasis of Bank

lending in the next year or so will continue to be on infrastructure projects where there is a justifiable need for Bank assistance.

20. Notwithstanding some deterioration in the balance of payments and the prospective increase in debt service as a proportion of export earnings, Thailand has a considerable margin of creditworthiness. The debt service burden can be mitigated if Thailand takes in time the necessary measures to diversify and accelerate export growth and is able to increase the share of official capital in overall external financing.

Head of State H. M. King Bhumibol Adulyadej

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Field Marshal Thanom Kittikachorn - Prime Minister

Gen. Prapas Charusathira - Deputy Prime Minister

Nai Pote Sarasin - Deputy Prime Minister

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MEMBERS OF THE COUNCIL OF MINISTERS OF THAILAND

1. Lt. Gen. Sawaeng Senanarong - Minister attached to the Prime Minister's office
2. Field Marshal Thanom Kittikachorn - Minister of Defence
3. Gen. Kris Sivara - Deputy Minister of Defence
4. Nai Serm Vinicchayakul - Minister of Finance
5. M. R. Thongthang Thongtaem - Deputy Minister of Finance
6. Col. Thanat Khoman - Minister of Foreign Affairs
7. Pol. Maj.-Gen. Sanga Kittikachorn - Deputy Minister of Foreign Affairs
8. M. R. Chakratong Tongyai - Minister of Agriculture
9. Pol. Lt.-Gen. Pichai Kullavanich - Deputy Minister of Agriculture
10. Air Chief Marshal Dawee Chullasapya - Minister of Communications
11. Rear Admiral Chalie Sindusopon - Deputy Minister of Communications
12. Nai Pote Sarasin - Minister of National Development
13. Nai Boonrod Binson - Deputy Minister of National Development
14. Gen. Prapas Charusathira - Minister of Interior
15. Nai Thawee Raengkham - Deputy Minister of Interior
16. Nai Thawil Sunthornsaratul - Deputy Minister of Interior
17. Luang Chamroon Netisatr - Minister of Justice

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|---|---|---|
| 18. | Nai Manoon Birusuthi | - Deputy Minister of Justice |
| 19. | Nai Sukich Nimmanhaeminda | - Minister of Education |
| 20. | Nai Abhai Chandavisol | - Deputy Minister of Education |
| 21. | Nai Bunchana Atthakor | - Minister of Economic Affairs |
| 22. | Nai Prasit Kanchanawat | - Deputy Minister of Economic Affairs |
| 23. | Pol. Gen. Prasert Rujirawongs | - Minister of Public Health |
| 24. | Nai Sombun Phong-Aksara | - Deputy Minister of Public Health |
| 25. | Lt. Gen. Pongse Punnakanta | - Minister of Industry |
| 26. | Nai Sa-ard Hongsayonta | - Deputy Minister of Industry |
| 27. | Gen. Chitti Navisthira | - Deputy Minister of Defence |

# BIOGRAPHY

of

## H. E. Field Marshal Thanom Kittikachorn

Prime Minister of Thailand
and
Minister of Defense

| | | |
|---|---|---|
| Date of Birth: | August 11, 1911. | |
| Education: | Military Academy, Bangkok | 1920-29 |
| | Military Survey School | 1931-33 |
| | Infantry School | 1938 |
| | National Defense College | 1955 |
| Career (Military): | Commissioned into 8th Infantry Regiment | 1930 |
| | Engaged in military campaigns in Shan States | 1941 |
| | Commander, 21st Infantry Regiment | 1947 |
| | Commanding General, 1st Army | 1954 |
| | Deputy Supreme Commander | 1963 |
| | Field Marshal, Admiral of the Fleet and Marshal of the Air Force | 1964 |
| Career (Political): | Member, House of Representatives | 1951 |
| | Deputy Minister Cooperatives | 1955 |
| | Minister of Defense | 1957 |
| | Prime Minister | 1958 |
| | Deputy Prime Minister | 1959 |
| | Prime Minister and Minister of Defense | 1963 todate |
| Other Positions: | Rector, Thammasat University, Bangkok | |
| | Special ADC to H.M. The King | |

BIOGRAPHY

of

Thanat Khoman

Minister of Foreign Affairs

Date of Birth: May 9, 1914.

Education: Assumption College, Thailand.

Lycee de Bordeaux.

Faculty of Law, University of Bordeaux.

Faculty of Law, University of Paris
(Docteur de Droit, 1939)

Career: Joined Foreign Service, 1940.

Second Secretary, Tokyo Embassy

Joined Resistance Movement.

First Secretary, Washington Embassy, 1947.

Charge d'Affaires, New Delhi, 1947-50.

Director, Economic Affairs Department, 1950-52.

Deputy Permanent Representative to the U.N. 1952-57.

Ambassador to the United States, 1957-58.

Foreign Affairs Advisor to Prime Minister Sarit Thanarat, 1958-59.

Minister of Foreign Affairs, 1959-todate.

Married, two daughters and one son.

BIOGRAPHY

of

General Prapas Charusathira

Deputy Prime Minister and Minister of Interior

**Date of Birth:** November 25, 1912.

**Education:** Student Chula Chomklao, Royal Military Academy and National Defence College.

**Career:** Commander Thai Army, 1933.

Advanced through grades to general, 1960.

Army deputy commander. Deputy Supreme Commander 1963-1964.

Minister of Interior, 1957. )
)
Deputy Prime Minister, 1958. )
) to date
Rector Chulalongkorn University, 1961 )
)
Supreme Commander, 1964 )

BIOGRAPHY

of

H. E. Pote Sarasin

Deputy Prime Minister

Minister of National Development

| | |
|---|---|
| Date of Birth: | 1906. |
| Education: | Student Wilbraham Acad. (Mass) Middle Temple London |
| | Barrister at Law, Thailand, 1921. |
| | Member of the Bar Association of Thailand, 1929. |
| Career: | Practiced in the courts of law of Thailand up to 1945. |
| | Senator Nat. Assembly, 1948-50. |
| | Deputy Minister of Foreign Affairs, 1948. |
| | Minister of Foreign Affairs, 1949-50. |
| | Represented Thailand on the U.N. Commission for the Unification and Rehabilitation of Korea, 1951. |
| | Chairman of the 5th Commission, 9th Session U.N. General Assembly, 1952-57. |
| | Thai representative, drafting Manila Treaty, 1954. |
| | Ambassador to the United States, 1952-57. |
| | Secretary-General of the Southeast Asia Treaty Organization, 1957-63. |
| | Prime Minister, Sept. 1957-Jan. 1958. |
| | Minister of National Development, 1963-todate. |
| | Minister of Economic Affairs, 1968-69. |
| | Vice-Chairman, United Thai People's Party, 1968. |
| | Deputy Prime Minister, 1969-todate. |
| Other Positions: | Chairman, Board of Investment. |
| | Rector, Khonkaen University. |

BIOGRAPHY

of

M. R. Chakratong Tongyai

Minister of Agriculture

Date of Birth: January 23, 1913.

Education:

Military Academy, Bangkok 1921-24.

Lycee Buffon, Paris, France, 1925-28.

Galileo High School, San Francisco, California, USA 1928-1930.

Dhebsirindra School, Bangkok, 1930-31.

Chulalongkorn University, College of Arts and Science (Pre-medical), Bangkok, 1931-32.

B.Sc. (Entomology), College of Agriculture, Cornell University, Ithaca, N.Y., USA 1932-35.

Honorary D.Sc., Kasetsart University, Thailand, 1970.

Career:

Entomologist, Section of Entomology, Division of Plant Industries, Department of Agriculture and Fisheries, 1935-37.

Chief Entomologist, Section of Entomology, Division of Plant Industries, Department of Agriculture and Fisheries, 1937-47.

Chief, Division of Plant Industries, Department of Agriculture, Ministry of Agriculture, 1947-48.

Resigned and joined Messrs. D. Couper and Johnston Co., Ltd., as Manager of Department of Pest Control, 1948-52.

Entomology Specialist, Department of Rice, Ministry of Agriculture, 1952-55.

Entomological Expert, Ministry of Agriculture, 1955-59.

Director-General, Department of Agriculture, 1960.

Under-Secretary of State for Agriculture, Ministry of Agriculture, 1961-69.

Minister of Agriculture, 1969-todate.

BIOGRAPHY

of

H. E. Sukich Nimmanhaeminda

Minister of Education

Date of Birth: November 25, 1906.

Education: Assumption College, Bangkok.

London U. Msc.

Career: Lecturer in Math. Chulalongkorn University, 1932.

Secretary General, 1934.

Head Department Math., 1935.

Director General Vocational Education Department, Ministry of Education, 1939.

Senator, 1946-47.

Member of Parliament (M.P.), 1947-1959.

Deputy Minister of Education, 1947.

Minister of Industries, 1948.

Minister of Economic Affairs, 1957-59.

Deputy Prime Minister, 1958-59.

Ambassador to India, also Minister to Nepal, Ceylon and Afghanistan, 1959-63.

Ambassador to U.S.A., 1963-68.

Minister of Education, 1969-todate.

Decorated Grand Cordon Order Crown of Thailand,

Grand Cordon Order White Elephant.

BIOGRAPHY

of

Khun Bisudhi Nimmanhaemin
Governor, Bank of Thailand

Date of Birth: May 1915.

Education: Suan Kularb High School, Bangkok.

London School of Economics (B. Com.), 1939.

Career: Joined Ministry of Finance, 1939.

One of the founders of the Bank of Thailand, 1940-41.

Has remained in the Bank of Thailand throughout his career.

Director of Exchequer Department, 1948

Assistant to Governor, 1952

Deputy Governor, 1965

Governor, August 1971

BIOGRAPHY

of

H.E. Serm Vinicchayakul

Minister of Finance

Date of Birth : 2 June 1908

Wife : Khunging Chomsri Vinicchayakul

Education:

1914 - 1926 : Assumption College

1926 - 1928 : Barrister at Law, Law School, Ministry of Justice

1935 - 1937 : Docteur en Droit and Higher Certificate in Private Law and Economic, University of Paris

Career :

1932 : Joined Juridical Council

1942 - 1944 : Member of the Legislative Committee of the Juridical Council

1946 : Secretary General of the Juridical Council

1946 - 1947 ; 1952 - 1954 : Governor, Bank of Thailand

1952 - 1959 : Governor for Thailand in The Boards of Governors of IBRD & IFC

1954 - 1965 : Under - Secretary of State for Finance

1954 : Professor, Faculty of Law, Thammasat University

1957 - 1958 : Minister of Finance (also Under-Secretary of State for Finance)

1965: Minister of Finance todate.

Decorations: Knight Grand Cordon of the Most Noble Order of the Crown of Thailand.

Knight Grand Cordon (Special Class) of the Most Exalted Order of the White Elephant.

Knight Grand Commander (First Class) of the Most Illustrious Order of Chula Chom Klao.

BIOGRAPHY

of

Khun Boonma Wongswan

Under Secretary of State, Ministry of Finance

| | |
|---|---|
| Date of Birth: | November 7, 1917 (Thailand). |
| Education: | University of London, B. Sc. (Economics), 1936-39. |
| | University of London, post-graduate study in Public Finance, 1939-40. |
| Career: | Chulalongkorn University, Bangkok, Lecturer in Economics, 1941-42. |
| | Prime Minister's Office, Chief of Economic Affairs Division, 1943-44. |
| | Ministry of Finance, Chief of Revenue Survey Division, 1945-46. |
| | Ministry of Finance, Chief of Finance Division, 1946-47. |
| | Secretary, British Commonwealth - Thai War Claims Committee, 1946-50. |
| | Ministry of Finance, Acting Assistant Comptroller-General, 1947-48. |
| | Ministry of Finance, Assistant Comptroller-General, 1948-51. |
| | Alternate Executive Director of the International Bank for Reconstruction and Development, 1950. |
| | Financial Counsellor of Royal Thai Embassy, Washington, D.C. 1951. |
| | Director General, Comptrollers Department, Ministry of Finance, 1957-63. |
| | Director General, Customs Department, 1963-65. |
| | Under Secretary of State, 1965-todate. |

Other Positions: Chairman, Bank of Agriculture and Agricultural Cooperatives.

Board Member:- Electricity Generating Authority of Thailand.
Port Authority of Thailand.
Bank of Thailand.
Erawan Hotel.
Siam Cement.

BIOGRAPHY

of

Khun Renoo Suvannasit

Secretary General
National Economic Development Board (NEDB)

Date of Birth: 1921.

Education: Suan Kularb High School, Bangkok

University of Minnessota

Swarthmore College (Mechanical Engineering)

Harvard University (Business Administration, 1950)

Career: Fiscal Policy Office, Ministry of Finance, 1951-1966
(Secretary of Committee Investigating Affairs of Field Marshal Sarit, 1964-1966)

Board Director, Bank of Thailand, 1952-55

Director, Budget Bureau - 1966-70

Secretary Genera, NEDB - 1970- todate

Other Positions: Chairman, Industrial Finance Corporation of Thailand (IFCT)

Vice-Chairman, Accelerated Rural Development Committee

Board Member:- Fuel Oil Organization
Thai Airways International
Thai Television Corporation
Metropolitan Water and Supply Authority
National Atomic Energy Commission

Member:- National Education Council
Thammasat, Chiang Mai
Mahidol and Prince of Sonkhla Universities.

Head of State H. M. King Bhumibol Adulyadej

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Field Marshal Thanom Kittikachorn - Prime Minister

Gen. Prapas Charusathira - Deputy Prime Minister

Nai Pote Sarasin - Deputy Prime Minister

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| 7. | Pol. Maj.-Gen. Sanga Kittikachorn | - Deputy Minister of Foreign Affairs |
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| 9. | Pol. Lt.-Gen. Pichai Kullavanich | - Deputy Minister of Agriculture |
| 10. | Air Chief Marshal Dawee Chullasapya | - Minister of Communications |
| 11. | Rear Admiral Chalie Sindusopon | - Deputy Minister of Communications |
| 12. | Nai Pote Sarasin | - Minister of National Development |
| 13. | Nai Boonrod Binson | - Deputy Minister of National Development |
| 14. | Gen. Prapas Charusathira | - Minister of Interior |
| 15. | Nai Thawee Raengkham | - Deputy Minister of Interior |
| 16. | Nai Thawil Sunthornsaratul | - Deputy Minister of Interior |
| 17. | Luang Chamroon Netisatr | - Minister of Justice |

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| 22. | Nai Prasit Kanchanawat | - Deputy Minister of Economic Affairs |
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| 25. | Lt. Gen. Pongse Punnakanta | - Minister of Industry |
| 26. | Nai Sa-ard Hongsayonta | - Deputy Minister of Industry |
| 27. | Gen. Chitti Navisthira | - Deputy Minister of Defence |

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Minister of Agriculture

Date of Birth: January 23, 1913.

Education:

Military Academy, Bangkok 1921-24.

Lycee Buffon, Paris, France, 1925-28.

Galileo High School, San Francisco, California, USA 1928-1930.

Dhebsirindra School, Bangkok, 1930-31.

Chulalongkorn University, College of Arts and Science (Pre-medical), Bangkok, 1931-32.

B.Sc. (Entomology), College of Agriculture, Cornell University, Ithaca, N.Y., USA 1932-35.

Honorary D.Sc., Kasetsart University, Thailand, 1970.

Career:

Entomologist, Section of Entomology, Division of Plant Industries, Department of Agriculture and Fisheries, 1935-37.

Chief Entomologist, Section of Entomology, Division of Plant Industries, Department of Agriculture and Fisheries, 1937-47.

Chief, Division of Plant Industries, Department of Agriculture, Ministry of Agriculture, 1947-48.

Resigned and joined Messrs. D. Couper and Johnston Co., Ltd., as Manager of Department of Pest Control, 1948-52.

Entomology Specialist, Department of Rice, Ministry of Agriculture, 1952-55.

Entomological Expert, Ministry of Agriculture, 1955-59.

Director-General, Department of Agriculture, 1960.

Under-Secretary of State for Agriculture, Ministry of Agriculture, 1961-69.

Minister of Agriculture, 1969-todate.

BIOGRAPHY

of

Khun Renoo Suvannasit

Secretary General
National Economic Development Board (NEDB)

Date of Birth: 1921.

