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TO ICA *Sten Dahl*

# REPORT OF THE ICA STUDY MISSION

ON

## PERSPECTIVE AND PROJECT PLANNING

FOR

## AGRICULTURAL CO-OPERATIVE SECTOR

IN

## THAILAND

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REPORT OF THE ICA STUDY MISSION

ON

PERSPECTIVE AND PROJECT PLANNING FOR AGRICULTURAL  
COOPERATIVE SECTOR IN THAILAND

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ACRONYMS

ACFT	Agricultural Cooperative Federation of Thailand.
<u>APRACA</u>	
ASC	Agricultural Sub-Committee for Asia of the ICA Regional Office.
ASEAN	Association of South-East Asian Nations.
BAAC	Bank for Agriculture and Agricultural Cooperatives.
CDB	Cooperative Data Bank
CDC	Cooperative Development Council.
CEPOS	Cooperative Education and publicity Officers.
CIDA	Canadian International Development Agency
<u>CIRDAP:</u>	
<del>CLT</del> CLT	Cooperative League of Thailand.
CORPDEC	Cooperative Research, planning, Development and Consultancy Division of CLT
<u>CPC (p.6):</u>	
CPD	Cooperative promotion Department of the Ministry of Agriculture and Cooperatives, Government of Thailand.
CUC	Cooperative Union of Canada.
DANIDA	Danish International Development Authority
DPD	Dairy promotion Organisation
FAO	Food and Agriculture Organisation of the United Nations.
FAO RAPA	FAO Regional Office for Asia and the Pacific.
GDP	Gross Domestic product
GNP	Gross National product
ICA RO	International Cooperative Alliance, Regional Office for Asia
ILO	International Labour Organisation.
JICA	Japanese International Cooperative Agency.

Acronyms (2)

MES - Monitoring and Evaluation System.

MIS Management and Information System.

NACTI National Agricultural Cooperative Training Institute.

NCDP National Cooperative Development policy.

NESDB National Economic and Social Development Board.

NORAD Nordic Agency for International Development (?)

SAS Scandinavian Airways System.

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4. Mr. Prayad Angkanavisalya Chief, Land Settlement Section of CPD.
5. Mrs. Srisupan Prohmtong Chief of Dairy Coop Promotion Section of CPD.
6. Mrs. Benjawan Sadpak Chief, Foreign Relations Section, CPD.
7. Mr. Surasit Impol Foreign Relations Department of CLT.
8. Ms. Sujitra Tampathet Foreign Relations Department of CLT.
9. Mrs. Wanna Sentsong Cooperative Technical Officer, VII Songklah Provincial Coop Office
10. Ms. Ratchaporn Tangyungyuen Foreign Relations Technical Division of CPD:
11. Ms. Suvapee Vaiaveta Coop Technical Officer, VII Tak Provincial Cooperative Office
12. Mr. Tawee Sitticai District Coop Officer, Ranode, Songklah
13. Mr. Wattanachai Suponpong Chief of Bangsaphan Land Settlement Section, CPD
14. Ms. Kanitta Promsamak Officer Land Settlement Section, CPD



## 2. Organizational Responsibility

The Study Mission which was of an exploratory nature was carried out by the ICA Regional Office for (South-East) Asia in close collaboration with and assistance of the Cooperative League of Thailand (CLT), being a member of the ICA, together with the Cooperative Promotion Department (CPD) in the Ministry of Agriculture and Cooperatives which represented the Government of Thailand. The assistance provided to the Mission by CLT and CPD with transport, interpreters and guidance during field visits was quite substantial and is hereby acknowledged with gratitude.

## 3. Terms of Reference

3.1 A meeting of the members of the Study Mission with representatives from both the CLT and the CPD was held on 9th April 1986 under the chairmanship of Mr. Chern Bamrungwong, Chairman of CLT and Director General of the CPD in the Ministry of Agriculture and Cooperatives. During this meeting, the Mission members explained the background and the support needed from the member organizations which had been set out in ~~memorandum~~ sent to the CLT in advance. The terms of reference were thus decided upon at the meeting.

3.2 The terms of Reference of the Study Mission were as follows:

- i. to identify the problems and needs of farmers and farmers' cooperatives in the context of the existing cooperative structure as well as past agricultural and cooperative development trends;
- ii. to outline future opportunities of development within the next 10-15 years and specify cooperative development possibilities, strategies and policies in the context of the national development plan;
- iii. to suggest specific areas in which cooperative development projects may be formulated to give effect to proposed cooperative development strategies; and
- iv. to formulate at least one/two model projects in areas of critical importance for cooperative development.

3.3 In carrying out its work, the Study Mission focused its attention towards the needs of small farmers and specifically the following areas: -

- (a) strengthening of the cooperative structure at primary, secondary and national levels;
- (b) the need to improve management efficiencies and skills;
- (c) livestock and dairying sector (field study); and
- (d) fresh water giant prawn farming (field study).

#### 4. Composition of the Study Team

The members of the Study were as follows:

- (a) Mr. J.M. Rana, Regional Development Officer, in the ICA RO; and
- (b) Mr. Sten H. Dahl, Cooperative Development Adviser, in the ICA RO.

## 5. Support

5.1 CLT assisted by CPD had secured the concurrence and support from the national government, ministries and departments concerned with agricultural cooperative development for the work of the Mission.

5.2 A programme of visits and discussions with international and national agencies as well as agricultural cooperative organizations was jointly worked out by the members of the Study Mission and CLT/CPD.

5.3 CLT and CPD made available the following:

- Officers with adequate knowledge in dairy, prawn breeding, agricultural cooperative movement and statistics;
- Secretarial assistance;
- Office space for the Study Mission; and
- Transport for the field study trips.

## 6. Methodology

The following methods were used for collecting data and for drawing conclusions and recommendations : -

- 6.1 All necessary secondary data was collected from suitable literature and materials and produced by the ICA, FAO, ILO, CLT, ACEI, NACTI, BAAC, CPD, CIRDAP, National Economic and Social Development Board, the Kasetsart University, the Ministry of Agriculture, other government departments, parastatal organizations, cooperative organizations and the various organizations visited by the Study Mission.
- 6.2 Discussions were held with senior officers in the above organizations, the Japan International Cooperative Agency, CIDA, CUC, DANIDA, APRACA and Deputy Permanent Secretary in the Ministry of Agriculture.
- 6.3 Field visits were made to selected rural areas and agricultural cooperatives in the provinces of Songkhal, Chum Pon, Prachuab Kiri Khan, Phet Buri, Bangkok and Chiang Mai for the purpose of primary data collection. Interviews were also made with sample farmers in some of those areas.
- 6.4 Based on the data collected, the Study Team has prepared a report outlining the economic situation in Thailand, development trends in the agricultural sector and agricultural cooperatives and conclusions and recommendations, in accordance with the Terms of Reference.
- 6.5 Before the report was prepared the preliminary conclusions and principal recommendations were presented and generally agreed upon at a meeting held at CPD on 7th May 1986. Representatives of CLT, CPD, ACFT, NACTI, the Ministry of Agriculture, Kasetsart University and other governmental departments concerned with agricultural cooperative development in Thailand participated. A number of additional views expressed during the meeting have been taken into account in writing the report.

## 7. Work Programme of the Study Mission

7.1 A detailed programme of work for the Study Mission was formulated by CLT/CPD together with the members of the Mission. (Annexe 1)

7.2 During the first three days (9-12 April 1986) the Study Mission had meetings and visits in Bangkok as follows:

- Planning meeting with the Chairman and Senior Officers of CLT and CPD.
- Meeting with the Deputy Manager of Agricultural Coop Federation of Thailand (ACFT).
- Regional Adviser on Rural Institutions and Coop Development and Adviser, ILO/NORAD Regional Project on Coop Training Policy and Standards in the ILO Regional Office for Asia and the Pacific.
- Meeting with Regional Marketing, Credit and International Cooperative Agency (JICA) and CPD Agricultural Coop Promotion Project.

7.3 During the period 27-28 April 1986 the following activities were undertaken:

- Field visits to Songklah Province, including meetings and discussions with Cooperative Technician Officer VII, Songklah Province, the District Coop Officers of Ranode District and Kasaesin District, Songkhla Province

- Meetings with Chairman, General Manager, Credit Officer, Farm Guidance Officer and employees of Ranode District Agricultural Coop Society, Songklah.
- Discussions with the Chief and his Assistant of the Fisheries Department and Research Centre, Ranode District, Songklah.
- Visit to the village of Bankao Taklia at the Lake of Songkhla for appraisal of an idea for establishing a Fresh Water Prawn Breeding Project which is proposed by Ranode District Agricultural Coop Society, Songklah.
- Interviews on prawn breeding with board members and personnel of the Ranode District Agricultural Coop Society.

7.4 During the period 29 April - 2nd May 1986 the Study Mission had fruitful meetings and discussions with the following persons:

- FAO Assistant Secretary General for Asia and the Pacific.
- Regional Marketing, Credit and Coop Adviser of FAO Regional Office for Asia and the Pacific (FAO-RAPA).
- Associate Expert on Cooperatives, Credit and Marketing of FAO-RAPA.
- Chairman and Director of the CLT.
- Officer in Charge and Assistant of Foreign Relations Department of CLT.
- Chief of Foreign Relations Department of Coop Promotion Department (CPD), Ministry of Agriculture and Cooperatives.

- Director of Technical Division of CPD,  
Ministry of Agriculture and Cooperatives.
- Chief Coop Dairy Promotion Section of CPD,  
Ministry of Agriculture and Cooperatives.
- Experts of the JICA/CPD Agricultural Coop  
Promotion Project.
- Programme Manager (Asia), International  
Development Department of the Coop Union  
of Canada.
- Deputy Permanent Secretary to the Ministry  
of Agriculture and his Personal Assistant.
- Manager, Rice Department of Agricultural  
Coop Federation of Thailand.
- Adviser for the ILO/NORAD Regional Project  
on Coop Training Policy and Standards, ILO  
Regional Office for Asia and the Pacific.
- Directors of Planning and Research, Division  
of Agricultural Economics and Research,  
Ministry of Agriculture and Cooperatives.
- First Secretary and Head of CIDA, Canadian  
Embassy, Bangkok.
- Director, Deputy Director and Heads of  
Administrative Department, Training Department,  
Instructional Media and PR Department and  
the Training Follow-up Department of the  
National Agricultural Coop Training Institute  
(NACTI).
- General Manager, Deputy General Manager and  
the Manager of Loans Department, Bank for  
Agriculture and Agricultural Cooperatives.

- Director, Rural Development Coordination Division and Secretary to National Rural Development Coordination Centre, National Economic and Social Development Board (NESDB).

7.5 Field visits and meetings were carried out as follows during the period 3-5 May 1986 :

- General Manager and personnel of Nong Poh Dairy Coop Society, Rajburi Province.
- General Manager, Ban Land Agricultural Coop Society, Petcha Buri Province.
- General Manager, Committee Members and personnel of Bangsaphan Land Tenant (Settlement) Coop Society including touring of the society area of operation.
- Interviews with farmer/members of Bangsaphan Land Tenant (Settlement) Coop Society.
- Deputy Manager, Dairy Promotion Organization, Dairy Plant at Pran Buri, Prachubkerekhan.
- Chief Land Settlement Section and Officer of the same Section, CPD.
- Cooperative Technician Officer VI of CPD and Chief Bangsaphan Land Settlement Section of CPD.

7.6 During the period 6-9 May 1986, i.e. after the field visits to The South the following activities were undertaken in Bangkok :



- Meeting Dean, Professors, Lecturers and researchers of the Cooperative Department, Faculty of Economics and Business Administration of Kasetsart University.
- Preparation of draft preliminary findings and suggestions for conclusions and recommendations of the Study Mission.
- Representative meeting chaired by Chairman of CLT with participants from CPD, CLT, ACFT, NACTI, Kasetsart University, Ranode District Coop Officer, Songklah, Provincial Coop Office and other government departments, etc.
- Agricultural Extension Department.
- FAO-RAPA for final meeting on results of the Mission.
- Initiating work/preparation of the project proposal for Coop Dairy Development in Bangsaphan.
- Brief meeting with District Cooperative Officer Ranode District on the Project Proposal for Giant Fresh Water Prawn Breeding.

7.7 Finally the Study Mission during the period 27th May - 2nd June 1986 did the following:

- Meeting at CPD on the finalization of the Coop Dairy Promotion Project proposal for Bangsaphan Land Tenant Coop Society.
- Meeting Deputy Minister of Agriculture on the findings and preliminary recommendations of the Mission.
- Meeting with Cooperative Technician Officer VII Songklah Province and Officer Foreign Relations Department of CPD for finalizing project proposal on Giant Fresh Water Prawn Breeding at Ranode, Songklah.

- Meeting Chairman and Director of CLT for finalizing of detailed recommendations for dairy promotion, cooperative bank development and establishment of CLT Accounting Services as well as merging of CLT and NACTI including manpower development and phasing out of government involvement in "running of cooperatives."
- Visit Chiang Mai together with Chief, Dairy Promotion Section of CPD for meetings with principal, vice principal and staff of the Chiang Mai Dairy Research and Training Centre.
- Visit to the FAO Dairy Training Centre at Chiang Mai.
- Meeting with First Secretary, Commercial, Royal Thai Embassy in New Delhi.

8. A considerable amount of published and mimeographed material was also collected and referred to. A complete list of the material referred is given in Annex-2. Some of the main documents regarded as most important by the Mission were : "Position Paper" prepared by the CLT/CPD, "The 5th National Social and Economic Development Plan (1982-86)", "The Final Report for Study on Agricultural Cooperative Promotion in Thailand" by JICA, "Case Studies of Cooperatives as Institutions for Development of the Rural Poor : Thailand" by Vinai Artkogharn, Sproj

Anungsumaralin and Nugool Kornyuenyong for CIRDAP,  
"Agricultural Statistics of Thailand 1984-85",  
"Annual Reports" of NACTI and BAAC and the unpub-  
lished "A Five Year Comprehensive Plan for the  
Development of Agricultural Cooperatives" by  
Schott and NESDB.

9. Limitations

(a) Time : The time available for both the Perspective  
Planning and Project Identification parts of the Mission  
was exceedingly short and the two field visits were  
carried out under great time pressure. Even two  
national holidays falling within the period of the  
Mission reduced the efficiency of work.

*Projects ?*  
(b) Geographical : The time limitations also had the  
effect that only the southern parts of the country  
could be visited. The reason for this priority was  
that two of the <sup>proposed projects</sup> ~~Study Mission~~ were located in this  
part of the country. This has been compensated for  
through studying various previous research reports  
followed by discussions with some of the researchers  
involved. A brief visit to Chiang Mai was made on  
2-3 June 1986.

- (c) Weather : The worst flooding for several decades occurred in Bangkok during the last two days of the Mission. That was the main reason for reducing the period of study by one day, which otherwise should have been used for final discussions with the District Cooperative Officer concerned with the project proposal on Fresh Water Prawn Farming in Ranode and Krasaesin Districts of Songklah Province in Southern Thailand.
- (d) Support services at ICA RO, as a result of the recent restrictive financial measures, have been limited and seriously affected the finalising of this report. For this delay the Study Mission members extend a sincere apology.
- (e) Other limitations : The Study principally deals with the small farm sector. The situation in land settlement areas are covered while estate farming is not covered at all. The forestry sector is partly covered but not to the extent necessary to give a comprehensive view of future possibilities for cooperative activities to be developed within this sub-sector.

10. Expectations

It is expected that CLT in close collaboration with CPD will play the major role in follow-up on and coordinating the implementation of the conclusions and recommendations of this Report. It is also anticipated that CLT-CPD will be spearheading the mobilization of necessary internal resources for the same purpose.

ICA on its part will attempt to assist in discussions with suitable donor agencies regarding possible projects proposals, recruitment of external short-term consultants for future follow-up studies and missions and on any other matter within its scope of operations.

11. Acknowledgements

11.1 The Study Mission would like to express its sincere thanks to the Cooperative League of Thailand and the Cooperative Promotion Department in the Ministry of Agriculture and Cooperatives, which provided all the needed assistance for the Study Mission. It secured the concurrence and support of the government, ministries and departments concerned with agricultural coop development for the work of the Mission. A very useful programme of visits and discussions with various government departments, authorities, institutions and cooperatives was also drawn up by CLT and CPD.

- 11.2 The Study Mission expresses its sincere thanks to the Agricultural Coop Federation of Thailand (ACFT) for the support given.
- 11.3 The Study Mission also thanks the various senior officers of the government of Thailand in the various ministries, all of whom helped the Mission with valuable advice and information.
- 11.4 Finally, the Mission would like to express its high appreciation and thanks for the sincere collaboration and assistance rendered by the following cooperators and officers:
- Mr. Chern Bamrungwong, Chairman of CLT.
  - Mr. Taweewat Chaeronsok, Director, CLT.
  - Mrs. Thada Kiriratnikom, Director, Technical Division of CPD.
  - Mrs. Srisupan Prohmtong, Chief, Dairy Promotion Section of CPD.
  - Mrs. Benjawan Sadpak, Chief, Foreign Relations Sections, CPD.
  - Mrs. Wanna Sentsong, Coop Technician Officer VII, Provincial Coop Office, Songklah.
  - Mr. Surasit Impol, Foreign Relations Department of CLT.
  - Ms. Sujitra Tampathet, Foreign Relations Department of CLT.
  - Mr. Tawee Sitticai, District Coop Officer, Ranode District.

- Ms. Ratchaporn Tangyungyuen, Officer Foreign Relations, CPD.

## II : THE KINGDOM OF THAILAND - A BRIEF DESCRIPTION

### 12. Constitution and Government

Until 1932 Siam was an absolute monarchy. Since then several coup d'etat have taken place and several military regimes have been running the country. Since 1950 King Bhumibol Adyulej reigns the Kingdom of Thailand. A new constitution designed to restore democracy was promulgated in 1978 with new elections held in 1979. In 1983 (April) fresh elections were held and the Cabinet was formed in August the same year with the following composition:

Prime Minister, Deputy Prime Minister, Ministries of Defense; Finance; Foreign Affairs; Agriculture and Cooperatives; Communications; Commerce; Interior; Justice; Education; Industry; Science, Technology and Energy and the Ministry of University Affairs.

General elections were again held on 27th July 1986.

#### 12.1 Local Government

For purposes of administration, Thailand is divided into 73 provinces (Changwad), each under the control of a Changwad Governor. The Changwads are divided into 576 Districts (Amphur) and

80 Sub-districts (King Amphur), 5317 Countries (Tambon) and 54,385 Villages (Mooban).

Local legislative and executive bodies with limited powers are being established with functions, procedures and methods of election modelled on those of the Central Assembly.

#### 12.2 Planning

The Fifth National Development Plan 1982-86 (September) envisages a more equal distribution of incomes between urban and rural population. The sixth National Development Plan 1986-1991 had at the time of the visit of the Study Mission not yet been released which fact will leave possible consequences on the congruence of this report and the National Plans.

#### 13. International Relations

Thailand is a member of UN, ASEAN and the Colombo Plan.

#### 14. Size and Situation

The total land area of Thailand is 1,028,000 km. The country is divided into 4 regions i.e. Northeast, North, Central and South, and 73 provinces. Thailand borders in the north and east to Laos, in the east also to Kampuchea and



the Gulf of Thailand, in the South to Malaysia and in the West to Burma and the Andaman Sea.

15. Population

According to 1985 statistics, the population of Thailand was about 51.7 million with an annual growth rate of 2.3%. 20 million people were under the age of 15 years. The female and male population is almost equal. It has been projected that in the year 2000 the total population will be almost 63 million.

The population density for the whole country in 1974 was 86 per km<sup>2</sup> with the highest in Bangkok, the capital city. The infant mortality rate has been estimated by the World Bank to 56 and the death rate is 5 per one thousand live births.

Out of the total population, about 30 per cent or 15 million live in the Central Region, 35 per cent or 17.5 million in North-Eastern Region, 12.5 per cent or 6.25 million in Southern Region and 22 per cent or 11 million inhabitants in the Northern Region. In the capital city, Bangkok, there are now about 6 million residents. Other bigger towns, which for Asian conditions are very small, have an average of only 60,000 - 100,000 inhabitants.

### 15.1 Religion

About 95% of the population are Buddhists, 4% Muslims (Southern Thailand), 0.6% Christians, and 0.4% Hindus and others.

### 15.2 Education

The adult literacy rate in Thailand is comparatively high or more than 85% and at present the Thai Government is concentrating on free education for all Thais.

Primary education is compulsory for children between the ages of 7 - 14 years and free in about 33,000 local municipal schools. There are also about 2500 private schools. The total enrollment is about 10 million students and in 1983, 99.4% of all children between the ages of 7 - 12 attended primary schools. About 43% of them go on to receive secondary level education. Besides, there are 45 teachers' training schools with about 5,000 teachers and 120,000 students. Almost 200 vocational schools employ about 9000 teachers and enroll a total of 150,000 students.

14 universities, 10 of which are in Bangkok, cater for a good masters degree programme while doctoral degrees are offered by five of them. A separate Ministry is catering for university affairs.

### 15.3 Health

In 1982 statistics show that there were 434 hospitals and 6496 health centres throughout the country. In the same year there were 4,550 physicians, 1,122 dentists and 2,236 pharmacists registered in Thailand.

#### 15.4 Labour Force

The total labour force in 1985 was estimated at 25 million or equal to half the total population. The composition of male and female labour population was 57% and 43% respectively. The annual labour growth rate for the years 1985-1990 has been estimated at 2.6%.

### 16. Communications

#### 16.1 Roads

In 1982 the length of highways and provincial roads open to traffic was approximately 44,200 km of which 13,226 km were concrete or asphalt surfaced.

#### 16.2 Railways

3,735 km of state railways (metre gauge) was in 1982 open to traffic. The northern line runs from Bangkok to Chiang Mai (741 km), the extreme northern terminus. The southern line (990 kms) runs from Bangkok down the Peninsula to the boarder station of Padang Besar where it connects with the Malaysian railway to Penang and Singapore.

Another line (214 km) is branching off from the transit town of Hat Yai on the southern line and runs southwards on the eastcoast to Su-gnai Kolok where it connects with the Malaysian railway lines. There are also branch lines from the southern lines to Songklah, Nakhon-Si, Thammarat, Kan Tang and Thakanon totalling about 190 km.

There are also extensions of the north-eastern line (264 kms) from Nakhon Ratchasima (Korat) to Nong Khai (360 km) and from Kaeng Koi to Banay (250 km). The Nakhon Ratchasima-Ubol line (311 km) reaches as far as Ubol Tat Thams. The Eastern line 255 km runs from Makksan to Aran Pradet on the Kampuchean border.

The Northern and Southern railways systems are linked by a railway bridge over the Menam Chao Rya and both systems terminate in Bangkok.

All state railways are under one management and carried 78.8 million passengers in 1981 and 6 million tons of freight.

### 16.3 Aviation

Thai Airways Company Limited established in 1947 is the sole Thai air transport enterprise. The company operates all domestic routes and a number of international routes. The 1959 Thai Airways and Scandinavian Airlines System (SAS) set up a new company, Thai International Airways to operate the international air service from Thailand. In 1982, it carried over 2 million passengers.

### 16.4 Shipping

Almost 3000 vessels enter and clear the port of Bangkok annually. The port is capable of berthing oceangoing vessels of 10,000 gross tons and 28 feet draught. Bangkok is also the port for Laos and goods arriving in transit are sent by rail to Nong Khai and ferried across the

river Mekong to Vietnam.

#### 16.5 Postal services

The postal services are rather well developed and operate from post offices proper, 341 licensed Amphur post offices and 545 railways station post offices.

#### 16.6 Telegraph and telephone

In 1982 there were 529,106 telephones of which 389,852 or 74% of all telephones installed were in Bangkok.

#### 16.7 Radio and TV net works

In 1981 there were 265 radio stations and 9 TV stations operating in Thailand.

#### Banking

The Central Bank, The Bank of Thailand was established in 1942. It was organized on the same lines as Bank of England. There are altogether 30 commercial banks, 16 Thai and 14 foreign banks operating in Thailand. They had in 1981 not less than 1480 branches in Thailand and 12 abroad. The deposits held by them as at June 1981, amounted to Baht 334,884 million. (Baht 25 equals US\$ 1.)