Education: Suan Kularb High School, Bangkok

University of Minnessota

Swarthmore College (Mechanical Engineering)

✓ Harvard University (Business Administration, 1950)

Career: Fiscal Policy Office, Ministry of Finance, 1951-1966
(Secretary of Committee Investigating Affairs of Field Marshal Sarit, 1964-1966)

Board Director, Bank of Thailand, 1952-55

Director, Budget Bureau - 1966-70

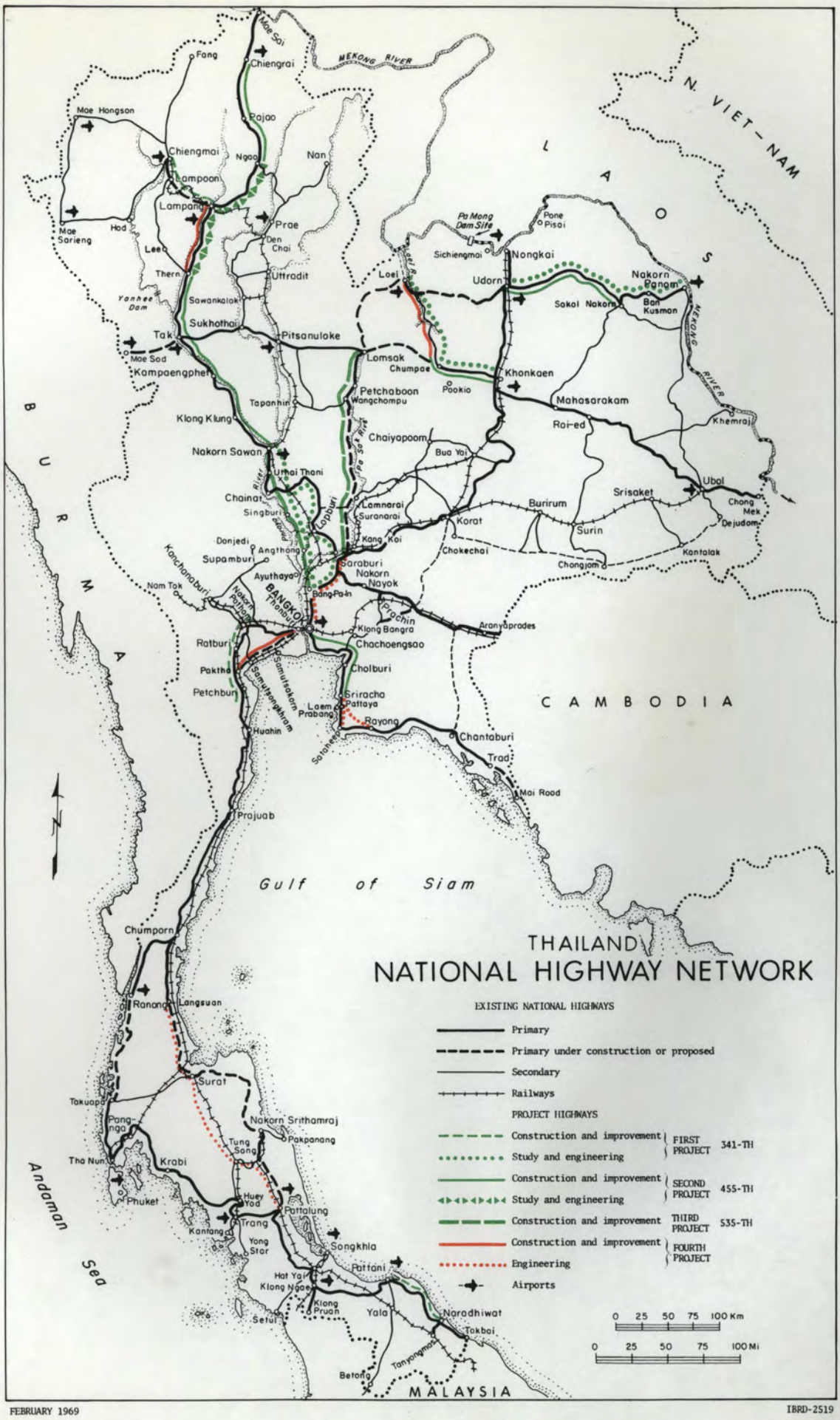
Secretary Genera, NEDB - 1970- todate

Other Positions: ✓ Chairman, Industrial Finance Corporation of Thailand (IFCT)

Vice-Chairman, Accelerated Rural Development Committee

Board Member:- Fuel Oil Organization
Thai Airways International
Thai Television Corporation
Metropolitan Water and Supply Authority
National Atomic Energy Commission

Member:- National Education Council
Thammasat, Chiang Mai
Mahidol and Prince of Sonkhla Universities.




FEBRUARY 1969

IBRD-2519

Inches
Centimetres
TIFFEN® Color Control Patches
© The Tiffen Company, 2007
Blue Cyan Green Yellow Red Magenta White 3/Color Black

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## III. OTHER URBAN PLACES

### A. Introduction

There can be little doubt that Thailand is a country of one great city, Bangkok, and beyond that nothing very much except villages and towns. It is environment service levels and relationship of these towns to Bangkok that concerns us. To ascertain the service levels, profiles and ambience of rural towns, five of the larger urban places were selected for inspection and urban profiles.49/ These towns were Chiengmai in the north, Korat (Nakorn Ratchasima), Khon Kaen and Udorn in the northeast and the companion towns of Songkhla and Haadyai in the south: The latter two because of their proximity to, and dependence on each other will be considered singly.

The city and towns selected, excepting Khon Kaen, are among the ten largest in Thailand and all rest well outside the Central region.

Table 37 REGION AND RANK OF SELECTED URBAN PLACES - 1970

| Place | Region | Urban Rank |
|---|---|---|
| Chiengmai | North | 2 |
| Korat | Northeast | 3 |
| Udorn Thani | Northeast | 6 |
| Haadyai | South | 5 |
| Songkhla | South | 8 |
| Khon Kaen | Northeast | 23 |

Two of the northeast towns (Korat and Udorn) have nearby Royal Thai Air Force bases used by the United States Air Force. The presence of the U.S.A.F. has generated both economic growth and, lately, economic stress with withdrawal of American forces from Asia. Khon Kaen has recently emerged from its former rural lethargy to a more active pace with its designation as the administrative center for the Northeast region of Thailand. The two southern towns, well beyond immediate influence of Bangkok, are self-movers.

### B. Chiengmai

1. Background: Chiengmai lies 800 kilometers north of Bangkok on the Ping River. Sited at an elevation of 314 meters in a broad, fertile valley amidst the northern mountain ranges, the city enjoys both a semi-tropical climate and the environmental splendor of close proximity to Thailand's tallest mountains. Chiengmai is important. It is the second largest city in Thailand, and is the administrative center of the Northern region of Thailand. Additionally, it is the provincial seat of Chiengmai Province; a large populous province with over 1,000,000 inhabitants. It is also a trading center of a rich agricultural region, and a forestry center with major stands of teak and other commercially valuable woods nearby. Chiengmai is the northern terminus of the railroad and the focal point of several major roads. Aside from the numerous handicraft industries which cater to the city's most important industry, tourism, and the omnipresent ice factories, rice and sawmills, there is little else; only a small number of plants processing agricultural products* and non-metallic mineral products.** These plants have an employment base of approximately

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* Shredded jelly, jam, tobacco, etc.

** Ceramics and pottery

1,000 persons. These industrial activities have been reinforced by recent proposals for a cold storage plant and a wood drying-curing company which, while complementing the agricultural-forestry base, will do little to diversify industry. The primary emphasis in the thoughts of officials is tourism. Shopping centers, bowling alleys and hotels are being built to accommodate the influx of Thai and foreign tourists. Ten years ago Chiengmai had only one hotel of any consequence. Today it has four first-class hotels with over 380 rooms. More are being built. Chiengmai is now receiving first national priority for the development of the tourist industry. To reinforce Chiengmai's tourist trade, there have been plans afoot during the last few years to open the airport, the nation's second largest, for direct international use.*

Chiengmai, founded in 1296 by King Meng Rai, a prince of Chieng Saen, was for centuries a city-state, controlling a significant hinterland. Thailand and Burma have historically struggled for control of the city. Since 1775 the city has been Thai, but up to two generations ago the city and province were ruled as an independent fiefdom by a prince who owed only allegiance to the Thai king. The Burmese, though losing, nevertheless, have left an architectural imprint on some of the oldest buildings and temples in the city.

Historically, the River Ping constituted the area's main trade route and it was on the west bank of the river that a fortified city was built. The large moated section, with the remnants of crumbling brick walls, encompasses an area of approximately two square kilometers. Parts of the old section of modern Chiengmai date back 700 years, and are architecturally rich, with temples, historical shrines and monasteries. The street pattern in this old part is nicely regular. Structures recently built, luckily, have been kept in scale with the older buildings. Chiengmai today covers approximately 18 square kilometers. The two newer urban areas have developed primarily (1) from contiguous

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* "The Pacific Area Travel Association seminar in Chiang Mai in 1969 recommended that Chiang Mai airport should be brought up to international standards. Subsequently, the Civil Aviation Bureau of the Ministry of Communications declared Chiang Mai to be an international airport and the Ministry of Finance made it a customs entry point last October. International airlines wishing to land at Chiang Mai were requested to contact the Civil Aviation Bureau. However, there have been no applicants so far. In fact the airport, although improved and extended during the last two years, still falls short of international standards. The runway is just over 9,000 feet long, and can receive aircraft not bigger than DC9s or Caravelles. The beacon installed is of the non-directional type..... The airport fee for passengers has not yet been fixed. Judging from the current rate of progress, the decision is not needed urgently." 50/

growth outward towards the river from the older city, and (2) around the road leading to the railroad station on the east bank of the Ping. The urban growth towards the river on the west bank is characterized by a mixture of commercial and residential land uses. Here, also, are some of the newer hotels, the central market, theaters, governmental offices, and foreign consuls. The growth on the east bank is confused and like the streets there, no discernible pattern emerges. In this vicinity there are shop-houses, industrial sites, some residential, government establishments and other mixed uses. The biggest structure in this area is the new Railway Hotel. The newest developments are now occurring in the areas well west of the old city where the new airport, hospital, university, and a major hotel have been built. Pleasantly enough, throughout the city the built-up areas are not continuous, and are intermixed with open spaces and treed areas.

2. Population and Density: Chiengmai Province has been growing slightly below the national rate. During the period from 1960-1970, the average annual increase was 2.47%. This reflects trends in the northern region of Thailand where no province was growing fast. As can be seen from the following table, the city's growth rate was lately only fractionally above provincial levels.

Table 38 POPULATION GROWTH - CHIENGMAI

| Year | Population (1) | Average annual rate of growth for the preceding ten-year period percent |
|---|---|---|
| 1950 | 41,400 | - |
| 1960 | 66,800 | 4.9 |
| 1970 | 89,272 | 2.9 |

(1) Registered persons

Additional population data and density follows:

Table 3 MISCELLANEOUS POPULATION DATA - CHIENGMAI - 1971

| | | |
|---|---|---|
| Area (square kilometers) | 18.0 | |
| Registered population | | 90,500 |
| Density (persons per hectare) | 50 | |
| Unregistered population (estimated) | - | - |
| Possible population | | 90,500 |
| Probable density | - | |
| Housing units | | - |
| Number of persons per housing unit based on registered population | 5.6 (1) | |
| Net immigration (estimated) | - | |

(1) Source: National Statistical Office

In addition to the municipal population, officials estimate that the greater Chiengmai area contains another 10,000 urban dwellers for a total metropolitan population of approximately 100,000 persons.

3. Urban Services:

a. Water: From two supply sources, the Ping River and an irrigation canal, the Provincial Water Authority services approximately 4,700 water users with an average output of 9,000 cubic meters a day. The main treatment plant, adjacent to the river intake, consists of rapid sand filters, sedimentation and chlorination processes. Water is then pumped into elevated water storage tanks, then gravity fed into the distribution system. The system contains no public water points. The authority makes no differentiation between commercial and residential users.

(1) Water service level: Based on the foregoing, and using an average of 5.6 persons per meter, it appears that 31% of the population is served at a high standard of 90 gallons per capita per day.* The available public water to total population is approximately 26 gallons per capita per day.

(2) Supplementary service: There are many shallow (10-12 meters) wells within the city that supply most of the rest of the people. The hospitals also have their own facilities. The University has its own supply, from a mountain stream, and its own treatment plant which supplies about 5,000 persons.

b. Electrical power is supplied to Chiengmai by nearby Yanhee Dam through a sub-station. The average daily power supplied is 7,000 kw. Peak load which occur daily near 1900 hours approximates 9,800 KVA. The power is sufficient for foreseeable future needs. The demand for new service is slow, primarily due to a lack of distribution lines.

(1) Service level: Approximately 14,000 electrical meters are in service with no differentiation being made between commercial and residential use. There is no industrial metering. Based on the foregoing, it appears that approximately 85% of the persons residing in the metropolitan area have power.

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* $\frac{264 \times 9{,}000\ m^3}{4{,}700 \times 5.6} = \frac{2{,}376{,}000 \text{ gallons}}{26{,}320 \text{ persons}} =$ 90 gallons per capita per day

c. Telephone Service: In Chiengmai there are 1,900 telephones presently installed, with a backlog of approximately 1,830 requests for telephone service. The installed telephones include approximately 100 government or official phones. It is programmed to have 1,000 new lines installed shortly. The 830 other requests for telephones cannot be met due to a lack of distribution lines. Service appears to be good, and connections may be made with all major Thai and world cities.

(1) Service level: Present level of telephone service appears to be one phone per 47 persons in the city.

4. Comments: Chiengmai, fortunately growing at slower rates, may be able to cope with some of its current and future urban problems if the city fathers are given more self-determination. As examples, the Mayor of Chiengmai stated that the city government is not following the master plan as proposed by the Department of Town and Country Planning, Ministry of Interior. Presently, there are no laws to control growth or to implement the plan. The Mayor further stated that the city cannot even control building setbacks or off-street parking.

Tourism, which is the city's biggest industry, has, perhaps, its detrimental side effects. In Bangkok, there was concern among discerning Thais that the inhabitants may be having their very fine religious values change through the influence of tourists from Bangkok. Moreover, the new architecturally uninspiring developments of bowling alleys and shopping centers are hardly typical of the culture, or worth journeying to Chiengmai to see. In their eagerness to have the city grow, the city fathers have destroyed historical (and touristic) features of worth. As recently as 1958 it is remembered that great stretches of the old wall still remained. Today most of the wall is gone, and parts of the moat have been filled in to accommodate cheap outside food stalls; a counter-productive move at best.

C. Khon Kaen

1. Background: Khon Kaen lies near the geographical center of the Korat plateau some 618 kilometers northeast of Bangkok, and 173 kilometers south of the small border town of Nongkhai (on the Mekong River). Rolling hills, lakes, rice paddies, and fields of kenaf characterize the surrounding territory. While the town is not old, human settlement of Khon Kaen province predates history. There is evidence of bronze metallurgy occurring in the province as early as 3,000 B.C.51/ The Upper Mekong area in which Khon Kaen is sited, is one that competes with other favorable ecological niches throughout the world as a "cradle" of civilization.

Its favorable geographical position has resulted in Khon Kaen being designated as the administrative center of the Northeast region of Thailand. In its regional role Khon Kaen has been the recipient of much attention and some important infrastructural inputs; the most notable of the latter being the new University of Khon Kaen. Prior to its new status, and before the

construction of the Korat-Nongkhai Highway, Khon Kaen is remembered as recently as ten years ago as a small collection of unpainted wooden buildings, huddled around a dusty crossroads. The potholed pasture adjacent to these buildings served at the airfield. Today, Khon Kaen has a fine new airport, provincial buildings, television station, and other amenities that attest to the town's growing importance.

In addition to being an administrative and provincial center, Khon Kaen serves as a market and trade center; dealing in rice, tobacco, sugarcane, jute and timber. Industrialization has occurred at somewhat of a somnolent pace. The main industry is a private plant producing kapok fabric that employs 40 workers. Other industries are the usual ice factory, rice, and sawmills expected to be found in rural Thai towns.

Today, the town is compact, with approximately 32,000 inhabitants living in a municipal area of four square kilometers. Most of the built-up area of Khon Kaen lies to the east of the railway that links Bangkok with Nongkhai and the new Korat-Nongkhai Highway. The commercial center of the city is a kilometer northeast of the railroad station. Most of the shop-houses and hotels are located here as well as the City Hall. The new provincial government complex is located at the northern end of the city.

Despite its compactness, there are a great number of agreeable open spaces within the town proper. Khon Kaen has two other amenities that will tend to ameliorate future stress as the town grows: (1) a rectangular street grid with few diagonal alignments, and (2) unlike Korat, Udorn and most of the other towns along its way, the Korat-Nongkhai Highway runs along the western extremity of the town, providing a bypass for the heavy through traffic.

2. Population and Density: The average yearly increase in Kohn Kaen Province during 1960-1970 was a low 1.93%. The growth of Muang Khon Kaen during the same period was high.

Table 39 POPULATION GROWTH - KHON KAEN

| Year | Population(1) | Average annual rate of growth for the last ten-year period, percent |
|---|---|---|
| 1960 | 19,600 | - |
| 1970 | 31,033 | 4.7 |

(1) Registered population only.

Additional population data, average overall density, housing units and family size are given in the next table.

Table 40 MISCELLANEOUS POPULATION DATA - KHON KAEN - 1971

| | | |
|---|---|---|
| Area (square kilometers) | 4.0 | |
| Registered population | | 31,900 |
| Density (persons per hectare) | 80 | |
| Unregistered population (estimated) | | - |
| Possible population | | 31,900 |
| Probable density (ppha) | | - |
| Housing units | | 5,536 |
| Number of persons per unit based on registered population | 5.76 | |
| Net immigration (estimated) | .04% | |

3. Urban Services: The service level of the city could be better. Water supply suffers from seasonal shortages and is of poor quality. Most residents have electricity but electric power is inadequate for roads, lighting and other public uses. Officials estimate that at least four additional trucks need to be added to the existing fleet of four garbage collection trucks. The total capital investment made by the city during the past year was approximately one million baht mostly for roads and drainage. Improvements are now being made on the existing drainage system by connecting it to the canal which loops around the southern and eastern part of the city. Once outside the main part of the city, the streets are mostly unpaved.

a. Water: Water obtained from the Kut Kwang Rivulet and an irrigation canal is passed through a filtration plant, equipped with rapid sand filters. The plant's capacity is 18,000 cubic meters a day. A reservoir feeds the water into a distribution line that services 3700 commercial and residential customers (meters). The present supply provides approximately 9,000 cubic meters of water a day.

(1) Service level: Based on 3,700 customers, water service level to the 5,536 dwelling units in Khon Kaen appears to be a high 67% of total population at an output of 111 gallons per capita per day.

(a) Based on enumerated population, available public water is 74 gallons per capita per day.

b. Electrical: Power is obtained from the Ubolratana Dam, and is supplemented by a local 1,152 kilowatt diesel generator.

(1) Service level: With approximately 3,000 subscribers, approximately 54% of all dwelling units receive electricity.

c. Telephones: There are 784 telephones installed, providing the town with a ratio of one telephone for every 40 persons.

4. Comment: Currently there are plans for the expansion of the municipal boundary to include an additional 39 square kilometers of land which currently has a population of 22,000. This tenfold expansion in area is in keeping with the recommendations of the Town and Country Planning Department Ministry of the Interior, as a method of exercising control over future growth. This action, if taken, should prove beneficial.

The two architectural features of Khon Kaen are the provincial government complex and the new University of Khon Kaen. Both of these were built by the central government and are fine examples of administrative grandeur. These institutions are unfortunately not vigorously expanding employers. The city is currently suffering the effects of a depressed job market. Potential industrial development, as proposed, for alleviating unemployment such as additional rice milling capacity and ice making are inadequate. Hence the rapid population increase of Khon Kaen has resulted in problems of unemployment.

7

# Population and Family Planning

## Population

1. The total population of Thailand has been estimated at 36 million in 1970 on the basis of preliminary results of the 1970 population Census, compared to 26 million in 1960. Thus, average density on an area of 514,000 square kilometer has increased from 52 persons per square kilometer in 1960 to 70 in 1970. Thailand lies close to the median of developing countries with respect to density. The Central region was the most densely populated area with 110 persons per square kilometer in 1970, and the Northern region the least with 46. Thailand is a predominantly rural country, where about 86 percent of the people live in over 46,000 villages and many small towns, and are engaged in agriculture. It is estimated that one-fourth of Thailand's total area is arable, so that density per square kilometer of arable land was 286 in 1970.

2. The 1970 urban population is estimated to be about 5.2 million, around 14 percent of the total population. While the population living in municipal areas increased by 59 percent during the ten years period 1960-1970, the rural population increased by only 31 percent during the same period. The twin city Bangkok-Thonburi grew by 62 percent in the decade 1960-1970, and its population was over 33 times greater than that of the country's second largest city, Chiengmai. If Bangkok-Thonburi continues to grow at this rate, it will reach nearly 3.9 million by 1975.

3. In the survey of population change carried out in 1967, the birth rate was estimated to be 41.8 per thousand and the death rate 10.9. The population growth rate was estimated at about 3.1 percent in the 1960s. This rate is among the highest in the world and the second highest in Asia next to the Philippines. There were about 7.5 million women within the reproductive age (15-44) in 1970. An average married woman has about 6.5 children during her child-bearing period. Fertility levels of Thai women in the older age group are among the highest in the world. The share of population in pre-school age group (age 0-4) and school age group (age 5-14) were 17.4 percent and 26.7 percent, respectively in 1970. The youth dependency ratio (population under 15 divided by population (aged 15-64) was 84 per 100 in 1970, compared to 89 in 1960. Thailand has a highly inefficient age structure for economic development.

4. A set of four population projections has been computed by the National Statistical Office. The constant fertility projection gives a 3.5 percent annual population growth rate in 1995-2000 and close to 100 million population at the end of the century. In the high projection with slight fertility declines the population growth rate would decline to 2.7 percent in 1995-2000 and the population in 2000 would be 86 million; while these figures would be 1.8 percent and 70 million in the low projection which is consistent with family planning targets. The medium projection lies between the high and low projections. The Third Plan adopted the low projection as a goal for population policy, but used medium projection for planning purposes. The annual rate of increase during the Plan period would be 3.07 percent in the medium projection and 2.73 percent in the low projection. In 2000, the school-age group would number 15 million, 21 percent of the total population, if the low projection holds, compared to 21 million and 25 percent in the high projection, and pre-school age population would be 12.5 million, 15 percent of the total, in the high projection, compared to 7.5 million and 12 percent in the low projection. The youth dependency ratio in the low projection would be 51 percent in the low projection and 71 percent

in the high projection at the end of this century. These calculations provide a basis for estimating the benefits of the family planning program in the country.

Family Planning Program

5. Thailand took a pro-natalistic stance for a long time. One of the major reasons for setting up a public health service in 1914 was to increase the rate of population growth by reducing mortality. Even in 1956, bonuses for large families were authorized in a social welfare act. After a visit of the World Bank economic team in 1959 which pointed out that Thailand's economic development was being adversely affected by an excessively high rate of population growth, the first National Population Seminar was held in 1963, which led to a number of research and survey projects. In 1966, the Population Council of New York began its International Postpartum Program and four Bangkok hospitals became participants. Government implemented an informal family planning project from 1968 to 1970 as a research project. Although it was limited in the scope of activities and financial sources, it achieved a remarkable success. In three years, more than 6,000 health personnel were trained for family planning activities, and services were started at more than 3,000 clinics throughout the country. The numberof new acceptors increased rapidly from about 57,000 in 1968 to 226,000 in 1970.

6. The role of population policy was further reviewed and more positive action was taken by the Government in March 1970, when the Cabinet approved a population policy of "supporting voluntary family planning", and also approved the appointment of an inter-ministerial coordination committee. Implementation of an official National Family Planning Project was authorized within the framework of the Third Plan. The Project's objective is a reduction of the population growth rate from around 3.1 percent in 1970 to 2.5 percent at the end of 1976. Annual targets of numbers of acceptors would rise from 350,000 in 1972 to 410,000 in 1976. These targets are ambitious, but considering the favorable conditions existing in Thailand they seem to be within reach. Before the Project (1972-76), the cost of family planning facilities and services was met by foreign grants mainly. Under the Project it is expected that ₱204 million will be allocated from domestic budgetary resources during 1972-76. The Project emphasizes public information, which has been prohibited so far, expansion of services and strengthening of the Project's administration.

7. Organization A new organization, the Family Planning Project, was set up in March 1970 in the Ministry of Public Health. During the Plan, it is expected to become an organization of 98 full-time Government officials, including 3 physicians, 14 nurses and 10 health educators, and an unspecified number of temporary field workers. At the provincial level, the Provincial Health Officer is responsible for public health services and family planning activities of rural health centers. Ministry hospitals also provide family planning services and report directly to the Assistant Director for Hospital Services of the Family Planning Project. In addition, municipal health centers under the municipalities, and private hospitals and clinics participate in the National Family Planning Project activities. Nearly twenty other government and private agencies also participate in family planning work. In order to obtain cooperation among these agencies, the Committee for Study, Coordination and Implementation of the Population Policy has been formed under the chairmanship of the Minister of Public Health.

8. Methods and Services Oral pills are increasingly widely used. While 9.5 percent of the new acceptors were given oral pills in 1965-68, this percentage increased to 58.6 percent in 1970 and 72.8 percent in January-May 1971. The ratio of IUD users to total new acceptors decreased from 64.4 percent in 1965-68 to 22.1 percent in January-May 1971. While IUD insertions have been performed by qualified doctors, pills have been distributed simply with prescriptions of midwives since mid-1970. Condoms are not emphasized in the program due to their bad public image. The use of chemical methods and diaphragms is insignificant. Female sterilizations have been performed so far while male sterilizations were very few. The total number of new acceptors was 186,000 during 1965-68, 123,000 in 1969 and 226,000 in 1970. DMPA injections are discussed below in Para 21.

9. According to evaluation by the Ministry of Public Health, between 1965-67 the majority of acceptors were in Bangkok; but by the end of 1970 approximately 85 percent of all acceptors received services outside Bangkok and 80 percent of all acceptors were from rural areas. A follow-up study conducted in 1970 revealed that IUD continuation rates after 12 months were 75.8 percent for pills prescribed by midwives and 66.7 percent for pills prescribed by physicians. These continuation rates are relatively high by international standards.

10. The family planning program is mainly implemented through the health centers of the Department of Health. In 1970, 3 maternal and child health, 214 first class health centers, 1,276 second class health centers and 1,764 midwifery centers served 61 percent of all acceptors. About 23 percent accepted contraceptives through 84 provincial and district hospitals and 3 metropolitan hospitals of the Department of Medical Services. The other acceptors were served by public and private organizations outside the Ministry of Public Health, such as municipal health centers, university hospitals and private clinics. The share of the Department of Health expanded significantly since about 3,000 midwives were permitted to prescribe pills in mid-1970.

11. In 1966, four hospitals in Bangkok became participants in the International Postpartum Program. 8 provincial hospitals and 3 MCH centers, all outside Bangkok, were added in 1969 and 1970. About 100,000 deliveries and 13,000 abortions were performed in the hospitals during 1970. Thailand has one of the most successful programs among the participants of this international program. In 1970, 20 percent of the patients accepted contraceptives prior to discharge from the hospital after delivery or abortion. The program was most successful at the 3 MCH centers where special motivational and educational efforts were carried out in the antenatal clinics, in the labor rooms and in the postpartum wards, with all staff taking part in these efforts. In these centers, an average of 58 percent of all obstetrical patients accepted family planning services in 1970. The activities in other hospitals were similar although somewhat less intensive than in the MCH centers because an insufficient number of personnel are available for the program. In view of these encouraging results, an accelerated development of maternal and child health services is planned within the National Family Planning Project.

12. The field activity program has not been fully developed yet. Home visits are performed by auxiliary midwives of rural health centers, but lack of mobility has restricted their activities in the one to three villages assigned to each one of them. In an attempt to increase the number of people reached by these midwives, the Ministry plans to provide motorcycles for midwives. During 1971 and 1972, pilot studies on field workers will be carried

out. Two alternative types of field workers will be tested. One is a full-time family planning field worker at district level to cover approximately 5,000 people, in those areas not adequately serviced by auxiliary midwives. Another is a village level volunteer who acts as an agent for MCH and family planning program. The National Family Planning Project states that the field workers program is to be developed gradually because the family planning program has been successful so far and field workers are not urgently needed.

Training

13. Training was one of the important components of the informal family planning project of 1968-70. During this period, 330 physicians, 700 nurse-midwives and 3,090 auxiliary midwives from every province attended one-week training courses. In 1970, two-day courses were developed for male health workers and 1,985 health workers participated in them. The National Family Planning Project of 1972-76 includes seminars and in-service training courses.

14. Shortages of medical and para-medical staff, such as midwives, nurses and health workers, are an obstacle to family planning activities, especially in rural areas. The Third Plan expects that 1,850 physicians, 19,000 nurses and 3,000 midwives will be trained, and that 6 schools will be established for this purpose during the Plan. However, the ratios of population to physicians and nurses will be improved only slightly from 6,600 per physician and 2,200 per nurse in 1971 to 5,900 and 1,800 in 1976 respectively.

15. Information No public information activities were allowed until recently and knowledge on family planning spread largely by word of mouth. Several surveys revealed that a majority of acceptors came to clinics after hearing about the services from friends and relatives. However, it is recognized that large numbers of women need greater motivational efforts to become acceptors, and these will be the targets of the Project in future. Public information was made possible by the Cabinet decision of March 1970 and was started on a pilot basis in 1971. A diversified approach has been planned, including the dissemination of documents and printed materials, utilization of radio, television, movies and public exhibitions and preparation of family planning curricula for various levels of schools. The emphasis in this information program is placed on the benefit to be gained from the practice of family planning; discussion of contraceptive methods is still not allowed. The Family Planning Project also includes a scheme of mobile information teams to disseminate information about family planning and about the services available through the Ministry of Public Health and other agencies. Nine teams are proposed. They will be assigned to provinces with large numbers of people and a high rate of population growth, and will operate in rural villages twenty days a month. Each team will consist of one health educator, one assistant and a driver.

Evaluation

16. A reporting system was established during the implementation of the informal family health project of 1968-70 and functions well now. Statistics are collected from all public and private clinics which have agreed to cooperate.

The Research and Evaluation Division of the Project organization prepares monthly and quarterly reports which are sent to all participating units within 6-8 weeks after the end of each reporting period. Besides, periodic analysis of the characteristics of acceptors and follow-up surveys are conducted by the Division.

Costs

17. The cost of family planning facilities and services was met by foreign grants mainly and by unidentified budget allocations of the Ministry of Public Health until fiscal 1971. Since it had been decided that only existing health personnel were to be trained and that clinics would be opened in existing facilities, many of the expenses incurred in other countries for training and clinics were unnecessary in Thailand. During the National Family Planning Project period, 1972-76, it is expected that ฿263 million, or 56 percent of the program's total cost will be financed by foreign grants, mainly the US and the UN Fund for Population Activities, while the remaining ฿204 million will come from domestic budgetary resources. Expecting foreign grants, the Government is not interested in external loans for these programs. The cost per new acceptor was estimated at $6.00 in 1970, and is expected to reach $11.55 in 1976, due to the expected increase in expenditure from both domestic and foreign sources.

18. Governmental family planning services have been provided free of charge so far, except for sterilization. In the Project, a system of donations is planned (฿5 or less per cycle of oral pills, ฿20 or less for an IUD insertion, ฿50 or less for a vasectomy, and ฿150 or less for a female tubal ligation) because it has been found that Thai women attach more value to contraceptives and have better continuation rates when they pay.

19. In recent years, various agencies, such as the Population Council, and the UN Fund for Population Activities, the US Government, the International Planned Parenthood Federation and other foreign government provided technical and financial help to family planning in Thailand. The Population Council provided overall support since 1963 and was particularly instrumental in creating awareness of population problems. The UN Fund for Population Activities, involving other organizations within UN is becoming now one major source of funds. Their future assistance will consist in the provision of motorcycles for midwives, the development of a major public information program, a pilot expansion of maternal and child services, etc. The US Government started providing assistance in 1968, and has since financed mainly the importation of large quantities of commodities, particularly pills, clinical equipment and vehicles. The International Planned Parenthood Federation provides funds and technical assistance to 7 institutions in Thailand. Mobile clinics of the Chulalongkorn Hospital and the program of McCormick Hospital are, reportedly, very successful.

McCormick Hospital, Chiengmai

20. The McCormick Hospital is one of four private hospitals in Chiengmai (the one government provincial hospital specialises in psychiatric cases). The hospital which is run by missionaries consists of a central clinic, three outlying clinics and a mobile unit begun in May 1969. The Director of the hospital is Dr. MacDaniel, a US citizen who has been in Thailand for 10 years and speaks Thai.

21. The hospital specialises in family planning, obstetrics, maternity and child care. The family planning service was introduced in 1963 using IUDs. In 1965 the hospital introduced the use of intra-muscular injections of DMPA (depo-type, medroxyprogesterone acetate) and is currently the main center in the world for the use of contraceptive injections. In 1970 the hospital recorded the following new acceptors:

| | |
|---|---|
| IUD | 212 |
| Pills | 4,163 |
| Female Sterlization | 297 |
| DMPA Injection | 5,345 |
| Total: | 10,017 |

An increasing number of women are showing a preference for the injection technique (which requires a repeater only once every three months) and the continuation rate for this method is 70 percent at the end of the second year as compared to 50-60 percent for the pill and IUD. All the contraceptives including DMPA, which is donated by the International Planned Parenthood Federation, are supplied free of charge by the Ministry of Public Health but the hospital collects service charges of 5 baht per cycle of pills, 15 baht per injection for three months, 35 baht per IUD and 410 baht per sterlization.

22. The mobile unit visits 35 places in rural areas every three months. The unit is composed of one doctor, one nurse, one nurse aid and a driver and goes into the field three or four days a week. It provides oral pills and injections and treats about 1,000 women a month, as compared to the 4,500 a month treated in the four clinics.

THAILAND

## Northern Regional Planning

The Northern Region Planning Office was established as a branch of the National Economic Development Board (NEDB) on the Chaengmai University Campus in August 1970. The Planning Office is assisted by a team from Israel Planning and Development (IPD) financed by UNDP. The team, which is led by Dr. Wiezmann, includes experts in industry, agriculture, water resources, transportation, as well as a regional planning economist, and a physical planner. The Planning Office works with the Northern Region Development Committee in the Prime Minister's Office.

The team is completing the first phase of its planning work and will shortly submit an outline development plan for the region. The Plan will consist of a number of specific development projects in priority areas, which will in some cases, require further study during the second phase of the team's work, and a set of policy recommendations designed to lead to regional equity which is the government's goal. (UNDP staff will review the government's request to extend the work of the team into Phase II in Bangkok, November 12-15.) Those development projects approved by the government will be incorporated in the Third National Development Plan.

The Northern Region of Thailand has been delineated as a geographic unit composed of a compact group of sixteen provinces (changwats). The region is well endowed with natural resources and is the second richest region in the country; however, most of the raw material produced or extracted flows out of the region to the Central region, Bangkok, and foreign markets. Thus, there have been little added value and few new employment opportunities generated by processing and marketing in the region. The outflow of raw material has been accompanied by an outflow of labor and capital, detrimental to regional development. The basic reason for this situation is that the Northern region is far from the center of economic activity (Bangkok) and has no direct overseas outlet. As a result the necessary institutions and infrastructure to support economic development did not emerge nor did the government pursue policies to correct this situation.

In the agriculture sector which provides the livelihood of 80% of the population, the Plan proposes to put new forest lands under upland crops for export (maize, soybean and ground nuts) and import substitution (tobacco and cotton) and gradually to turn single crop paddy farms in the lowlands to multiple cropping. In doing so, 'forest reserve' areas are delimited to protect water sheds and valuable timber resources. Projects to develop fisheries, livestock and forestry are also proposed.

In the industrial sector projects would compliment the proposed shift in agricultural production and use local raw materials wherever possible so as to increase local employment opportunities. Some industrial projects are integrated complexes. For instance, a complex based on the use of rice bran, kapok seed, soya bean ground nuts, cotton and sunflower seed would

produce oil solvents for the manufacture of edible oils, oil cakes and meals for subsequent processing into animal feeds. Another would be based on livestock using local feeds, and produce meat and byproducts of slaughtering such as bonemeal and bloodcake. The region's forestry resources which provide 45% of the value of the national production, but only 11% of the region's agricultural product would be used to manufacture veneers, plywood, fibreboard and chipboard in the region, rather than in Bangkok. A farm machinery industry based on the use of scrap iron is also being considered. In mining, small fluorite mines and larger mining enterprises would establish custom milling and dressing plants to increase added value before shipment.

With regard to transportation, the Plan will emphasize low cost all-weather feeder roads linking mining, forest, and agricultural areas and areas with tourism potential, to the main highway network (built with IBRD financing).

The Plan would integrate the hill tribes into Thai society through land settlement and granting of citizenship, as well as the extension of government services to their villages. This would hopefully improve security conditions in the region.

The Plan will cover education, health, and other sectors when proposals for these sectors included in the Third Plan have been evaluated.

The Plan will suggest a number of policy measures and expenditure programs necessary to achieve the shift in agricultural production and to induce private industrialists to invest in the region. The more important concern - 1) the establishment of a regional administrative structure linking the Changwat Governors and their planning staffs to a Regional Planning and Operational Center at Chiangmai with appropriate channels to Bangkok, 2) land use, land-settlement and farm sizes, 3) water use and control including ground water development, 4) agricultural research, 5) technical support and credit for farmers, 6) incentives to industrialists, 7) reduction in railway freight rates and electric power tariffs, 8) establishment of industrial estates, 9) establishment of a Northern Industrial Finance Corporation, and 10) the concentration of training and research institutions in three changwats - Chiangmai, Lampai and Lamphun - to create a development area.