The government savings bank originated in 1913 from the then government savings office and was established as an independent organization in 1947. It has now 420 branch offices spread all over the country with savings

and deposits to the tune of 32.8 billion Baht. Hence, it holds about 10% of total bank deposits and is the 4th largest Bank in Thailand.

The Bank for Agriculture and Agricultural Cooperatives (BAAC) established in 1966 provides credit to farmers, farmers groups and cooperatives. It operates through a net work of 67 branch offices and 564 field offices in most of the districts in Thailand. Deposits held from the general public amounted to 4.5 billion Baht at the end of 1984.

## 18. Energy

### 18.1 Oil : ~~Extensive oil and gas explorati-~~

Extensive oil and gas exploration in the gulf of Thailand were producing commercial quantities already in September 1981. In 1985 domestic oil was continuing to flow and imports of energy could be reduced. At the same time petroleum exploration companies continued to bid for further concessions.

### 18.2 Electricity:

In 1976 only 20% of the population had access to electricity. In 1982 steam power accounted for 52% of electricity production and 34% was derived from hydro-power plants.

During 1985 the electricity network expansion was continued in rural areas and at the same time urban and industrial demands could be met. It is expected that 50,034 villages or 92% of all villages in Thailand by the end of 1986 would have received electricity.

### 18.3 Minerals :

The mineral resources are extensive and varied and includes iron ore, manganese, tin, tungsten, lead, wolfram and next to Malaysia and Indonesia, Thailand is the world's third largest supplier of tin. Besides, large deposits of lime stone have made Thailand the largest cement producer in South-East Asia. The only known commercial deposits of potash in Asia has been discovered in North-Eastern Thailand. Precious stones such as rubies and sapphires are also found in Thailand.

## III : THE ECONOMY - OVERALL PICTURE

### 19. General background

The Kingdom of Thailand is an old nation with a democratic system. The word "Thai" means "free", with a special emphasis on freedom from foreign domination. Thailand has never been colonized. The three recognized national pillars which unite the population are - The Nation, Religion and Monarchy. The total land area is 514,000 km<sup>2</sup> and can geographically be divided into the fertile central plain, the mountainous North, the semi-

arid North-East and the topographically diverse South.

Thailand has a population of 51.7 million (December 1985). The population growth is still too high but is slowing down and has for 1985 been estimated to 2.3%<sup>(1)</sup> Life expectancy at birth is 64 years according to 1984 statistics.<sup>(2)</sup>

The vast majority of the population identifies itself as Thai. Ethnically a tolerant people, the Thais have assimilated a large population of immigrant Chinese, particularly in the cities. There are also about 350,000 hill tribesmen, mainly in the Northeast.

The country has a tropical climate with a high degree of humidity. Average temperature is 27.6°C, varying from 32.5°C to 23.7°C. There are three seasons : hot (March-May), rainy (June-October) and cool (November-February).

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(1) Bank of Thailand, Quarterly Bulletin, Vol. 25, No. 4, December 1985.

(2) World Development Report, 1986, IBRD, Washington, pp. 180.



20. The Thai Economy in General

The World Bank has in its Development Reports classified Thailand as a "lower middle income country". In 1984 the GNP per capita, stood at US\$ 820 <sup>(p)</sup> The average annual growth rate in GNP per capita over the years 1965-84 was 4.2% and the standards of living improved gradually.

20.1 The average annual rate of inflation during the period 1965-73 was rather moderate at 2.5%. During the years 1973-84 the same rate went up and averaged 8.2%, which still compares favourably with most other countries in the same income group and period.

20.2 The overall Gross Domestic Product (GDP) grew at an average annual rate of 7.8% and 6.8% for the periods 1965-73 and 1973-84 respectively.<sup>(2)</sup>

<u>Period</u>	<u>Agriculture</u>	<u>Industry</u>	<u>Manufacturing</u>	<u>Services</u>
1965-73	5.2%	9.0%	11.4%	9.1%
1973-84	3.7%	8.7%	10.0%	7.5%

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(p) World Development Report, 1986. IBRD, Washington.

Although the Thai economy performed better than the global economy in 1985, the overall recession was beginning to be felt. In the same year GDP grew with approximately 4.5% against 6%, 5.8% and 4.1% in 1984, 1983 and 1982 respectively. The target growth rate for GDP set in the 5th National Economic and Social Development Plan (1982-86) was 6.6%.

20.3 The trends in the structure of production distributed on various sectors during the last 20 years were as follows:

	<u>1965</u>	<u>1984</u>	<u>Total Changes</u>	<u>Av. Annual Changes</u>
i) GDP in millions of US\$	4,050	41,960	+37,910	1,896
ii) Distribution on :				
- Agriculture	35%	20%	-15%	-0.2%
- Industry	23%*	28%	+ 5%	+0.3%
- Services	42%	52%	+10%	+0.5%

From the above it can be seen that the agricultural sector share in GDP has diminished, drastically, while the industrial sector and particularly the service sector have played increasingly important roles in

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\*The World Bank has estimated that a 14% of total GDP in Industry was derived from manufacturing.

(1) Source: World Development Report 1986, IBRD, pp. 184 and 186.

contributing to the total production.

- 20.4 Huge investments have been made in infrastructure during the last two decades both in agriculture and industry. The gross domestic investment grew at an average annual rate of 7.6% and 5.3% for the periods 1965-73 and 1973-84 respectively. <sup>(2)</sup> The main sub-sectors have been transportation, irrigation and energy. Two deep sea harbours are also in the planning stage.

With the sharp drop in the farm sector revenues in 1985 the overall investment climate suffered accordingly. In fact investments stagnated in 1985 and production and sales were on a downward trend. <sup>(1)</sup> Furthermore, the overall utilization of production capacity in manufacturing was only 72% as compared to 76% in 1984.

- 20.5 The demand has over the last few years been slowing down. The average annual growth of private consumption for the period 1965-73 was 6.9% while for the period 1973-84 the growth had gone down to 6% per annum. As both public and private purchasing power was low in 1985 the growth in demand further slowed down.

- 20.6 The industry sector was during the period 1974-83 expected to create a considerable number of new job opportunities. But the high concessions on import duties for machineries led to imports of heavy and capital intensive machines. The capital to labour ratio became too high and only about 100,000 new jobs were created during those 10 years. Compared to the total of 16.4 million farmers and the total increase of population from 40 million to 49.5 million during those 10 years, the increase in job opportunities was negligible.

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(1) Bank of Thailand, Quarterly Bulletin, December 1985.

## 21. The Economy in 1985

21.1 In the following we have tried to highlight the economic performance of Thailand during 1985. Table-1 below compares for certain indicators the performance of 1984 and 1985. In line with its terms of reference the Study Mission has in so doing given much more emphasis to the agricultural sector.

Table 1. ECONOMIC SITUATION : 1984 TO 1985

Indicators	Value (Baht: Billion)		Percentage Changes	
	1984	1985 (Pre-liminary)	1984/83	1985/94
<u>Production (Estimated)</u>				
GDP at constant 1972 prices	363.4	378.2	6.0	4.1
Agriculture	84.7	87.9	4.1	3.8
Non-Agriculture	278.8	290.3	6.7	4.1
<u>Price</u>				
Consumer price index (1976=100)	189.5	194.1	0.9	2.4
Wholesale price index (1976=100)	169.1	169.1	-3.1	-2.1
<u>Trade and payments balances</u>				
Export of goods	173.5	190.0	19.6	9.5
Imports of goods	242.3	255.6	3.4	5.5
Balance of trade (US\$ : Billion)	-68.8	-65.6	NA	NA
Balance of current account (US\$ : Billion)	-49.5	-43.1	NA	NA
Balance of payments	10.6	12.5	NA	NA
<u>Public Finance (Fiscal Year)</u>				
Government revenue	147.8	159.0	8.4	9.5
Government expenditure	177.4	197.5	7.5	11.3
Cash balance (budgetary)	-29.6	-38.4	NA	NA
Cash Balance	-34.9	-34.6	NA	NA
<u>Money and Banking</u>				
Money supply (M <sub>2</sub> )	542.5	599.8	20.2	10.6
Money supply (M <sub>1</sub> )	93.4	-92.3	11.5	-1.2
Domestic credit	643.9	701.9	17.1	9.0
- Government	154.4	161.8	14.1	4.8
- Private	489.5	540.1	18.1	10.3
Deposits at commercial banks	494.0	511.7	23.0	11.7

Source: Bank of Thailand Quarterly Report, December 1985.

## 21.2 Employment

The labour force, in which is included all persons 11 years of age and above, was up with 2,5% from 26.6 million to 27.24 in 1985. Employment per sector in 1985 was as follows:

Table 2 . EMPLOYMENT PER ECONOMIC SECTOR, 1985.

Sector	Total number of persons employed (million)	Distribution in % of total
Agriculture	19.71	67.3%
Manufacturing	2.26	8.5%
Others	6.44	24.2%

Source: Bank of Thailand Quarterly Report, December 1985.

There were 630,000 persons unemployed in the same year. The whole economy slackened during 1985 and the employment situation deteriorated further.

## 21.3 Production in 1985

Agricultural production recorded an overall growth of 3.8% almost the same as in 1984. Non-agricultural production which in terms of value is over 3 times as big as the agricultural production increased by 4.1% as compared to 1984.

The National Gross Product increased with 4.1% in comparison with an increase of 6.0% in 1984.

#### 21.4 Farm Production

1985 is the third year in a row with increased crop production (because of mainly favourable climatical conditions). It is expected that production of rice, maize, sugarcane and rubber would amount to 20.0, 5.0, 26.0 and 0.69 million tonnes respectively. Minor crops, e.g. sorghum, beans and kenaf also enjoyed an expansion in production during 1985. The aggregate growth rate of crop production would be around 3.6% or almost the same as the previous year.

#### 21.5 Crop prices

Crop prices <sup>dropped</sup> with an average of 8.7% in wholesale prices. This was very severe, especially for tapioca and maize whose prices plunged down by 15.5% and 6.7% respectively. This was due to an over-supply of agricultural production in the world market. The impact thereof was so acute that the results of the devaluation in November 1984 did not have the expected effect of maintaining domestic crop prices.

#### 21.6 Fish

Production increased both in volume as well as in value (Wholesale Price Index WPI = 8.6% up). Only fishmeal exports staggered because of intense competition from Chile and Peru. Soyabean meal imports also increased during the first half of the year but as Indonesia placed orders at the second half of the year the situation improved.

21.7 Forestry :

Production was maintained while animal husbandry production continued growing, even though with a lower rate than in 1984. Particularly, production of pigs and broilers surged up as a result of sizeable imports of breeding stocks in the past few years.

21.8 Construction :

The activities of this sector slowed down considerably in 1985 and 1986.

21.9 Automobiles :

Vehicle sales in 1985 were sharply down and nothing indicates any immediate recovery.

21.10 Aviation :

Thai Air continued <sup>to</sup> experience profits although other world airlines saw declining sales.

21.11 Commercial Banks :

Profitability was cut sharply due to the credit squeeze and the amendments of the three Banking Acts boosted the role of the Central Bank in the banking system. The interest rates remained high.

21.12 Insurance :

Sales increased with 5% in spite of overall reduced purchasing power.

~~21.13 Tourism and Hotel :~~

~~Business flourished and this sub-sector~~ <sup>To 214</sup> ~~a~~ decrease in both nominal and real incomes as a result of depressed prices of principal agricultural products. Especially, those <sup>from</sup> ~~growing~~ rice, tapioca, cotton, tobacco leaves, coconut and coffee had a drop of about 3.8% in estimated earnings. The total income ~~suffered~~

of animal husbandry farmers also dropped by about 10% i.e. in the case of breeders of pigs and broilers. This was in spite of a 5.0% increase in production. Higher incomes were earned by growers of maize, rubber, soyabean and peanuts. Fishermen also increased incomes due to a 7% increase in fish prices.

12.15 Consumption in 1985 :

Consumption increased with barely 3.3% as compared with growth rates of 8.2 and 5.4 per cent in 1983 and 1984 respectively. The reasons for this was firstly, the decreased income and weakening purchasing power of the majority of the population, which in turn was a result of low prices of primary commodities in the world market. Secondly, the crisis permeating the unorganized money operations reduced the flow of consumption credit. Thirdly, there were considerable price increases of consumer goods because of rising import prices of both finished products and raw materials. This was also accompanied by the upward adjustment of taxes on certain goods.

21.16 Household savings :

household savings

During 1985, increased because of more cautious spending, interest rates on savings and deposits being higher than e.g. the rate of inflation, and also because of the slowing down of expenditures in connection with the crisis in the organized and unorganized money markets. Business savings on the other hand shrunk because of lower profits caused by a slow down in demand and tough competition with consequential price reductions.



21.17 Prices in 1985 :

Prices of capital goods, mostly imported, were up because of the Baht devaluation. Interest rates stood at a relatively high level throughout the year. Consumer price index (CPI) rose by 2.4% against only 0.9% during 1984.

Wholesale Price Index (WPI) remained unchanged. However, when classified by sector, WPI for agricultural products and food products dropped by 3.2%, while WPI for all manufactured products went up on an average by 2.6%.

21.18 Trade :

External factors such as the sharp oil price increases on the world market during the years 1972-1981 created instability in industrial investments and growth as well as heavy economic recession. It can be mentioned that oil prices in 1973-74 went up 4 times over the prices in 1972 and in 1981 oil prices stood at 14 times the prices of 1972. Therefore during the period 1972-1981 great losses of foreign exchange were incurred.

21.19 In 1985, the export volume increased with only 4.6% after an expansion in 1984 of 20.7% over the volume in 1983. In value, however, and in terms of US Dollars, exports dropped by 8.7%. Total export value was Baht 190,000 million representing a decelerated rise of 9.5% compared with 19.6% in 1984. The export volume of 8 principal products went up slightly, while exports of maize, rice and tapioca products decreased. Several minerals had falling exports although world market prices of, e.g. lime and a few other minerals rose. Exports of shrimp, sugar

and textile products (in spite of protectionistic measures abroad) enjoyed a steep rise in both volumes and values. Similarly, leather exports had a breakthrough and became an important foreign exchange earner. Exports of natural gas also increased and was worth Baht 2.4 billion.

21.20

The import volume dropped during 1985 by 5.4% as a result of slow economic and investment climate and higher import prices which in turn also depended on the devaluation of the Baht and the adjustment of import duties in April 1985.

21.21

The value of imports became 255,600 million which represented a rise of 5.5%. This is relative to the 3.4% increase attained in 1984. Imports of oil and oil products were down in terms of value because of increased domestic production and substitution while imports of non-oil items recorded a sharp drop in terms of value during 1985, especially so in case of imports of buses, trucks and parts of vehicles.

Imports of aircrafts (Thai International Airways) reached Bhat 7.25 billion in 1985 compared to Bhat 2.25 billion in 1984. If this amount was excluded the total import value rose by only 3.5% while the total volume then dropped by 7.2%.

21.22 <sup>20</sup> Trade balance

As can be seen from the (below table) there has been a trade balance deficit during the last 10 years.

Table 3. Foreign Trade (Million Baht): 1976 - 1985

Year	Exports (f.o.b)	Imports (c.i.f)	Deficit
1976	60,797	72,877	12,080
1977	70,463	96,062	25,599
1978	83,065	108,899	25,834
1979	108,179	146,161	37,982
1980	133,197	188,686	55,489
1981	153,001	216,746	63,745
1982	159,000	195,000	36,000
1983	150,000	237,000	87,000
1984	174,000	243,000	69,000
1985	190,000	255,600	65,600

Source: Data compiled from various sources by ICA Regional Office for South East Asia, New Delhi, 1986.

In the beginning of the period heavy machineries and raw-materials were used in large scale industries in the fields of ready made garments, home electrical devices, petroleum, trucks, cars and motor cycle production. Even if exports increased it could not match the growth of imports. This was partly due to the applying of a high degree of protectionist measures, which resulted in inefficiency and incapability as regards competition with foreign industries and goods. During the year 1985, however, the devaluation assisted in slowing down the trend of increases in imports. This measure also further helped in pushing up the exports with about 9 per cent compared to 1984. Consequently, the trade balance improved slightly in 1985.

21.23<sup>21</sup> Balance of payment :

The overall balance of payment closed with a surplus of 12.4 Billion Baht as against 10.6 Billion Baht in 1984. This was mainly due to a public loan of US\$300 million (Baht 7.8 Billion) received in the end of 1985.

IV. AGRICULTURAL SECTOR

22. General Background

Thailand has agriculturally been divided into 19 Agro-Economic Zones within the four geographical regions as follows:<sup>3)</sup>

<u>Geographical Regions</u>	<u>Number of</u>	<u>Province</u>
	<u>Zones</u>	
1. North-Eastern Region	5	17
2. Northern Region	4	17
3. Central Plain Region	7	25
4. Southern Region	3	14
<u>TOTAL</u>	<u>19</u>	<u>73</u>

3) Agricultural Statistics of Thailand, Crop Year 1984/85  
Centre for Agricultural Statistics Ministry of Agriculture  
and Co-operatives, Bangkok, 1985.

4)

23. Land and land utilization

Out of a total land area of 51,177,000 HA, 16,677,000 HA and 19,370,000 HA in 1974-76 and 1983 respectively were classified as "arable and permanently cropped land". This means that an increase of 2,693,000 HA during the above 10 years period has taken place wholly at the expense of forests and woodland areas. Arable land alone accounts for 17,400,000 HA and 1,970,000 HA was under permanent crops in 1983, representing 34% and 3.8% of total land area.

Forests and Woodlands, which have shrunk considerably due to encroachment by squatter farmers and poachers, covered a total area of 15,500,000 HA in the same year or 30.3% of total land area. The encroachment has already created ecological disturbances in certain areas and the government is taking drastic measures to curb this and even embark on reforestation. The area of permanent pasture was comparatively small viz 308,000 HA (0.6% of total land area)

24. Use of Farm Land

The total farm land of 19.37 million HA was in 1984 used as shown in table 4 below:

Table 4. Area of Farmland per type (in 1000 HA) 1974 -- 1985

Type of land use	1974		1985		Changes	
	1000 HA	%	1000 HA	%	Area	%
1. Paddy	7,952*	47.7	9,816	50.7	+1,864	+ 23.4
2. Maize	1,180	7.1	1,696	8.8	+ 516	+ 43.7
3. Cassava	538	3.2	1,417	7.3	+ 879	+163.4
4. Pulses	318	1.9	577	3.0	+ 259	+ 81.4
5. Beans	259	1.6	575	2.9	+ 316	+122.0
6. Other Crops	NA	NA	2,700	13.9	NA	NA
7. Fruits & tree crops	NA	NA	1,600	8.3	NA	NA
8. Idle, grass and other type of land	NA	NA	989	5.1	NA	NA
<b>TOTAL</b>	<b>16,677</b>	<b>100</b>	<b>19,370</b>	<b>100</b>	<b>2,693</b>	

\*Area under Paddy given is for 1975.

Source : Selected Indicators of Food and Agriculture Development in Asia - Pacific Region 1975-85 FAO, RAPA, Bangkok, 1986- Processed by ICA, 1986.

From the above table it can be seen that 50.7% of the total farm land was under Paddy in 1985.

24.1 The average landholding per farm family is 4.3<sup>4</sup>HA and the farmer owned land is 75% of the total farm land. Irrigation covers approximately 17% of the total farm land.

25. Agricultural population :

It is estimated that about 37 million inhabitants or 73% of the total population live in rural areas and derive their livelihood mainly from agricultural activities.

26. Contribution of Agricultural<sup>e</sup> to the Gross Domestic Product :

The agricultural sector's share in GDP contribution has diminished proportionately from 35% of the total GDP in 1965 to 20% in 1984.

27. Value added in Agriculture :

The value added in Agriculture in 1970 amounted to 5,631 M US Dollar while in 1984 the corresponding figure was 9,829 M US Dollar. Compared to other countries in Asia as for example: China, India and South Korea, the increase in value added in Thailand has been very small.

28. Soils :

Soils are generally rich volcanic but salinity and sulphuric acid soils constitute a big problem in North East and Southern parts of Thailand. Besides, soil erosion are constraints in the North and North-eastern regions.



29. Fertilizer Consumption :

Fertilizer Consumption was up from a very low 7.6 Kg HA in 1970 to only 24 Kg per HA in 1984. Compared with other countries in the region\*this is an extremely low average fertilizer consumption and the increase in usage has also been very slow. It should be noted that all fertilizers are imported and for several years attempts have been made by the government and a number of private interests to set up a National Fertilizer Company. However, the lack of funds for equity formation has been a major obstacle as well as that the opinion about the feasibility of the project has been questioned by a number of experts.

According to FAO 85-90% of fertilizer demand is presently handled by the private sector.

The major farm activities :

In Thailand in terms of value and percentage distribution according to types of activities or agricultural products are as follows:

Table 5 : Value in Million Bahts of Agricultural, Fishery and Forestry Production 1980 - 1984

Crops/Product	1980	1981	1982	1983	1984	%
- Rice	53,533	50,456	47,422	55,364	57,584	28.7
- Maize (shelled)	7,284	7,517	6,034	8,525	9,972	5.0
- Fruits	22,723	23,019	21,242	26,034	28,919	14.4
- Vegetables	5,171	4,586	7,722	10,073	7,966	4.0
- Livestock/products	33,016	35,639	35,782	38,495	40,977	20.4
- Oil Seeds	4,243	5,072	4,040	5,968	6,933	3.5
- Rubber prod.	7,434	6,717	6,987	8,641	9,048	4.5
- Fibres	3,095	2,899	2,237	2,734	2,512	1.3
- Forestry Prod.	7,580	6,590	6,133	6,232	6,913	3.4
- Fishery Prod.	14,068	17,134	18,931	19,238	N.A.	-
- Other Products	28,660	32,147	34,779	30,513	29,947	14.8
TOTAL	186,808	191,776	191,309	211,817	200,771*	100

\*Total for 1984 do not include the Fisheries Sub Sector

Source: Agricultural Statistics of Thailand, Crop Year 1986/85, Centre for Agricultural Statistics, Ministry of Agriculture and Cooperatives, Bangkok, 1985.

From the above table it can be seen that 29% of the total value of agricultural production in 1984 was derived from Rice paddy and 20.4% from Livestock and livestock products. The third largest contributor in terms of value were the fruit products.

31. Agricultural export commodities in terms of value in 1984 were as follows:

Table 6 : Exports of Agricultural Products, 1984

Agricultural Activity/ Product	Value in Billion Baht	%-age
1. Rice & rice products	25.9	23%
2. Cassava & cassava products	16.6	14.7%
3. Food crops	13.5	12%
4. Raw sugar & products	6.1	5.4%
5. Fibre crops	5	4.4%
6. Rubber	13.8	12.3%
7. Fishery products	13.4	11.9%
8. Fruits & products	4.8	3.7%
9. Animal products	3.0	2.7%
10. Forestry & products	2.6	2.3%
11. Other agri. products	8.5	7.6%
Total value of agricultural exports	112,576	100%

Source: Agricultural Statistics of Thailand, Crop Year 1984/85.

Taking into consideration that total value of exports for all sectors in 1984 was Baht 174,000 million it can be concluded that agriculture contributed with 64.2% to the total national exports in the same year.

32. Main Agriculture Imports :

The main agricultural imports during 1984 were as follows:

Table 7 : Major Imports of Agricultural Commodities in 1984

<u>Products</u>	<u>Value in Billion Baht</u>
1. Fibre & fibere products	5.67
2. Fertilizers	4.66
3. Paper & paper products	2.85
4. Animal feed	2.22
5. Wood & wood products	2.39 <sup>A</sup>
6. Milk products	2.09
7. Fishery products	2.02
8. Food crops	1.56
9. Machinery & appliances for agricultural purposes	1.54
10. Pesticides	1.63
11. Rubber & rubber products	1.39
12. Tobacco	1.08
13. Vegetable oils	1.03

Source: Agricultural Statistics of Thailand, Coop Year 1984/85 :

As can be seen from the above table /, there is certain scope for agro-based industries to be established in e.g. the fields of fertilizer production, Animal feed production, milk and dairy

products. Such industries have been successfully operated by cooperatives in other countries in Asia.