# Hill Tribes

1. Estimates of the number of hill tribe people in Thailand vary from 200,000 to 300,000. Population figures for hill tribes, such as those given below, should be regarded as being only indicative of an order of magnitude.

## Origin

2. The first distinction which should be made is between marginal hill tribes and hill top tribes. The marginal people such as the Karens, Lawa, etc., were in Thailand prior to the advent of the Thais from Southern China. Dispossessed of their land they were pushed back into the hills. The hill top people on the other hand are much more recent arrivals. The Meo and Yao, for example, migrated southward from China into Thailand within the last century, while the Lahu and Akha have come in from Burma within much the same period.

## Language

3. There are four main linguistic families found in the Lower Mekong region.

| | | |
|---|---|---|
| Sino-Tibetan: | Tibeto-Burman | Upland Groups: Akha, Lahu, Lisu & Lolo |
| | Karen | Upland Group: Karen |
| | Meo-Yao | Upland Groups: Meo and Yao |
| Austroasiatic: | Mon-Khmer | Lowland Groups: Khmer and Mon |
| | | Upland Groups: some 60 to 70 groups including Lawa |
| | Viet | Lowland Group: Viet-Namese |
| Tai: | Tai | Lowland Groups: Siamese Tai, Tai Yuan and Laotian Tai |
| | | Upland Groups: Black Tai, Neua and Phuthai |
| Malayo-polynesian: | Cham | Lowland Groups: Viet-Nam Cham and Cambodian Cham |
| | | Upland Groups: Rai, Rhadé etc. |

There are an immense number of dialects within the upland groups which makes communication between hill tribes extremely difficult.

## Religion

4. The hill tribes are predominantly animistic. The Karen are described as animists with a thin overlay of Buddhism. The Lawa are allegedly buddhists but strongly influenced by animism. There are some christians among the hill people.

Agriculture

5. Hill tribe people basically practise swidden agriculture, i.e. the clearing of fields for temporary cultivation by the slash and burn method. In Thailand the average swidden covers an area of 1 to 3 hectres. Rice, maize and vegetables are the staple foods which may be supplemented by pigs and chickens. Opium poppies are the only cash crop.

6. There are two forms of shifting cultivation. The first, general among non-opium-growing tribes, consists of cultivating fields for one or two years after they are cleared and then abandoning them for six years while different fields are put to use. In this form, the cultivation shifts from year to year but the village remains stable. It implies relatively light population density in the village territory.

7. In the second form, typical of the opium growing areas, fields are cultivated continuously for many years until their fertility has sunk so low they are unable to produce further crops. They then must be abandoned for upward of 50 years before they regain sufficient fertility to make them worth re-clearing. Villages which follow this form of cultivation are moved periodically. The most frequent movers, the Lahu, move every 5 to 8 years. The Meo move their villages every 10 to 15 years.

Notes on Individual Tribes

Meo (or Miao)

Population: about 50,000 in Thailand.
One of the more advanced of the hill tribes. Major producer of opium. Arrived in Thailand within the last century from China where they still have some 4 million ethnic kin. Speak a sino-tibetan language which is linguistically related to the Yao. Establish villages on ridges above 4,000 feet.

Yao

Population: about 10,000 in Thailand.
Arrived within last century from China. Opium poppy growers.
Tend to establish villages above 3,000 feet - villages re-located every 10 to 15 years.
Sino-tibetan language related to Meo.

Lahu

Population: 15,000 to 20,000 in Thailand.
Sino-tibetan language. Arrived in Thailand from Burma and Laos in the early 20th century. Tend to establish villages on flat ridge-tops at about 4,000 feet. Re-locate villages every 5 to 8 years. Their traditions have similarities with the Karen with whom they claim to have once been "brothers of the same clans". Raise both opium and food crops and are skilled hunters.

Lisu

Population: about 20,000 in Thailand.
Sino-tibetan language. Arrived in Thailand from Burma. Establish villages at elevations between 4,000 and 8,000 feet. Considered second only to Meo as opium producers.

Akha

Population: 25,000 to 30,000 in Thailand.
Sino-tibetan language. Migrated from Burma within the last century. One of the most isolated and primitive of all the hill people. Establish villages at about 3,500 feet which they re-locate once every 5 to 10 years. Some opium trade.

Karen

Population: about 75,000, the largest minority group in the Thai hills. They form the third largest group in South East Asia numbering 1 million principally in Burma and Thailand.
Sino-tibetan language.

Lawa

Population: about 10,000 in Thailand.
Speak Austroasiatic language. The hill tribe longest established in Thailand, primarily wet rice cultivators. Major concentration in the Bo-Luang Platau, south east of Chiengmai. Allegedly buddhists but greatly influenced by animist beliefs.

Relations with Thais

8. The Thais have tended to treat the hill tribes with that condescension and neglect which "civilized" people have normally had for "primitive" people. Until recently the hill tribes were not regarded in any sense as being a Thai problem. The vast differences between the Thais and the hill people are obvious from the above notes. The Thais numbering 32 million possess a national social structure, a money economy, schools and a single language. The hill tribes live on a subsistence basis in isolated village communities separated from each other by a great variety of dialects and without benefit of education except for a few schools established within the past decade. The Thais are very much the in-group and it is not surprising that they should be viewed with bitterness by the dispossessed and hostility from the newly arrived but isolated minorities.

9. In many of the hill tribes areas, the sole continuing government presence is represented by the Border Patrol Police who, although technically under the control of the commissioner of the Provincial Police, in fact operate with a great deal of autonomy. Reports of their handling of the hill tribes are mixed. They have, however, created some development centers with dispensaries, schools and trading facilities. Since 1960 the Department of Public Welfare through its Hill Tribes Division has been operating land settlement projects and development and welfare centers in the Northern Region. The King is particularly interested in development work for the hill tribes which he supports from His personal funds.

Questions:

Is it Government policy to integrate hill tribes into Thai social structure by offering citizenship and land ownership?

What success has been had in developing sources of income for hill tribes as an alternative to opium?

What contacts have there been between the Governments of Burma, Laos and Thailand on control of opium?

What international assistance has been requested or offered?

How many Thais are studying hill tribe languages?

A NOTE ON THE BANK'S REVIEW OF THE MEKONG BASIN DEVELOPMENT

1. The Bank's review of the Mekong Committee's Indicative Basin Plan (IBP) has been completed. A final draft of the Bank's report is scheduled for November 15, 1971.

2. Throughout its review, the Bank's Mekong Group worked closely with the Mekong Committee's Secretariat. The Group discussed key chapters of the draft report with the Secretariat staff in July and August of 1971. The Secretariat's comments at that time indicated a broad measure of agreement with the Bank's approach to basin development and with the necessity for further studies and investigations before outlining a definitive long-range plan.

3. Some restrictions under which the Bank had to conduct its review ought to be mentioned. Internal strife in the area prevented the Bank from making vital on-site investigations. Instead, the Bank was forced to rely heavily on the work already done by the Mekong Secretariat; this meant using the IBP as the prime source document even though many mainstream projects and several tributary projects described in the Plan were formulated largely from desk studies. Also, the Delta Development Plan prepared by Development and Resources Corporation was based largely on desk studies. Therefore, Bank studies and those of its consultants reflect the inadequacies of previous desk study investigations. Obviously on-site investigations will be the top priority once conditions are normalized.

4. Despite the severe limitations on available studies, the Bank did reach some broad conclusions from its analysis of the Mekong Committee plans and its own Basin studies.

5. The next step advised for Basin development is a program of moderate-sized projects that could be swiftly implemented in several locations in order to gain some practical experience about the most effective ways of exploiting water resource potentials. At this stage, however, it would be presumptuous for the Bank to define a detailed investment program for a situation as complex as the Mekong Basin. Therefore, the Bank has attempted in its action program only to indicate how an investment program might be prepared for the immediate future that would flow logically into a long-term development program.

The Indicative Basin Plan

6. The Indicative Basin Plan presents a framework for progressive development of water and other resources of the Lower Mekong Basin to meet the anticipated need to improve the material well-being of Basin inhabitants during the next three decades. The IBP stipulates that increasing both agricultural production and manufacturing outputs would satisfy the anticipated needs. It goes on to assume that the desired increases in production could be most effectively achieved by developing the Basin's water resources for irrigation, hydro-power, flood control, and navigation.

7. Briefly stated, the Indicative Basin Plan includes three main programs: (See Annex 1 for project details.)

(a) A Short-Range Program of irrigation and power projects at an estimated total cost of $ 794 billion to satisfy the needs of individual Basin countries from 1971-1980;

(b) A Long-Range Program of multipurpose mainstream projects at an estimated total cost of $ 7.1 billion to meet national and regional needs from 1981-2000; and

(c) A Complementary Program of research, training, and development of minor infrastructure and facilities to support the implementation of the water and land resources projects in a reasonable amount of time.

8. The proposed mainstream projects alone would provide 24,000 MW of power and 124,000 GWh of annual energy, which would be more than enough to meet the estimated increase in power demands within the four Basin countries by 2000. These same projects would also irrigate two million hectares of farm land in the Basin, as well as control the flooding of 1.7 million hectares in the Khmer Republic and the Vietnam Delta.

Basic Considerations

9. Before discussing the specific projects proposed in the IBP, it would be well to review some basic considerations affecting development planning for the Mekong Basin, keeping in view the objectives of the Mekong effort.

10. The two principal objectives of particular significance are: first, to increase the material well-being of the Basin inhabitants with a concomitant effort to see that the increase is equitably distributed; and second, to promote regional cooperation among the riparian countries through economic development.

11. In light of the stated objectives, the Bank not only examined the economic factors indicating profitable rates of return on proposed projects, but also focussed on the broader social and regional aspects of what these projects could contribute to integrated regional development. Viewed in this way the question of priorities becomes who will receive the benefits as much as what will be the anticipated economic rate of return.

A Strategy for Agricultural Development

12. Both the Mekong Committee and the Bank agree that improving agricultural production is the key to general economic development in the Basin. However, the Committee's IBP recommends only one strategy for increasing production: irrigation from storage dams and conventional canal systems. Yet, this single strategy fails to acknowledge apparent constraints to irrigation development. Bank studies indicate most of the land suitable for irrigation is already planted with at least one rice crop annually. Getting two rice harvests annually from this land with conventional irrigation systems does not seem economically attractive according to recent studies using farmgate prices for paddy. Some schemes in the IBP would involve irrigation facilities costing $1,700 per hectare. Based on two annual rice harvests an investment of this magnitude does not appear economically justified. Outside the Delta

and river valleys Basin soils generally are of such low fertility that they may be unsuitable for dry season irrigated cropping of either rice or other crops. More importantly, irrigation from projects proposed in the Indicative Basin Plan would reach only 10 percent of the Basin's population and, therefore, would not meet the objective of distributional equity.

13. The Bank's study corroborates the fact that the Basin economy depends on rice-growing. A few specialized crops, such as maize and rubber, have some value locally and contribute to national exports. But, at present 90 percent of the Basin inhabitants grow rice on 85 percent of the cultivated land. Statistically the Basin has a total area of 65 million hectares; 10 million hectares are cultivated; 8.6 million hectares are planted in rice annually. Rice yields per hectare are low, averaging about 1.3 tons, and they have remained stagnate for a decade. Production increases during that time have resulted from bringing more land into use, and not from increasing yields. Considering the dependency of area inhabitants on growing rice, any improvement in their well-being in the immediate future will mean improving rice productivity. Since direct irrigation will benefit only 10 percent of the farmers, the main effort to increase rice production should focus on finding means of increasing yields under rainfed conditions. Selected areas of particularly fertile soils should yield high returns under new types of rice, if it is possible to improve drainage, control runoff, install low-lift pumps, and use fertilizers.

14. Clearly a pressing need exists for investment in water management and water control. Water management in wet tropical regions involves far more than irrigation in an arid climate. Under monsoon conditions there is liable to be far too much water for optimum crop growth during one season and far too little during the other season. And, occasionally, the one natural growing season suffers from erratic rainfall at key periods. Therefore, any water management system should provide flood control in some areas, better drainage where there is too much water, and additional water when required. As a specific example, the new rice varieties that could be introduced to spur higher yields, will require precisely controlled water levels in the fields at every stage of plant growth in order to reach maximum output.

15. Within the Lower Mekong Basin there are several sub-basins with distinctive characteristics of geography, hydrology, soils, population concentration, and other factors affecting agricultural development. Consequently those sub-regions with the best characteristics should be the first developed. The most promising development areas are: the Mun and Chi sub-basin in Northeast Thailand; the Tonle Sap-Great Lake area in the Khmer Republic; the Nam Ngum in Laos; and the Mekong Delta in South Vietnam and the Khmer Republic. Together these four sub-basins encompass 84 percent of the agricultural lands, and 73 percent of the population in the entire Basin. Priority development of these sub-regions with their individual needs and unique potentials would promote both cumulative progress and knowledge useful for further expansion to provide the scale economies associated with mainstream development.

16. The strategy for developing agriculture in the Basin should evolve from trials of alternative approaches, not wholly irrigation and not completely rainfed, but a combination of methods appropriate for the peculiar conditions in various parts of the Basin. Because little information is available on the potentialities and practical constraints to agricultural development in the sub-basins a flexible development program might be designed initially around relatively uncomplicated projects with prospects for an early return. Such an approach would disperse the investment capital so each sub-basin shares equitably the development benefits.

17. The Vietnam Delta has experienced remarkable success with high-yielding rice varieties by using low-lift pumps, fertilizers, and other inputs. This form of development, also applied in the Ganges-Brahmaputra Delta in East Pakistan, is cheaper than conventional canal irrigation and it can be extended over large areas in a relatively short time. However, to expand this practice on a large-scale in the Vietnam Delta will require augmenting the Mekong dry season flow. In the order of development priorities, precedence should be given to rehabilitating the existing canal and drainage network, navigation locks, and salinity control dykes. It might also be possible to promote double cropping and crop diversification by constructing low dykes in particularly fertile areas for drainage and flood protection.

18. The approach to development in the Khmer Delta and also in the Great Lake Basin will resemble that in the Vietnam Delta. The Great Lake tributaries do offer some possibility for irrigation, but the Battambang and Stung Chinit projects proposed in the Indicative Basin Plan need substantial modification to replace their expensive storage facilities with more viable run-of-river diversion schemes, with or without lift pumps. On the eastern bank of the Mekong River a number of plantations need restoration. Also, development of existing "preks" along the river could provide valuable irrigation water for diversified cropping in the river bank ponds.

19. Northeast Thailand undoubtedly presents the most severe development problem in view of its poor resource base. (The second portion of this paper analyzes the development prospects in Northeast Thailand.) Eight large storage reservoirs either completed or under construction will eventually irrigate 250,000 hectares when fully implemented. The Bank's review of the situation lead to the now generally accepted conclusion that a step-by-step approach to area development would be preferable to the current plan of introducing sophisticated modern irrigation and agricultural practices in one step which few people know how to utilize. Here the urgent need is to construct promptly full distribution systems connecting the reservoirs with the farmers' fields. The next advisable step would be a carefully phased program based on a detailed inventory of existing structures and prevailing local conditions.

20. Irrigation programs of the above kind, however, can benefit only a small percentage of the population of Northeast Thailand. Indeed, of the estimated three million hectares presently used for rice cultivation, probably little more than 250,000 hectares can be considered potentially irrigable at an economic cost. Other smaller facilities, such as the irrigation tank program, with a combined command area of about 80,000 hectares, have been completed but not fully utilized. Only limited possibilities appear for using low-lift pumps and tubewells. In these circumstances, methods must be found

for increasing productivity of rainfed agriculture. The objective is not necessarily to achieve yields commensurate with those in other Basin areas endowed with better soils, but rather to determine how to minimize the disadvantages with appropriate crops or livestock under prevailing water management and farming conditions. A series of pioneer projects would demonstrate the most satisfactory alternatives for conditions in Northeast Thailand.

21. In Laos, considerable attention has been given to possibilities for irrigation development in the Vientiane plain. Eight projects identified for the Plan would cover a combined area of 33,000 hectares. However, irregular rainfall and poor surface drainage hinder widespread use of improved seeds and supplementary inputs. Production in some areas suffers from considerable overbank flooding of the Mekong. Planning often concentrates on intensifying cultivation on existing land, yet the scope for bringing new land under cultivation also merits consideration. Here,again, rainfed agriculture is vitally important.

22. Several years of continued planning effort will be required to develop an appropriate strategy for agricultural development in each portion of the Basin. This is not an easy task; but Basin development on the scale proposed in the Indicative Basin Plan is virtually impossible without a realistic perspective of sub-basin potentials and the needs of inhabitants against which to determine how, where, and when water resource projects can best contribute to the improved well-being of inhabitants. We are discussing not merely changes in farming methods, but a change in the basic life style of 30 million people who are generally unaccustomed to change.

ROLE OF THE MEKONG COMMITTEE IN AGRICULTURAL DEVELOPMENT

23. Some question has arisen as to whether the Mekong Committee should confine its efforts to projects on the mainstream of the Mekong that promote regional cooperation, leaving smaller projects, such as those presented in the Bank's Action Program, to the individual riparian governments or whether the Mekong Committee should, in fact, become involved in the planning and even perhaps associated with the implementation of all such projects. The confusion on this point needs to be erased. On the essential question of promoting rainfed agriculture the Mekong Secretariat has said that rainfed projects were outside the charter of the Committee "to promote, coordinate, supervise and control planning and investigation of water resource development projects in the Lower Mekong Basin".

24. The mainstream regional development projects which the Mekong Committee has proposed will essentially provide three benefits -- irrigation water, power and flood control. All relate to agricultural development in individual Basin countries. Therefore, the design of sub-basin projects cannot be separated from the timing and benefits of mainstream projects. In fact, the timing, sequence, design, and scope of large-scale mainstream projects can only be decided after knowing how, when and where the project benefits are needed for use in the individual sub-basins. Surely, the Committee's involvement in developing strategies for agricultural improvement in the sub-basins is vitally important to the overall success of the mainstream projects.