32. Agriculture Production :

- 32.1 Rice paddy production has increased from 11.5 Million Metric Tons (MT) in 1974 to 19.2 Million MT in 1984. During the same period the area harvested increased from 7.9 Million HA to 9.7 Million HA. Yields have increased very slowly from 1.8 MT per HA to 1.97 MT during the same period. From this it can be seen that Thailand is having the lowest average rice yield in Asia except for Laos and Kampuchea. <sup>4)</sup>
- 32.2 Maize production increased over the period 1974 to 1984 from 2.7 Million MT to 4.2 Million MT while the area harvested in the same period went up from 1.4 Million HA to 1.7 Million HA. However, average yields only increased from 2.3 tons per HA in 1974 to 2.5 MT per HA in 1984.
- 32.3 Production of Cassava increased drastically from 7.9 Million MT in 1974 to 20 Million MT in 1984. → The area under production also more than doubled from 0.5 Million HA to 1.4 Million HA during the last 10 years. Yields have been almost the same throughout the period as in 1974 when the average yield per HA was 14.6 MT and in 1984 it reached 14.9 MT per HA.

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4) FAO Production Year Book, 1985

- 32.4 Overall farming in 1985. Due to favourable weather conditions record high crops were registered during 1985 in e.g. rice, maize and rubber. However, prices of several commodities including rice, maize, tapioca, sugar and rubber weakened considerably because of oversupply and keen world market competition.
- 32.5 Palm Oil Production went up from 2,000 MT to 81,400 MT over the last 10 years.
- 32.6 Fruits also doubled production during the same period from 2.5 Million MT to 4.1 Million MT and in 1985 fruit exports again increased and this sub-sector emerged as one of the biggest foreign exchange earners.
- 32.7 Livestock. The number of Buffaloes, Cattle and Swine and meat production has during the period 1975 to 1984 <sup>4)</sup> increased as follows:

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4) FAO Production Year Book 1985 Processed by ICA.

Table 8 : Number of Buffaloes, Cattle, Swine and Meat Production 1975 - 1985.

Year	Buffaloes		Cattle		Swine	
	: Heads :(Million)	: Meat :(000MT)	: Head :Million)	: Meat :000MT	: Head :(Million	: Meat :(000MT)
1975	: 5.6 M	: 63	: 4.1 M	: 126	: 3.5 M	: 190
1985	: 6.2 M	: 73	: 4.6 M	: 152	: 4.2 M	: 262
Growth Rate%	: 10.7%	: 15.9%	: 12.2%	: 20.6%	: 20.0%	: 37.9%

Source: FAO RAPA: Selected Indicators of Food and Agricultural Development in Asia - Pacific Region, 1975 - 85, Processed by ICA.

Buffaloes are mainly kept as drought animals, and not for meat production. The biggest number of Buffaloes are kept in Northeastern and Northern regions where at the end of 1984 there were 4.5 million and 1.1 million heads of Buffaloes respectively. The biggest number of cattle at the end of 1984 could also be found in the Northeastern region where there were 1.7 million Heads. At the same time there were 1.1 Million Heads of cattle in Northern region and 1.1 million heads in the Central Plain while in the Southern region there were 0.8 million heads of cattle at the end of 1984.

6) FAO, RAPA Selected Indicators of Food and Agricultural Development in Asia and the Pacific Region 1973 - 1983

- 32.8 Swine : As far as swine are concerned the biggest number appeared in Central Plain with 1.4 million heads in 1984, 1.2 million in the Northern region and 1.1 million heads of Swine in the Northeastern Region.
- 32.9 The Dairy Sector has shown a fast growth over the last 25 years both in terms of number of farmers, dairy cattle, training and processing plants. The milk production and consumption of domestic and imported milk products have also increased considerably. However, during the last one to two years there has been a slight but gradual decrease in imports of milk products. Consumption of Ready-to-Drink Milk (RDM) grew by 15% and presently consumption of RDM Milk exceeds production of raw milk with about 20%. The Dairy Promotion Organization (DPO) which is established by the government for the purpose of receiving milk from farmers for pasturization are presently running at low capacity utilization. Hence, as demand for Ready-to-Drink Milk is higher than the supply and as production capacity in most of the DPO Dairy Plants which are underutilized there is a scope for increased production of RDM and milk products.

In 1985 the Dairy Industry continued to do well. The production rose with 20% again over the previous year. Partly this was due to the government support programme to this industry.



6)

32.10 Fisheries - Inland fish production in Thailand amounted to 136,000 MT in 1973. Production reached a peak of 164,000 MT in 1981 and fell back to only 133,000 MT in 1982 while in 1983 it picked up again and reached 150,000 MT. Recently efforts have also been made to make more productive use of lakes and rivers for fish, prawns and shrimp cultivation.

Marine fishery production has increased from 1.5 million MT in 1973 to 2.1 Million MT in 1983. Hence, the annual growth rate during the period 1973-1983 was 3.6% and during the period 1980-83 it was 8.5%. Compared to other countries in the region the Marine fishery production of Thailand is high. Imports during the last 10 years of seven fishery commodity groups (as classified by FAO) increased from 18,000 to 50,500 MT. The exports of the same commodity groups more than tripled during the same period from 80,300 to 319,300 MT. This means a net export at the end of 1983 of 268,000 MT. Consequently, the fishing sector plays an important role in foreign exchange earnings. In terms of value it brought a net foreign exchange earning of 448 Million US Dollars in 1983. However, in 1985 fish marketing experienced problems in quality, pricing and delivery. Hence, previous buyers switched to other suppliers. Poor demand and strong foreign competition of fishmeal was also experienced by producers and exporters.

V. THE AGRICULTURAL COOPERATIVE MOVEMENT

BACKGROUND

- 32.11 The first agricultural cooperative was started in 1916 as a limited liability credit cooperative. Based on the Raiffeisen model the purpose of the cooperative was to relieve farmers from severe indebtedness and prevent their mortgaged land from foreclosed by money lenders. This cooperative became the model for both agricultural and non-agricultural cooperatives in Thailand. Consequently, the agricultural cooperatives were originally credit cooperatives.
- 32.12 Later on in 1938 service cooperatives, consumers cooperatives and paddy marketing cooperatives were started.
- 32.13 In 1943 a Bank for cooperatives was formed to take the place of the government's direct lending to cooperatives. This Bank was changed to the Bank for Agriculture and Agricultural Cooperatives in 1966. This Bank is providing loan services to individual farmers, farmers associations and agricultural cooperatives.

32.14 In 1968 a comprehensive amalgamation of the cooperatives took place, and the over 10,000 primary cooperatives of 22 types were reduced to only about 2,300. The major changes in the structure was the introduction of the 3-tier system into primary district cooperatives, provincial cooperative federations and national cooperative federations. The Cooperative League of Thailand was also formed and became the national apex organization with the main functions to promote cooperative activities and provide cooperative education and training facilities to the movement.

32.15 Presently, there are six different types of cooperatives in Thailand.

Table 9 : Types, Number of Cooperative Societies and Members, 1985

<u>Types</u>	<u>No. of Societies</u>	<u>No. of Members</u>
Agricultural Cooperatives	1,043	826,725
Land Settlement Cooperatives	92	77,122
Fishery Cooperatives	20	4,394
Thrift & Credit Cooperatives	587	862,023
Consumers Cooperatives	325	529,941
Service Cooperatives	216	68,893
<b>TOTAL</b>	<b>2,283</b>	<b>2,379,098</b>

Source: Statistics and evaluation section, Technical and Extension Division, Cooperative League of Thailand.

- 32.16 At the time of the visit of the Study Mission, there were 1,155 cooperative societies which could be termed as agricultural cooperatives. This include a total of 20 fishery and 92 land settlement cooperatives. The total membership for all agricultural cooperatives was at that time 908,241.
- 32.17 With regard to a primary agricultural cooperative society at the district level, its members consist of individual farmers. They are organized into informal groups at village or Tambon level for education purposes, business activities and the formulation of policies to be proposed further to the board of directors.<sup>8</sup>
- 32.18 There are also about 25 specialized agricultural cooperative societies marketing e.g. cut flowers, tobacco and tea. There are mulberry producers, sugar plantation and orange orchard cooperatives, pig raising cooperatives, dairy cooperatives and rabbit raising cooperatives from about 400-820 per cooperative society.

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8) Case studies of Cooperatives as Institution for Development of the Rural Poor; Thailand, Centre of Integrated Rural Development for Asia and the Pacific (CIRDAP), 1985, pages 20-23.

32.19 Provincial or Changwad cooperative federations are secondary level cooperatives whose members consist of primary cooperatives of the province. At present there are 71 cooperative federations which undertake joint business activities such as processing and marketing of agricultural produce.

Table 10. Business Activities of Agricultural Cooperatives  
(only primary cooperatives, excl. Fishery and Land Settlement Cooperatives.)

Details	1979	1980	1981	1982	1983	1984
- Number of coops. (primary)	841	890	965	981	1,012	1,081
- Membership (Households)	711,177	775,270	786,082	863,149	860,270	885,572
- Amount of loans provided to members (million ฿)	1,414	1,659	2,194	2,355	2,646	2,804
- Providing fertilizers, chemicals and equip- ment to members (million ฿)	587	1,065	731	675	565	1,085
- Collecting of members farm products: paddy maize; cotton, rubber (million ฿)	1,442	1,241	1,415	1,718	1,434	1,457
- Members' deposits (million ฿)	182	109	n.a.	n.a.	n.a.	557
- Land improvement (rai)	696,813	924,490	568,000	168,085	569,120	n.a.

Source: Cooperative League of Thailand, Unpublished Position Paper, 1985.

32.20 The membership of national cooperative federations comprise both primary agricultural cooperatives at the district level and provincial cooperative federations. At national level, the federations are horizontally classified into two categories:

- a) The National Federation related to 'multi-purpose agricultural cooperatives in the Agricultural Cooperative Federation of Thailand Ltd., (ACFT). This apex society is undertaking economic activities primarily in marketing of important grain products, like rice, maize, etc, produced by the farmer members of primary cooperatives as well as purchasing of agricultural inputs like fertilizers, chemicals, farm machinery and equipment supply directly to cooperatives and private dealers. International trade of cooperatives for exporting of rice and maize are also done through ACFT.
- b) Those apex societies related to specialized agricultural cooperatives are the Sugar-cane Growers Cooperative Federation Ltd., and the Swine - raising Cooperative Federation Ltd., which are carrying out production and marketing activities of swine raisers and sugar-growers cooperatives respectively.

32.21 Agricultural and Cooperative Credit. During the period of the Study Mission we had an opportunity to visit the Bank for Agriculture and Agricultural Cooperatives (BAAC) and had very interesting discussions with the Director,

Manager and Deputy Manager of the Credit Department. Below we review those discussions as well as we give the picture of the agricultural credit situation in Thailand.

Agricultural credit is provided by three different structures of credit institutions. The BAAC which was established in 1966 is the most important in this field. Through a network of branches and field units the BAAC is providing credit firstly, to individual farmers, secondly, to cooperatives for lending to members, for purchasing of inputs and equipments by cooperatives for resale to members, for purchasing and marketing of members' agricultural products and long-term loans for investments by the cooperatives in fixed assets and thirdly, the BAAC is also providing credit to farmers associations.

- 32.22 The Cooperative Promotion Department (CPD) in the Ministry of Agriculture is also providing credit to the cooperative sector for the purposes of buying real estates, construction of storage facilities, establishment of agricultural processing units and for the sake of transport facilities.
- 32.23 The commercial banks through their branches also provide credit to individual farmers. However, the proportion of commercial bank credit to the agricultural sector is very small. One bank, The Thai farmers Bank, is only having the word "farmers" included in its name but it does not extend services specifically to farmers.

32.24 The Bank for Agriculture and Agricultural Cooperatives (BACC)

The BAAC was established in 1966 for the purpose of catering to the needs of credit of farmers and cooperatives. According to information from FAO, the BAAC had loans outstanding to the tune of 1,194 Billion Baht and grew by 6 times to 7461 billion Baht in 1976. During the same period the gross agricultural product in nominal terms grew by only 2 1/2 times.

32.25 During the last five years i.e. 1980-84, the capital of BAAC grew from Baht 2037 million to Baht 2,290 million in 1982. Since then the capital has diminished to Baht 2,191 in 1984. Consequently, the capital has decreased by 1.92% over the past three years.

Liabilities, though have increased over the same five year period from Baht 16,031 million to Baht 23,097 million in 1984, an increase of 11.93%.

During the years 1980-83 the net profit of the bank increased from 88 million Baht to 195 million Baht in 1983, just to see a drop to 140 million Baht in 1984, which is a decrease in the net profit of 28.1% compared to 1983. The total assets increased by 10.37% during the last five years.

The establishment of new branch offices has been slow during the last five years. Only 9 new branches were established during that period and in 1984 there were 67 branches all over the country. According to the statistics provided by the BAAC it operated through 564 Field offices at the end of 1984 and thus according to the same statistics 699 districts were served by the branches.



32.26 Below we have attempted to review the lending operations of the BAAC as regards the 3 major groups of farmers to whom agricultural credit is extended.

32.27 Client farmers

Over the last five year period 1980-84 the annual disbursements have increased from 5.9 billion to 13.5 billion in 1984. This means an average annual increase of 25.4% in the volume of disbursements to individual farmers. As regards loans outstanding an almost similar increase has been recorded. The balance outstanding in 1980 was 7.3 billion and at the end of 1984 it stood at 14.9 billion, a total increase in the loan portfolio of client farmers for 7.6 billion, or an average annual increase of 20.8 per cent.

32.28 The composition of the total disbursements during 1984 were as follows:

Table 11. Total BAAC Loan disbursements during 1984

Type of Credit	: Amount in : Billion Baht	: Percentage : Total
Short-term loans	: 9,705	: 71.8
Medium-term loans	: 1,301	: 9.6
Cash Credit lines	: 485	: 3.6
Long-term loans	: 1,958	: 14.5
Re-financing of old debts	: 2	: -
Fertilizer from marketing organizations for farmers.	: 74	: 0.5
TOTAL	: 13,525	: 100

Source: BAAC Annual Report, 1985.

32.29 If we classify the short-term loans (STL) according to production purposes in 1984, we get the following:

Table 12 : Classification of Short Term Loans According to production purposes in 1984.

Loan Purpose	Amount (million)	Percentage
Rice production	4,457	46.9
Other Field crops	3,527	37.1
Livestock and poultry	933	9.8
Tree crops	336	3.5
Fisheries	169	1.8
Others	87	0.9

Source: BAAC Annual Report, 1985.

From the above table it can be seen that rice production is the most important short-term loan purpose and accounts for 46.9% of the total, while disbursements for other field crops amounted to 3,527 million or 37.1% of the total disbursements. Livestock and poultry accounted for a smaller portion, only 9.8% of the total disbursements.

The reasons for that a total of 263,955 farmers could not repay their loans on time were because of unexpected household expenses, heavy indebtedness to private lenders, loss due to legal suits and willfull default. As the climate was good during

the same year, non-payment of loans for crop loss due to natural calamities was very small, or only 1.1% of the total number of loans.

32.30 Medium term loans (MTL) were provided to 86,076 client farmers. The total disbursements amounted to 1,301 million, giving an average loan size of 15,144 per borrower. Most loans were granted for the purpose of purchasing land for agriculture (411 million or 31.6%), purchasing drought animals (21.4%), investment in farm buildings (17.5%) and investment in beef and dairy cattle (17.3).

The total loan default of STL and MLT was as high as 42.4%. The reasons for the farmers inability to repay on time were mainly unexpected household expenses (25.8%), loss of assets due to legal suit (21.5%) and in 14.1% of the case it was due to heavy indebtedness to private lenders.

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32.31 During 1984, 92,162 borrowers got long-term loans at an average of 21,245 Baht per borrower. The total disbursement was 1,958 million Baht. 22% of the total long-term loan disbursement was granted for the purpose of purchasing agricultural machinery. Investment in accessories accounted for 7.4% of the total disbursement. Similarly the purchase of agricultural land required 14.3% and farm land development work 18%. 7% of the total disbursement was used for purchase and improvement of farm buildings and 6.3% was given for purchase of drought animals. Only 21 million Baht or 42% of the expected loan repayment were made on time.

- 32.32 As in the cases of both short-term and medium-term loans, the reasons for loan default as regards long-term loans were unexpected household expenses in 36% of the cases, heavy indebtedness to private creditors in 22.9% of the cases and losses of assets due to legal suit in 9.6% of all the cases in this category

VI. AGRICULTURAL CO-OPERATIVES VISITED

- 23.1 During the period of the Study Mission the following Agricultural Co-operative Societies were visited:
- \*Nong Poh Dairy Co-operative Society;
  - \*Ban Lard Agricultural Cooperative Ltd.;
  - \*Bangsaphan Land Settlement Co-operative Society Ltd.; and
  - \*Ranode District Agricultural Co-operative Society Ltd.
- 33.2 In the following the main impressions from the visits to those co-operatives are reviewed.
- 33.3 As a result of the visits to Ranode District Agricultural Co-operative Society Ltd. and the Bangsaphan Land Settlement Co-operative Ltd. it was agreed that the Development Coordination Unit of ICA Regional Office for South East Asia will assist Co-operative League of Thailand and the respective Co-operatives to develop two project proposals on:
- \*Giant Fresh Water Prawn Breeding Co-operative Project in Ranode District, Songkhla Province and
  - \*Dairy Promotion Project, Bangsaphan, Prachuab Khirikhan Province.

33.4 Brief visits were also made to the Dairy Promotion Organization and its dairy plant at Pran Buri. Besides, the Mission had opportunities to meet farmers on their farms and interview them about their conditions, their needs, aspirations and thoughts of the co-operatives and their activities and operations, and how well those activities and services actually meet the needs of the members.

While in Songkhla the Mission also got a very useful and enlightening review of prawn breeding techniques under fresh water conditions.

Similarly, the Dairy Training Centre in Chiangmai was visited for the purpose of the Mission getting deeper insight about the training facilities available to future dairy farmers who may participate in co-operative projects. Other subjects related to livestock and dairying especially, high yielding and disease resistant cattle breeds and sources of supply, dairy product markets and marketing situation in Thailand as well as veterinary services and credit facilities available were ventilated at length.

33.5 Nong Poh Dairy Co-operative Society. This cooperative society was started by the King of Thailand. It was later taken over fully by the members, who today number 1,600 farmers. Their total production is 48 tons of milk per day. The dairy plant is a very modern one with packing facilities, using the most modern type of equipment. The dairy plant also sells raw milk to Multinational companies such as Nestles. Previously, this cooperative society also operated a powder milk factory which is now shut down to technical difficulties.

This cooperative society holds annual general meeting every year which elects the Committee comprising of 15 persons who hold office for one year at a time. The farmers are divided into 21 groups who are represented in the Committee.

33.6 Products :

The dairy plant produces pasturised milk which is packed in plastic bags and sold locally and to the Bangkok Dairy. Besides, UHT milk has been produced and sold during the last six years. Yogurt has been found very difficult to introduce but this cooperative society has managed to produce a yogurt drink with strawberry taste which is getting increasingly popular. Also, a small quantity of ice-cream is produced and sold by this cooperative.

The dairy cattle used in the area are mainly of Holstein-Freezian breed crossed with native cows. This has created a breed which can bear sometimes rather hot and dry climate and which is also disease resistant. The cooperative society provides veterinary services free of charge to the members. As regards artificial insemination, this is the case if government semen is used. However, if semen from abroad is utilized the farmers have to pay a small sum for a dose.

33.7 Feeds and Grasses :

A number of farmers have planted Mauritius grass which is stored up for the winter season, but this is not sufficient. Therefore, stocks of maize and maize leaves, stocks of sugarcane plants and stems of a number of other plants such as babycorn and rice straw are complementary feeds during the dry

and more temperate periods of the year. The cooperative society also provides from its own store concentrates containing required minerals and vitamins.

What is significant with this cooperative society is that the cows are kept in sheds and also fed in those sheds. However, this is slowly changing.

Milking is mostly done by hand, and machine milking is undertaken by approximately 5% of the farmers. Milk brought by the farmers to the cooperative dairy are undergoing the following tests :

- Sediment test
- Milk Concentration test
- Bacteriological test
- Butter Fat Content Test

As the test results are very carefully followed, the quality of the milk products sold and adhered to by this cooperative society is very high. The increase in production has been 15% per year over the period 1978 to 1985. In 1978, the total production of all the members of this cooperative was 5,467 tons while in 1985 the production had gone up to 13,882 tons.

The dairy plant has got a capacity of 8,000 litres per hour. In the pasteurization unit the capacity today is about 4,000 litres per hour and the plant can sterilize 2,500 litres per hour. The packing capacity as regards the UHT tetra pack machines is 900 litres per hour. The dairy owns 5 trucks which can transport pasteurized milk to the above mentioned Multinational company.

It also has a Warehouse where milk is stored up and undergoing continuous tests in its own laboratory during five consecutive days.

The cooperative also has a store where it sells lots of other items required by the farmers, e.g. bicycles, houses <sup>1/2 (1) etc (1)</sup> etc.

It has its own feed mills with a production capacity of 16 tons of cattle feed. Raw materials are bought from the whole country. The prices of the feeds are lower than competitors and besides they are sold on credit to members.

The cooperative society has got its own extension services which comprise 3-5 persons on a full-time basis together with one foreign volunteer. They provide training and extension service in simpler veterinary services and they carry out also, for example, hoof cutting.

Cowdung is collected in bags by the members and sold by the cooperative society to vegetable growers at a price of 15 Bht per 50 kgs bag.

The cooperative society employs 60 persons on a full-time basis in its dairy plant, 20 persons in the feed mill and 35 persons in administrative work and as drivers.

### 33.8 Prices :

The farm prices have developed positively over the last six years. In 1979, a farmer received 4 Bht per kg of milk while in 1985 the same farmer got 6.80 Bht per kg. an increase of 2.80 Bht.

The value of the sales of dairy products also developed very well over the period... 1978-85. The total value of sales amounted to 43.7 million Bht in 1978 and had gone up to 161 million Bht in 1985, which means a



four time increase over the last eight years. Finally, it can be mentioned that this cooperative society is a member of the Dairy Federation of Cooperatives, which is the National Apex Organization for all dairy cooperatives in Thailand.

33.9 Ban Lard Agricultural Cooperative, Ltd. :

During the period of the Mission, Ban Lard Agricultural Cooperative Limited was visited. This cooperative society has 2,558 members based on 4,800 farm families in 18 Tambons. Main agricultural activities in the area are rice and banana growing. The activities of the cooperative society are as follows :

- a) Paddy collection and milling and selling of rice ~~in~~ Agricultural Cooperative Federation of Thailand (ACFT); to
- b) Banana drying and marketing. This activity fetches 397,000 Baht per year;
- c) Consumer shop where fertilizers and other farm inputs are also stocked up;
- d) Credit section with at present a turnover of 90 million Baht. to Mainly funds are derived from the Bank for Agriculture and Agricultural Cooperatives (BACC); and
- e) Savings Activities. So far members savings amount to 9 million Baht.

33.10 Rice Production in Ban Lard:

The member farmers of this cooperative society have an average land holding of 6.3 HA (38 Rai), out of which they use 4.2 HA or 25 Rai for paddy production and the rest for other agricultural activities. The average rice production in the area is about 3,600 kgs per HA. Under irrigated conditions, the average production of rice is about 5,000 kgs per HA/year and only 1,875 kgs per HA/year under rainfed conditions. In the area of operation of the cooperative society it has been estimated that over 10,000 Rai are irrigated. The farm price for paddy during the last one year i.e. 1985 has been approximately 3,000 Bht per M/Tons. The cooperative society obtains 5,200 Bht per M/T while selling to ACFT. In this connection, it can be mentioned that in 1985 this cooperative society sold 50 M/T to ACFT. The total production of paddy in 1985 was 1077 M/T. 60 per cent of the farmers utilized the credit facilities offered by the cooperative society. The future plans of this cooperative can be categorized as follows:

- 1) Production of organic fertilizers by members;
- 2) Diversification of Agricultural Crops to include for example Mungbeans; and
- 3) Swine raising and rearing.