25. A major shortcoming of the Indicative Basin Plan was that the tributary projects in the Short Range Plan were designed to match the estimated needs for irrigation water and power, but they had no relevance to the mainstream and regional projects.

26. The Committee must become involved in sub-basin planning to ensure uniform performance and quality of studies and field projects required to develop an agricultural strategy and development pattern. They can also ensure that all these projects are completed in sufficient time to form the basis for planning the mainstream projects. And the Committee is uniquely qualified to mobilize and coordinate the vast technical and financial assistance required for the various stages of development.

27. Numerous donor countries and the riparians themselves have emphasized the need for greater integration of Basin planning with national planning. The Committee's role should be to assist Basin countries in developing a common resource for their mutual benefit. By participating in sub-basin planning, the Committee will acquire valuable experience for planning the mainstream regional projects. Yet, in no way should the Committee function to impose a development strategy which might not be consistent with the objectives and planning efforts of individual riparian governments.

Mainstream and Regional Projects

28. Of the six mainstream and regional projects -- Pa Mong, Sambor, Stung Treng, Nam Theun, Ban Koan and High Luang Prabang -- included in the Indicative Basin Plan for long-term development, only two projects -- Pa Mong and Sambor -- have been brought sufficiently close to feasibility grade to permit fairly detailed assessment of their economic viability. Pa Mong and Stung Treng as designed are multipurpose projects for irrigation, power and flood control. In terms of the size of their reservoirs (gross storage volume 98 milliards $m^3$, and 110 milliards $m^3$ respectively) and their power potential (installed capacity of 4,800 and 6,000 MW respectively) Pa Mong and Stung Treng would rank amongst the largest storage and power projects ever constructed in the world both costing more than a billion dollars. The remaining four mainstream projects are essentially power projects.

29. The Republic of South Vietnam, which is the main consumer for power from Sambor, is apparently not enthusiastic about Sambor and has indicated a strong preference for Stung Treng which could provide considerable irrigation and flood control benefits in the Delta and even a larger source of power than Sambor.

30. The Tonle Sap Barrage when first identified in 1957 appeared to provide an inexpensive and quick way to control Delta floods. Subsequent investigations, however, proved that the flood control benefits would probably not be significant. Yet the barrage, or low dam, is apparently still the least costly facility for augmenting the Delta dry season flow for irrigation and salinity control.

31. The Bank limited its review to only four projects -- Pa Mong, Sambor, Tonle Sap, Stung Treng -- because of their potential benefits, the interest expressed by riparian countries, and their relative state of preparedness.

32. For effective flood control in the Delta, there is no foreseeable alternative to the great storage project of Stung Treng. According to the consultants' estimates Stung Treng would provide annual Delta flood control benefits of $30 million compared with $6 million for Pa Mong.

33. Any of the three projects, Pa Mong, Stung Treng or Tonle Sap, could meet the dry season flow requirements for irrigation and salinity control in the Delta. Pa Mong and Stung Treng also have the potential for direct irrigation. According to United States Bureau of Reclamation Studies, which are still not complete, Pa Mong could irrigate 800,000 hectares in Northeast Thailand and 130,000 hectares in the Vientiane plain, but if the cost of the irrigation facilities were to be US$1,700 per hectare, as estimated in Phase I, this appears too high for the return that could be expected from the relatively poor soils of the Northeast. However, if this is considered part of the cost for resettling residents of the flooded reservoir basin it might be an acceptable figure. Stung Treng could irrigate about 300,000 hectares in Khmer Republic on the right bank of Mekong. The soils in this area are relatively better than in the Northeast but the project has not been sufficiently investigated to know its economic merits.

34. Pa Mong and Stung Treng would be among the world's largest power projects. They have a potential power capacity of 4,800 and 6,000 MW and an annual energy output of 27,000 and 35,000 GWh respectively. Their combined potential would be much larger when operated as part of an integrated system. Pa Mong is located at a distance of 600 km from Bangkok and 1100 km from Saigon, which are the main load centers. Stung Treng is somewhat more favorably located at a distance of 700 km from Bangkok and 400 km from Saigon. Half of the Pa Mong dam and power plant is located within Thailand, the main consumer for Pa Mong power, but Stung Treng located in the Khmer Republic has no footing in Thailand, South Vietnam, the two countries having the main load center of Bangkok and Saigon.

35. With such variations in political and geographical location of the projects and the sizes and patterns of benefits available to each Basin country, the preferences of the Basin countries may depend largely on what each country would receive from the regional projects.

36. Some broad indication of preferences are already available. Not a single project has strong support from all four Basin countries. Yet unified support is the essential ingredient for regional cooperation.

37. Thailand has mixed reactions to Pa Mong primarily because of its remoteness from the power center of Bangkok, its relative insecurity, and the rather unattractive possibilities of using its storage water for irrigation development in the Northeast. But, of all the regional projects, Pa Mong would undoubtedly be the first, and perhaps only preference of Thailand.

38. Laos would not receive mainly indirect benefits from any of the regional projects because; first, its needs for power, irrigation and flood control are quite small and, second, it could meet these needs from projects located in its own territory without much difficulty. Furthermore, Laos would be forced to make substantial sacrifices because both Pa Mong and Stung Treng reservoirs would submerge large areas of Laotian territory dislocating several hundred thousand people. Notwithstanding these disadvantages Laos appears to favor Pa Mong in view of its location.

39. South Vietnam and the Khmer Republic strongly prefer Stung Treng. They have also expressed interest in the Tonle Sap Barrage as it benefits both countries. Thailand and Laos have apparently no direct interest in either project. However, Stung Treng could meet the power requirements of Thailand as well as Pa Mong, but in view of its mixed feelings on Pa Mong, which is partly within its own territory, it seems unrealistic to assume that Thailand could have any direct interest in Stung Treng. Both South Vietnam and the Khmer Republic would benefit from the increased dry season flow provided by Pa Mong. Still, it is not clear whether they prefer Tonle Sap or Pa Mong for this limited use of water.

40. The riparian countries will be required not only to cooperate at the planning and investigation stage but to translate their commitment to regional development into formal international agreements. Here the experience on previous international river basin developments indicates that years

of tedious negotiations may be ahead. The process of resolving technical, legal, political, and administrative problems requires several years of concentrated effort. More importantly, it requires a willingness from the participants to accept accommodation, compromise, and also sacrifice in the larger interest of regional development. Therefore some dramatic benefits which can be achieved no other way must compel the Basin countries to cooperate and make compromises. Self-interest is always the strongest motivation in the regional development. Superficially, such compelling reasons for cooperation and compromise do not appear to exist at present because the potential benefits and the social costs of these projects have not been fully evaluated. None of the Basin governments have a clear idea about what each regional project means for its economic development, how it compares with other development alternatives available within its own territory, and at what time its commitment to regional cooperation becomes critical for the country's development.

MAJOR GAPS IN INFORMATION

41. Resettlement of people inundated by reservoir flooding is a serious problem which will affect the size, cost, and feasibility of the large multi-purpose projects at Pa Mong and Stung Treng. Yet little attention has been given to the resettlement problems. If Pa Mong were constructed as presently designed with a reservoir elevation of 250m, then 4,000 $km^2$ of land would be submerged in Thailand and Laos including 450 villages with a present population of about 300,000 people. By the mid-80's the population could approach 500,000. No reservoir in the world has caused resettlement on this scale. Consider the population resettled for the great Asian and African dams: Aswan - 100,000; Mangla - 86,000; Tarbela - 80,000; Volta - 80,000; Kariba - 50,000; and Kainji - 40,000.

42. The political and social upheaval caused by resettlement is a cost which needs to be considered. Are the four riparians willing to pay the cost when they are already plagued by civil unrest? Will Laos, for instance, agree to vast resettlement when it will receive only indirect benefits from the projects? Answers based on careful study will be necessary before proceeding with detailed project preparation.

43. The Bank and the USBR have been considering alternative reservoir sizes at Pa Mong to minimize the magnitude of the resettlement problem. A lower Pa Mong with reservoir elevation at 230m -- that is 20 meters below the present design -- would submerge 231 villages with a population of about 93,000. This lower elevation would reduce the resettlement problem to manageable proportions. However, it would probably take a few years to complete sufficient field surveys to provide a realistic assessment of this problem.

44. Hardly any study has been conducted on the ecological and environment effects of constructing Pa Mong. Further study of ecological impacts should be considered for other projects as well.

45. More study is necessary to determine how the benefits of various projects would be distributed to Basin countries. Studies by Bank consultants show Pa Mong has a 9 percent internal rate of return for power alone. Yet the importance of Pa Mong lies not just in what it does for meeting power demands in Thailand, but in what it accomplishes as a regional endeavor. Pa Mong's potentialities have not been fully explored. For instance, Thailand might be more interested in Pa Mong once the possibilities for using its storage water for agricultural development in Northeast Thailand have been fully evaluated. Similarly, if diversion of Pa Mong waters for irrigation in the central part of Thailand becomes feasible, a proposal which has not yet been investigated, this would increase the status of Pa Mong in Thailand's economic development.

46. It has also been suggested that North Vietnam be invited to participate in the Mekong Development. If power from Pa Mong could be supplied to North Vietnam the importance and the economic viability of Pa Mong would be greatly enhanced. Even within the Basin, the benefits of Pa Mong in respect of the potential for direct irrigation, augmentation of dry season flow in the Delta, flood control, navigation, fisheries, etc. have not been adequately analyzed. Until the place of Pa Mong in the economic development of the Basin countries is fully evaluated, it will be difficult for the Basin countries as well as for the donor countries to make positive commitments.

...

47. Similar information gaps exist relating to investigations and studies of the Stung Treng and Tonle Sap projects which are far less advanced than Pa Mong.

Timing and Sequence of Regional Projects

48. The Bank's review of mainstream projects does not lead to definite conclusions on their economic merit, priority, and timing. The Bank's preliminary studies show that both Pa Mong and Stung Treng could satisfy the criteria of economic viability and that their power revenues alone could justify the investment. But power benefits alone will not meet the objective of improving the well being of Basin inhabitants nor is there currently a need for power development in the Basin countries that would bind them together on such a major undertaking. There is a need, however, to reshape these projects, now largely oriented to power to a general development strategy. As more precise information becomes available these projects can be reassessed in view of the main objectives of the Mekong effort.

49. The need for a period of reassessment should not be viewed with chagrin. Not only do current security conditions militate against a decision to proceed at this time, but there also appears to be some time available before a decision is required on economic grounds. In fact, there is some risk in prematurely deciding on such large projects without fully evaluating their merits and shortcomings, and the practical implementation problems.

50. Obviously, factors other than entirely economic ones should be considered in decisions on international investments of such a magnitude. And many basic features affecting those may change over the next year or two. To decide sooner than needed, allowing, of course, for design and construction leadtimes, may well prove counterproductive and lead to unnecessary friction. Rather it seems desirable to assemble all possible data so an appropriate decision can be made at the proper time. If security conditions permit, a decision may be required in two or three years time. The Bank's Action Program is designed precisely to provide the information and experience needed to make decisions about Basin development.

ACTION PROGRAM FOR BASIN DEVELOPMENT

51. This program specifies the development activities required to bring the more promising irrigated and rainfed agriculture projects to the stage of financing and implementation. It also indicates priorities for further investigation of mainstem projects.

52. Most promising opportunities for irrigation development in the tributary basins and the Delta require substantial preparation before they can be considered ready for implementation. Because irrigation projects to date have produced disappointing results, it is recognized that careful and realistic planning should precede capital investments. However, with prompt and effective action, there are projects in each of the national components of the Basin which could be brought to the implementation stage early in 1973.

53. Some rainfed projects and programs have been identified but not formulated in any detail. A much deeper understanding is required of the potentials and constraints for rainfed agriculture. In particular, recent encouraging developments, such as crop diversification in Northeast Thailand and introduction of high-yielding varieties in the Delta, need to be carefully monitored to assess their implications for development in other parts of the Basin.

54. Recognizing the need for project preparation, the Mekong Committee in cooperation with UNDP and the Bank has formulated a Pioneer Projects Program to concentrate on identifying and formulating projects for irrigated and rainfed agriculture. The pioneer projects will be prototypes for trying promising farm techniques;by successive modification methods will be developed for use in full-scale development projects. Where appropriate, the feasibility studies of the full-scale development projects will be carried out as an integral part of the pioneer project implementation. The Pioneer Projects Program is therefore an important foundation for the Action Program.

55. The first priority for mainstem development is the analysis of an alternative formulation for the Pa Mong Project which would reduce the resettlement problem to manageable proportions. Studies of the ecological impact of such a major project are also given high priority. Design studies and cost estimates should be started for a structure on the Tonle Sap solely to control outflow from the Great Lake.

56. The principal features of the Action Program (see Annex 2) are designed to promote investments in the period immediately ahead and to lead logically into a longer term basin development program. The Action Program would require a commitment of about US$12 million to meet the highest priority needs for expeditious preparation of land and water development projects in the Basin. Within this total, provision has been made to fund the most urgent follow-up studies on the most promising mainstem projects. If these preinvestment funds are committed during the course of 1972 and 1973, and if security conditions permit the necessary field work, then the Action Program should result in the preparation of a "pipeline" of priority projects. Between 1972 and 1978 a commitment of US$250 million would be required to cover total project costs.. Given the present state of preinvestment studies, this estimate is of necessity highly conjectural. Uncertainties about future security conditions and policies an d priorities of the riparian governments further reduce this projection to a mere order-of-magnitude guess. Finally, the basin development program includes mainstem projects which will require unusually large, indivisible investments and even the best prepared of the mainstem projects are still undergoing close scrutiny, the outcome of which cannot be pre-judged. Therefore, the above projections have been confined to tributary projects and other land and water development activities on the basis of reasonable assumptions about the project preparation requirements and likely improvements in the implementation capacity of the riparian governments. With these qualifications, the estimate of an investment program of $250 million is advanced as a first indication of the likely short-term outcome of the proposed $12 million program of preinvestment studies.

# Indicative Basin Plan
## Short-Range Plan (1970-1980)

| | Irrigated Area (hectares) | Installed Capacity (MW) | Estimated Cost ($ million) |
|---|---|---|---|
| **Khmer Republic:** | | | |
| Prek Thnot Project[1/] | 35,000 | 18 | 54 |
| Battambang Project | 68,000 | 37 | 91 |
| Thermal Power Station | - | 45 | 8 |
| Transmission Lines | - | - | 5 |
| Sub-total | 103,000 | 100 | 158 |
| **Laos:** | | | |
| Nam Ngum Project[1/] | 35,000 | 130 | 80 |
| Nam Dong and Se Done[2/] | - | 3 | 4 |
| Sub-total | 35,000 | 133 | 84 |
| **Northern Thailand:** | | | |
| Completion of seven multipurpose projects[1/] | 232,000 | 36 | 169 |
| Nam Phrom Hydroelectric Project[1/] | - | 60 | 22 |
| Pak Mun Hydroelectric Project | - | 100 | 32 |
| Sub-total | 232,000 | 196 | 223 |
| **Vietnam:** | | | |
| Danhim Hydro (Rehabilitate and Extend) | - | 332 | 68 |
| Upper Se San Project | 21,700 | 260 | 92 |
| Upper Se Prok Project | 24,500 | 26 | 35 |
| "Polder" Development in the Delta | 40,000 | - | 40 |
| Thermal Power Stations | - | 600 | 81 |
| Transmission Lines | - | - | 14 |
| Sub-total | 86,200 | 1,218 | 330 |
| **Basin Summary:** | | | |
| Totals | 456,200 | 1,647 | 795 |

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1/ Under construction.

2/ Completed 1971.

## Indicative Basin Plan
## Projects in the Long-Range Plan (1980-2000)

| Project[2/] | Installed Capacity (MW) | Annual Energy (GWh) | Active Storage (milliards) | Estimated Cost of dam and power-plant ($ million) |
|---|---|---|---|---|
| Nam Theun (1981) | 2,500 | 8,000 | 6 | 243 |
| Sambor (1981) | 3,250 | 22,000 | 2 | 584 |
| Pa Mong (1983) | 4,800 | 24,000 | 42 | 844 |
| Stung Treng (1992) | 7,200 | 35,000 | 46 | 1,440 |
| Ban Koum (1997) | 3,300 | 20,000 | - | 637 |
| High Luang Prabang (1999) | 2,750 | 15,000 | 10 | 412 |
| Delta Development (1983)[1/] | - | - | - | - |
| | 24,200 | 124,000 | 106 | 4,160 |

1/ A plan for flood protection, irrigation, and salinity control which would ultimately serve 2.5 million hectares in the Khmer and Vietnam parts of the Delta. Development would be phased in accordance with mainstem storage and flood control provided by Pa Mong and Stung Treng. By the year 2000, the areas developed would be: Khmer Republic (460,000 ha.) and Vietnam (400,000 ha.).

2/ Direct irrigation by the year 2000 from mainstem projects would be: 35,000 ha. in Khmer Republic from Sambor, and 650,000 ha. in Thailand and 61,000 ha. in Laos from Pa Mong.

3/ Capital costs of the program as estimated in the Indicative Basin Plan Report are:

| | US$ million |
|---|---|
| Dams and powerplants | 4,160 |
| Power transmission facilities | 951 |
| Direct Irrigation | 1,274 |
| Delta Development | 1,055 |
| | 7,440 |

## ACTION PROGRAM

The principal features of the Action Program are as follows:

### A. Basinwide Studies

1. Pioneer Project Program: Identification and preparation of a program of pioneer agricultural projects. The program will comprise the following general types of projects:

   irrigation developments dependent upon dams and reservoirs under construction or already completed;
   irrigation developments dependent upon pumping schemes from the Mekong and its tributaries;
   rehabilitation and improvement of flood control and salinity works;
   polder development in the Mekong Delta; and
   improvements in rainfed crop production.

   All projects will give special attention to the requirements for comprehensive rural development. The program of pre-investment studies is projected to require total expenditures of US$ 2.0 million. While the cost of implementation of such a program is still highly conjectural the figure of US$ 50.0 million has been used in discussions with potential donors to indicate a rough order of magnitude for total program costs.

2. Pa Mong Project: a) Technical and economic studies of a project with maximum pool at El.230 and with saddle dikes to prevent inundation in the Nam Mong and Nam Lik basins (Estimated Cost: US$0.5 million); b) A review of environmental studies so far executed, identification of further studies and preparation of terms of reference for the execution of further studies (Estimated Cost: US$0.03 million); and c) execution of studies identified and formulated under (b) (Estimated Cost: US$0.5 million).

3. Tonle Sap: Design studies and cost estimates for a structure to control outflow from Great Lake between Lake levels of +4 and +2 meters above MSL. Present project plans would involve civil works costing US$140 million. It is expected that the proposed redesign of the project will bring substantial savings in costs. (Estimated Cost: US$0.2 million).

4. Stung Treng: (a) A comprehensive desk study bringing together work of the Secretariat and the Bank's consultants leading to the preparation of detailed terms of reference for further project investigations (Estimated Cost: US$0.1 million); (b) site investigations and feasibility study subject to firm expression of interest by riparians in project (Estimated Cost: US$12.0 million).

5. Delta Studies: Study in both Khmer and Vietnam portions of Delta to establish guidelines for future development, and identify priority projects (study by Netherlands Team in progress, estimated cost of follow-up: US$0.5 million).

6. Central Data Bank: Establish a central data bank to store in computerized form all types of data pertaining to Basin development in conjunction with a comprehensive inventory and evaluation of the existing data base for basin planning (Estimated Cost: US$0.3 million).

7. Rainfed Crop Improvement: A basinwide program for research and field trials of techniques for improving agricultural productivity under rainfed conditions (Estimated Cost: US$3.0 million).

8. Agricultural Data: A program for applying new techniques of remote sensing and data processing to the acquisition and analysis of data on land use, land capability, crops and crop production for the entire Basin. Arrangements have been made with NASA for coverage of the Mekong Basin by the Earth Resource Technology Satellite (ERTS) Program. Funds are required for ground controls and data interpretation as well as for complementary techniques using aircraft. (Estimated Cost: US$0.3 million).

B. Laos

1. Nam Ngum: (a) operation studies to develop rules for reservoir operation following installation of spillway gates -- taking into account flood reduction in Nam Ngum Valley and low-flow augmentation in the Delta; (b) technical and economic studies for installation of additional power generating units. (Estimated Cost: US$0.12 million) These studies may lead to follow-up investments for the installation of spillway gates (US$0.6 million) and additional generating units (US$20 million).

2. Flood Protection, Vientiane Plain: Review and summarize existing proposals with a view to arriving at final decision on diking and bank protection. (Estimated Cost: US$0.1 million.)

3. Nam Ngum Valley: Survey of potential for agricultural development in the area between the Vientiane Plain and the Nam Ngum dam site. (Estimated Cost: US$0.2 million.)

4. Resource Surveys: Security situation permitting, reconnaissance surveys of land use, soils, crops and crop production in areas which are potential sources of agricultural products for major population centers in Laos. (Estimated Cost: US$0.3 million.)

C. Northeast Thailand

1. Irrigation from existing reservoirs: (a) Surveys and preliminary designs for completion of main canals, laterals and distribution channels in selected areas totalling about 40,000 ha served from three existing reservoirs (Lam Pao, Nam Pong, Lam Phra Plerng). (Estimated Cost: US$0.1 million) The follow-up investments are expected to require total expenditures in the neighbourhood of US$10.0 million. (b) Review and, if necessary, reformulation of designs and construction schedules for irrigation systems of Lam Dom Noi and Nam Oon. (Estimated Cost: US$0.8 million) Follow-up investment may require outlays totalling US$25.0 million.

2. Flood protection study: There are large areas in the lower reaches of Nam Mun where annual flooding imposes a severe constraint on crop production. Studies are needed to establish the nature of the problem and to indicate possible remedies. (Estimated Cost: US$0.15 million.) Follow-up investments may require outlays in the order of magnitude of US$5.0 million.

3. Development studies on Nam Chi: Two areas on Nam Chi (Bantoom Bantiew and Sang Badang) are presently protected from flooding. The possibility of irrigation in these areas using releases from upstream reservoirs merits consideration. (Estimated Cost: US$0.1 million.) A very first estimate of follow-up investments US$5.0 million.

4. Rainfed Crop Improvement: Identify possibilities for production increases and quality improvement for dry-foot crops such as kenaf, cassava, cotton, oilseeds, and corn. (Estimated Cost: US$0.2 million.)

D. Khmer Republic

1. Prek Thnot Project: Completion of irrigation system designed for Stage I (5,000 hectares) to be served from storage and diversion works presently under construction. Planning studies for ultimate expansion of service area to 70,000 hectares. (Estimate subject to further review, a notional cost of US$1.0 may be appropriate). These works are ongoing, but additional funds may be required.

2. Stung Battambang: Several planning reports have been prepared for a multipurpose project on Stung Battambang. Further technical and economics studies are needed, especially consideration of staged development. (Estimated Cost: US$0.4 million.) Existing studies propose a project costing US$20.0 million.

3. Stung Chinit: Review feasibility report on this project which has recently been completed by OTCA. (Estimated Cost: US$0.1 million.) The recently completed feasibility study pertains to a project costing US$26.0 million.

4. Riverbank Farms: Review possibilities for further development of diversified agriculture on levee soils along Mekong. (Estimated Cost: US$0.2 million.)

5. Fisheries: Identify measures required to arrest the decline in yields of the Great Lake. (Estimated Cost: US$0.3 million.)

E. Vietnam Delta

1. Project Planning: Project identification and formulation for the following areas:

(a) Go Cont (50,000 hectares), Kien Hoa (100,000 hectares), Tiep Nhut (50,000 hectares) - primarily salinity control and irrigation;

(b) Caisan (60,000 hectares), An Truong (10,000 hectares) - primarily flood protection, irrigation and drainage. To the extent that

pioneer projects are being formulated in each of these project areas, feasibility studies of the larger developments may be carried out as an integral part of pioneer project implementation. However, to retain flexibility in project preparation, additional funds for pre-investment studies will be required. (Estimated Cost: US$1.0 million.)

2. Low-lift Pumping: Survey of extent of low-lift pumping in the Delta, crops grown and impact on production, pumping practices and equipment, and forecasts of future growth. (Estimated Cost: US$0.4 million.)

3. High Yielding Varieties (HYV) Program: Preparation of a report describing history, present status and future prospects for the cultivation of high yielding rice varieties. (Estimated Cost: US$0.1 million.)

4. Hydrologic Data Collection: Implement a program designed to provide an understanding of the occurrence and effects of salinity intrusion and the possible consequences of increasing diversion during periods of low flow. (Estimated Cost: US$0.5 million.)

5. Inventory of Water Control Infrastructure: A survey to obtain up-to-date information on the present condition and performance of canals, canal structures, and salinity control works. (Estimated Cost: US$0.3 million.)

# MEKONG
# AMPLIFIED BASIN PLAN

Limits of the Lower Mekong Basin
Rivers
Reservoirs and lakes
Gauge and discharge observation stations

SHORT RANGE PLAN (1971-1980)
Dams completed
Dams under construction
Dams proposed
Future reservoirs

LONG RANGE PLAN (1981-2000)
Dams and reservoirs
Bridges

PILOT PROJECTS
1. Laos - Tha Ngon
2. Laos - Hat Doc Keo
3. Thailand - Nang Wai
4. Cambodia - Prek Thnot
5. South Vietnam - Go Cong
6. South Vietnam - An Xuyen

PROJECTS NOT INCLUDED IN AMPLIFIED BASIN PLAN
Potential projects

International boundaries
National capitals
Important towns

CHINA
NORTH VIETNAM
BURMA
LAOS
THAILAND
CAMBODIA
SOUTH VIETNAM
Gulf of Tonkin
Gulf of Thailand
South China Sea
Hanoi
Nam Ou
Phong Saly
Mekong
Houei Sai
Chiang Saen
Nam Tha
Ban Hat Kham
Ban Sieou
Nam Ou
High Luang Prabang
Luang Prabang
Nam Khan
Nam Dong
Nam Lik
Mekong
Nam Lik
Nam Ngum
Paksane
Nam Theun No. 1
Nam Gia Dinh
Ban Phone Si
Nam Theun No. 2
Pa Mong
1 Nam Ngum Tha Ngon
Vientiane
2 Nong Khai
Nong Khai-Vientiane Bridge
Nam Songkhram
Mekong
Thakhek
Se Bang Fai
Sirikit Dam (under construction)
Mae Nam Nan
Mae Nam Yom
Mae Nam Kam
Nam Oon
Nong Han
Lam Pao
Nam Pong
Nam Pong
Nam Pong
Lam Pao
3 Nang Wai
Khon Kaen
Kalasin
Savannakhet
Se Bang Hiang
Hue
Nam Phrom
Lam Chi
Ban Keng Done
Khemarat
Upper Chi
Chaiyaphum
Mae Nam Mun
Mae Nam Chi
Ban Koum
Ban Dan
Ubol
Se Done
Pakse
Mae Nam Mun
Mae Nam Pa Sak
Lam Takhong
Khorat (Nakhon Ratchasima)
Lam Pra Plerng
Lam Mun
Lam Dom Noi
Mekong
Se Kong
Mae Nam Chao Phraya
Mae Nam Suphan Buri
Mae Nam Bang Pakong
Bangkok
Stung Sreng
Siemreap
Siemreap
Ban Khmuon
Stung Treng
Stung Sen
Se Kong
Se San
Sre Pok
Sre Pok No. 2
Ban Komphun
Kontum
Upper Se San
Pleiku
Battambang
Sanker
Kontu Dam
Phum Leao Dam
Stung Sen No. 1
Sambor
Kratie
Upper Krong Buc
Lower Krong Buc
Krong Pach
Drayling
Dar Lac
Stung Pursat
Stung Chinit
Stung Chinit
Mekong
Tonle Sap
Kompong Chhnang
Prek Kdam
Kompong Chham
Danhim Power Plant
Phan Rang
Phnom Penh
Prek Thnot
4
Tonle Bassac
Neak Luong
Voica East
Voica West
Saigon
Sihanoukville
Chau Doc
Mekong
My Thuan Bridge
Vam Cong
My Thuan
Vinh Long
Go Cong
5
Song Cua Dai
Song Ham Luong
Song Co Chien
Song Hua Giang
Mouths of the Mekong
Can Tho
Bassac
An Xuyen
6

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# A NOTE ON NORTHEAST THAILAND PLAN REVIEW MISSION

Staff of the Mekong Division visited Bangkok and the Northeast of Thailand in July and August to review development plans for Northeast Thailand in the context of Thailand's Third Plan for Economic and Social Development (1972-1976).

Upon request of the Government, the mission's major purposes were:

- to review with the Government the overall objectives and strategy, the sector strategies and the project content of its Third Plan proposals for the development of Northeast Thailand;

- to examine the adequacy of Government policies and public investment priorities for achieving specific objectives for the economic and social development of Northeast Thailand;

- on the basis of its review and analyses of project and program proposals, to examine the proposed overall program for public development expenditure in Northeast Thailand; and

- to identify projects suitable for external financing and recommend steps leading to their detailed preparation.

## Planning for Northeast Development

Analysis of the sectoral and spatial dimensions of the remarkably rapid economic growth of the Thai economy has drawn the attention of the Government to the widening disparity of income levels and welfare standards between different regions of the economy.

Among the regions of Thailand, the Northeast with its geographically well defined boundaries, its different climatic conditions, its history and culture, and its different dialect (Thai/Lao) can be readily identified as a separate region. All indices confirm that this region, which accounts for 33% of Thailand's gross land area and 35% of its population lags behind other regions in terms of economic development.

For instance, with 35% of the total population the Northeast contributes only about 16% of gross domestic product and its per capita income is half the national average, one-fourth of the level prevailing in the Central region, which includes metropolitan Bangkok, and 40% and 55% respectively of the per capita income of the equally rural Southern and Northern regions. Consequently, the region has been for some time the focal point of the Government's concern with regional disparities in economic and social development. A concern which has been both stimulated and reinforced by a desire to counter the threat of Communist insurgency in the Northeast region.

Together with substantial US financial support for infrastructural developments, considerable US technical assistance has also been devoted to the formulation of development programs for the 1972-76 period. However, both the formulation of such programs and their integration into a regional development plan have been seriously handicapped by the absence of a clearly stated regional development objective, and by the limited support accorded to the planners by the numerous ministries and departments which have overlapping and often conflicting responsibilities for Northeast development. Finally, to the extent that Government patronage for Northeast development programs resulted from concern over insurgency problems, the recent improvement of security conditions in the Northeast, combined with deteriorating security in the southern and northern regions of Thailand, seem to have led to a reconsideration of political support for Northeast planning and programs.

Thus, the Bank's recent Northeast Plan Review Mission which had been requested by the Government as an integral part of the Bank's National Plan Review, had to be carried out on the basis of an early draft of a National Plan which is largely devoid of a spatial dimension, and on the basis of sectoral "plans" which still require elaboration of program and project content.

Under these circumstances, the quantitative aspects of sectoral and regional resource allocation could not be reviewed. Instead, emphasis was placed on the broad sector strategies and the identification and, where possible, initial formulation of a core of Northeast projects and programs which derive their priority from the national objectives stated in the Third Five Year Plan, and which occupy a strategic place in the implementation of major regional sector strategies.

A Program of Priority Investments

The mission has prepared a core-program of priority investments which, in the context of the Third Five Year Plan, emphasizes better utilization of past infrastructural investments, further diversification into agricultural production for export, efforts to raise the standards of public services in the field of health and education, and decentralization of industrial production away from the Bangkok Thonburi area. These projects would be consistent with both national and regional development objectives and a large number would be suitable for external financing. Considering the present state of preparation of most of the projects which have been identified, it is only possible to conjecture about program cost (US$150 million, requiring commitments during

1972-76 but leading to disbursements of maybe half that total during that same period) foreign exchange component (30%), and a suitable share of external financing (60%). There follows a summary of past regional growth performance and future prospects leading into a brief presentation of the core-program of priority investment in the context of the proposed sectoral development of the Northeast economy.

Past Growth of the Northeast Economy

Economic growth in the region has been retarded by a combination of unfavorable resource endowment, limited quality and quantity of public services in the field of education and health, social and political distance of the region from the Bangkok-based Central Government, problems of insurgency which have discouraged private investment and, until the early 1960's, by limited transport infrastructure.

In the past 10 years the region's overall economic growth at an average annual rate of 7% compared with an annual growth of the national economy by 10%. However, it must be noted that this, by absolute standards, rather satisfactory economic growth in the Northeast has been to a large extent the result of a sizeable program of public expenditures for infrastructure construction combined with substantial expenditures for construction and operation of military bases, which brought about a rapid growth of the construction and service sector. However, apart from these growth stimuli, the regional economy is still dominated by agriculture which generates nearly half the GRP and which expanded from 1960 to 1969 at an annual rate of 4.3%. With the exception of the rapid expansion in the production of such cash crops as kenaf, cassava, and maize, which was significantly stimulated by the road construction program but which may not be sustainable, the development of the private sector has tended to lag behind the rates of growth achieved by the same sectors in the rest of the Thai economy. In particular, the small manufacturing sector (5% of Gross Regional Product) expanded very slowly at no more than 5.7% per annum. However, the Government's past emphasis upon infrastructure development has created a basis which, with proper public follow-up investments in irrigation distribution systems, feeder roads, and other rural infrastructure to obtain better utilization of existing public works, and with public promotion of agro-industry and manufacturing in the Northeast, could support a significant acceleration of private sector growth in the region.

Regional Growth Prospects

In the context of the overall strategy for development of the Northeast the Bank's review emphasizes the fact that even under most optimistic assumptions about attainable agricultural growth in the Northeast, a regional income growth which, at the minimum, is sufficient to arrest the trend toward the gradual deterioration of the Northeast's relative position vis-a-vis the rest of the economy, cannot be attained without a substantial restructuring of the "industrial mix" of the regional economy through rapid development of the agro-business and manufacturing sector. It is now widely realized among planners in Thailand, that self-sustained economic development in the Northeast cannot be attained with

mere emphasis upon the creation of infrastructure and upon the elimination of obvious marketing bottlenecks, but will require systematic government promotion of industrial development in the region. The location of agricultural processing capacity in the Northeast must be considered as an integral part of any program designed to sustain the growth and modernization of agriculture in the Northeast. Also, a proper policy to promote the location of manufacturing capacity to provide simple consumer goods for the sizeable Northeast market of 12 million people would appear to be entirely reconcilable with national development objectives. However, even if the Government were to approach the formulation of a regional industrialization policy with a sense of urgency, the delays inherent in institution-building and project preparation make it unlikely that such measures would have more than a limited impact upon regional income and employment during the Third Five Year Plan period. Thus, such policies could not compensate for the reduction in military expenditures and for the slow-down in major public works necessitated by the lack of well-prepared priority projects; and Government intervention and promotion designed to change the character of economic activity in the Northeast, whatever its intensity and determination, will have to be accompanied by a substantial measure of inter-regional income redistribution through continued but different infrastructure investment, stepped up expenditures for social services and through liberal, government-guaranteed credit schemes for agriculture, handicraft industry and manufacturing. This would not represent a departure from past policy which was characterized by heavy government expenditures for public works in the Northeast, but the future programs would have to place greater emphasis upon projects which maximize the intra-regional income and employment effects.

The magnitude of such a program of "transfer" payments to stimulate regional income growth is, of course, a political decision and, in the absence of a clearly stated Northeast development objective, quantification cannot be attempted.

Sectoral Strategies and Programs

Agriculture:

In spite of the recent rapid increase in the rainfed cultivation of maize, kenaf, groundnuts and cassava on the better drained terraces in the riceIands and on uplands in the Western uplands, rice is still the main crop occupying, on the average, 2.7 million hectares out of the total cropped area of about 3.5 million hectares.