33.11 Cooperative Organization and Administration :

The General Meeting is the supreme body of the cooperative. It elects the Board of Directors who are responsible for the formulation of cooperative policies and guidelines for decision-making. It also elects the office-bearers and appoints the Manager of the cooperative society. The Manager administers the entire operation under the advice and supervision of the Board of Directors. The latest General Meeting was held in 1984. From the final accounts of 1983 we find that the assets at the end of the financial year 1983 were 31 million Bht and the liabilities and capital were divided as follows :

Share Capital : 4.5 million

Reserve Fund : 3.1 million

Accumulated Fund: 0.5 million

Total amount due to creditors at the end of the same year was 13.5 million and finally there were members' deposits amounting to 8.1 million Bht. Noteworthy is that this cooperative society made a net surplus for 1.2 million Bht during 1983.

33.12 Visit to Bang Saphan Land Settlement Cooperative Ltd. :

33.13 This Cooperative which is situated in the province of Prachuab Kirikhan embraces a total land area of 12,000 rai which will be used in the following way:

- public facilities 43,000 rai
- land for use by forestry department  
40,000 rai
- land to be shared by farmers  
117,000 rai

- 33.14 Up to now 1,359 farmers are members of this land settlement cooperative and they are using 52,000 rai for different types of farm activities. The plan of the cooperative society is to enroll another 2,000 more members within the next 10 years to come and distribute another 64,800 rai to those new farmers.
- 33.15 The criteria for farmers to join the cooperative are that they must be willing to abide by its rules and by laws. Another qualification which they have to fulfill is that they are living in that area but have no land of their own. This means in practice that they would be allocated the rights to the land and after 7 - 10 years they will become the owners of the land, but on the condition that they will not sell any land which they have received through this procedure from the government. Also the land cannot be sub-divided even in cases of farmers' deaths. In such cases the children together with the land settlement cooperative will decide who will take over the co-operative membership and get the new rights to the land.

- 33.16 As regards policies of the cooperative it was explained by the manager that meetings are held with the farmer members and the policies of the government are announced. Together they hold discussions on those policies and programmes and members contribute towards the planning for the implementation of those programmes.
- 33.17 Organizationally the cooperative has got a Board of Committees which consists of 19 members representing each one of the 19 farmer groups of 80 members each, with 16 members elected by the general membership.
- 33.18 The Chief of the Land Settlement who is an employee of the Cooperative Promotion Department of the Ministry of Agriculture and Cooperatives acts as an Advisor to the Board and to the Manager of the Cooperative Society.
- 33.19 Also, the Cooperative has got four sections namely the Credit Section, the Accounts Section, the Marketing Section which also covers the Cooperative Store and finally the Processing Section. The Credit Section obtains its funds from the Bank for Agriculture and Agricultural Cooperatives and from the Cooperative Promotion Department. It provides production credit based on farmers needs and before loans are issued the credit manager consults the Agricultural Extension Officer who pays a visit to the farmers to assess and verify the credit requirements. All loans records are maintained by the Office of the Cooperative Society.

- 33.20 The Cooperative Society has three full time employees, i.e. the Manager, the Accountant and the Marketing Officer. The salaries paid range from about 2,500 Bht per month to 1,800 Baht per month. The Manager also does the duties of a Credit Manager and a Committee Member is responsible on a voluntary basis for the Processing Section which mainly deals with the procurement of bananas and processing of banana products
- 33.21 In contrast to this personnel setup of the Cooperative Society it was found that the Cooperative Promotion Department has assigned six full-time officers to assist this Cooperative Society. Hence, there is the Chief of the Land Settlement, there is an Assistant Chief, a Cooperative Technician - Agricultural Extension, a Cooperative Technician - Cooperative Extension and an Administrative Officer. Besides the Cooperative Promotion Department has provided 7 drivers, one oil pump attendant, one guard, a cleaner and a chauffeur. From this it can be seen that the CPD personnel is more - double the number of employees of the cooperative society itself.
- 33.22 The main incomes of the cooperative society come from the loan activities, supplies of farm inputs as well as from marketing of, for example, ginger and a few other crops for the members. During the financial year 1984-85 this society incurred a loss of 48,000 Bah. This was mainly due to bad debts and depreciation of obsolete goods for a total amount of 86,500 Bht.
- 33.23 The Annual General Meeting is held every year with an agenda as per the Society bye-laws.

- 33.24 The total operational budget amounts to 3,000,000 Baht for which the Committee is fully responsible.
- 33.25 Most of the Board Members have finished both primary and secondary school, that means a total schooling of 10 years.
- 33.26 The Cooperative Promotion Department is making a very heavy input in the form of road construction, building of dams and preservation of water resources.
- 33.27 The farmers' activities according to the visit to the farmers' fields cover the following:
- Ginger;
  - Sugarcane;
  - Coconuts;
  - Sweet potatoes;
  - Rubber plantations; and
  - Beans
- 33.28 A large proportion of the land area of the individual farmers will be set aside for pasture and grazing. Dairy cows will be introduced for the purpose of assisting the farmers to earn incomes throughout the year and it should certainly help them to be less dependent on only their crops mentioned above.
- 33.29 The purpose of the visit to this cooperative society was to find out the feasibility of starting a cooperative dairy project in the area. The primary objective of the project is to encourage 150 members to raise dairy cows and through the coordination with the Dairy Promotion Organization's plant situated 100 km north of the area it is hoped that members will be able to receive

each 250 cows each year. It is expected that such cow will produce 2,000 kgs of milk per year.

- 30.30 It is also hoped that farmers will be able to deliver their milk, at reasonable prices to the Dairy Promotion Organization and that they will be paid monthly through their cooperative society. For this purpose the members will need training and technical know-how in dairy farming techniques and the Department of Livestock Development will be involved in providing such services as for example artificial insemination, disease prevention and treatment.
- 30.31 The Cooperative Society will be responsible for the selection of qualified members to join the project. The Cooperative will also provide cattle-feed, material and other equipment at reasonable prices to members. The Cooperative Society will organize milk collection and transport of milk to the DPO on a daily basis. Loan recoveries will also be made by the cooperative society at source from the sales proceeds of each member.
- 30.32 The Cooperative Promotion Department will be responsible for provision of loans to the cooperative society for feed production and marketing as well as milk collection. It will also provide training to members on cooperative principles and methods as well as ~~it will be training~~ farmers on maintenance of pastures, mixing of cattle feed and hygiene in milk handling, etc. etc. CPD will also assist in the coordination with other organizations. The project which will initially run for a period of three years will be to the tune of 1,194,330 US Dollars.



33.33 It is hoped that ICA will be able to assist the Cooperative Society to negotiate funding from abroad.

34. Ranode Agricultural Cooperative Society Limited. :

34.1 This Agricultural Cooperative Society is operating in Ranode District of Songkhla Province, Southern Thailand. It was started in 1976 through amalgamation of two credit societies. At that time there were 1707 members only. It can be noted that all these members are still with the Society. The members also comprised ~~of~~ 760 female members.

34.2 At the time of the visit of this Mission, the Society had 2,000 members. They are mainly poor paddy farmers. The average farm size per member is 2 1/2 - 3 hectares which yields a low average income of 9,000 Bht (US\$ 360). Other income bringing activities of the farmers in the area are piggery, egg production, duck breeding and a little milk production. All these activities are presently outside the operations of the cooperative society.

34.3 Enrolment of new members is taking place through the holding of group meetings of farmers whereby discussions are focussing on how farmers are benefitting from the services of the cooperative society. Farmers then make a formal application on an individual basis to join this Society as a member. The Committee of the Society will then examine such applications and if the farmer is found to be bonafide, i.e. he can make use of his services and fulfill his obligations

to the society, he is admitted as a member of the Society. It should be noted that the law restricts the membership to only those farmers who have their own land. Of course this is a shortcoming in the possibilities for landless farm workers and tenants to become members of the cooperative society and enjoy the facilities and benefits of it.

34.4 Decisions in this cooperative are done through the holding of :

- a) Farmers group meetings four times a year to discuss discussions proposed plans are made up;
- b) Monthly committee meetings are held; and
- c) Annual General Meetings are held within 150 days after the end of the financial year. The reports for the past year and the financial accounts including information about surplus and possibilities for distribution of such surplus are presented and decided upon by the General Meeting. Plans and budgets for the forthcoming year are also discussed and finally decided on. During the General Meeting 1/3rd of the Committee members are elected for a period of three years. As regards the day-to-day operation of the cooperatives the general manager executes and supervises all activities in between the monthly committee meetings.

- 34.5 This cooperative has got 12 full time staff members. They are employed in six main sections i.e. Accounts, Finance, Credit and Purchasing, Marketing and Farm Guidance Sections. Each section is having a Head of Section and an Assistant is also employed in the Credit, Purchasing and Marketing Sections.
- 34.6 Besides, the Cooperative Promotion Department employs four persons on a full-time basis for particularly assisting this cooperative society. They are seated in the cooperative society office against rental payment and the district cooperative officer is in charge of this unit which consists of apart from the DCO, a Cooperative Technician who assist the Cooperative Society in matters of finance, accounts and general coordination. The Cooperative Promotion Officer who assists the District Cooperative Officer on administration and is also responsible for advising the cooperative society on various aspects related to especially the extension of cooperative ideology and matters related to new undertakings and activities. A cleaner is also employed by the CPD in Ranode.
- 34.7 The members of this cooperative society have ~~ac~~cess to credit and savings and they can buy farm inputs, machine equipment and different kinds of feed stuff from the Marketing Section. The Cooperative Society also markets paddy on behalf of its members as well as it is providing farm guidance in rice, fish, vegetable and livestock production. ~~The~~

The Cooperative Society is also providing social welfare to those members in the form of assistance for funerals and payment of school fees. Members can participate in the above activities according to their needs and own initiative and interests. In case a member would like to avail himself of some of the facilities he, would approach the cooperative society personnel and he would be helped to enter into activity either directly by the person or via decision by the Board of the Society.

34.8 Below is given also information about the financial situation of this cooperative society during the year 1985:

In general, incomes are generated from:

- (a) Loans to members;
- (b) Sales of goods to members; and
- (c) From the paddy marketing activities.

*doing* If the society makes a surplus, which it has been continuously from 1976 and up to date, it is distributed by the Annual General Meeting for the following purposes:

- \* reserve fund which in 1985 distribution of surplus represented 22%;
- contribution to the Cooperative League of Thailand (1985). - 0.4%;
- dividend at a rate of 10% on shares (1985) - 33.4% on net surplus;
- rebate on loan interest - 14.6% on surplus in 1985;

- patronage refund (7.6% of net surplus or 1.4% of fertilizer surcharge and 2% on purchases of other goods);
- additional final payment to growers (3.9% on net surplus or 20 Bht per kg. delivered by the members in 1985);
- bonus to the staff and committee members (7.5% of net surplus in 1985);
- training funds which are kept by the Society (8.1% of net surplus); and finally
- development fund (1985 (2.4% of the net surplus).

34.9 After having had very sincere and elaborate discussions on the project idea i.e. to establish a giant fresh water prawn breeding project within this cooperative society the Study Mission went into details of collecting necessary data and information to enable a proper project appraisal to be made.

34.10 The Cooperative Society with this project intends to assist the farm families in the area to diversify their activities, increase their incomes and also to assist them to improve their protein intake and as a whole improve the standards of living of the participating farmer members. The Cooperative Society will start a project of 100 farm families over the next three years in giant fresh water prawn breeding in Pen culture along the shores of Lake Songkhla. The quality of the water in the lake close

to the village of Bankao Takhlia has been verified suitable by the Department of Fisheries.

- 34.11 As regards the marketing, the tourist town of Hat Jay which is also an outlet for the exports of prawn can easily absorb the expected annual production of 18 tonnes with a total sales value of 3.24 million Baht from these 100 farmer members.
- 34.12 The average net income of farm families is thus expected to increase by about 10,400 Baht per year ~~and~~ participating member. This would ~~be~~ more than double their present incomes.
- 34.13 The project will cost a total of 3.7 million Baht (US\$140,000) over the next three years and is expected to be financed to the tune of 500,000 by the Cooperative Society itself and hopefully with external assistance for 3.2 million Baht. The Cooperative Society is also expected to benefit from this new project in the form of additional marketing income. The project is according to the financial analysis going to be self supporting within the next three - four years to come.
- 34.14 It was decided that the Study Mission would further assist this Cooperative Society and the Cooperative Federation of Songkhla, which will be the principal caretaker of possible donor funds for this project to prepare a Project Document and also assist in negotiating necessary foreign support.

Annex No. 5 gives the seasonal project activities cycle during its first phase i.e. during the first three years in operation.

VII. AGRICULTURAL PLAN OBJECTIVES

- 35.1 In the following it is attempted to review the objectives of the 5th Five Year Development Plan which will have a bearing on the agriculture and the rural population. Consequently, those objectives will also have a definite impact on the agricultural cooperatives and its members during the next few years to come.
- 35.2 The Overall Agricultural Plan Objectives are to create "economic progress with national harmony." This would mean:
- i) Structural adjustments in the economy for a more equitable distribution of national development benefits to the rural population. In other words the disparities between urban and rural areas will be reduced. More emphasis will be laid on rural and agricultural development compared to efforts in the urban areas.
  - ii) In order to achieve the above, six major national objectives have been outlined. They are as follows:

- Restoration of the country's economic and financial position which will be achieved through:
  - a) increased savings mobilization;
  - b) expansion of manufacturers' and traders' export capabilities; and
  - c) reducing the dependence on imported energy and raw materials.
  
- Adjust the Economic Structure and Raise the Economic Efficiency through the following:
  - a) enhance self-reliance with individuals, groups and organizations;
  - b) generation of higher incomes and employment opportunities for the rural population;
  - c) dispersment of economic activities to the rural areas;
  - d) increase economic efficiency and yields in agricultural production;
  - e) reduce imports of oils and gas in favour of e.g. production of bio-gas;
  - f) increase yields of major crops by 4% per year;
  - g) enable farmers to sell their products at higher and more fair prices;



- h) speed up the dispersal of the land ownership pattern;
- i) increase farmers capability and bargaining power by forming more cooperatives;
- j) encourage agro-industrial activities in the rural areas; and
- k) develop the fertilizer industry through use of natural gas to be extracted from the Gulf of Thailand.

- Further Development of the Social Structure and Distribution of Social Services

- a) improve the quality of the population including morale development in order to develop a disciplined and a more cultured and ethical society; and
- b) improve the schooling facilities and education at all levels.

- Poverty Alleviation in the More Backward Areas will be given high priorities and will include the following:

- a) uplifting of the poor rural population to enable them to finally help themselves and become more self-reliant;
- b) enhance peoples own participation in solving their own community problems instead of relying on a one-sided help from the government;

- c) establish rural development programmes with the support of an expanded education system and other relevant training facilities;
- d) establishment of new projects, e.g. village fishery projects, cattle/buffalo bank projects, village water resources projects, etc.; and
- e) introduce "basic needs concept" in certain target areas in 216 districts and 30 sub-districts in the north-east, north and south. Special projects are to be drawn up in the areas mentioned in order to stimulate the implementation of those activities.

The coordination of economic development activities must go hand in hand with the national security management. The following will therefore be given priorities:

- a) improvement of food preservation methods; and
- b) acceleration of economic and social development programmes in security sensitive and depressed areas. An important ingredient in such undertakings will be the alleviation of local problems and at the same time the provision of basic local needs.

Emphasis will also be given to the Reformation of the National Development Administration System and De-concentration of the Ownership Pattern. This will be achieved through the following main undertakings:

- a) a comprehensive reform at the local administration level;
- b) reform of the national development administration and management system;
- c) improvement in project preparation and submission process together with the establishment of efficient and effective monitoring and evaluation systems;
- d) promote participation of the local population through de-centralization of development administration to the local authorities;
- e) establishment of rural development committees for the purpose of coordination of all rural development activities;
- f) make necessary amendments to the laws and regulations covering the private sector; and
- g) disperse the ownership of land; the amended Land Act for the purpose of limiting the size of land holdings is to be submitted to the Parliament.

VIII. THAILAND'S FIFTH PLAN - SOME RELEVANT ASPECTS

36. General Background :

36.1 The Fifth Five Year Plan 1982-86 differs drastically from previous plans by being a policy-cum-operation plan, which stresses policy issues and lays down related action programmes. It also treats growth only as a component of the overall development, whereas all previous plans emphasized growth itself as a primary goal. In this Fifth Plan, therefore, six objective-operation programmes have been designed in an attempt to meet the needs of Thailand and also try to capitalize on the potentiality of the country. The six programmes are as follows:

- Poverty alleviation programme;
- Stabilization programme;
- Economic restructuring programme;
- Social structure adjustment programme;
- National security coordination programme; and
- Development administration reform programme.

36.2 In the following we have concentrated our analysis of the plans on only those aspects which we felt had relevance to agricultural and agricultural cooperative development.

36.3 Poverty Alleviation Programme (1982-86)

Poverty related problems have in the Fifth Five Year Plan been defined as hunger, sickness, ignorance and general deprivation.

To overcome these problems especially in the Northeast, North and Southern regions four major plans were drawn up as follows :

1. The Rural job creation plan.
2. The Village development activities plan.
3. The Basic Services Provision plan.
4. The Economic restructuring programme.

36.4 The Rural Job Creation Plan

This was an ad-hoc plan carried over from the previous plan period. It was projected that 3 million persons in the above poorer areas should obtain employment during the dry season. The disparities in income distribution between rural and urban areas should thereby also be alleviated. The plan also envisaged the provision of rural peoples' basic needs. An annual budget for this plan was set aside with emphasis towards 216 districts and 30 sub-districts in the Northeast, North and South defined as having the highest poverty concentration. Work tasks that improved people's capacity and participation in Tambon Council activities and were like~~to~~ to create more permanent job opportunities

were given priorities. Specially appointed programme officers would be trained for better overall coordination. The Tambon Councils were furthermore to be strengthened through mobilization of resource persons such as development officers, teachers and Tambon agricultural officers, who would assist in both project identification and project management. Attempts would also be made to assign technical personnel with knowledge on elementary design, engineering and construction work to the local authorities. Besides, the Tambon Councils were given the task to maintain records on the public properties that would be constructed with financial grants from the projects. The following examples of project activities were to be undertaken :

- Construction and improvement of community buildings and facilities (reading centres, nutrition centres, children development centres, medical centres, rain water storage tanks, rice barn-rice banks, stables for cattle-buffalo banks, etc. etc.)
- Village water reservoirs and improvements of those already existing.
- Digging of water distribution channels and ponds.
- Planting of fast growing trees.

- Rehabilitation of fish ponds.
- Participation in reforestation projects.
- Public property rehabilitation projects with subsequent education for protection of public properties.
- Improvement and expansion of village transportation network including roads, digging of canals for connection with other villages and irrigation schemes.
- Skilled labour utilization in projects for e.g. making of cement water containers, earthenware jars and handi-crafts.
- Conservation of natural resources such as soil erosion, protection of walls (Northeast), planting of trees in watershed areas and communities, and soil improvement and saline soil development projects in the Northeast.

#### 6.5 The Village Development Activities Plan

Under-nourishment (protein deficiency), as a result of reduced fish consumption and dwindling poultry stocks affected by diseases, shortage of essential draught animals, water resources and lack of systematic organization for problem solving group activities at village levels are the reasons for this plan.

It was anticipated that within the five year span the above main problems would be solved in 5000 villages for more than 1 million people of the poor rural population. Uncultivated land would be given (possibilities to) become

owners of production means. Local resources and raw materials utilization in production and income generating activities would be encouraged.

375 village fish ponds and 368 village water ponds should be constructed and other water resources improved in 400 places. Furthermore, 164 swamps should be dredged and animal disease control programmes be introduced to 3,968 villages in the above mentioned three regions and eventually cover 10,841 villages. 22,400 households should benefit from provision of water buffaloes and cattle on a loan or sales basis. Another 46,200 people of 462 member groups would be involved in the formation and operation of a rice bank as well as 300 other groups of 46,000 people would be promoted to organize handicraft industries and occupations concerned with water management. Growing of peanuts and cashewnuts and setting up of processing industries by use of the nuts as raw material was also planned.

36.6 Basic Services Provision Plan (867.5 million Baht)

This plan concentrated on the prevention and treatment of food and water borne diseases in the target area. Legal advice to 5000 people should be provided through a new legal advice bureau. Publishing of experience enhancing books should be done and given to 3 million primary school children in the North and



Northeastern regions. Policies would aim at raising the overall standard and capacity of rural public health services for the rural poor. Basic public utility services would be provided. The nutritional problems in the form of food deficiency in infants and pre-school children would also be given particular emphasis. Extra food would be given to children aged 1-5 years, who suffer from second and third degrees of malnutrition. Special health communicators and health volunteers would be selected, taught basic health education and employed in further basic health projects.

36.7 Restructuring programme :

"The Structural adjustments must permit a more equitable distribution of national benefits to the Rural population." Restoration of the country's economic and financial position through:

- a) mobilization of more savings for both the public and the private sectors;
- b) building a national economic and financial discipline in both the public and private sectors to increase savings and lower extravagant and wasteful spending; and
- c) to increase economic efficiency and productivity and to expand export capability by improving the economic structure and natural resources utilization of efficiency and by reducing the dependence on imported energy and raw materials.

The above would require the launching of domestic savings campaigns, adjustments of domestic interest rates and establishment of more institutions to mobilize savings.

36.8 The restructuring of the Agricultural sector would provide greater justice to producers. The Plan stresses an increased agricultural productivity and improved efficiency in the use of natural resources, promotion of domestic production patterns consistent with exports and domestic consumption, the encouragement of the private sector to invest and develop in advanced agricultural areas, including improvement of farm productivity through research and extension work to raise yields; the improvement of land use, water and forest resources.

36.9 The restructuring of the agricultural sector aimed at providing greater justice to producers by enabling farmers to sell their products at higher and fairer prices and to speed up the dispersal of land ownership pattern; the target has also been to reduce the illiteracy rate to 10.5% by 1986.

36.10 The restructuring of agriculture was aimed at an annual rate of expansion of at least 4.5%. Instead of an "extensive" agriculture there should be an "intensive" agriculture, especially for rice, rubber, maize, beans, soyabean and cotton. Other agricultural sub-sector growth targets envisaged were:

- crops 4.7% per year;
- livestock 4.2% per year;
- fishery 5.4% per year; and
- forestry 0.3% per year.

Land productivity was to be increased by further improving 2.6 million HA of existing irrigated land and 1.1 million HA of acid sulphate (0.7 million HA) and saline (0.4 million HA) soils. Reforestation of 4,800 HA per year was also planned.

36.11 As regards land ownership the following was stated in the plan:

- Speeding up of land use surveys;
- Restrict private land holding;
- Speed up the land reform in central and lower Northern regions;
- Revise and enforce the Farm Rent Control Act so as to create justice for tenants and landlords;
- Improve land (saline, acid sulphate and low fertility soil)
- Amend laws and regulations to preserve high fertility agricultural land.

36.12 Regarding research and extension the Plan emphasized the needs to:

- Study yield improvements in rainfed areas;
- Speed up production of high yielding shoots or branches;

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\*Rai = 0.16 HA

- Study paddy which is drought and saline resistant;
- Improve the agricultural extension system especially in the fields of seed-water-fertilizer technology and pesticides construction of small experimental plots;
- Promote crop rotation system (castor beans, beans, cotton, sesame and wheat), in Central and Northern regions to increase land utilization efficiency
- Speed up substitution of low yielding paddy seeds, rubber trees, fruit trees, etc.
- Promote inland fisheries;
- Provide fertilizers more extensively to farmers with improved control of fertilizer quality;
- Encourage farmers to produce organic fertilizers; and
- Produce and sell 5000 tons of paddy seed, 4000 tons of bean seed per year and encourage 4000 farmers to produce high yielding paddy seed.

36.13 Agricultural credit was to be expanded from a total of 41.6 billion Baht in 1982 to 64.7 billion Baht to 1986 with an additional coverage of 400,000 farm households.

Also a credit plan for guiding the financial institutions' credit allocations should be established, farmers capability and bargaining power to be enhanced by forming co-operatives and by providing more services and knowhow.

36.14 Reduction of the population growth to 1.5% p.a. in combination with development of the quality of the population and moral development and creation of discipline were other features of the Plan.

36.15 The Plan also aimed at a more equal distribution of education, health and justice facilities to the rural areas:

This would involve e.g. private organizations in family planning, out of school education in remote rural areas were to be expanded both in terms of quantity and quality. Similarly, investments in higher education would be encouraged by the private sector.

36.16 In order to achieve the above targets the government would encourage the merging of all rural farmer organizations into agricultural cooperatives. These cooperatives will be encouraged to jointly market their products, as well as to improve the coordination of work between other institutions of the same level and the linkages between institutions of different levels.

36.17 Industrial restructuring :

In the first instance, the manufacturing industry would be changed into export industries by speeding up the transportation of primary processing industries into finished product industries.

On the Eastern seaboard the government was to develop basic industrial complexes connected with production of natural gas from the Gulf of Thailand, sponge iron industry, chemical fertilizer, soda-ash, potash and petrochemical products.

The government would also encourage the dispersion of agro industrial and manufacturing activities to the out-laying regions in order to increase rural employment in order to increase income for landless farmers especially during off farm seasons and thereby increase the use of local raw material. The conservation of energy in manufacturing would also be attempted.

IX FUTURE PERSPECTIVE - CONCLUSION<sup>S</sup> AND RECOMMENDATIONS

37.1 In the foregoing chapters the Study Mission has reviewed the socio-economic setting, the past and present development trends as well as the policies of the Government of Thailand as set out in the 5th National Five Year Plan. The agricultural sector as well as the agricultural cooperatives have also been studied and discussed in the previous chapters. The conclusions and recommendations of the Study Mission which were also discussed and agreed upon with officials from both the Cooperative Promotion Department, the Cooperative League of Thailand and a number of national cooperative experts will in this Chapter take the form of indicating future perspectives for the agricultural cooperatives, during the next 13 - 14 years, i.e. up to the year 2000. In pursuance to its terms of reference the Study Mission has also suggested certain areas in which projects may be developed in the context of the goals visualized by the Study Mission, viz. building a voluntary and genuine cooperative movement which can play an active

role in improving the social and economic conditions of the Thai farmers and at the same time make an important contribution to national development.

38. Recommendation 1 : Formulation of a National Cooperative Development Policy

38.1 The Study Mission is of the opinion that the cooperative movement in Thailand is supported to a very large extent by the Cooperative Promotion Department of the Ministry of Agriculture and Cooperatives. Many of the cooperatives therefore, have CPD employees occupying posts both at Board of Directors and managerial levels. Very often the activities and undertakings of the cooperatives are steered by those officers more towards national projects and goals rather than the needs and participation of individual members. The Study Mission while acknowledging wholeheartedly the efforts and good results of a number of CPD officers, would like to state that the democratic process which is an important and integral part of the cooperative organization would not be fully realized under the present arrangements. This may especially be so in the case where CPD representation on the Board of Directors of a cooperative organization is particularly heavy. Besides, there are a number of areas where cooperatives themselves will have to take the initiative and play a leading role. This is the case, particularly, in the development of cooperative philosophies and principles as well as

in developing coordinated cooperative development plans. Such plans must be taking into account both long-term and short-term perspectives needs and aspirations of the movement. It is in view of the above that the Study Mission strongly recommends that the CLT formulates a National Cooperative Development Policy (NCDP) which is based on Cooperative Principles and Methods of Work. Such a policy should be a very important ingredient in the future Five Year Economic and Social Development Plans of the country.

- 38.2 It has been noted that the Fifth National Plan emphasizes the promotion of farmers participation in development programmes and economic activities. Within such a national policy framework the NCDP could go a long way in enhancing self-reliance of individual groups and organizations like agricultural cooperatives.
- 38.3 The NCDP should address particularly areas such as agricultural production, planning, extension services and post-harvest technologies, agricultural cooperative marketing, cooperative training and education, cooperative financing, cooperative processing and agri-business activities. The agricultural cooperative sector should also address questions of pricing and subsidies.
- 38.4 Policy Objective

The objective of the National Cooperatives Development Policy will be to promote genuine cooperative organizations which would be organized and operated on the basis of self-help and democratic decision-making for the purpose of making a significant contribution to alleviating rural poverty and disparities between the rural and urban population.



NCDP would thus aim at making significant contributions to the national goals of Thailand as set out in the Economic and Social Development Plans.

39. Recommendation 2: Recognition of the Cooperative Movement as a Separate Sector of the National Economy

- 39.1 The Fifth Five Year Economic and Social Development Plan allocates greater role to the private sector. At the same time the plan emphasises the need to develop self-reliance, generate higher incomes and employment opportunities for rural people and disperse economic activities to the rural areas. It further stresses that it is necessary to inculcate a higher degree of initiative on the part of the people and further the people's participation in development programmes. The poverty alleviation goals set out in the Plan stress the need for "uplifting of the poor rural population in order to enable them to help themselves". It is the belief of the Study Mission that the cooperative movement is best equipped to achieve those objectives.
- 39.2 A cooperative in its true sense is of the people, by the people and for the people. Based on democratic principles and decision making, enterprises based on cooperative concepts and methods would generate a spirit of self-help for the promotion of collective and group well-being.

- 39.3 The private enterprise on the other hand seeks profits and not necessarily improvement of the conditions of the people it professes to serve. Consequently the private industry or the private sector is not the best instrument to alleviate rural poverty; on the contrary, the activities of private enterprise may enhance relative rural poverty.
- 39.4 Keeping in view the ideological character of the Cooperative Movement and its commitment to improve the lot of its members, who usually are the weak and the underprivileged, the Study Mission recommends that the government should assign the cooperative movement a vital role in rural development, working side by side with the government and its specialized agencies, and that the government should recognize the cooperative movement as a separate sector of the economy. There would thus be three economic sectors i.e. the State, Private and the Cooperative sectors. The Mission further recommends that the CLT should secure such recognition so that cooperatives can perform their due role in the national economy.
- 39.5 The 5th Five Year Plan refers to the cooperatives especially in regard to goals for the adjustment of the economic structure and raising economic efficiency where it states that "it will be necessary to increase farmers capability and bargaining power by forming cooperatives." In view of this it is suggested that future national plan documents should also review the performance of the cooperative movement, outline in detail the contributions which are expected to be made by the movement and allocate the required resources from the government exchequer.

39.6 It is further suggested that CLT should constitute a small group of cooperative experts to prepare a draft national cooperative development policy for consideration and adoption, first by its Board of Directors and later by the Annual General Meeting. If required the DCU of the ICA Regional Office could be requested to assist in the above task. In view of the rapid changes taking place in the national economy and the serious concern of the government to alleviate rural poverty, it is suggested that the above task be completed as soon as possible, possibly within the period of a few months.

Recommendation 3 : CLT and its Cooperative Coordination Role

40.1 There are a number of government bodies, i.e. ministries, cooperative departments and especially established agencies which are involved either directly or indirectly in the development of land and agriculture and with the livelihood of farmers. Even in respect of direct promotion and development of agricultural cooperatives there are different bodies involved. The Secretary of the Ministry of Agriculture and Cooperatives is the Registrar for Cooperatives, the promotion of cooperative is under the Director General of the Cooperative Promotion Department while a separate Director General is heading the Cooperative Audit Department. The Central Bank regulates the operations of the Bank for Agriculture and Agricultural Cooperatives (BAAC) under a different structure. The national development planning is done by the National Economic and Social Development

Board of the Office of the Prime Minister. Each one of the organizations mentioned have independent authority.

40.2 In view of this the Study Mission recommends that the CLT which is the national apex organization for the cooperatives in the country should play a coordinating role not only vis-a-vis its members but also vis-a-vis the various governmental ministries and authorities concerned with farmers and farmers' cooperatives.

40.3 The formulation of a national agricultural policy can be expected to bring about a coordinating approach in agricultural development. The formulation of a national cooperative development policy will similarly bring about a coordinating approach with regard to agricultural cooperative development and it should be the endeavour of CLT to ensure its implementation and monitoring of progress.

41. Recommendation No. 4 : Establishment of A Cooperative Development Council      ablishmer

41.1 The Cooperative League of Thailand as the national cooperative apex organization has the responsibility to promote and plan development of the cooperative movement in collaboration with the government. In order that this task is effectively performed the Study Mission recommends that a Cooperative Development Council is formed by the Cooperative League of Thailand with representatives from the cooperative movement and the concerned government ministries and departments. It would be the task of the Cooperative Development Council to formulate plans and programmes for cooperative development in line with the national objectives and cooperative ideology.

- 42.2 It is further suggested that a professional Cooperative Research, Planning, Development and Consultancy Division (CORPDEC) be established in CLT to provide the leadership of CLT with necessary information, data, material and views on cooperative development planning and implementation. It is the opinion of the Study Mission that this Division would also be responsible for handling and coordinating all cooperative development programmes and projects which receive foreign assistance.
- 42.3 In order to assist CLT in developing the necessary experience and skills in performing the duties outlined in the aforementioned Division, ICA Regional Office for (South East) Asia through its Development Coordination Unit (DCU) has developed a training programme in Project Identification and Planning. This programme is suggested to be tested out in Thailand with DCU as coordinator. It will be important in this respect that collaboration between the Cooperative League of Thailand and national experts from, for example, Kasetsart University, will be established so that CLT in the future may draw on such expertise in further development of this training programme and the division mentioned. If the proposed CORPDEC is developed slowly, carefully and systematically over a period of 4 - 5 years and if it will have competent and well-trained staff who can interact at both national and international levels, it is the view of the Study Mission that a number of problems besetting the cooperatives in Thailand today will be alleviated. The lack of statistics and information within the movement, the lack of long-term provincial and national planning for the cooperatives by the cooperatives as well as the lack of adequate coordination as regards cooperative development planning ~~and~~

and implementation are just a few of the problems. The output of the Cooperative Development Council and the proposed Cooperative Research, Planning Development and Consultancy Division (CORPDEC) of CLT should be transferred into the training programmes conducted by CLT and NACTI through subsequent collaboration between this division and the Education Division of CLT. More suitable and efficient training curricula and programmes could be developed in the weaker cooperative fields such as management, business diversification, finance and marketing,

42. Recommendation No. 5: Computerized Accounting Services

- 42.1 The proposed CORPDEC of CLT will in the opinion of the Study Mission also be able to assist in drawing up and developing new services, programme activities and projects which are needed by members of cooperatives at both primary and secondary levels. In this regard the Study Mission recommends that the Cooperative League of Thailand will establish Computerized Accounting Services for its membership and that CORPDEC should be instrumental in coordinating initial studies required and developing a possible pilot project with activities needed to develop and perfect new systems and routines suitable for the cooperatives and its members. Again this programme would secure relevant statistics for establishing of policies by the Cooperative Development Council (CDC) and for the purpose of planning and development to be spearheaded by the CLT in collaboration with its members. The Study Mission is of the opinion that all these efforts if well coordinated and executed will go a long way in alleviating many of the present weaknesses in the whole cooperative structure in Thailand.

43. . Recommendation No. 6 : Cooperative Data Bank; Manpower and Evaluation; and Management Information Systems

- 43.1 In order to enable the proposed CORPDEC of CLT to play the necessary role in planning for cooperative development, it is essential that the Division has access to necessary statistics, data and information with regard to the agro-based cooperatives, farmers and agricultural situation. It is of utmost importance in this regard that monitoring of the progress of the cooperatives in the country is also done. Consequently, the Study Mission recommends that a Cooperative Data Bank be established by the CLT. The Data Bank in collaboration with the CORPDEC will equip CLT with the knowledge of the existing agricultural and cooperative situation and enable it to monitor progress. The CLT would hence acquire both necessary knowledge, power and capacity for initiating and planning cooperative development programmes and influencing government policies vis-a-vis cooperative development.
- 43.2 The Mission further recommends that the CLT in conjunction with the establishment of the cooperative data bank also create its own monitoring and evaluation system (MES) and management and information system (MIS). MIS would enable CORPDEC of CLT to provide its affiliated organizations with scientific management counselling, with a view to enhancing their management and operational performance to high standards which will enable the cooperatives to function more effectively in a free, competitive environment.

- 43.3 The MES would enable CORPDEC and CLT to:
- a) Periodically monitor and evaluate progress of affiliated organizations as well as planned programmes and projects;
  - b) Issue early warning signals to decision makers at various levels; and
  - c) Help take timely corrective action, with a view to achieving efficient plan implementation. MES would also enable CLT and its affiliated organizations to improve the planning in the future.
- 43.4 In view of the above the Mission recommends that the CLT will acquire the necessary computer facilities to establish both the CLT Accounting Services, the Cooperative Data Bank, the MIS and the MES.
- 43.5 The DCU of ICA Regional Office if requested is prepared to assist CLT for and implementing the above recommendations. It is further suggested that the CLT formulates projects for the establishment of the Cooperative Accounting Services, Cooperative Data Bank, MES and MIS.
- 43.6 The above recommendations would give effect to CLT's role as a national cooperative body and especially its objectives to "advise, guide and assist its member organizations in the development of cooperative activities and services", and to "act as a link between the cooperative movement and the government as well as international organizations", and to "promote economic relations among member societies including those of trading - exports and imports," as



well as to organize "and conduct technical assistance, to conduct courses, seminars, conferences, and to carry out services and research and to bring out for the knowledge of both cooperators and the public as a whole, publications and news on cooperatives and allied subjects" and to "support and supplement the educational activities of member societies."

44. Recommendation No. 7 : Progressive Democratization and Self-Management

- 44.1 While recognizing the very significant contributions which the Government agencies have made to the development of the agricultural cooperatives, the Study Mission has come to the conclusion that the sense of belonging and ownership among members of the cooperative is not very strong.
- 44.2 After having analyzed the number of employees in both the Cooperative Promotion Department and the cooperative movement, the Mission has realized that there are an average of 2.5 - 3 CPD officers employed per cooperative society. The corresponding figure for full-time employees in the cooperative movement is approximately 1 - 2 persons per cooperative society.
- 44.3 However, the participation of farmers in the cooperative activities is very low in Thailand. Out of a total of 6 million farm families only about 900,000 or 15% are members of the agricultural cooperatives. In some areas the participation

percentage is as low as 10.6%.

- 44.4 This implies CPD officers should concentrate on extension activities diverted at membership expansion and also possibly establishment of societies in new areas.
- 44.5 Recognizing that skillful persons and employees are necessary to lead and to the management of the cooperatives at all levels the Study Mission recommends that all possible efforts be made over the next 10-5 years to create new, viable economic activities within the cooperatives, to re-organize in a coordinated manner the member, board members and the staff training and education efforts within the movement and that a scheme for creation of appropriate cooperative movement personnel policies and personnel development plans be drawn up, so that a progressive democratization and self-management of the cooperatives could be achieved by the year 2000.
- 44.6 The Fifth Year Development Plan expresses serious concern with regard to the lack of participation of farmers in the economic activities. It is in this context that the plan emphasizes the necessity of appropriate social and institutional development and the development of people's "own participation in solving their own community problems instead of relying on one-sided help from the government", and urges to "increase farmers capability and bargaining power by forming cooperatives." The plan further stresses the need to "establish rural development programmes with a suitable education system and relevant training facilities."

- 44.7 If the above policy pronouncements are to be seriously implemented the Study Mission recommends that the management of all the cooperatives should be democratized progressively. Steps must also be devised to enhance members participation. As a first step the cooperatives could have fully elected boards which should be given opportunities to learn how to exercise their power and how to execute their tasks in the most efficient ways.
- 44.8 Steps should simultaneously be taken to raise the operational efficiency of the cooperative managers and other personnel. The Study Mission recommends that the CLT and its affiliated members should adopt a policy whereby by the year 2000 all Board of Directors are elected by the respective Annual General Meetings and the General Managers are appointed by and work under the direction and authority of such elected boards. It is the firm view of the Mission that the next 13 - 14 years is an adequate period in which this target could be realized.
- 44.9 It is further suggested that the CLT together with its membership will establish criteria for classifying the cooperatives in various categories and after necessary studies and analyses, in the form of a national Cooperative Baseline Survey covering each one of the cooperative organizations, a master plan will be drawn up for how to achieve fully democratized and self-managed cooperatives.
- 44.10 Such criteria and classifications could include the degree of self-help and mutual help spirit accepted through team work and activities, member participation as exhibited through attendance in general meetings,

contributions to share capital, member deposits, members patronage, performance of loan repayments and member coverage in relation to number of households, etc.

44.11 Other criteria could include for example the performance of elected board members in formulating policies, in initiating new projects and in member relations and member services; Criteria for measuring the degree of dependence on government support in direct management should be developed and the performance in creation of social benefits such as member education and cultural activities should also be followed. Business performance in terms of market share of the cooperatives, increases in members incomes, as well as the effects and impact of the cooperative business on the standards of living of its membership could be measured.

44.12 The financial performance should also be used for the classification of the cooperatives. Example of criteria for such appraisals could be the members share capital in relation to the total capital, the efficiency of capital employed, input and output relationships of the cooperative activities, projects and programmes, surplus generation as percentage of total capital and per member, etc.

45. Recommendation No. 8 : Establishment of a Cooperative Financing System

45.1 It has been made clear to the Study Mission that there is an acute shortage of finances for cooperative activities. A number of

different credit schemes are administered by the Bank for Agriculture and Agricultural Cooperatives (BAAC), commercial banks and the Cooperative Promotion Department. The Study Mission has felt that the coordination of these efforts is not streamlined and that the farmers are rather divided into groups according to sources of credit.

- 45.2 It has also been made clear to the Study Mission that commercial banks serve only to a limited extent (interests of farmers, particularly the smaller and poorer farmers. In view of the above the Study Mission recommends that the CLT being the apex organization of the cooperatives in the country should spear-head the establishment of a separate cooperative financing system which will be registered under the cooperative laws, run by the cooperatives for the benefit of the cooperatives and their individual members. It is in this context suggested that the present savings activities being undertaken by the Provincial Cooperative Federation in Songkhla be studied in depth and based on the findings, a decision taken at the highest cooperative level whether a properly organized pilot activity for the purpose of a national cooperative resource mobilization should be launched. It is the firm opinion of the Study Mission that the cooperatives themselves have to mobilize their own resources in the form of savings and deposits and rely to the highest possible extent on such resources for providing its membership with required credit facilities.

- 45.3 It is important to realize that the competition for capital in a rapidly developing country is too sharp to enable the cooperatives to have a reasonable share of the funds available within the present banking system. Farmers or less well-to-do layers of the population, as is the case with most cooperative members, do not possess the necessary collateral and cannot comply with the stringent regulations and procedures of ordinary banks. Therefore, the Study Mission has suggested that the aforementioned in-depth study should also address questions like the credit requirements of individual members as well as the credit requirements of the primary cooperatives for the purpose of financing future development projects which will be identified with the assistance of the CORPDEC division of CLT.
- 45.4 It is further suggested that the same Study should explore the possibilities of each individual member of a cooperative society having his/her sales proceeds of produce and products sold to the society to be deposited to his/her own savings account with the cooperative society. The experience of such projects for cooperative resource mobilization in other countries have been very positive. In fact cooperative savings has increased very rapidly under such schemes and even in many cases surpassed the savings deposits of commercial banks operating in such areas.
- 45.5 The sales proceeds deposited to individual members personal accounts with their own cooperatives should be allowed to be withdrawn by the members as and when they need them. Consequently, the regulations for

cooperative members savings account within their own co-operative financing system should be simple and of easy access. This could be further promoted through mobile banking services.

- 45.6 The CLT together with the Cooperative Promotion Department, the Cooperative Audit Department and the ICA should form a working party which should have ~~on~~ its task to evaluate the results of the study and together develop finance and credit systems which are suitable for the cooperatives and their individual members. The present laws should be screened too and if necessary, changes and amendments be made accordingly.
46. Recommendation No. 8 : Increased Membership to cover 90% of the Farm Families by the year 2000
- 46.1 This report has already pointed out that only 10% - 20% of farm families are members of cooperatives in the agricultural sector. The 5th Five Year Plan emphasizes that farmer groups of various origin should be amalgamated into agricultural cooperatives. In view of this and the fact that at present only 15% - 20% of the agricultural output is generated through cooperatives the Study Mission recommends that a vigorous programme for the purpose of enrolling 90% of the farm families in cooperatives by the year 2000 is launched by CLT.
- 46.2 The launching of cooperative membership drives, preferably repeated annually and with innovative activities and programmes to attract farm families to become members would also be necessary.

- 46.3 Such plans would have to include pamphlets and brochures on cooperative performance on an area basis which provide information to the farming communities as regards the advantages of being members of a cooperative society.
- 46.4 (It is, further, the view of the Study Mission that statistical data on the extent of coverage by the Agricultural Extension Services together with information from the Bank for Agriculture and Agricultural Cooperatives (BAAC) on the total number of farmers who are obtaining farm credit on a regular basis should be used by the CLT, the Agricultural Cooperative Federation of Thailand and its affiliated member organizations in drawing up plans for how to achieve the above targets.
- 46.5 Apart from this, it is suggested that the above bodies carry out studies to find out the exact proportion of non-members and the reasons for their not joining the agricultural cooperatives. It will, in this respect, be the responsibility of the Cooperative League of Thailand and its membership to ensure the necessary support from the various government agencies for the realization of such plans and membership drives.

47. Recommendation No. 9 : Increased Member Participation

- 47.1 The Study Mission has been informed that 40% - 60% of farmers' incomes comes from farming activities. As mentioned earlier total membership in agricultural cooperatives is low. The sense of belonging and ownership among the present members of primary cooperatives is also low. The Study Mission on several occasions during field visits met the expression that cooperatives are government-run organization



The 5th Five Year Plan emphasizes "the people's own participation" in solving their problems" and "to enable them to help themselves". The National Plan recognizes the cooperatives as very important instruments in achieving these objectives.

- 47.2 It is in view of this that the Study Mission recommends that the CLT together with its membership launch a member education programme which will elicit member needs and views about the possibilities of the members themselves developing programmes for the fulfilment of such needs. It is the opinion of the Study Mission that the activities of the proposed CORPDEC of CLT will assist greatly in identifying cooperative activities including off-farm activities which will be beneficial to the members of primary cooperatives. It is suggested that the activities of CORPDEC be well coordinated with the efforts to be made for the purpose of stimulating member participation in cooperative activities.
- 47.3 It is further recommended that material is developed for study groups and study circles enabling members to identify their own problems and needs and to find joint solutions through group discussions conducted by trained leaders. Firstly, this should be done on a pilot basis in a few selected areas where the programme could be tested out. Secondly, after a series of test programmes, improvements and perfection of the program can be made. Thereafter, the programme can be launched on a national scale by CLT together with the Provincial Cooperative Federations.

47.4 In order to create the necessary infrastructure for such a programme the Study Mission recommends that CLT employs a number of Cooperative Education and Publicity Officers (CEPOS) to be posted at Cooperative Federation levels for the purpose of assisting the primary cooperative societies in carrying out training needs surveys for both the members and Board Members and for assisting the primary cooperative societies to develop and implement new training programmes. It is important that the CEPOS are conversant with adult training methodologies, group work and study circle leadership techniques and most of all, are capable of using modern technics of andragogy, where group dynamics, the experience and the knowledge of the group are being used to evolve on-the-spot training.

48. Recommendation No. 10 : Improved Structure and Coordination of Training of Board Members and Cooperative Personnel

48.1 The cooperative training and education activities as a whole are undertaken by a number of different organizations under separate management and policies. CLT is organizing a number of training activities for both board members and cooperative personnel. The CLT operates centrally from Bangkok and can thus concentrate mostly on residential courses in the capital city with participants from all over the country. Secondly, the National Agricultural Cooperative Training Institute (NACTI) is responsible for the management training programmes. NACTI trains

managers, credit officers, accounts officers and marketing officers in various professional aspects. The training seems to be of high quality. However, in the same way as CLT, ~~and~~ NACTI is hampered by limited student places and is not spreading fast enough over the country and can only cover a few areas of training needs, NACTI cannot reach out to the provinces to the extent necessary.