Production estimates indicate that Northeast Thailand has, in the past, been on average self-sufficient in rice. Given the low opportunity cost of the Northeast's resources presently employed in rice production, it would appear justified to pursue a regional development policy which aims at maintaining regional self-sufficiency in rice production but which, at the same time, aims to accelerate diversified agricultural production where economically feasible. Expansion of rice production which, in the past, largely kept pace with growth in population and effective demand, will continue to rely on the lateral expansion of ricelands, but given the

decreasing suitability of the remaining lands that can be brought into production, increasing emphasis will have to be given to the improvement of the productivity of rainfed rice production through wider use of genetically improved seed and to an adaptation of the modern rice production techniques(which tend to require a high degree of water control) to the higher risks of rainfed production. Eventual completion of ongoing irrigation developments with a potential service area of over 200,000 ha can also be expected to make a significant contribution to regional rice production as improved water control leads farmers to accept modern production techniques.

Significant progress in crop diversification has been made in the Northeast in the rainfed cultivation of the well-drained terraces and in the Western uplands. However, the current expansion of cropped area under kenaf, maize and cassava, is largely taking place on upland soils of limited inherent fertility. These soils, formerly under forest and scrub, tend to lose their structure and fertility under prolonged cultivation. It follows that, in the Northeast, the present national strategy which emphasizes crop diversification for export production must urgently be combined with soil conservation measures to protect the agricultural resource base of the region. A project proposal to that effect has been submitted to the Government.

It is also noted that significant scope exists for the improvement of both yields and quality of upland crop production through the improvement of seed material and through a research and extension effort with focus upon the development of viable models of diversified labor-intensive rainfed farming. In this context a review of the prevailing fertilizer price policy is urgently needed.

Livestock production in the Northeast, which accounts for about half of the total cattle and buffalo population of Thailand, is essentially an adjunct to smallholder crop production. The mission recommends concentration upon livestock improvements which are feasible in the context of the prevailing smallholder production. Emphasis should be placed on genetic improvement through cross-breeding programs with imported bulls, and the establishment of commercial fattening lots which would draw their stock supplies from smallholders. A Northeast cattle improvement program which features these program elements has been formulated.

In the context of the above described sector strategy, the mission has identified the following priority projects:

Irrigation Systems Completion: The project would focus upon the completion of irrigation works serving 40,000 ha. Also, funds would be provided to formulate detailed plans for irrigation of a further 160,000 ha commanded by already existing storage dams. Pre-investment studies are recommended to formulate a pump irrigation project in the Mekong Littoral, and a program of flood control measures to protect agricultural land in the Lower Mun Basin.

Seed Improvement Project: The project is designed to upgrade and reorganize the seed supply for upland crop production through the improvement of the Government's 15 Northeast seed stations with a total production area of about 600 ha.

Rural Infrastructure Project: The project is designed to cover three contiguous provinces in the Southern part of the region hitherto isolated from the expanding transport network with a view to the systematic development of substantial areas suitable for permanent diversified crop production. The project would provide feeder roads, storage and processing facilities and other rural infrastructure. A similar project should also be formulated for the Mekong Littoral.

Upland Crop Improvement Project: The project is designed to improve in the first instance production and processing facilities in the major kenaf areas, with a view to increasing production of high value export grades of kenaf for which a strong export demand exists; such a project might be followed by the formulation of an oilseed and cotton improvement project;

Agricultural Credit Project: The project is designed to provide the agricultural credit inputs for the above-mentioned priority projects and to support a general expansion of agricultural credit in the region.

A pioneer project designed to test upland crop production cum soil conservation techniques on a meaningful scale has been formulated by FAO/IBRD for the Mancha Khiri project area. However, the detailed project proposal has not been accepted by the Ministry of Agriculture because of its organizational and institutional complexity. The reformulation of such a project to meet a more limited objective should be considered. The mission also recommends a program of research and field trials to develop techniques and suitable inputs for the improvement of productivity in rainfed crop production.

Industry:

The National Plan recognizes the need for policies to decentralize industrial production away from the Bangkok-Thonburi area. However, there is as yet no policy framework to implement a promotional scheme designed to bring about the desired shifts in location, in particular as regards the Northeast.

In the past, promotional privileges have been granted by the Board of Investments (BOI) in the course of its general promotional policies to five plants operating in the Northeast, the largest being the Northeast Jute Mill. More attractive incentives could be given by means of a tax deposit scheme (which permits specific direct taxes to be deposited in special accounts for investment in the Northeast), the establishment of industrial estates near some of the major towns (possibly one near Khorat and one in Khon Kaen), and the issue of BOI promotion certificates with more attractive

terms (e.g. tax relief might be extended from the present 5 years to 7 years). The capital requirements for implementing such a policy are necessarily high, but, against the background of a declining rate of private investment, an effective incentive structure becomes crucial. In the short and medium term the development of agricultural processing industry and of light manufacturing would provide employment opportunities in the urban areas most affected by the shut-down of military bases. Studies to determine the feasibility of specific industrial projects should be given the fullest government support. Assistance from bilateral and multilateral agencies could facilitate these studies. Beyond these immediate possibilities, the establishment of an appropriate institution designed to finance and provide technical and managerial assistance for the establishment of industrial projects would be of great value in a long-term program for restructuring the region's economy.

If the Government were to make it a clearly stated policy to accelerate the industrial development of the Northeast, it is recommended that the Bank provide the necessary technical assistance in the design of the appropriate policies and institutions with a view toward Bank lending an intermediary financial institution.

Social Services:

Concern over growing regional disparity of economic development has also focussed the attention of the Government on the very pronounced inter-regional differences in the quantity and quality of public services in the field of education and health. Again, in the field of health services, the Northeast ranks last in inter-regional comparisons as indicated by the availability of physicians per head of regional population (Northeast: 1 per 50,000 persons; national average: 1 per 9,000 persons).

To correct these inequities, the National Development Plan for the 1972-76 period gives high priority to public investment in health services, community facilities and education. However, attention is being drawn to the fact that stepped-up capital expenditures for social service infrastructure must be matched by an adequate supply of professional staff which the Government, so far, has not been able to deploy to the outlying, backward areas. Generous incentive payments and other rewards for professional staff willing to work in the more backward areas would appear to be necessary. In particular, an adequate supply of medical personnel is the prerequisite for the urgently needed upgrading and construction of health centers which is proposed in the National Plan. This program, if properly staffed, could play a crucial role in the improvement of the productivity of the Northeast labor force and in the dissemination of family planning information. Together with a program for the construction and improvement of health centers, the establishment of a regional health-science-center at Khon Kaen University, as proposed in the Third Plan, would be a major step toward the systematic upgrading of the region's health facilities. Both projects might be proposed to the Bank for financing.

Education:

In the field of education the region shares in the weaknesses of the unitary national system. However, the low level of economic development in the Northeast and its social and political distance from the central Government in Bangkok which is reinforced by a substantially different regional dialect tend to exacerbate these weaknesses. For instance, the fact that only about 14% of the grade 4 leavers continue in upper primary education, which is 'compulsory', summarizes the limitations of the regional educational system.

Furthermore, schooling within the first four grades is dominated by a standardized national curriculum which, with its urban orientation, leaves little room for a teaching program that recognizes the regional reality. Improvements in this aspect are noticeable, but the excessive centralization of the system provides little support for the development of regionalized teaching material and curricula.

Improvement of educational services in the Northeast should emphasize the quality and relevance of instruction in the lower levels of primary school with a view toward a rapid improvement of the progression into a vocationally-oriented, upper level of primary school. This will require a more regionalized curriculum and a concentrated program of teacher training within the region.

With the rapid spread of electricity in the rural area, audio-visual equipment should be supplied on a much broader scale with a view to its simultaneous use in vocational and adult education. Mobile audio-visual libraries and maintenance units should be employed in program and equipment maintenance. In certain areas the use of educational television would seem to be feasible. All in all, the gradual improvement of formal education should be closely coordinated with much more innovative approaches to non-formal education.

Roads:

Although the road network has been expanded rapidly from a total length of 4,900 kms to 9,700 kms during the last five years, there is still a need for immediate attention in three important areas:

(1) Large areas of the Southern Border Provinces need an east-west linkage with terminals at Khorat and Ubon;

(2) External links with the rest of the country are still restricted to Highways 2 (Friendship Highway) and 304; and

(3) The density of provincial highways and feeder roads is uneven and leaves large tracts, especially in the Southern Border Provinces, Western Provinces and the Mekong Littoral, poorly served.

In addition, one of the main fields that needs immediate attention is the maintenance of roads (especially feeder roads) to ensure all-weather service. The maintenance of highways constructed by the Thai Highway Department appears adequate but there is uncertainty about the responsibility for the maintenance of roads built by various other government agencies and, given the wide range of design standards employed by the various agencies, the maintenance needs of the entire network will have to be reviewed to determine the best organizational arrangement and to allocate priorities. The Thai Highway Department is proposing a program of national and provincial highway construction in the Northeast, requiring a total expenditure of ฿3.3 billion during the 1972-76 period. With the exception of certain program components totalling about ฿500 million, the project content appears to meet the immediate needs of the region. However, greater emphasis on road maintenance is being recommended.

Rural Infrastructure:

The development of rural infrastructure is carried out by a large number of ministries and departments with little coordination in planning and execution and almost no effort toward an assessment of the impact of these investments. The overlapping responsibilities for these activities and the frequent competition between agencies, have led to unbalanced construction and duplication of efforts in some areas.

The emphasis of the Government on rural development programs in the Northeast deserves to be continued, but a consolidation of administrative responsibilities for design, implementation and maintenance of the civil works, is urgently required to avoid the substantial waste of scarce resources which presently characterizes the rural development efforts. The formulation and implementation of the comprehensive rural infrastructure projects recommended for the Southern Provinces and for the Mekong Littoral should be used to accomplish the badly needed coordination and re-evaluation of the ongoing program.

Urban Infrastructure:

In the 1960's the Northeast led all other regions including the Central Region, which comprises Bangkok, with an annual growth of urban population of 4.6% per annum. Much of this urbanization reflects the rapid expansion of urban employment opportunities due to the establishment and operation of major air bases near the cities of Khorat (pop: 82,000), Udorn (pop: 57,000), Ubon (pop: 35,000), and Nakon Phanom (pop: 16,500). The withdrawal of the US Air Force is now causing a difficult adjustment period, with growing unemployment.

Khon Kaen (pop: 32,000) which, at a distance of 600 kilometers from Bangkok, lies near the geographic center of the Northeast, has recently been designated the administrative center of the region although a number of ministries still operate their regional offices in other towns, especially in Khorat.

All of the Northeast cities are in need of improvements in the field of public utilities and social services to cope with the rapid influx of population and to qualify as attractive sites for the location of new industry.

The National Plan gives priority to the improvement of the municipal water supply of all major Northeast cities. Consideration is also being given to the establishment of small industrial estates in Khorat and Khon Kaen. The mission supports these plans and recommends that these civil works be integrated with a comprehensive effort to improve the infrastructure and public services of Khon Kaen, Khorat and, eventually, Ubon and Udorn as an integral element of an overall strategy aimed at the development of an industrial sector in the region.

Power:

In 1970 the Electricity Generating Authority of Thailand (EGAT), which is responsible for power generation and transmission throughout Thailand, connected the Northeast with the Central region, so that the Northeast is now an integral part of the national grid. This has removed a major constraint on power development in the Northeast.

During the Third Plan period, EGAT plans to expand the existing 115-kv transmission system by adding over 1,000 km of new lines together with new substations and increased transformer capacity at existing stations.

The Provincial Electricity Authority (PEA) which is responsible for distribution of power in the provinces, plans to expand its distribution system and to install diesel generators in rural areas where it is uneconomical to connect with the 115-kv EGAT grid. Over 6,600 km of 22-kv feeder lines and 2,600 km of 230/400 volt distribution lines are planned. PEA also has plans for the elctrification of about 1,200 Northeast villages in the plan period. The Northeast programs of EGAT and PEA together comprise total expenditures of ฿1.1 billion during the 1972-76 period. Relative to the programs of other spending agencies, these projects and programs are relatively well developed and could become the carrier of substantial external financing. With the implementation of these programs power supply should no longer be a constraint on commercial and industrial development in the Northeast.

Development Expenditures and Priority Investments:

In the context of the preceding sector strategies the mission recommends the following core-program of priority projects. The projects have been selected because of their strategic place in sector development, and because they should lead to an improvement in inter-departmental cooperation in project formulation and implementation. A large number of these priority projects are also suited to become the carrier of substantial external technical assistance and finance.

It is envisaged that expeditious implementation of the necessary investment studies could, during the period 1972 to 1976, lead to the commitment of funds to cover a core-program with a total program cost of ฿3,000 million. By major sectors, such a program would be composed as follows:

| | | ฿ | |
|---|---|---|---|
| Irrigation and Agriculture | : | 1,500 | million |
| Rural Infrastructure | : | 500 | " |
| Urban Infrastructure | : | 400 | " |
| Public Health | : | 300 | " |
| Education | : | 200 | " |
| Industrial Finance | : | 100 | " |
| Total Program Cost | | 3,000 | million (US$150 million equivalent) |

It is estimated that the preparation of these priority projects will require studies and investigations costing about US$5 million if substantially carried out by consultants. With expeditious preparation and implementation of the required pre-investment studies, actual project expenditures may reach ฿1,500 million during the 1972 to 1976 period. In addition to the priority projects summarized above, the mission considers the Northeast highway program and power program with proposed total expenditure of about ฿3,300 million and ฿1,000 million respectively, sufficiently well formulated and of high priority to merit consideration for external financing of major program components.

Thus, the combined implementation of the core-program together with the highway and power development programs would comprise development expenditures during the Third Five Year Plan period of about ฿6,000 million. The mission has not been able to identify the project content of the various proposed programs which would comprise the remainder of public development expenditures in the Northeast. If the region continues to receive about 28% of the total proposed national development budget of ฿70 billion, such other expenditures would total as much as ฿14 billion. The largest part of these funds would be spent upon educational programs which, in the preceding plan period, are reported to have absorbed ฿3.9 billion. The public health programs and the various rural development programs would be other major fields of expenditures. In the absence of a regional development objective and without the benefit of a Northeast development budget which elaborates the program and project content, the merit of these development expenditures cannot be ascertained. However, the overall lack of project and program preparation coupled with the observable inefficiencies in the implementation of ongoing programs, would counsel against anything more than a modest increase in the Northeast budget over its Second Plan level.

# WATER CONTROL IN CENTRAL THAILAND

## Introduction

For many decades, the strategy of agricultural development in Thailand has been the building of innumerable water control facilities like dams and canals. The Bank's involvement in agriculture in Thailand has also mainly been confined to these activities. Most of the investment has gone into the Chao Phya project area in the Central Plains. This area accounts for three-fourths of the irrigated area of the kingdom. The water-controlled facilities (i.e. dams and its associated canals) has been constructed for various purposes such as irrigation, power, or flood control, a number of which are competitive with each other in terms of water use. It is the attribution of different functions to individual facilities for which it was not designed, which has led to a number of misleading impressions of the relative lack of success of the facilities.

Initial attempts in the building of water-control facilities facilities in Thailand was to ameliorate the problem of flooding in the Chao Phya delta. Floods are caused by the fact that during the rainy season, water empties into the Chao Phya from the North, Northeast and Northwest from four large rivers. Combined with tidal incursions from the sea at the South, and the rather heavy marine soils of the Chao Phya basin, the land therefore gets flooded and waterlogged. In many parts of the delta there are patches of areas, some of which are fairly extensive, where only floating rice can be grown. Early attempts to ameliorate the flood situation took the form of canals which formed an inter-river communication network in the lower delta. These canals were intended to spread the water over the land as well as to store water for the dry spell. These canals could also be used for irrigation provided pumps were used.

## Major Water Control Facilities in the Central Plains

The first major step in water control was undertaken in 1956 with the construction of a diversion dam at Chainat at the apex of the Chao Phya delta. The Chainat Dam was intended to elevate and spread the flood waters which tended to collect at the southern end of the delta and spread them more evenly over the northern portion. The effluence of the Chao Phya river with their well-defined ridges were modified for use as main canals and also with the construction of locks for navigation.