- 48.2 . Apart from the specialist training courses conducted by the CLT and NACTI, a number of universities are having cooperative and allied subjects in their Bachelor's and Master's Degree programmes. For instance, Kasetsart University is having a full-fledged Department of Cooperative Science with a number of very qualified professors and lecturers and this department receives approximately 60 students per year, comprising officers from the Cooperative Promotion Department and the cooperative movement.
- 48.3 The Cooperative Promotion Department which is having 10 cooperative training centres spread over the country and only partly equipped is catering mainly for the training needs of cooperative officers of various grades.
- 48.4 In view of the above and the lack of scientific and systematic coordination which are based on relevant training needs survey and geared towards the future aspirations of the cooperative movement and its members, the Study Mission strongly recommends that CLT will set up a National Cooperative Training and Education Council for the co-ordination of all cooperative training and education activities in the country. It is further suggested that the work of this Council should be based on:

- a) in-depth studies of the present levels of training and education;
- b) the future cooperative development policies, strategies and plans;
- c) training needs surveys for all categories of staff members of the cooperative movement; and
- d) training needs surveys for the board members.

- 48.5 As regards the training needs surveys and analyses it is important to take into account the experience gained by NACTI in this respect. While building up future training programmes also such relevant issues as performance targets for the purpose of post-course evaluation should be included.
- 48.6 In order to create the necessary infrastructure for the training programmes and training activities to be launched in the future, the Study Mission also recommends that an in-depth study of the present structure, the premises and facilities of all training institutions should be carried out by CLT through the assistance of an external consultant on cooperative education and training.
- 48.7 The cooperatives in the future will have to have adequately and sufficiently trained personnel so as to operate all services including new cooperative development programmes and projects in a businesslike and efficient manner. It should in this respect be taken into account that about

4000 officers of the Cooperative Promotion Department are presently either seconded to or otherwise involved more or less directly in the activities of Cooperative Societies all over the country. They are engaged in cooperative extension work, they are acting as managers, they are functioning as advisors in various technical fields as well as they are doing supervision of the cooperative societies, provincial federations their activities and projects. The work force of the movement is, consequently, rather weak and thus needs the highest possible attention by the cooperative leaders.

48.8 Another serious constraint according to NACTI <sup>is</sup> ~~in~~ the relatively high turnover of cooperative movement employees. This is clearly illustrated in the following table:

Table 13. Employment and resignation of agricultural cooperative personnel in the project year 1983-1985.

Position	: Number of employees	: Number of resignations	: % of resignations
Manager	: 533	: 209	: 39.12
Credit Officer	: 477	: 98	: 20.55
Account Officer	: 456	: 76	: 16.67
Marketing Officer	: 254	: 39	: 15.35
<b>TOTAL</b>	<b>: 1,720</b>	<b>: 422</b>	<b>: 24.53</b>

Source: NACTI surveyed on June 30, 1985

- 48.9 This situation calls for a complete re-thinking in terms of manpower planning, salary structures, career and manpower development within the Cooperative Movement.
- 48.10 It is the firm opinion of the Study Mission that CLT must take very serious and drastic measures to bring training for the movement by the movement itself at more easy reach than is the case to-day. It is therefore recommended that the CLT considers very seriously the employment and posting of Cooperative Education and Publicity Officers at the Provincial Cooperative Federations who will serve as a link between the individual including the CLT itself and who will carry out continuous studies, training needs surveys, curriculum and course development, planning of training and education activities and most of all assisting in the coordination of the various cooperative training and education activities in the country.
- 48.11 During the visit of the Study Mission to Thailand, it was announced that the Cabinet had approved that NACTI will be merged with CLT, a move which is a step in the right direction as suggested above. However, it is very urgent that the CLT, NACTI, the Universities concerned, the Cooperative Promotion Department and the Cooperative Department will come together to discuss under what terms the future setup and organization will be done and how the responsibilities should be divided so that maximum benefits could be derived from this merger. Another issue which should be urgently addressed is the need for expansion of the facilities in terms of buildings, dormitories, training aids and equipment with the CLT and NACTI. In this respect

it should be taken into account that a modern, well equipped Training Centre has been established with the assistance of Japan.

48.12 In view of the earlier recommendations it is envisaged that the number of cooperative movement personnel will increase from about 2000 today to about 6000 - 7000 in the year 2000. Therefore, the Study Mission also recommends that all studies to be undertaken as well as that all plans which would come out as a consequence of such studies and other co-ordination activities would have to take into account the establishment of effective personnel, career and manpower development policies. It is further suggested that CLT must be the initiator and executor of all these activities. The Study Mission further recommends that the results of all the meetings and workshops and seminars on these special subjects by ILO and other international and national organizations should be taken into account. Even in this respect a de-centralized provincial approach will be necessary to accomplish such a huge and important task.

48.13 The proposed employment of CEPOS<sup>S</sup> at Provincial Federation level would facilitate action on the ILO Cooperative Policy and Standards Workshop Policy Recommendations

49. Recommendation No. 12 : Involvement of Agricultural Cooperatives in Agri-Business and Marketing

49.1 Realizing that only 1% of the exports of rice is being handled by the cooperative sector, that fertilizer usage in paddy production is as low as 24 kgs per hectare and recognizing that cooperative participation in agro-based industries and agro-

processing activities are exceedingly limited the Study Mission recommends that CLT together with ACFT and its membership will launch a programme to increase considerably the participation of primary cooperative societies and secondary level federations in agro-based industrial projects and agro-processing activities. It is further recommended that the market shares of the agricultural cooperatives in various agricultural produce, products and finished foods over the next five years should be substantially increased in terms of business volume. The Study Mission is of the opinion that farmers can and should increase production, but experience has already shown that farm gate prices of produce and farm products in Thailand have fallen drastically in case of good crop years. Consequently, increased production would only marginally improve the income situation of particularly the small farmers.

- 49.2 It is the opinion of the Study Mission that it is only by participating in agribusiness and agro-processing through cooperative organizations that the small farmers will reap the fruits of added value generation and thereby increase their incomes very substantially. The main thrust by the cooperative societies and their federations at various levels should be all types of feasible agribusiness, agro-processing activities and marketing of agricultural produce and ready made products.



- 49.3 In this respect development of storage, warehousing, bagging and packaging facilities as well as handling procedures and transportation must be taken seriously into account and developed. Another aspect which has to be addressed is the relation between quantity, quality and price structures for farm produce and products. It is recommended that these relations be studied in the context of both national and international markets and that schemes be launched for the implementation of grassroot level programmes which will enhance quality and hence also farm gate prices.
- 49.4 Practically all fertilizers used by farmers are presently being imported. For a number of years a plant for the production of fertilizers, the National Fertilizers Corporation, has been in the pipeline. However, doubts are to its financial viability and the raising of necessary equity and finance has been hampering the progress of this very important project. Taking into account the low fertilizer usage by farmers and hence low productivity in most regions of the country it is recommended that the CLT and ACFT with the support of the Government will explore the possibilities of primary agricultural cooperatives and their members to raise on a voluntary basis a part of the capital required for the start of the National Fertilizer Corporation. It is further recommended that the possibility of obtaining finance by the cooperatives on soft term loan basis for the purchase of shares in the NPC also be explored so that farmers themselves can be part owners of the planned fertilizer production unit.

49.5 With a stake in such a nationally important undertaking the farmers would benefit in several ways. Firstly, their access to fertilizers through their cooperatives would be ensured. This would also considerably enhance the business turnover of secondary and primary cooperatives. Secondly, possible profits of the NFC would come into the hands of the cooperative organization and its members instead of to other interests. Thirdly, foreign exchange to the tune of 4.7 billion Baht or more would annually be saved by the country.

// 50. Recommendation No. 13 : Increased Input Supply Through Agricultural Cooperatives

50.1 The National Five Year Plan stresses the need for reducing the economic disparities between regions. It further aims at increasing the production and economic activities of farmers. It is the view of the Study Mission that increased production through higher yields could be achieved through better farm guidance and planning. Such an approach would require a higher and more efficient use of farm inputs combined with more efficient measures for control of insects and pests.

50.2 It is in view of this that the Study Mission recommends CLT and ACFT to spearhead the establishment of a scheme for improved farm guidance and planning at grassroots level through which the sales volume of fertilizers and other inputs could be well established. It is further suggested that necessary infrastructure and support services are built up. In this regard it will be necessary to establish the requirements at working capital, credit, storage and transport. Based on such facts it is recommended that CLT and ACFT together with the Provincial Cooperative Federations will develop a master plan for timely provision of farm inputs at convenient reach of the farmer members of primary cooperatives.

50.3 The Japanese supported project on farm guidance in one of the provinces is of great value for development of such a scheme on a national basis. Such a project enhances not only the planning, purchasing, credit, savings and marketing but also increases the possibilities for more coordinated government support programme and joint member activities such as joint nurseries, pest and insect control and the use of machinery and implements. In turn this also facilitates more practical training exercises and on-the-job training of farmers. If properly organized and coordinated all these actions will finally lead to the development of simpler administrative routines with the cooperatives and the standardization of both cooperative member and management training.

51. Recommendation No. 14 : Action Towards Improving Living Conditions of Farmers

51.1 In the foregoing recommendations it has been stressed that farmers will need to increase their production and develop agro-industries and better market schemes in order to enhance the incomes and living standards of the farm families. During the visits of the Study Mission to a number of agricultural cooperatives it was experienced that farmers and their families members were engaged in farm activities only on a part-time or seasonal basis. The unemployment of especially young girls and women in a number of regions of the country would have to be addressed seriously and should be taken up by the agricultural cooperatives in order to alleviate this problem.

51.2 The Study Mission is of the opinion that the Cooperatives have not approached this problem of women and youth in a systematic manner. It is strongly recommended that measures and steps are taken to effectively serve these two groups in order to help farmers with home budgeting and education activities with regard to nutrition, balanced diets and child and family health care. It is in view of this, extremely important that new farm activities will be identified and started in which women and youth could be usefully employed. It is recommended that the CLT and the proposed CORPDEC Division will pay special attention towards these two groups while identifying new projects and programmes on behalf of its membership. In this respect it is of utmost importance that income generating activities which can assist the farm families in evening out their incomes throughout the year should be given high priorities.

51.3 Efforts aiming at the improvement of environment, development of energy resources based on agricultural wastes and other general community development activities should as well be given high priorities. It is only through such activities that agricultural cooperatives will be able to attract sincere involvement of the members, an aspect which has already been referred to in earlier recommendations.

52. Recommendation No. 15 : Contribution to Diversification of Agriculture

52.1 The policy measures taken by the ~~U.S.~~ as regards their Farm Act has affected the Thai rice farmers and their incomes. In fact during the years 1985, 1986 and the first half of 1987 the exports of rice from Thailand decreased substantially.

United States America

Thailand has for many years been the leading supplier of rice together with the U.S. on the world market, and recently it has been proved that the Thai farmers conditions and markets cannot be guaranteed to the same extent as was the case in the past.

- 52.2 It is in view of this new situation that the Study Mission strongly recommends that the cooperatives assist the small farmers in diversifying agricultural production.
- 52.3 Small farmers can very well develop production of meat, dairy products, aquaculture of products, production of fruits and vegetables and do flower culture.
- 52.4 More efforts to grow fibre crops and thereby reduce imports of fibre raw materials should also be made. At present Thailand imports fibre raw materials to the tune of almost 6 million Baht per year.
- 52.5 Hence, it is recommended that the diversification efforts should be made by the cooperatives in collaboration with the relevant government departments i.e. Agricultural Extension Services, the Land Settlement Department and the authorities responsible for national security management. The Study Mission recommends that the cooperative in accordance with the economic and agro-climatic conditions should formulate projects in the above various fields and thereby make a contribution to the development of the agricultural economy as well as also to national development. The CLT and the proposed CORPDEC division should actively assist the cooperatives in identifying such projects and participate in promoting the diversification of agriculture.

53. Recommendation No. 16 : Development of the Cooperative Dairy Industry

- 53.1 During the Study Mission visits were arranged to areas where cooperative dairy activities were undertaken and also where dairy activities could be developed. A study undertaken by the Ministry of Agriculture and assisted by Danish experts in the field of dairy promotion was undertaken in June 1986. This study reveals among other things that the present government regulations on compulsory use of domestic raw milk by all Ready-to-Drink milk production plants has secured the market for the dairy farmers in Thailand. It further states that the consumption of ready-to-drink milk exceeds the production by about 20%, and that the consumption continued to grow by about 15% per annum over the past 10 years.
- 53.2 The Study further recommends better co-ordination, the establishment of a Dairy Sub-Committee under the Agricultural Policy and Planning Committee and the establishment of a Master Plan for Dairy Development.
- 53.4 In the chapter on the Dairy Promotion Organization (DPO) the study report recommends "a concentration of DPO activities on milk collection/processing with a long-term possibility of transferring such activities to cooperatives with sufficient managerial capacity."
- 53.5 Taking this into account and assuming that the purchasing power of the urban population will continue to grow at the present rates it is recommended that the CLT assists farmers and farmers cooperatives especially in areas with suitable agro-climatic conditions to introduce schemes for the supply of dairy cows and develop processing units of competitive standards

as well as it enhances the formation and development of a National Cooperative Dairy Federation which over a period of 10 years would develop its own expertise in dairy industry development. It is therefore felt necessary that the CLT will arrange for a study which should address especially the possibilities of the "cooperative sector" undertaking the development of the cooperative dairies in the country. Especially small farmers should be given attention in this study.

53.6 Training facilities for care and preventive treatment of dairy cows and artificial insemination as well as production of high quality milk etc. according to farmers needs and suitable schemes for financing should be developed. It is suggested that CLT in this respect collaborates closely with CPD and its Dairy Cooperative Promotion section, which is presently undergoing upgrading.

53.7 Such issues as the present legislation and institution building surrounding this industry should also be studied and recommendations made to support small farmers' dairy cooperatives in Thailand.

54. Recommendation No. 17 : Identification of Areas for Projects

54.1 The Study Mission received a number of suggestions regarding agricultural cooperative development project potentials. They were as follows:

- project on coffee marketing promotion for cooperatives in selected provinces;
- dairy promotion project in Bang Sapahan;
- Giant Fresh Water Prawn Breeding Cooperative Project in Ranode district; and
- production, marketing and export of green beans by selected cooperatives.

54.2 In view of the limited time available the Study Mission together with CLT and the Cooperative Promotion Department selected the projects on Prawn Breeding in Ranode and Dairy Cooperative Development in Bang Sapahan for further study and appraisal. The DCU of ICA Regional Office will assist the CLT to develop project proposals and negotiate necessary foreign donor support for the above two projects.

55. Recommendation No. 18 : Studies and Research

55.1 The Study Mission during its visit to various provinces and after having studied various reports and documents have come to the conclusion that there are a number of other fields which agricultural cooperatives could enter and develop to the benefits of its members. However, the future business potential and opportunities for serving the members need to be further studied, each one of these areas on their own merits. The Study Mission therefore recommends that the CLT will develop through the proposed CORPDEC Division the capability to undertake such studies as well as it would draw up a three-year plan in order to phase these studies.



55.2 ICA will be prepared to assist CLT to find necessary experts for the carrying out of the studies concerned as well as assist the CLT to develop the necessary competence in cooperative research for the future. It is important in this context that CLT will look at these studies as undertakings for the cooperative movement through which the aspirations and needs of the cooperative movement are set in focus. In view of the above, the Study Mission further suggests that the following areas will be subjects of further research and study:

- all types of livestock breeding;
- slaughtering;
- meat processing and other allied industries;
- animal-feed production for various types of domestic animals;
- inland and marine fishery development;
- aqua-culture development both inland and in coastal regions;
- processing of agricultural wastes for production of energy and new income-generating activities;
- agricultural machinery and appliances production including marketing and after sales services;
- forestry including harvesting, replanting, re-forestation and forest preservation;

- establishment of saw mills, pulp and paper production;
- water resource preservation for both irrigation and consumption purposes;
- reclamation of land and re-use of such land;
- fruit production and marketing for both domestic and international markets; and
- processing of various crops and production of agricultural products by the cooperatives.

55.3 It is further recommended that CLT will assist its members in doing Area Potential Surveys followed by project identification studies on activities termed as very potential by such area surveys. CLT should also through its proposed CORPDEC Division assist its members in negotiating necessary resources, both in terms of manpower and funding, for such new programmes.

**SCHEDULE OF VISITS AND MEETINGS OF MR. STEN DAHL AND MR. J.M. RANA, STUDY MISSION ON PERSPECTIVE & PROJECT PLANNING FOR THE AGRICULTURAL COOPERATIVE SECTOR IN THAILAND : 9TH APRIL TO 2ND JUNE 1986.**

Sunday, 27th April

Arrival at Hadyai Airport from Malaysia at 1700 hours.

Monday, 28th April

- Visit Ranoda Agricultural Coop Society Limited to collect primary data on a proposed project on Fresh Water Giant Prawn Breeding.
- Visit Fishery Department at Ranoda District.
- Arrival at Bangkok by Air at 2215 hours.

Tuesday, 29th April

0930

- Meeting with Dr. S.H. Kim, FAO.

1400

- Meeting with Director General of the Cooperative Promotion Department (CPD) and Chairman of the Cooperative League of Thailand (CLT), Mr. Chern Bamrungwong; Mrs. Benjawan Sadpak, Chief, Foreign Relations Section of CPD and Mrs. Thada Kiriratnikom, Director, Technical Division of CPD.

Wednesday, 30th April

0930

- Together with Mr. Surasit Impol, Foreign Relations Department of CLT, meeting with the Manager, Rice Department of the Agricultural Coop Federation of Thailand (ACFT).

1200

- To ILO collecting reference material on Cooperative Manpower and Training Standards.

1330

- Meetings with CPD and CLT on the preparation for the ICA Agricultural Sub-committee Meeting to be held on 29th and 30th May 1986 at Bangkok.

Thursday, 1st May

0930 - 1000

- Meeting with Mr. Hiroshi Yamamoto and Mr. Akira Yoshida, Japanese-Thailand Agricultural Cooperative Promotion Project (CPD).

1000 - 1100

- Meeting with the Deputy Permanent Secretary of the Ministry.

1200 - 1330

- Lunch with Mr. Robby Tulus of Coop Union of Canada.

- 1400-1600 - Meeting with Directors of Planning and Research of the Division of Agricultural Economics and Research, Ministry of Agriculture and Cooperatives.
- 1600-1800 - Meeting with Mrs. Jean Perlin, First Secretary and Head of CIDA (Canada) at the Canadian Embassy regarding support programmes for cooperative development.

Friday, 2nd May

- 0830 - Meeting with Mr. Pairoon Sicliada, Director, Rural Development Coordination, National Economic and Social Development Board, Office of the Prime Minister (Sten Dahl).
- 0830 - Mr. J.M. Rana - Meeting with Mr. Robby Tulus of Cooperative Union of Canada and Mrs. Jean Perlin, First Secretary and Country Representative of CIDA (Canada), Canadian Embassy, Bangkok.
- 1000 - Meeting with Director and Senior Personnel of the National Agricultural Coop Training Institute (NACTI).
- 1330 - Lunch hosted by Bank for Agriculture and Agricultural Cooperatives (BAAC).
- 1400 - Meeting with General Manager, Deputy General Manager and Manager, Loans Department of the BAAC.

Saturday, 3rd May

- Departure for field trip.
- Visit to the Dairy Plant of the Nong Pok Dairy Cooperative Society.
- Visit to the Ban Land Agricultural Coop Society Limited, Ban Land, Paetchaburi Province.
- Overnight at Champon.

Sunday, 4th May

- Meetings at Bangsaphan Land Settlement Cooperative Society Limited (210 km. South of Bangkok) with the Society Committee Members, Staff and District Cooperative Officers.
- Visiting farmers members of the Bangsaphan Land Settlement Cooperative Society.
- Stay overnight at Bangsaphan Cha-am.

Monday, 5th May

- Data collection and discussions on Dairy Development Project Proposal.
- Visit to and meeting with Deputy Manager of the Dairy Promotion Organisation Dairy Plant at Pran Buri, Prachabkerekran.
- Return to Bangkok.

Tuesday, 6th May

0930

- Meeting with Dean and Lecturers of the Cooperative Department, Faculty of Economics and Business Administration of the Kasetsart University, Bangkok.

1400

- Preparation for draft summary on the Mission and meetings with CLT personnel.

Wednesday, 7th May

0830

- At CLT for finalising draft summary.

1230

- Lunch hosted by CPD.

1330

- Preparation of and discussions on the draft summary conclusions and recommendations of the Perspective and Project Planning for the Agricultural Cooperative Sector in Thailand. The Director General of CPD chaired the Session. In attendance were representatives for the CLT, ACFT, CPD, NACTI and the Kasetsart University.

Thursday, 8th May

0900

- Agricultural Extension Department.

1100

- FAO Regional Office for Asia and the Pacific.

1300

- CLT - working on the preparation of the Dairy Project Proposal for Bangsaphan.

1600

- Brief meeting with Insurance Adviser of CLT.

Monday, 27th May

- 1000 - Meeting on Dairy Project Proposal for Bangsaphan.
- 1300 - Meeting with Deputy Minister of Agriculture, Ministry of Agriculture and Cooperatives on the findings and preliminary recommendations of the Perspective and Project Planning Mission.

Tuesday, 28th May

- 1100 - Discussions on Project Proposal for Giant Fresh Water Prawn Breeding.

Friday, 31st May

- 0930 - Meeting Chairman and Director of CLT for discussions and agreements regarding Mission recommendations.
- 1500 - Meeting with Japanese expert on the Agricultural Cooperative Promotion Project.

Saturday, 1st June  
Sunday, 2nd June

- Visit to Chiang Mai Dairy Research and Training Centre for meetings with the Principal and Vice Principal on possibilities for training farmers in the proposed project on Cooperative Dairy Development in Bangsaphan.

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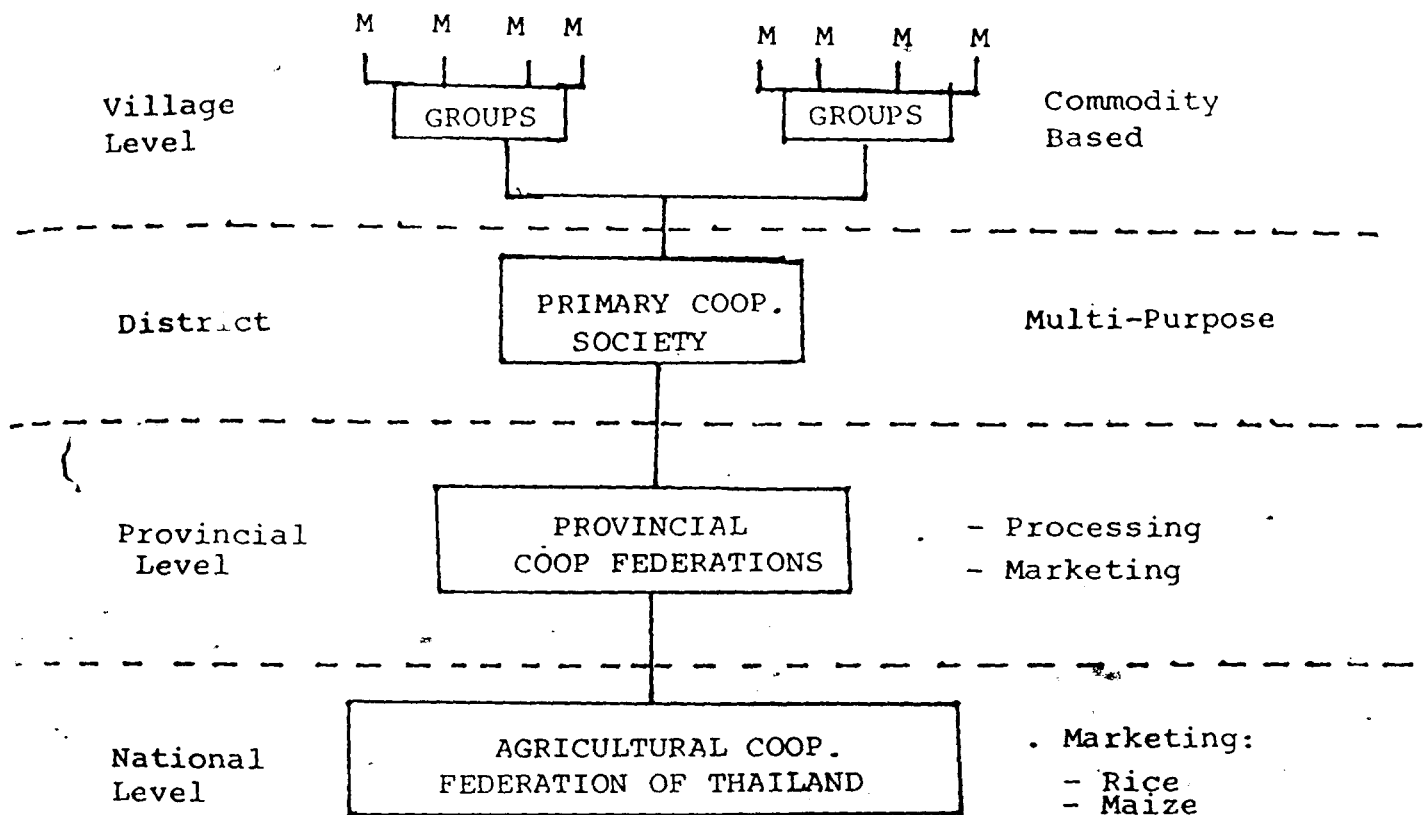
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STRUCTURE OF AGRICULTURAL COOPERATIVES



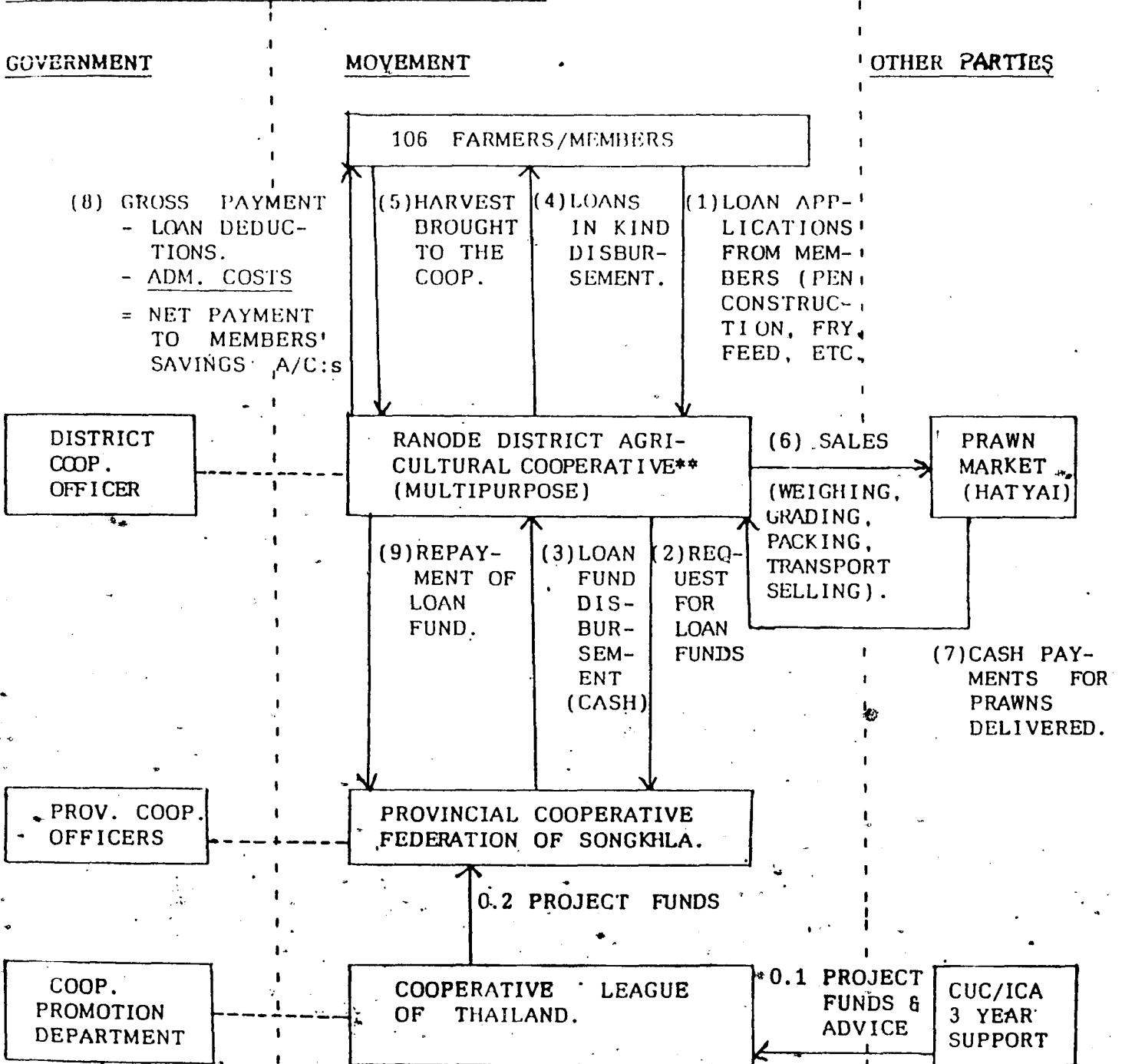
Different Types of Agricultural Cooperatives:

1. Agricultural Cooperatives	1043
2. Land Settlement Cooperatives	92
3. Fishery Co-operatives	20
Total	<u>1,155</u>

- Marketing:
- Rice
- Maize
- Purchase & Distribution:
- Fertilizers
- Chemicals
- Machinery
- Exports:
- Rice
- Maize

SEASONAL PROJECT ACTIVITY CYCLE, PHASE-1.

THAI COOP STRUCTURE



\*\*Functions : - Savings  
 - Credit  
 - Feed Supply  
 - Prawn Marketing

Country : Thailand  
Advisor : Stan H. Dan  
Date : 28 Oct 84

BASIC INDICATORS :	1970	1975	1980	1984	1985
1. Population (thousand persons)					
1.1 Total population	36,370	41,388	46,455	50,584	51.74
1.2 Total Agric. Population	29,049	32,158	35,000	37,109	
1.3 Economically active - total	16,952	18,873	20,803	22,437	
1.4 Economically active in Agric.	13,540	14,604	15,870	16,460	
1.5 Economically active in "A"	79.9	77.7	75.0	73.9	
1.5.1 Total number of cooperatives					2.2-C
1.5.2 Total cooperative population					11.095-C
1.7.1 Total number of agri.coops 1)					1.1-C
1.7.2 Total Agric. Coop Population 1)					1.317-C
1.8 Economically active Agri. Coop Population - Total					7.4.
1.9 Total Agri. Coop Members 1)	N.A	N.A	775		863-C
1.10 Total Agri. Coop Employees					
2. Land (1000 Ha)	1974-76	1979	1983	1984	1985
2.1 Total area	51,400	51,400	51,400	51,400	
2.2 Land area	51,177	51,177	51,177	51,177	
2.3 Arable and Permanently Cropped	16,677	18,082	18,601	19,370-F	
2.3.1 Arable land	14,896	16,315	16,655	17,400-F	
2.3.2 Permanent crops	1,781	1,767*	1,946	1,970-F	
2.4 Permanent pasture	308	308*	308*	305-F	
2.5 Forest and woodlands	18,573	16,774	16,093	15,930-F	
2.6 Other land	15,619	16,013	16,095	15,999	
3. Irrigation (1000 Ha)	2,415	2,800-F	3,171	3,472	

Source : FAO Production Year Book 1984 : F = FAO Estimates, I = ICA Estimates, \* = Unofficial figure, C = Coop Promotion Data  
1) Agricultural Coops, land settlement Coops and Fisheries Coops are here classified as "Agricultural Cooperatives".

PRODUCTION INDICES (1974-76 = 100)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
<b>4. Food Production</b>												
4.1 Total	94.27	92.02	101.78	106.20	104.52	120.36	114.26	119.03	128.19	130.81	136.09	139.94
4.2 Per cap	99.31	94.47	101.81	103.72	99.71	112.20	104.13	106.09	111.76	111.43	117.30	121.33
<b>5. Aerial Production</b>												
5.1 Total	94.64	92.96	101.37	105.47	105.39	120.89	115.66	118.09	120.53	121.74	127.11	131.11
5.2 Per cap	99.89	95.41	101.39	103.19	100.32	112.68	105.39	108.04	112.03	112.71	118.50	122.77
<b>6. Gross Production</b>												
6.1 Total	95.69	93.07	101.45	105.46	104.40	121.57	114.54	120.32	123.03	120.43	129.44	133.73
6.2 Gross/Per cap	100.79	95.52	101.47	103.00	99.57	113.32	104.37	107.24	111.84	111.08	115.83	120.11
<b>7. Livestock production</b>												
7.1 Total	96.35	92.26	100.40	107.34	113.82	121.04	128.95	130.44	142.33	152.72	157.44	162.48
7.2 Gross/Per cap	90.93	94.71	100.47	104.82	108.40	112.84	115.88	118.24	124.53	130.31	131.34	131.33
<b>8. Cereals Production</b>												
8.1 Total	99.73	92.23	105.23	102.53	90.51	117.77	107.77	118.02	122.92	115.10	126.14	128.24
8.2 Gross/Per cap	105.03	94.56	105.22	100.10	86.31	109.45	98.19	105.15	107.13	98.33	106.80	110.73

	1974-76	1982	1983	1984
Area harvested in 1000 Ha.	9,289	10,466	11,226	11,6
Yield in Kg/Ha	1,182	1,923	1,997	2,0
Production in 1000 MT.	17,478	20,125	22,422	23,7
<u>addy</u>				
Area harvested in 1000 Ha.	7,952	8,918	9,400-F	9,7
Yield in Kg/Ha	1,834	1,893	1,972	1,9
Production in 1000 MT.	14,585	16,878	18,555	18,8
Area (1000 Ha)	1,180	1,306	1,567	1,8
Yield (Kg/Ha)	2,277	2,299-F	2,267	2,5
Production (1000 MT)	2,679	3,002	3,552	4,1
Area (1000 Ha)	152	236	251	2
Yield (Kg/Ha)	1,383	1,000	1,304	1,3
Production (1000 MT)	210	236	327	3
<u>and tubers</u>				
Area (1000 Ha)	575	1,128	1,058	1,3
Yield (Kg/Ha)	14,261	16,088	16,267	14,7
Production (1000 MT)	8,204	18,155	17,355	20,3
<u>es</u>				
Area (1000 Ha)	1	1-F	1-F	
Yield (Kg/Ha)	7,225	11,111	11,029	10,9
Production (1000 MT)	5	7-F	8-F	
<u>Potatoes</u>				
Area (1000 Ha)	37	40-F	40-F	
Yield (Kg/Ha)	9,343	8,967	8,987	8,9
Production (1000 MT)	344	355-F	355-F	3

1974-76 1982 1983 1984

	1974-76	1982	1983	1984
<b>9.6 Cassava</b>				
9.6.1 Area (1000 Ha)	538	1,087	1,018	1,555
9.6.2 Yield (Kg/Ha)	14,606	16,362	18,653	14,970
9.6.3 Production (1000 MT)	7,855	17,788	18,989	19,965
<b>9.6.A Pulses</b>				
9.6.A.1 Area (1000 Ha)	259	542*	543-F	546-F
9.6.A.2 Yield (Kg/Ha)	758	646	650	649
9.6.A.3 Production (1000 MT)	196	350	353-F	353-F
<b>9.7 Soyabeans</b>				
9.7.1 Area (1000 Ha)	106	101	156	151
9.7.2 Yield (Kg/Ha)	1,060	1,124	1,087	1,192
9.7.3 Production (1000 MT)	113	113	172	192
<b>9.7.A Beans, Dry</b>				
9.7.A.1 Area (1000 Ha)	186	440*	540-F	602-F
9.7.A.2 Yield (Kg/Ha)	773	639	643	643
9.7.A.3 Production (1000 MT)	144	281	283-F	384-F
<b>9.7.8 Cassor Beans</b>				
9.7.8.1 Area (1000 Ha)	37	38-F	59-F	59-F
9.7.8.2 Yield (Kg/Ha)	1,027	906	923	923
9.7.8.3 Production (1000 MT)	38	34	56	56-F
<b>9.8 Groundnuts in shell</b>				
9.8.1 Area (1000 Ha)	116	116	123	139
9.8.2 Yield (Kg/Ha)	1,310	1,237	1,193	1,206
9.8.3 Production (1000 MT)	152	145	147	164
<b>9.8.A Sesame Seed</b>				
9.8.A.1 Area (1000 Ha)	25	37-F	37-F	37-F
9.8.A.2 Yield (Kg/Ha)	962	695	696	703
9.8.A.3 Production (1000 MT)	24	26	26	26-F

1984

1983

1982

1974-76

## 1.8.8 Seed cotton

9.8.8.1	Area (1000 Ha)	34	107	108	109
9.8.8.2	Yield (Kg/Ha)	1,106	1,139	1,104	1,127
9.8.8.3	Production (1000 MT)	37	122	119	123

## 9.8.C. Cotton seed

9.8.C.1	Area (1000 Ha)	25	81	80	82
9.8.C.2	Yield (Kg/Ha)				
9.8.C.3	Production (1000 MT)				

9.9	Coconut production (1000 MT)	809	1,076	1,090-F	1,100-F
9.10	Copra production (1000 MT)	40	41-F	35-F	35-F

9.11	Palm kernels (MT)	421	10,406	11,695	17,129
9.12	Palm oil (MT)	2,000	49,522	55,552	81,361
9.13	Vegetables + Melons (1000 MT)	2,771	3,066	3,057-F	3,109-F
9.14	Fruits excluding melons (1000 MT)	2,484	3,871	3,981	4,111
9.15	Tree nuts (1000 MT)	2	15-F	13-F	13-F

## 9.16 Cabbages :

9.16.1	Area (1000 Ha)	25	17-F	17-F	17-F
9.16.2	Yield (Kg/Ha)	5,504	5,471	5,402	5,402
9.16.3	Production (1000 MT)	136	93-F	94-F	94-F

## 9.17 Tomatoes :

9.17.1	Area (1000 Ha)	8	7-F	7-F	7-F
9.17.2	Yield (kg/Ha)	4,065	4,069	4,600	4,614
9.17.3	Production (1000 MT)	32	32-F	32-F	32-F

## 9.18 Pumpkins, squash, Gourds :

9.18.1	Area (1000 Ha)	8	8-F	8-F	8-F
9.18.2	Yield (Kg/Ha)	8,750	8,780	8,795	8,690
9.18.3	Production (1000 MT)	70-F	72	73-F	73-F



	1974-76	1982	1983	1984
<b>9.18.A Cauliflower :</b>				
9.18.A.1	4	4-F	4-F	4-F
9.18.A.2	6,571	6,568	6,579	6,579
9.18.A.3	23	24-F	25-F	25-F
<b>9.19 Cucumbers and Cherkins :</b>				
9.19.1 Area (1000 Ha)	7	7-F	7-F	7-F
9.19.2 Yield (Kg/Ha)	10,410	10,448	10,441	10,441
9.19.3 Production (1000 MT)	68	70-F	71-F	71-F
<b>9.19.A Eggplants :</b>				
9.19.A.1 Area (1000 Ha)	10	10-F	11-F	11-F
9.19.A.2 Yield (Kg/Ha)	5,490	5,481	5,476	5,476
9.19.A.3 Production (1000 MT)	56	57-F	58-F	58-F
<b>9.19.B Onions, Dry :</b>				
9.19.B.1 Area (1000 Ha)	25	28	26-F	26-F
9.19.B.2 Yield (Kg/Ha)	6,224	8,503	5,882	5,862
9.19.B.3 Production (1000 MT)	156	242	150-F	150-F
<b>9.19.C Garlic :</b>				
9.19.C.1 Area (1000 Ha)	31	43	42-F	43-F
9.19.C.2 Yield (Kg/Ha)	5,298	4,073	4,476	4,419
9.19.C.3 Production (1000 MT)	166	173	188-F	190-F
<b>9.19.D Green beans :</b>				
9.19.D.1 Area (1000 Ha)	16	17-F	18-F	18-F
9.19.D.2 Yield (Kg/Ha)	2,371	2,353	2,343	2,343
9.19.D.3 Production (1000 MT)	38	40-F	41-F	41-F
<b>9.20 Water melons :</b>				
9.20.1 Area (1000 Ha)	47	41-F	42-F	42-F
9.20.2 Yield (Kg/Ha)	12,305	12,500	12,500	12,500
9.20.3 Production (1000 MT)	581	513-F	525-F	525-F

1974-76

1982

1983

1984

9.20.A Grapes :

9.20.A.1	Area (1000 Ha)				
9.20.A.2	Yield (Kg/Ha)	10,000	1-F	10,000	1-F
9.20.A.3	Production (1000 MT)	4	6-F	7-F	7-F

9.21 Sugarcane :

9.21.1	Area (1000 Ha)	318	613	577	577
9.21.2	Yield (Kg/Ha)	50,200	49,241	42,289	43,140
9.21.3	Production (1000 MT)	15,947	30,200	24,407	24,894
9.22	Sugar (Centrifugal, Raw) (1000 MT)	1,272	2,930	2,268	2,350
9.22.A	Sugar (Non-centrifugal) (1000 MT)	357	850-F	900-F	900-F

9.23 Apples (1000 MT)

9.24 Oranges (1000 MT)

9.25 Lemons, Limes (1000 MT)

9.26 Grape fruit and pomelo (1000 MT)

9.27 Citrus fruits NES (1000 MT)

9.28 Mangoes (1000 MT)

9.29 Pineapples (1000 MT)

9.30 Bananas (1000 MT)

9.31 Papayas (1000 MT)

9.32 Cashew Nuts (MT)

1,800	4,700-F	4,800-F	4,800-F
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1,333	2,028-F	2,035-F	2,045-F
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813	1,439	1,537*	1,650*
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49	56-F	56-F	58-F
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1	1-F	1-F	1-F
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13	16-F	17-F	17-F
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	1974-76	1982	1983	1984
<b>9.33 Coffee Green :</b>				
9.33.1 Area (1000 Ha)	8	24	25	26-F
9.33.2 Yield (Kg/Ha)	772	729	724	725
9.33.3 Production (1000 MT)	6	18	18	19-F
<b>9.34 Cocoa Beans :</b>				
9.34.1 Area (1000 Ha)	-	-	-	-
9.34.2 Yield (Kg/Ha)	-	-	-	-
9.34.3 Production (1000 MT)	-	-	-	-
<b>9.35 Tea :</b>				
9.35.1 Area (1000 Ha)	1	10	11*	12-F
9.35.2 Yield (Kg/Ha)	117	144	179	178
9.35.3 Production (1000 MT)	-	2*	2*	2-F
<b>9.36 Tobacco leaves :</b>				
9.36.1 Area (1000 Ha)	133	88	94	91-F
9.36.2 Yield (Kg/Ha)	466	981	989	989
9.36.3 Production (1000 MT)	62	86	93	90F
<b>9.36.A Hemp fibre and tow :</b>				
9.36.A.1 Area (1000 Ha)	-	-	-	-
9.36.A.2 Yield (Kg/Ha)	-	1,000	1,000	1,000
9.36.A.3 Production (1000 MT)	-	-	-	-
<b>9.36.B Jute + Jute like fibres :</b>				
9.36.B.1 Area (1000 Ha)	283	216	209	197-F
9.36.B.2 Yield (Kg/Ha)	1,096	995	1,113	1,007
9.36.B.3 Production (1000 MT)	310	215	233	199-F
<b>9.36.C Sisal :</b>				
9.36.C.1 Area Ha	-	-	-	-
9.36.C.2 Yield (Kg/Ha)	646	625	625	625
9.36.C.3 Production (1000 MT)	-	-	-	-
9.36.D Cotton lint (1000 MT)	12	41	40	41
9.36.E Fibre crops NES (1000 MT)	-	-	-	-

	1974-76	1982	1983	1984
10. <u>Livestock</u>				
1. Horses (1000)	33	21	19	18-F
2. Mules (1000)	1	-	-	-
3. Asses (1000)	-	-	-	-
4. Cattle (1000)	4,205	4,579	4,600-F	4,620-F
5. Buffaloes (1000)	5,711	6,417	6,150-F	6,150-F
6. Pigs (1000)	3,599	4,022	4,100-F	4,150-F
7. Sheep (1000)	34	22-F	22-F	22-F
8. Goats (1000)	30	32-F	30-F	30-F
9. Chicken (million)	51	65	70*	75-F
10. Ducks (million)	12	14	15*	15-F

1984

1983

1982

1974-76

## 11. Animal Production

1. Beef and Veal :

1.1	Slaughtered Heads (1000)	613	730-F	740-F	750-F
1.2	Carcass weight (Kg/Animal)	200	200	200	200
1.3	Production (1000 MT)	124	146-F	148-F	150-F

2. Buffalo Meat :

2.1	Slaughtered (1000 Heads)	252	285-F	285-F	285-F
2.2	Carcass weight (Kg/Animal)	253	253	253	253
2.3	Production (1000 MT)	64	72-F	72-F	72-F

3. Mutton and Lamb :

3.1	Slaughtered (1000 Heads)	14	12-F	12-F	12-F
3.2	Carcass weight (Kg/Animal)	15	15	15	15
3.3	Production (1000 MT)	-	-	-	-

4. Goat Meat :

4.1	Slaughtered (1000 Heads)	15	16	15-F	15-F
4.2	Carcass (Kg/Animal)	15	15	15	15
4.3	Production (1000 MT)	-	-	-	-

5. Pig Meat :

5.1	Slaughtered (1000 Heads)	3,833	4,900-F	5,000-F	5,100-F
5.2	Carcass weight (Kg/Animal)	50	50	50	50
5.3	Production (1000 MT)	192	245-F	250-F	255-F

6. Poultry Meat (1000 MT)

		117	293	301-F	306-F
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7. Meat total production (1000 MT)

		496	757	771	783
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7.1 Beef and buffalo meat indigenous (1000 MT)

		193	218-F	221-F	223-F
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7.2 Sheep and goat indigenous (1000 MT)

		-	-	-	-
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	1974-76	1982	1983	1984
7.3 Pig meat indigenous (1000 MT)	192	246-F	250-F	255-F
8. Cow milk, whole, fresh :				
8.1 Milk animals (1000 Heads)	3	9-F	11-F	12-F
8.2 Yield (Kg/Animal)	1,870	3,003	3,182	3,200
8.3 Production (1000 MT)	6	27	35-F	38-F
9. Buffalo milk (1000 MT)	6	7-F	7-F	-
10. Evaporated condensed milk (MT)	2,566	7,287-F	5,362-F	5,362-F
11. Hen eggs (MT)	86,667	111,000*	120,000*	124,000-F
11.A Other eggs (MT)	7,483	10,560*	12,240*	12,665-F
12.A Wool, greasy (MT)	-	-	-	-
12.B Wool, Scoured (MT)	-	-	-	-
13. Silk; raw and waste (MT)	240	1,100-F	1,200-F	1,200-F
14. Cattle and buffalo hides, Fresh (MT)	35,667	41,500-F	41,700-F	42,020-F
15. Sheep skins, Fresh (MT)	36	30-F	30-F	30-F
16. Goat skins, Fresh (MT)	30	32-F	30-F	30-F