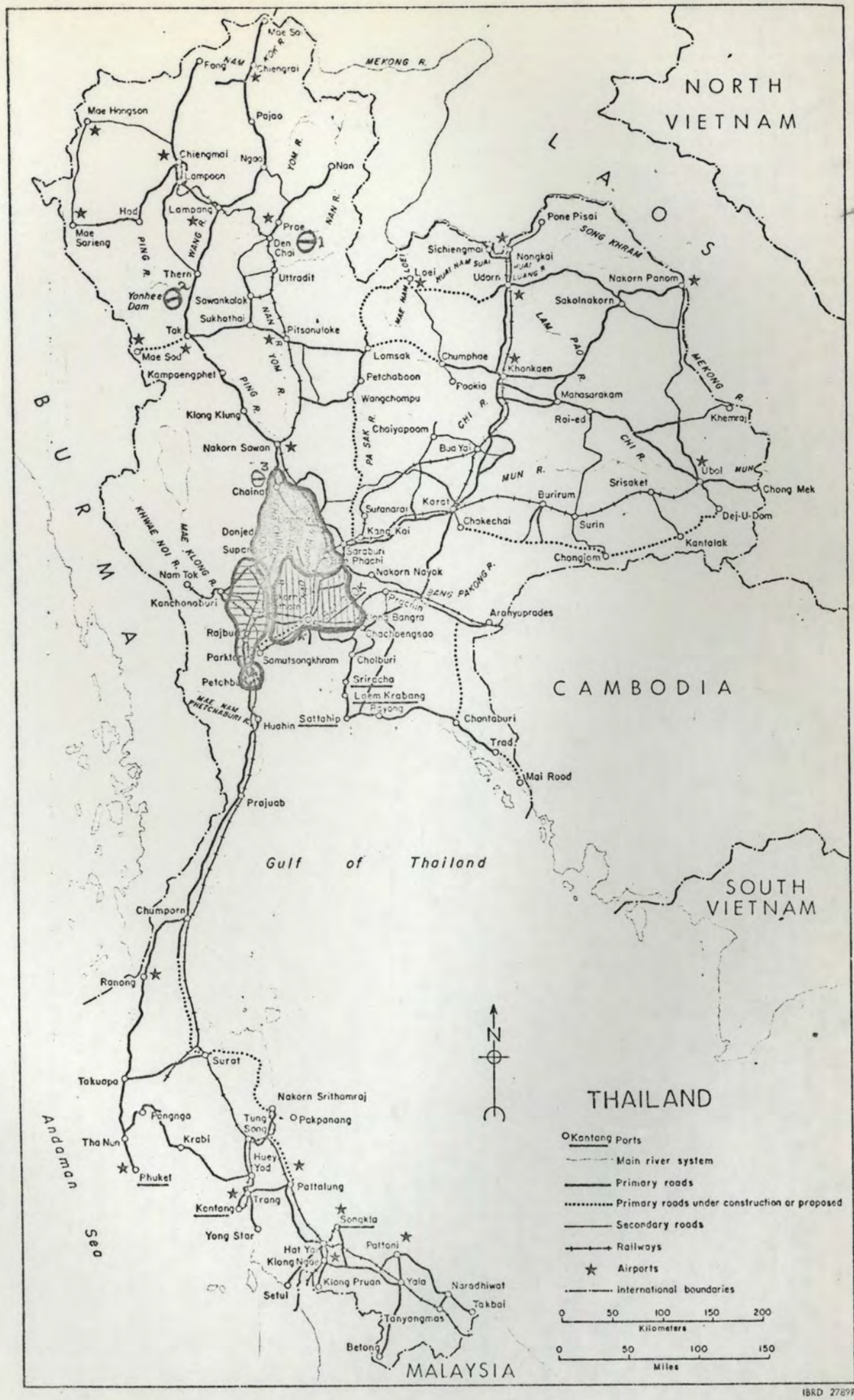
In trying to extend the use of the Chainat Dam, its canals and laterals, the Ditches and Dikes Project was started in 1962. This project was intended to carry water for both wet and the dry seasons to the actual farms. This involved extensions beyond the lateral canals by means of ditches which were placed at 400 meter invervals. It was assumed that the farmers themselves

would complete the final stage of supplementary ditches to their individual plots.

The third major step in water control was the construction of the Bumiphol Dam on the Ping river well above the Chao Phya delta in 1964. Primarily for power, this dam was expected to provide for the opportunity of irrigation in the dry season, for storage, as well as to afford a supplementary supply to combat the dry spell period (July/August) in the wet season. Some measure of flood control was also anticipated. The provision of dry season water was expected to be phased over a 10-year period through 1974 when about 1.4 million rai are expected to be irrigated.

The latest major effort in effecting water control in the Chao Phya Basin is the Sirikit Dam on the Nan river well above the delta. This dam is expected to restrain still further the flooding now experienced in the delta, as well as to provide storage water for an additional 1.1 million rai in the dry season by 1972.

Other water control projects located to the southeast of the Chao Phya delta are at the Me Klong and Petburi areas. These projects began operation at around 1964. The main purposes of these projects were to erect dams and related canals to improve irrigation, drainage and flood control.




## Water Control Project Areas

- Northern Chao Phya
- Southern Chao Phya
- Me Klong
- Petburi
- $\Theta_1$ Sirikit Dam
- $\Theta^2$ Bhumipol Dam
- $\Theta^3$ Chainat Dam

IBRD 2789R

# THAILAND

## Tourism Sector

1. The tourist industry is well established in Thailand, and is a major source of foreign exchange. An active private sector, sensitively attuned to the market, has developed a range of facilities which provides good standards at acceptable prices, and in general represent sound investments. A stop in Thailand has become an almost obligatory feature of any Far East tour.

2. The number of tourist arrivals to Thailand, excluding U.S. forces on leave, grew from 225,000 in 1965 to almost 630,000 in 1970, at an average annual compound growth rate of over 22 percent. Over 73 percent of all visitors to Thailand in 1970 came there on holiday, and the rest came either for business or family reasons. Europeans and North Americans each accounted for about 25 percent of the total, while visitors from Asian and Pacific countries constituted slightly less than 50 percent. Tourists in Thailand stay about 5 days on the average (3 in Bangkok and 2 in one of the other tourist areas in Thailand, such as Chiengmai and Pattaya) and spend approximately $30-35 a day per person on the average.

3. U.S. troops have also come to Thailand on rest-and-recreation leave, reaching a peak of 71,000 arrivals in 1969, declining to 44,000 in 1970. The hotels built for this specialized business now face an uncertain future. The social costs that a tourist industry of this type may have inflicted have yet to be assessed.

4. The development of tourism in Thailand has, however, been hampered by its distance from the main tourist-generating countries and the relatively high per-mile air fares; increasing competition from other destinations; and its proximity to the war-torn areas of Southeast Asia. In addition, the Government of Thailand has been slow in taking measures to solve some minor problems, such as the facilitation of immigration and customs procedures, and the improvement of tourist services.

5. The total number of hotel rooms available in Thailand is approximately 10,000, most of which are located in Bangkok. Almost all of this capacity is privately owned and managed. In the past few years, the government has provided various incentives to private investors to encourage them to build hotels of a high standard. These incentives have included exemption from import duties on construction materials and equipment and from taxes on income derived from sales for five fiscal years after the start of operation. This has kept hotel construction costs quite low by international standards, and the costs of construction of first-class and luxury-class hotels have ranged from $10,000 to $20,000 per room, depending on the time of construction, the location, the size and the type of the establishment. Hotels are generally well-managed and provide excellent service.

6. While reliable data on occupancy rates are not available, it is apparent that the existing capacity is in excess of demand. This impression is corroborated by the temporary suspension of the promotional privileges accorded

to hotel investors by Thailand's Board of Investment, which occurred in June 1970; and the measures resorted to by some hotel managers to attract more guests. The problem of excess capacity is exacerbated by the decline in the numbers of U.S. troops coming to Thailand on leave.

7. Bangkok is, and will remain, the main focus of tourist activity in Thailand, having 9,200 of the country's total of 10,650 hotel beds. The city has much to appeal to the visitor -- temples, palaces, shopping, and night life. Against that, the noise and smell of the traffic can be appalling, and the climate is trying for much of the year: attention has been focused too on the poor handling facilities at the airport, the disreputable practices of touts and taxi drivers, and urban security problems.

8. The effects of tourism on the economy are significant. Foreign exchange earnings derived from tourism in 1970 amounted to approximately $104 million, including $19 million derived from American troops on leave. In 1970, tourism ranked third as a foreign exchange earner after rice ($121 million) and rubber ($107 million). The impact of tourist expenditures on domestic income generation is high in view of their relatively low import content. Approximately 20,000 people are estimated to be directly employed by the hotel industry. A few thousand more are engaged in the travel trade, restaurants, and the production and sales of souvenirs.

Organization and Planning for the Sector

9. At the Government level, the responsibility for the development of the sector rests primarily with the Tourist Organization of Thailand (TOT), which is a department within the Prime Minister's Office. TOT's activities have been confined to: (i) collection of statistics; (ii) overseas promotion; and (iii) management of three Government-owned tourist enterprises (two hotels and a golf course). Whether TOT should be engaged in the management of tourist enterprises is debatable, but it is clear that TOT has discharged its first two functions relatively well, given the low budget put at its disposal. On a broader basis, while TOT can and does suggest corrective actions to deal with the problems of the sector, it lacks the power to ensure that such actions are taken by the various government departments concerned.

10. Planning for tourism is done by the TOT in collaboration with the National Economic Development Board (NEDB). Cooperation between the two agencies has not so far been very fruitful. The draft Third Five-Year Development Plan (1972-76) therefore contained little of substance on the tourist sector.

Future Tourism Development

11. The future prospects of the sector are good, provided the Government adopts and implements appropriate policies and measures. In this respect, an early decision must be made by the Government on the precise role to be played by the TOT. TOT will then have to be provided with the necessary human and material resources and the authority to enable it to play its role effectively.

12. In April 1971, the Government of Thailand appointed a committee under the chairmanship of the Minister of Foreign Affairs to study the problems and obstacles faced by the tourist industry. Its recommendations were approved by the Cabinet. They suggest practical ways to liberalize the present cumbersome immigration and customs procedures, to ease the steps for obtaining and/or extending visas, and to improve taxi services. In addition, the committee draws attention to the need for tourism legislation to regulate and control the standards of various tourist services, such as guide services, travel agencies, hotels. The committee's recommendations are sound, but implementation has been slow. Firm and quick action on most of these recommendations could have very beneficial effects on the development of tourism in Thailand.

13. The fifth freedom restrictions imposed on foreign airlines flying into and out of Bangkok may have detrimental effects on the development of tourism in Thailand. A review of these restrictions and other aspects of commercial air policy would be in order.

14. The rate of growth of tourist arrivals postulated by TOT (12 percent per year) seems attainable and may even be exceeded, assuming quick action by the Government along the lines mentioned above. Little new investment in accommodation facilities seems to be required, particularly in Bangkok. Emphasis in the next few years ought to be put on the promotion of the two or three existing tourist centers (Bangkok, Pattaya and, to a lesser extent, Chiengmai). In the longer term, the development of new tourist centers, such as Songkla, Pukhet and Hua Hin in the south, may become justified, and studies of these possibilities should be started in a few years' time.

15. As these centers are planned, assistance may be sought from the Bank Group for the necessary infrastructure works. It is, therefore, important that the Bank Group maintain close contact with the tourism authorities in Thailand in order to ensure that when studies of new tourist centers are undertaken, they are done along lines the Bank requires in order to be able to consider providing financial assistance for their implementation.

Basic Tourism Statistics

| | 1967 | 1968 | 1969 | 1970 |
|---|---|---|---|---|
| Arrivals '000 | | | | |
| Overseas Visitors | 244 | 298 | 378 | 485 |
| Visitors from neighboring countries | 92 | 79 | 91 | 143 |
| U.S. R&R personnel | 54 | 69 | 71 | 44 |
| Total: | 390 | 446 | 540 | 672 |
| Estimated Gross Expenditure US$ Mill. Equiv. | | | | |
| Overseas Visitors | 23.7 | 35.1 | 54.1 | 72.5 |
| Visitors from neighboring countries | 13.1 | 5.9 | 8.8 | 13.1 |
| U.S. R&R personnel | 10.8 | 20.4 | 22.1 | 18.7 |
| Total: | 47.6 | 61.4 | 85.0 | 104.3 |
| Purpose of Visit | | | | |
| Holiday, as % of total (1) | n.a. | 67% | 70% | 73% |
| Method of Travel | | | | |
| Arriving by air, as % of total (1) | 67% | 77% | 78% | 77% |

(1) excluding R&R personnel

# THAILAND

## The Education Sector

### General

1. Education in Thailand is marked by fragmented responsibilities for administration and policy; an almost total absence of planning; serious imbalances in the enrollment structure; wide discrepancies in educational opportunity between rural and urban areas; largely inappropriate curricula and poor teaching techniques and a relatively low public education expenditure level.

### The Education System

2. The system of education comprises a 7-year primary (4 years lower and 3 years upper primary) and a 5-year secondary program (3 years lower and 2 years upper level). Compulsory education is being extended from 4 to 7 years. Higher education consists of 2-year diploma level colleges and 4-year degree level universities. In 1971 a total of 6 million pupils were enrolled, or 16% of the total population. At the secondary level private schools are important with 50% of total enrollment.

3. Administration of education, policy formulation and its implementation involve at least 5 separate government bodies. One of these is the Ministry of Education which itself is composed of almost autonomous Directorates General between which there is little coordination. Educational planning activities are undertaken to some extent jointly by the Ministry of Education, NEDB and the National Education Council; however, the impact of planning on policies relevant to education has so far been very small.

### Past and Present Situation

4. During the past five year plan period (1966-70), substantial overall progress was made in increasing enrollments. Primary and secondary education enrollments increased at 10% annually; teacher training 20% and higher education 3%, raising enrollment ratios to 83% in primary, 13% in secondary and 20% in higher education. Dropout and repeater rates were decreased, comprehensive secondary schools introduced, vocational industrial and agricultural education improved and universities established in the Regions. Education expenditures increased at a higher rate (about 15% annually) than total government expenditures (11%), raising the share of education in total government spending to 16.3% in 1970 and in GNP to almost 3%.

5. Nevertheless, a number of problems remain to be tackled during the Third Five Year Plan (1972-76). Primary education is particularly lacking in quality, relevance and availability. There are serious shortages of text-books and teaching materials and curricula are inadequate at all levels, particularly in rural primary schools (i.e., for about 75% of all school

children). There are marked imbalances in the enrollment structure; of every 100 children who entered first grade in 1970, only about 35 could expect to continue primary education beyond grade 4, leaving in the long run 65% of the population in a state of quasi-illiteracy. Of the 35 children continuing their education 25 would reach and 10 would complete secondary education. Moreover, there are considerable discrepancies between Bangkok and rural areas in terms of educational opportunity. (In the North-East Region with one third of Thailand's population only 14% of the Grade-4 leavers continue their education as against 85% in Bangkok). The potentially beneficial effect of the expansion of teacher training is impaired by the proliferation of training over almost 40 different programs. Non-formal training receives little attention and, is generally inadequate. Agricultural education and training is not well directed to prepare farmers, technicians, professionals and extension personnel for the introduction of modern and diversified agriculture.

6. Some measures were taken to improve educational administration, supervision and planning but further improvements in these areas are urgently required. The fragmentation of administrative, financial and policy responsibilities in education within the Ministry of Education and between several government authorities continued and has become the most serious obstacle to balanced educational development.

7. The quantitative objectives of the Third Plan emphasize relative increases in upper primary and higher education enrollments whilst the growth of secondary and vocational enrollments will be slightly reduced. However, these objectives are unlikely to eliminate the serious imbalances in the enrollment structure and in the regional distribution of education opportunities. At the end of the Plan period (1976), the relative shares of the different levels of education in total enrollments would be essentially the same as today.

8. A qualitative advance is proposed in improvement in textbook provision and the introduction of limited incentives to attract teachers to village schools; some curriculum and textbook revisions are planned; also improvements in non-formal training. However, these proposals do not meet the need for a general increase in the know-how of the labor force to be achieved through improvements in the quality and relevance of education, particularly at the lower levels and of non-formal training. In short, under the Third Plan, the basic inadequacies in structure content and management of education are likely to continue.

Plan Review Mission

9. The recent mission feels that substantial improvements in education and training could be made within the existing financial constraints and without disrupting the continuous work of the system, primarily through rationalizing administration, content and structure of the system and through increasing its efficiency by improving curricula, textbooks, provision of textbooks and teaching techniques.

10. The following are possible improvements in the educational system, some of which could be begun during the Third Plan period. External financing of education projects would probably be more effective if related to these proposals:

I. In Primary Education:

(a) Increase in the number of effective school days from about 150 today (the lowest in Asia) to 210 days (the present Asian average); this would not increase unit costs since teachers are already employed on a 12-months basis.

(b) Reduction of the primary cycle from 7 to 6 years. With an extended school year, the number of effective school days could increase more than 10% and costs per graduate could decrease.

(c) Increase in the progression rate from lower primary (grade 4) to upper primary (grade 5) from 38% at present to 75% by 1976 and 100% by 1980.

(d) Distribution of free textbooks to primary pupils and of free teaching aids to primary teachers.

(e) Initiation and implementation of curriculum and textbooks reform.

(f) Introduction of a comprehensive system of incentives to attract teachers to village schools.

These measures would substantially increase the efficiency and quality of primary education without necessarily increasing unit costs in real terms.

II. In Secondary Education:

(a) Decrease in the progression rate from primary to secondary from 85% at present to 75% by 1980. Because of the proposed increase in primary enrollments, this would still permit substantial increases in secondary school enrollments and an output in numbers sufficiently high to provide for university entrants and to satisfy the demands for qualified manpower.

(b) Restructuring secondary vocational education to make training more related to industrial and agricultural requirements on a local basis.

(c) Expand the use of the vocational schools to include formal training courses of various lengths so that vocational school facilities become local centers for vocational training and upgrading, integrated into local development schemes.

III. In Higher Education:

Reducation of growth rates of university enrollment in the metropolitan region with simultaneous increase in the growth rates of regional universities, emphasizing science and technology oriented faculties and increasing post-graduate study facilities.

IV. In Planning and Administration:

Increase in competence of the educational planning staff of NEC, NEDB and the Ministry of Education; introduction of annual operation programs for each level of education and of an aggregate program for the entire education system; introduction of continuous quantitative and qualitative evaluation of program performance; establishment of aggregate national education budgeting, including all levels and types of education and training irrespective of distribution of administrative responsibilities, under a joint committee of NEC and the Budget Bureau; restructuring of the program planning and budgeting procedures of the Ministry of Education.

11. Bank Projects

(a) A first education loan of US$ 6 million was made to Thailand in 1966 to finance the equipment and expansion of 14 trades and industry schools, 9 vocational agricultural schools, 1 vocational teacher training college and 1 agricultural teacher training center. The United States Government is providing technical assistance and fellowships. The project is expected to be completed in February 1972.

(b) A proposed second education project concerns the improvement and expansion of university training and research in agriculture and related fields at Kasetsart University. The project would cost about US$ 27 million, US$ 13.5 million of which would be covered by the proposed loan. The main feature of the project is the development of a rural campus at Kamphaengsaen, 80 km from Bangkok, and the relocation and expansion of all production oriented courses at this new campus. The Government has been invited for negotiations, but prefers to await legislation to permit borrowing at Bank terms.

(c) It seems possible that the Government may request Bank financial assistance in the following fields:

- Curriculum development and educational technology center;
- Educational radio and television;
- Integrated development of primary education in rural areas;
- Agricultural vocational schools and training centers;
- Industrial vocational training centers;
- Faculties of medicine at Khonkaen and Mahidol universities;
- Faculties of engineering at Chiengmai and Songkhla universities.

Bank assistance for education development in Thailand will be reviewed with the Government during forthcoming discussions.