1980-82

1974-76

1969-71

1964-66

2. Food Supply (world total in brackets)

	1980-82	1974-76	1969-71	1964-66
1. Calories per caput/day-number (provincial)	(2,652)	(2,522)	(2,488)	(2,413)
1.1 Grand total	2,312 (2,652)	2,211	2,160	2,067
1.2 Vegetables	2,161 (2,236)	2,074	2,001	1,933
1.3 Animal products	151 (414)	137	159	135
2. Protein caput/day-grams (provincial)	(68.9)	(66.3)	(65.5)	(64.1)
2.1 Grand total	42.4 (68.9)	45.8	46.8	42.7
2.2 Vegetable products	34.3 (45.9)	34.5	34.3	33.2
2.3 Animal products	12.2 (23.3)	11.2	12.5	9.5
3. Fat per caput/day-grams (Provincial)	(52.9)	(51.7)	(56.5)	(53.7)
3.1 Grand total	27.0 (52.9)	24.7	25.9	26.2
3.2 Vegetable products	18.7 (31.3)	12.4	15.1	17.1
3.3 Animal products	10.2 (21.6)	12.3	10.7	9.1
4. Calcium per caput/day-milligrams (prov.)	(453)	(453)	(468)	(461)
4.1 Grand total	257 (465)	233	238	206
4.2 Vegetable products	194 (222)	176	163	155
4.3 Animal products	63 (243)	57	75	50
5. Iron per caput/day, milligrams (prov.)	(15.0)	(15.0)	(15.7)	(15.5)
5.1 Grand total	15.1 (16.0)	13.8	13.8	12.5
5.2 Vegetable products	13.0 (13.3)	11.9	11.0	10.4
5.3 Animal products	2.1 (2.6)	1.9	2.8	2.1

Figures in brackets are world totals

	1974-76	1981	1982	1983
<u>Means of Production</u>				
1. Tractors Agri. Total (Number) in use.	24,302	89,202	107,529	113,116
2. Harvesters - Threshers (Number) in use.	7	-	-	-
3. Milking machines (number) in use.	290	350-F	380-F	400-F
<u>Insecticides - Consumption :</u>				
1. Other insecticides (100 Kg)	73,036	130,000	140,000	100,100
<u>Fungicides - Consumption :</u>				
1. Other fungicides (100 Kg).	15,667	30,000	30,000	30,000
<u>Herbicides - Consumption :</u>				
1. Other herbicides (100 Kg)	16,552	100,000	80,000	60,474
Other Fumigants Consumption (100 Kg)	1,960	4,000	4,000	5,614
<u>Pesticides NES - Consumption (100 Kg)</u>	795	4,270	5,400	5,628



	1979	1980	1981	1982	1983	1984
<b>Prices</b>						
<b>Rice :</b>						
a) Thai Cargo 2nd Grade, FOB Bangkok (US\$/1000 KG)	334	428	474	280	278	254
b) Thai white 5% broken, FOB Bangkok (US\$/MT)	334	433	484	294	277	253
c) Parboiled 5% long grain, FOB Bangkok (US\$/1000 KG)	312	391	432	270	270	258
d) Thai, Broken A1 super, FOB Bangkok (US\$/1000 KG)	198	252	249	198	194	212

**Index Prices :**

**1. Received by farmers for agril products :**

- 1.1 All agricultural products
- 1.2 Crops \*
- 1.3 Livestocks and livestock products

**2. Paid by farmers for :**

- 2.1 Production requisites
- 2.2 Tractors and farm machinery
- 2.3 Fertilisers
- 2.4 Pesticides
- 2.5 Feed
- 2.6 Energy and lubricants
- 2.7 Seed

**Cassava :**

1. Bangkok wholesale pellets (80th/100 Kg)	248	251	192	211	252	170
" " (US\$/MT)	121	123	88	92	110	72
2. Thai Flour, CIF New York (Grade-A) (US\$/100 kg)	376	370	325	357	350	312
<b>Kenet : Thai A FOB Bangkok (US\$/1000 KG)</b>	328	356	342	322	315	432

Summary of Business Volume of  
All types of Cooperatives in 1983

(Currency: Baht)

(For Fiscal Year ended June 30, 1984)

Type of Coops.	No. of Coopers.	No. of Members.	Credit	Purchasing	Marketing	Extensior & related services
1. Agricultural Coops	998	785,152	756,030,340	693,925,595	1,095,108,088	21,637,511
2. Land Settlement Cooperatives	91	74,306	35,523,291	71,753,505	57,929,720	7,636,484
3. Fishery Coops.	18	3,693	1,826,012	151,020,351	10,519	-
4. Thrift and Credit Cooperatives.	532	831,198	1,154,043,411	-	-	-
5. Consumer Coops.	296	464,648	-	2,334,517,644	-	-
6. Service Coops.	200	60,121	442,172	9,038,335	1,721,517	59,132,954
	2,135	2,249,318	1,927,865,226	3,260,255,630	1,161,569,644	128,406,949

Source: Cooperative Auditing Department.

Type of Cooperative	Cooperative Capital	Liabilities	Operational Capital	Working Capital	Net Profit (Loss)
1. Agricultural Coops.	2,204,596,914	4,679,664,485	6,884,261,399	1,891,176,595	241,255,891
2. Land Settlement Coops.	132,511,844	344,451,365	476,965,209	17,215,745	15,135,114
3. Fishery Coops.	6,964,790	19,054,685	26,019,403	5,776,399	1,593,267
4. Thrift & Credit Coops.	8,089,349,053	1,470,788,287	9,560,137,340	8,161,897,666	91,803,153
5. Consumer Coops.	354,896,479	291,032,013	645,928,492	235,048,786	83,433,700
6. Service Coops.	77,747,391	754,342,458	832,089,629	679,604,335	11,559,554
	10,866,066,471	7,559,333,271	18,425,399,742	11,144,310,026	1,263,435,679

Source: Cooperative Auditing Department.

Statistics on the Business Volumes of  
Agricultural Cooperatives during the  
period 1974-1983.

Year	No. of Coops.	No. of Members	Credit	Purchasing	Marketing	Extension & Service (Mill)
1974	606	372,175	116,274,011	187,193,450	386,915,795	6,926,716
1975	588	465,502	197,108,733	303,129,994	474,648,428	5,183,279
1976	620	516,993	273,099,166	275,560,745	452,205,333	14,197,560
1977	703	603,264	342,357,777	403,048,389	498,342,696	19,100,638
1978	852	704,437	434,553,752	545,963,729	674,945,452	19,006,054
1979	861	732,560	491,378,015	621,855,296	1,021,526,414	6,859,999
1980	884	762,387	544,114,389	744,320,305	965,782,889	6,135,405
1981	898	770,585	639,087,586	812,471,988	1,743,734,640	7,573,461
1982	981	783,664	716,100,364	590,379,173	1,222,212,009	22,343,304
1983	998	785,152	756,030,340	693,925,595	1,096,108,088	21,637,511

Source: Cooperative Auditing Department.

Statistics on the Business Volumes  
Agricultural Cooperatives during the  
period 1974-1983.

Year	Cooperative Capital	Liabilities	Operational Capital	Working Capital	Net profit (loss)
1974	575,614,301	1,283,648,669	1,859,262,970	464,449,341	50,801,068
1975	684,996,073	2,178,123,124	2,863,119,197	681,253,311	47,390,305
1976	777,060,891	2,521,108,580	3,298,169,471	550,585,541	53,551,245
1977	929,718,400	3,221,501,073	4,151,219,473	685,695,237	96,957,044
1978	1,127,932,662	3,747,006,839	4,874,939,501	889,153,299	124,028,401
1979	1,311,559,392	4,005,215,298	5,316,774,690	1,071,576,847	143,623,135
1980	1,478,276,974	4,431,004,461	5,909,281,435	1,232,568,175	151,065,826
1981	1,663,123,015	4,871,471,587	6,534,594,402	1,425,367,779	151,141,170
1982	1,909,200,363	5,028,318,391	6,937,518,754	1,609,367,827	164,346,265
1983	2,204,596,914	4,679,664,485	6,884,261,399	1,891,176,595	241,255,691

Statistics on the Business Volumes of  
Land Settlement Cooperatives during the  
period 1974-1983

(Currency: Baht)

Year	No. of Coops.	Members (Person=Households)	Credit	Purchasing	Marketing	Extension & Service.
1974	190	17,314	2,486,335	3,807,310	7,732,178	1,362,255
1975	51	29,808	3,512,142	10,879,573	7,654,659	1,162,263
1976	53	38,113	5,134,669	18,238,207	6,866,173	1,379,459
1977	58	42,388	8,858,529	30,817,449	6,783,454	1,995,102
1978	70	48,175	11,883,882	24,644,588	10,287,205	1,755,555
1979	73	56,741	16,738,938	55,602,881	33,476,877	2,202,594
1980	80	60,054	20,259,375	54,520,684	43,679,983	18,223,235
1981	84	63,472	23,737,240	51,811,108	49,575,634	20,601,641
1982	88	68,594	31,239,703	41,329,561	36,331,723	8,904,409
1983	91	74,306	35,523,291	71,753,505	57,929,720	7,636,484

Statistics on the Business Volumes of  
Land Settlement Cooperatives during the  
period 1974-1983.

(Currency: Baht)

Year	Cooperative Capital	Liabilities	Operational Capital	Working Capital	Net Profit (Loss)
1974	26,553,569	36,975,035	65,528,604	31,345,446	1,066,103
1975	30,336,825	48,619,456	79,456,321	36,305,403	1,956,380
1976	35,636,919	68,492,639	104,129,556	48,166,108	3,631,030
1977	45,023,276	115,796,386	160,619,662	72,684,588	6,014,485
1978	52,503,312	141,568,647	194,468,959	78,962,878	4,555,749
1979	65,806,696	189,621,910	255,428,606	89,679,400	6,340,614
1980	74,168,931	224,976,323	299,145,254	95,315,696	6,413,009
1981	78,006,491	256,565,256	334,571,747	104,667,394	7,424,386
1982	92,286,346	302,932,846	395,219,192	122,166,049	5,145,769
1983	132,511,844	344,451,365	476,963,209	170,803,745	13,103,114

Statement on the Business Volumes  
of Thrift and Credit Cooperatives  
for the year ended June 30, 1975-1984

(Currency = Bant)

Year	No. of Coops.	No. of Members	Interest received.	Other incomes	Coop. capital	Liabilities.
1975	142	295,354	119,221,880	1,477,877	1,091,116,529	67,565,460
1976	147	316,826	145,330,803	1,626,473	1,287,476,793	125,322,514
1977	216	365,486	175,481,315	2,214,930	1,524,561,502	193,054,900
1978	239	409,777	216,397,949	3,400,409	1,850,000,491	262,628,449
1979	261	473,831	268,739,707	5,059,864	2,295,519,939	377,050,415
1980	310	540,531	344,838,083	5,734,962	2,936,137,788	490,221,178
1981	356	606,435	457,232,253	13,582,420	3,779,991,131	540,820,003
1982	398	676,626	650,086,881	25,096,003	4,906,488,645	803,816,165
1983	454	753,018	863,965,159	34,871,304	6,310,700,969	1,060,408,632
1984	532	834,198	1,134,043,411	48,248,736	8,089,349,053	1,470,788,287

Source: Cooperative Auditing Department.



Statement on the Business Volumes  
of Thrift and Credit Cooperatives  
period 1974-1983

(Currency = Bant)

Year	Operational Capital	Working Capital	Net profit (loss)
1974	1,178,683,989	1,088,417,766	96,535,527
1975	1,412,755,309	1,285,971,730	115,022,427
1976	1,715,616,490	1,533,462,825	156,924,869
1977	2,112,654,940	1,872,147,193	164,910,902
1978	2,673,077,354	2,325,740,054	193,947,867
1979	3,406,358,966	2,968,805,591	255,495,117
1980	4,420,817,214	3,829,842,814	321,116,571
1981	5,710,304,810	4,968,466,463	510,178,999
1982	7,371,109,601	6,412,997,972	684,015,299
1983	9,560,137,340	8,161,897,666	910,608,153

Source: Cooperative Auditing Department.

**Statement of Business Volumes of  
Service Cooperatives  
(for the years ended June 30, 1974 to 1983.)**

Year	No. of Coops.	No. of Members.	Service Business	Credit Business	Purchasing Business.	Marketing Business	Coop. Capital	Liabilities	Working Capital.
1974	13	7,935	4,997,433	8,661,737	-	-	12,401,622	137,365,137	149,766,859
1975	46	17,720	6,110,377	7,651,755	-	-	12,356,481	135,112,535	147,471,316
1976	63	28,870	56,831,484	10,045,310	-	-	20,483,667	211,388,153	231,863,776
1977	100	30,832	66,265,329	138,727,819	-	-	28,381,922	285,175,727	317,557,649
1978	121	32,432	125,439,709	12,087,994	-	-	25,775,006	341,296,364	367,073,376
1979	137	52,114/40,435	138,139,254	7,533,596	12,193,899	4,313,877	33,114,520	356,505,110	419,619,630
1980	176	52,114/52,273	220,359,019	4,303,280	77,824,423	10,923,499	44,639,508	554,638,626	599,478,134
1981	183	52,114/56,897	233,601,161	377,450	14,690,350	69,057,164	56,951,608	654,054,173	711,005,781
1982	196	52,114/60,346	106,041,347	432,319	16,158,056	64,150,164	66,944,344	795,456,416	862,400,760
1983	200	52,114/60,121	99,132,954	442,172	9,038,335	5,721,317	77,747,391	754,342,438	832,089,829

Source: Cooperative Auditing Department.

Year	Working Capital	Net profit (loss)
1974	138,153,765	496,466
1975	115,629,227	1,332,947
1976	163,022,927	3,764,315
1977	229,242,936	7,937,063
1978	285,453,070	2,900,114
1979	330,353,425	4,933,203
1980	497,733,601	6,637,879
1981	580,761,278	11,356,374
1982	734,878,872	11,067,694
1983	579,604,835	11,359,554

Total population, Number of Farmers and Number of  
Coop. Farmer Members per Region in 1985. (June 30, 1985)

Schedule 1.

Region	No. of provinces	Total Population		No. of farmers		No. of Coops having farmers members.	No. of members (farm families)	%age of members farm families
		Persons	Families	Persons	Families			
1	9	8,733,751	1,018,937	6,113,627	132	108,529	10.65	
2	8	3,976,800	463,961	2,783,760	118	95,473	21.58	
3	8	3,874,244	451,995	2,711,971	103	73,101	16.17	
4	8	5,006,353	584,074	3,504,448	124	99,391	17.02	
5	9	5,325,817	621,345	3,728,071	141	133,418	21.47	
6	7	6,856,671	1,033,279	6,199,670	168	143,377	13.69	
7	10	9,045,625	1,055,322	6,331,936	193	150,462	14.20	
8	7	3,042,640	354,975	2,129,850	87	50,986	14.38	
9	7	3,316,576	386,933	2,321,603	89	53,304	13.72	
<b>Total</b>	<b>73</b>	<b>51,178,477</b>	<b>5,970,821</b>	<b>35,824,936</b>	<b>1,155</b>	<b>908,241</b>	<b>15.21</b>	

Source: Research Section, Technical Division, Cooperative Promotion Department, Oct. 8, 1985.

Remarks: 1) Family size 6 persons per family.

2) Cooperatives, having farmer members as well as Agricultural Cooperatives, Land Settlement Cooperatives and Fishery Cooperatives.

Total population, No. of farmers and No. of Coop  
Farmers Members per province in Region I.  
in 1985 (June 30, 1985).

Schedule 2.

Province	Total Population	No. of Farmers		No. of Coops having Farmer members.	No. of members (families)	Percentage
		Persons	Families			
1. Bangkok	5,250,571	3,675,400	612,567	15	7,211	1.17
2. Nonthaburi	491,335	343,935	57,322	7	5,686	9.92
3. Pathum Thani	375,825	263,078	43,846	17	10,089	23.00
4. Ayuthya	644,078	450,855	75,142	26	17,313	23.04
5. Lopburi	680,023	476,016	79,336	20	24,173	30.47
6. Sareburi	476,482	333,537	55,596	20	13,634	22.27
7. Singburi	211,966	148,376	24,729	9	9,156	37.19
8. Angthong	268,045	187,632	31,272	9	8,757	28.00
9. Chainat	335,426	234,798	39,133	9	13,473	34.43
Totals	8,733,751	6,113,627	1,018,937	132	108,529	10.65

Number of Inhabitants, Farmers and No. of Cooperative Farmer Members in Region 2, divided into provinces as on June 30, 1985.

## Schedule 3.

Province	No. of inhabitants	No. of Farmers		No. of Coops. having farmer members	No. of members (families)	Percentage of members over total farm families.
		Persons	Families			
1. Kanehanaburi	612,752	428,926	71,458	20	12,280	17.18
2. Nakornpathom	603,711	422,598	70,433	15	9,696	13.77
3. Prachin Kiri Khan.	599,178	279,425	46,571	16	7,662	16.49
4. Phatthaburi	408,942	286,259	47,710	14	15,950	29.27
5. Rat Buri	681,471	477,030	79,505	18	15,547	19.30
6. Suphumburi	761,486	533,040	88,840	17	27,402	30.54
7. Samut Songkhro	200,734	140,514	23,419	8	5,590	15.35
8. Samut Sakhon	308,526	215,968	35,995	12	5,814	16.15
Region 2. Total.	3,976,800	2,783,760	465,961	118	595,475	20.58

Number of Inhabitants, Farmers and No. of Cooperative Farmer Members in Region 3, divided into provinces as on June 30, 1985.

Schedule 4.

Province	No. of inhabitants	No. of Farmers		No. of Coops. having farmer members	No. of members (families)	%age of members over total farm families.
		Persons	Families			
1. Chanthaburi	381,849	267,294	44,549	9	11,067	24.84
2. Chachoengsac	516,814	361,770	60,295	19	10,524	17.45
3. Chonburi	788,611	552,028	92,005	10	7,144	7.76
4. Trat	163,039	114,127	19,021	8	4,317	22.70
5. Nakhon Nayok. Prachinburi	208,825	146,199	24,366	9	5,553	22.09
6. Banchinburi	757,673	530,371	88,395	30	21,011	23.77
7. Rayong	410,590	287,413	47,902	13	11,890	24.82
8. Samut Prakan	646,813	452,769	75,462	5	1,765	2.34
Total	3,874,244	2,711,971	451,995	103	75,101	16.17

Number of Inhabitants, Farmers and No. of Cooperatives  
Farmer Members in Region 4, divided into provinces  
as on June 30, 1985.

Province	No. of inhabitants.	No. of Farmers.		No. of Coops. having farmer members.	No. of members (families)	Age of mem- bers over 20. farm families
		Persons	Families			
1. Sukhothai	562,767	393,937	65,656	18	17,218	26.22
2. Kamphangphet	634,900	444,430	74,072	14	11,159	15.06
3. Uthai Thani	271,568	190,098	31,683	11	9,604	30.31
4. Tak	314,841	220,389	36,731	12	5,976	16.20
5. Nakhon Bawan	1,037,347	726,143	121,024	21	15,229	12.50
6. Pichit	554,565	388,195	64,699	12	9,933	15.35
7. Pitsanulok	729,354	510,548	85,091	18	15,392	19.26
8. Phetchabun	901,011	630,708	105,118	18	13,860	13.20
Total	5,006,353	3,504,448	584,074	124	99,391	17.02



Number of Inhabitants, Farmers and No. of Cooperative  
Farmer Members in Region 5, divided into provinces  
as on June 30, 1985.

Province	No. of inhabitants	No. of Farmers		No. of coops. having farmer members.	No. of members (families)	Age of members over total farm families.
		Persons	Families			
1. Chiangmai	1,260,743	882,520	147,087	43	33,169	22.03
2. Chiangrai	580,714	686,500	114,417	18	19,828	17.12
3. Payaw	477,885	334,391	55,753	12	10,322	18.61
4. Mae Hong Son	1,150,456	105,319	17,553	6	2,019	11.30
5. Lampong	734,055	513,362	65,644	16	12,322	15.09
6. Lamphun	355,207	276,643	40,807	7	10,043	22.53
7. Nan	413,867	285,777	48,256	13	12,733	20.19
8. Phrae	472,933	331,053	55,175	11	10,074	22.11
9. Uttaradit	423,623	307,876	51,313	15	13,050	26.37
<b>Total</b>	<b>5,325,617</b>	<b>3,728,071</b>	<b>621,345</b>	<b>141</b>	<b>153,710</b>	<b>21.47</b>

Number of Inhabitants, Farmers and No. of Cooperative Farmer Members in Region 6, divided into provinces as on June 30, 1985.

Schedule 7	Provinces	No. of Farmers			No. of Coops. having farmer members.	No. of members (families)	%age of members over total farm families.
		No. of inhabitants.	Persons	Families			
	1. Chiyapum.	928,168	649,718	108,286	24	14,770	13.64
	2. Nakhon Ratchasima	1,336,938	1,495,857	249,310	35	37,829	15.17
	3. Surin	1,258,169	880,718	146,786	24	15,164	10.35
	4. Yaxatham <sup>SO</sup>	484,554	359,188	56,531	11	7,577	13.40
	5. Sriseket	1,180,002	826,001	137,667	19	17,955	13.04
	6. Ubon Ratchathani	1,718,962	1,203,273	200,546	30	26,602	13.26
	7. Surin	1,149,876	804,915	134,153	25	23,682	17.65
	Total	8,856,671	6,199,670	1,033,279	168	143,577	13.89

Number of Inhabitants, Farmers and No. of Cooperative Farmer Members in Region 7, divided into provinces as on June 30, 1985.

Provinces	No. of Inhabitants	No. of Farmers		No. of Coops. having farmer members.	No. of members (families)	No. of members over total farm families.
		Persons	Families			
1. Kalasin	923,062	646,143	107,690	20	15,708	14.58
2. Khan Kan	1,512,390	1,058,678	176,445	29	27,232	15.40
3. Nakhon Phanom	562,679	407,87	87,879	14	10,370	15.23
4. Nakhon Phanom	837,221	586,055	97,676	11	14,833	14.93
5. Loei	507,669	355,368	55,228	12	10,830	15.20
6. Nongkhai	749,799	524,859	87,470	15	10,819	14.97
7. Udon Thani	1,650,512	1,155,356	192,560	30	20,744	18.77
8. Sakon Nakhon	678,467	614,927	102,480	23	17,554	17.17
9. Roi Et	1,141,014	798,710	133,118	27	17,766	13.36
10. Mukdahan	262,812	183,968	30,661	12	4,721	15.40
<b>Total</b>	<b>9,045,625</b>	<b>6,331,936</b>	<b>1,055,322</b>	<b>193</b>	<b>150,462</b>	<b>14.26</b>

Number of Inhabitants, Farmers and No. of Cooperative Farmer Members, in Region 8, divided into Provinces on June 30, 1965

Schedule 9.	Provinces	No. of inhabitants	No. of Farmers		No. of Coops. having farmer members.	No. of members (families)	%age of total farm families
			Persons	Families			
1.	Prangrangge	192,938	135,057	22,509	79	5,347	14.87
2.	Makoro Sili Temmarat	1,551,980	932,386	155,598	2325	15,533	10.00
3.	Buket	146,428	102,500	17,083	4	2,346	13.50
4.	Randang	96,571	67,600	11,267	5	1,324	11.00
5.	Surat Tani	669,561	468,693	78,115	23	12,755	10.30
6.	Kraci	255,691	177,724	29,621	11	5,237	10.50
7.	Churphon	351,271	245,890	40,982	12	10,446	25.49
	Total	3,042,640	2,129,850	354,975	67	50,816	14.36

Number of inhabitants, farmers and No. of Cooperative  
 Member Members in Region 9, divided into provinces  
 June 30, 1985.

Schedule 10.

Provinces	No. of Inhabitants.	No. of Farmers		No. of Coops. having farmer members.	No. of members (families)	Age of member and total families.
		Persons	Families			
1. Yala	300,586	210,410	35,069	9	4,401	12.55
2. Trang	464,958	325,459	54,250	8	8,098	14.53
3. Nakhon Phanom	488,630	342,041	57,007	22	8,068	12.15
4. Pattani	478,672	335,070	55,845	13	7,201	11.85
5. Phatthalung	424,879	297,415	49,566	12	10,516	11.25
6. Satun	189,611	132,728	22,121	9	3,200	11.46
7. Songkhla	969,200	678,440	113,073	14	11,780	10.42
Total	3,316,576	2,321,603	386,933	89	53,304	13.78